Sourcebook ★ Vol. 5

Sourcebook: Women Veterans in the Veterans Health Administration

Volume 5: Longitudinal Trends in Sociodemographics and Utilization, including Type, Modality, and Source of Care

Women's Health Evaluation Initiative (WHEI)
Center for Innovation to Implementation (Ci2i)
VA Palo Alto Health Care System
Palo Alto, CA

Office of Women's Health
Veterans Health Administration
Department of Veteran Affairs
Washington, DC

June 2024

VA | U.S. Department of Veterans Affairs

Sourcebook:
Women Veterans in the Veterans Health Administration

Volume 5: Longitudinal Trends in Sociodemographics and Utilization, Including Type, Modality, and Source of Care

Prepared for:
Office of Women's Health
Veterans Health Administration
Department of Veterans Affairs
810 Vermont Ave., NW
Washington, DC 20420

Prepared by:
Women's Health Evaluation Initiative (WHEI):
Jessica Y. Breland, PhD, Senior Program Analyst*
Susan M. Frayne, MD, MPH, WHEI Director*
Fay Saechao, MPH, Program Manager*
Kritee Gujral, PhD, MA, Senior Technical Writer
Anita A. Vashi, MD, MPH, MHS, Senior Technical Writer
Jonathan G. Shaw, MD, MS, Senior Technical Writer
Kayla M. Gray, MA, Technical Writer
Samantha S. Illarmo, MPH, Technical Writer
Tracy Urech, MPH, Technical Writer
Nicole Grant, MD, Senior Clinical Consultant
Eric Berg, MS, Senior Data Analyst
Claudine Offer, MPH, Data Analyst
Sirisha Veldanda, MPH, Data Analyst
Lena Schoemaker, MS, Data Analyst
Aaron L. Dalton, MA, MSW, Data Analyst
Aryan Esmaeili, MD, PhD, Data Analyst
Ciaran S. Phibbs, PhD, WHEI Associate Director

Office of Women's Health
Patricia M. Hayes, PhD, Chief Officer Emerita
Sally Haskell, MD, MS, Acting Chief Officer

* Equal first authors

Recommended citation: Breland JY, Frayne SM, Saechao F, Gujral K, Vashi AA, Shaw JG, Gray KM, Illarmo SS, Urech T, Grant N, Berg E, Offer C, Veldanda S, Schoemaker L, Dalton AL, Esmaeili A, Phibbs CS, Hayes PM, Haskell S. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 5: Longitudinal Trends in Sociodemographics and Utilization, Including Type, Modality, and Source of Care. Women's Health Evaluation Initiative, Office of Women's Health, Veterans Health Administration, Department of Veterans Affairs, Washington DC. June 2024.

Acknowledgements: In addition to our appreciation to the groups acknowledged in prior volumes of the Sourcebook who contributed to the development of variable algorithms that continue to be used herein, the current Sourcebook also benefited from consultations with Michael D. Visconage and Robyn Rodgers of the VA History Office; Daniel Palmeri of VHA's Office of Rural Health; Sommer Kohlhoff of VHA's Office of Connected Care – Telehealth; Michelle M. Mengeling, PhD, MS; Anne G. Sadler, PhD, RN; Aimee Sanders, MD, MPH; and Megan Vanneman, PhD, MPH. Last, we express our appreciation to other contributors who helped in the development of the Sourcebook, including Quy Vu, MA; Lakshmi Ananth, MS; Vilija R. Joyce, MS; Samina Iqbal, MD; Amanda M. Johnson, MD, FACOG; Chelsea Morgan, MD; Alicia Y. Christy, MD, MHSCR; Nancy Maher, PhD; Kristin Haeger, MPH, MAT; and Elizabeth W. Patton, MD, MPhil, MSc.

Our deepest gratitude goes to the women Veterans who have served our country across the generations.

This report is based on program evaluation analyses conducted by the Women's Health Evaluation Initiative at the VA Palo Alto Health Care System in Palo Alto, California. This work was funded by Office of Women's Health, Veterans Health Administration, Department of Veterans Affairs. The findings and conclusions in this document are those of the authors who are responsible for its contents and do not necessarily represent the views of the Department of Veterans Affairs or the United States government. Therefore, no statement in this document should be construed as an official position of the Department of Veterans Affairs.

All images contained in this report feature real women Veterans (with their permission).

Table of Contents

3. Temporal Changes in VHA User Status

4. Use of VHA and VA-purchased Community Care

5. Modality of Care

6. Type of Care

7. Emergency Department and Urgent Care

8. VHA-covered Births

List of Exhibits

1. Introduction

2. Temporal Changes in Sociodemographic and Geographic Characteristics

3. Temporal Changes in VHA User Status

4. Use of VHA and VA-purchased Community Care

5. Modality of Care

6. Type of Care

7. Emergency Department and Urgent Care

8. VHA-covered Births

List of Acronyms

ADUSH	Assistant Deputy Under Secretary of Health
AI/AN	American Indian or Alaska Native
CBOC	Community-Based Outpatient Clinic
CCCs	Clinical Contact Centers
CCS	Clinical Classification Software
CDW	Corporate Data Warehouse
CHAMPVA	Civilian Health and Medical Program of the Department of Veterans Affairs
Ci2i	Center for Innovation to Implementation
CORE	Consortium of Research
COVID-19	Coronavirus Disease 2019
CVT	Clinical Video Telehealth
ED	Emergency Department
FY	Fiscal Year (October 1 to September 30)
GAO	Government Accountability Office
HCS	Health Care System
HERC	Health Economics Resource Center
HSR&D	Health Services Research and Development
HT	Home Telehealth
ICD-10-CM	International Classification of Diseases, Tenth Revision, Clinical Modification
MCA	Managerial Cost Accounting
MH/SUD	Mental Health/Substance Use Disorder
MISSION Act	Maintaining Internal Systems and Strengthening Integrated Outside Networks Act
NDEs	National Data Extracts
NHOPI	Native Hawaiian or Other Pacific Islander
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OMB	Office of Management and Budget
OMOP CDM	Observational Medical Outcomes Partnership Common Data Model
OND	Operation New Dawn
OWH	Office of Women's Health
PACT Act	Promise to Address Comprehensive Toxics Act
PSSG	Planning Systems Support Group
PTSD	Posttraumatic Stress Disorder
QUERI	Quality Enhancement Research Initiative
RUCA	Rural-Urban Commuting Areas
SC	Service-connected
TriCare	Department of Defense's health care program for active-duty and retired service members and their families
SUD	Substance Use Disorder
U.S.	United States
Unk.	Unknown
VA	Department of Veterans Affairs

VACC	VA-purchased Community Care
VAMC	Department of Veterans Affairs Medical Center
VAST	VHA Site Tracking Database
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Networks
VSSC	VHA Support Service Center
VVC	VA Video Connect
WH-PCP	Women's Health Primary Care Provider
WHEI	Women's Health Evaluation Initiative
WHS	Women's Health Services

Executive Summary

The past two decades have seen unprecedented growth in the population of women Veterans coming to the Veterans Health Administration (VHA) for their care. Over this same period, VHA has rolled out numerous initiatives designed to improve access to and quality of care for women Veterans. Since 2008, these efforts have been overseen nationally by the Office of Women's Health (OWH).

OWH's Women's Health Evaluation Initiative (WHEI) analyzes centralized, national VHA databases to inform OWH strategic policy and program planning objectives. Among WHEI's products have been a series of Sourcebooks. Like Sourcebook Volumes 1,[1] 2,[2] 3,[3] and 4,[4] the current Sourcebook—Volume 5—describes sociodemographic characteristics and health care utilization patterns of women Veterans who use VHA care. Volume 5 also describes longitudinal trends across an 11-year time horizon between fiscal year (FY) 2010 and FY20 and provides information about geographic variability. Among the new elements in Volume 5 is information about telehealth care, emergency department use, and, given the years covered, consideration of the effects of the COVID-19 pandemic. It examines women Veterans overall and by age group and compares women to men.[5]

Sourcebook Volume 5 thus provides a view of how the population of women Veterans using VHA evolved across an 11-year period coinciding with rapid VHA women's health care delivery system advances and points to priorities for consideration in the context of anticipated further expansion of the number of women Veterans using VHA. Key findings and their implications follow.

Key Findings and Implications

TEMPORAL CHANGES IN SOCIODEMOGRAPHIC AND GEOGRAPHIC CHARACTERISTICS

Women VHA Users

- By FY20, the proportion of all U.S. women Veterans who used VHA grew to more than 1 in 4 (FY10: 17% of U.S. women Veterans used VHA; FY20: 28% of U.S. women Veterans used VHA).
- From FY10 to FY20, the number of women Veterans who used VHA nearly doubled, to half a million women (FY10: 316,961; FY20: 556,135).
- The proportion of all VHA users who were women also increased (FY10: 5.9%; FY20: 9.2%).

IMPLICATIONS

The increasing use of VHA by women Veterans could reflect VHA's efforts to improve care for women Veterans. If increasing use continues among the large group of women Veterans who currently do not use VHA, demands on VHA delivery systems for women's health services will further accelerate.

Age

- Women Veteran VHA users span the full adult lifespan, from the late teen years to more than 100 years of age. The age distribution of women Veteran VHA users, in part, reflects war-era cohort effects.
- In FY20, 41% of women Veteran VHA users were 18-44 years old, 45% were 45-64 years old, and 15% were 65+ years old. From FY10 to FY20, the number of women in these age groups increased 1.7-fold, 1.8-fold, and 2.0-fold, respectively.
- Growth has been particularly noteworthy in two specific age bands: from FY10 to FY20 those 55-64 years old grew as a proportion of women Veteran VHA users from 17% to 24% and those 65-74 years old grew from 5% to 11%; in the coming years, a large surge of women will advance into the 65+ years old age group.
- A far greater proportion of women than men VHA users were younger than age 65 (FY10: 87% of women vs. 55% of men; FY20: 85% of women vs. 45% of men).

IMPLICATIONS

The age distribution of women Veteran VHA users suggests that VHA will need to prioritize care for women across the lifespan as the number of women it serves continues to grow.

Growth in the number of young women Veterans (age 18-44) using VHA may reflect, in part, successful efforts to enroll women Veterans in VHA at military discharge or increasing awareness and availability of specific services for women throughout VHA. The large number of women in the youngest age group highlights the need to ensure ample capacity for clinical services for women in their childbearing years, including reproductive health services.

The largest group of women is in the middle age group (age 45-64); in this life stage, health issues can become more prominent, including menopause and the need for preventive care measures to avert late-life disease. As this group becomes Medicare-eligible, coordination of care across health care systems for dual users of VHA and Medicare services may become increasingly important.

The number of women age 65+ doubled between FY10 and FY20, and a surge of additional women entering this age group is around the corner. Veterans in this age group face unique issues, and some of their burden of illness reflects the late effects of war, as health consequences of military exposures may appear decades later. Women in the oldest group may require more intensive health care services as they age, including care for chronic conditions, geriatric and extended care services, and, where applicable, support for their role as caregivers.

Race/Ethnicity

- The racial/ethnic diversity of women Veteran VHA users has grown over time.
- Among women VHA users, there was an increase over time in the proportion who were Black or African American (FY10: 27%; FY20: 30%), Hispanic or Latina (FY10: 5%; FY20: 8%) or Asian (FY10: 1%; FY20: 2%). There was no change in the proportion who were American Indian or Alaska Native (FY10: 1%; FY20: 1%) or Native Hawaiian or Other Pacific Islander (FY10: 1%; FY20: 1%), and there was a decrease in the proportion who were White (FY10: 61%; FY20: 53%).
- A larger proportion of women than men were Veterans of color across all years (FY10: 35% vs. 21%; FY20: 42% vs. 26%).

IMPLICATIONS

Women Veterans using VHA represent an increasingly diverse population and they continue to be more heterogenous than men with regard to race/ethnicity. To avert racial/ethnic disparities in health care and uphold VHA's commitment to health equity, VHA has an opportunity to provide care tailored to gender, culture, and the intersection among gender, race/ethnicity, and other facets of a person's identity. This will be especially important as the women in the older age groups—who may need more intensive health care for chronic conditions associated with advancing age—become increasingly diverse.

Urban/Rural Status

- Across all years, most women Veteran VHA users lived in urban areas, with the proportion growing from 64% to 73% from FY10 to FY20.
- While the proportion of women Veteran VHA users living in rural areas (highly rural or rural) decreased from 36% (FY10) to 27% (FY20), the absolute number increased from 112,417 (FY10) to 147,988 (FY20).

IMPLICATIONS

Although the majority of women Veterans live in urban areas, this does not necessarily guarantee ready access to needed services. Particularly in small urban areas, specialty services and transportation options may be limited.

VHA has a mission to provide care to every Veteran eligible for services, regardless of how remote the Veteran's residence is. This duty extends to ensuring that high-quality, equitable, gender-specific VHA primary care services are available to women in areas remote from main VHA facilities. While VHA has implemented approaches to reaching rural Veterans, access gaps are still possible. Most of VHA's web of Community-Based Outpatient Clinics (CBOCs) now have at least one designated women's health primary care provider (WH-PCP) but staffing with at least two WH-PCPs is less common at CBOCs serving a predominantly rural Veteran population than at other CBOCs. VHA additionally offers community-based care through its purchased care system for services not available internally, but if the local community likewise lacks specialists, an access gap ("care desert") can arise.

Potential issues around access take on special importance for women Veterans living in highly rural areas, suggesting a possible niche for programs that extend access, such as telemedicine or mobile clinics. During the COVID-19 pandemic, VHA has seen a marked increase in reliance upon virtual care, including Video Telehealth and Clinical Resource Hubs. These advances may have particular value for women with geographic access barriers, especially those in the most remote areas (women with highly rural or insular island residences).

Service-connected Disability Rating

- An increasing proportion of women Veteran users had some level of service-connected (SC) disability (FY10: 56%; FY20: 73%).
- In FY20, the proportion of women Veteran users with an SC disability rating was 83% for those 18-44 years old, 72% for those 45-64 years old, and 46% for those 65 years or older.
- There was also an increase in the proportion of women Veteran VHA users with high SC disability ratings; for example, between FY10 and FY20 the proportion with at least a 50 percent SC disability rating increased from 27% to 53% and the proportion with a 100 percent SC disability rating increased from 5% to 15%.

IMPLICATIONS

Growth in the proportion of women Veteran users with SC disability ratings could reflect changes over time in war exposures, disability applications/processes, awareness of eligibility, and/or patterns of which Veterans choose to seek VHA care. Nearly 3 out of 4 women Veteran VHA users now carry an SC disability rating, with even higher rates among the youngest women. These women are eligible for lifelong VHA care for their SC conditions, sometimes representing complex combinations of conditions. The intensity and mix of SC conditions likely have evolved with shifts in the nature of war and women's roles in the military, as well as with improved accessibility of the benefits application process.

HEALTH CARE SYSTEM-LEVEL GROWTH

- There was marked growth in care of women Veterans at nearly all of the unique Health Care Systems (parent stations) in VHA: 21 Health Care Systems saw at least 2-fold growth in the number of women Veteran users; 81 saw 1.5- to 1.9-fold growth, and 36 saw 1.1- to 1.4-fold growth.
- For most sites, absolute growth in the number of women Veteran users was >1,000, with many seeing 5,000+ gains in women Veteran users from FY10 to FY20. No Health Care Systems saw a decrease in the number of women Veterans in this decade.

IMPLICATIONS

The growth between FY10 and FY20 in the number of women Veterans using VHA touched every Health Care System, highlighting the importance of delivering augmented women's health services at every point of care in VHA. At all sites, long-range strategic planning must address their capacity to provide for the growing population of women Veterans, including privacy and environment of care, as well as staffing with designated Women's Health Primary Care Providers and their teams. Particularly at those sites with rapid growth, there may be heavy space and workforce demands, potentially straining capacity. This will require an investment of resources to comprehensively address women's health care needs, while at the same time avoiding burnout and attrition of their skilled women's health care providers.

VHA's long-term women's health care strategic planning efforts need to account for geographic factors. Across all sites, it is important to ensure a VHA culture that welcomes women Veterans and acknowledges their military service.

TEMPORAL CHANGES IN VHA USER STATUS

- In FY20, 89% of women Veteran VHA users were returning users, having also used VHA in FY19.
- Among returning VHA users who had been enrolled for at least a decade, 69% of women used VHA care in every year from FY11-FY20, reflecting highly consistent longitudinal use.
- Across the decade (FY10 to FY20), the absolute number of new women Veteran users joining VHA care remained relatively stable (range: 35,000 to 47,000 annually); in FY20, 6% of women VHA users were new users, i.e., they used VHA in FY20 but were not VHA users in any of the prior 10 fiscal years.
- Among women who used VHA in FY19, 7% did not return for VHA care in FY20, although some of them may have returned in subsequent years.

IMPLICATIONS

Examining utilization patterns from multiple perspectives, a consistent conclusion is that women Veterans who use VHA care usually return to VHA. The high rate of retention of women Veteran VHA users bodes well for VHA's efforts to be the provider of choice for Veterans. This is consistent with past work suggesting that many Veterans are satisfied with their care, and other work that shows that older Veterans may be choosing VHA over Medicare. With so many women Veterans choosing to use VHA long-term, VHA has an opportunity to provide strong continuity of care and preventive care for women across their lifespans.

While most women continue to use VHA, some do not. It is important to ensure a safe, welcoming, and inclusive care environment for all women and to ensure positive first impressions for the large group of women new to VHA, increasing the likelihood they will choose to return in the years to come.

USE OF VHA AND VA-PURCHASED COMMUNITY CARE (VACC)

Location of care: VHA Facility-based vs. VA-purchased Community Care (VACC)

- The vast majority (99%) of women Veteran VHA users received at least some VHA-based care in FY19.
- A larger proportion of women than men Veteran VHA users used at least some VACC in FY19 (44% vs. 31%); this pattern held across different sociodemographic groups and Veterans Integrated Service Networks (VISNs).
- The proportion of women with Any VACC use in FY19 varied by age group (18-44 years old: 40%; 45-64 years old: 49%; 65+ years old: 43%).
- VACC use rates in FY19 were the highest among three subgroups of women Veterans: highly rural women Veterans (61% of highly rural women had Any VACC use), American Indian or Alaska Native women Veterans (51% had Any VACC use), and women Veterans with a 100 percent service-connected disability rating (58% had Any VACC use).

IMPLICATIONS

The fact that nearly all women Veteran VHA users receive at least some VHA-based care highlights the continued importance of the availability of women's health services in VHA-based settings, even as access to VA-purchased Community Care (VACC) expands through policies such as the MISSION Act.

Ongoing efforts to examine the quality of outsourced care and identify optimal approaches to coordinate care between VHA and VACC providers are of great relevance for women as they navigate across distinct sources of care. Care coordination will be particularly relevant for subgroups of women with higher rates of VACC use, including highly rural Veterans, American Indian or Alaska Native Veterans, and those with a high service-connected disability rating. Understanding drivers of VACC use is warranted and may point to focus areas for expanded in-house services. Ensuring effective care coordination is particularly important to prevent gaps and fragmentation of care. Identifying pathways for retaining Veterans in VHA care is salient in light of data that suggest quality and safety are as good as or better in VHA compared to outside VHA.

CONDITIONS SEEN IN VA-PURCHASED COMMUNITY CARE SETTINGS

- Women Veteran VHA users receive care for a broad range of conditions in VACC settings.
  - Note that this Sourcebook does not present the prevalence of conditions.[6]
  - Note that it is possible women who received care for a condition in a VACC setting also received care for the same condition in a VHA-based setting.
- Specific types of conditions varied by age group. For example, when examining the top 10 most frequent conditions reflected in women's visits in VACC settings:
  - Musculoskeletal conditions, across all age groups, were collectively the conditions most commonly recorded in VACC settings.
  - The other most common conditions recorded in a VACC setting for women aged 18-44 included pregnancy, headache, anxiety, and depression; for women aged 45-64 included hypertension, esophageal disorders, and breast conditions; and for women aged 65+ included hypertension, diabetes, lipid disorders, eye conditions, esophageal disorders and neurologic conditions.

IMPLICATIONS

Women Veteran VHA users receive care for a broad range of conditions in VA-purchased Community Care (VACC) settings, reflective of women's needs across the life course.

The high frequency of potentially painful conditions (musculoskeletal conditions and headache) and mental health conditions treated in VACC in young women Veterans (aged 18-44 years old) suggests it will be important for VHA to ensure coordination of care across multiple specialties and settings. Whereas integrated care may be facilitated in VHA by its unified electronic medical record and multidisciplinary network of staff providers communicating with relative ease, Veterans receiving care for a painful condition from multiple community-based providers may potentially face barriers to care coordination. In this age group, pregnancy also ranks high among conditions treated in VACC since obstetric care is not provided in VHA. VHA-based Maternity Care Coordinators bridge VHA and VACC during pregnancy, seeking to ensure that during and after pregnancy women do not lose contact with VHA for other needed medical or mental health services.

For women aged 45-64 years old (and in the other age groups), musculoskeletal conditions are among the most commonly addressed conditions in VACC settings which may reflect specialty consultations, complementary medicine, rehabilitative services, or supportive services. The need for in-person care, such as for musculoskeletal conditions, extends to every corner of the country, including rural areas where tertiary care specialty services may not be available even through a community provider. VHA telehealth and electronic consultation programs are increasingly providing improved access for users and providers in remote settings, but VACC provides another avenue for women to access in-person specialized care.

Among women aged 65+ years old, maintaining independence takes on particular importance, and VACC may play an important role as many receive some of their care for musculoskeletal, vision, and neurologic conditions in that setting. Older women also may be at particular risk of cancer. Given the complexity of cancer management, it will be important to ensure strong care coordination for those women receiving breast or gynecologic cancer care through VACC to provide seamless care across services and disciplines.

MODALITY OF CARE

- Among VHA-based encounters, In-Person visits dropped early in the COVID-19 pandemic, and virtual care (via Telephone, Video Telehealth, Store-and-Forward Telehealth, or the Home Telehealth program) more than doubled from 17% of women Veterans' VHA encounters in FY19 to 40% in FY20.
- Specifically, the proportion of women Veterans' FY20 encounters occurring via Telephone was 30% (ranging from 17% to 41% across Health Care Systems), and the proportion via Video Telehealth was 8% (ranging from 2% to 17% across Health Care Systems).
- While 8% of FY20 encounters for women were via Video Telehealth, only 4% of encounters for men were via this modality.

- Among women Veterans, there was variation in use of Video Telehealth by sociodemographic characteristics. For example:
  - The proportion of women using Video Telehealth at least once in FY20 was greatest in younger women (39% of those age 18-44 and 35% of those age 45-64, but only 22% of those age 65+).
  - Use of Video Telehealth varied by race/ethnicity, ranging from 32% (American Indian or Alaska Native and White women) to 40% (Hispanic or Latina women) with any such visits in FY20.
  - Any Video Telehealth use in FY20 was most common among urban women (36% with any use) and women with insular island residences (37%), and least common in those with rural (32%) or highly rural residences (28%).
  - Women with higher SC disability ratings had more uptake of Video Telehealth. In FY20, 24% of women with no SC disability rating versus 46% of women with 100 percent SC disability rating had any Video Telehealth visits.

IMPLICATIONS

Drawing upon previously implemented virtual care infrastructure, VHA was able to adjust rapidly to the demands of the COVID-19 pandemic. For women Veteran VHA users the decline in In-Person visits the pandemic precipitated was offset by the increase in the number of virtual (Telephone and Video Telehealth) visits. This suggests that VHA was able to compensate for the pandemic-imposed barriers to face-to-face care via a nimble transition to virtual care, with Telephone visits ramping up most quickly, and Video Telehealth visits increasing more gradually. This presumably reduced threats to continuity of care.

VISN-level and VHA Health Care System-level variability in the use of virtual care was observed and may represent patient-level and systems-level factors. Moreover, as has been seen outside of VHA, some types of VHA care not amenable to a virtual platform (e.g., preventive or diagnostic services) may have been delayed with the pandemic. Screening for and addressing intimate partner violence (which has a high prevalence among women Veterans) or other sensitive care needs may have faced new barriers with virtual care, as some women Veterans may hesitate to speak candidly with their provider by Telephone or Video Telehealth, given privacy issues in their home setting.

Why higher uptake of virtual care was observed among women versus men Veterans is unknown, but may be related to user-level factors (e.g., women's average age, technology literacy, work/caregiving responsibilities, geographic/transportation access, or level of comfort on VHA grounds) and/or systems-level differences (e.g., the fact that many women receive care from designated Women's Health Primary Care Providers and/or in distinct VHA Women's Clinic settings).

Given VHA's commitment to health equity, it will be important to assess whether sociodemographic variations in virtual care use reflect user preference and need versus access issues that may require more outreach and tailored approaches. Innovations like VHA's tablet distribution program may reduce barriers imposed by the digital divide. In rural areas more remote to VHA, the use of VHA-purchased Community Care may offset some use of VHA-based services.

The widespread shift to virtual care, if sustained, will likely come with access benefits for many women Veterans, especially those for whom In-Person visits are challenging. Given the rapid expansion of virtual care services between FY19 and FY20, VHA's programmatic/policy emphasis and research emphasis on this area is clearly warranted. Going forward, it will be important to determine the optimal, patient-centered balance of In-Person and virtual care that considers women Veterans' preferences and health care needs.

TYPE OF CARE

- System-wide, women Veterans had 2.2 million primary care encounters, 2.5 million mental health/substance use disorder (MH/SUD) encounters, and 2.1 million specialty care encounters in VHA-based settings in FY19.
- Nearly all women Veteran VHA users (89%) used VHA-based primary care at least once in FY19, nearly two-thirds (65%) of women used VHA-based specialty care, and nearly half (46%) of women used VHA-based MH/SUD care.
- A far higher proportion of women than men (46% vs. 37%) used MH/SUD care in FY19.
- The highest proportions of women using VHA-based MH/SUD care were those in the youngest age group (18-44 years old: 53% used MH/SUD care), Black or African American women (50%), Hispanic or Latina women (51%), women with an urban residence (47%), and women with higher SC disability ratings (100 percent SC disability rating: 65%).
- With the COVID-19 pandemic's onset there was a sharp decline in in-person visits and a compensatory rise in virtual visits for women Veterans for all types of care. By September 2020, telephone visits exceeded in-person visits for primary care and MH/SUD care, but in the case of specialty care, in-person visits had rebounded enough to once more exceed telephone visits.

IMPLICATIONS

The fact that women are choosing to receive primary care, mental health/substance use disorder (MH/SUD) care, and specialty care services in VHA substantiates the implication that it is essential to ensure women can access a wide range of services in VHA-based settings.

The high proportion of women using VHA-based MH/SUD care, and greater use among specific subpopulations, suggests these services may need to be tailored to women's unique needs, such as high rates of experiences with military sexual trauma. The high rate of MH/SUD service use in the youngest group of women points to the importance of continuing programs that support the smooth transition to VHA care at the time of separation from the military. Given that women with urban residences had the highest rates of MH/SUD care use, future work can clarify whether women residing in highly rural or insular island areas have lower MH/SUD care needs, are using alternative sources of care (VACC or non-VHA sources), or are facing access issues that lead to unmet needs.

With the COVID-19 pandemic's onset, VHA was able to shift to virtual care rapidly across a wide range of services. The longer-term implementation of optimal models of hybrid in-person and virtual care will need to consider various issues, including where and when virtual care can substitute for or augment in-person care for women Veterans; what scenarios or specialty visit types require an in-person encounter; safety considerations in remote visits; and women Veterans' preferences around modalities of care. Fortunately, VHA has been investing substantially in understanding such issues, via national research and quality improvement initiatives.

EMERGENCY DEPARTMENT AND URGENT CARE

- Nearly a quarter of women Veteran VHA users (22%) had at least one VHA-based Emergency Department (ED) visit in FY19, and 9% had at least one VACC ED visit.
- Patterns of FY19 ED use among women Veterans varied by their sociodemographic characteristics.
  - Among racial/ethnic groups, the proportion of women with any VHA ED use was largest for Black or African American women (26%), followed by Hispanic or Latina women (24%), and American Indian or Alaska Native women (22%). The proportion of women using VACC EDs was largest for American Indian or Alaska Native women (10%) and White women (10%).
  - Examining urban/rural residence, the proportion of women Veteran VHA patients using VHA EDs was greatest among women living in urban areas (24%). The proportion using VACC EDs was greatest for women living in highly rural areas (12%).
- The reasons women Veterans visited an ED varied by age group, but in both VHA and VACC and across age groups, chest pain, low back pain, and urinary tract infections were among the most common.
- With the COVID-19 pandemic, there was a substantial decline in the number of VHA ED encounters, and even by the end of FY20 (six months into the pandemic), the number of VHA ED encounters had not yet recovered to pre-pandemic levels.

IMPLICATIONS

Far more women Veterans used VHA EDs than used VA-purchased Community Care (VACC) EDs, highlighting the continued importance of the availability of acute, unscheduled care in VHA-based settings, even as access to VACC expands. Efforts to examine the quality of and Veterans' experiences with purchased ED care and to identify optimal approaches to coordination between VHA and VACC settings are of great relevance for women as they navigate across distinct settings of care.

Among racial/ethnic groups, Black or African American and Hispanic or Latina women were the two groups for whom the largest proportions visited VHA EDs. Outside VHA, it has been suggested that these groups face critical differences in health care access owing to higher rates of uninsured care and a variety of structural, cultural, and linguistic barriers. Many of these barriers should be reduced for Veterans in an integrated health system like VHA, although research has shown Black or African American Veterans are more likely than White Veterans to lack a non-ED usual source for health care.

While VHA has a robust network of over 1,000 geographically distributed primary care clinics, VHA currently operates only 111 EDs in the country, plus another 35 Urgent Care Centers. Prior research shows driving time to a VHA ED/urgent care center is the greatest predictor of VACC urgent care use. Thus, it is not surprising that in FY19 the proportion of women Veteran VHA patients using VACC EDs was greatest for women living in highly rural areas. Likewise, the fact that the proportion using VACC ED services among racial/ethnic groups was largest for American Indian or Alaska Native women could reflect alternatives to VHA (for example, they may have access to care through the Indian Health Service that could be captured in VACC data files) and geographic barriers in accessing VHA-based acute care (for example, there is no VHA ED in the state of Alaska).

The reasons women Veterans visit an ED provide insights about the breadth of services that should be available to them. VHA and VACC EDs must ensure not only appropriate reproductive care for women of childbearing age, but also access to the full range of standard gynecologic, medical, and mental health

ED services for women Veteran users who have distinct health care needs across their life span. Attention to principles of trauma-informed care and suicide prevention requires particular attention in all ED settings.

VA Health Connect is a new program designed to modernize VHA Clinical Contact Centers (CCCs), which will ultimately be available to Veterans 24 hours a day, 7 days a week, as an alternative to VHA EDs for many low-acuity conditions. The CCCs will include services like scheduling and administrative services, clinical triage, virtual clinic visits, and pharmacy services. VHA-wide implementation of CCCs is ongoing and could have implications for VHA ED and Primary Care use.

VHA-COVERED BIRTHS

- The number of women Veteran VHA patients with obstetric deliveries paid for by VHA increased to more than 5,500 in FY19, tripling the number 10 years prior.
- Notably, a quarter of these births were in Veterans of advanced maternal age (35+ years old) and a quarter were among Black or African American Veterans—both groups known to experience higher risk of severe maternal morbidity.

IMPLICATIONS

The past decade's rise in VHA-covered deliveries occurred contemporaneously with major VHA policy changes favorable to parenting Veterans, including the FY10 expansion of benefits to cover the newborn's first week of life. More recent developments include expansion of fertility services, maturation of the VHA-wide Maternity Care Coordinator program and legislation requiring VHA to offer training for community care clinicians on perinatal care of Veterans. Coordinated and inclusive services are crucial given that many Veterans who use VHA often have intersecting characteristics associated with adverse pregnancy outcomes and severe maternal morbidity, such as belonging to a minoritized racial/ethnic group, advanced maternal age, or serious comorbidities like post-traumatic stress disorder (PTSD).

Endnotes

1 Frayne SM, Phibbs CS, Friedman SA, Berg E, Ananth L, Iqbal S, Hayes PM, Herrera L. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 1. Sociodemographic characteristics and use of VHA care. Women Veterans Health Strategic Health Care Group, Veterans Health Administration, Department of Veterans Affairs, Washington DC. December 2010. Available at https://www.womenshealth.va.gov/WOMENSHEALTH/docs/Sourcebook_FINAL.pdf.

2 Frayne SM, Phibbs CS, Friedman SA, Saechao F, Berg E, Balasubramanian V, Bi X, Iqbal S, Mattocks K, Haskell S, Zephyrin L, Torgal A, Whitehead A, Hayes PM. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 2. Sociodemographics and use of VHA and non-VA care (Fee). Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. October 2012. Available at https://www.womenshealth.va.gov/WOMENSHEALTH/docs/SourcebookVol2_508c_FINAL.pdf.

3 Frayne SM, Phibbs CS, Saechao F, Maisel NC, Friedman SA, Finlay A, Berg E, Balasubramanian V, Dally SK, Ananth L, Romodan Y, Lee J, Iqbal S, Hayes PM, Zephyrin L, Whitehead A, Torgal A, Katon JG, Haskell S. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 3. Sociodemographics, utilization, costs of care, and health profile. Women's Health Evaluation Initiative, Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. February 2014. Available at https://www.womenshealth.va.gov/WOMENSHEALTH/docs/Sourcebook_Vol_3_FINAL07-22-14.pdf.

4 Frayne SM, Phibbs CS, Saechao F, Friedman SA, Shaw JG, Romodan Y, Berg E, Lee J, Ananth L, Iqbal S, Hayes PM, Haskell S. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 4: Longitudinal trends in sociodemographics, utilization, health profile, and geographic distribution. Women's Health Evaluation Initiative, Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. February 2018. See https://www.womenshealth.va.gov/WOMENSHEALTH/materials-and-resources/publications-and-reports.asp.

5 Data in Sourcebook Volume 5 must be interpreted subject to several caveats: (1) The data represent only Veterans who used VHA care in the years examined, rather than all Veterans or all VHA enrollees. The characteristics of Veterans who did not choose to use VHA could differ from the characteristics of those who did. (2) This report does not examine non-Veteran women who used VHA services. (3) Utilization data include outpatient VHA care and VA-purchased Community Care (VACC) available in national VHA databases, but do not include care received privately by women who use VHA. (4) All data in Sourcebook Volume 5 are descriptive; no statistical significance testing is presented for the differences described here. (5) Due to limitations of the source data, Sourcebook Volume 5 uses "woman" and "man" as a dichotomous construct throughout, an approach that does not reflect current understanding of sex and gender as encompassing more than the woman/man, female/male dichotomies. Chapter 1 provides more information about these caveats.

6 Sourcebook Volume 5 does not present the prevalence of conditions, although the prevalence of diagnosed conditions can be found in the Supplemental Appendix. Instead, it provides information about what conditions are diagnosed in a VACC setting, to provide insight into the types of conditions being addressed in VACC contexts.

1. Introduction

Background

Despite women serving in every U.S. military conflict since the American Revolution, they were not recognized as Veterans when President Abraham Lincoln urged Congress to authorize Veterans benefits assistance "to care for him who shall have borne the battle, and for his widow, and his orphan." Today VA has a new mission statement: "To fulfill President Lincoln's promise to care for those who have served in our nation's military and for their families, caregivers, and survivors."[1]

When the Congressional Government Accountability Office (GAO) released its first comprehensive report addressing Veterans Health Administration (VHA) care for women Veterans in 1982 women represented an extreme numeric minority group within an organization originally designed to meet the health care needs of men. Reports by the GAO and the VA Office of Inspector General in the late 1980s and early 1990s documented quality gaps in VHA women's health care delivery.

By the mid-1990s, major change had begun. Over the ensuing years, VHA began rolling out numerous initiatives designed to improve access and quality of care for women Veterans. Among these were Comprehensive Women Veterans Health Centers, Continuing Medical Education offerings in women's health, postdoctoral fellowship training programs in women's health, the Women's Health Sciences Division of the National Center for PTSD, women's mental health specialty programs, a national Military Sexual Trauma Support team, and active solicitation of women's health services research projects.

Building on these earlier achievements, in late 2008 VA's Women's Health Services (WHS), now Office of Women's Health (OWH),[2] launched a plan to redesign the women's health care delivery system within VHA; the plan was detailed in VHA Handbook 1330.01 in 2010.[3] A fundamental component of this new vision was to ensure women Veterans receive comprehensive primary care from Women's Health Primary Care Providers (WH-PCPs)[4] proficient in women's health care. Every VHA Health Care System in the U.S. now has a full-time Women Veterans Program Manager tasked with advocating for the health care needs of women using that facility. Mini-residencies in women's health with didactic and practicum components have been disseminated system-wide to enhance clinician proficiency.[5] To date, 10,000 clinicians (including primary care and emergency physicians and nurses) have been trained nationally, including approximately 900 trained via the Rural Women's Health Mini-Residency Program—a pathway for accelerating access to women's health training for rurally based primary care providers and nurses.[6]

Meanwhile, VHA is actively recruiting additional providers with experience in women's health care. Numerous initiatives have been launched to improve access to state-of-the-art reproductive health care, mental health services, and emergency services for women Veterans; others have focused on enhancing care coordination through technological innovations such as registries and mobile applications. Communications initiatives have raised awareness about the top-notch health care services women Veterans should expect at every VHA facility. OWH oversees these efforts nationally.

As part of this dynamic systems' redesign, OWH identified the need for data to inform policy and program planning. Although highly informative data on women Veterans are available from the research literature[7,8,9,10,11,12,13,14] and various VHA reports, e.g., VHA Chief Strategy Office and the searchable VHA Support Service Center (VSSC) Data Cube, OWH identified the need for detailed data tailored to its strategic planning objectives.

To address this need, OWH approached women's health investigators with expertise in large database research at the VA Health Services Research and Development (HSR&D) Center for Innovation to Implementation (Ci2i)[15] and the VA Health Economics Resource Center (HERC)[16] at the VA Palo Alto Health Care System. The resulting partnership was called the Women's Health Evaluation Initiative, or WHEI. Since 2009, WHEI has been conducting analyses in response to queries by OWH. The analyses that WHEI produces are relevant to groups beyond OWH, including policymakers, clinicians, managers, researchers, advocates, and women Veterans. To facilitate dissemination of information to a broader audience, a series of Sourcebooks have presented major findings regarding key characteristics of women Veterans.

Sourcebook Volume 5 builds on Volumes 1-4; please see the VHA Office of Women's Health publications and resources page for prior reports.[17] As the present Sourcebook is based on prior Sourcebook volumes, some text is identical to prior volumes. Volume 1[18] described sociodemographic characteristics and VHA health care utilization of women Veterans in fiscal year 2009 (FY09). Volume 2[19] provided updated information for FY10 and described urban/rural status as well as women Veterans' use of VA-purchased Community Care.[20] Volume 3[21] provided updates through FY12 and also included information about women Veterans' race/ethnicity; service in Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND); costs of care; and medical conditions. Volume 4[22] characterized longitudinal trends in sociodemographic characteristics, health care utilization, and health conditions of women Veterans who used VHA in FY00, FY05, FY10, and/or FY15; it also provided information about trends in cross-facility variability in the number of women Veteran users over time.

The current report, Volume 5, describes trajectories in cohort size, sociodemographic characteristics, and geographic distribution of women Veterans who used VHA between FY10 and FY20 as well as trajectories in patterns of health care use. In addition, it describes use of VA-purchased Community Care (VACC), modality of VHA outpatient care (In-person, Telephone, Telehealth), and type of VHA outpatient care use (primary care, mental health/substance use disorder [MH/SUD] care, specialty care), overall and by sociodemographic characteristics. Sourcebook Volume 5 also presents information on women Veterans' Emergency Department use in VHA and in VACC between FY19 to FY20, touching briefly on Urgent Care use in these settings. Lastly, it describes VHA-covered births in FY19.

Starting in March 2020, responses to the COVID-19 pandemic greatly impacted the ways Veterans sought and received care. Shelter-in-place orders and related rapid transitions to virtual care affected health care use and the settings in which care was received. COVID-19-related screening, prevention, and treatment needs influenced the types of care sought. Therefore, since some FY20 data are included in Sourcebook Volume 5, this volume includes caveats to describe possible effects of the COVID-19 pandemic.

COMMENT REGARDING THE USE OF THE PHRASE "WOMEN VETERANS"

"Sex is a multidimensional biological construct based on anatomy, physiology, genetics, and hormones…. Gender can be broadly defined as a multidimensional construct that encompasses gender identity and expression, as well as social and cultural expectations about status, characteristics, and behavior as they are associated with certain sex traits." National Institutes of Health Office of Research on Women's Health.[23]

In this Sourcebook, the phrase "women Veterans" refers to VHA users with a "sex" field coded as "female" in VHA administrative data. An understanding of the limitations of this data source is important for contextualizing results presented in this Sourcebook and interpreting the gender-related terms used throughout this volume.

The sex field in VHA administrative data is meant to reflect sex assigned at birth rather than gender

identity; it includes only two options (female, male) and does not include additional options for sex assigned at birth. Historically when there was not a separate gender identity variable in VHA databases, some transgender/gender diverse Veterans successfully petitioned for their "sex" field to be edited to match their gender identity. More recently, a separate gender identity field has been added to VHA administrative data, but this field is still being populated. The ultimate goal will be to have a fully populated "sex" field that reflects sex assigned at birth (relevant to biological aspects of health care) and a fully populated "gender" field that reflects current gender identity. However, at present, the sex field may not always reflect the sex assigned at birth, and the gender field is not yet sufficiently populated for use in this report.

This means that the term "woman" in this Sourcebook predominantly describes people who were assigned female sex at birth. However:

- Among people assigned female sex at birth but whose gender identity is male, non-binary, or another gender identity:
  - Some will be coded as female in the sex field
  - Some will be coded as male in the sex field
- Among people assigned male sex at birth but whose gender identity is female, non-binary, or another gender identity:
  - Some will be coded as male in the sex field
  - Some will be coded as female in the sex field
- For people assigned intersex or another sex at birth, the sex field does not have a code to reflect this.

Furthermore, gender-diverse Veterans can have diverse needs for sex-related aspects of health care. For example, some transgender men/gender-diverse Veterans have a cervix and need routine cervical cancer screening. Some Veterans who do not identify as women give birth.

Also, some miscoding of the sex variable is inevitable. That means that even among Veterans whose birth sex matches their gender identity, data could have been entered incorrectly. This was a larger issue in the past when "male" was listed as a default for sex data entry but is expected to be infrequent in recent years of data.

For these reasons, the incomplete capture of gender is a limitation of the current data structure. It does not reflect current understanding of sex and gender as encompassing more than the woman/man, female/male dichotomies.

Nonetheless, because of the way that available databases are structured, Sourcebook Volume 5 uses "woman" and "man" as a dichotomous construct throughout. Representing only one in 10 VHA users, the women Veteran VHA users described in this Sourcebook are a numerical minority group in VHA, with unique health care needs. Therefore, it is important to report on this cohort, despite these limitations. At the same time, doing so may obscure the needs of an even smaller numerical minority—gender-diverse Veterans. The current data do not allow us to report on those special populations. However, as the gender field in VHA data becomes populated over the coming years, it will become possible to address these gaps in future reports.

Methods

Overview. For women Veterans who received medical care in the VHA between FY10 and FY20, this volume presents the number of women VHA users and their age, race/ethnicity, urban/rural status, service-connected (SC) disability rating, and geographic distribution as well as information about patterns of health care use. It also presents their utilization of VACC and direct VHA outpatient care in FY19 and FY20. Emergency Department and Urgent Care use and VHA-covered births are also presented. Detailed methods are included in the Online Technical Appendix.

Data for this volume were derived from several centralized VHA administrative files: Office of the Assistant Under Secretary for Health (ADUSH) Monthly Enrollment File, Corporate Data Warehouse (CDW) domains, VHA Medical SAS Datasets, Non-VA Inpatient Stays files, VACC files including emergency and urgent care data provided by the Office of Integrated Veteran Care, Observational Medical Outcomes Partnership Common Data Model (OMOP CDM) files, Planning Systems Support Group (PSSG) Geocoded Enrollee files, VHA Vital Status File, VHA Site Tracking Database, and the Managerial Cost Accounting (MCA)[24] National Data Extracts (NDEs), all described in the Online Technical Appendix. Data sources for variable creation span a 21-year period from FY00–FY20.

Cohorts of VHA users examined. This volume examines the characteristics of 11 separate fiscal year cohorts of users: women Veterans who used VHA services at least once in FY10 through FY20. For benchmarking purposes, men Veteran VHA users are also examined in each of these years. Note that many users use VHA on an ongoing basis, so an individual user may appear in more than one year's cohort. Veterans enrolled in VHA who did not use VHA services in any of the years examined are not included in this volume. Non-Veterans who used VHA services (e.g., with eligibility through CHAMPVA or TriCare) also are not included in this volume. For most analyses in Sourcebook Volume 5, percentages presented include Veteran VHA "users" in the denominator; "users" are those who used any type of outpatient or inpatient care through VHA or through VACC during the fiscal year being examined.[25,26,27]

The number of Veteran users in the denominator, by year is presented in Exhibit 1.A.

Exhibit 1.A. Number of Veteran Users, by Sex, by Fiscal Year

FY	Women	Men
FY10	316,961	5,010,173
FY11	337,986	5,137,274
FY12	362,241	5,220,855
FY13	390,292	5,300,482
FY14	413,174	5,346,724
FY15	439,951	5,417,847
FY16	462,711	5,464,248
FY17	483,552	5,480,756
FY18	509,120	5,517,288
FY19	536,636	5,564,701
FY20	556,135	5,498,487

Note that a slightly smaller denominator is used for some of the analyses reported in Sourcebook Volume 5. This is because of missing data for some variables. For example, a slightly smaller denominator is used for analyses reporting results by age due to missing date of birth data for a small number of Veterans.

User characteristics examined. Sociodemographic characteristics examined in this volume are age, race/ethnicity, urban/rural status, and service-connected (SC) disability rating. The geographic distribution of women Veteran users across the United States is also presented. This volume examines several types of health care utilization: [28] any utilization from a VHA facility or through VACC; VHA outpatient utilization by modality (i.e., In-Person, Telehealth, or Telephone); VHA outpatient utilization by type of care (i.e., primary care, MH/SUD care, specialty care), and Emergency Department and Urgent Care use through VHA and VACC. Diagnoses received during these Emergency Department visits are also presented. Finally, this volume examines the number of VHA-covered births among women Veterans. See Online Technical Appendix for details of the algorithms used to create these variables and the Supplemental Appendices for data validity checks completed and supplemental materials. [29]

Analyses. All data in this volume are descriptive and stratified by cohort year (FY10-FY20) and sex. Exhibit 1.B summarizes the analyses presented in each chapter of Sourcebook Volume 5. Implications for policy and practice, derived from the findings, appear at the end of each chapter.

Exhibit 1.B. Summary of Analyses, Stratified by Cohort Year and Sex

Chapter	Cohort years	VHA and/or VACC use	Utilization variables examined	Subgroups examined
2. Temporal Changes (Sociodemographic/ Geographic)	FY10-FY20	All users[a]	Users[b]	Age Race/ethnicity Urban/rural status SC disability rating Geographic distribution
3. Temporal Changes (VHA User Status)	FY10-FY20	All users	New users[c] Returning users[c] Intermittent users[c] Non-returners[c]	
4. VA-purchased Community Care (VACC)	FY19	VHA, VACC	VACC (vs. VHA[d]) Location of care	Age Race/ethnicity Urban/rural status SC disability rating VISN Conditions diagnosed in VACC setting
5. Modality of care	FY19, FY20	VHA	In-person Telephone Video Telehealth Store-and-Forward Telehealth Home Telehealth	Health Care System Age Race/ethnicity Urban/rural status SC disability rating
6. Type of care	FY19, FY20	VHA	Primary care MH/SUD care Specialty care Other care[e]	Age Race/ethnicity Urban/rural status SC disability rating
7. Emergency department (ED), Urgent care	FY19, FY20	VHA, VACC	Emergency care Urgent care[f]	Age Race/ethnicity Urban/rural status SC disability rating Diagnostic codes assigned during ED encounters
8. VHA-covered Births	FY19	VACC	Births	Granular age groups Race/ethnicity

Key: ED: Emergency Department; FY: Fiscal Year; MH/SUD: Mental Health/Substance Use Disorder; SC: Service-connected; VACC: VA-purchased Community Care; VHA: Veterans Health Administration; VISN: VA Integrated Service Network.

a. Benchmarked against all U.S. Veterans
b. Chapter 2 includes all Veteran VHA users: users of VHA and/or VACC services, outpatient and/or inpatient
c. *New users* are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior 10 fiscal years. *Returning users* are Veterans who used VHA services in a given fiscal year and in the prior fiscal year; they may or may not have also used VHA in years earlier than the prior fiscal year. *Intermittent users* are Veterans who used VHA services in a given fiscal year and in at least one of the prior 10 fiscal years, but who did not use VHA services in the

immediately preceding fiscal year. *Non-returners* in a given fiscal year are Veterans who received care in the immediately preceding year but who did not use VHA in the year being examined. In other words, for purposes of Sourcebook Volume 5, non-returners in a particular year are a subset of the users from the immediately preceding year. They may or may not return to VHA for care in subsequent years. Being a non-returner in a particular year may reflect infrequent use (less than once a year), attrition from VHA care, institutionalization, or death.

d. Chapter 4 primarily focuses on VACC use, but also examines how care is distributed across locations (VHA vs. VACC settings).
e. While Chapter 6 focuses on primary care, MH/SUD care, and specialty care, limited data on "Other" types of care are also included.
f. Chapter 7's main focus is Emergency Care, but limited data are also presented regarding Urgent Care.

Endnotes

1 In March 2023, VA announced its new mission statement: "To fulfill President Lincoln's promise to care for those who have served in our nation's military and for their families, caregivers, and survivors." New VA Mission Statement recognizes sacred commitment to all Veterans, their families, caregivers and survivors - VA News
2 Veterans Health Administration. Women Veterans Health Care. [Internet] Accessed April 2, 2023. https://www.womenshealth.va.gov/
3 Veterans Health Administration. Health Care Services for Women Veterans (VHA Handbook 1330.01). Washington, DC: US Department of Veterans Affairs, 2010. Available at https://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=5332.
4 Earlier versions of VHA Handbook 1330.01 referred to WH-PCPs as "designated women's health providers."
5 Baier Manwell L, McNeil M, Gerber MR, Iqbal S, Schrager S, Staropoli C, Brown R, Veet L, Haskell S, Hayes P, Carnes M. Mini-residencies to improve care for women veterans: A decade of re-educating Veterans Health Administration primary care providers. J Womens Health (Larchmt). 2022 Jul;31(7):991-1002. doi: 10.1089/jwh.2021.0033. Epub 2022 Jan 18. PMID: 35049359.
6 Sanders AM, Golden RE, Kolehmainen C, Brenton JK, Frayne SM. Implementation experience and initial assessment of a rural women's health training program in support of the U.S. Department of Veterans Affairs as a learning health system. Learn Health Syst. 2022 Aug 24;6(4):e10334. doi: 10.1002/lrh2.10334. PMID: 36263264; PMCID: PMC9576238.
7 Yano EM, Bastian LA, Bean-Mayberry B, Eisen S, Frayne S, Hayes P, Klap R, Lipson L, Mattocks K, McGlynn G, Sadler A, Schnurr P, Washington DL. Using research to transform care for women veterans: Advancing the research agenda and enhancing research-clinical partnerships. Womens Health Issues. 2011 Jul-Aug;21(4 Suppl):S73-83. doi: 10.1016/j.whi.2011.04.002. PMID: 21724148.
8 Danan ER, Krebs EE, Ensrud K, Koeller E, MacDonald R, Velasquez T, Greer N, Wilt TJ. An evidence map of the women veterans' health research literature (2008-2015). J Gen Intern Med. 2017 Dec;32(12):1359-1376. doi: 10.1007/s11606-017-4152-5. Epub 2017 Sep 14. PMID: 28913683; PMCID: PMC5698220.
9 Danan E, Ensrud K, Krebs E, Koeller E, Greer N, Velasquez T, MacDonald R, Wilt, TJ. An evidence map of the women veterans' health research literature (2008 – 2015). VA ESP Project #09-009; 2016. https://www.hsrd.research.va.gov/publications/management_briefs/default.cfm?ManagementBriefsMenu=eBrief-no119&eBriefTitle=Evidence+Map%3A+Women+Veterans%26apos%3B+Health+Research+Literature+%282008-2015%29)
10 Bean-Mayberry B, Yano EM, Washington DL, et al. Systematic review of women veterans' health: Update on successes and gaps. Womens Health Issues, 2011;21(4 Suppl), S84-97.
11 Yano EM, Frayne SM. Health and health care of women veterans and women in the military: Research informing evidence-based practice and policy. Womens Health Issues 2011;21(4 Suppl):S64-66.
12 Creech SK, Pulverman CS, Crawford JN, Holliday R, Monteith LL, Lehavot K, Olson-Madden J, Kelly UA. Clinical complexity in women veterans: a systematic review of the recent evidence on mental health and physical health comorbidities. Behav Med. 2021 Jan-Mar;47(1):69-87. doi: 10.1080/08964289.2019.1644283. Epub 2019 Aug 12. PMID: 31403895.
13 Katon JG, Zephyrin L, Meoli A, Hulugalle A, Bosch J, Callegari L, Galvan IV, Gray KE, Haeger KO, Hoffmire C, Levis S, Ma EW, Mccabe JE, Nillni YI, Pineles SL, Reddy SM, Savitz DA, Shaw JG, Patton EW. Reproductive health of women veterans: a systematic review of the literature from 2008 to 2017. Semin Reprod Med. 2018 Nov;36(6):315-322. doi: 10.1055/s-0039-1678750. Epub 2019 Apr 19. PMID: 31003246; PMCID: PMC6613775.
14 Carter A, Borrero S, Wessel C, Washington DL, Bean-Mayberry B, Corbelli J; VA Women's Health Disparities Research Workgroup. Racial and ethnic health care disparities among women in the Veterans Affairs Healthcare System: a systematic review. Womens Health Issues. 2016 Jul-Aug;26(4):401-9. doi: 10.1016/j.whi.2016.03.009. Epub 2016 Apr 29. PMID: 27138241.
15 https://www.ci2i.research.va.gov/CI2IRESEARCH/index.asp
16 https://www.herc.research.va.gov/include/page.asp?id=home
17 Veterans Health Administration. Women Veterans Health Care Publications and Reports [Internet]. Accessed April 2, 2023. https://www.womenshealth.va.gov/WOMENSHEALTH/materials-and-resources/publications-and-reports.asp.
18 Frayne SM, Phibbs CS, Friedman SA, Berg E, Ananth L, Iqbal S, Hayes PM, Herrera L. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 1. Sociodemographic characteristics and use of VHA Care. Women Veterans Health Strategic Health Care Group, Veterans Health Administration, Department of Veterans Affairs, Washington DC. December 2010.
19 Frayne SM, Phibbs CS, Friedman SA, Saechao F, Berg E, Balasubramanian V, Bi X, Iqbal S, Mattocks K, Haskell S, Zephyrin L, Torgal A, Whitehead A, Hayes PM. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 2. Sociodemographics and use of VHA and non-VA care (fee). Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. October 2012.
20 Note that the official term for care that VHA purchases for its patients has evolved over the 11-year time period covered by Sourcebook Volume 5; terms have included "Fee Basis Care," "Non-VA Medical Care," and, more recently, "Community Care" or "Care in the Community." This Sourcebook uses the term "VA-purchased Community Care" to distinguish this type of non-VA care from other types of care that VHA patients might receive outside of VHA (e.g., to distinguish it from care funded through Medicare, private insurance, etc.). Accessed March 8. 2023. http://www.va.gov/COMMUNITYCARE/
21 Frayne SM, Phibbs CS, Saechao F, Maisel NC, Friedman SA, Finlay A, Berg E, Balasubramanian V, Dally SK, Ananth L, Romodan Y, Lee J, Iqbal S, Hayes PM, Zephyrin L, Whitehead A, Torgal A, Katon JG, Haskell S. Sourcebook: Women Veterans

in the Veterans Health Administration. Volume 3. Sociodemographics, utilization, costs of care, and health profile. Women's Health Evaluation Initiative, Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. February 2014.

22 Frayne SM, Phibbs CS, Saechao F, Friedman SA, Shaw JG, Romodan Y, Berg E, Lee J, Ananth L, Iqbal S, Hayes PM, and Haskell S. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 4: Longitudinal trends in sociodemographics, utilization, health profile, and geographic distribution. Women's Health Evaluation Initiative, Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. February 2018.

23 Sex & Gender [Internet] Accessed April 2, 2023. https://orwh.od.nih.gov/sex-gender

24 Formerly Decision Support System, or DSS

25 Specifically, "users" are those identified as having used any VHA care (i.e., outpatient VHA care, outpatient VA-purchased Community Care, inpatient VHA care, inpatient VA-purchased Community Care, or one of several other categories of care) in the fiscal year being examined, based on the ADUSH Enrollment File. See Online Technical Appendix.

26 For cross-analysis consistency, Sourcebook Volume 5 uses "users" for all analyses, with the exception of some parts of Chapters 2 and 3.

27 In each year there was also a small group of users for whom sex data were missing, for whom sex could not be categorized (see Online Technical Appendix); they are not included in any of the denominators.

28 Inpatient utilization and costs of VHA care are not characterized in this volume; however, data on inpatient utilization are available in Sourcebook Volume 1, and data on cost are available in Sourcebook Volume 3.

29 Available at: https://www.womenshealth.va.gov/WOMENSHEALTH/materials-and-resources/publications-and-reports.asp#sourcebook-v5.

2. Temporal Changes in Sociodemographic and Geographic Characteristics

Overview

This chapter reports on changes among Veterans who used Veterans Health Administration (Veteran VHA users) between Fiscal Year (FY)10 and FY20. The final year of utilization data reported (FY20) reflects care received during a global pandemic.

This chapter includes:

- Trajectories of change in cohort size among women and men[1] Veterans who used VHA between FY10 and FY20.
- Trajectories of change in sociodemographic characteristics among women and men Veteran VHA users between FY10 and FY20 across the following subsections:

  - Age
  - Race/ethnicity
  - Urban/rural status
  - Service-connected (SC) disability rating

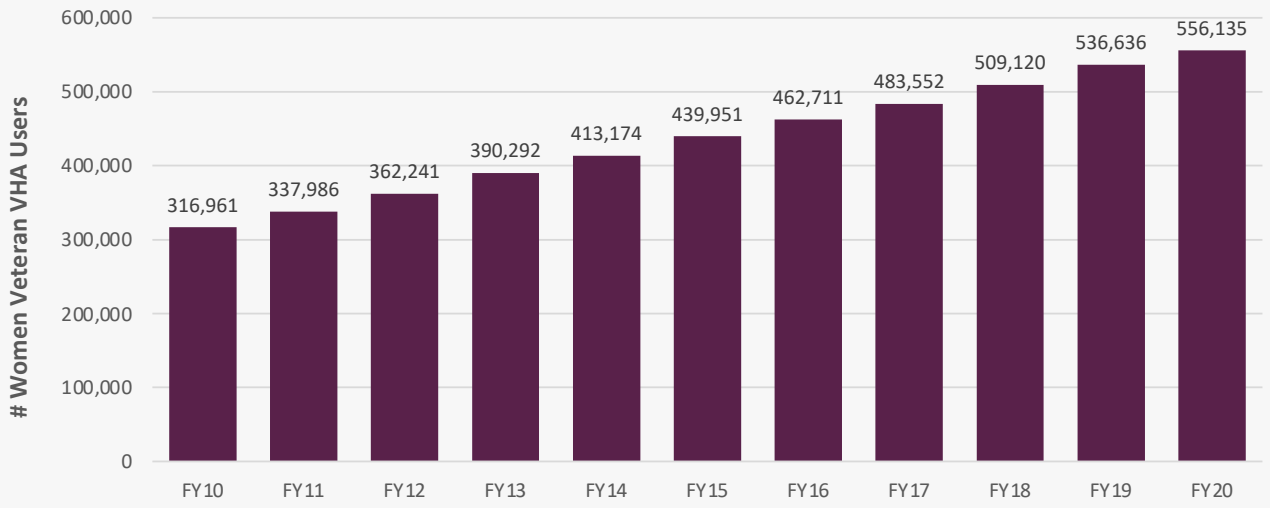
- Geographic distribution of women Veteran VHA users in each individual VHA Health Care System in FY10 and FY20.

Implications for policy and practice, derived from the findings, appear at the end of each section.

Trajectories of Change in Cohort Size of Women and Men Veteran VHA Users

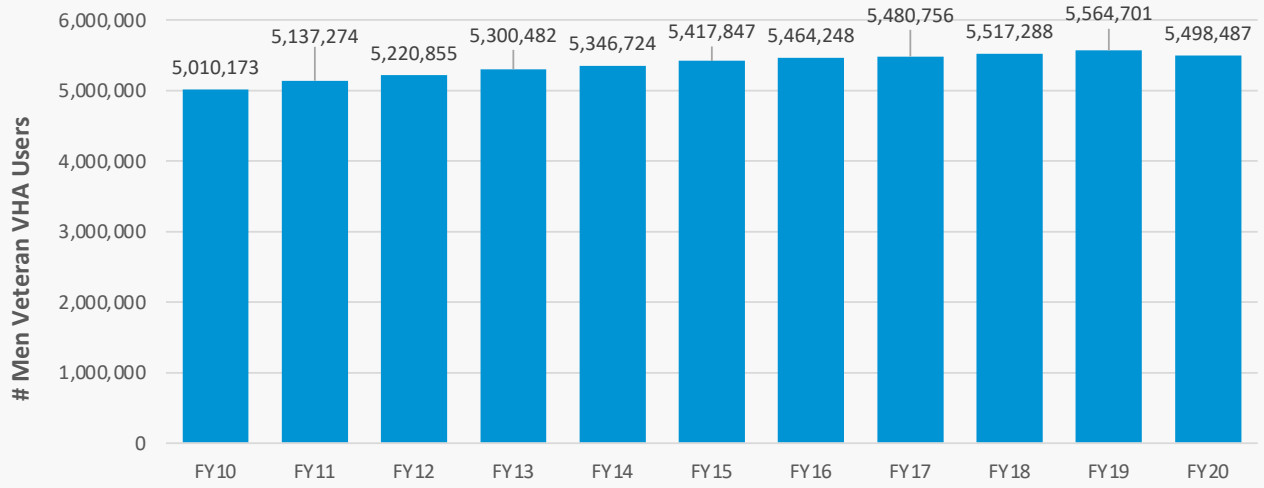
Women Veterans using VHA. Exhibit 2.A shows the number of women Veteran VHA users in each year from FY10 to FY20. Over half a million women Veterans used VHA in FY20, which represents nearly double the number of women who used VHA in FY10 (FY10: 316,961; FY20: 556,135, a 1.8-fold increase). The number of women Veteran VHA users increased every year between FY10 and FY20, as did the proportion of all VHA users who were women (FY10: 5.9%; FY20: 9.2%; data not represented graphically in Exhibit 2.A). The largest increase in the number of women users occurred between FY12 and FY13, which saw a 7.7% year-over-year increase. That rate of increase started to slow between FY15 and FY16, with a particularly small year-over-year increase between FY19 and FY20 (3.6%); note that FY20 was the year the COVID-19 pandemic began.

Exhibit 2.A. Cohort Size of Women Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users in each year. FY10: N=316,961; FY20: N=556,135
Source: WHEI Master Database

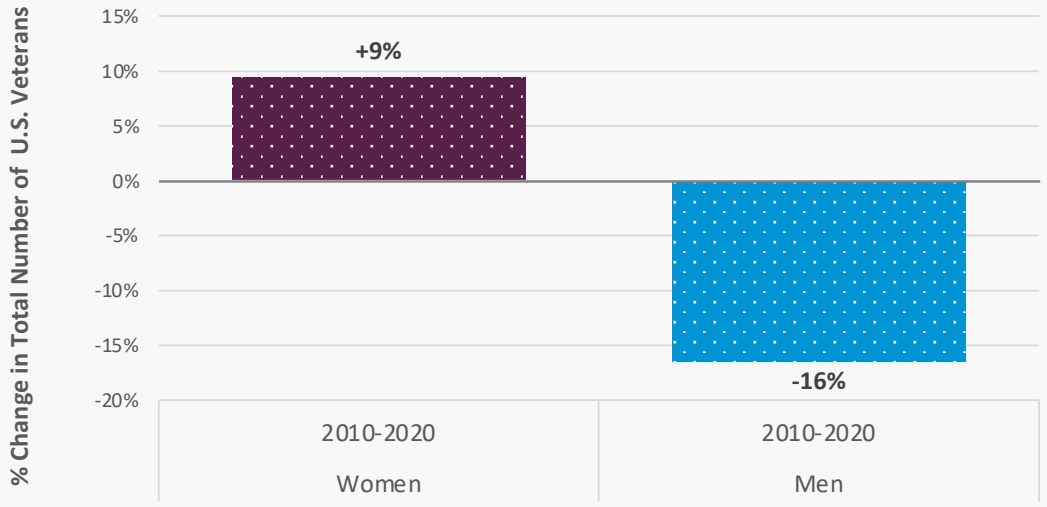
Exhibit 2.B. Cohort Size of Men Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Men Veteran VHA users in each year. FY10: N=5,010,173, FY20: N=5,498,487.
Source: WHEI Master Database

Men Veterans using VHA, compared to women. Exhibit 2.B provides the number of men Veteran VHA users each year from FY10 to FY20. It shows that the number of men Veteran VHA users increased between FY10 and FY20 (FY10: 5,010,173; FY20: 5,498,487), reaching a peak in FY19 (5,564,701). The rate of increase among men was slower than the rate of increase among women. As with women, the rate of increase among men became smaller over time. Unlike women, for whom there were ongoing increases in the number of users across the entire reporting period, between FY19 and FY20 there was a 1.2% year-over-year decrease in men Veteran VHA users. Potential contributors to this decline could include institutionalization or death among aging men Veterans, compounded by COVID-19–related deaths, in addition to other causes (attrition from VHA care or VHA use on a less than yearly basis).

Exhibit 2.C. Estimated Percent Change in the Total Number of Living Women and Men Veterans in the United States from 2010 to 2020



Key: U.S. – United States
Notes: Findings portray the estimated change in the total number of living Veterans in the United States.
Cohort: Estimated total number of living Veterans in the U.S. in each year. Women: 2010: N=1,840,000, 2020: N=2,012,760; Men: 2010: N=20,818,000, 2020: N=17,385,184.
Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics, Veteran Population.

Women and men who use VHA compared with all U.S. Veterans. The footnote to Exhibit 2.C shows the estimated total number of living women and men Veterans in the U.S. in 2010[2] and 2020.[3] Unlike other exhibits, this exhibit includes all living U.S. Veterans, regardless of whether they use VHA services. Exhibit 2.C demonstrates that the estimated number of women Veterans in the U.S. increased across this period (2010: 1,840,000; 2020: 2,012,760, a 1.1-fold increase). In parallel, the number of women Veterans using VHA increased at an even faster pace (FY10: 316,961; FY20: 556,135, a 1.8-fold increase; see Exhibit 2.A). Therefore, the estimated proportion of all U.S. women Veterans who used VHA increased over this period (FY10: 17% of U.S. women Veterans used VHA; FY20: 28% of U.S. women Veterans used VHA).

As shown in Exhibit 2.C, a different pattern emerged for men during this same period. The estimated total number of living men Veterans in the U.S. dropped from 2010 to 2020 (2010: 20,818,000; 2020: 17,385,184). Despite the more modest rate of growth of the men Veteran population in VHA (compared with women), men using VHA did increase numerically (FY10: 5,010,173; FY20: 5,498,487; see Exhibit 2.B) and also increased as a proportion of all men Veterans in the U.S. (FY10: 24% of U.S. men Veterans used VHA; FY20: 32% of U.S. men Veterans used VHA).

Notes to Interpretation: *Longitudinal data reported in Sourcebook Volume 5 reflect dynamic cohorts. The number of Veteran VHA users in a particular fiscal year reflects the aggregate number who used VHA at least once during that fiscal year; an individual Veteran might have used VHA in only one year or might have used VHA (continuously or intermittently) across more than one year. The same is true for estimates of the number of Veterans in the U.S. in any particular calendar year. The same individual might be a Veteran in more than one fiscal year, but in any given year new Veterans join the cohort and other Veterans leave the cohort.*

These data reflect the VHA system at a national level. Specific geographic regions or individual VHA facilities may have experienced greater or lesser increases in the women Veteran VHA user population.

Not all Veterans enrolled in VHA use VHA services in a particular year. This section presents the estimated proportion of the U.S. Veteran population who used VHA in each year examined. The focus here is on Veterans who used VHA in a particular year, not on all Veterans enrolled in VHA in a particular year.

IMPLICATIONS

The number of women Veterans using VHA services increased 1.8-fold between FY10 and FY20. During that same period, the share of the total U.S. women Veteran population using VHA also increased so that by FY20 more than one in four U.S. women Veterans chose to use VHA services in that year. This increase could reflect VHA's efforts to improve care for women Veterans. Women Veterans report high levels of trust in VHA providers, especially when provided with gender-sensitive care,[4] and Veterans receiving care from designated women's health care providers report greater satisfaction with care.[5] If increasing use continues among the large group of women Veterans who currently do not use VHA, demands on VHA delivery systems for women's health services will further accelerate.

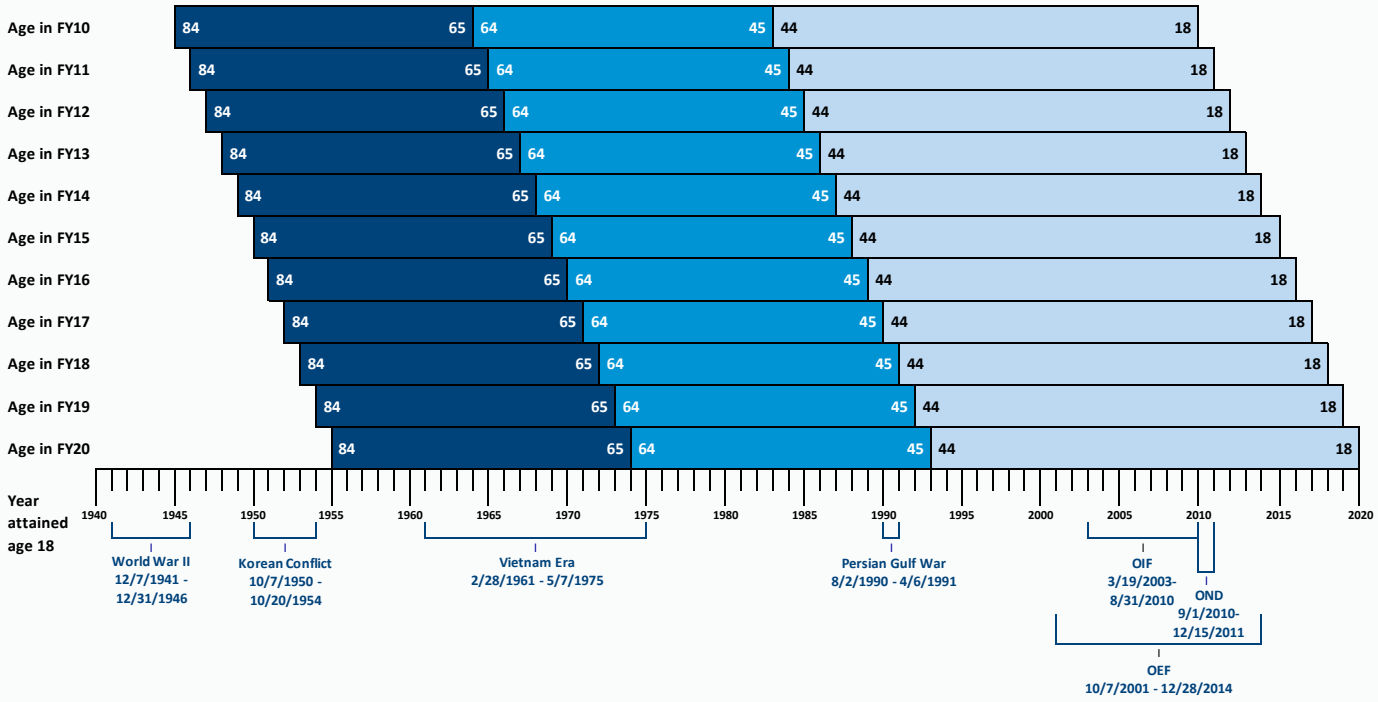
Trajectories of Change in Sociodemographic Characteristics of Women and Men Veteran VHA Users

This section describes changes in sociodemographic characteristics among women and men Veteran VHA users between FY10 and FY20 across four subparts: age, race/ethnicity, urban/rural status, and service-connected (SC) disability rating status.

AGE

Women Veteran VHA users span the full adult lifespan, from the late teen years to more than 100 years of age. Many joined the military in their late teens or early 20s, although some joined at an older age. Therefore, the age distribution of women Veteran VHA users, in part, reflects war-era cohort effects. Exhibit 2.D illustrates how a Veteran's age during the cohort year examined (FY10-FY20) could relate to a war era or eras during which the Veteran might have served in the military, depending on the Veteran's age on joining and leaving the military.[6] For example, within the FY10 Veteran user cohort (top row), a Veteran who was 64 years old in FY10 (age shown in the middle segment of the top row) would have been 18 years old in 1964; if the Veteran was in the military at age 18, then the Veteran would have served during the Vietnam War Era (which lasted from 1961-1975).[7,8]

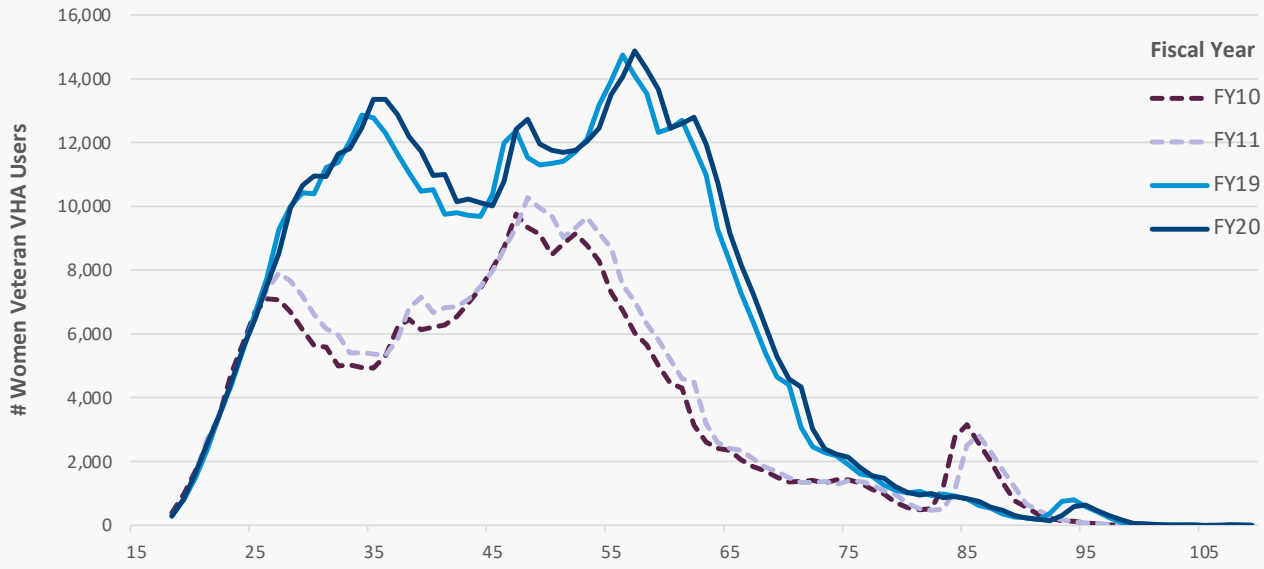
Exhibit 2.D. Timeline: War Eras and Their Potential Relationship to Age Cohorts



Key: FY – Fiscal Year, Operation Enduring Freedom (OEF); Operation Iraqi Freedom (OIF); Operation New Dawn (OND)
Notes: Not listed are Operation Inherent Resolve, which began in October 2014, Operation Freedom's Sentinel, which began in January 2015 after the U.S. officially ended OEF, and Operation Enduring Sentinel, which began in October 2021 and is beyond the reporting period of this Sourcebook.
Sources: WHEI synthesis of dates extracted from U.S. Congressional Research Service.

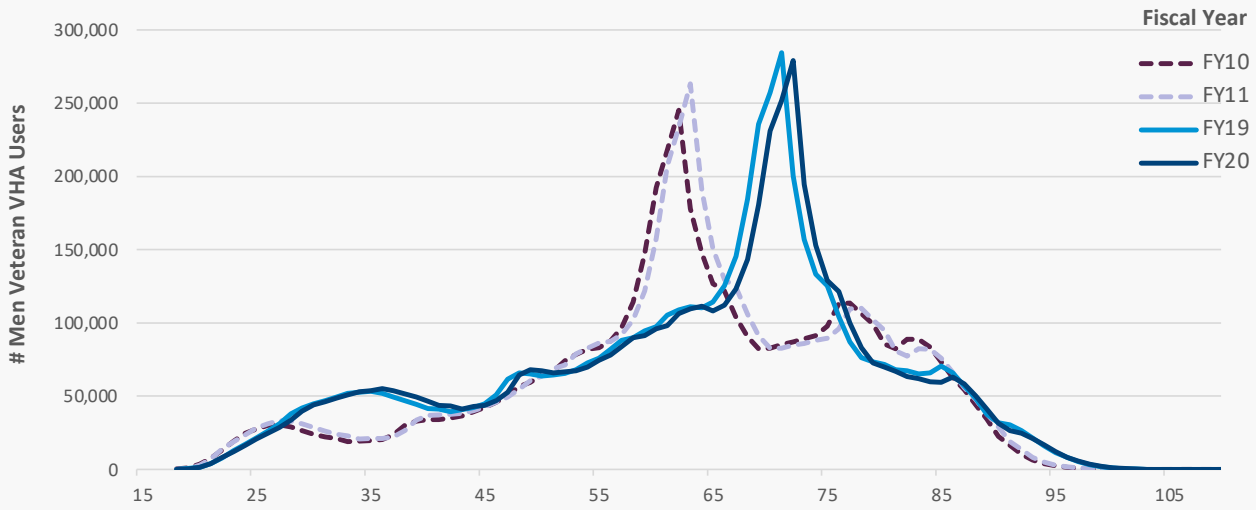
Women, age distribution. Exhibit 2.E shows the number of women Veteran VHA users at each age in FY10 and FY20, as well as in two intervening years (FY11 and FY19). In FY10, the distribution had three main peaks. The tallest peak was bifurcate with maximums at ages 48 and 53. The second largest peak had a maximum at age 27, and the third largest peak had a maximum at age 86. By FY20, the peaks had shifted forward. The peak that had been tallest in FY10 was even taller in FY20 and no longer bifurcated, with a maximum at age 58 and a small secondary shelf with a maximum at age 63 years. The second tallest peak in FY10 was even taller in FY20, with a maximum at age 37. The third peak from FY10 became a very small peak in FY20, with a maximum at age 96, perhaps, in part, due to death or transfer to long-term care facilities among the oldest group of women. Further, by FY20 a substantial new peak had appeared, with its maximum at age 49. Of note, the total area under the curve in Exhibit 2.E is much greater for the FY20 cohort than for the FY10 cohort, again showing that the total number of women Veteran VHA users grew substantially over this period (also see Exhibit 2.A, which demonstrates the same effect).

Exhibit 2.E. Age Distribution of Women Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) in each year. FY10: N=316,926, FY11: N=337,968, FY19: N=536,418, FY20: N=555,967.

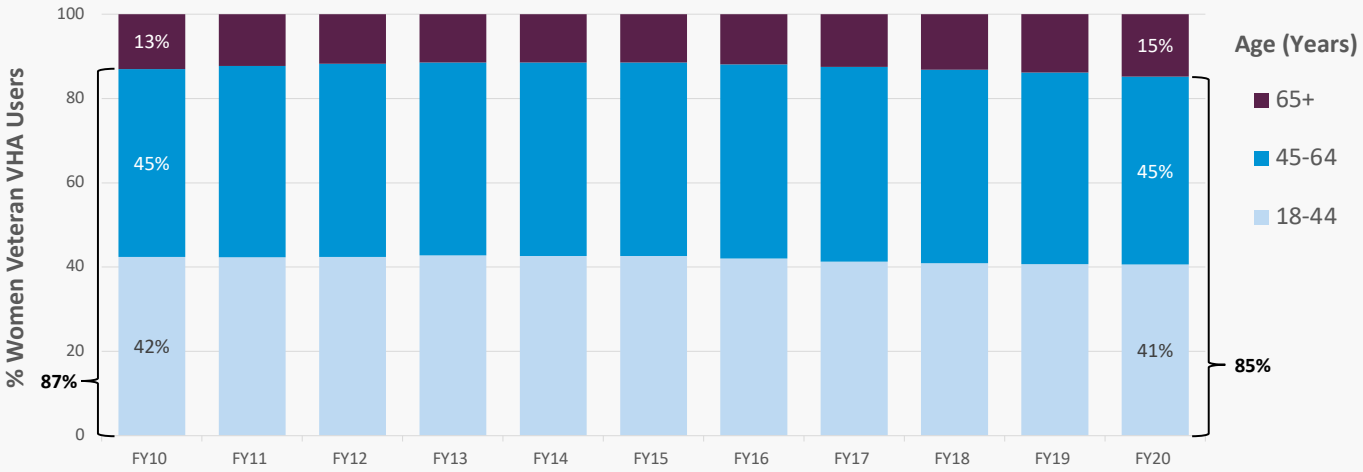
Exhibit 2.F. Age Distribution of Men Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Men Veteran VHA users with non-missing ages 18-110 years (inclusive) in each year. FY10: N=5,010,114; FY11: N=5,137,220; FY19: N=5,564,416; FY20: N=5,498,291.
Source: WHEI Master Database

Men, age distribution. Exhibit 2.F shows a different age distribution pattern over the years for men Veteran VHA users compared to the distribution for women seen in Exhibit 2.E and shows that men on average represent a substantially older population compared to women. The age distribution for men in FY10 had three main peaks, the tallest with a maximum at age 62, a smaller bifurcate peak with maximums at ages 77 and 82, and a small peak with a maximum at age 27. By FY20 the tallest peak had shifted to the right and was even taller, with a maximum at age 72 (note that for women in FY20, there was no corresponding peak, although there was a small shelf in the age distribution in this age range). The bifurcate peak from FY10 was mostly smoothed by FY20, presenting as only a small shelf with a maximum at age 86 years. The smallest peak from FY10 had moved to the right and grown taller by FY20 with a maximum at age 36 years (note that for women in FY20, one of the age distribution peaks similarly was at age 37 years).

Exhibit 2.G. Age Group Distribution of Women Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Due to rounding, the aggregated percentage of women younger than age 65 in FY20 does not equal the sum of the component values reported in this exhibit.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) in each year. FY10: N=316,926; FY20: N=555,967.
Source: WHEI Master Database

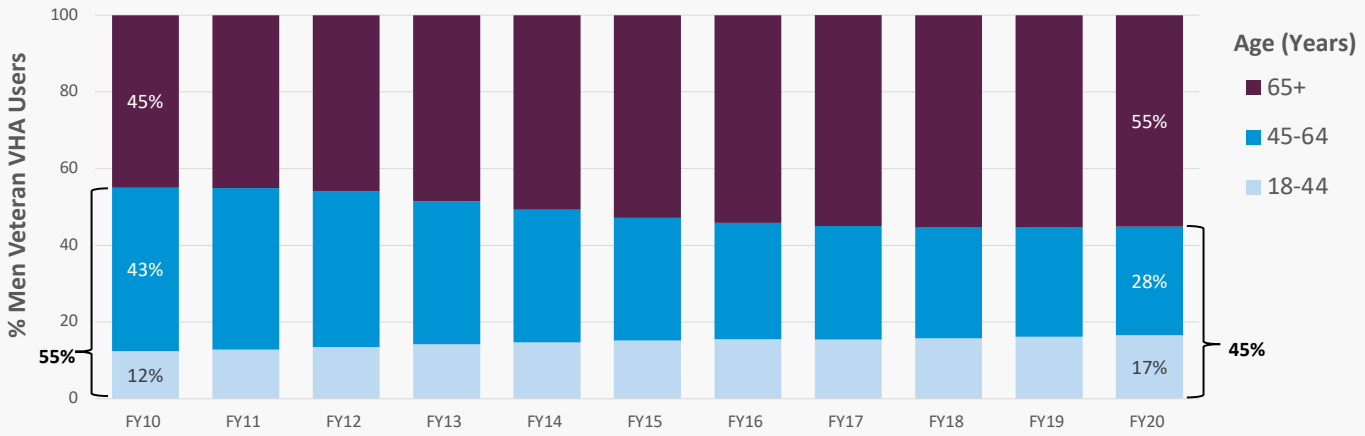
Women, age categories. Exhibit 2.G provides the proportion of women using VHA across age categories from FY10 to FY20. The total number of women Veteran VHA users 18-44 years old increased over time (FY10: 134,488; FY20: 225,653, a 1.7-fold increase). However, because there was slightly faster growth in the older age groups (see below), the proportion of women who were 18-44 years old decreased slightly (FY10: 42%; FY20: 41%).

Over this same period, the number of women Veteran VHA users who were 45-64 years old also grew. This age group grew numerically (FY10: 141,193; FY20: 247,899, a 1.8-fold increase), but was unchanged as a proportion of all women in VHA (FY10: 45%; FY20: 45%) (Exhibit 2.G).

Compared with the numbers of women Veteran VHA users in the 18-44 and 45-64-year-old age groups, relatively fewer women were 65+ years old. However, between FY10 and FY20, the number of women in this age cohort grew (FY10: 41,425; FY20: 82,415, a 2.0-fold increase), and this group increased as a proportion of all women (FY10: 13%; FY20: 15%) (Exhibit 2.G).

In aggregate, the majority of women were 18-64 years old throughout the FY10 to FY20 time period. At the same time, the proportion of women 18-64 years old decreased over this period (FY10: 87%; FY20: 85%). In smaller age increments, the proportion of all women Veteran VHA users also changed within each incremental age band (data not represented graphically in Exhibit 2.G): age 18-24 (FY10: 4%; FY20: 2%); age 25-34 (FY10: 19%; FY20: 17%); age 35-44 (FY10: 19%; FY20: 21%); age 45-54 (FY10: 28%; FY20: 21%); age 55-64 (FY10: 17%; FY20: 24%); age 65-74 (FY10: 5%; FY20: 11%); age 75-84 (FY10: 3%; FY20: 3%); and age 85+ (FY10: 4%; FY20: 1%). Thus, from FY10 to FY20, the proportion of women Veterans appearing in the 35-44, 55-64, and 65-74-year-old incremental age groups increased, and the proportion in the other incremental age groups remained unchanged or decreased.

Exhibit 2.H. Age Group Distribution of Men Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Men Veteran VHA users with non-missing ages 18-110 years (inclusive) in each year. FY10: N=5,010,114, FY20: N=5,498,291.
Source: WHEI Master Database

Age categories, men. Exhibit 2.H shows the proportion of men Veteran VHA users in each age group between FY10 and FY20. When compared to Exhibit 2.G, it shows that in every year examined, the population of women Veteran VHA users was substantially younger than the population of men Veteran VHA users. Far higher proportions of women than men were ages 18-44 years old, although the gap for women versus men has narrowed slightly (FY10: 42% vs. 12%; FY20: 41% vs. 17%). The gap between the proportion of women versus men in the 45-64-year-old age group widened over time (FY10: 45% vs. 43%; FY20: 45% vs. 28%), such that by FY20 a far greater proportion of women than men were in this age group. Looking at the 18-44 and 45-64-year-old age groups cumulatively (i.e., the combined age group, 18-64 years old), far higher proportions of women than men Veterans were younger than age 65, and the gap between women versus men has widened (FY10: 87% vs. 55%; FY20: 85% vs. 45%). Conversely, lower proportions of women than men Veterans were 65+ years old. Despite modest growth in the proportion of women Veterans aged 65+ years old, the proportion of men in this age group grew more, and so the gender gap for women versus men widened over time (FY10: 13% vs. 45%; FY20: 15% vs. 55%). The average age of women increased slightly (FY10: 48.3 years; FY20: 49.6 years; data not represented graphically in Exhibit 2.G). The average age for men remained stable (FY10: 63.4 years; FY20: 63.5 years; data not represented graphically in Exhibit 2.H).

Notes to Interpretation: *Cross-year changes in age distribution of women Veteran VHA users can occur for two reasons. First, the changes reflect the aging of women receiving ongoing care in VHA. Second, the changes reflect the age characteristics of dynamic cohorts of women who use VHA services over time. Annual cohorts change because of new women VHA users,[9] women ceasing to use VHA (through death, institutionalization, or attrition),[10,11,12] or women using VHA infrequently (and thus not being counted in some years). Within each age cohort, age distribution varies across the years examined (FY10 through FY20).*

IMPLICATIONS

The age distribution of women Veteran VHA users includes a wide tableau across young, middle, and older age groups. This differs from the pattern seen among men users, whose age distribution is characterized by a tall, but relatively narrow peak in the oldest age group. The age distribution of women Veterans suggests that VHA will need to prioritize care for women across the lifespan as the number of women it serves continues to grow.

The number of young women Veterans using VHA (age 18-44) grew between FY10 and FY20. This increase may reflect, in part, successful efforts to enroll women Veterans in VHA at military discharge or increasing awareness and availability of specific services for women throughout VHA. The large number of women in the youngest age group highlights the need to ensure ample capacity for clinical services for women in their childbearing years, including reproductive health services.[13,14]

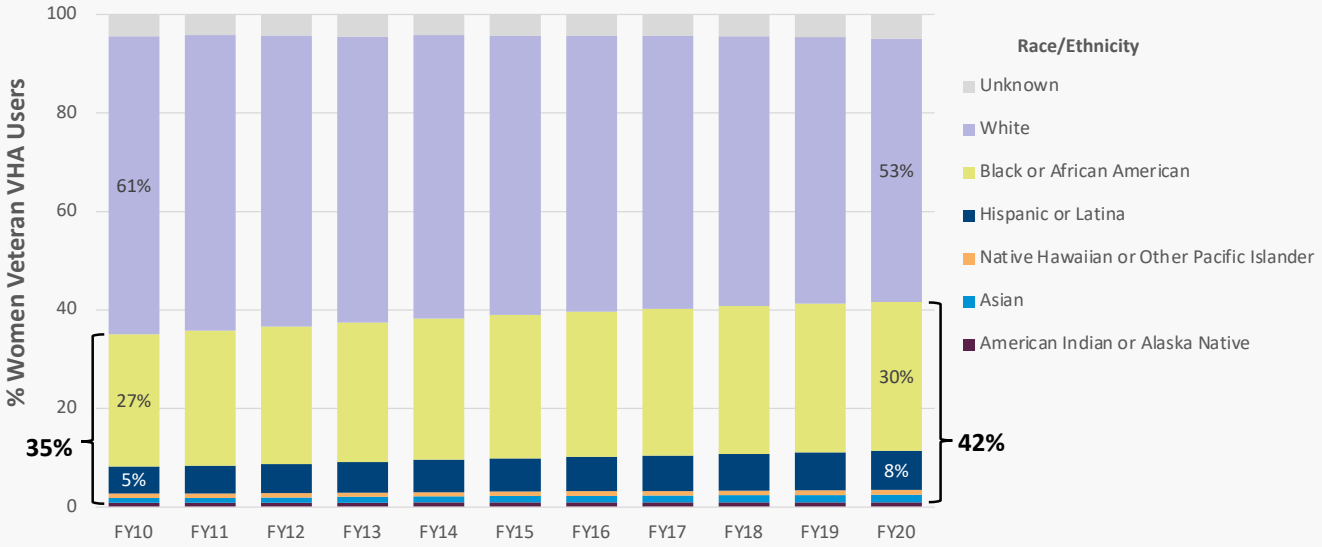
The largest group of women is in the middle age group (age 45-64); in this life stage, health issues can become more prominent, including menopause and the need for preventive care measures to avert late life disease. As the current middle age group of women becomes Medicare-eligible, coordination of care across health care systems for dual users of VHA and Medicare services may become increasingly important.[15,16]

The number of women age 65+ doubled between FY10 and FY20, and a surge of additional women entering this age group is around the corner. Unique issues face Veterans in this age group.[17] Women in the oldest group may require more intensive health care services as they age, including care for chronic conditions,[18,19,20] geriatric and extended care services, and, where applicable, support for their role as caregivers.[21] Some of the burden of illness among older women reflects the late effects of war; military exposures can have health consequences decades later.[22,23,24] The passage of the PACT Act in 2022 expands and extends VHA coverage for the effects of toxic exposures;[25,26] some of these effects may continue into later life or may not be experienced until later in life.

RACE/ETHNICITY

The five race categories (American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White) and one ethnicity category (Hispanic or Latino/Latina) presented in this Sourcebook follow the Office of Management and Budget's (OMB) Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.[27] Consistent with the American Medical Association Style guidelines,[28] we use the terms Hispanic or Latino/Latina as they are most similar to the options provided to VHA users and VHA personnel when entering this information into the medical record. For data reported herein, race/ethnicity is presented as a composite. A user's race/ethnicity is considered to be "Hispanic or Latino/Latina" if ethnicity is Hispanic or Latino/Latina (independent of the user's race). See Online Appendix (Technical Appendix), for further details.

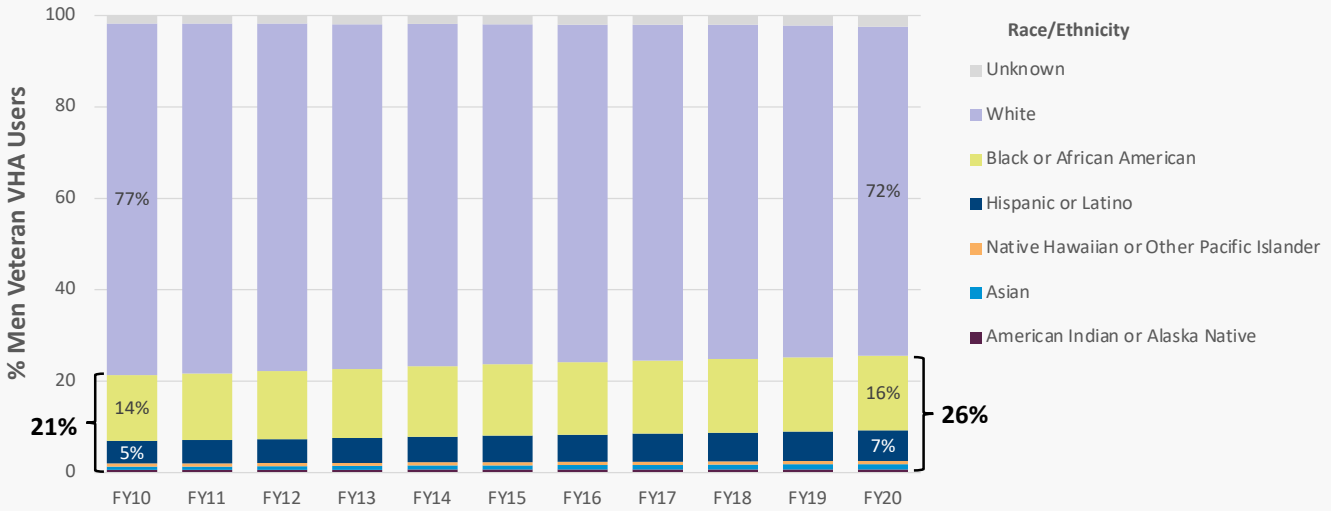
Exhibit 2.I. Race/Ethnicity of Women Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users in each year. FY10: N=316,961; FY20: N=556,135
Source: WHEI Master Database

Women, race/ethnicity categories. The number of women Veteran VHA users increased across all racial/ethnic groups between FY10 and FY20. There were also important changes in the proportion of women in each racial/ethnic group. Exhibit 2.I provides the proportion of women across racial/ethnic groups between FY10 and FY20. It shows an increase in the proportion of women VHA users who were Black or African American (FY10: 27%; FY20: 30%) and a doubling of the number of women in this group (FY10: 85,242; FY20: 167,920, a 2.0-fold increase; data not represented graphically in Exhibit 2.I). Hispanic or Latina women also increased as a proportion of women Veteran VHA users (FY10: 5%; FY20: 8%), and in absolute numbers (FY10: 17,336; FY20: 44,371, a 2.6-fold increase). While the increases between FY10 and FY20 in the number and proportion of American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander women may appear small, they represent large relative increases. For FY10 versus FY20, the proportion of women Veteran users who were American Indian or Alaska Native was 1% vs. 1% (FY10: 2,687; FY20: 5,403, a 2.0-fold increase), 1% vs. 2% for Asian women (FY10: 3,230; FY20: 8,529, a 2.6-fold increase), and 1% vs. 1% for Native Hawaiian or Other Pacific Islander women (FY10: 2,761; FY20: 5,419, a 2.0-fold increase). While remaining the largest group numerically, the proportion of women Veteran users who were White decreased from 61% in FY10 to 53% in FY20, even though the number of women in this group increased (FY10: 191,765; FY20: 297,182, a 1.5-fold increase). The proportion of women users with unknown race/ethnicity increased over the same period from 4% in FY10 to 5% in FY20 (FY10: 13,940; FY20: 27,311, a 2.0-fold increase).

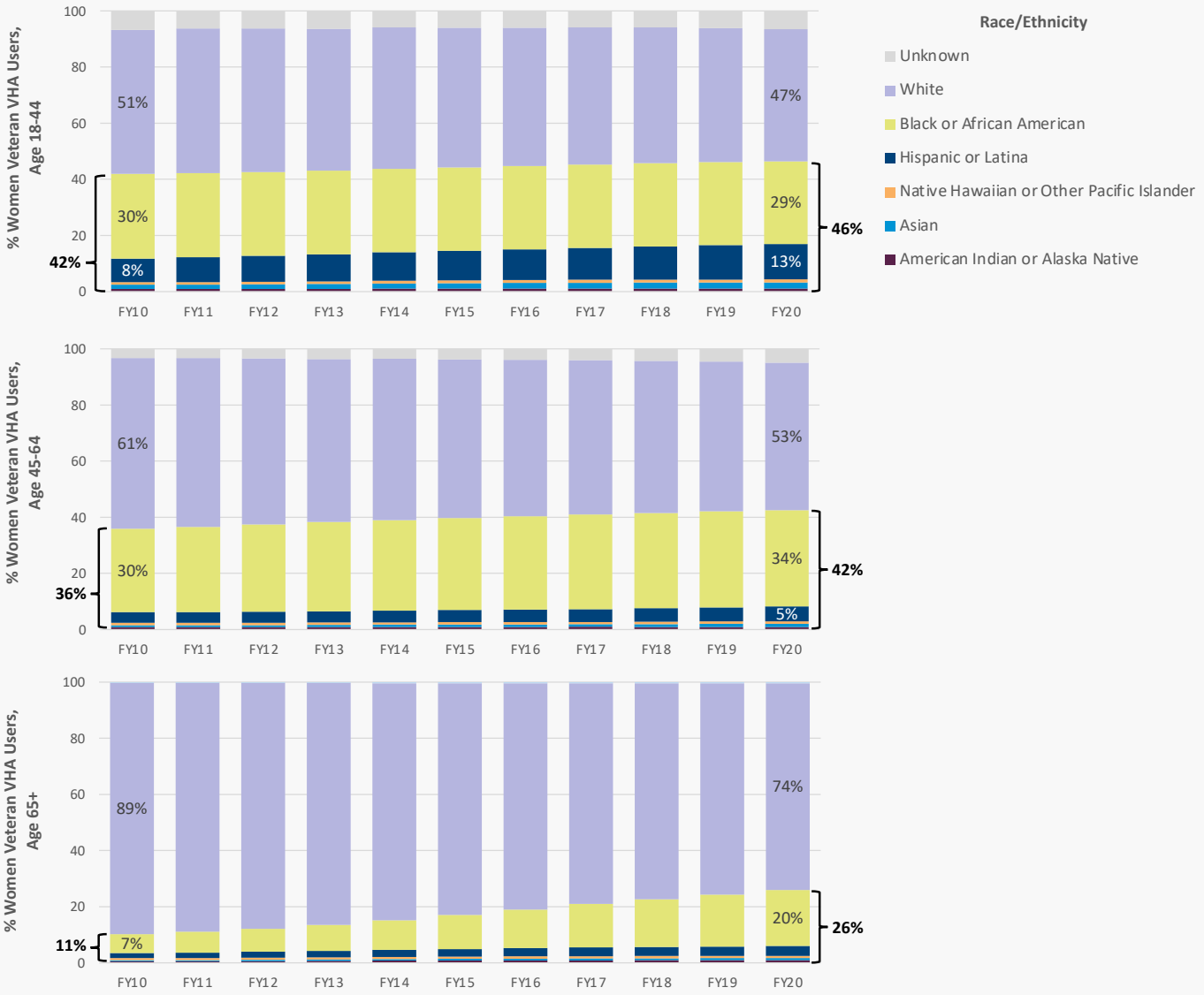
Exhibit 2.J. Race/Ethnicity of Men Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Men Veteran VHA users in each year. FY10: N=5,010,173; FY20: N=5,498,487.
Source: WHEI Master Database

Race/ethnicity categories, men. Exhibit 2.J provides the proportion of men across race/ethnicity categories between FY10 and FY20. When compared to Exhibit 2.I, Exhibit 2.J demonstrates that among Veteran VHA users, a larger proportion of women than men were Veterans of color across all years (FY10: 35% vs. 21%; FY20: 42% vs. 26%). Conversely, a smaller proportion of women than men were White over time (FY10: 61% vs. 77%; FY20: 53% vs. 72%). Exhibit 2.J shows that the proportion of men in some racial/ethnic groups grew over time. For FY10 versus FY20, the proportion of men Veteran users who were Black or African American was 14% vs. 16% and 5% vs. 7% for Hispanic or Latino men. Groups remaining stable between FY10 versus FY20 were American Indian or Alaska Native men (1% vs. 1%), Asian men (1% vs. 1%), Native Hawaiian or Other Pacific Islander men (1% vs. 1%), and men with unknown race/ethnicity (2% vs. 2%). The proportion of men Veteran users who were White decreased from FY10 to FY20 (77% vs. 72%).

Exhibit 2.K. Race/Ethnicity of Women Veteran VHA Users, by Age, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) in each year. FY10: N=316,926; FY20: N=555,967.
Source: WHEI Master Database

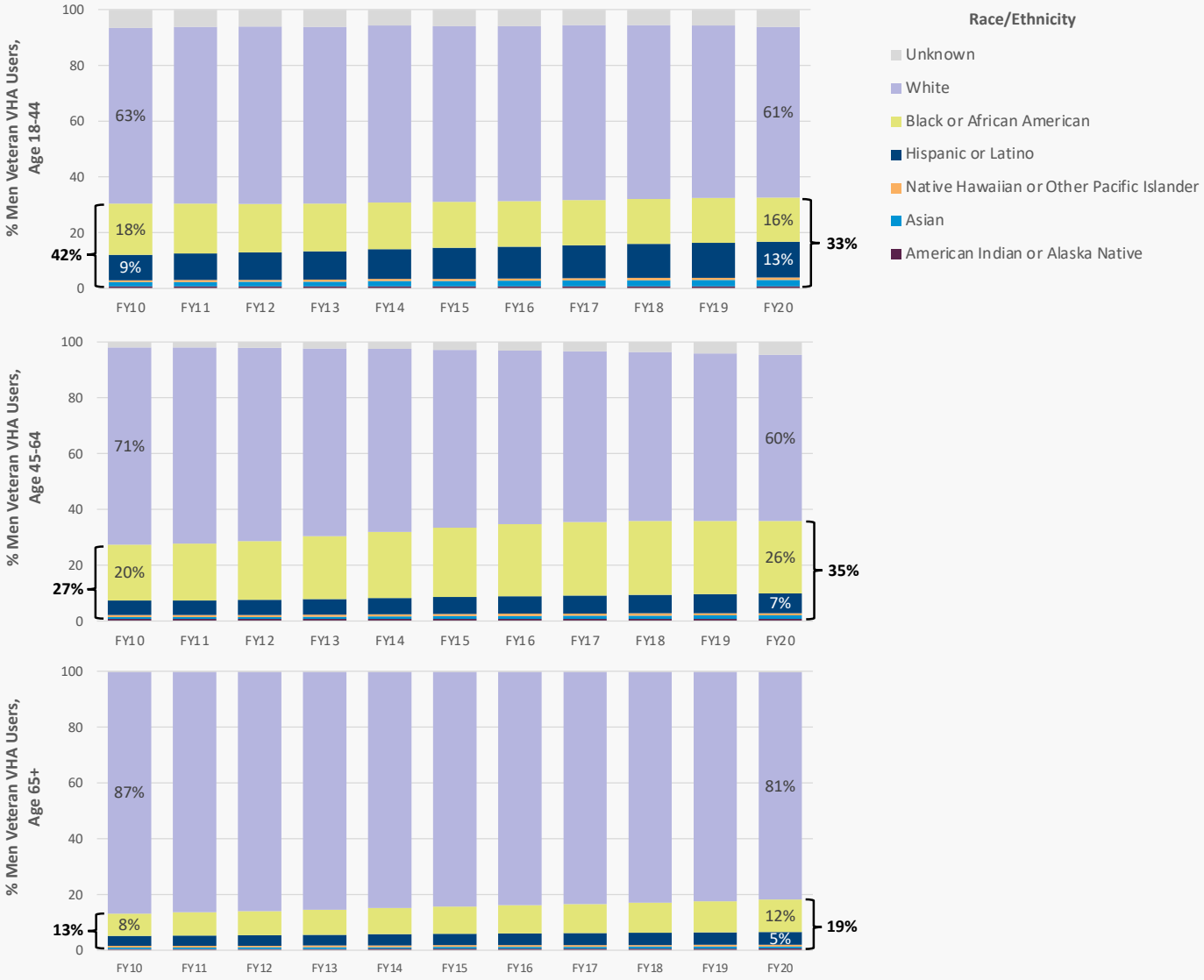
Women, race/ethnicity categories by age. Exhibit 2.K shows the proportion of women Veteran VHA users by race/ethnicity in each year by age category. Among the youngest cohort (18-44-year-olds), the proportion of women who were Veterans of color increased between FY10 and FY20 (FY10: 42%; FY20: 46%). This increase was attributable primarily to an increase in the proportion of women who were Hispanic or Latina (FY10: 8%; FY20: 13%). Although Black or African American women continued to be the largest group of women Veterans of color, the proportion of women in the youngest age group who were Black or African American decreased slightly over time (FY10: 30%; FY20: 29%).

The proportions across most other race/ethnicity groups among 18-44-year-old women remained constant: Asian women (FY10: 2%; FY20: 2%); American Indian or Alaska Native women (FY10: 1%; FY20: 1%); Native Hawaiian or Other Pacific Islander women (FY10: 1%; FY20: 1%). The proportion of 18-44-year-old women who were White decreased over time (FY10: 51%; FY20: 47%).

Exhibit 2.K shows that the proportion of 45-64-year-old women Veteran VHA users who were Veterans of color also increased between FY10 and FY20 (FY10: 36%; FY20: 43%). This was attributable primarily to increases in the proportion of women in this age group who were Black or African American (FY10: 30%; FY20: 34%), but also by increases in the proportion who were Hispanic or Latina women (FY10: 4%; FY20: 5%). The proportions of women who were American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander remained constant (FY10: 1%; FY20: 1% for each group). The proportion of women who were White decreased over time (FY10: 61%; FY20: 53%), perhaps due to the more racially/ethnically diverse younger women aging into this 45-64-year-old category.

The increase from FY10 to FY20 in the proportion of women who were Veterans of color was most pronounced among the 65+ year-old cohort (FY10: 10%; FY: 26%). The predominant contributor to this increase was the large increase in the proportion of 65+ year-old women who were Black or African American (FY10: 7%; FY20: 20%) (Exhibit 2.K). The proportion of women who were Hispanic or Latina also increased (FY10: 2%; FY20: 4%), as did the proportion who were Asian (FY10: <1%; FY20: 1%). The proportions who were American Indian or Alaska Native women or Native Hawaiian or Other Pacific Islander women remained constant (FY10: 1%; FY20: 1% for each group). As with the younger women, among women in the 65+ year-old group, the proportion who were White decreased over time (FY10: 89%; FY20: 74%).

Exhibit 2.L. Race/Ethnicity of Men Veteran VHA Users, by Age, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Men Veteran VHA users with non-missing ages 18-110 years (inclusive) in each year. FY10: N=5,010,114, FY20: N=5,498,291.
Source: WHEI Master Database

Race/ethnicity categories, by age, men. Exhibit 2.L shows the racial/ethnic group composition among men Veteran VHA users in each year, within each age group. When compared with Exhibit 2.K, it shows that among 18-44-year-olds, higher proportions of women than men were Veterans of color each year; this difference between women and men widened over time (FY10: 42% vs. 31%; FY20: 46% vs. 33%). Contributors to this pattern of a widening difference between women and men were a slightly smaller decline over time in the proportion of women who were Black or African American compared to men, combined with a slightly larger increase over time in the proportion of women who were Hispanic or Latina compared to men.

Also seen in Exhibits 2.K and 2.L, among 45-64-year-olds, a higher proportion of women than men were Veterans of color each year, with the magnitude of difference becoming smaller over time (FY10: 36% vs. 27%; FY20: 43% vs. 36%). The main factors behind this smaller difference were smaller increases in the proportions of women than men who were Black or African American or Hispanic or Latino/Latina.

A different pattern occurred among the 65+ year-old cohort. In FY10, a lower proportion of women than men were Veterans of color, but by FY20, a much higher proportion of women than men were Veterans of color (FY10: 10% vs. 13%; FY20: 26% vs. 18%). The main factor behind this flip in the direction of difference over time was that, in FY10, a lower proportion of women than men in this age group were Black or African American, but by FY20, a higher proportion of women than men were Black or African American (FY10: 7% vs. 8%; FY20: 20% vs. 12%).

Notes to Interpretation: *The race/ethnicity categories reported in this Sourcebook are mutually exclusive. All individuals with an indication of Hispanic or Latino/Latina ethnicity are included in the "Hispanic or Latino/Latina" race/ethnicity group regardless of their race. The remaining race/ethnicity categories represent Veteran users who have identified as "Not Hispanic or Latino/Latina," but, for simplicity, the label identifies only the race. For example, "White" is used as shorthand for Not Hispanic or Latino/Latina White, and "Black or African American" is used as shorthand for Not Hispanic or Latino/Latina Black or African American. Each Veteran is mapped to a single race/ethnicity category; due to limitations in the source data, a reliable multi-race category is not available for this Sourcebook.*

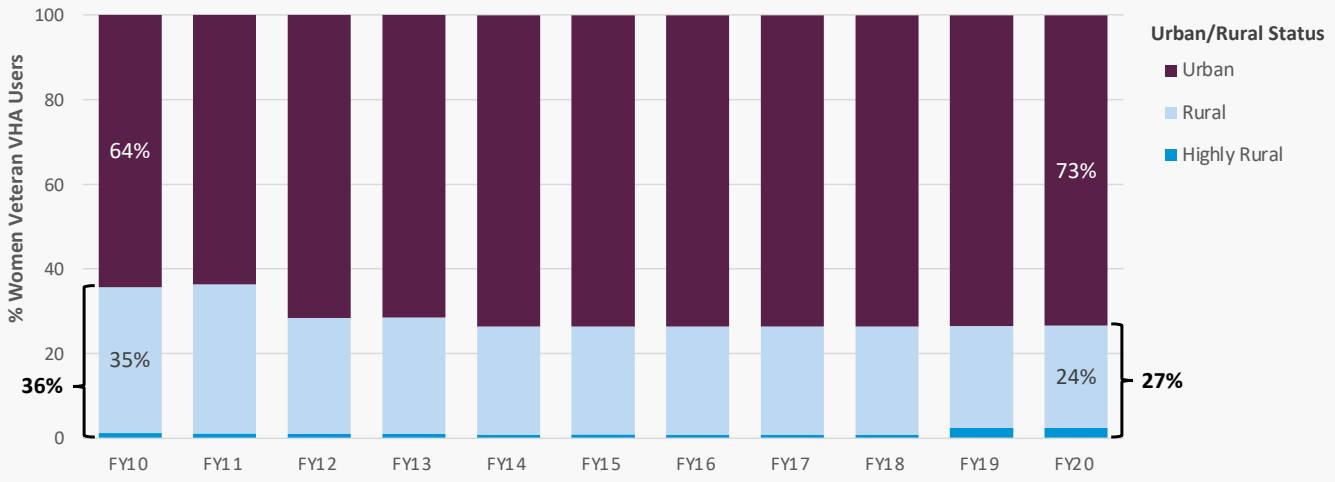
IMPLICATIONS

Women Veterans using VHA represent an increasingly diverse population and they continue to be more heterogenous than men with regard to race/ethnicity. To avert racial/ethnic disparities in health care and uphold VHA's commitment to health equity[29,30] there is an opportunity to provide care tailored to gender, culture, and the intersection among gender, race/ethnicity, and other facets of a person's identity.[31] This will be especially important as the women in the older age groups—who may need more intensive health care for chronic conditions associated with advancing age—become increasingly diverse.

URBAN/RURAL STATUS

For initiatives aimed at optimizing access to care for special subgroups of Veterans, VHA classifies geographic areas where Veterans reside according to the area's urban/rural status. Sourcebook Volume 5 uses a version of the Rural-Urban Commuting Areas (RUCA) system for classification of urban/rural status into four categories: urban, rural, highly rural, and insular island. The latter includes the U.S. Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands.[32]

Exhibit 2.M. Urban/Rural Status of Women Veteran VHA Users, FY10-FY20

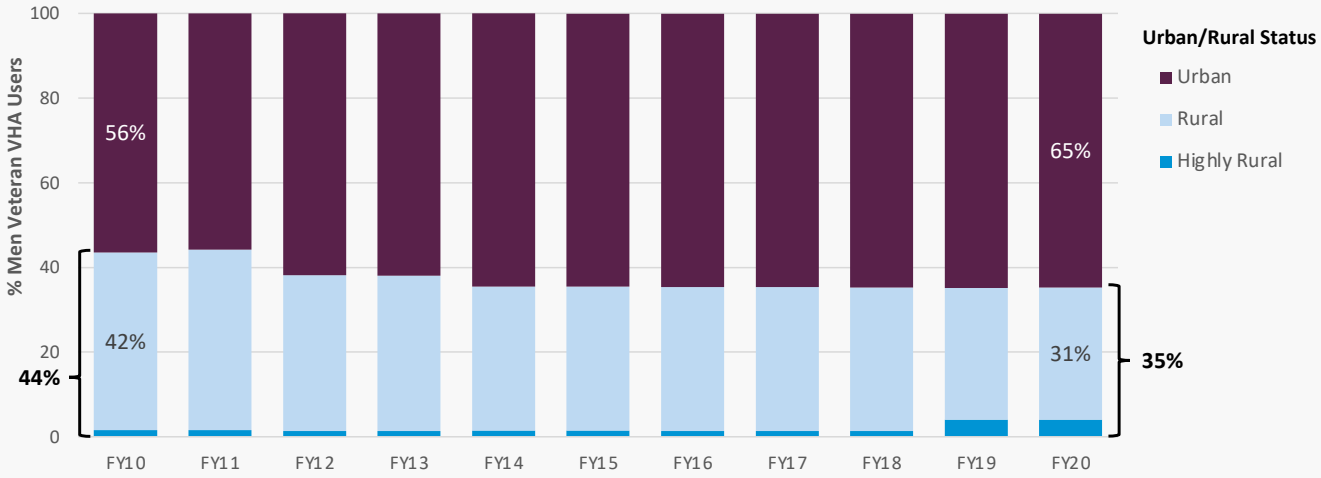


Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. Women residing on insular islands (N=670 in FY20) are not included in this Exhibit. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing urban/rural status in each year. FY10: N=314,631; FY20: N=555,323.
Source: WHEI Master Database

Women, urban/rural status. Exhibit 2.M shows the proportion of women living in urban, rural, or highly rural areas between FY10 and FY20. Across all years, the majority of women Veteran VHA users lived in urban areas. The number of women in urban areas doubled over that time period (FY10: 202,214; FY20: 406,665, a 2.0-fold increase). The proportion of women living in urban areas also increased over that time period (FY10: 64%; FY20: 73%). However, the increase was not linear: the proportion of women in urban areas had a large increase between FY11 (64%) and FY12 (72%), then remained relatively stable from FY14 to FY20.

Correspondingly, the proportion of women living in any rural area (highly rural or rural) decreased over the same period (FY10: 36%; FY20: 27%). However, given the overall growth in women Veteran VHA users during that period, there was still a numeric increase of women living in any rural area (FY10: 112,417; FY20: 147,988, a 1.3-fold increase). The number of women Veteran VHA users living in highly rural areas also increased (FY10: 3,730; FY20: 13,594, a 3.6-fold increase); however, highly rural women only represented 1% of women Veterans in FY10 and 2% in FY20. Women in insular island regions were tracked starting in FY14; while quite small, the number of women in these areas has grown (FY14: 256; FY20: 670; data not represented graphically in Exhibit 2.M.).

Exhibit 2.N. Urban/Rural Status of Men Veteran VHA Users, FY10-FY20



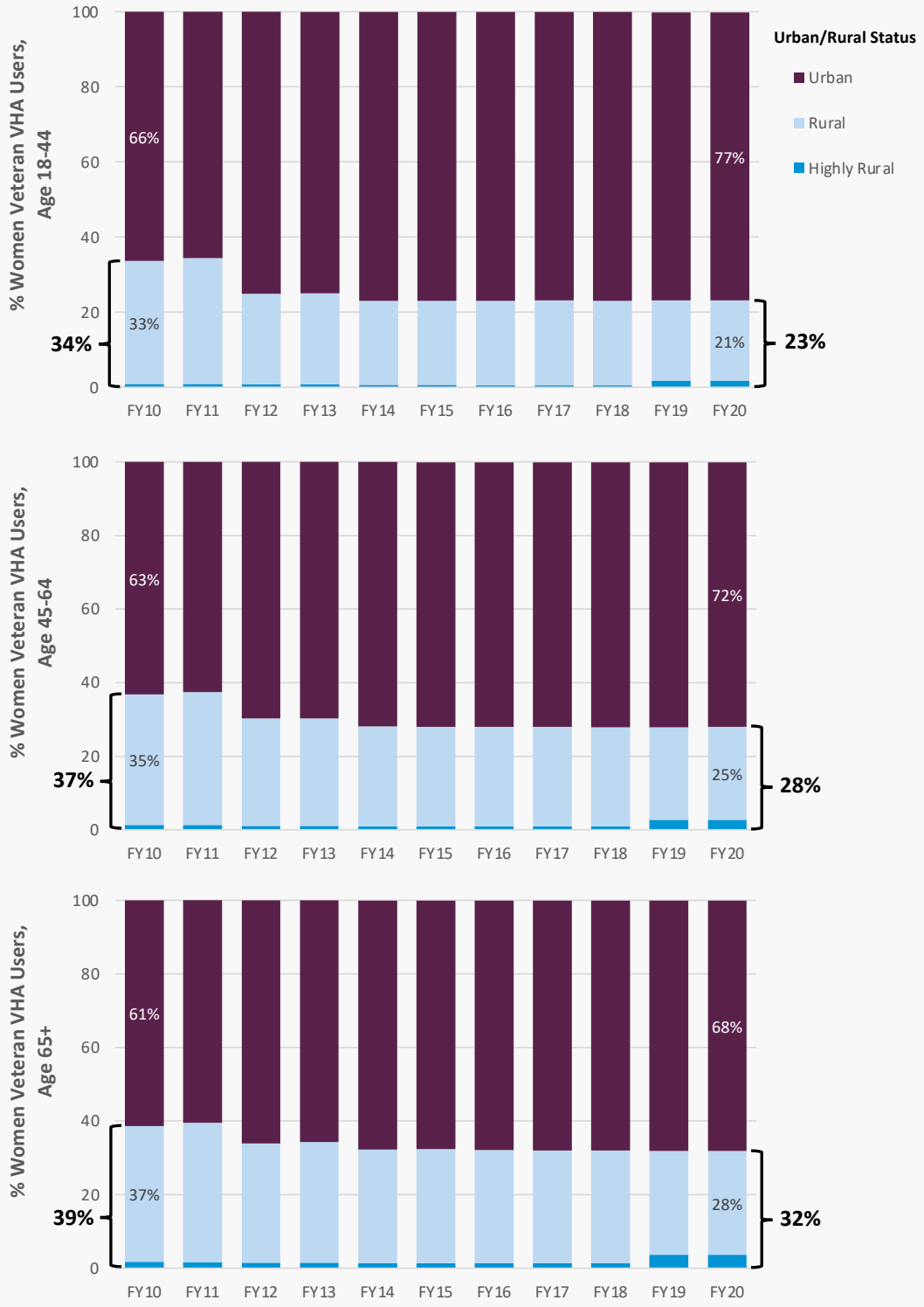
Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. Men residing on insular islands (N=4,861 in FY20) are not included in this Exhibit. See Technical Appendix.
Cohort: Men Veteran VHA users with non-missing urban/rural status each year. FY10: N=4,985,673; FY20: N=5,493,897.
Source: WHEI Master Database

Urban/rural status, men. Exhibit 2.N shows the proportion of men living in urban, rural, or highly rural areas between FY10 and FY20. When compared with Exhibit 2.M, Exhibit 2.N shows that consistently over time, a larger proportion of women than men Veteran VHA users lived in urban areas (FY10: 64% vs. 56%; FY20: 73% vs. 65%). Correspondingly, a smaller proportion of women than men lived in any rural area (FY10: 36% vs. 44%; FY20: 27% vs. 35%).

Women urban/rural status, by age. As Exhibit 2.O shows, the proportion of women Veterans living in any rural area (i.e., highly rural or rural) decreased from FY10 to FY20 in women 18-44 years old (FY10: 34%; FY20: 23%); 45-64 years old (FY10: 37%; FY20: 28%); and 65+ years old (FY10: 39%; FY20: 32%). Conversely, the proportion of women residing in urban areas increased from FY10 to FY20 in women 18-44 years old (FY10: 66%; FY20: 77%); 45-64 years old (FY10: 63%; FY20: 72%); and 65+ years old (FY10: 61%; FY20: 68%).

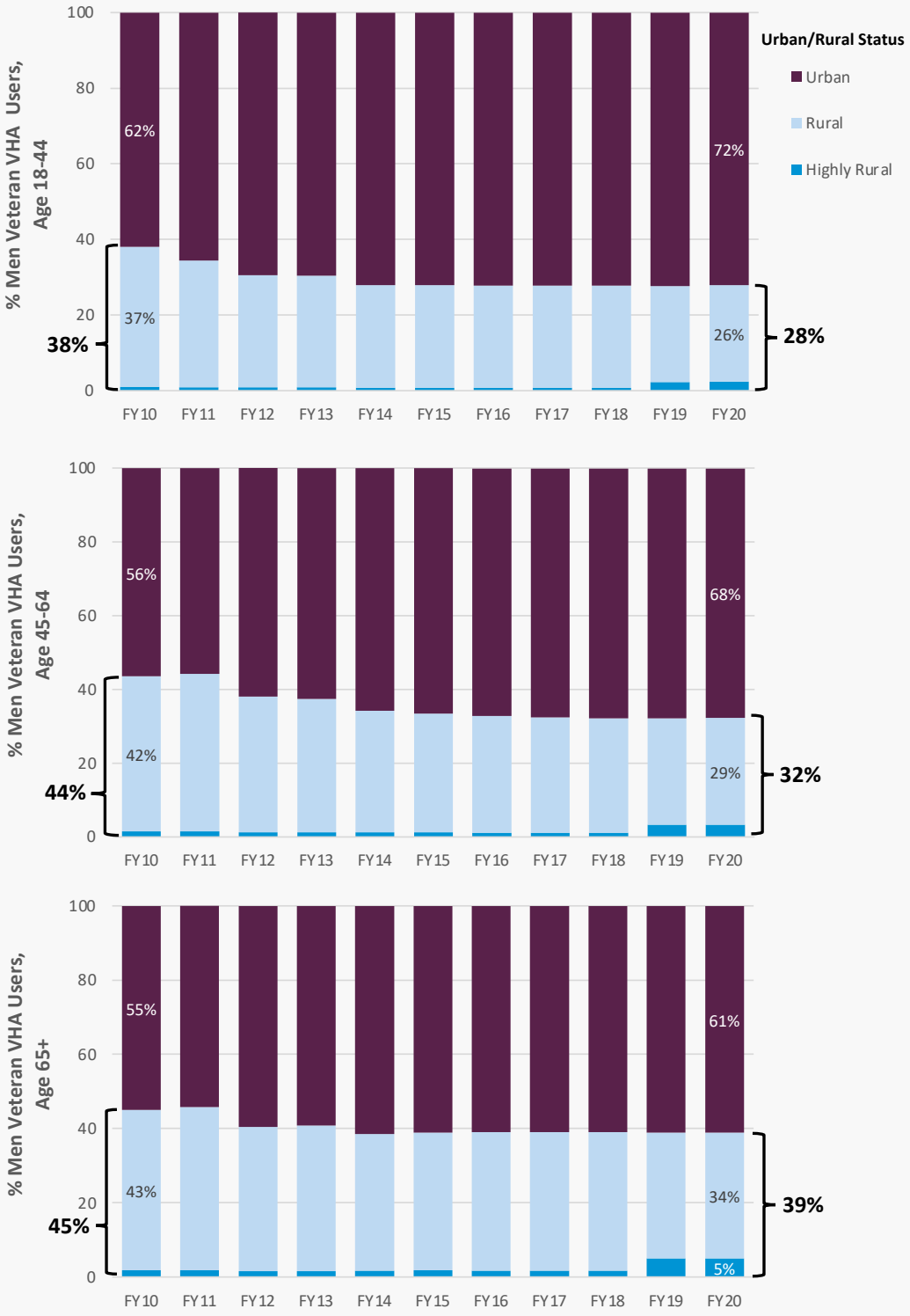
Men urban/rural status, by age. When compared to Exhibit 2.O, Exhibit 2.P shows a lower proportion of women than men Veteran users had any rural residence across all years and age groups. This was true for 18-44-year-olds (FY10: 34% vs. 38%; FY20: 23% vs. 28%); 45-64-year-olds (FY10: 37% vs. 44%; FY20: 28% vs. 32%); and 65+ year-olds (FY10: 39% vs. 45%; FY20: 32% vs. 39%). The proportion of Veterans with highly rural residence grew overtime across women and men in all age groups: 18-44-year-old age group (FY10: 1% vs. 1%; FY20: 2% vs. 2%); 45-64-year-olds (FY10: 1% vs. 2%; FY20: 3% vs. 3%); and 65+ year-olds (FY10: 2% vs. 2%; FY20: 4% vs. 5%).

Exhibit 2.O. Urban/Rural Status of Women Veteran VHA Users, by Age, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. Women residing on insular islands (Ages 18-44: N= 266; 45-64: N=343; 65+: N=61 in FY20) are not included in this Exhibit. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) and urban/rural status in each year. FY10: N=314,621; FY20: N=555,242.
Source: WHEI Master Database

Exhibit 2.P. Urban/Rural Status of Men Veteran VHA Users, by Age FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. Men residing on insular islands (Ages 18-44: N= 893; 45-64: N=1,965; 65+: N=2,003 in FY20) are not included in this Exhibit. See Technical Appendix.
Cohort: Men Veteran VHA users with non-missing ages 18-110 years (inclusive) and urban/rural status in each year. Men: FY10: N= 4,985,648; FY20: N= 5,493,812.
Source: WHEI Master Database

Notes to Interpretation: *The reason for the decline in the proportion of women Veteran users living in rural areas is unclear. Although this could potentially reflect access issues for women residing in rural areas or migration of rural women Veterans to more urban areas, it could also potentially reflect changes over this period in what communities the U.S. Census classifies as rural (i.e., if previously rural areas became urban over time due to population growth). For example, the abrupt increase between FY11 and FY12 in the proportion of Veterans with an urban residence may in part reflect changes in urban and rural area definitions based on results of the 2010 Census data.*[33]

IMPLICATIONS

Although the majority of women Veterans live in urban areas, this does not necessarily guarantee ready access to needed services. Particularly in small urban areas, specialty services and transportation options may be limited. This could impact women's continuing use of VHA services since attrition from VHA care is greater among women who live farther from a VHA health care facility.[34]

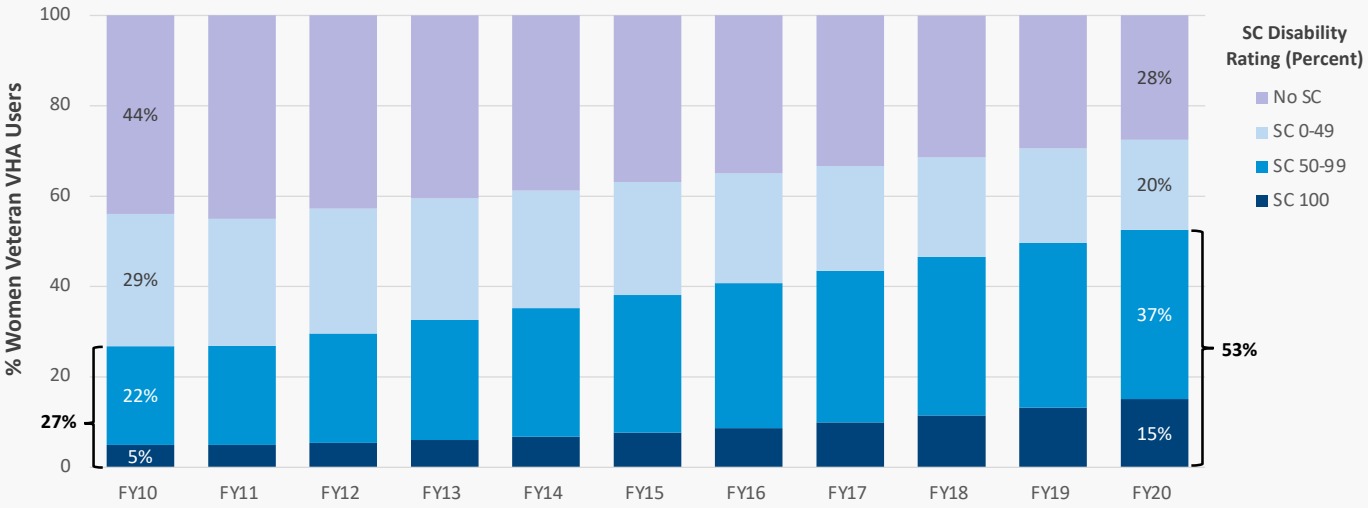
VHA has a mission to provide care to every Veteran eligible for services, regardless of how remote the Veteran's residence is. This duty extends to ensuring high-quality, equitable, gender-specific VHA primary care services are available to women in areas remote from the main VHA facility. While VHA has implemented approaches to reaching rural Veterans, access gaps are still possible. Most of VHA's web of Community-Based Outpatient Clinics (CBOCs) now have at least one designated women's health primary care provider (WH-PCP), but staffing with at least two WH-PCPs is less common at CBOCs serving a predominantly rural Veteran population than at other CBOCs.[35] VHA additionally offers community-based care through its purchased care system for services not available intramurally, but if the local community likewise lacks specialists, an access gap can arise; this phenomenon of "care deserts" has been described for gynecologist services.[36]

Potential issues around access take on special importance for the more than 13,000 women Veteran VHA users living in highly rural areas. This suggests a possible niche for programs that extend access to women's primary care and specialty care, such as telemedicine or mobile clinics.[37] During the COVID-19 pandemic, VHA has seen a marked increase in reliance upon virtual care, including video telehealth Clinical Resource Hubs.[38,39,40,41,42,43] These advances in health care delivery systems may prove to have particular value for women with geographic access barriers, especially those in the most remote areas (women with highly rural or insular island residences.).

SERVICE-CONNECTED DISABILITY RATING

A service-connected disability rating indicates an injury or illness deemed to have been incurred or aggravated while serving in the armed forces. The Veterans Benefits Administration (VBA) reviews disability compensation claims using a multi-step process. VBA first determines whether the disability was incurred or aggravated during active military service—if so, the Veteran receives an "SC" disability rating status. The Veteran's SC disability is then assessed and rated for severity from 0 to 100 percent.[44]

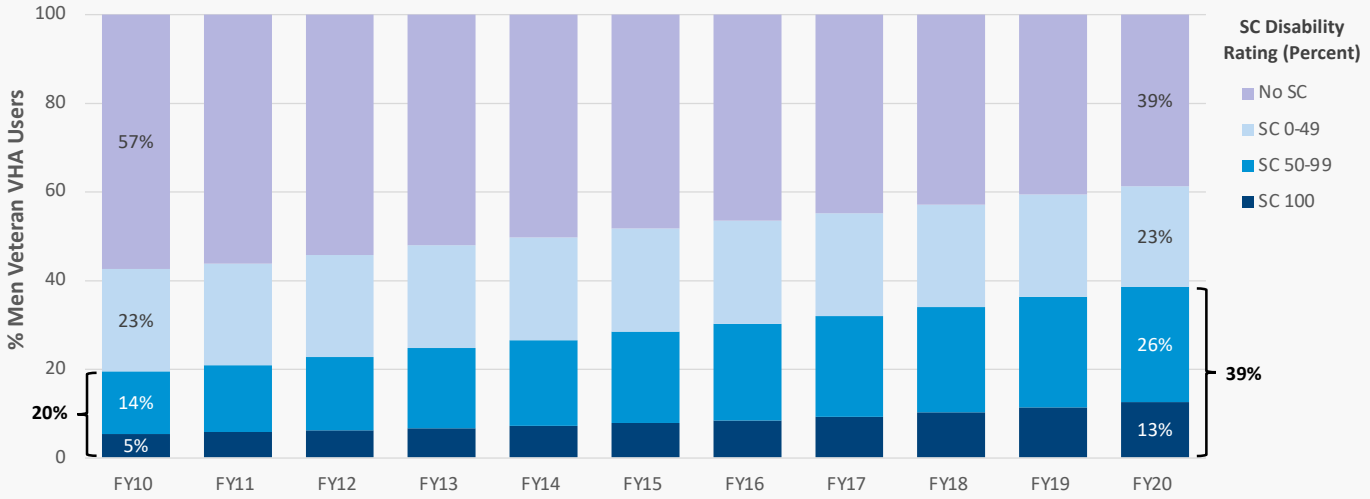
Exhibit 2.Q. Service-Connected (SC) Disability Rating of Women Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Due to rounding, the aggregated percentage of women Veterans with at least a 50 percent SC disability rating in FY20 does not equal the sum of the component values reported in this exhibit.
Cohort: Women VHA users with non-missing SC disability rating in each year. FY10: N=316,184; FY20: N=553,653
Source: WHEI Master Database

Women, SC disability rating. Exhibit 2.Q shows the proportion of women by SC disability rating for each year between FY10 and FY20. For every year between FY10 and FY20, the majority of women had some level of SC disability. The number of women with some level of SC disability rating increased over time (FY10: 177,271; FY20: 401,405, a 2.3-fold increase) as did the proportion of women (FY10: 56%; FY20: 73%). The proportion and number of women with higher levels of SC disability rating also increased over time. Specifically, from FY10 to FY20, the proportion of women with at least a 50 percent SC disability rating (the 50-99 percent group combined with the 100 percent group) increased from 27% to 53% (FY10: 84,633; FY20: 291,106, a 3.4-fold increase), and the proportion with a 100 percent SC disability rating increased from 5% to 15% (FY10: 15,711; FY20: 83,577, a 5.3-fold increase).

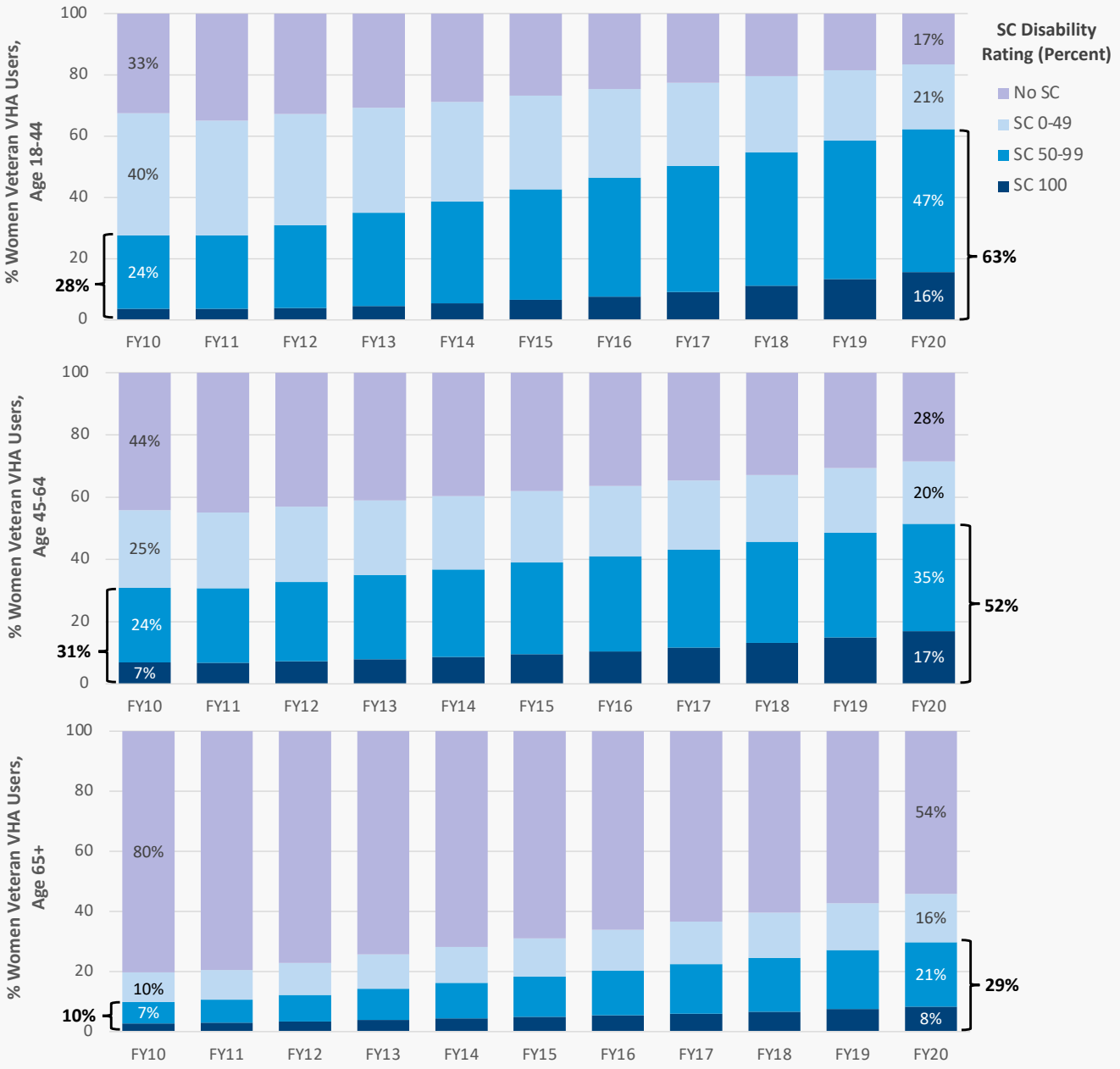
Exhibit 2.R. Service-Connected (SC) Disability Rating of Men Veteran VHA Users, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Due to rounding, the aggregated percentage of men Veterans with at least 50 percent SC disability rating in FY10 does not equal the sum of the component values reported in this exhibit.
Cohort: Men Veteran VHA users with non-missing SC disability rating in each year. FY10: N=5,003,048, FY20: N=5,478,490.
Source: WHEI Master Database

SC disability rating, men. Exhibit 2.R shows the proportion of men and their SC disability rating for each year between FY10 and FY20. It demonstrates that, similar to women (see Exhibit 2.Q), the proportion of men with some level of SC disability increased over time (FY10: 43%; FY20: 61%). Also similar to women, the proportion of men with at least a 50 percent SC disability rating increased (FY10: 20%; FY20: 39%) as did the proportion with a 100 percent SC disability rating (FY10: 5%; FY20: 13%). However, in every year, the proportion of Veterans with any SC disability rating was higher for women than for men (FY10: 56% vs. 43%; FY20: 73% vs. 61%).

Exhibit 2.S. Service-Connected (SC) Disability Rating of Women Veteran VHA Users, by Age, FY10-FY20

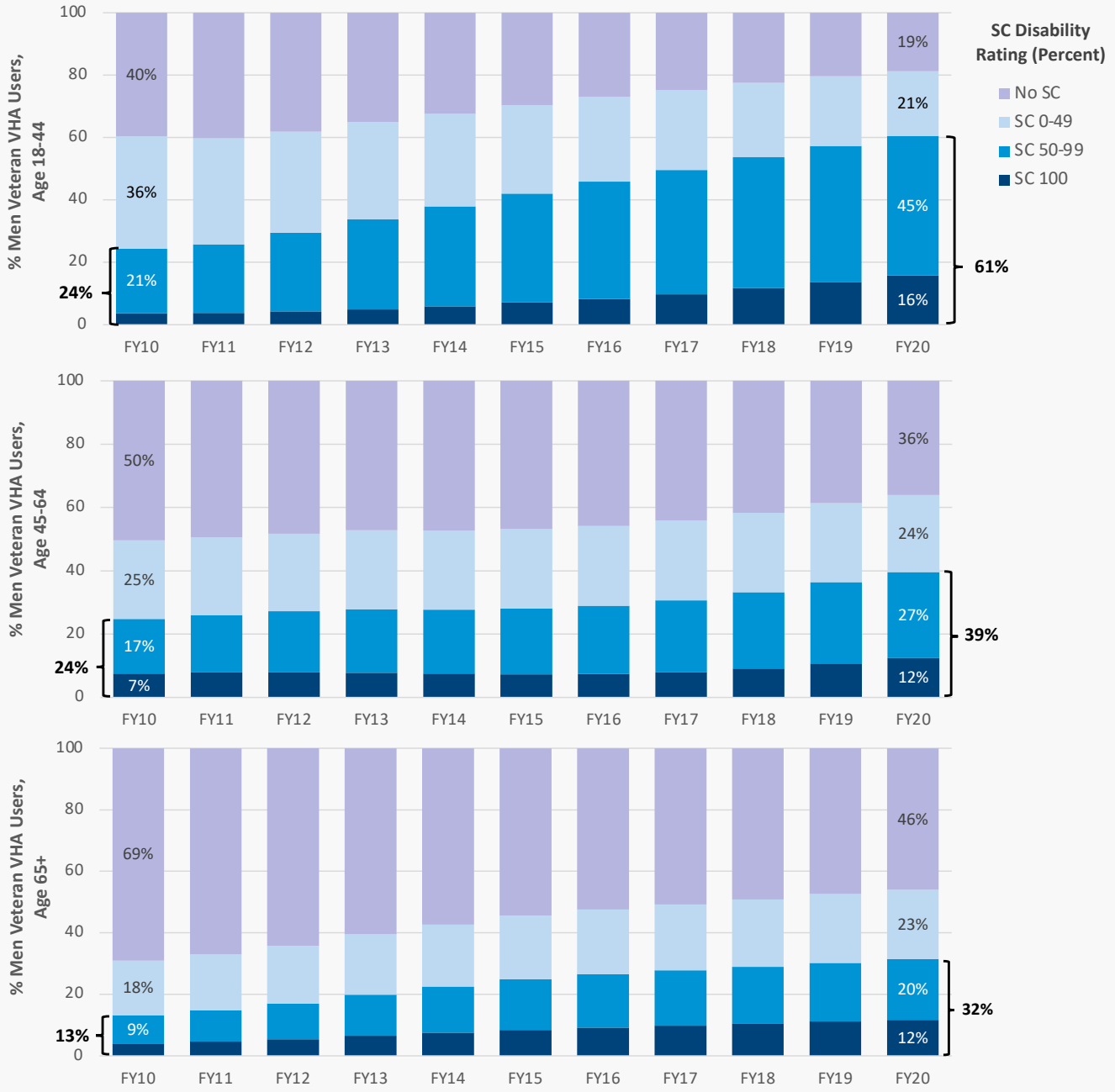


Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing SC disability rating and ages 18-110 years (inclusive) in each year. FY10: N=316,149; FY20: N=553,485.
Source: WHEI Master Database

Women, SC disability rating by age. Exhibit 2.S reports the proportion of women Veteran VHA users with an SC disability rating in each year by age categories. This proportion increased between FY10 and FY20 among 18-44-year-olds (FY10: 67%; FY20: 83%), among 45-64-year-olds (FY10: 56%; FY20: 72%), and among those 65 years and older (FY10: 20%; FY20: 46%). It is notable that the youngest women also have the highest proportion with any SC disability rating.

The proportion of women with an SC disability rating of 50-99 percent increased among 18-44-year-olds (FY10: 24%; FY20: 47%); among 45-64-year-olds (FY10: 24%; FY20: 35%); and among 65+ year-olds (FY10: 7%; FY20: 21%). The proportion of women with an SC disability rating of 100 percent also increased among all three age groups: 18-44-year-olds (FY10: 4%; FY20: 16%); 45-64-year-olds (FY10: 7%; FY20: 17%); and 65+ year-olds (FY10: 3%; FY20: 8%). Cumulatively, the proportion of women with an SC disability rating of 50 percent or more increased dramatically among 18-44-year-olds (FY10: 28%; FY20: 62%); 45-64-year-olds (FY10: 31%; FY20: 51%); and 65+ year-olds (FY10: 10%; FY20: 30%).

Exhibit 2.T. Service-Connected (SC) Disability Rating of Men Veteran VHA Users, by Age, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Men Veteran VHA users with non-missing SC disability rating and ages 18-110 years (inclusive) in each year. FY10: N= 5,002,990; FY20: N= 5,478,294.
Source: WHEI Master Database

Men, SC disability rating by age. Exhibit 2.T reports the proportions of men with an SC disability rating in each year, within each age group. When compared to Exhibit 2.S, it shows that the proportion of women with an SC disability rating was higher than the proportion of men with an SC disability rating in both FY10 and FY20 among 18-44 year-olds (FY10: 67% vs. 60%; FY20: 83% vs. 81%) and 45-64 year-olds (FY10: 56% vs. 50%; FY20: 72% vs. 64%), although the difference between women and men grew smaller over time for the 18-44 year-olds. However, in both FY10 and FY20, among 65+ year-olds, a lower proportion of women than men had an SC disability rating (FY10: 20% vs. 31%; FY20: 46% vs. 54%), with the difference becoming smaller over time.

Notes to Interpretation: *First, an SC disability rating can result from a variety of exposures including, but not limited to, combat. The administrative data used for this report do not indicate the diagnoses associated with an individual's SC disability rating. Thus, no conclusions can be drawn from these data regarding potential gender-related differences in the causes of SC disability.*

Second, these data show the proportion of women and men Veteran VHA users who have an SC disability rating. These data do not show the total number of Veterans nationally who have an SC disability rating: Veterans who do not use VHA care are not examined here. Therefore, no conclusions can be drawn about what proportion of all women and men Veterans in the U.S. population has an SC disability rating.

Third, these data identify only Veterans who have been formally granted an SC disability rating; VHA users who have a military service-related illness or disability, but who have not applied for an SC disability rating, are not identified in these data as having an SC disability rating. Likewise, Veterans who have only recently applied for an SC disability rating will appear in the database as "non-SC" until the time, if any, that they are granted an SC disability rating and VHA is updated regarding this change.

Fourth, higher proportions of VHA users with SC disability ratings in one group compared with another group (e.g., women versus men) could imply either that the proportion of Veterans applying for and being granted an SC disability rating is greater in that group or that Veterans in that group who have an SC disability rating are more likely to be using VHA services. Similarly, higher proportions of VHA users in one group compared with another group carrying higher SC disability ratings could imply either that the proportion of Veterans applying for and being granted higher SC disability ratings is greater in that group or that Veterans in that group who have higher SC disability ratings are more likely to be using VHA services.

Fifth, cross-year differences in the proportion of Veterans who have an SC disability rating could reflect differences in the prevalence of injuries or illnesses incurred or aggravated while serving in the armed forces, differences in the proportion of Veterans with a potentially qualifying injury or illness who decide to apply for an SC disability rating, differences in the criteria that the VBA uses to rule on the SC disability rating, and/or differences in the use of VHA by Veterans with an SC disability rating.

IMPLICATIONS

From FY10 to FY20, the number of women Veteran users with any SC disability rating more than doubled; the number with an SC disability rating of at least 50 percent more than tripled; and the number with 100 percent SC disability ratings (entitling them to special benefits) increased more than 5-fold. Growth in the proportion of women Veteran users with SC disability ratings could reflect changes over time in war exposures, disability applications, disability rating processes, and/or in patterns of which Veterans choose to seek VHA care. Nearly 3 out of 4 women Veteran VHA users now carry an SC disability rating, with even higher rates among the youngest women. These women are eligible for lifelong VHA care for their SC conditions, sometimes representing complex combinations of conditions. While the nature of these conditions is not available from Sourcebook data, the intensity and mix of SC conditions likely have evolved with shifts in the nature of war and in women's roles in the military, as well as with improved accessibility of the benefits application process.

Geographic Distribution

This section provides information about the geographic distribution of women Veteran VHA users in each individual VHA Health Care System in FY10 and FY20.

Definition of Terms

- *Health Care Systems* most often are composed of a flagship VA Medical Center (VAMC) (typically offering both inpatient and outpatient services) and a cluster of surrounding Community-Based Outpatient Clinics (CBOCs) that provide primary care and sometimes other services as well, for enhanced access to care in Veterans' local communities.

HEALTH CARE SYSTEM-LEVEL GROWTH

Notes About Health Care Systems: *The VHA Site Tracking (VAST) database maintains an official list of all VHA sites of care. The VAST FY20Q4 report lists 140 unique Health Care Systems (or parent stations) in FY20.*

The VAST FY10Q4 report lists 148 unique Health Care Systems (or parent stations) in FY10.[45] For the FY10 count of Health Care Systems, WHEI applied the Health Care System mapping approach developed for the FY20 Health Care System list. Eight Health Care Systems that were present in FY10 were no longer considered Health Care Systems in FY20: Brockton MA, Batavia NY, Mattoon IL, Hot Springs SD, Leavenworth KS, North Little Rock AR, Del Rio TX, and Seguin TX.[46] Additionally, Bath NY and Canandaigua NY were listed as separate Health Care Systems in FY10 but had merged into a single Health Care System in FY20. For cross-year comparability, when reporting the number of women Veterans per Health Care System in FY10, Sourcebook Volume 5 maps all women who attended one of these sites to the corresponding FY20 Health Care System.[47]

Conversely, one new facility that was not present in FY10 had opened by FY20: VA Texas Valley Coastal Bend Health Care System (Harlingen TX). This Health Care System is included on the FY20 list but not on the FY10 list of Health Care Systems. As a result, at Health Care Systems proximate to this site, there could be less growth in the number of women Veterans than anticipated because some patients may have been reassigned to the newly opened site.

Some women did receive the majority of their care in Manila, Philippines, but counts of women Veterans in Manila are not included in this subsection.

The final list of unique Health Care Systems was 138 in FY10 and 139 in FY20.

The Sourcebook Volume 5 Online Appendix (Technical Appendix) provides additional details about facility mapping algorithms.

With these caveats, the following describes how the number of women Veterans changed over time at the Health Care System level.

Exhibit 2.U shows the number of women Veteran VHA users in each of the 138 Health Care Systems in the U.S. in FY10 (Panel A) and in each of the 139 Health Care Systems in FY20 (Panel B).[48] There was marked growth in multiple Health Care Systems.

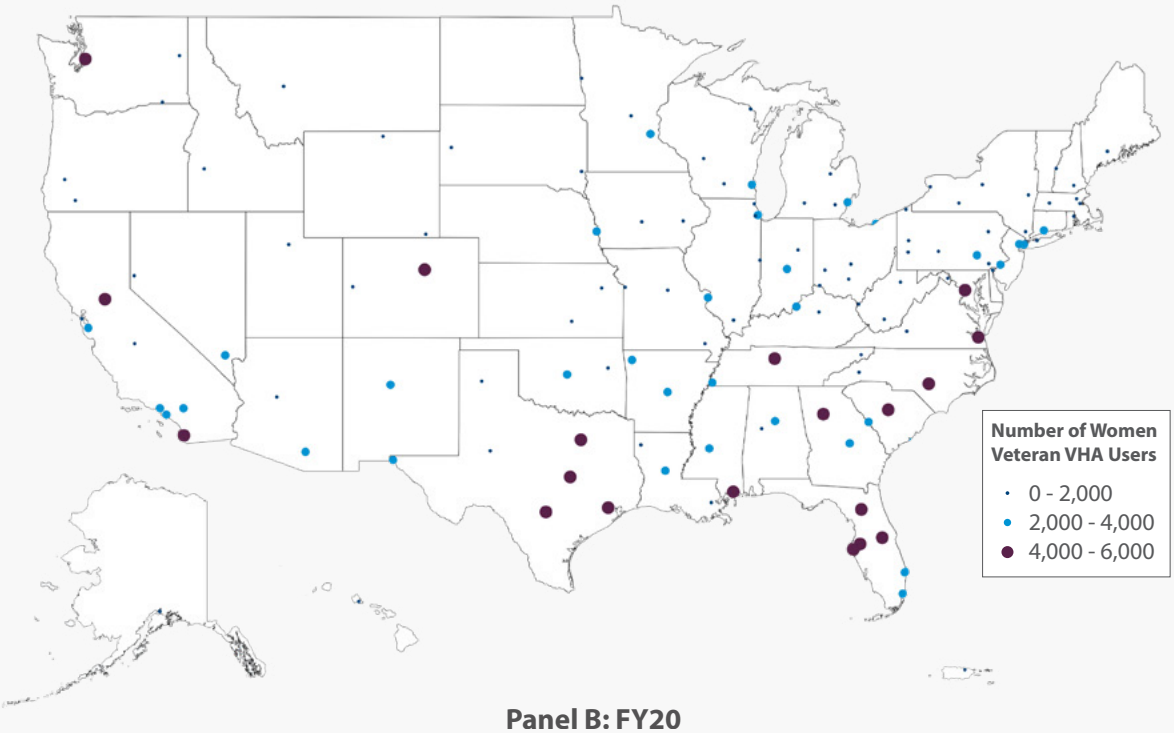
Those with at least a 2-fold growth in the number of women Veteran users were:[49]

- Louisiana: New Orleans (FY10: 1,628; FY20: 4,248; 2.6-fold increase)
- South Carolina: Charleston (FY10: 3,704; FY20: 9,292; 2.5-fold increase)
- Massachusetts: Central Western Massachusetts (FY10: 638; FY20: 1,518; 2.4-fold increase)
- Georgia: Atlanta (FY10: 7,120; FY20: 16,242; 2.3-fold increase)
- North Carolina: Fayetteville (FY10: 4,825; FY20: 10,788; 2.2-fold increase)
- Virginia: Richmond (FY10: 3,232; FY20: 7,143; 2.2-fold increase)
- Florida: Tampa (FY10: 4,526; FY20: 9,652; 2.1-fold increase)
- Virginia: Hampton (FY10: 4,966; FY20: 10,578; 2.1-fold increase)
- Texas: Houston (FY10: 5,323; FY20: 11,330; 2.1-fold increase)
- North Carolina: Asheville (FY10: 1,295; FY20: 2,745; 2.1-fold increase)
- Texas: Dallas (FY10: 6,536; FY20: 13,629; 2.1-fold increase)
- Florida: Orlando (FY10 5,353; FY20: 11,001; 2.1-fold increase)
- Nevada: Las Vegas (FY10: 2,897; FY20: 5,932; 2.0-fold increase)
- North Carolina: Durham (FY10: 3,211; FY20: 6,552; 2.0-fold increase)
- Georgia: Augusta (FY10: 2,806; FY20: 5,646; 2.0-fold increase)
- South Carolina: Columbia (FY10: 4,521; FY20: 9,082; 2.0-fold increase)
- Colorado: Aurora (FY10: 4,878; FY20: 9,701; 2.0-fold increase)
- Michigan: Ann Arbor (FY10: 1,593; FY20: 3,160; 2.0-fold increase)
- Texas: San Antonio (FY10: 7,222; FY20: 14,310 2.0-fold increase)
- North Carolina: Salisbury (FY10: 3,700; FY20: 7,303; 2.0-fold increase)
- Texas: Temple (FY10: 6,992; FY20: 13,690; 2.0-fold increase)

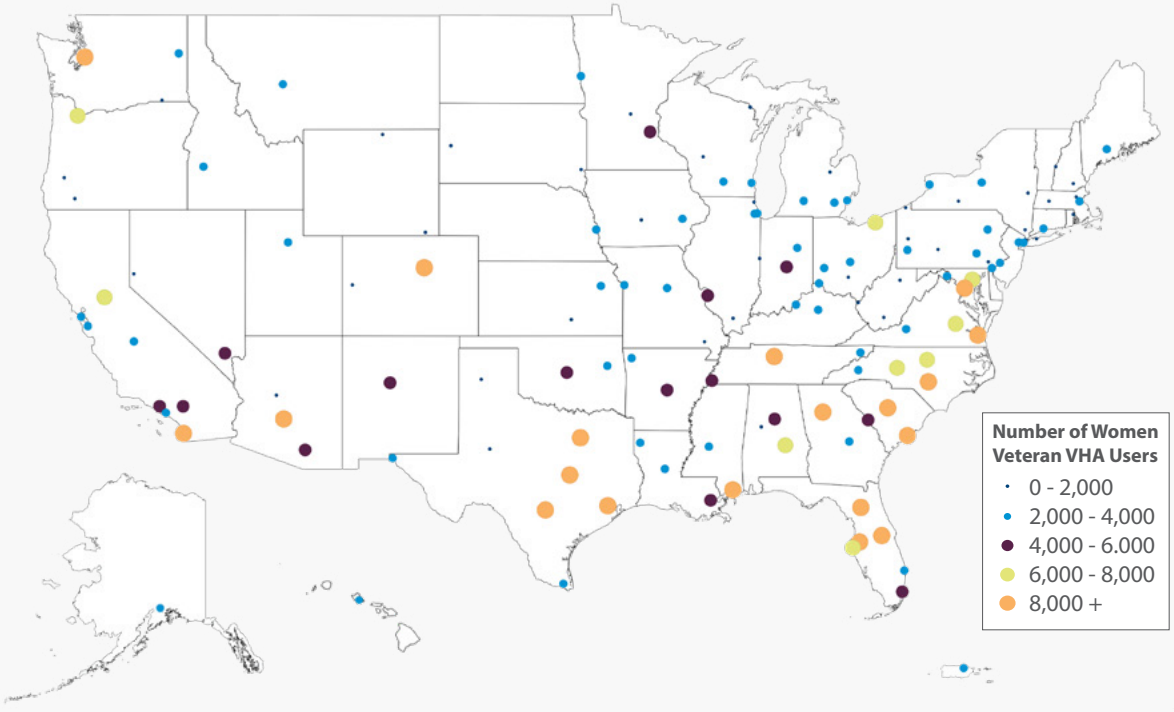
At another 81 Health Care Systems, the number of women Veteran users grew 1.5- to 1.9-fold, and at an additional 36 Health Care Systems the number of women Veteran outpatient users grew 1.1- to 1.4-fold.

Exhibit 2.U. Number of Women Veteran VHA Users by Health Care System, FY10 and FY20

Panel A: FY10



Panel B: FY20



Key: FY - Fiscal Year; VHA - Veterans Health Administration
Notes: Findings portray the number of women Veteran VHA users in each of the 138 Health Care Systems in FY10 (Panel A) and in each of the 139 Health Care Systems in FY20 (Panel B). VA Texas Valley Coastal Bend Health Care System (Harlingen TX) appears on the map in FY20 (Panel B) but was not yet established as a Health Care System in FY10 and therefore does not appear on the map in FY10 (Panel A). See Technical Appendix.
Cohort: Women Veteran VHA Users in FY10: N=316,961 (Panel A) and in FY20: N=556,135 (Panel B).
Source: VHA Site Tracking (VAST), WHEI Master Database

There was also striking growth in the absolute number of women Veteran users at many facilities. The number of women Veteran users at a particular Health Care System increased by at least 5,000 women (shown in Exhibit 2.U) at the following Health Care Systems:

- Georgia: Atlanta (FY10: 7,120; FY20: 16,242; an increase of 9,122 women)
- Texas: Dallas (FY10: 6,536; FY20: 13,629; an increase of 7,093 women)
- Texas: San Antonio (FY10: 7,222; FY20: 14,310; an increase of 7,088 women)
- Texas: Temple (FY10: 6,992; FY20: 13,690; an increase of 6,698 women)
- Texas: Houston (FY10: 5,323; FY20: 11,330; an increase of 6,007 women)
- North Carolina: Fayetteville (FY10: 4,825; FY20: 10,788; an increase of 5,963 women)
- Florida: Gainesville (FY10: 7,034; FY20: 12,970, an increase of 5,936 women)
- Florida: Orlando (FY10: 5,353; FY20: 11,001; an increase of 5,648 women)
- Virginia: Hampton (FY10: 4,966; FY20: 10,578; an increase of 5,612 women)
- South Carolina: Charleston (FY10: 3,704; FY20: 9,292; an increase of 5,588 women)
- Florida: Tampa (FY10: 4,526; FY20: 9,652; an increase of 5,126 women)

In addition, the following sites, presented in descending order of growth, grew by at least 2,500 women Veterans (but by less than 5,000 women Veterans):

- Washington, DC: (FY10: 5,305; FY20: 10,256; an increase of 4,951 women)
- Colorado: Aurora (FY10: 4,878; FY20: 9,701; an increase of 4,823 women)
- South Carolina: Columbia (FY10: 4,521; FY20: 9,082; an increase of 4,561 women)
- Washington: Puget Sound (FY10: 5,655; FY20: 10,001; an increase of 4,346 women)
- Tennessee: Middle Tennessee (FY10: 4,693; FY20: 8,999; an increase of 4,306 women)
- California: San Diego (FY10: 4,925; FY20: 8,921; an increase of 3,996 women)
- Mississippi: Gulf Coast (FY10: 4,500; FY20: 8,438; an increase of 3,938 women)
- Virginia: Richmond (FY10: 3,232; FY20: 7,143; an increase of 3,911 women)
- Arizona: Phoenix (FY10: 4,207; FY20: 8,102; an increase of 3,895 women)
- North Carolina: Salisbury (FY10: 3,700; FY20: 7,303; an increase of 3,603 women)
- North Carolina: Durham (FY10: 3,211; FY20: 6,552; an increase of 3,341 women)
- Nevada: Las Vegas (FY10: 2,897; FY20: 5,932; an increase of 3,035 women)
- Alabama: Central Alabama (FY10: 3,360; FY20: 6,267; an increase of 2,907 women)
- Georgia: Augusta (FY10: 2,806; FY20: 5,646; an increase of 2,840 women)
- Oregon: Portland (FY10: 3,731; FY20: 6,493; an increase of 2,762 women)
- California: Northern California (FY10: 4,551; FY20: 7,297; an increase of 2,746 women)
- Oklahoma: Oklahoma City (FY10: 3,215; FY20: 5,932; an increase of 2,717 women)
- Florida: Bay Pines (FY10: 4,603; FY20: 7,276; an increase of 2,673 women)
- Louisiana: New Orleans (FY10: 1,628; FY20: 4,248; an increase of 2,620 women)
- Alabama: Birmingham (FY10: 3,150; FY20: 5,722; an increase of 2,572 women)

Another 40 Health Care Systems grew by at least 1,000 women Veterans (but by less than 2,500); 36 grew by 500 women Veterans (but by less than 1,000); and 31 grew by less than 500 women Veterans. No Health Care Systems saw a decrease in the number of women Veterans between FY10 and FY20.

IMPLICATIONS

The growth between FY10 and FY20 in the number of women Veterans using VHA touched every Health Care System, highlighting the importance of delivering augmented women's health services at every point of care in VHA.

At all sites, long-range strategic planning must address capacity to provide for the growing population of women Veterans, including privacy and environment of care, as well as staffing with designated Women's Health Primary Care Providers. Particularly at those sites with rapid growth, there may be heavy space and workforce demands, potentially straining capacity. This will require an investment of resources to meet the influx of women and comprehensively address their health care needs, while at the same time avoiding burnout and attrition of their skilled women's health care providers.

Some of the rapid-growth facilities are in locations close to military bases, raising the possibility that some of the growth may be attributable to women who have recently left military service. If that is the case, then post-deployment services may also be especially relevant at these sites to ensure women's smooth transition into VHA care.

VHA's long-term women's health care strategic planning efforts need to account for geographic factors. Across all sites, it is important to ensure a VHA culture that welcomes women Veterans and acknowledges their military service.

The VA medical center in San Diego is now called the Jennifer Moreno VA Medical Center in honor of CPT Jennifer Moreno '10, an Army nurse who was killed in an attack in Kandahar, Afghanistan in 2013. Photo credit: Susan Prion and VA San Diego Healthcare System

Additional VA medical centers named after women Veterans include: Edith Nourse Rogers Memorial Veterans Hospital, Aleda E. Lutz VA Medical Center, Margaret Cochran Corbin VA Campus, MSG Silverine Vinyard James Women's Health Clinic, Captain Rosemary Bryant Mariner Outpatient Clinic , Colonel Mary Louise Rasmuson Campus of the Alaska VA Healthcare System, Kathleen M. Bruyere Health Pavilion

Endnotes

1 See Introduction for explanation of why only two genders are discussed in this Sourcebook.
2 U.S. Dept. of Veterans Affairs, VetPop 2007, VA Office of the Actuary, Table 521. Veterans living by period of service, age, and sex: 2010. Section 10. National Security and Veterans Affairs. In: Report Number: Statistical Abstract of the United States: 2012 (131st Edition).
3 U.S. Dept. of Veterans Affairs, National Center for Veterans Analysis and Statistics, Veteran Population, Table 1L. VetPop2020 Living Veterans by Age Group, Gender, 2020-2050. https://www.va.gov/vetdata/Veteran_Population.asp. Accessed October 13, 2022.
4 Carlson GC, Than CT, Rose D, Brunner J, Chanfreau-Coffinier C, Canelo IA, Klap R, Bean-Mayberry B, Agrawal A, Hamilton AB, Gerber MR. What drives women veterans' trust in VA healthcare providers? Womens Health Issues. 2022 Sep-Oct;32(5):499-508. doi: 10.1016/j.whi.2022.02.004. Epub 2022 Mar 30. PMID: 35367107; PMCID: PMC9522916.
5 Bastian LA, Trentalange M, Murphy TE, Brandt C, Bean-Mayberry B, Maisel NC, Wright SM, Gaetano VS, Allore H, Skanderson M, Reyes-Harvey E. Association between women veterans' experiences with VA outpatient health care and designation as a women's health provider in primary care clinics. Womens Health Issues. 2014 Nov 1;24(6):605-12.
6 Some women serve for a few years, whereas others continue military service into their 50s or beyond. Military service sometimes spans more than one war era and/or peacetime period.
7 Source for Dates: Office of the Federal Register. Code of Federal Regulations. Title 38: Pensions, bonuses, and Veterans relief. Chapter 1. Part 3. Subpart A. §3.2. Accessed July 13, 2022, at https://www.govinfo.gov/content/pkg/CFR-2012-title38-vol1/pdf/CFR-2012-title38-vol1-chapI.pdf
U.S. Congressional Research Service. U.S. periods of war and dates of recent conflicts, by Barbara Salazar Torreon. CRS Report RS21405. Washington, DC: Office of Congressional Information and Publishing, June 5, 2020. https://crsreports.congress.gov/product/pdf/RS/RS21405. Accessed June 29, 2022.
8 Although age 18 is highlighted here for illustrative purposes, note that individuals join the military at various ages. Some join earlier than age 18. Others join later, especially if they obtained professional training (such as a nursing degree) prior to joining the military. For example, see Magruder K, Serpi T, Kimerling R, Kilbourne AM, Collins JF, Cypel Y, Frayne SM, Furey J, Huang GD, Gleason T, Reinhard MJ, Spiro A, Kang H. Prevalence of post-traumatic stress disorder in Vietnam-era women Veterans: The Health of Vietnam Women's Study (HealthViEWS). JAMA Psychiatry. 2015; 72(11):1127-34.
9 Friedman SA, Phibbs CS, Schmitt SK, et al. New women Veterans in the VHA: A longitudinal profile. Womens Health Issues. 2011; 21 (4 Suppl):S103-S111.
10 Friedman SA, Frayne SM, Berg E, Hamilton AB, Washington DL, Saechao F, Maisel NC, Lin JY, Hoggatt KJ, Phibbs CS. Travel time and attrition from VHA care among women Veterans: How far is too far? Medical Care. 2015; 53(4 Suppl 1):S15-22.
11 Hamilton AB, Frayne SM, Cordasco KM, Washington DL. Factors related to attrition from VA healthcare use: Findings from the National Survey of Women Veterans. J Gen Intern Med. 2013; 28 (Suppl 2):S510-516.
12 Chrystal JG, Frayne S, Dyer KE, Moreau JL, Gammage CE, Saechao F, Berg E, Washington DL, Yano EM, Hamilton AB. Women Veterans' Attrition from the VA Healthcare System. Womens Health Issues. 2022 Mar-Apr;32(2):182-193. doi:10.1016/j.whi.2021.11.011. Epub 2021 Dec 28.
13 Zephyrin LC, Katon J, Hoggatt KJ, Balasubramanian V, Saechao F, Frayne SM, Mattocks KM, Feibus K, Galvan I, Hickman R, Hayes PM, Haskell SG, Yano E. State of reproductive health in women Veterans: VA reproductive health diagnoses and organization of care. Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, February 2014.
14 Katon JG, Tartaglione EV, Eleazer JR, Frayne SM, Haeger KO, Luo S, Schule AKR, Offer C, Phibbs CS, Rose D, Saechao F, Shankar M, Shaw J, Vinekar KS, Yano EM, Christy AY, Johnson AM. State of Reproductive Health Volume II: VA Reproductive Health Diagnoses and Organization of Care. Office of Women's Health, Veterans Health Administration, Department of Veterans Affairs, January 2023. https://www.womenshealth.va.gov/WOMENSHEALTH/materials-and-resources/publications-and-reports.asp#state-of-reproductive-health-vol2
15 Hynes DM, Koelling K, Stroupe K, Arnold N, Mallin K, Sohn MW, Weaver FM, Manheim L, Kok L. Veterans' access to and use of Medicare and Veterans Affairs health care. Medical Care. 2007;45(3):214-23.
16 Petersen LA, Byrne MM, Daw CN, Hasche J, Reis B, Pietz K. Relationship between clinical conditions and use of Veterans Affairs health care among Medicare-enrolled Veterans. Health Services Research. 2010 Jun 1;45(3):762-91.
17 Geriatrics and Extended Care. [Internet]. U.S. Department of Veterans Affairs. https://www.va.gov/GERIATRICS/. Accessed February 25, 2023.
18 Reiber GE, LaCroix AZ. Older women Veterans in the Women's Health Initiative. Gerontologist. 2016; 56(Suppl_1):S1-S5.
19 LaCroix AZ, Rillamas-Sun E, Woods, NF, Weitlauf J, Zaslavsky O, Shih R, LaMonte MJ, Bird C, Yano EM, LeBoff M, Washington D, Reiber G. Aging well among women Veterans compared with non-Veterans in the Women's Health Initiative. Gerontologist. 2016; 56 (Suppl_1):S14-S26.
20 Bastian LA, Hayes PM, Haskell SG, Atkins D, Reiber GE, LaCroix AZ, Yano EM. Improving our understanding of health issues in older women Veterans. Gerontologist. 2016; 56(Suppl_1):S10-S13.
21 Lavela SL, Etingen B, Louise-Bender Pape T. Caregiving experiences and health conditions of women veteran and non-veteran caregivers. Womens Health Issues. 2013 Jul-Aug;23(4):e225-32. doi:10.1016/j.whi.2013.04.001. PMID: 23816152.
22 Magruder K, Serpi T, Kimerling R, Kilbourne AM, Collins JF, Cypel Y, Frayne SM, Furey J, Huang GD, Gleason T, Reinhard MJ. Prevalence of posttraumatic stress disorder in Vietnam-era women veterans: The health of Vietnam-era women's study (HealthViEWS). JAMA Psychiatry. 2015 Nov 1;72(11):1127-34.

23 Schmidt EM, Magruder K, Kilbourne AM, Stock EM, Cypel Y, Félix SE, Serpi T, Kimerling R, Cohen B, Spiro A, Furey J. Four decades after war: incident diabetes among women Vietnam-era veterans in the HealthViEWS Study. Womens Health Issues. 2019 Nov 1;29(6):471-9.
24 US Dept. of Veterans Affairs. Veterans' Diseases Associated with Agent Orange - Public Health. https://www.publichealth.va.gov/exposures/agentorange/conditions/. Accessed July 18, 2022
25 US Dept. of Veterans Affairs. The PACT Act and your VA benefits. https://www.va.gov/resources/the-pact-act-and-your-va-benefits/. Accessed August 31, 2022.
26 Text - H.R.3967 - 117th Congress (2021-2022): Honoring our PACT Act of 2022 | Congress.gov | Library of Congress. Accessed August 31, 2022
27 Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity. 62 Fed. Reg. 58782 (October 30, 1997). https://www.gpo.gov/fdsys/pkg/FR-1997-10-30/pdf/97-28653.pdf. Accessed June 2022.
28 Christiansen S, Iverson C, Flanagin A, et al. *AMA Manual of Style: A Guide for Authors and Editors*. 11th ed. Oxford University Press; 2020. https://www.amamanualofstyle.com/. Accessed June 20, 2022
29 Department of Veterans Affairs. 2022. Department of Veterans Affairs Fiscal Years 2022-28 Strategic Plan. https://www.va.gov/oei/docs/va-strategic-plan-2022-2028.pdf. Accessed July 18, 2022.
30 Washington DL (ed). *National Veteran Health Equity Report 2021. Focus on Veterans Health Administration Patient Experience and Health Care Quality.* Washington, DC: VHA Office of Health Equity; September 2022. https://www.va.gov/healthequity/nvher.asp. Accessed February 23, 2023.
31 Bowleg L. The problem with the phrase women and minorities: Intersectionality–an important theoretical framework for public health. Am J Public Health. 2012;102(7):1267-1273.
32 US Department of Veterans Affairs Information Resource Center. VIReC Research User Guide: PSSG Geocoded Enrollee Files, 2015 Edition. Hines IL: US Department of Veterans Affairs, Health Services Research & Development Service, Information Resource Center; May 2016.
33 United States Census Bureau. 2010 Census Urban and Rural Classification and Urban Area Criteria. https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural/2010-urban-rural.html. Accessed October 31, 2022.
34 Friedman SA, Frayne SM, Berg E, Hamilton AB, Washington DL, Saechao F, Maisel NC, Lin JY, Hoggatt KJ, Phibbs CS. Travel time and attrition from VHA care among women Veterans: How far is too far? Medical Care. 2015; 53(4 Suppl 1):S15-22.
35 Based upon data from the Women's Health Assessment of Workforce Capacity-Primary Care (WAWC-PC) survey, among CBOCs where at least half of Veteran VHA outpatients resided in rural areas in FY20, 50% of CBOCs had 2+ women's health PCPs whereas, among the remaining CBOCs, 70% had 2+ women's health PCPs. Personal Communication, Office of Women's Health, August 3, 2022.
36 Friedman SA, Shaw J, Hamilton AB, Vinekar K, Washington DL, Mattocks K, Yano EM, Phibbs CS, Johnson AM, Saechao F, Berg E, Frayne SM. Gynecologist Supply Deserts across the VA and in the Community. J. Gen. Intern. Med. (2022). https://doi.org/10.1007/s11606-022-07591-5
37 Oh A, Scott JY, Chow A, Jiang H, Dismuke-Greer CE, Gujral K, Yoon J. Rural and urban differences in the implementation of Virtual Integrated Patient-Aligned Care Teams. J Rural Health. 2022 May 25. doi: 10.1111/jrh.12676. Epub ahead of print. PMID: 35611882.
38 Clinical Resource Hubs. [Internet]. U.S. Department of Veterans Affairs. Clinical Resource Hubs (CRH) - Patient Care Services (va.gov). Accessed March 30, 2023.
39 Rosen CS, Morland LA, Glassman LH, Marx BP, Weaver K, Smith CA, Pollack S, Schnurr PP. Virtual mental health care in the Veterans Health Administration's immediate response to coronavirus disease-19. Am Psychol. 2021 Jan;76(1):26-38.
40 Der-Martirosian C, Chu K, Steers WN, Wyte-Lake T, Balut MD, Dobalian A, Heyworth L, Paige NM, Leung L. Examining telehealth use among primary care patients, providers, and clinics during the COVID-19 pandemic. BMC Prim Care. 2022 Jun 18;23(1):155.
41 Gujral K, Van Campen J, Jacobs J, Kimerling R, Blonigen D, Zulman DM. Mental Health Service Use, Suicide Behavior, and Emergency Department Visits Among Rural US Veterans Who Received Video-Enabled Tablets During the COVID-19 Pandemic. JAMA Netw Open. 2022 Apr 1;5(4):e226250.
42 Ferguson, JM, Jacobs, J, Yefimova, M, Greene, L, Heyworth, L, & Zulman, DM. (2021). Virtual care expansion in the Veterans Health Administration during the COVID-19 pandemic: clinical services and patient characteristics associated with utilization. Journal of the American Medical Informatics Association, 28(3), 453-462.
43 Gujral, K, Scott, JY., Ambady, L, Dismuke-Greer, CE., Jacobs, J, Chow, A, ... & Yoon, J. (2022). A Primary Care Telehealth Pilot Program to Improve Access: Associations with Patients' Health Care Utilization and Costs. Telemedicine and e-Health, 28(5), 643-653.
44 To enhance the clarity and readability of this report, an editorial decision has been made to spell out "percent" in reference to SC disability ratings, e.g., "SC disability rating of 100 percent." In all other measures of percentage, the percent symbol (%) is used. Also note that "0 percent" refers to a patient who does have a SC disability rating, but whose severity rating is 0 (zero) percent; a 0 percent disability rating is distinct from a no SC disability rating.
45 The FY10Q4 VAST report lists 185 unique parent stations. After removing 37 parent stations that had 7-digit station numbers, 148 parent stations remained.
46 Four Health Care Systems (Brockton MA, Mattoon IL, Del Rio TX, and Seguin TX) consisted of only one site, the main parent station site.
47 For the FY10 Health Care System list, Sourcebook Volume 5 maps Brockton MA to Boston MA (station 523), Batavia

NY to Buffalo NY (station 528), Mattoon IL to Danville IL (station 550), Hot Springs SD to Fort Meade SD (station 568), Leavenworth KS to Topeka KS (station 589A5), North Little Rock AR to Little Rock AR (station 598), and Del Rio TX plus Seguin TX to San Antonio TX (station 671). Bath NY and Canandaigua NY merged in FY20 to become Finger Lakes Health Care System (station 528A6).

48 See "Notes about Health Care Systems," above, regarding how Health Care Systems were mapped for purposes of Sourcebook Volume 5

49 An abbreviated version of the "Facility Location" from the VHA Support Service Center (VSSC) is used herein as the Health Care System label.

3. Temporal Changes in VHA User Status

Overview

To understand trends in patterns of VHA use between FY10 and FY20, Sourcebook Volume 5 categorizes Veterans into three user types, defined as follows for purposes of this Sourcebook:

- ***New users*** are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior ten fiscal years.
- ***Returning users*** are Veterans who used VHA services in a given fiscal year and in the prior fiscal year. They may or may not have also used VHA in years earlier than the prior fiscal year.
- ***Intermittent users*** are Veterans who used VHA services in a given fiscal year and in at least one of the prior ten fiscal years, but who did not use VHA services in the immediately preceding fiscal year.

These three user types in aggregate represent all Veterans who used VHA services in a given fiscal year.

In addition to examining the number of users in a given year, Sourcebook Volume 5 also examines what the Sourcebook refers to as "*non-returners*."

- ***Non-returners*** in a given fiscal year are Veterans who received care in the immediately preceding fiscal year but who did not use VHA in the fiscal year being examined. In other words, for purposes of Sourcebook Volume 5, non-returners in a particular fiscal year are a subset of the users from the immediately preceding fiscal year. They may or may not return to VHA for care in subsequent fiscal years. Being a non-returner in a particular fiscal year may reflect infrequent use (less than once a fiscal year), attrition from VHA care, institutionalization, or death.

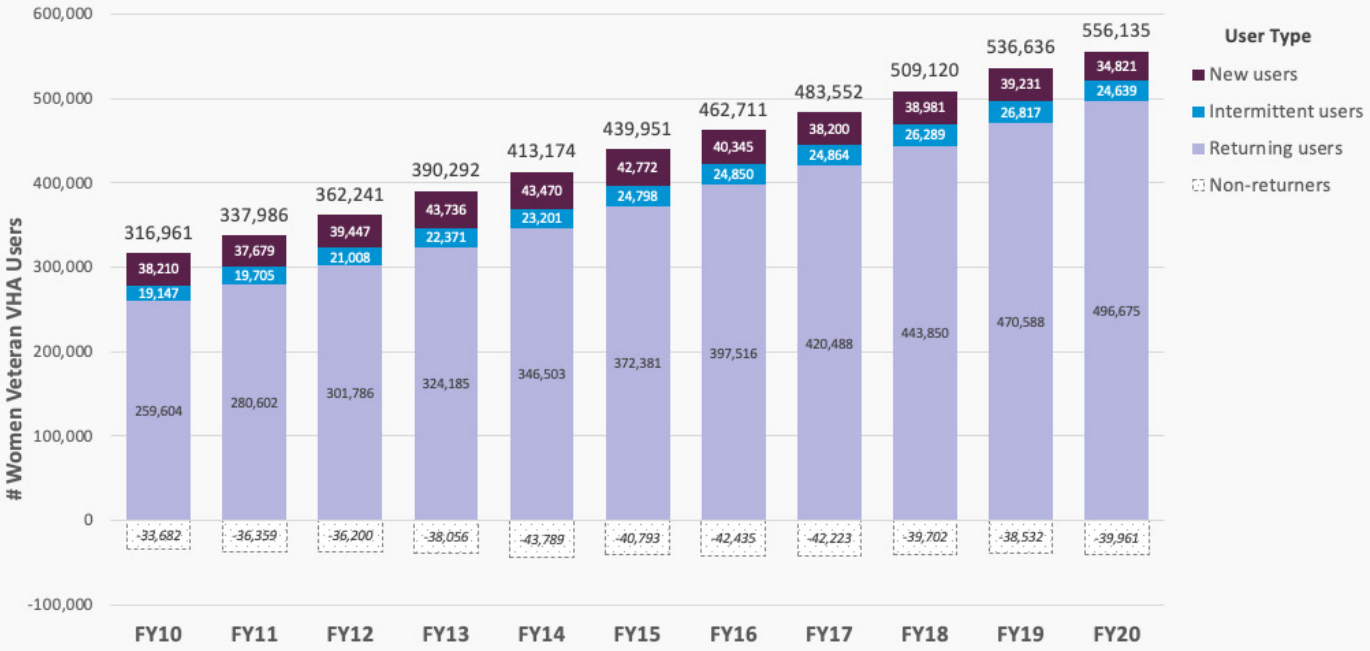
This section describes patterns of health service use between FY10 and FY20, by sex, across the following subsections:

- Utilization by year, by user type
- Subsequent VHA use among FY10 new enrollees

Implications for policy and practice, derived from the findings, appear at the end.

Utilization by User Type, by Year

Exhibit 3.A. Women Veterans by VHA User Type, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
New users are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior ten fiscal years.
Returning users are Veterans who used VHA services in a given fiscal year and in the prior fiscal year.
Intermittent users are Veterans who used VHA services in a given fiscal year and in at least one of the prior ten fiscal years, but who did not use VHA services in the immediately preceding fiscal year.
Non-returners in a given fiscal year are Veterans who received care in the immediately preceding fiscal year but who did not use VHA in the fiscal year being examined. In other words, non-returners in a particular fiscal year are a subset of the users from the immediately preceding fiscal year.
Cohort: Women Veteran VHA users in each year: FY10: N=316,961; FY20: N=556,135.
Source: WHEI Master Database

Women Veterans. Exhibit 3.A provides the number of women Veterans across each user type between FY10 and FY20. Examining all women Veteran user types in aggregate demonstrates the overall rapid growth of women Veterans using VHA (FY10: 316,961; FY20: 556,135, a 1.8-fold increase), as seen earlier in Exhibit 2.A.

Driving this overall increase was growth among *returning users* (i.e., women who also used VHA in the prior fiscal year). Specifically, in each year from FY10 to FY20, most women Veteran users were returning users, and this proportion grew over time (FY10: 82%; FY20: 89%). The absolute number of women Veteran returning users nearly doubled during that period (FY10: 259,604; FY20: 496,675, a 1.9-fold increase).

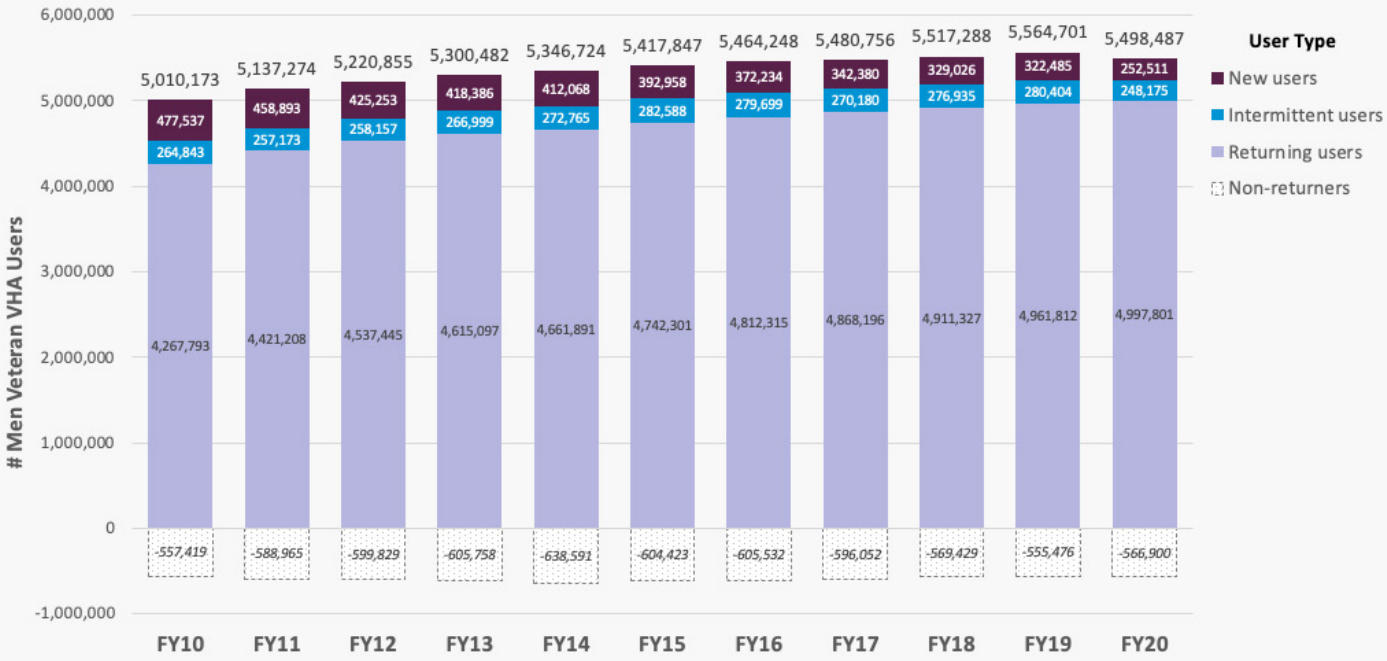
The absolute number of women *intermittent users*—that is, women who used VHA at least once in the prior ten fiscal years, but not in the immediately preceding fiscal year—also grew, but only modestly (FY10: 19,147; FY20: 24,639, a 1.3-fold increase). However, given increases in the proportion of women who were returning users, the overall proportion of women who were intermittent users decreased (FY10: 6%; FY20: 4%).

The absolute number of women *new users* was relatively stable between FY10 and FY20, with no consistent pattern of increase or decrease (FY10: 38,210; FY20: 34,821). However, given the increase in the number of women who were returning users over that period, the proportion of women Veteran users who were *new users* decreased (FY10: 12%; FY20: 6%).

Exhibit 3.A also shows that the number of women Veteran *non-returners* (i.e., women who used in the prior fiscal year but not in the fiscal year being examined) was relatively stable over time (FY10: 33,682 from the FY09 cohort did not return in FY10; FY20: 39,961 from the FY19 cohort did not return in FY20). The proportion of women Veteran *non-returners* decreased over time (FY10: 11% of the FY09 cohort did not return in FY10; FY20: 7% of the FY19 cohort did not return in FY20). The fact that such a small proportion of the FY19 cohort were *non-returners* in FY20 is particularly striking, since some users may have avoided seeking care during the first year of the COVID-19 pandemic, although some may have also sought care for that reason.

In each fiscal year, the number of women Veteran *new users* in that fiscal year and the number of women Veteran *non-returners* tended to be of similar magnitude (FY10: 38,210 gained, 33,682 lost; FY20: 34,821 gained, 39,961 lost). In FY19, prior to the COVID-19 pandemic, VHA gained 39,231 new women users and lost 38,532 women users.

Exhibit 3.B. Men Veterans by VHA User Type, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
New users are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior ten fiscal years.
Returning users are Veterans who used VHA services in a given fiscal year and in the prior fiscal year.
Intermittent users are Veterans who used VHA services in a given fiscal year and in at least one of the prior ten fiscal years, but who did not use VHA services in the immediately preceding fiscal year.
Non-returners in a given fiscal year are Veterans who received care in the immediately preceding fiscal year but who did not use VHA in the fiscal year being examined. In other words, non-returners in a particular fiscal year are a subset of the users from the immediately preceding fiscal year.
Cohort: Men Veteran VHA users in each year: FY10: N=5,010,173, FY20: N=5,498,487.
Source: WHEI Master Database

Men Veterans. The total number of men Veteran VHA users grew (FY10: 5,010,173; FY20: 5,498,487, a 1.1-fold increase), but at a slower rate than that seen among women Veterans. Indeed, the total number of men Veteran users decreased between FY19 and FY20 (FY19: 5,564,701; FY20: 5,498,487).

As with women, for each year between FY10 and FY20 most men Veteran VHA users were *returning users*, and the number of returning users grew over time (FY10: 4,267,793; FY20: 4,997,801, a 1.2-fold increase), although the increase in the number of returning men Veterans was substantially smaller than the 1.9-fold increase seen for returning women Veterans. The proportion of men VHA users who were returning users also grew; the proportion of Veterans using VHA who were returning users (as opposed to *new users* or *intermittent users*) was smaller for women versus men in both FY10 and FY20 (FY10: 82% vs. 85%; FY20: 89% vs. 91%).

As with women, the number of men *intermittent users* was relatively stable between FY10 and FY20 (FY10: 264,843; FY20: 248,175); however, the number of men Veteran *intermittent users* decreased between FY19 (280,404) and FY20 (248,175). The proportion of Veterans who were *intermittent users* declined more for women than for men (FY10: 6% vs. 5%; FY20: 4% vs. 5%).

Whereas the number of women Veteran *new users* decreased only modestly from FY10 to FY20 (FY10: 38,210; FY20: 34,821), the number of men Veteran *new users* decreased more substantially over time (FY10: 477,537; FY20: 252,511); the number of new men Veterans was cut nearly in half during this period. Among Veterans using VHA in a particular fiscal year, the proportion who were *new users* declined for women and men (FY10: 12% vs. 10%; FY20: 6% vs. 5%).

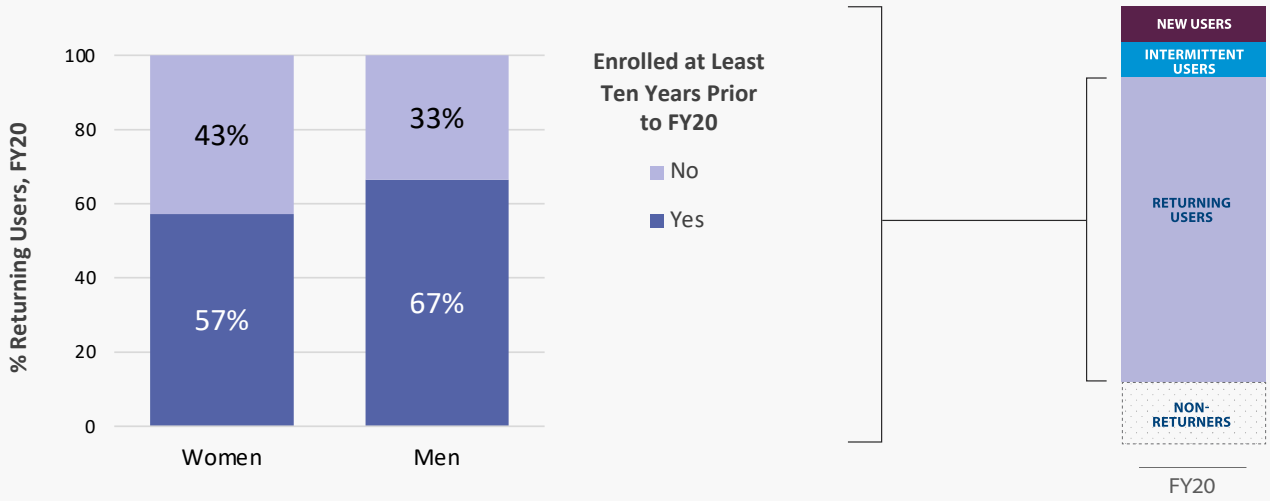
The number of men Veteran users who used in the prior fiscal year but not in the fiscal year being examined (*non-returners*) was relatively stable over time (FY10: 557,419 from the FY09 cohort did not return in FY10; FY20: 566,900 from the FY19 cohort did not return in FY20). However, *non-returners* represented a smaller proportion of prior-year women than men Veteran users (FY10: 11% vs. 12% of the FY09 cohort did not return in FY10; FY20: 7% vs. 10% of the FY19 cohort did not return in FY20).

In each year, the number of men Veterans new to VHA that fiscal year was substantially less than the number of men Veterans who were *non-returners* in that fiscal year (FY10: 477,537 gained, 557,419 lost; FY20: 252,511 gained, 566,900 lost). In FY19, prior to the COVID-19 pandemic, VHA gained 322,485 new men users and lost 555,476 men users.

Details across User Types among Veteran Users in FY20 and Veteran Non-returners in FY20.

This section provides more detailed information about the user types among the cohort of Veteran VHA users in FY20, the most recent fiscal year covered by this Sourcebook. Exhibits 3.C through 3.F provide more details about each segment of the FY20 bars.

Exhibit 3.C. Women and Men Veteran Returning Users, FY20: Prior Enrollment

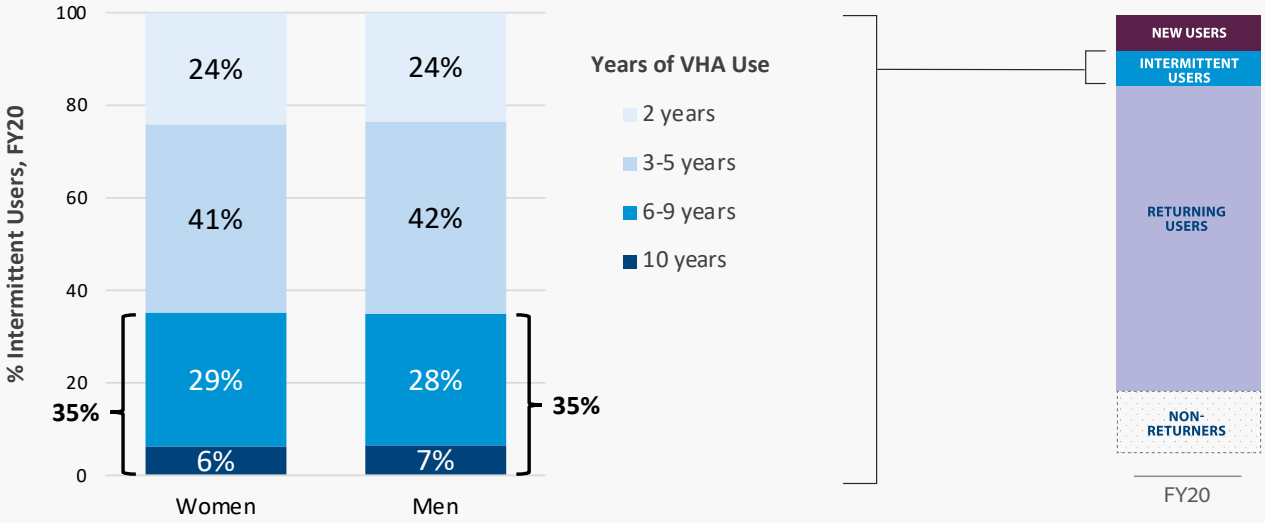


Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
New users are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior ten fiscal years.
Returning users are Veterans who used VHA services in a given fiscal year and in the prior fiscal year.
Intermittent users are Veterans who used VHA services in a given fiscal year and in at least one of the prior ten fiscal years, but who did not use VHA services in the immediately preceding fiscal year.
Non-returners in a given fiscal year are Veterans who received care in the immediately preceding fiscal year but who did not use VHA in the fiscal year being examined. In other words, non-returners in a particular fiscal year are a subset of the users from the immediately preceding fiscal year.
Cohort: Women and men Veteran VHA users in FY20 (Base Cohort) who also used in FY19 (i.e., FY20 returning users) with non-missing enrollment date: Women: N=496,675; Men: N=4,997,801.
Source: WHEI Master Database

Returning Users. Exhibit 3.C provides details about FY20 *returning users* (i.e., Veterans who used care in FY19 and in FY20). Given the younger average age of women Veteran VHA users compared to men, it is not surprising that a smaller proportion of women versus men FY20 *returning users* had been enrolled in VHA for at least a decade (i.e., had enrolled, or signed up for VHA care, as of FY10, i.e., prior to the first day of FY11) (57% vs. 67%).

Among the subset of FY20 *returning users* who had been enrolled for at least a decade, i.e., who were enrollees as of FY10 (and who thus had an opportunity to use VHA across this period), a smaller proportion of women than men used VHA care in every year from FY11-FY20 (69% vs. 73%; data not presented graphically in Exhibit 3.C). However, this represents remarkably consistent longitudinal use of VHA care for both women and men.

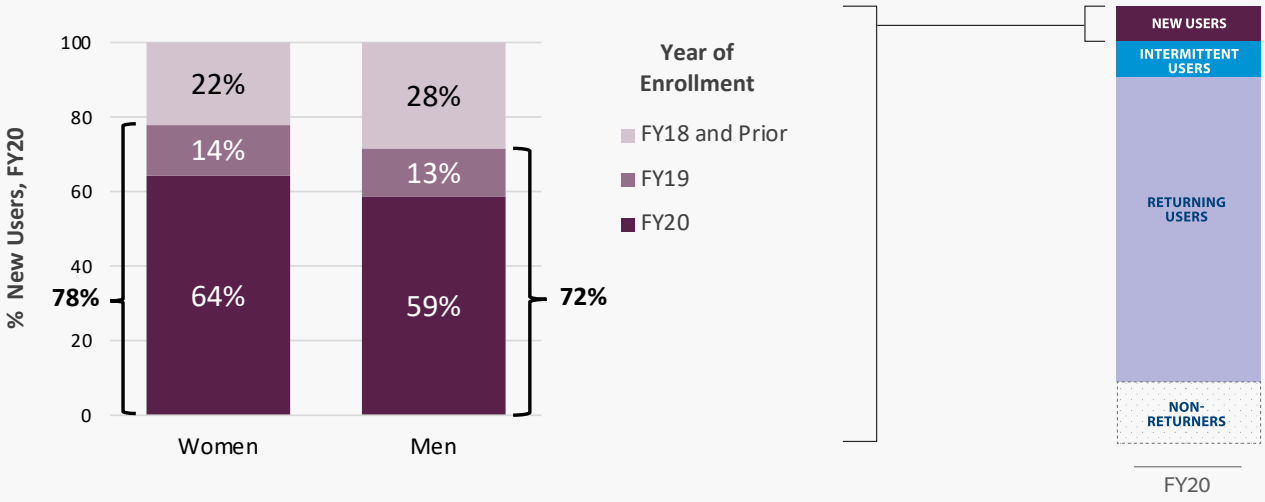
Exhibit 3.D. Women and Men Veteran Intermittent Users FY20: Years of VHA Use, FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
New users are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior ten fiscal years.
Returning users are Veterans who used VHA services in a given fiscal year and in the prior fiscal year.
Intermittent users are Veterans who used VHA services in a given fiscal year and in at least one of the prior ten fiscal years, but who did not use VHA services in the immediately preceding fiscal year.
Non-returners in a given fiscal year are Veterans who received care in the immediately preceding fiscal year but who did not use VHA in the fiscal year being examined. In other words, non-returners in a particular fiscal year are a subset of the users from the immediately preceding fiscal year.
Cohort: Women and men Veteran VHA users in FY20 (base cohort) who did not use in FY19 (i.e., FY20 intermittent users). Women: N=24,639; Men: N=248,175.
Source: WHEI Master Database

Intermittent Users. Among FY20 *intermittent users*, women and men had very similar patterns of use. Exhibit 3.D shows the distribution of the cumulative number of years of use from FY10 to FY20 among FY20 women and men Veteran VHA users who did not receive VHA care in FY19 but who did use VHA care at least once in FY10 through FY18 (i.e., *intermittent users*). It shows that among FY20 *intermittent users*, 35% of women and 35% of men used VHA care for at least half of the years from FY10 to FY20 (i.e., they used VHA care in each of 6-10 separate years); 6% of women and 7% of men *intermittent users* used in all 10 years exclusive of FY19 (i.e., they used VHA yearly in FY10-FY18 and also used VHA in FY20). Only 24% of women and men FY20 *intermittent users* used VHA services for two years, meaning they received VHA care in FY20 and in one other year between FY10-FY18. Note that this exhibit does not account for the number of years enrolled in VHA; Veterans who enrolled in recent years would not have had an opportunity to use VHA services for more than a small number of years.

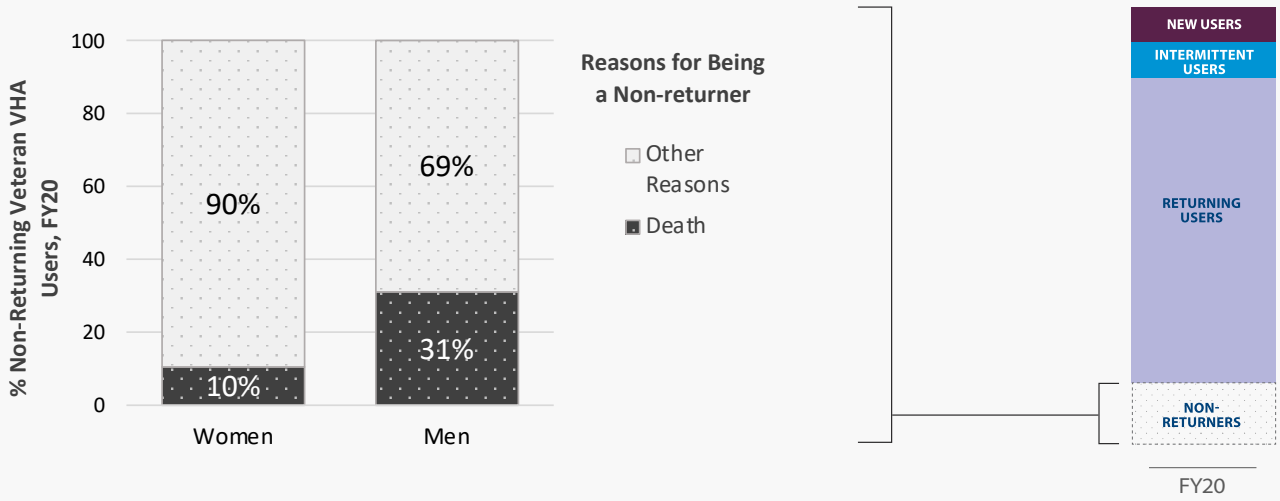
Exhibit 3.E. Women and Men Veteran New Users FY20: Year of Enrollment



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
New users are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior ten fiscal years.
Returning users are Veterans who used VHA services in a given fiscal year and in the prior fiscal year.
Intermittent users are Veterans who used VHA services in a given fiscal year and in at least one of the prior ten fiscal years, but who did not use VHA services in the immediately preceding fiscal year.
Non-returners in a given fiscal year are Veterans who received care in the immediately preceding fiscal year but who did not use VHA in the fiscal year being examined. In other words, non-returners in a particular fiscal year are a subset of the users from the immediately preceding fiscal year.
Cohort: Women and men Veteran VHA users in FY20 (base cohort) who are new to VHA (i.e., FY20 new users) and with non-missing enrollment dates in FY20 or earlier. Women: N=32,285; Men: N=239,408.
Source: WHEI Master Database

New Users. As seen in Exhibit 3.E, the VHA enrollment date among new VHA users in FY20 was in FY20 for the majority of women (64%) and men (59%). Examining enrollment over the two-year period FY19-FY20, 78% of FY20 new women users and 72% of FY20 new men users enrolled in FY19 or FY20. The other 22% of women and 28% of men in the *new user* groups enrolled in FY18 or earlier. Therefore, most but not all *new users* were recent enrollees.

Exhibit 3.F. Women and Men Veteran Non-Returners in FY20: Proportion Who Died in FY19



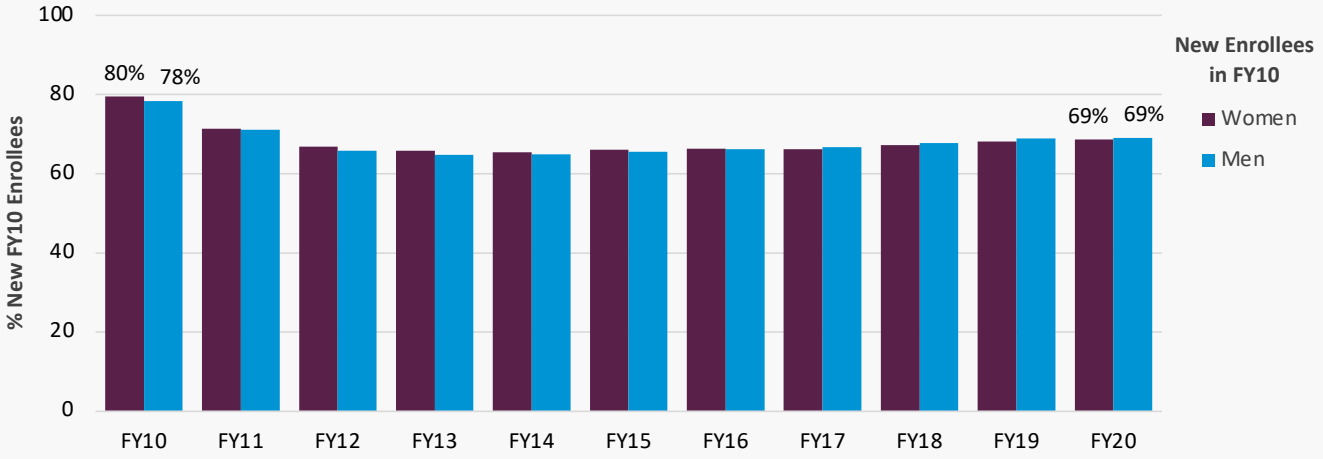
Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
New users are Veterans who used VHA services in a given fiscal year, but who did not use VHA in any of the prior ten fiscal years.
Returning users are Veterans who used VHA services in a given fiscal year and in the prior fiscal year.
Intermittent users are Veterans who used VHA services in a given fiscal year and in at least one of the prior ten fiscal years, but who did not use VHA services in the immediately preceding fiscal year.
Non-returners in a given fiscal year are Veterans who received care in the immediately preceding fiscal year but who did not use VHA in the fiscal year being examined. In other words, non-returners in a particular fiscal year are a subset of the users from the immediately preceding fiscal year.
Cohort: Women and men Veteran VHA users in FY19 who did not return for care in FY20 (i.e., non-returners). Women: 39,961; Men: 566,900.
Source: WHEI Master Database

Non-Returners. As seen in Exhibit 3.F, among *non-returners* in FY20 (i.e., FY19 users who did not use VHA care in FY20), 10% of women (N=4,179) and 31% of men (N=176,267) died in FY19, explaining why they did not use VHA services in FY20. Given the older age of men Veterans, men's higher death rate is not unexpected. (Note that while Exhibit 3.F focuses on FY19 deaths, an additional 577 women and an additional 29,037 men from the FY19 cohort died in FY20; data not represented graphically in Exhibit 3.F. Among *non-returners*, 90% of women (N=35,782) and 69% of men (N=390,633) were alive for part or all of FY20 and yet did not return for VHA care in FY20. These Veterans may reflect "true" *non-returners* or may simply have not required (or chose not to receive) regular care, i.e., they may be infrequent VHA users. In fact, after excluding those who died in FY19 or FY20, 41% of women Veterans from the FY19 cohort who did not use VHA in FY20 did return for VHA outpatient care in the following year, FY21 (data not represented graphically in Exhibit 3.F).

Subsequent VHA Use among FY10 New Enrollees

Subsequent use trajectories. Unlike the prior sections of this Sourcebook, which looked *backward* at prior use among a recent cohort of VHA users, this section starts with an earlier cohort of VHA *enrollees* and looks *forward* at their subsequent use.[1] Also unlike other sections, this sections examines enrollees, some of whom have not used VHA care.

Exhibit 3.G. Proportion of FY10 New VHA Enrollees with Any VHA Use by Sex FY10-FY20



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Notes: Findings portray Veteran VHA enrollees, not the entire Veteran population. See Technical Appendix. "FY10 New Enrollees" are Veterans who enrolled in VHA for the first time in FY10.
Cohort: New FY10 women and men VHA enrollees who were alive as of the end of FY20. Women: N=36,850; Men: N=366,417.
Source: WHEI Master Database

Exhibit 3.G shows the proportion of women and men FY10 new enrollees (who were still alive as of the last day of FY20) with any VHA care in each year from FY10 to FY20. It demonstrates that 80% of new FY10 women enrollees and 78% of new FY10 men enrollees used VHA in FY10. Exhibit 3.G also demonstrates that a fairly consistent proportion of new FY10 women and men enrollees used VHA care in each year from FY11 to FY20. Further, while not presented in Exhibit 3.G, 47% of women and 47% of men FY10 new enrollees used VHA in at least ten of the 11 years from FY10 to FY20; 35% of women and 35% of men used in all 11 years. Just 1% of women and men FY10 new enrollees never used VHA care across the entire period FY10-FY20.

Notes to Interpretation: The proportion of FY10 new enrollees who used VHA services in FY10 is not 100% because some Veterans enroll and do not use care. Also, some members of the FY10 new enrollee cohort may have had little opportunity to use VHA care in FY10, e.g., if their enrollment date was very close to the end of FY10.

IMPLICATIONS

Examining utilization patterns from multiple perspectives, a consistent conclusion arises: women Veterans who use VHA care usually return to VHA. Indeed, in FY20, 89% of women Veteran VHA users were returning users who also used VHA in FY19. The high rates of retention of women Veteran VHA users are similar to overall membership retention rates of at least one private integrated health care system.[2,3] This bodes well for VHA's efforts to be the provider of choice for Veterans[4] and is consistent with work suggesting that many Veterans are satisfied with their care[5,6,7,8] and that older Veterans may be choosing VHA over Medicare.[9] Indeed, among FY20 returning users who had been enrolled for at least a decade (and who thus had an opportunity to use VHA across this period), 69% of women used VHA care in *every year* from FY11-FY20, representing remarkably consistent longitudinal use of VHA care. With so many women Veterans choosing to use VHA long-term, VHA has an opportunity to provide strong continuity of care and preventive care for women across their lifespans.

While most women continue to use VHA, some do not. Known reasons women leave VHA care include living far from VHA, dissatisfaction with their care experiences, and having other health insurance.[10,11,12,13] In addition, some women may not drop out of VHA care but may avoid needed services if they experience harassment while on VHA grounds;[14] VHA has prioritized its system-wide campaign to end any form of harassment.[15] It is important to ensure a safe, welcoming, and inclusive care environment for all women, and to ensure positive first impressions for the large group of women new to VHA, increasing the likelihood that they will choose to return in the years to come.

Endnotes

1 Also note a distinction between Exhibit 3.D and Exhibit 3.H. Exhibit 3.D starts with Veterans who used VHA care in FY20, and then examines a subgroup who were enrolled as of the first day of FY11; they might have enrolled during FY10, or they might have enrolled prior to FY10. In contrast, Exhibit 3.H starts with a cohort of Veterans who enrolled during (but not prior to) FY10, who may or may not have used VHA in FY10, and then looks forward to whether that cohort of enrollees went on to use VHA care in FY10 (their enrollment year) or in any of the subsequent years.

2 Fast Facts, Southern California Research Program. https://www.kp-scalresearch.org/aboutus/fast-facts/. Accessed May 10, 2022.

3 Fang H, Frean M, Sylwestrzak, MA, Ukert B. Trends in disenrollment and reenrollment within US commercial health insurance plans, 2006- 2018, JAMA Network Open. 2022; 5(2)e220320.

4 Department of Veterans Affairs. 2022. "Department of Veterans Affairs Fiscal Years 2022-28 Strategic Plan." https://www.va.gov/oei/docs/va-strategic-plan-2022-2028.pdf. Accessed August 31, 2022.

5 Davila H, Rosen AK, Beilstein-Wedel E, Shwartz M, Chatelain L Jr, Gurewich D. Rural veterans' experiences with outpatient care in the Veterans Health Administration versus community care. Med Care. 2021 Jun 1;59(Suppl 3):S286-S291.

6 Eid MA, Barnes JA, Trooboff SW, Goodney PP, Wong SL. A comparison of surgical quality and patient satisfaction indicators between VA hospitals and hospitals near VA hospitals. J. Surg. R. 2020 Nov 1;255:339-45.

7 Bastian LA, Trentalange M, Murphy TE, Brandt C, Bean-Mayberry B, Maisel NC, Wright SM, Gaetano VS, Allore H, Skanderson M, Reyes-Harvey E, Yano EM, Rose D, Haskell S. Association between women veterans' experiences with VA outpatient health care and designation as a women's health provider in primary care clinics. Womens Health Issues. 2014 Nov-Dec;24(6):605-12.

8 Carlson GC, Than CT, Rose D, Brunner J, Chanfreau-Coffinier C, Canelo IA, Klap R, Bean-Mayberry B, Agrawal A, Hamilton AB, Gerber MR. What drives women veterans' trust in VA healthcare providers? Womens Health Issues. 2022 Mar 30.

9 Liu CF, Batten A, Wong ES, Fihn SD, Hebert PL. Fee-for-service Medicare-enrolled elderly veterans are increasingly voting with their feet to use more VA and less Medicare, 2003–2014. Health Serv. Res. 2018 Dec;53:5140-58.

10 Friedman SA, Frayne SM, Berg E, Hamilton AB, Washington DL, Saechao F, Maisel NC, Lin J, Hoggatt KJ, Phibbs CS. Travel time and attrition from VHA care among women veterans: how far is too far? Medical care. 2015 Apr;53(4 0 1):S15.

11 Hamilton AB, Frayne SM, Cordasco KM, Washington DL. Factors related to attrition from VA healthcare use: Findings from the National Survey of Women Veterans. J Gen Intern Med. 2013 Jul;28 Suppl 2(Suppl 2):S510-6.

12 Chrystal JG, Frayne S, Dyer KE, Moreau JL, Gammage CE, Saechao F, Berg E, Washington DL, Yano EM, Hamilton AB. Women veterans' attrition from the VA healthcare system. Womens Health Issues. 2022 Mar-Apr;32(2):182-193. doi: 10.1016/j.whi.2021.11.011. Epub 2021 Dec 28.

13 Washington DL, Yano EM, Simon B, Sun S. To use or not to use: What influences why women veterans choose VA health care. J. Gen. Intern. Med. 2006 Mar;21(S3):S11-8.

14 Klap R, Darling JE, Hamilton AB, Rose DE, Dyer K, Canelo I, Haskell S, Yano EM. Prevalence of stranger harassment of women veterans at Veterans Affairs medical centers and impacts on delayed and missed care. Womens Health Issues. 2019 Mar 1;29(2):107-15.

15 US Dept. of Veterans Affairs. Stand Up to Stop Harassment Now! - VHA Assault and Harassment Prevention Office. https://www.va.gov/STOP-HARASSMENT/StandUpToStopHarassmentNow.asp. Accessed August 6, 2023.

4. Use of VHA and VA-purchased Community Care

Overview

This section reports on the location of Veterans' service use: the proportion of women and men Veteran VHA users who used services from a VHA facility, from VA-purchased Community Care (VACC), or both. It then describes the proportion of women and men Veteran VHA users[1] who used any VACC (i.e., VACC only or both VHA and VACC care), overall and across the following categories:

- Age
- Race/ethnicity
- Urban/rural status
- Service-connected (SC) disability rating
- Veterans Integrated Service Network (VISN)

Finally, for women Veterans only, this section examines the proportion of women Veteran VHA users receiving specific medical condition diagnoses through VACC, suggesting that some or all of the care the person received for the condition occurred in VACC. Within each age group, it describes the 25 conditions most commonly diagnosed in VACC.

Implications for policy and practice, derived from the findings, appear at the end of each section.

Notes to interpretation: *First, when interpreting differences in utilization based on sex, age, etc., it is important to recognize that these analyses present raw comparisons of proportions, without comment on the statistical significance of those differences. Differences also are provided without adjustment for user characteristics, such as number of medical conditions, which can influence conclusions regarding between-group differences in the use of VHA services.[2] For example, the fact that women Veteran VHA users are, on average, younger than men Veteran VHA users could be one of the factors driving some observed gender differences in utilization.*

Second, some Veterans who use VHA also use health care services outside of VHA (e.g., reimbursed through Medicare, Medicaid, private insurance, etc.). Care provided in such settings may occur in the community but are not part of VACC, since VACC is outsourced care that occurs in the community but that is paid for by VHA. Sourcebook Volume 5 does not attempt to capture the totality of care that women Veteran users receive, such as care that women arrange privately outside of VHA through Medicare, Medicaid, or private insurance.[3]

Third, the degree to which Veterans are reliant upon VACC varies. Some may use VACC only once (e.g., for a community-based mammogram or a one-time consultation with an allergy specialist). Others may split a substantial proportion of their care between VHA and VACC (e.g., receiving their primary care at VHA and their ongoing specialty care through VACC). Others may receive most or even all of their care in a particular year through VACC (e.g., primary care or obstetric care during pregnancy through VACC). The data presented describe Veterans who had at least one VACC visit, not the degree to which they were more or less reliant on VACC.

Fourth, inpatient care (other than obstetric births), long-term nursing home care, and VHA pharmacy prescription services are not included in any utilization counts.[4]

Care received through VACC may be undercounted. National VACC databases are populated with utilization records as VHA pays invoices from VACC providers, but sometimes delays occur in invoicing or payment. However, lags in fully populating VACC databases should not be a major issue for the FY19 VACC care examined here because data were obtained more than two years after the end of FY19, which should provide ample time for most claims to be invoiced and paid.

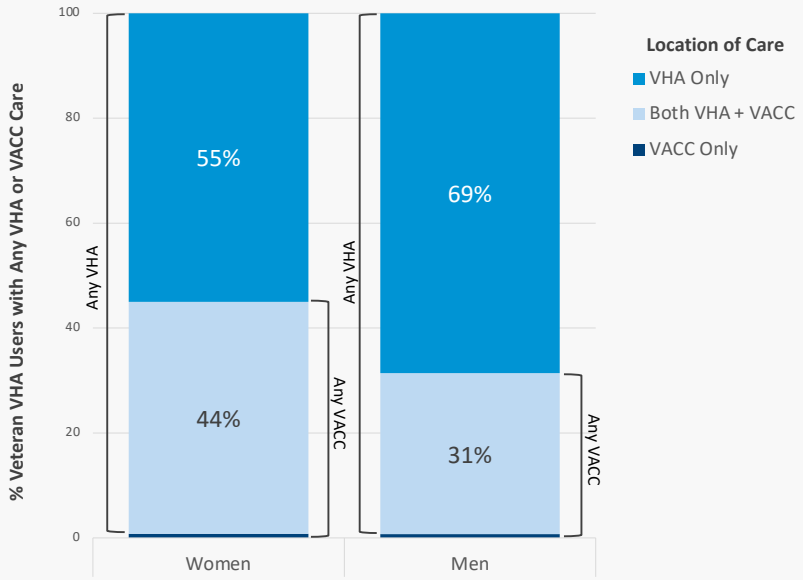
Location of Care: VHA Facility-based vs. VA-purchased Community Care

Starting with the implementation of the Veterans Choice Program in 2014 and continuing with the implementation of the MISSION Act in June 2019 (i.e., the second quarter of FY19), an increasing number of Veteran VHA users have been eligible to receive outsourced care in the community that is paid for by VHA.[5,6] In Sourcebook Volume 5, we term this care VA-purchased Community Care (VACC). Therefore, in a given year, VHA users can receive care paid for by VHA in three ways: in VHA only, in VACC only, or in Both VHA and VACC.

Exhibit 4.A shows the location of care for VHA users who received care in FY19 from a VHA facility and/or in VACC, by sex. In FY19, nearly all women Veteran VHA users (99%) received some or all of their care through VHA. The majority of women Veteran VHA users received care in VHA only (55%, N=290,413 women), and a smaller proportion received care in Both VHA and VACC (44%, N=233,806 women). A very small proportion of women (1%, N=4,205 women) received care in VACC only.

Compared to women, men showed a similar pattern: the majority received care in VHA only (69%), followed by a smaller proportion receiving care in Both VHA and VACC (31%). A very small proportion of men received care in VACC only (1%).

Exhibit 4.A. Proportion of Women and Men Veteran VHA Users Who Received Care in VHA Only, VACC Only, or Both VHA and VACC, FY19



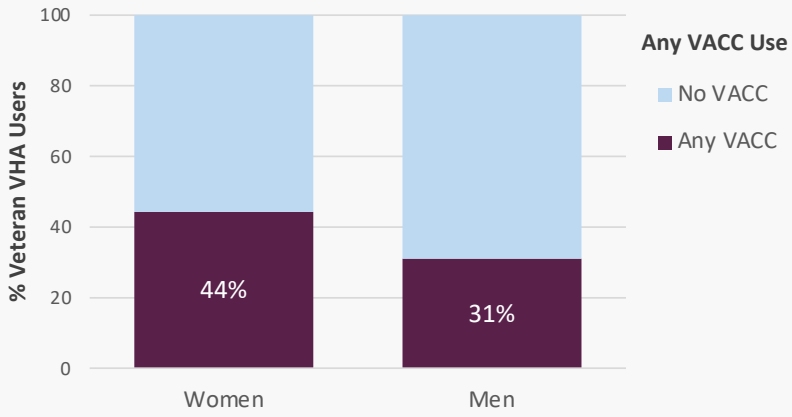
Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix. Users with no VHA or VACC use are excluded.
Cohort: Veteran VHA users with care in VHA and/or VACC in FY19. Women: N=528,424, Men: N=5,500,639.
Source: WHEI Master Database

Any VACC use

In the following sections, the groups *Both VHA and VACC* and *VACC only* are aggregated into a single *Any VACC* group.

Exhibit 4.B shows that, among Veteran VHA users, a larger proportion of women than men used *Any VACC* in FY19 (44% vs. 31%). As demonstrated in the subsequent exhibits, this pattern of a greater proportion of users with *Any VACC* use among women than men holds across different sociodemographic groups.

Exhibit 4.B. Any VACC Use among Women and Men Veteran VHA Users, FY19

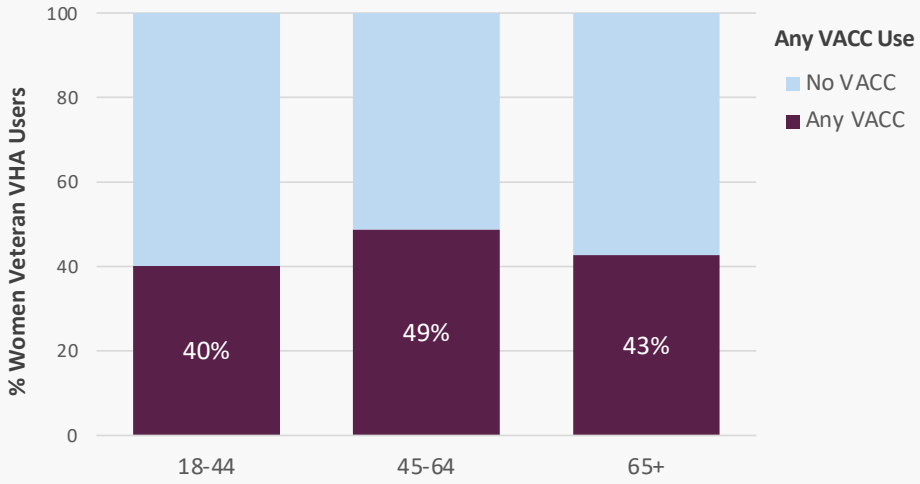


Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Veteran VHA users FY19. Women: N=536,636, Men: N=5,564,701
Source: WHEI Master Database

AGE

Women Veterans. Exhibit 4.C presents the proportion of women Veterans with *Any VACC* use, by age group. The youngest age group, 18-44 years old, had the smallest proportion of women using *Any VACC* (40%, N=87,534). Among women 45-64 years old, nearly half used VACC (49%, N=118,640). Among the oldest women, those 65 years or older, 43% used VACC (N=31,762).

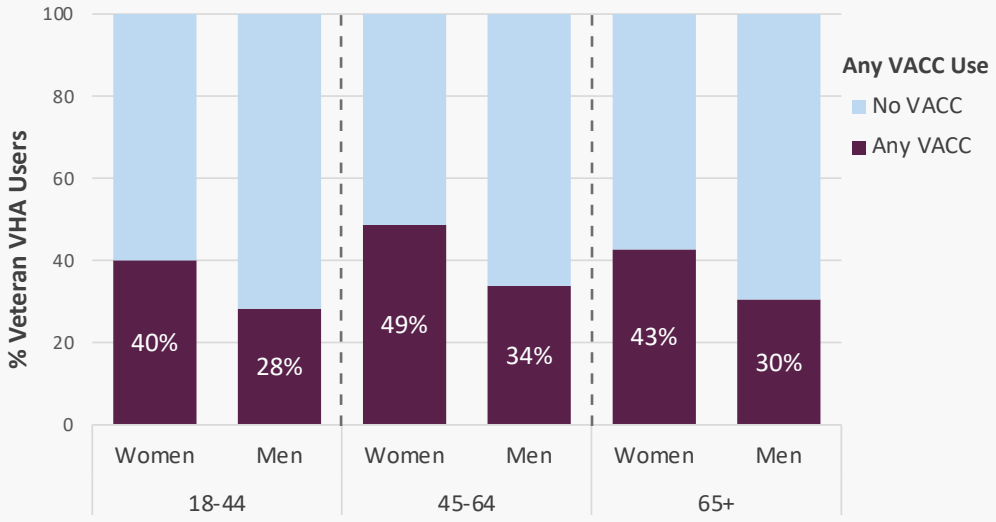
Exhibit 4.C. Any VACC Use among Women Veteran VHA Users by Age, FY19



Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) in FY19. N=536,418.
Source: WHEI Master Database

Women vs. men. Exhibit 4.D compares *Any VACC* use between women and men VHA users in FY19, by age group. Across all age groups, greater proportions of women than men used *Any VACC*: this was true among 18-44-year-olds (40% vs. 28%); among 45-64-year-olds (49% vs. 34%); and among 65+ year-olds (43% vs. 30%). The exhibit also shows that there was more variation in *Any VACC* use among women than men across age groups, but among both women and men, the middle age group had the largest proportion of users with *Any VACC*.

Exhibit 4.D. Any VACC Use among Women and Men Veteran VHA Users by Age, FY19



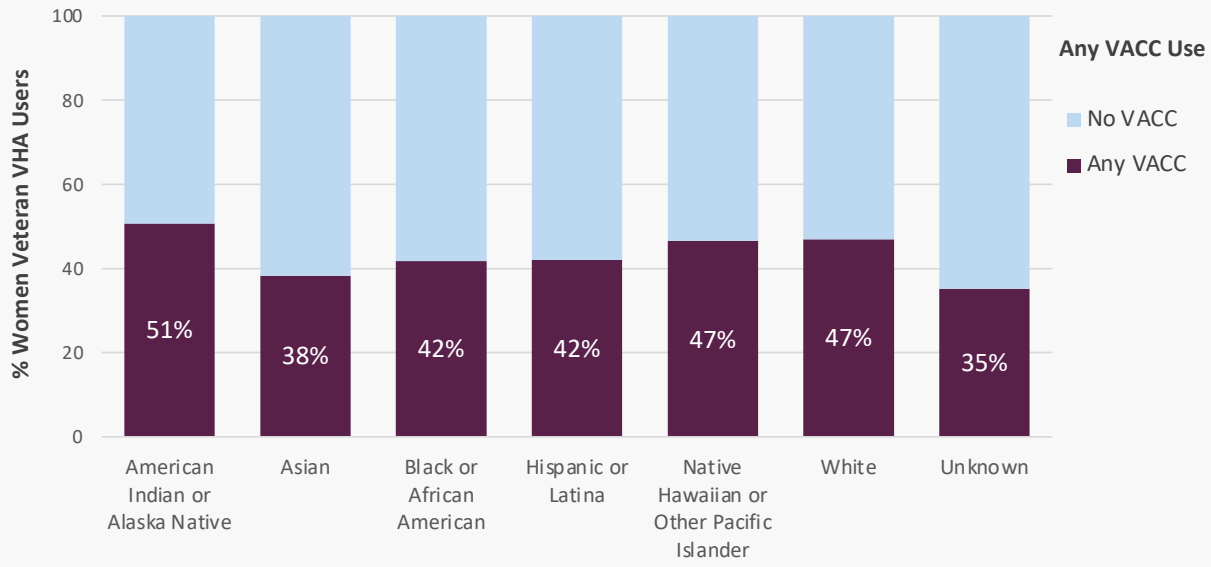
Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration,
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: VHA users with non-missing ages 18-110 years (inclusive) in FY19. Women: N=536,418; Men: N=5,564,416.
Source: WHEI Master Database

RACE/ETHNICITY

This Sourcebook uses five race categories (American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White) and one ethnicity category (Hispanic or Latino/Latina). For data reported herein, race/ethnicity is presented as a composite. A Veteran's race/ethnicity is considered to be "Hispanic or Latino/Latina" if ethnicity is Hispanic or Latino/Latina (independent of the Veteran's race); for all other Veterans, race/ethnicity is considered to be the Veteran's race. See Chapter 2 and Online Appendix (Technical Appendix), for further details.

Women Veterans. Exhibit 4.E shows the proportion of women VHA users in FY19 with *Any VACC use*, across racial/ethnic groups. The group with the largest proportion using *Any VACC* were American Indian or Alaska Native women. Just over half of American Indian or Alaska Native women Veterans used Any VACC in FY19 (51%, N=2,669). It is notable that 3% of American Indian or Alaska Native women (N=132 women) used *VACC only* (data not represented graphically in Exhibit 4.E), a higher proportion than seen in other racial/ethnic groups. This may be explained in part by care provided through the Indian Health Service, which has expanded access for American Indian Veterans in rural areas.7,8 Native Hawaiian or Other Pacific Islander women (47%, N=2,351) and White women (47%, N=136,119) had the second largest proportion of women using Any VACC, followed by Black or African American women (42%, N=67,714), Hispanic or Latina women (42%, N=17,391), Asian women (38%, N=3,039), and women with unknown race/ethnicity (35%, N=8,728). A relatively large proportion of women with unknown race/ethnicity used VACC only (2%, N=398) (data not represented graphically in Exhibit 4.E).

Exhibit 4.E. Any VACC Use among Women Veteran VHA Users, by Race/Ethnicity, FY19



Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women Veteran VHA users in FY19: N=536,636
Source: WHEI Master Database

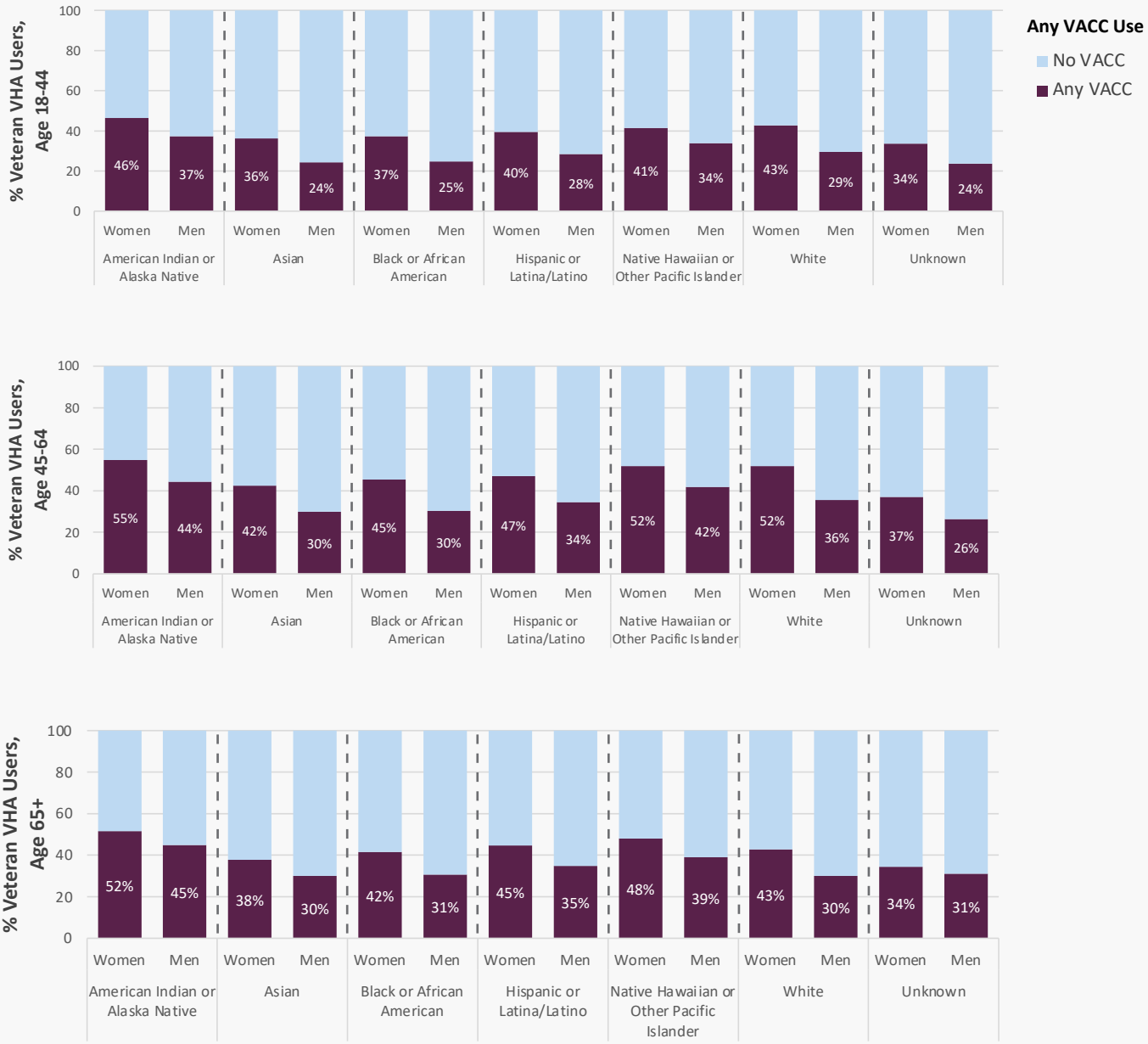
Women vs. men. Exhibit 4.F compares *Any VACC* use among women and men by racial/ethnic group, stratified by age group. Within each age group, across all race/ethnicity categories, a greater proportion of women than men used VACC in FY19. In addition, across age groups, the proportion with *Any VACC* use was highest among women and men American Indian or Alaska Native Veterans. As was seen with women Veterans, a high proportion of American Indian or Alaska Native men Veterans (4%) used *VACC only* (N=1,717) (data not represented graphically in Exhibit 4.F).

As seen in Exhibit 4.F, among the youngest Veterans, ages 18-44, a larger proportion of women than men had at least one VACC visit in FY19 in every racial/ethnic group: American Indian or Alaska Native Veterans (46% vs. 37%), Asian Veterans (36% vs. 24%), Black or African American Veterans (37% vs. 25%), Hispanic or Latino/Latina Veterans (40% vs. 28%), Native Hawaiian or Other Pacific Islander Veterans (41% vs. 34%), White Veterans (43% vs. 29%), and Veterans with unknown race/ethnicity (34% vs. 24%).

Among Veterans ages 45-64, a similar pattern emerged in Exhibit 4.F, although the proportion of women and men with *Any VACC* use was larger in this age group than the younger age group. A greater proportion of women than men across all racial/ethnic groups had *Any VACC* use: American Indian or Alaska Native Veterans (55% vs. 44%), Asian Veterans (42% vs. 30%), Black or African American Veterans (45% vs. 30%), Hispanic or Latino/Latina Veterans (47% vs. 34%), Native Hawaiian or Other Pacific Islander Veterans (52% vs. 42%), White Veterans (52% vs. 36%), and Veterans with unknown race/ethnicity (37% vs. 26%).

The same pattern is seen in Exhibit 4.F when looking at Veterans in the oldest age group (age 65+). A greater proportion of women than men across all racial/ethnic groups had Any VACC use and the proportions were generally larger than for those in the youngest group: American Indian or Alaska Native Veterans (52% vs. 45%), Asian Veterans (38% vs. 30%), Black or African American Veterans (42% vs. 31%), Hispanic or Latino/Latina Veterans (45% vs. 35%), Native Hawaiian or Other Pacific Islander Veterans (48% vs. 39%), White Veterans (43% vs. 30%), and Veterans with unknown race/ethnicity (34% vs. 31%).

Exhibit 4.F. Any VACC Use among Women and Men Veteran VHA Users, by Race/Ethnicity, by Age, FY19



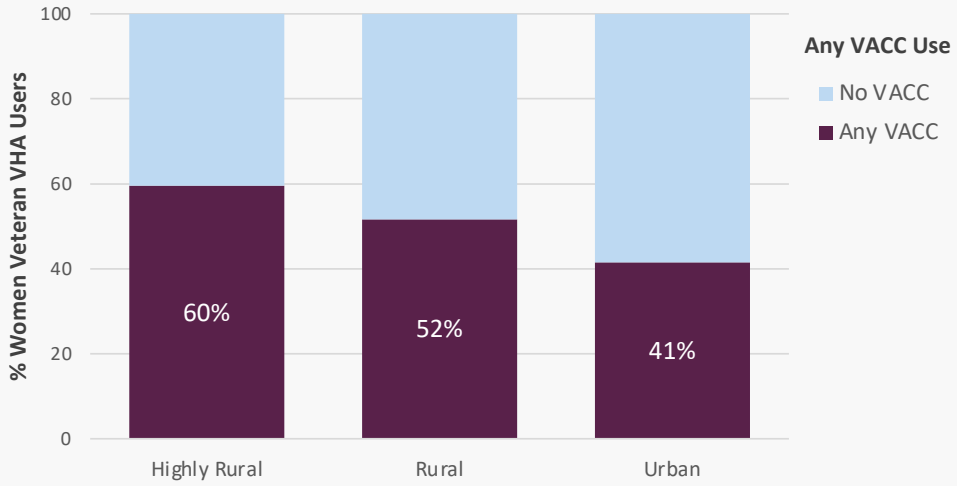
Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: VHA users with non-missing ages 18-110 years (inclusive) in FY19. Women: N=536,418; Men: N=5,564,416.
Source: WHEI Master Database

URBAN/RURAL STATUS

Women Veterans. Exhibit 4.G shows the proportion of women with *Any VACC* use among women Veterans with highly rural residence, rural residence, or urban residence. It demonstrates that a greater proportion of women living in rural than urban areas used Any VACC–highly rural: 60%; rural: 52%; urban: 41% (N=7,804, N=66,477, and N=162,968, respectively). A particularly large proportion of women in highly rural areas used VACC only (2%, N=272; data not represented graphically in Exhibit 4.G).

Women residing on insular islands represent a fourth category of urban/rural status. This group is not represented in Exhibit 4.G due to its relatively small size (N=657). However, a particularly large proportion of women dwelling on insular islands used VACC in FY19 (76%, N=501; data not represented graphically in Exhibit 4.G). It is also notable that a high proportion of women dwelling on insular islands used *VACC only* (3%, N<20; data not represented graphically in Exhibit 4.G).

Exhibit 4.G. Any VACC Use among Women Veteran VHA Users, by Urban-Rural Status, FY19



Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix. Women residing on insular islands (N=657) are not included in this Exhibit; 76% of this group used Any VACC in FY19.
Cohort: Women Veteran VHA users with non-missing urban/rural status in FY19. N=535,467.
Source: WHEI Master Database

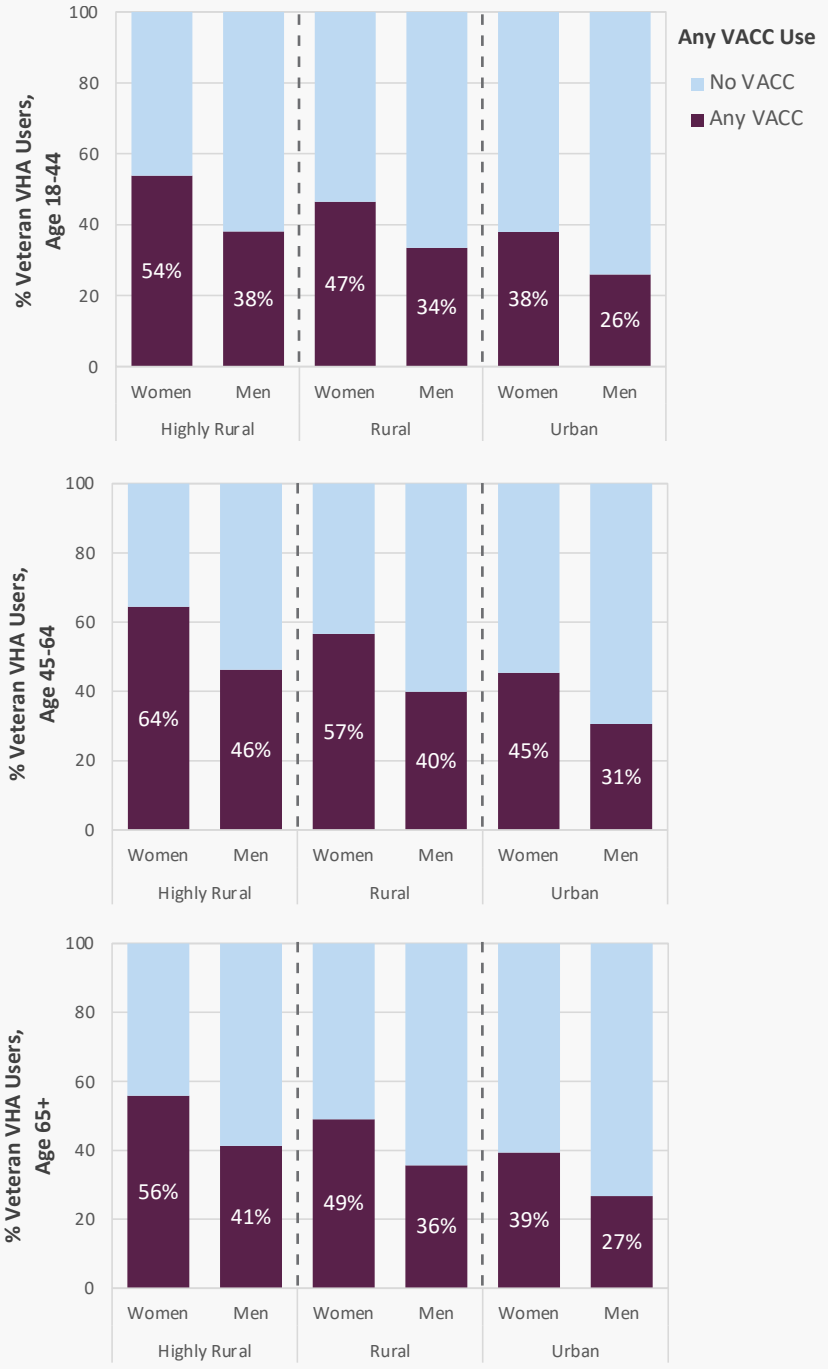
Women vs. men, by age group. Exhibit 4.H compares *Any VACC* use among women and men VHA users in FY19 by urban/rural status, stratified by age group. It shows that across all urban/rural categories a larger proportion of women than men had *Any VACC* use. As was seen with women Veterans, a large proportion of men living in highly rural areas (2%, N=4,153) and men living in insular island areas (3%, N=147) had *VACC only* use (data not represented graphically in Exhibit 4.H).

In the 18-44-year-old group, a larger proportion of women than men in each urban/rural subgroup had *Any VACC* use, and the proportions were largest for rural Veterans: highly rural (54% vs. 38%), rural (47% vs. 34%), and urban (38% vs. 26%). This was also true for Veterans residing on insular islands (69% vs. 65%, data not represented graphically in Exhibit 4.H).

The patterns were similar for the 45-64-year-old group. Again, the proportion of Veterans with *Any VACC* use was larger among women than men and increased with rurality: highly rural (64% vs. 46%), rural (57% vs. 40%), and urban (45% vs. 31%). This pattern was also seen among Veterans residing on insular islands (82% vs. 77%, data not represented graphically in Exhibit 4.H).

Among Veterans in the oldest age group (age 65+), the pattern was also similar. Among women and men, the proportion of users with *Any VACC* use was largest for rural Veterans: highly rural (56% vs. 41%), rural (49% vs. 36%), and urban (39% vs. 27%). However, a different pattern was seen among Veterans living in insular island areas–a slightly lower proportion of women than men had *Any VACC* use in this population (78% vs. 81%, data not represented graphically in Exhibit 4.H).

Exhibit 4.H. Any VACC Use among Women and Men Veteran VHA users, by Urban/Rural Status, by Age, FY19



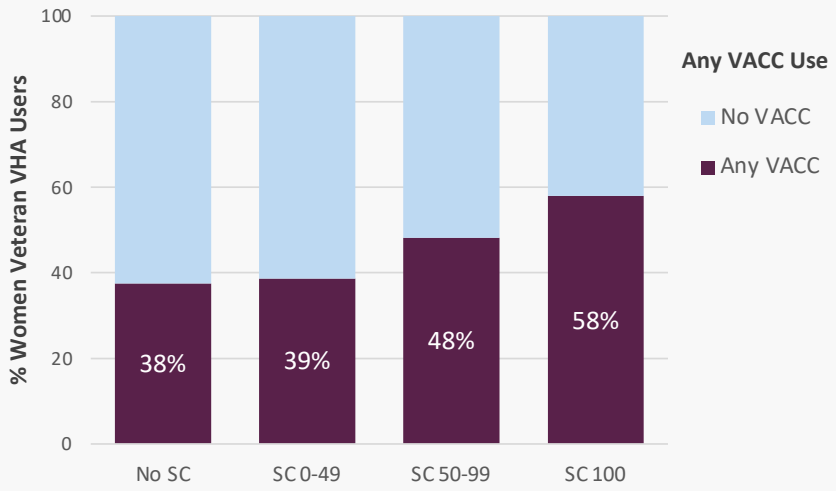
Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: VHA users with non-missing ages 18-110 years (inclusive) and urban/rural status in FY19. Women: N=535,367, Men: N=5,554,458.
Source: WHEI Master Database

SERVICE-CONNECTED DISABILITY RATING

A service-connected (SC) disability rating indicates an injury or illness deemed to have been incurred or aggravated while serving in the armed forces. Chapter 2 describes disability ratings.[9]

Women Veterans. Exhibit 4.I shows rates of *Any VACC* use across SC disability rating among women Veteran VHA users in FY19. As SC disability ratings increased so did the proportion of women with *Any VACC* use. Among women with 100 percent SC ratings, 58% used Any VACC in FY19 (N=40,931). Progressively lower proportions were seen among those with 50-99 percent SC disability ratings (48%, N=93,971), 0-49 percent SC disability ratings (39%, N=43,321), and no SC disability ratings (38%, N=59,031).

Exhibit 4.I. Any VACC Use among Women Veteran VHA Users, by Service-Connected (SC) Disability Rating, FY19



Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing SC disability rating in FY19. N=534,752.
Source: WHEI Master Database

Women vs. men, by age group. Exhibit 4.J compares *Any VACC* use among women and men VHA users in FY19 across SC disability rating groups, stratified by age group. Across all age groups and SC disability ratings, a larger proportion of women than men had *Any VACC* use.

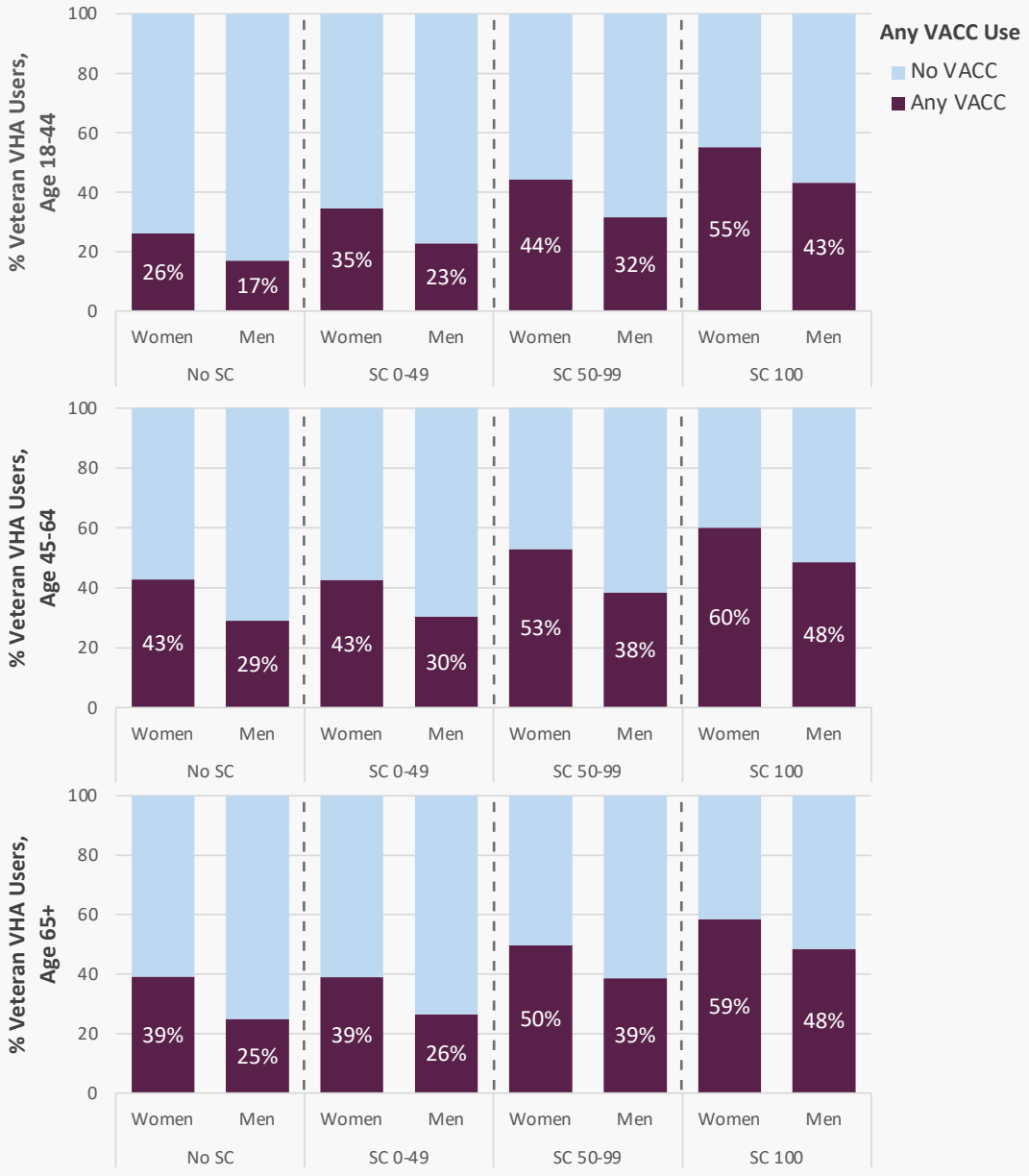
Among both women and men in the 18-44-year-old group, the proportion of Veterans with *Any VACC* use in FY19 increased with increasing SC disability ratings. At all SC disability ratings, a greater proportion of women than men had *Any VACC* use: 100 percent SC disability rating (55% vs. 43%); 50-99 percent SC disability rating (44% vs. 32%), and 0-49 percent SC disability rating (35% vs. 23%). Those without SC disability ratings had the smallest proportion of users with *Any VACC* use (26% vs. 17%).

Among women and men in the middle age group (ages 45-64), those with the highest SC disability ratings had the largest proportion of Veterans using *Any VACC*: 100 percent SC rating (60% vs. 48%) and 50-99 percent SC rating (53% vs. 38%). At all SC disability levels, a greater proportion of women than men had *Any VACC* use.

Exhibit 4.J demonstrates that patterns among the oldest age group of Veterans (ages 65 years and older) were similar to those in the middle age group. Among women and men in the oldest age group, the groups with the highest SC disability ratings had the largest proportion of Veterans with *Any VACC*

use: 100 percent SC rating (59% vs. 48%) and 50-99 percent SC rating (50% vs. 39%). As with the middle age group, Veterans in the oldest age group had similar patterns of *Any VACC* use in the two lowest SC disability rating categories: 0-49 percent SC rating (39% vs. 26%) and no SC disability rating (39% vs. 25%). Again, at all SC disability levels, a greater proportion of women than men had *Any VACC* use.

Exhibit 4.J. Any VACC Use among Women and Men Veteran VHA Users, by Service-Connected (SC) Disability Rating, by Age, FY19

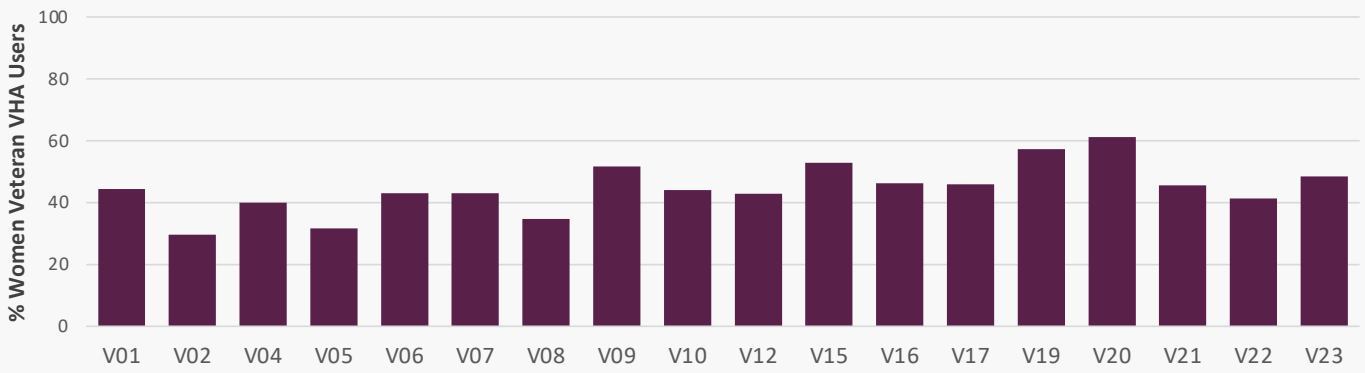


Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: VHA users with non-missing ages 18-110 years (inclusive) and non-missing SC disability rating in FY19. Women: N=534,535; Men: N=5,546,513.
Source: WHEI Master Database

VETERANS INTEGRATED SERVICES NETWORKS (VISNS)

Women Veterans. Exhibit 4.K summarizes the proportion of women Veteran VHA users using *Any VACC* in FY19 across Veterans Integrated Services Networks (VISNs).[10] VISNs represent broad geographic regions of the US and are made up of multiple VHA Health Care Systems. Overall, Exhibit 4.K demonstrates variability across VISNs in the proportion of women Veteran users receiving care in the VISN who used *Any VACC* during FY19. Across all VISNs, the range of *Any VACC* use was 30% to 61% (median 44%): in VISN 2, 30% of women Veteran users used *Any VACC*, whereas in VISN 20, 61% of women used *Any VACC*.

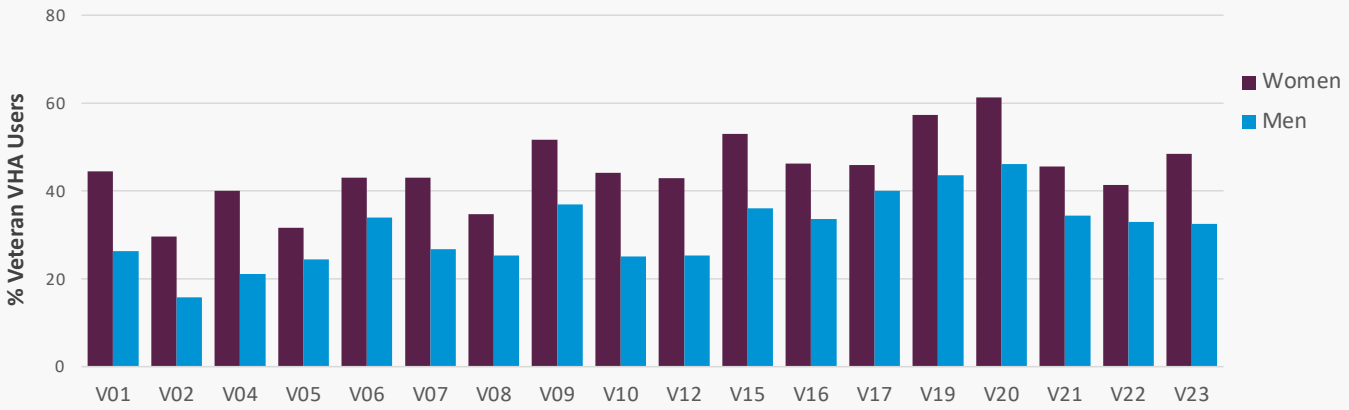
Exhibit 4.K. Proportion of Women Veteran VHA Users with Any VACC Use, by VISN, FY19



Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration, VISN – Veterans Integrated Services Network
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women Veteran VHA users in FY19. N=536,636, Range of Any VACC use among women, by VISN: 30% - 61%; Median 44%
Source: WHEI Master Database

Women vs. men. Exhibit 4.L presents the proportion of women and men with *Any VACC* use across VISNs in FY19. Consistently within each VISN, a greater proportion of women than men used *Any VACC*. However, there was substantial variability in the magnitude of the absolute and relative difference in proportions of women vs. men using VACC: the smallest difference was in VISN 17 (46% vs. 40%; 1.1-fold higher percent of women than men used VACC) and the largest difference was in VISN 4 (40% vs. 21%; 1.9-fold higher percent of women than men used VACC).

Exhibit 4.L. Proportion of Women and Men Veteran VHA Users with Any VACC Use, by VISN, FY19



Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration, VISN – Veterans Integrated Services Network
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Veteran VHA users in FY19. Women: N=536,636, Men: N=5,564,701
Range of Any VACC use among women, by VISN: 30% - 61%; Median 44%
Range of Any VACC use among men, by VISN: 16% - 46%; Median 33%
Source: WHEI Master Database

Notes to interpretation: *For the analyses displayed in Exhibit 4.K and Exhibit 4.L, each FY19 Veteran VHA user is linked to their "home facility," the single VHA Health Care System where they received the preponderance of their care, which is then linked to their VISN. (See Online Technical Appendix for definition.) This approach provides information about variability across the country in the proportion of a VISN's users who received VACC at least once; it does not indicate how reliant the VISN's users were upon VACC (i.e., what proportion of users' care occurred in VACC versus in VHA), nor does it reflect that over the course of a year, some users receive care at more than one VISN. Examples of the use of more than one VISN over the course of a year include (a) Veterans who move residence over the course of the year; (b) Veterans who spend part of the year in another area (such as "snowbirds"); (c) Veterans who are referred by their home facility to another VHA Health Care System for specialized care; (d) Veterans who receive part of their VHA care from a VHA Clinical Resource Hub.*

IMPLICATIONS

The fact that nearly all women Veteran VHA users (99%) received at least some VHA-based care[11] in FY19 highlights the continued importance of the availability of women's health services in VHA-based settings, even as access to VA-purchased Community Care (VACC) expands through policies such as the MISSION Act.[12]

A larger proportion of women than men Veteran VHA users used VACC in FY19 (44% vs. 31%); this pattern held across different sociodemographic groups and VISNs.[13] Ongoing efforts to examine the quality of outsourced care and to identify optimal approaches to coordinate care between VHA and VACC providers are of great relevance for women as they navigate across distinct sources of care.[14,15,16] Care coordination will be particularly relevant for subgroups of women with higher rates of *Any VACC* or *VACC-only* use, including highly rural Veterans, American Indian or Alaska Native Veterans, and those with high SC disability ratings. Understanding drivers of VACC use is warranted and may point to focus areas for expanded in-house services. Ensuring effective care coordination is salient as some data suggest quality and safety are as good as or better in VHA compared to outside VHA.[17,18]

Conditions Seen in VA-purchased Community Care Settings

The "conditions" described in Sourcebook Volume 5 represent clinically coherent aggregates of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes; sets of conditions are grouped into broad "domains" (e.g., Musculoskeletal, Cardiovascular, Reproductive Health, Mental Health, etc.). The nosology used in Sourcebook Volume 5 drew on multiple sources, including the Agency for Healthcare Research & Quality's Clinical Classifications Software (CCS),[19] the ICD-10-CM classification system,[20] and approaches used by other VHA offices. The Online Appendix (Technical Appendix) explains how over 70,000 ICD-10-CM diagnosis codes were mapped to 202 conditions.

This section **does not** focus on the **prevalence** of specific conditions among women Veterans. (Note: For information on the prevalence of diagnosed conditions, please see the Supplemental Appendix.) Instead, it examines conditions diagnosed during VACC-based health care encounters. Understanding what conditions are diagnosed in a VACC setting provides insight into the types of conditions being addressed in VACC contexts.

Notes to interpretation of findings related to conditions: *It is important to keep several caveats in mind while reviewing the following results.*

First, counts of medical conditions reported in this section of Sourcebook Volume 5 cannot be directly compared to counts of conditions for prior years reported previously in Sourcebook Volume 4. This is because (a) minor adjustments were made to the ICD code mapping approach; and (b) adjustments were made to the types of encounters from which a diagnosis code was accepted (for example, diagnoses coded as a reason for a VHA telephone encounter and diagnoses associated with the professional component of a radiologic study are accepted in Sourcebook Volume 5 but were not in Sourcebook Volume 4). Details of these adjustments are described in the Online Appendix (Technical Appendix). Furthermore, the percentages provided in the tables in this section do not represent rates of conditions among all women Veterans (i.e., these percentages do not represent prevalence of a condition); instead, the percentages indicate what proportion of women Veteran VHA users received services for that condition in a VACC setting.

Second, the numbers of medical conditions reported here refer to Veterans who use VHA and/or VACC, and not to all Veterans. Veterans who seek care through VHA may have a different health profile than Veterans who receive all their care outside VHA.[21]

Third, even among Veterans who use VHA, the total number of women in a specific age group with a specific condition presented in the exhibits here does not represent the true number of women with the condition. Instead, it reflects the number of Veteran VHA users who have had diagnosed conditions recorded in VHA and/or VACC administrative databases during a one-year period of observed utilization. The administrative databases are populated with ICD-10-CM diagnosis codes entered by clinical staff on encounter forms in outpatient VHA or VACC settings or by abstractors pulling hospital discharge diagnoses in inpatient VHA or VACC settings. Therefore, these diagnoses have the advantage of reflecting clinical assessments on the complete universe of VHA users. However, they may underestimate true condition prevalence among VHA users.[22] *For example:*

- *Underestimation of the number of women with a condition could occur via under-identification of diseases. If a clinician does not recognize the presence of a condition, the clinician will not include it in the medical record. Some diseases/symptoms may be more prone to underdiagnosis and under-detection than others.*
- *Even if a clinician identifies a condition, it may not be recorded in the administrative data, again leading to underestimation of number of women with the condition. This could happen if the condition was not treated at that visit or during that inpatient stay;*[23] *if the condition was in fact treated at a visit, but some other condition(s) was/were recorded as the reason(s) for the visit;*[24] *or if*

a definitive diagnosis was made after the clinical encounter was complete (e.g., based on the results of a diagnostic test that was performed after the clinical encounter). It could also potentially happen disproportionately for conditions for which the ICD-10-CM code look-up requires more clinician effort (e.g., conditions not already pre-populated on the encounter form from the patient's problem list, or conditions the clinician does not regularly encounter).

- *Similarly, since conditions are recorded in the context of a clinical encounter, users making fewer visits to the clinic (or with fewer hospital stays) will have less opportunity to have a diagnosis recorded. Therefore, underestimation of the number of women with a condition may be an issue of greater magnitude for infrequent users of health care, for users who have only recently begun to use VHA services, or for users who left VHA care (through attrition or death) partway through the year.*
- *Some Veterans use VHA care (in some cases supplemented with VACC) for part of their health care needs and other health care delivery systems for other needs. Conditions identified in other health care settings and reimbursed by other payors (e.g., funded through Medicare, Medicaid, or private insurance) are not captured in the available administrative databases. Underestimation of the number of women with a condition could be an issue for some Veterans with dual health care system utilization.*

Although underestimation of the number of various conditions is expected to be a more important issue, overestimation of the number of conditions could also occur. This could happen, for example, if a "rule-out" diagnosis was coded to indicate presence of a suspected condition (e.g., if "rule-out myocardial infarction" was coded as "myocardial infarction"). It could also happen if a provider recorded an ICD-10-CM code for a condition when performing a screening test (e.g., by recording a diagnosis of "hyperlipidemia" when ordering a hyperlipidemia screening panel). Further, occasional inaccuracies in ICD-10-CM data are also inevitable, due to data entry errors. [25]

Fourth, there are limitations to the specificity of the source data from which conditions were derived. A clinician coding a treated condition could describe it with a very specific ICD-10-CM code or with a very general ICD-10-CM code.[26] *Similarly, the clinician might pick an ICD-10-CM code describing the user's symptom or an ICD-10-CM code reflecting the underlying disease that caused that symptom.*[27] *Clinicians may also have different thresholds for what they consider an acceptable level of certainty about the etiology of symptoms before being willing to assign a "working diagnosis." Such differences in clinicians' coding practices could affect conclusions about users' conditions.*

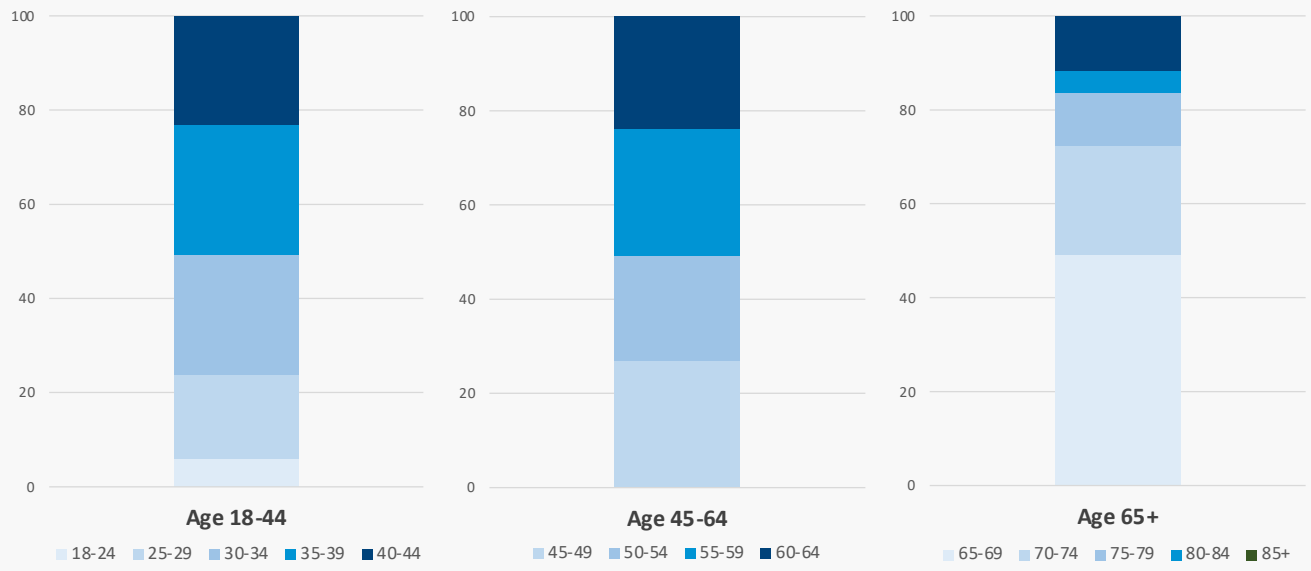
Fifth, decisions made about how to map ICD-10-CM codes to particular conditions can affect the observed counts of conditions. Algorithms that lump broad groups of ICD-10-CM codes into a relatively small number of conditions tend to yield relatively high counts of those conditions, whereas more granular algorithms that map finer groups of ICD-10-CM codes to a larger set of more specific conditions tend to yield relatively low counts of conditions.[28] *Distinct algorithms can yield different conclusions about counts of conditions.*[29] *Regardless of what algorithm is used, consistency in algorithm use over time is key and permits evaluation of changes in rates of conditions and domains present in the cohort of Veterans that VHA treats in different years; this provides insight into the health profile of the user population and clarifies the burden of health issues for which the system is providing care.*

Sixth, Sourcebook Volume 5 reports the types of diagnosed conditions in Veteran users, not the types of care they received for those conditions. While the presence of a diagnosed condition in the administrative databases indicates that the condition was noted in the encounter record (i.e., it was listed on the invoice that the VACC provider submitted to VHA justifying the billed amount), it may not have been the primary reason for the encounter. Therefore, the "top 25" conditions in VACC in each age group need to be interpreted with caution: these conditions are ones that were frequently included as a reason for the VACC encounter, but they were not necessarily the primary reason for the referral to VACC. In addition, Veterans may or may not have received specialty care or testing related to a particular condition.[30]

Seventh, Sourcebook Volume 5 treats as "conditions" some symptoms (such as "headache" or "malaise and fatigue") that are coded as diagnoses by providers if the ICD-10-CM can be reasonably mapped to a condition. Similarly, it treats some health risk factors (such as Tobacco Use Disorder or Housing Insufficiency) as conditions. However, a symptom is counted only if a clinician noted the symptom with an ICD-10-CM diagnosis code within an encounter record; diagnoses, symptoms, and psychosocial issues appearing in other locations, such as in clinical progress notes or on problem lists, are not captured with this approach. Further, the available data sources used for this Sourcebook do not capture other user-centered measures of health status, such as functional status or health-related quality of life.

Eighth, health condition frequency varies substantially by age. Sourcebook Volume 5 addresses this by presenting information separately for each age group (18-44, 45-64, and 65+ years old). These broad age groups were chosen for simplicity of presentation and to approximate clinically relevant life cycle phases (reproductive age group, post-reproductive age group, and older Veterans who are in a Medicare-eligible age group). However, even within each age group, women fall across an age spectrum; for example, within the 18-44-year-old group, the health conditions of those 18-24 years old are likely to differ from the health conditions of those 40-44 years old. When comparing condition frequency across years, it is important to recognize that the age distribution within each age group also varies across years; see Exhibit 4.M for an illustration of this phenomenon.

Exhibit 4.M Age Distribution of Women Veteran VHA Users Within Age Groups, FY19



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) in FY19: N=536,418.
Source: WHEI Master Database

With these caveats in mind, the following text describes health conditions for which women Veteran VHA users received a VACC-based diagnosis in FY19 (whether or not the woman also received a diagnosis for the condition in a VHA setting), by age group. Within each age group, only the 25 conditions most frequently appearing as diagnoses in a VACC setting are presented in the text; the Supplemental Appendix provides this information for all 202 conditions.

WOMEN AGED 18-44

Among women Veteran VHA users aged 18-44 years, Exhibit 4.N shows the top 25 conditions associated with services provided in VACC. This exhibit does **not** represent condition prevalence among women Veterans. Instead, it indicates what percent of all women VHA users in this age group received a diagnosis for the condition in FY19 in VACC billing records, indicating that services provided in VACC related to the condition, at least in part.[31] The top ten conditions (domain in parenthesis[32]) included in FY19 VACC records for 18-44-year-old women were:

#1 Spine Disorders - Lumbosacral (Musculoskeletal)

#2 Spine Disorders - Cervical (Musculoskeletal)

#3 Spine Disorders - Other/Unspecified (Musculoskeletal)

#4 Joint Disorders - Lower Extremity (Musculoskeletal)

#5 Headache (Neurologic)

#6 Musculoskeletal Conditions - Other (Musculoskeletal)

#7 Pregnancy or Delivery - Normal (Reproductive Health)

#8 Pregnancy with Obstetrical Complications or Prolonged (Reproductive Health)

#9 Anxiety Disorders (Mental Health/Substance Use Disorder [SUD])

#10 Major Depressive Disorder (Mental Health/SUD)

Comparison to diagnoses in any setting. Many of these conditions were common among 18-44-year-old women Veterans overall. For example, among all women Veterans aged 18-44 years in FY19, the two conditions for which the largest proportion of women were diagnosed in any setting (VHA or VACC) were major depressive disorder (34%)[33] and anxiety disorders (31%). Other common conditions among women in this age group, diagnosed in any setting, included spine disorders – lumbosacral (31%), headache (26%), and pregnancy or delivery – normal (6%). Note: these data are not represented graphically in Exhibit 4.N (see Supplemental Appendix for percent receiving services in VACC for all 202 conditions. The Supplemental Appendix also provides the overall prevalence of all 202 conditions).

Exhibit 4.N. Top 25 Conditions Seen in VACC Settings among Women Veteran VHA Users Aged 18-44, FY19

Rank	Condition	% of women Veteran VHA users who received services related to the condition in a VACC setting
1	Spine Disorders - Lumbosacral	9.2
2	Spine Disorders - Cervical	6.0
3	Spine Disorders - Other/Unspecified	5.7
4	Joint Disorders - Lower Extremity	5.5
5	Headache	4.9
6	Musculoskeletal Conditions - Other	4.9
7	Pregnancy or Delivery - Normal	4.6
8	Pregnancy with Obstetrical Complications or Prolonged	4.2
9	Anxiety Disorders	3.9
10	Major Depressive Disorder	3.8
11	Abdominal Pain	3.6
12	PTSD	3.5
13	Dermatologic Disorders - Other	3.0
14	Joint Disorders - Upper Extremity	2.8
15	Tobacco Use Disorder	2.7
16	Allergies and Urticaria	2.7
17	Overweight/Obesity	2.6
18	Menstrual Disorders	2.5
19	Reproductive Organ Disorders - Other	2.4
20	Dyspnea, Cough, and Other Respiratory Symptoms	2.4
21	Injuries and Conditions Due to External Causes - Other	2.3
22	Breast Conditions, Benign or Unknown	2.3
23	Pregnancy Complicated by Other Medical Conditions	2.3
24	Chronic Pain Syndromes	2.3
25	Nervous System Symptoms/Disorders - Other	2.2

Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration,
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix. Percentage reflects the number of women Veteran VHA users within the specified age group (18-44) who received services related to the condition in VACC. The condition was not necessarily the primary reason for the encounter in all cases, and it was not necessarily the reason for the referral from VHA to VACC.
Cohort: Women Veteran VHA users with non-missing age 18-44 (inclusive) in FY19. N=218,473.
Source: WHEI Master Database

WOMEN AGED 45-64

Among women Veteran VHA users aged 45-64 years, Exhibit 4.O shows the top 25 conditions diagnosed in VACC. This exhibit indicates the percentage of all women VHA users in this age group who received a diagnosis for the condition in FY19 in VACC billing records, indicating that services provided in VACC related to the condition, at least in part.[34] The top ten conditions (domain in parenthesis[35]) included in FY19 VACC records for 45-64-year-old women were:

#1 Spine Disorders - Lumbosacral (Musculoskeletal)

#2 Joint Disorders - Lower Extremity (Musculoskeletal)

#3 Hypertension (Cardiovascular)

#4 Musculoskeletal Conditions - Other (Musculoskeletal)

#5 Spine Disorders - Cervical (Musculoskeletal)

#6 Spine Disorders - Other/Unspecified (Musculoskeletal)

#7 Joint Disorders - Upper Extremity (Musculoskeletal)

#8 Esophageal Disorders (Gastrointestinal)

#9 Breast Conditions, Benign or Unknown (Breast)

#10 Major Depressive Disorder (Mental Health/SUD)

Comparison to diagnoses in any setting. Many of these conditions were common among 45-64-year-old women Veterans overall. For example, among all women Veterans aged 45-64 years in FY19, hypertension (38%) and lipid disorders (36%) were the two conditions for which the largest proportions of women were diagnosed in any setting (VHA or VACC). Other common conditions among women in this age group, diagnosed in any setting, included spine disorders - lumbosacral (34%), major depressive disorder (32%), and breast conditions (7%). Note: these data are not represented graphically in Exhibit 4.O (see Supplemental Appendix for percent receiving services in VACC for all 202 conditions. The Supplemental Appendix also provides the overall prevalence of all 202 conditions).

.

Exhibit 4.O. Top 25 Conditions Seen in VACC Settings among Women Veteran VHA Users Aged 45-64, FY19

Rank	Condition	% of women Veteran VHA users who received services related to the condition in a VACC setting
1	Spine Disorders - Lumbosacral	9.8
2	Joint Disorders - Lower Extremity	7.9
3	Hypertension	7.2
4	Musculoskeletal Conditions - Other	6.6
5	Spine Disorders - Cervical	6.3
6	Spine Disorders - Other/Unspecified	5.8
7	Joint Disorders - Upper Extremity	4.5
8	Esophageal Disorders	4.4
9	Breast Conditions, Benign or Unknown	4.1
10	Major Depressive Disorder	3.9
11	Lipid Disorders	3.8
12	Headache	3.8
13	Dermatologic Disorders - Other	3.7
14	Breast Conditions, Abnormal Radiologic Findings	3.7
15	Diabetes Mellitus	3.7
16	Dyspnea, Cough, and Other Respiratory Symptoms	3.6
17	Tobacco Use Disorder	3.6
18	Refraction Disorders	3.6
19	Overweight/Obesity	3.5
20	Anxiety Disorders	3.5
21	Eye Disorders - Other	3.4
22	Nervous System Symptoms/Disorders - Other	3.4
23	Chronic Pain Syndromes	3.4
24	Joint Disorders - Unspecified or Multiple Joints	3.4
25	Gastrointestinal System Disorders - Other	3.3

Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix. Percentage reflects the number of women Veteran VHA users within the specified age group (45-64) who received services related to the condition in VACC. The condition was not necessarily the primary reason for the encounter in all cases, and it was not necessarily the reason for the referral from VHA to VACC.
Cohort: Women Veteran VHA users with non-missing age 45-64 (inclusive)in FY19. N=243,563.
Source: WHEI Master Database

WOMEN AGED 65+

Exhibit 4.P shows the top 25 conditions diagnosed in VACC among women Veteran VHA users aged 65 years and older. This exhibit indicates what percent of all women VHA users in this age group received a diagnosis for the condition in FY19 in VACC billing records, indicating that services provided in VACC related to the condition, at least in part.[36] The top ten conditions (domain in parenthesis[37]) included in FY19 VACC records for women age 65 and older were:

#1 Hypertension (Cardiovascular)

#2 Spine Disorders - Lumbosacral (Musculoskeletal)

#3 Joint Disorders - Lower Extremity (Musculoskeletal)

#4 Diabetes Mellitus (Endocrine/Metabolic/Nutritional)

#5 Musculoskeletal Conditions - Other (Musculoskeletal)

#6 Lipid Disorders (Endocrine/Metabolic/Nutritional)

#7 Eye Disorders - Other (Sense Organ)

#8 Cataract (Sense Organ)

#9 Esophageal Disorders (Gastrointestinal)

#10 Nervous System Symptoms/Disorders - Other (Neurologic)

While the top 25 conditions did not include any cancers, the condition from the Cancer domain most commonly diagnosed in a VACC setting among women 65+ years old was Cancer - Breast (2.0% of women Veterans in this age group, only slightly lower than the 25th ranked condition in Exhibit 4.P)

Comparison to diagnoses in any setting. Many of these conditions were common among 65+ year-old women Veterans overall. For example, among all women Veterans aged 65+ in FY19, hypertension (59%) and lipid disorders (50%) were the two conditions for which the largest proportions of women were diagnosed in any setting (VHA or VACC). Other common conditions among women in this age group, diagnosed in any setting, included joint disorders - lower extremity (29%), diabetes mellitus (27%), and spine disorders - lumbosacral (26%). The proportion of women aged 65+ who received care for breast cancer in any setting (VHA or VACC) was 5%. Note: these data are not represented graphically in Exhibit 4.P (see Supplemental Appendix for percent receiving services in VACC for all 202 conditions. The Supplemental Appendix also provides the overall prevalence of all 202 conditions).

Exhibit 4.P. Top 25 Conditions Seen in VACC Settings among Women Veteran VHA Users Aged 65+, FY19

Rank	Condition	% of women Veteran VHA users who received services related to the condition in a VACC setting
1	Hypertension	10.2
2	Spine Disorders - Lumbosacral	6.5
3	Joint Disorders - Lower Extremity	6.4
4	Diabetes Mellitus	5.8
5	Musculoskeletal Conditions - Other	5.5
6	Lipid Disorders	5.2
7	Eye Disorders - Other	4.9
8	Cataract	4.6
9	Esophageal Disorders	4.4
10	Nervous System Symptoms/Disorders - Other	3.9
11	Respiratory Conditions - Other	3.8
12	Dyspnea, Cough, and Other Respiratory Symptoms	3.8
13	Chronic Obstructive Pulmonary Disease	3.8
14	Spine Disorders - Other/Unspecified	3.6
15	Dermatologic Disorders - Other	3.4
16	Joint Disorders - Unspecified or Multiple Joints	3.3
17	Spine Disorders - Cervical	3.3
18	Thyroid Disorders	3.3
19	Joint Disorders - Upper Extremity	3.2
20	Gastrointestinal System Disorders - Other	3.1
21	Tobacco Use History	3.1
22	Injuries and Conditions Due to External Causes - Other	3.0
23	Overweight/Obesity	3.0
24	Refraction Disorders	2.9
25	Major Depressive Disorder	2.9

Key: FY – Fiscal Year, VACC – VA-purchased Community Care, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix. Percentage reflects the number of women Veteran VHA users within the specified age group (65+) who received services related to the condition in VACC. The condition was not necessarily the primary reason for the encounter in all cases, and it was not necessarily the reason for the referral from VHA to VACC.
Cohort: Women Veteran VHA users with non-missing age 65-110 (inclusive) in FY19. N=74,382.
Source: WHEI Master Database

IMPLICATIONS

Women Veteran VHA users receive care for a broad range of conditions in VA-purchased Community Care (VACC) settings. The specific types of conditions vary by age group, reflective of women's needs across the life course.

Among women 18-44-years-old, conditions often addressed in VACC settings included musculoskeletal conditions (e.g., spine disorders), reproductive health conditions (e.g., pregnancy), neurologic conditions (e.g., headache), and mental health conditions (e.g., depression). The high frequency of potentially painful conditions treated in VACC in this youngest group suggests it will be important for VHA to ensure coordination of care across multiple specialties and settings. Whereas integrated care may be facilitated in VHA by its unified electronic medical record and its multidisciplinary network of staff providers who can communicate with each other with relative ease, Veterans receiving care for a painful condition from multiple community-based providers may potentially face systems barriers to care coordination.

In this age group, pregnancy ranks high among conditions treated in VACC since obstetric care is typically not offered in VHA. VHA-based Maternity Care Coordinators bridge VHA and VACC during pregnancy, seeking to ensure that women do not lose contact with VHA during and after their pregnancy for other needed medical or mental health services.

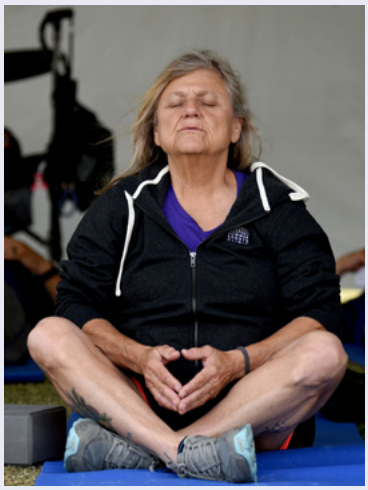
While depression is the most prevalent of all conditions in the youngest group of women, few in this age group receive a depression-related service in VACC, consistent with VACC currently being a minor source of young women Veterans' mental health services.

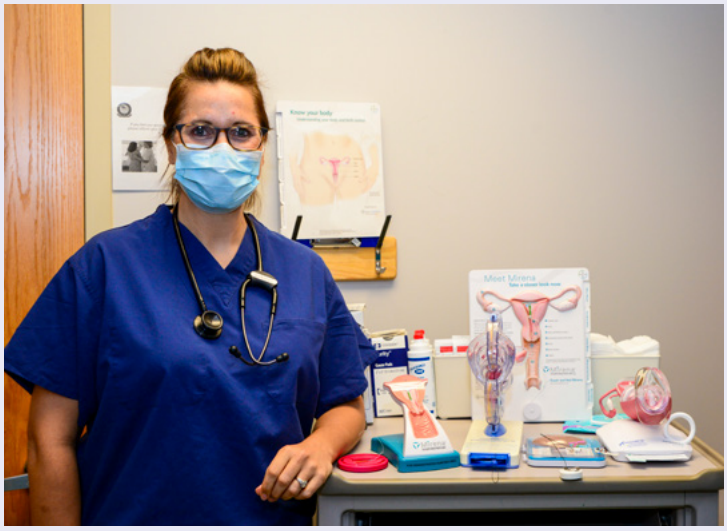
For women aged 45-64-years-old (and in other age groups), musculoskeletal conditions are among the most commonly addressed conditions in VACC settings. While the data presented here do not specify the nature of the care provided in the community, VACC services associated with musculoskeletal conditions may reflect, for example, specialty consultations (e.g., orthopedics, rehabilitation medicine, pain specialists, chiropractic care), complementary medicine (e.g., acupuncture), rehabilitative services (e.g., physical therapy), or supportive services (e.g., home-based care). Need for in-person care, such as for musculoskeletal conditions, extends to every corner of the country, including rural areas where tertiary care specialty services may not be available even through a community provider.[38] VHA telehealth and electronic consultation programs are increasingly providing improved access for users and providers in remote settings, but VACC provides another avenue for women to access in-person specialized care. Other conditions often appearing among VACC diagnoses for women 45-64-years-old (though not necessarily as the primary reason for the referral) include cardiovascular conditions (hypertension), gastrointestinal conditions (esophageal disorders), breast conditions (some of which may be associated with mammograms completed in the community), and mental health conditions (depression).

Among women aged 65+ years old, conditions frequently listed as VACC billing diagnoses include musculoskeletal, cardiovascular (hypertension), sense organ (eye disorders), gastrointestinal (esophageal disorders), and neurologic. Maintaining independence takes on particular importance

for older women. Treating musculoskeletal conditions can help to reduce pain and improve functional status and quality of life. Rehabilitative services, home-based care, and treatment of sense organ conditions (such as vision or hearing services) may prevent or delay the need for transitions to long-term care settings in this age group.

Among women Veteran VHA users 65+ years old, 2% received breast cancer care (in part or in whole) in a VACC setting. Given the complexity of cancer management, it will be important to ensure strong care coordination for those women receiving cancer care in VACC. Breast cancer care presents numerous challenges both within and outside VHA.[39,40] Coordination of care across services and disciplines needs to be seamless, including for women who receive part of their breast cancer care through VACC.[41]





Endnotes

1 See Introduction for discussion of why only two genders are presented in this Sourcebook.
2 Frayne SM, Yu W, Yano EM, et al. Gender and use of care: planning for tomorrow's Veterans Health Administration. J Women's Health (Larchmt). 2007;16(8):1188-1199. doi: 10.1089/jwh.2006.0205
3 Care that women receive from VHA under global contracts also may not be captured.
4 Services provided in Vet Centers, which offer readjustment counseling services, are also not included. For more information, see https://www.vetcenter.va.gov/index.asp. Accessed August 12, 2022.
5 For more information about the Choice Program, see https://news.va.gov/39882/10-things-know-veterans-choice-program/. Accessed August 26, 2024
6 For more information about the Mission Act, see https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5264. Accessed August 12, 2022
7 Kaufman CE, Grau L, Begay R, Reid M, Goss CW, Hicken B, Shore JH, O'Connell J. American Indian and Alaska Native veterans in the Indian Health Service: Health status, utilization, and cost. PLoS One. 2022;1;17(4):e0266378. doi: 10.1371/journal.pone.0266378. PMID: 35363822; PMCID: PMC8975153
8 Indian Health Service/Tribal Health Program/Urban Indian Organization in relation to VACC, see https://www.va.gov/COMMUNITYCARE/programs/veterans/ihs/index.asp. Accessed August 12, 2022.
9 To enhance the clarity and readability of this report, an editorial decision has been made to spell out "percent" in reference to SC disability ratings, e.g., "SC disability rating of 100 percent." In all other measures of percentage, the percent symbol (%) is used. Also note that "0 percent" refers to a user who does have SC disability rating, but whose severity rating is 0 (zero) percent; this is distinct from a user who has no SC disability rating.
10 For an interactive map of VISNs see: https://www.va.gov/directory/guide/map.asp?dnum=1. Accessed 08/25/2022.
11 That is, care in a VHA outpatient and/or VHA inpatient setting, as opposed to a VA Community Care setting.
12 For more information about the Mission Act, see https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5264. Accessed August 12, 2022
13 The data describe Veterans who had at least one VACC visit, not the degree to which they were more or less reliant on VACC
14 Mattocks KM. Care coordination for women Veterans: Bridging the gap between systems of care. Med Care.2015;53(4 Suppl 1):S8-S9. doi: 10.1097/MLR.0000000000000339
15 Mattocks KM, Mengeling M, Sadler A, et al. The Veterans Choice Act: A qualitative examination of rapid policy implementation in the Department of Veterans Affairs. Med Care. 2017;55 (7 Suppl 1):S71-S75. doi: 10.1097/MLR.0000000000000667
16 Zuchowski JL, Chrystal JG, Hamilton AB, et al. Coordinating care across health care systems for Veterans with gynecologic malignancies: A qualitative analysis. Med Care. 2017;55 (7 Suppl 1):S53-S60. doi: 10.1097/MLR.0000000000000737
17 Rosen AK, Beilstein-Wedel EE, Harris AHS et al. Comparing postoperative readmission rates between veterans receiving total knee arthroplasty in the Veterans Health Administration versus community care. Med Care. 2022;1;60(2):178-186. doi: 10.1097/MLR.0000000000001678. PMID: 35030566.
18 Shekelle P, Maggard-Gibbons M, Blegen M, et al. VA versus non-VA quality of care: a systematic review. Washington, DC: Evidence Synthesis Program, Health Services Research and Development Service, Office of Research and Development, Department of Veterans Affairs. VA ESP Project #05-226; 2022.
19 Healthcare Cost and Utilization Project (HCUP) Clinical Classification Software (CCS). Agency for Healthcare Research and Quality. Rockville, MD, 2012.
20 World Health Organization. (2004). ICD-10: international statistical classification of diseases and related health problems: tenth revision, 2nd ed. World Health Organization. https://apps.who.int/iris/handle/10665/42980
21 Washington DL, Farmer MM, Mor SS, Canning M, Yano EM. Assessment of the healthcare needs and barriers to VA use experienced by women Veterans: Findings from the National Survey of Women Veterans. Med Care. 2015;53(4 Suppl 1):S23-31. doi: 10.1097/MLR.0000000000000312
22 In Sourcebook Volume 3, the effect of applying a "high sensitivity" algorithm for identification of conditions was explored in an online appendix, available on the Women's Health Services website, https://www.womenshealth.va.gov/WOMENSHEALTH/docs/Sourcebook_Vol_3_FINAL07-22-14.pdf.
23 For example, a primary care clinician might note on the user's medical history or in her problem list that she has a specific chronic condition, but the clinician might not record the condition on the encounter form for a particular visit because that condition was not a focus of the visit.
24 The VHA outpatient encounter form is embedded in the electronic medical record and provides a pick-list of conditions previously entered on the user's problem list. The clinician has the option to select one (or more) of these conditions as the reason(s) for the visit or to enter a text search for an ICD-10-CM diagnosis not appearing on the user's problem list. If more than one condition was addressed at a particular visit, a clinician might potentially be inclined to select a condition that was treated at the visit from the pick-list of the user's known conditions or to do a text search for a familiar ICD-10-CM code that the clinician diagnoses frequently. Therefore, it is possible that common or chronic conditions might have a somewhat greater opportunity to appear in the administrative data. Further, while the VHA outpatient encounter form has fields for multiple diagnoses, only a single diagnosis is needed to close the form. For example, a busy primary care provider who addressed several issues during a single visit (e.g., diabetes management, hypertension monitoring,

treatment of chronic low back pain, and counseling regarding abnormal vaginal bleeding) might potentially streamline the effort by entering only one or two of these conditions on the encounter form.

25 In Sourcebook Volume 3, the effect of applying a "high specificity" algorithm for identification of conditions was explored in an online appendix, available on the Women's Health Services website, https://www.womenshealth.va.gov/WOMENSHEALTH/docs/Sourcebook_Vol_3_FINAL07-22-14.pdf.

26 For example, a clinician seeing a user for hematemesis caused by a gastric ulcer could use a specific ICD-10-CM code (e.g., "gastric ulcer," which we would map to the condition "Gastroduodenal Ulcer") or a general ICD-10-CM code (e.g., "gastric disease not otherwise specified" which we would map to the condition "Gastrointestinal System Disorders - Other").

27 For example, a clinician seeing a user for hematemesis caused by a gastric ulcer could code the visit with an ICD-10-CM code for the symptom, hematemesis (which we would map to the condition "gastrointestinal hemorrhage"), or with an ICD-10-CM code for gastric ulcer (which we would map to the condition "Gastroduodenal Ulcer"), or both (which we would map to both). The Gastrointestinal domain would capture comprehensively each of these approaches to coding.

28 For example, one approach would be to create a single composite "joint disorders" condition, whereas another (used in this Sourcebook) would be to create three separate, more descriptive conditions: "Joint Disorders – Upper Extremity," "Joint Disorders – Lower Extremity," and "Joint Disorders – Unspecified or Multiple Joints." The former approach would identify a rate of "joint disorders" higher than the rate of any of our three finer-granularity conditions.

29 For example, joint disorders would be more likely to appear as one of the most common conditions if all three types of joint disorder were collapsed into a single "joint disorders" condition than if the three types of joint disorder ("Joint Disorders – Upper Extremity," "Joint Disorders – Lower Extremity," and "Joint Disorders – Unspecified or Multiple Joints") were presented separately.

30 For example, Veterans with a Substance Use Disorder (SUD) condition may or may not have received care in a SUD specialty care clinic, and women Veterans with a reproductive organ condition may or may not have received care in a Gynecology clinic.

31 The condition could also have been diagnosed in the same woman in a VHA setting. In addition, even though the condition was listed as one of the reasons for the encounter, the condition was not necessarily the primary reason for the encounter in all cases, and it was not necessarily the reason for the referral from VHA to VACC.

32 While the domain corresponding to each condition is listed in parentheses next to the condition, the domains are not listed in any rank order. Only the conditions are listed in rank order.

33 So, for example, this means that the prevalence of diagnosed major depressive disorder was 34% among 18-44-year-old women Veteran VHA users in FY19; looking at Exhibit 4.N, a diagnosis of major depressive disorder was included as one of the diagnoses associated with a VACC service for 3.8% of 18-44-year-old women Veteran VHA users in FY19.

34 The condition could also have been diagnosed in the same woman in a VHA setting. In addition, even though the condition was listed as one of the reasons for the encounter, the condition was not necessarily the primary reason for the encounter in all cases, and it was not necessarily the reason for the referral from VHA to VACC.

35 While the domain corresponding to each condition is listed in parentheses next to the condition, note that the domains are not listed in any rank order. Only the conditions are listed in rank order.

36 The condition could also have been diagnosed in the same woman in a VHA setting. In addition, even though the condition was listed as one of the reasons for the encounter, the condition was not necessarily the primary reason for the encounter in all cases, and it was not necessarily the reason for the referral from VHA to VACC.

37 While the domain corresponding to each condition is listed in parentheses next to the condition, note that the domains are not listed in any rank order. Only the conditions are listed in rank order.

38 Mattocks KM, Mengeling M, Sadler A, Baldor R, Bastian L. The Veterans Choice Act: A qualitative examination of rapid policy implementation in the Department of Veterans Affairs. Med Care. 2017;55 Suppl 7 Suppl 1:S71-S75. doi: 10.1097/MLR.0000000000000667

39 Bickell NA, Young GJ. Coordination of care for early-stage breast cancer users. J Gen Intern Med. 2001;16(11):737-742.. https://link.springer.com/content/pdf/10.1111/j.1525-1497.2001.10130.x.pdf. Accessed August 24, 2022.

40 Walsh J, Young JM, Harrison JD, Butow PN et al. What is important in cancer care coordination? A qualitative investigation. European Journal of Cancer Care. 2011;20(2):220-227. doi:10.1111/j.1365-2354.2010.01187.x

41 Mattocks KM. Care coordination for women veterans: Bridging the gap between systems of care. Med Care. 2015;53(4 Suppl 1):S8-9. doi: 10.1097/MLR.0000000000000339

5. Modality of Care

Overview

Some VHA users face geographic and travel barriers or have work or caregiving responsibilities that can impede their efforts to access needed services in a timely way.[1] To reduce access barriers for VHA users, VHA has been an early adopter of technology-based solutions such as telehealth that can improve care for Veterans[2] by delivering timely care in more convenient locations or in users' homes. Prior reports[3,4] indicate that in 2013, VHA provided telehealth care to 600,000 Veterans. In 2017, VHA expanded its telehealth infrastructure by allowing VHA clinicians to provide telehealth services to Veterans anywhere in the country.[5] This "anywhere to anywhere" policy leveraged the VA Video Connect (VVC) technology, allowing providers to connect with Veterans through their smartphones, tablets, or computers using the video modality. Thus, even before the COVID-19 pandemic struck in March 2020, VHA was already the biggest provider of telehealth care in the U.S.[6]

As the COVID-19 pandemic spread through the U.S., starting in March 2020, many VHA facilities temporarily ceased or curtailed in-person elective care in response to public health mandates. VHA made an unprecedented nationwide shift from in-person encounters to video and telephone-based care.[7] The accelerated adoption of virtual care during the pandemic resulted in varying patterns of care across virtual care modalities.

Here we describe the varying patterns of VHA-based care in-person and across virtual care modalities for women Veterans in FY19 and FY20, comparing these patterns to those of men Veterans. As there is no unified definition of "telehealth" or "virtual care" across VHA or in telehealth research, we follow the general practice adopted by the Office of Connected Care after consultation with researchers in the VHA's Virtual Care Consortium in defining "virtual care." In the following sections, we refer to "telehealth" services as including video telehealth, Store-and-Forward Telehealth, and the Home Telehealth program.[8,9] We refer to "virtual care" as the combination of telephone and telehealth services.

In a VHA outpatient setting, encounters between Veterans and health care providers can occur via one of several modalities.

- **In-Person**[10] care occurs face-to-face, in an individual or group visit.
- **Telephone care** can be scheduled calls (e.g., in lieu of an in-person visit) or unscheduled calls (e.g., to discuss and provide clinical plans related to a laboratory result or to respond to a callback request from a Veteran for a symptom or concern).
- **Video Telehealth** can occur through the Clinical Video Telehealth (CVT) system or through VA Video Connect (VVC). In CVT, the clinician is at one VHA location, such as the main VA Medical Center, and the Veteran is at a remote VHA location, such as a VA Community-Based Outpatient Clinic; VHA staff at the remote connection assist the Veteran in connecting with the clinician via video conferencing and assist with elements of the physical exam, such as holding a stethoscope to the Veteran so the clinician can listen to the Veteran's heart and lungs remotely. In VVC, the Veteran is at home or any other location on a personal or VA-issued smartphone, tablet, or computer; the clinician, who can be onsite at VHA or at another location, and the Veteran connect through videoconferencing software.

- **Store-and-Forward Telehealth** involves asynchronous care, where clinical data are transmitted to the clinician for subsequent review. For example, skin photographs might be transmitted to a dermatologist, or retina images might be transmitted to an ophthalmologist.
- **Home Telehealth** clinicians assist Veterans with chronic disease monitoring and self-management; Home Telehealth may include technologies like home scales or home blood pressure cuffs that transmit readings to the VHA Home Telehealth clinician.

Many VHA clinicians work at specific VHA facilities and see Veterans enrolled at that site, either in-person or via virtual care. Some also see Veterans referred to the site from another VHA facility, e.g., for specialized care. VHA has also been expanding its network of Clinical Resource Hubs,[11] centralized clinicians who can provide primary care or specialty care services to Veterans at remote locations. Clinical Resource Hub providers may connect with Veterans through telephone or video telehealth modalities.

This section examines all outpatient health care occurring in a VHA context; care provided through VA-purchased Community Care (VACC) is not included in this section. Secure electronic messages between VHA care teams and Veterans can be another element of clinical management but are not recorded consistently in encounter databases and so are also not included in the encounters examined in this section. Unlike other parts of this Sourcebook that focus on FY19 care, this section compares FY19 care to FY20 care, because of the large expansion of virtual care that occurred in FY20 with the onset of the COVID-19 pandemic.

Notes to interpretation:

First, the data in this section compare modality of care in FY19 versus FY20. FY20 began October 1, 2019, so nearly half a fiscal year had passed before the COVID-19 pandemic took hold in the U. S. in March 2020. Year-to-year differences reported here will be diluted by this fact; for example, many of the FY20 In-Person encounters reported here could have occurred in the first half of the fiscal year, as described below in Exhibit 5.A.

Second, when interpreting differences in utilization based on sex, age, etc., it is important to recognize that these analyses present raw comparisons of proportions, without comment on the statistical significance of those differences. Differences also are provided without adjustment for user characteristics, such as number of medical conditions, which can influence conclusions regarding between-group differences in the use of VHA services.[12] *For example, the fact that women Veteran VHA users are, on average, younger than men Veteran VHA users could be one of the factors driving some observed gender differences in utilization.*

Third, inpatient care (other than obstetric births), long-term nursing home care, and VHA pharmacy prescription services are not included in any counts of utilization.[13]

Fourth, while all encounters described here are for VHA-based care (not VACC), even some In-Person encounters could occur outside of a physical VHA facility–for example, Home-Based Primary Care.

Modality of Care, at the Encounter Level: In-Person vs. Virtual Care

This section focuses on the raw numbers of encounters and not user-level patterns. Time trends and user-level patterns are presented in the subsequent sections. Encounters include standard clinic visits as well as other types of in-person care (e.g., phlebotomy, radiology, ambulatory procedures, etc.) and virtual care (telephone, telehealth).

Exhibit 5.A and Exhibit 5.B show the total number of encounters in FY19 by modality of care and by sex.[14] Both exhibits depict data at the encounter level, rather than at the user level. Exhibit 5.A provides a numeric count of encounters for each modality, whereas Exhibit 5.B shows the proportion of all annual encounters that occurred via each modality.

As shown in Exhibit 5.A in FY19, the total number of VHA encounters for both women and men Veterans exceeded 113 million unduplicated encounters (women: 11.3 million; men: 102.1 million). In comparison, in FY20, there were fewer encounters, albeit still a total of over 100 million encounters (women: 10.6 million; men: 89.5 million). The reduction in total number of encounters from FY19 to FY20 is unsurprising given that FY20 included the start of the COVID-19 pandemic when states were implementing social distancing policies and like other health care systems, VHA had to temporarily close many ambulatory services and shift in-person care to virtual modalities. VHA was able to leverage its existing virtual care infrastructure and was well positioned to quickly transition to providing virtual care.[15,16]

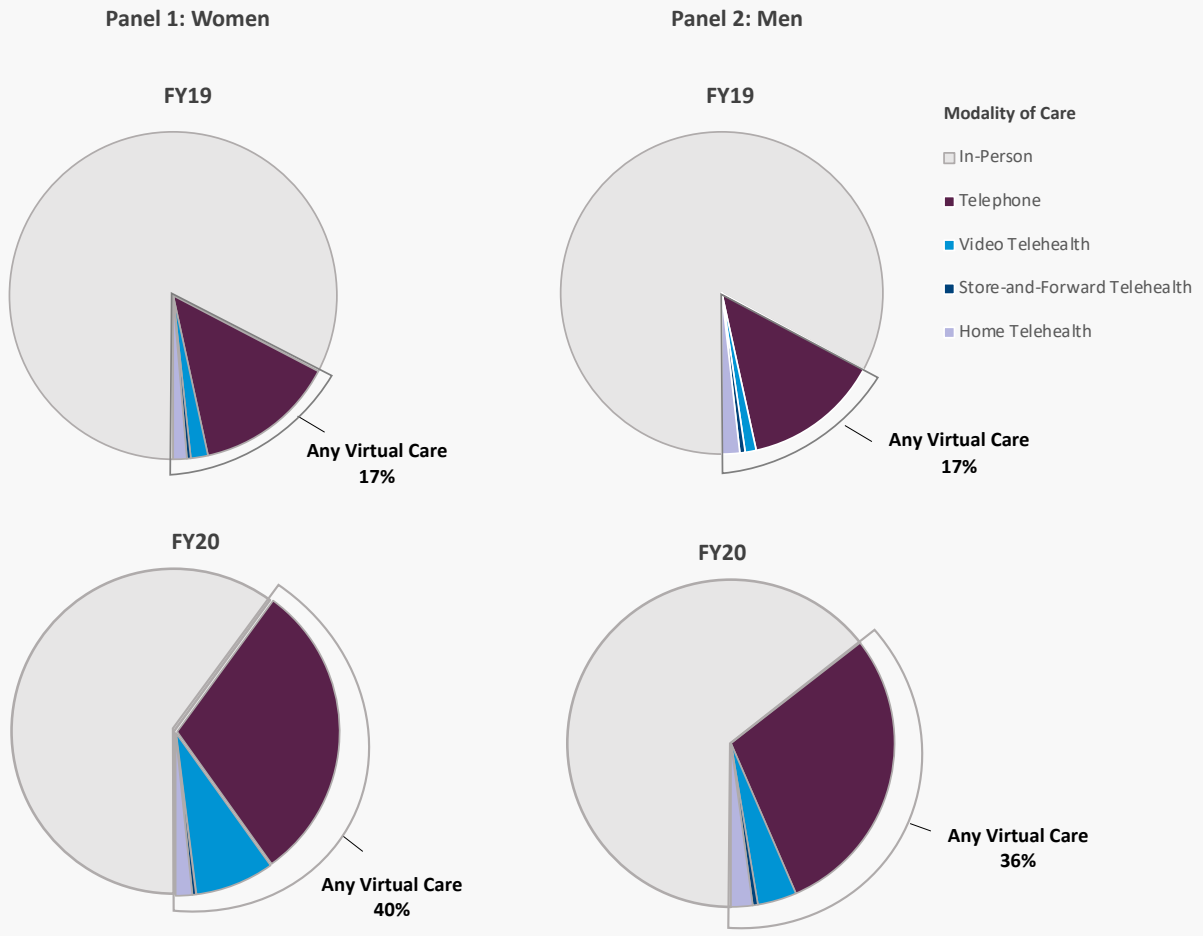
Exhibit 5.A. Number of VHA Encounters among Women and Men Veteran VHA Users by Modality of Care, FY19 and FY20

	Presumed In-Person	Telephone	Video Telehealth	All Store-and-Forward Telehealth	Home Telehealth (HT) Non-Video Monitoring	Total*
Women Veterans						
FY19	9,318,644	1,570,693	190,908	43,021	151,183	**11,274,449**
FY20	6,380,684	3,194,186	837,153	37,675	174,301	**10,623,999**
Men Veterans						
FY19	84,601,261	13,994,053	1,129,260	547,710	1,829,466	**102,101,750**
FY20	57,708,664	25,970,934	3,456,154	454,476	1,904,561	**89,494,789**

*The total number of encounters excludes secure messaging encounters. There were 365,596 secure messages in FY19, and 498,138 secure messages in FY20.

Key: FY – Fiscal Year; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: FY19: 11,274,449 encounters (N= 536,636 Veterans), FY20: 10,623,999 encounters (N=556,135 Veterans); Men: FY19: 102,101,750 encounters (N=5,564,701 Veterans), FY20: 89,494,789 encounters (N=5,498,487 Veterans).
Source: WHEI Master Database

Exhibit 5.B. Proportion of VHA Outpatient Encounters among Women and Men Veteran VHA Users by Modality of Care, FY19 and FY20



Key: FY – Fiscal Year; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: FY19: 11,274,449 encounters (N= 536,636 Veterans), FY20: 10,623,999 encounters (N= 556,135 Veterans); Men: FY19: 102,101,750 encounters (N= 5,564,701 Veterans), FY20: 89,494,789 encounters (N= 5,498,487 Veterans).
Source: WHEI Master Database

Women Veterans. As Exhibit 5.A shows, the cumulative number of encounters among all women Veteran VHA users nationally decreased from FY19 to FY20, from 11,274,449 encounters to 10,623,999 encounters. The main factor driving this decline was a decline in total number of In-Person encounters (FY19: 9,318,644 encounters; FY20: 6,380,684 encounters), although a decline in Store-and-Forward Telehealth encounters (which often have an in-person component, e.g., to take a photograph of a user's retina) also contributed to this effect. As described earlier, this is not surprising, because the COVID-19 pandemic started during FY20 and non-essential in-person care was curtailed for safety reasons. In contrast, the number of encounters using virtual care modalities increased among women from FY19 to FY20; this was true for Telephone (FY19: 1,570,693 encounters; FY20: 3,194,186 encounters; a 2.0-fold increase), Video Telehealth[17,18,19] (FY19: 190,908 encounters; FY20: 837,153 encounters; a 4.4-fold increase), and Home Telehealth (FY19: 151,183 encounters; FY20: 174,301 encounters; a 1.2-fold increase). COVID-19-related care likely accounted for some of the encounters, both in an in-person context (e.g., for testing, acute care) and in a virtual context (e.g., clinical assessment for symptoms, longitudinal monitoring, follow-up on test results).

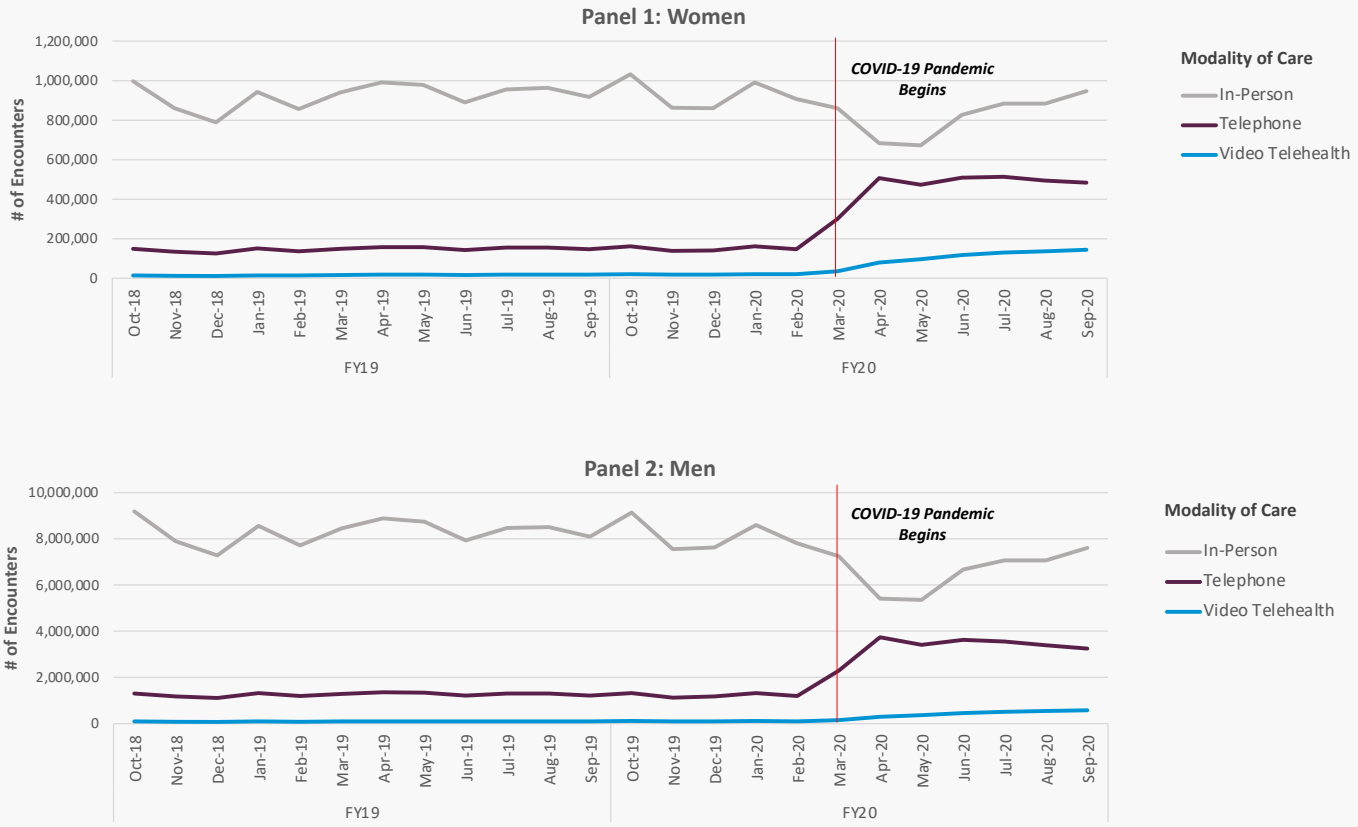
In both FY19 and FY20, In-Person encounters accounted for the largest share of encounters in women Veterans, followed by Telephone and then Clinical Video Telehealth, with Home Telehealth and Store-and-Forward Telehealth making up only a small share of encounters (Exhibit 5.B, Panel 1 and Panel 2). However, there was a substantial shift from FY19 to FY20 in the distribution of modality used. Among women, the proportion of encounters that occurred In-Person dropped markedly (FY19: 83% of encounters; FY20: 60% of encounters), whereas the proportion that were by Telephone increased (FY19: 14% of encounters; FY20: 30% of encounters), as did the proportion via Clinical Video Telehealth (FY19: 2% of encounters; FY20: 8% of encounters).

Women vs. men. As was the case for women Veterans, the total number of VHA encounters declined from FY19 to FY20 among men Veterans; the decline was less pronounced proportionally among women (FY19: 11.3 million encounters, FY20: 10.6 million encounters) than among men (FY19: 102.1 million encounters, FY20: 89.5 million encounters) (Exhibit 5.A). As with women, among men the number of In-Person encounters and Store-and-Forward Telehealth encounters declined from FY19 to FY20, and the number of other virtual encounters increased. However, the magnitude of increase in virtual encounters was more pronounced for women than men for Telephone (women: 2.0-fold increase; men: 1.9-fold increase), Clinical Video Telehealth (women: 4.4-fold increase; men: 3.1-fold increase) and Home Telehealth (women: 1.2-fold increase; men: 1.0-fold increase).

The proportion of encounters occurring via different modalities shifted between FY19 and FY20 in similar ways for women (Exhibit 5.B Panel 1) and men (Exhibit 5.B Panel 2). Percentage of encounters that were In-Person declined slightly more for women (FY19: 83%; FY20: 60%) than for men (FY19: 83%; FY20: 64%). Percentage of encounters that were by Telephone increased similarly for women (FY19: 14%; FY20: 30%) and for men (FY19: 14%; FY20: 29%). Percentage of encounters that were via Clinical Video Telehealth increased for both women and men, but more so for women (FY19: 2%; FY20: 8%) than for men (FY19: 1%; FY20: 4%), resulting in an overall greater proportion of virtual visits for women compared to men in FY20 (40% vs. 36%)

Encounters by Modality: Time Trends

Exhibit 5.C. Number of Encounters, by Modality of Care among Women and Men Veteran VHA Users by Month, FY19 and FY20



Key: FY – Fiscal Year; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix. Only the three most common modalities are displayed.
Cohort: Women and men Veteran VHA users. Women: FY19: 11,080,245 encounters (N= 536,636 Veterans), FY20: 10,412,023 encounters (N= 556,135 Veterans); Men: FY19: 99,724,574 encounters (N= 5,564,701 Veterans), FY20: 87,135,752 encounters (N= 5,498,487 Veterans). Total numbers of encounters for these cohorts refers to encounters in one of the three specific modalities of care: In-Person, Telephone, or Video Telehealth.
Source: WHEI Master Database

Women Veterans. Exhibit 5.C displays time trends at a more granular level, by month, for FY19 and FY20.

In-Person encounters: Among women Veteran VHA users, after relative stability from October 2018 through February 2020, there was a sharp decline in the number of In-Person encounters, reaching a nadir in April 2020 (In-Person encounters: February 2020: 758,600; March 2020: 560,024; April 2020: 176,608). This represented a marked reduction compared to one year prior; the number of In-Person encounters among women was 4.7-fold higher in April 2019 than in April 2020 (April 2019: 832,881; April 2020: 176,608). After the initial months of the COVID-19 pandemic taking hold in the U.S., there was subsequent progressive recovery (May 2020: 198,291; June 2020: 317,970; July 2020: 370,667;

August 2020: 390,209; September 2020: 463,095). However, the number of In-Person encounters among women was 1.7-fold higher in September 2019 than in September 2020 (September 2019: 770,793; September 2020: 463,095).

Telephone encounters: In parallel with the pandemic-related decline in In-Person encounters, Telephone encounters increased, reaching a maximum in April 2020 (February 2020: 127,204; March 2020: 264,704; April 2020: 428,191) but then continuing at a high level. The number of Telephone encounters among women was 3.1-fold higher in April 2020 than in the prior year (April 2019: 140,268; April 2020: 428,191) and was 2.7-fold higher in September 2020 than in the prior year (September 2019: 127,322; September 2020: 339,393).

Video Telehealth encounters: As was seen with Telephone encounters, Video Telehealth visits also increased with the onset of the pandemic in the U.S. and continued to increase for the remainder of FY20 (February 2020: 20,508; March 2020: 36,375; April 2020: 79,457; May 2020: 95,979; June 2020: 117,126; July 2020: 129,218; August 2020: 136,452; September 2020: 144,107). By April 2020, the number of Video Telehealth encounters among women was 4.5-fold higher than in the prior year (April 2019: 17,669; April 2020: 79,457), and by September 2020 it was 7.8-fold higher than in the prior year (September 2019: 18,563; September 2020: 144,107).

The rate of growth of Video Telehealth encounters in the early months of the pandemic was steeper than the early rate of growth of Telephone encounters (Telephone: 3.4-fold greater in April 2020 than in February 2020; Video Telehealth: 3.9-fold greater in April 2020 than in February 2020). Comparing February 2020 to September 2020, the relative growth in Video Telehealth encounters was substantially greater than the relative growth in Telephone encounters (Telephone: 2.7-fold greater in September 2020 than in February 2020; Video Telehealth: 7.1-fold greater in September 2020 than in February 2020). This suggests that the ramp-up in use of Video Telehealth services, which require more technology and care processes, required a more extended effort over time, but continued to expand over the observation period reported here.

It is also noteworthy to examine absolute changes in number of encounters via different modalities over time. From February 2020 to April 2020, the absolute number of Telephone encounters among women increased (Δ = +300,987) as did the number of Video Telehealth encounters (Δ = +58,949). However, the combined increase in Telephone and Video Telehealth encounters (Δ = + 359,936) did not match the decline in In-Person encounters over the same period (Δ = -581,992). From February 2020 to September 2020, the number of Telephone encounters among women increased (Δ = +212,189) and as did the number of Video Telehealth encounters (Δ = +123,599). The combined increase (Δ = +335,788) was larger than the decline in In-Person encounters over the same period (Δ = -295,505). Therefore, by the end of FY20, even though the number of In-Person encounters was still nearly two times lower than pre-pandemic, there had been a marked ramp-up in Telephone and Video Telehealth services to compensate.

Store-and-Forward Telehealth: The two less common types of telehealth are not displayed in Exhibit 5.C; data regarding these modalities are available in the Supplemental Appendix. Because Store-and-Forward Telehealth often requires an in-person component (e.g., for a retinal photograph or other in-person service), it is not surprising that this use of modality by women Veterans followed a pattern similar to that seen for In-Person encounters (February 2020: 4,161; March 2020: 3,287; April 2020: 1,030). By the end of FY20, the number of Store-and-Forward Telehealth encounters had not yet reached the number seen a year prior (September 2019: 4,077; September 2020: 3,783) (data not represented graphically in Exhibit 5.C).

Home telehealth: While home telehealth services may require use of some in-home equipment provided by VHA, they do not require face-to-face visits. Among women Veteran VHA users, the number of home telehealth encounters increased in the early period of the pandemic (February 2020:

12,671; March 2020: 14,265; April 2020: 16,021). By the end of FY20, the number of home telehealth encounters exceeded the number seen a year prior (September 2019: 12,544; September 2020: 15,199).

Women vs. men. Exhibit 5.C shows time trends for men Veteran VHA users as well. The overall pattern was similar for women and men. Examination of the number of encounters at the end of FY19 compared to the end of FY20 showed no difference in the magnitude of decline for women versus men (women: 1.1-fold higher in September 2019 than in September 2020; men: 1.1-fold higher in September 2019 than in September 2020). However, uptake of Telephone encounters was greater for women than for men (women: 2.7-fold higher in September 2020 than in September 2019; men: 2.4-fold higher in September 2020 than in September 2019). The same was true for Video Telehealth encounters (women: 7.8-fold higher in September 2020 than in September 2019; men: 5.8-fold higher in September 2020 than in September 2019).

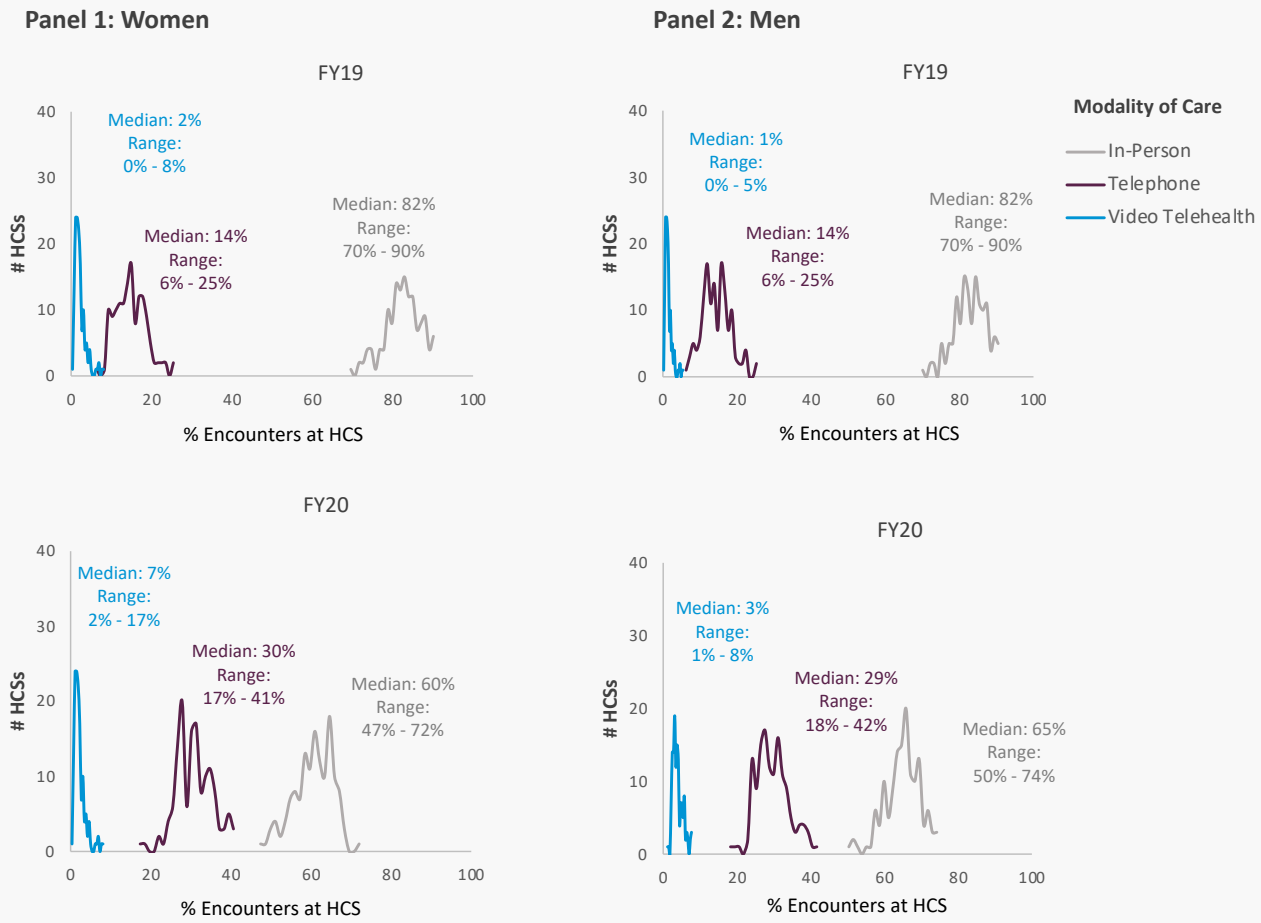
Encounters by Modality, by Health Care System and VISN

Across the approximately 140 VHA Health Care Systems nationally, there can be variability in practices. For example, some tertiary care VHA facilities might be expected to perform more specialty procedures that require In-Person care. Conversely, some rural facilities with a geographically dispersed user population might be expected to rely more heavily upon virtual care. Variability at the Health Care System level would be expected to translate into variability at the regional Veterans Integrated Services Network (VISN) level as well.

This section examines the variability across VHA Health Care Systems and VISNs in the proportion of encounters that occur In-Person; it also examines variability in the proportion of encounters that occur by Telephone or via Video Telehealth. Variability in use of the lower frequency modalities (Home Telehealth, Store-and-Forward Telehealth) is not examined (except in Exhibit 5.E) here but is included in the Supplemental Appendix.

Notes to interpretation: *VHA Health Care Systems are typically composed of a flagship VA Medical Center plus its geographically dispersed satellite Community-Based Outpatient Clinics (CBOCs). Veteran VHA users are linked to their "home facility," the single VHA Health Care System where they received the preponderance of their care. (See Online Technical Appendix for definition.) Each of the 18 VISNs nationally is composed of a regional cluster of VHA Health Care Systems.*

Exhibit 5.D. Number of VHA Health Care Systems by Percent of Encounters Occurring via In-Person Care, Telephone or Video Telehealth, among Women and Men Veteran VHA Users, FY19 and FY20

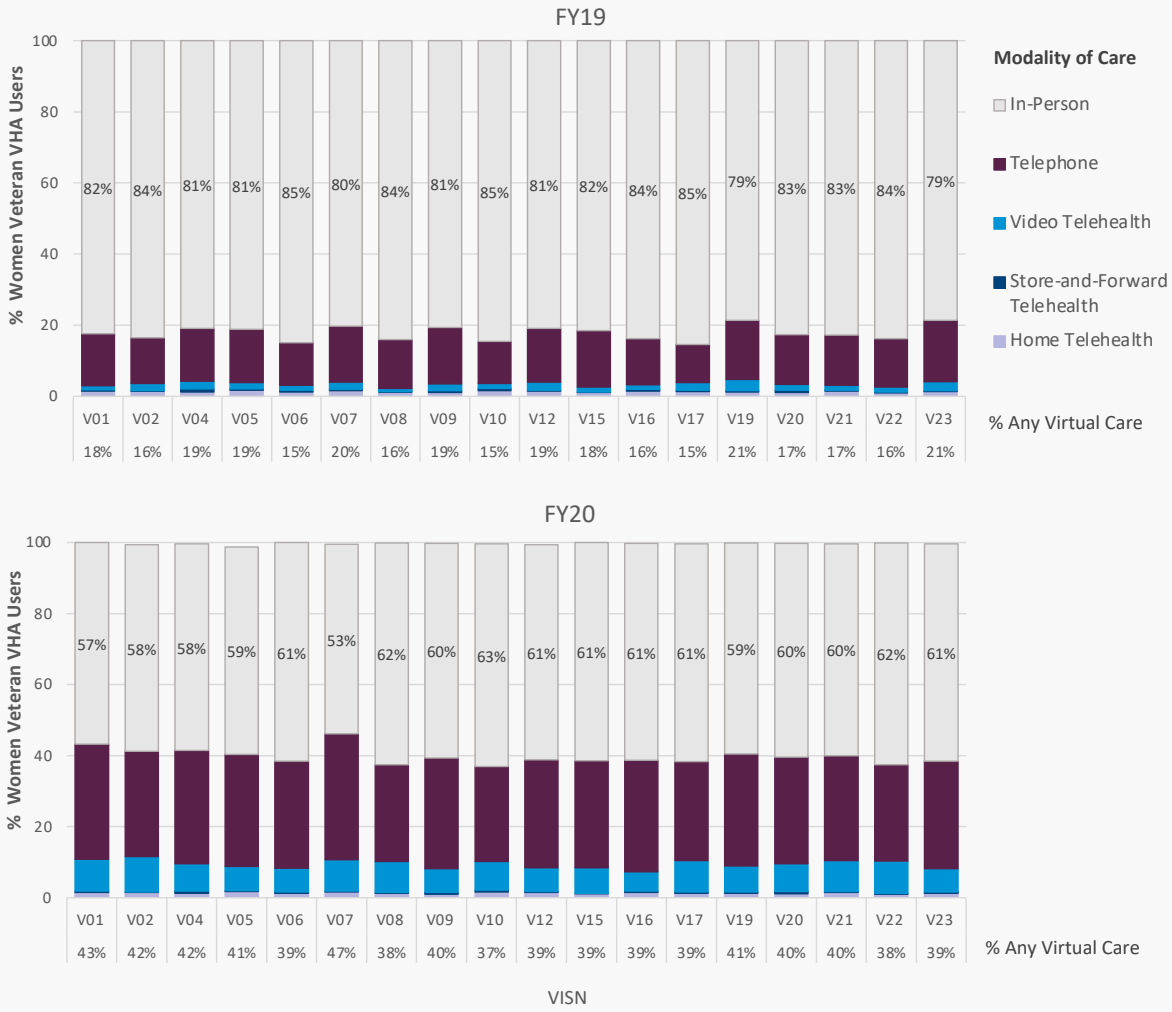


Key: FY – Fiscal Year; HCS – Health Care System; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: FY19: 11,274,449 encounters (N= 536,636 Veterans), FY20: 10,623,999 encounters (N= 556,135 Veterans); Men: FY19: 102,101,750 encounters (N= 5,564,701 Veterans), FY20: 89,494,789encounters (N= 5,498,487 Veterans).
Source: WHEI Master Database

Exhibit 5.D summarizes what proportion of encounters by women Veterans and by men Veterans at each Health Care System occurred In-Person, by Telephone, or via Video Telehealth in FY19 and in FY20. Overall, Exhibit 5.D demonstrates (a) considerable variability across VHA Health Care Systems in regard to reliance on different modalities, and (b) Health Care System-level shifts between FY19 and FY20 in the reliance on different modalities of care.

Exhibit 5.E. Percent of Encounters by Modality of Care, by VISN, among Women and Men Veteran VHA Users, FY19 and FY20

Panel 1: Women



Panel 2: Men

Key: FY – Fiscal Year; V01 to V23 is the abbreviation for each Veterans Integrated Services Network (VISN); VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: FY19: 11,274,449 encounters (N=536,636 Veterans), FY20: 10,623,999 encounters (N=556,135 Veterans); Men: FY19: 102,101,750 encounters (N=5,564,701 Veterans), FY20: 89,494,789 encounters (N=5,498,487 Veterans).
Source: WHEI Master Database

Exhibit 5.E presents the proportion of encounters at each Veterans Integrated Services Network (VISN)[20] by modality for women and men Veterans in FY19 and FY20.

Women Veterans. As Exhibits 5.D and 5.E show, the predominant form of encounters for women Veterans across all Health Care Systems and across all VISNs in FY19 were In-Person encounters. The share of women Veterans' encounters delivered In-Person ranged from 70% to 90% across Health Care Systems in FY19. In FY20, there was a dramatic shift in the modalities of care across VHA at the Health Care System level due to VHA's shift to greater reliance on virtual care during the COVID-19 pandemic. The share of FY20 women Veterans' encounters delivered In-Person ranged from 47% to 72% across

Health Care Systems (In-Person median across Health Care Systems: FY19: 82%; FY20: 60%). At four Health Care Systems, less than half of FY20 encounters occurred In-Person (Exhibit 5.D).

At the VISN-level, in FY19, virtual care encounters among women Veterans ranged from 15% to 21% of all encounters and in FY20, the range was 37% to 47% (Exhibit 5.E). In FY19, the VISN with the highest percentage of its encounters for women occurring via Video Telehealth was VISN 19 (3%) and VISN 23 (3%), and in FY20, it was VISN 2 (10%).

In parallel, the share of women Veterans' encounters delivered by Telephone ranged from 6% to 25% across Health Care Systems in FY19 versus 17% to 41% in FY20 (Telephone median: FY19: 14%; FY20: 30%). The share delivered via Video Telehealth ranged from 0% to 8% in FY19 and from 2% to 17% in FY20 (Video Telehealth median: FY19: 2%; FY20: 7%).

Women vs. men. The use patterns of the various modalities at the Health Care System-level were generally similar for women and men in both FY19 and FY20. The share of men Veterans' encounters delivered In-Person ranged from 70% to 90% across Health Care Systems in FY19 and 50% to 74% in FY20 – a range very similar to that for women Veterans. For men the median across Health Care Systems for In-Person encounters was 82% in FY19 and 65% in FY20 (Exhibit 5.D).

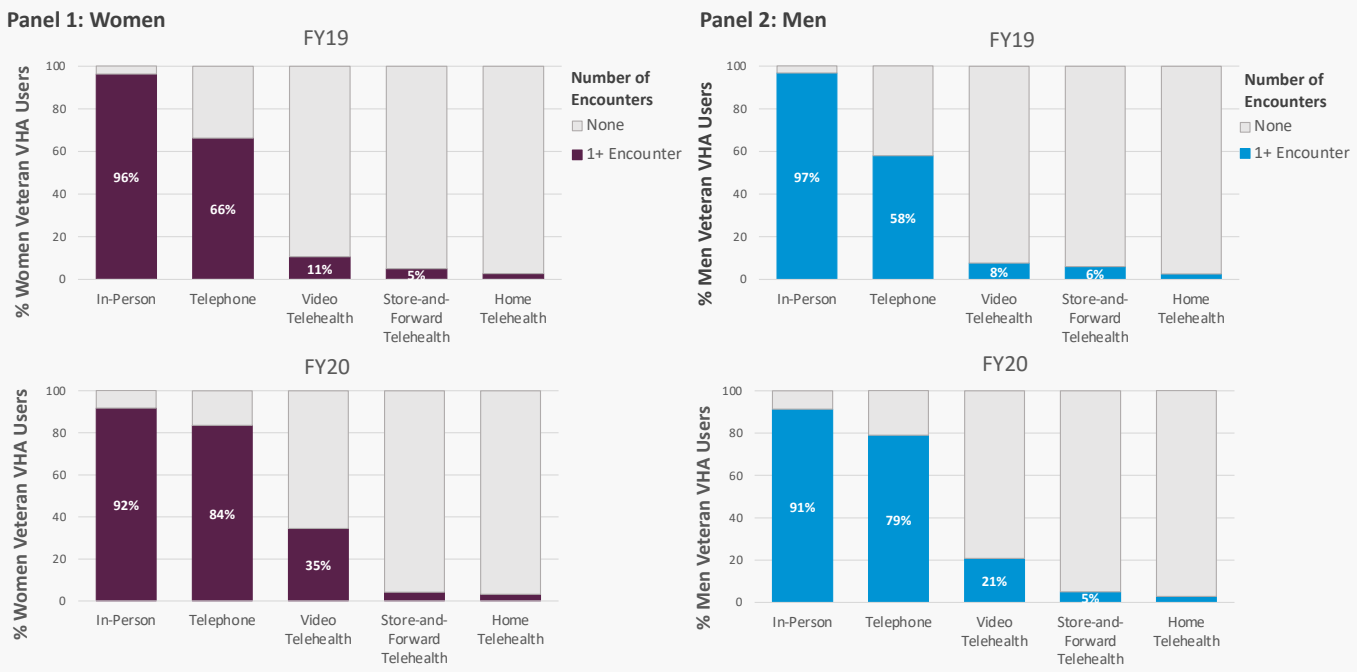
At the VISN-level too, the use patterns of the various modalities were similar for women and men in both FY19 and FY20 (Exhibit 5.E).

Modality of Care, at the User Level

Whereas the preceding text examined what share of **encounters** occurred via different modalities, the remainder of this section on modality of care examines modality at the user level: that is, what proportion of **users** had at least one encounter via the type of modality being examined. It is helpful to examine the data patterns at the user-level to understand how many users are exposed to the various virtual care modalities in any given year across all VHA users, and in specific subgroups of users. The number of users who receive care at least once via a particular modality may reflect a combination of user preferences plus system-level factors (such as availability of the modality) and provider behaviors; the total number of encounters under a particular modality (described in the prior section) beyond one encounter may potentially be more heavily driven by user preferences and health care need. As such, it is important to examine the reach of these modalities at the user-level.

This section first reports on proportion of Veteran VHA users with any visits (i.e., at least one encounter) via each of the five modalities (In-Person, Telephone, Video Telehealth, Store-and-Forward Telehealth, and Home Telehealth), by sex, in FY19 and FY20. Then, for the three top modalities (In-Person, Telephone, and Video Telehealth), this section shows the proportion of women and men Veteran VHA users with any visit via the modality, by sociodemographic characteristics: age, race/ethnicity, urban/rural status, and by SC disability rating.

Exhibit 5.F. Specific Modality of Care among Women and Men Veteran VHA Users, FY19 and FY20



Key: FY – Fiscal Year; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: FY19: N= 536,636 Veterans, FY20: N= 556,135 Veterans; Men: FY19: N= 5,564,701 Veterans, FY20: N= 5,498,487 Veterans.
Source: WHEI Master Database

Women Veterans. As described earlier, many U.S. health care systems, including VHA, shifted to virtual care nearly half-way through FY20, owing to the COVID-19 pandemic. Thus, it is unsurprising that the number of women Veterans with any VHA visits declined slightly from FY19 to FY20, although the preponderance of women Veterans still had at least one In-Person visit in both years (FY19: 96%; FY20: 92%). As Exhibit 5.C shows, FY20 In-Person visits occurred disproportionately in the first half of FY20.

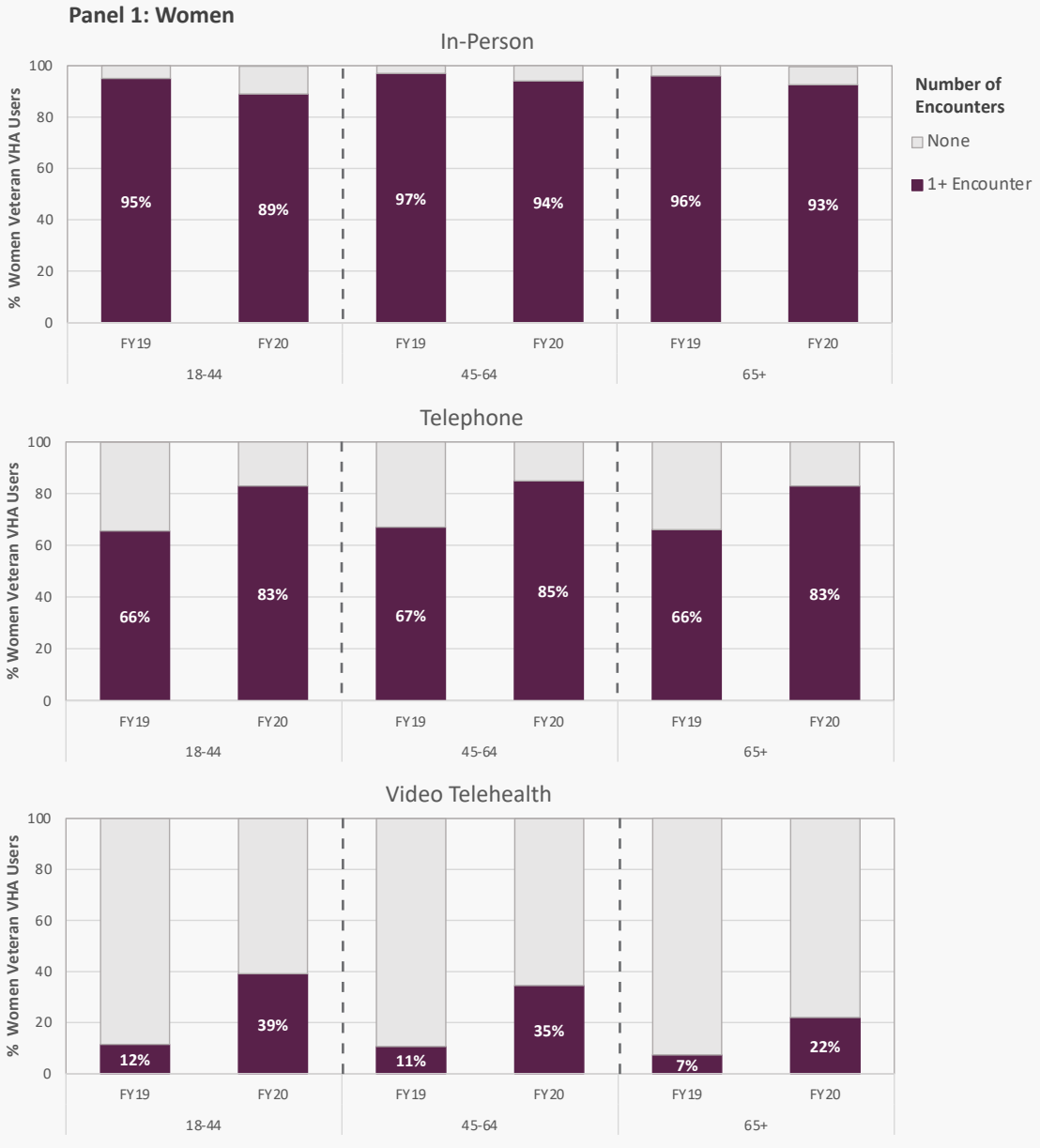
A higher proportion of women Veterans received at least some of their care by Telephone in FY20 than in the prior year (FY19: 66%; FY20: 84%); the same was true for Video Telehealth (FY19: 11%; FY20: 35%). In both years, small proportions of women had any Store-and-Forward Telehealth (FY19: 5%; FY20: 4%) or Home Telehealth (FY19: 3%; FY20: 3%) visits. (The modest decline in Store-and-Forward Telehealth could be related to the fact that there is often an in-person component to this type of care.)

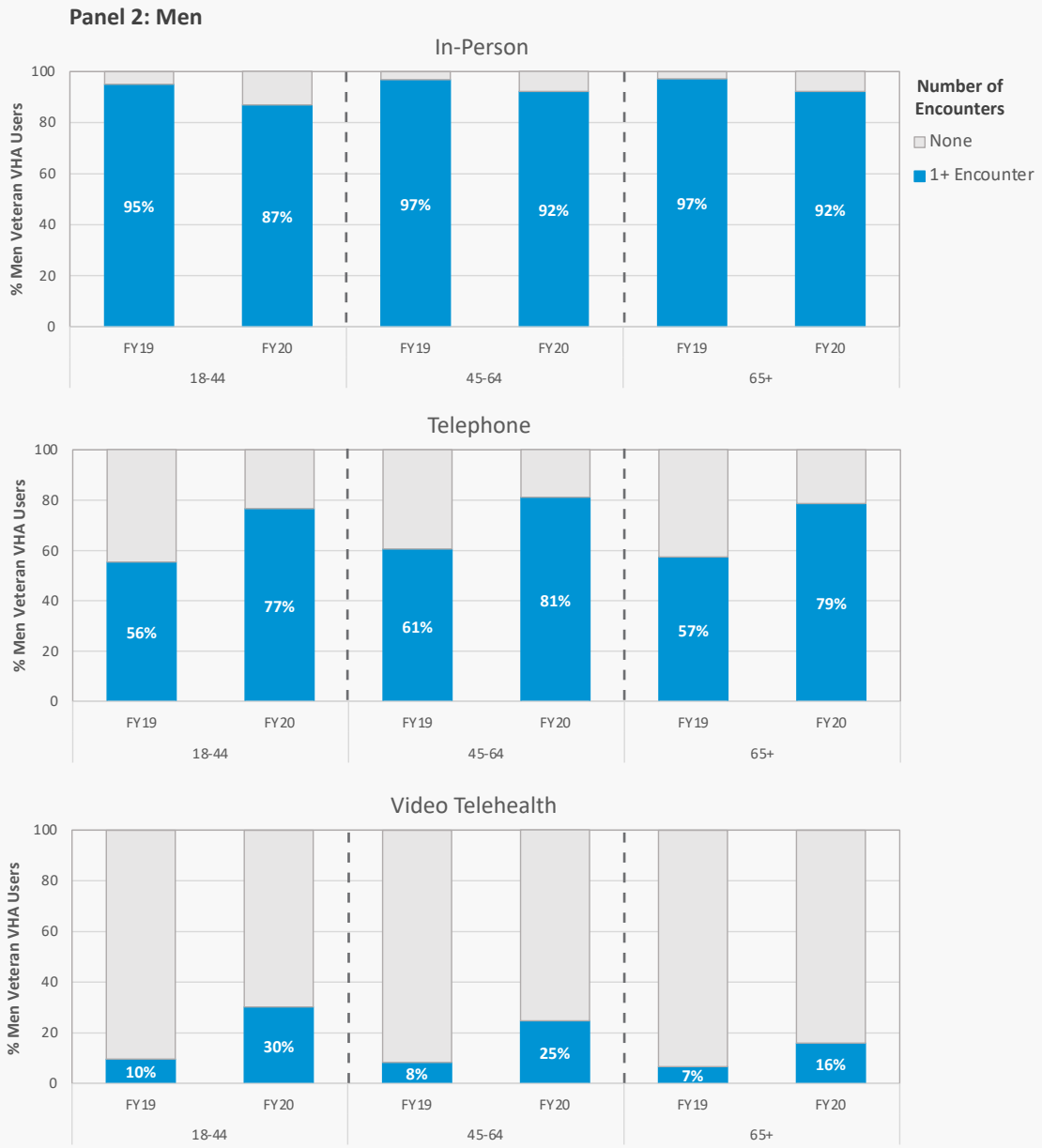
Women vs. men. As discussed in an earlier section, at the encounter level (Exhibit 5.B), the proportion of encounters that were In-Person decreased from FY19 to FY20 more among women than men, this pattern did not hold true at the person-level. That is, the reduction in the proportion of Veterans with at least one In-Person encounter from FY19 to FY20 was similar for women and men (FY19: women: 96%, men: 97%; FY20: women: 92%, men: 91%).

The proportion of Veterans with any Telephone visits increased similarly from FY19 to FY20 for women and men: a 1.3-fold increase in the proportion of women Veterans with any Telephone visits (FY19: 66%; FY20: 84%) and a 1.4-fold increase for men (FY19; 58%; FY20: 79%). For any Video Telehealth visits, there was a 3.3-fold increase for women (FY19: 11%; FY20: 35%) and a 2.7-fold increase for men (FY19: 8%; FY20: 21%).

AGE

Exhibit 5.G. Proportion of Specific Modality of Care among Women and Men Veteran VHA Users by Age, FY19 and FY20





Key: FY – Fiscal Year; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users with non-missing ages 18-110 years (inclusive). Women: FY19: N= 536,418, FY20: N =555,967; Men: FY19: N= 5,564,416, FY20: N= 5,498,291.
Source: WHEI Master Database

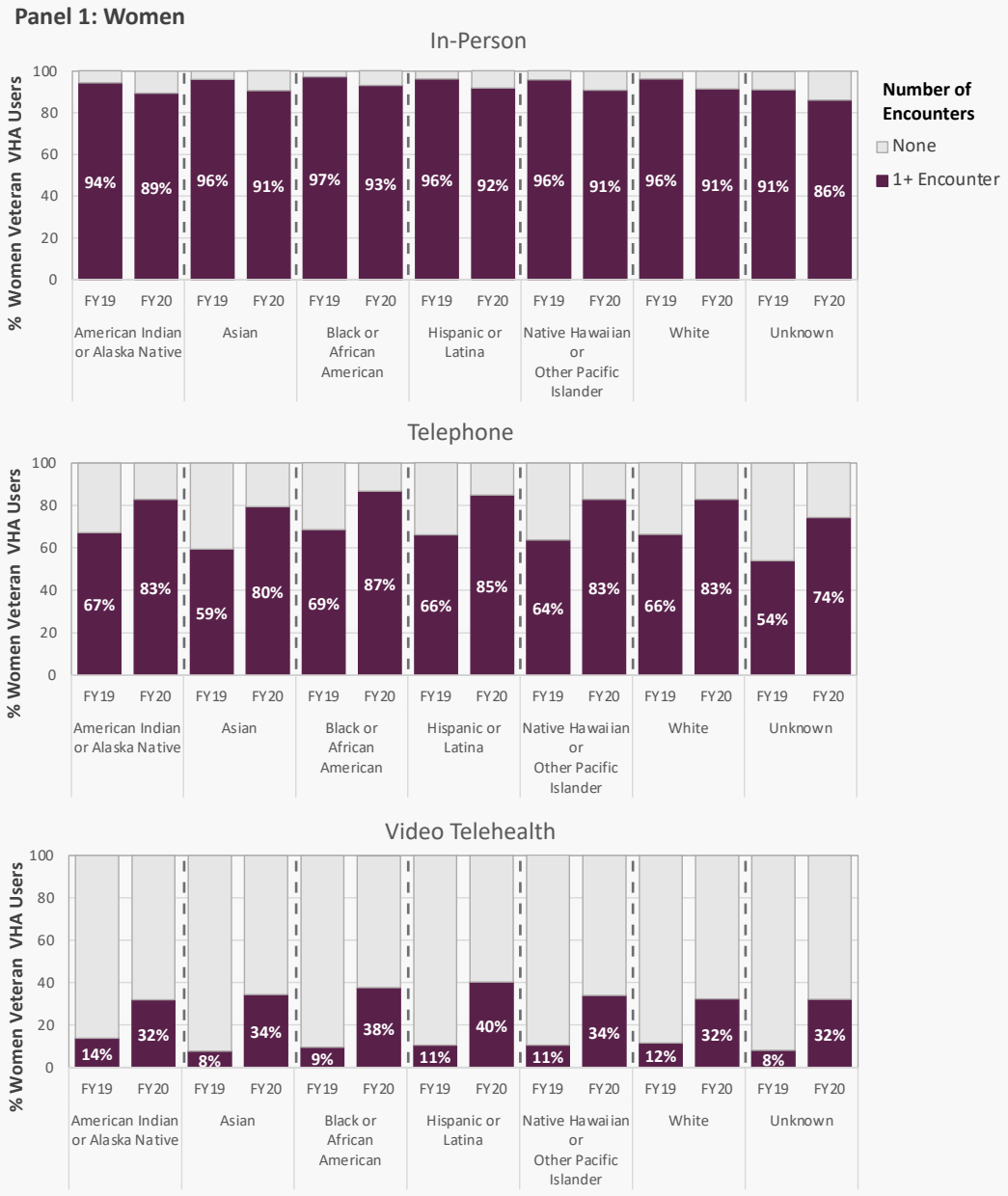
Women Veterans. Exhibit 5.G shows the proportion of women Veterans with any In-Person, Telephone, and Video Telehealth (Panel 1) visits by age group in FY19 and FY20. Across age groups, most women had at least one In-Person visit in FY19. There was only a small decline in the proportion with any In-Person visits from FY19 to FY20, most notably in the 18-44 year old group and to a lesser extent in the 45-64 and 65+ age groups (18-44: 95% vs. 89%; 45-64: 97% vs. 94%; 65+: 96% vs. 93%, in FY19 vs. FY20 respectively).

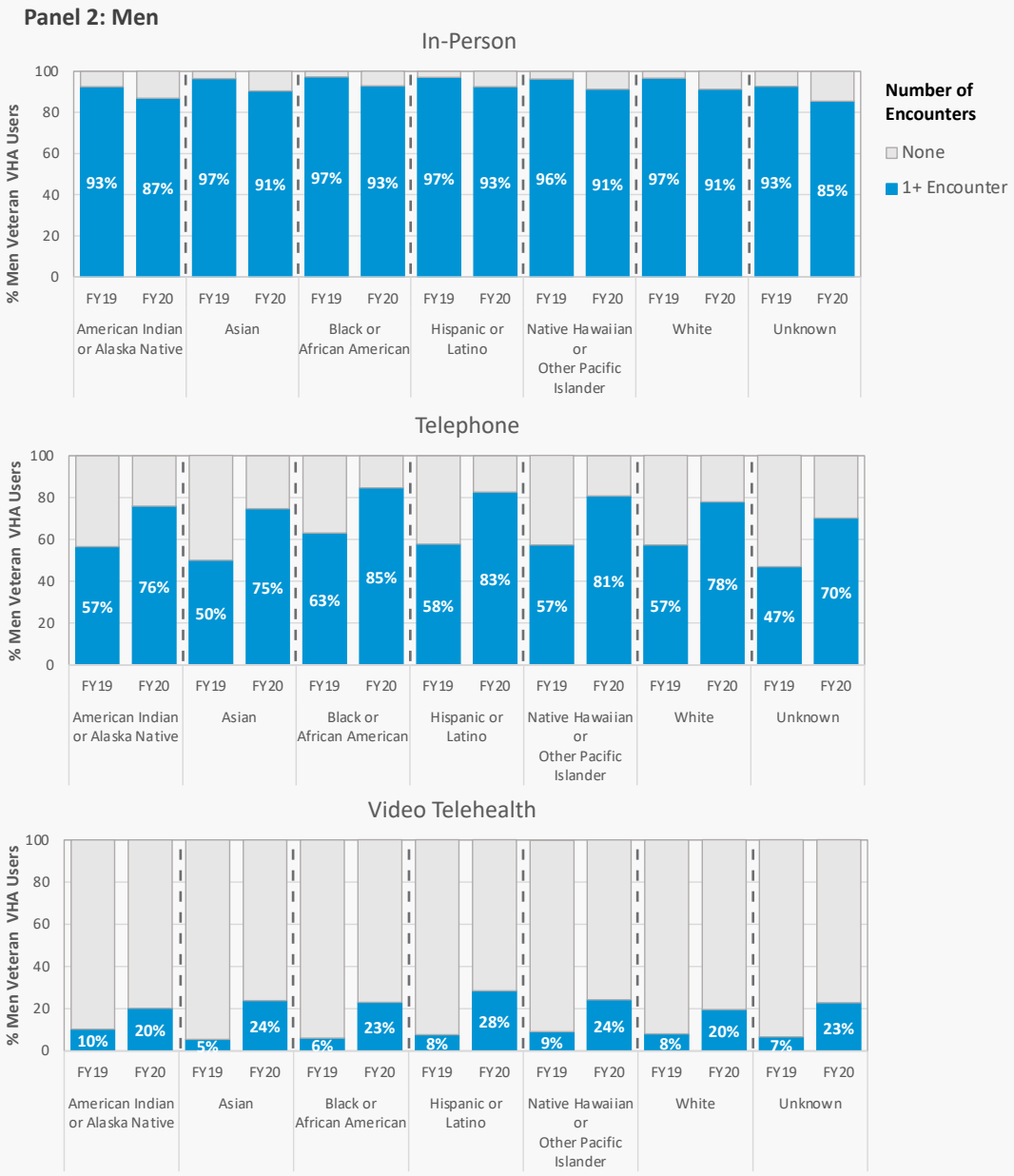
Conversely, the proportion of women with any Telephone visits increased substantially from FY19 to FY20, as did the proportion with any Video Telehealth visits. The proportion of women using any Telephone care increased over time to a similar extent in all three age groups (18-44: 66% vs. 83%; 45-64: 67% vs. 85%; 65+: 66% vs. 83%, in FY19 vs. FY20 respectively). In contrast, the magnitude of change over time in the proportion of women using any Video Telehealth care differed by age group, with the most pronounced increase occurring among the youngest group of women (18-44: 12% vs. 39%; 45-64: 11% vs. 35%; 65+: 7% vs. 22%, in FY19 vs. FY20 respectively; this represents a 3.4-fold, 3.2-fold, and 3.0-fold increase, respectively).

Women vs. men. Patterns of change over time by age group were generally similar for women and men, with a trend toward more men receiving In-Person care in FY19 than in FY20, and less men receiving Telephone and Video Telehealth care in FY19 than in FY20. As was seen with women, among men the proportion using Video Telehealth in FY20 was greatest for the 18-44-year-old age group. In both FY19 and FY20 and in every age group, a higher proportion of women than men used Telephone care. In both FY19 and FY20 and in every age group (except for the 65+ age group in FY19), a higher proportion of women than men used Video Telehealth.

RACE/ETHNICITY

Exhibit 5.H. Specific Modality of Care among Women and Men Veteran VHA Users by Race/Ethnicity, FY19 and FY20





Key: FY – Fiscal Year; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: FY19: N= 536,636, FY20: N= 556,135; Men: FY19: N= 5,564,701, FY20: N= 5,498,487.
Source: WHEI Master Database

Women Veterans. Exhibit 5.H presents the proportion of Veterans using specific modalities of VHA care at least once in FY19 and at least once in FY20 by race/ethnicity. The proportion of women with any In-Person visits declined from FY19 to FY20 in every racial/ethnic group, whereas the proportion with any Telephone visits increased in every racial/ethnic group, as did the proportion with any Video Telehealth visits. The proportion of women with any In-Person visits and the proportion with any Telephone visits was lowest in both FY19 and FY20 for the group with unknown race/ethnicity; while

not the lowest for Video Telehealth, the proportion with any Video Telehealth visits was also low for the group with unknown race/ethnicity. This may be an artifact of the fact that Veterans who are low users of VHA healthcare may have less opportunity to have their race/ethnicity recorded, and thus may disproportionately be classified as having unknown race/ethnicity. For the remaining descriptions of the relationship between race/ethnicity and modality of care, Veterans with unknown race/ethnicity are not included.

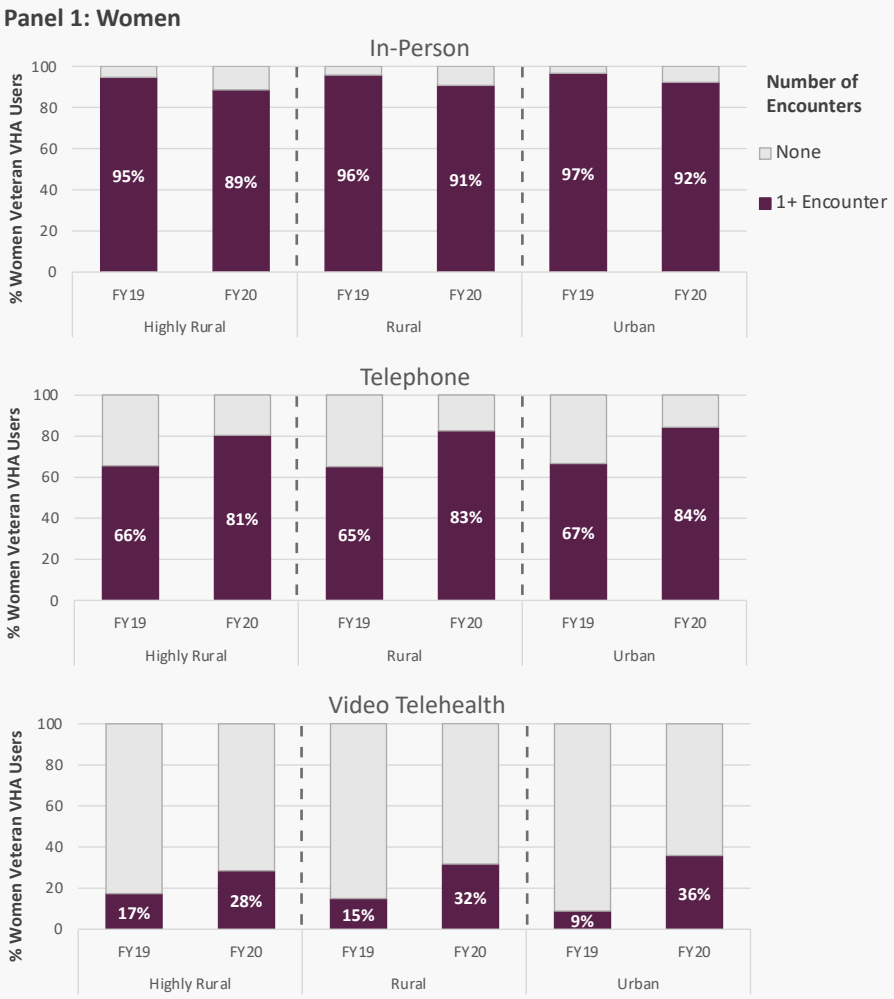
In FY19, across groups with known race/ethnicity, the proportion of women with any In-Person visits ranged from 94% (for American Indian or Alaska Native women) to 97% (for Black or African American women). The proportion with any Telephone visits ranged from 59% (for Asian women) to 69% (for Black or African American women). The proportion with any Video Telehealth visits ranged from 8% (for Asian women) to 14% (for American Indian or Alaska Native women). The relative increase from FY19 to FY20 in the proportion of women with any Video Telehealth visits varied by racial/ethnic group (American Indian or Alaska Native women: 2.3-fold; Asian women: 4.5-fold; Black or African American women: 4.0-fold; Hispanic or Latina women: 3.8-fold; Native Hawaiian or Other Pacific Islander women: 3.2-fold; White women: 2.8-fold).

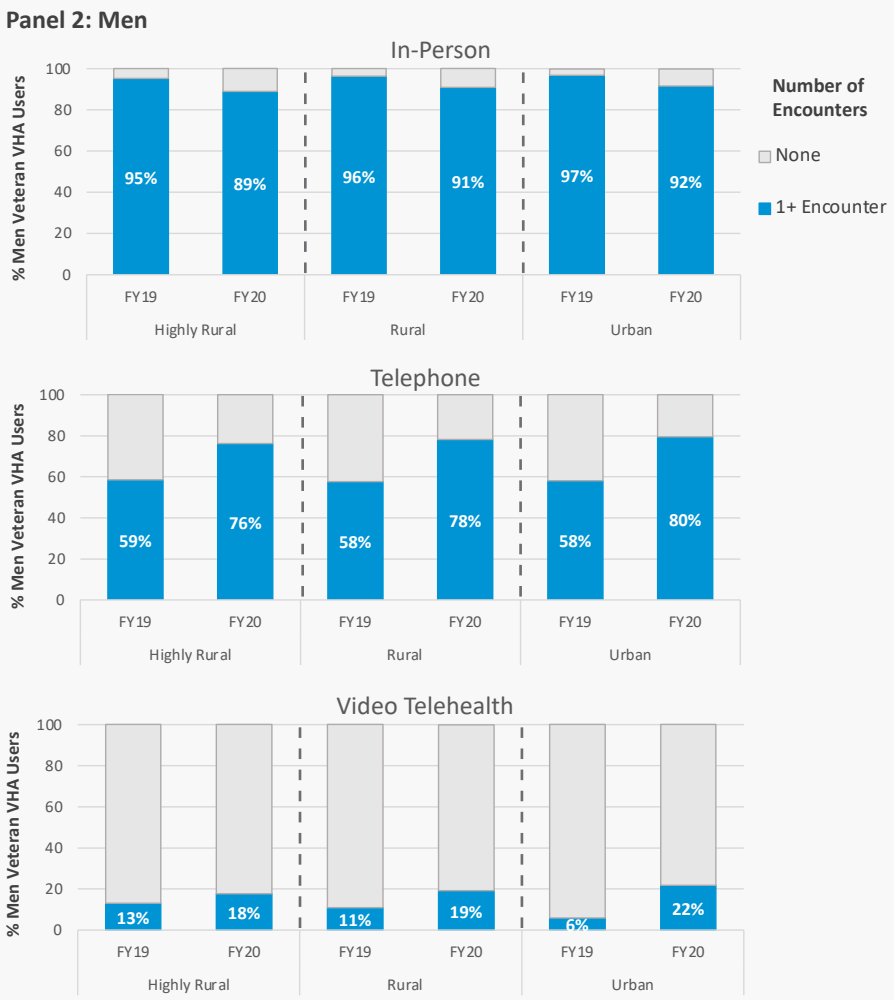
Among women in every racial/ethnic group, there was an increase from FY19 to FY20 in the proportion with any Telephone visits and in the proportion with any Video Telehealth visits. By FY20, the proportion with any Telephone visits ranged from 80% (for Asian women) to 87% (for Black or African American women). The proportion with any Video Telehealth visits ranged from 32% (for American Indian or Alaska Native women and White women) to 40% (for Hispanic or Latina women).

Women vs. men. While the racial/ethnic distribution of women Veterans versus men Veterans is different, the general pattern of change from FY19 to FY20 by modality of care by racial/ethnic group was similar for women and men.

URBAN/RURAL STATUS

Exhibit 5.I. Proportion of Specific Modality of Care among Women and Men Veteran VHA Users by Urban/Rural Status, FY19 and FY20





Key: FY – Fiscal Year; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. Veterans with an insular island residence are excluded from this exhibit due to small numbers (Women: FY19: N=657, FY20: N=670; Men: FY19: N=4,759, FY20: N=4,861). Among women Veterans with an insular island residence, in FY19 vs. FY20, 93% vs. 87% used In-Person care, 49% vs. 78% used Telephone care, and 24% vs. 37% used Video Telehealth care. Among men Veterans with an insular island residence, in FY19 vs. FY20, 93% vs. 88% used In-Person care, 45% vs. 78% used Telephone care, and 24% vs. 31% used Video Telehealth care. See Technical Appendix.
Cohort: Women and men Veteran VHA users with non-missing urban/rural status. Women: FY19: N= 535,467, FY20: N= 555,323; Men: FY19: N= 5,554,583, FY20: N= 5,493,897.
Source: WHEI Master Database

Women Veterans. Exhibit 5.I shows use of specific modalities of VHA care in FY19 and FY20 among Veterans with highly rural residence, rural residence, or urban residence.

The preponderance of women Veterans in all three groups had at least one In-Person visit in FY19, and the same was true in FY20, but all three groups saw a decline in the proportion of women with any In-Person visits, with the largest decline seen in highly rural women: 95% of highly rural women Veterans had an In-Person visit in FY19, whereas only 89% of highly rural women had an In-Person visit in FY20.

Conversely, the proportion with virtual care increased in all three groups. The proportion of women

with any Telephone visits increased from FY19 to FY20 to a similar degree in all three groups. The proportion of women with any Video Telehealth visits increased for all three groups but to differing degrees: the proportion using Video Telehealth in FY19 vs. FY20 was 17% vs. 28% for highly rural women (a 1.6-fold increase), 15% vs. 32% for rural women (a 2.1-fold increase), and 9% vs. 36% for urban women (a 4.0-fold increase). Of note, in FY19 the proportion of women with any Video Telehealth visits was highest for highly rural women (17%) and lowest for urban women (9%), but by FY20 this had reversed, such that the proportion was highest for urban women (36%) and lowest for highly rural women (28%). The degree to which internet accessibility in highly rural areas contributes to this finding is unknown. Similarly, the proportion of women using any Telephone care in FY20 was greatest for urban women (84%) and lowest for highly rural women (81%).

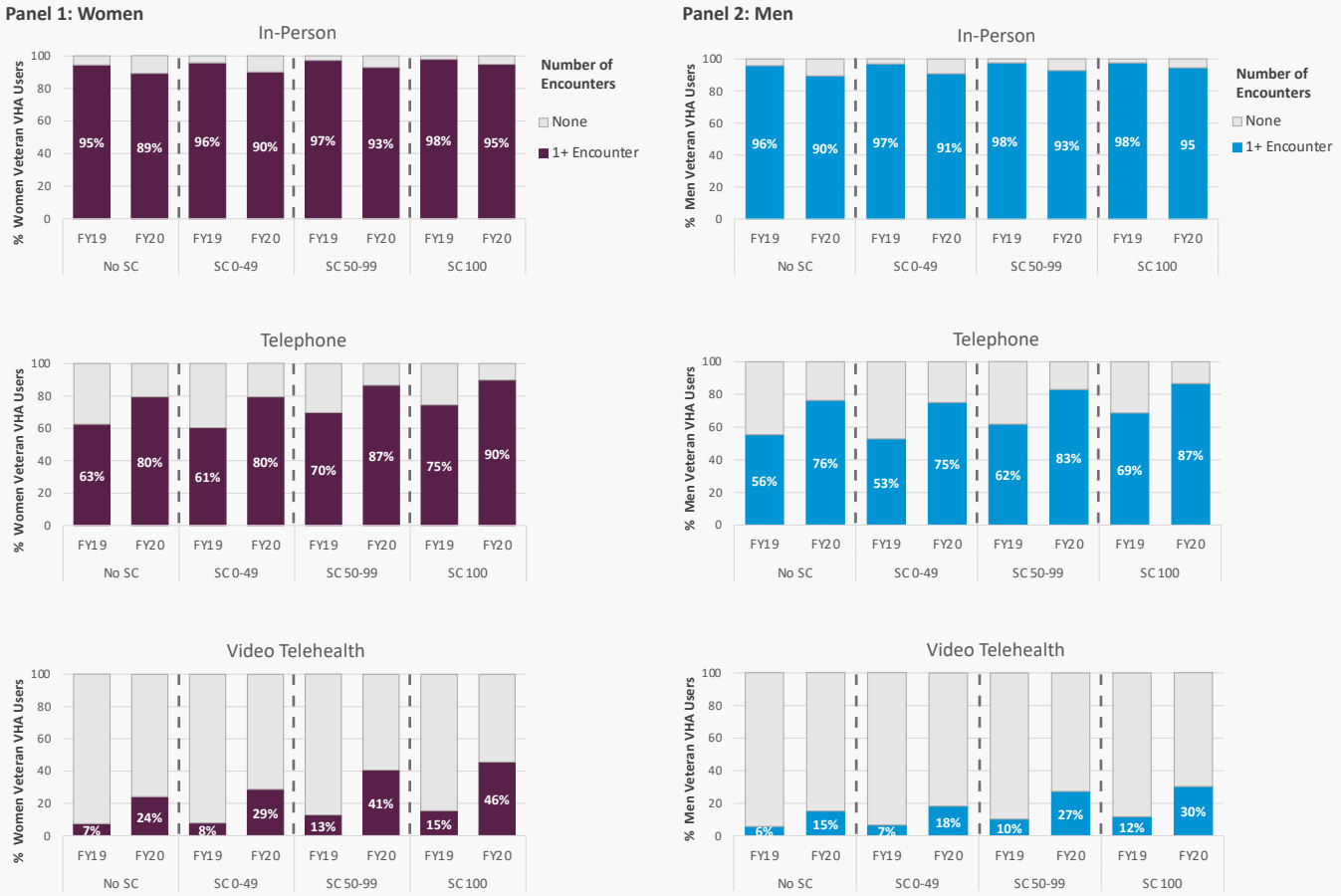
Women residing on insular islands represent a fourth category of urban/rural residence status. This group is not represented in Exhibit 5.I due to its relatively small size (N=657). In FY19 and FY20, the proportion of women with any In-Person visits was lower for women living on insular islands than for women with highly rural, rural, or urban residence (FY19: 93%, FY20: 87%). The same was true for use of any Telephone care (FY19: 49%; FY20: 78%) (data not represented graphically in Exhibit 5.I). It is worth noting, however, that this represents a 1.6-fold increase from FY19 to FY20 in the proportion of women Veterans dwelling on insular islands using Telephone care. A substantial proportion of women living on insular islands had at least one Video Telehealth visit (FY19: 24%; FY20: 37%).

Women vs. men. While there were differences in magnitude of change by sex, the general pattern of change from FY19 to FY20 by modality of care by urban/rural status was similar for women and men.

Among Veterans dwelling on insular islands, the growth in the proportion of Veterans with any Telephone visits was even larger among men than among women Veterans (data not represented graphically in Exhibit 5.I). Specifically, the proportion of men Veterans dwelling on insular islands with any Telephone visits increased by 33 percentage points (FY19: 45%; FY20: 78%, a 1.7-fold increase). The proportion of men Veterans dwelling on insular islands with any Video Telehealth visits also increased (FY19: 24%; FY20: 31%).

SERVICE-CONNECTED DISABILITY RATING

Exhibit 5.J. Specific Modality of Care among Women and Men Veteran VHA Users by Service-Connected (SC) Disability Rating, FY19 and FY20



Key: FY – Fiscal Year; SC – Service-Connected Disability rating; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran user population. See Technical Appendix.
Cohort: Women and men Veteran VHA users with non-missing SC disability rating. Women: FY19: N= 534,752, FY20: N= 553,653; Men: FY19: N= 5,546,798, FY20: N= 5,478,490.
Source: WHEI Master Database

Women Veterans. Exhibit 5.J shows the proportion of Veterans with at least one visit for each modality of care in FY19 and FY20 across SC disability rating groups. As SC disability ratings increased so did the proportion of women with any In-Person visits; this was true in both FY19 and FY20. In both FY19 and FY20, the proportion of women with any Telephone visits was greatest for women with SC disability ratings of 50 percent or higher; indeed, in FY20, 90% of women with a 100 percent SC disability rating had at least one Telephone visit. Similarly, as SC disability ratings increased, so too did the proportion of women with any Video Telehealth visits; this pattern was seen in both FY19 and FY20. In FY20, whereas 24% of women with no SC disability rating had any Video Telehealth visits (representing a 3.3-fold increase from FY19 to FY20), fully 46% of women with a 100 percent disability rating had any Video Telehealth visits (representing a 3.0-fold increase from FY19 to FY20).

Women vs. men. The general patterns were similar in women and men: in both women and men the proportion with any Telephone visits and the proportion with any Video Telehealth visits increased from FY19 to FY20 across all SC disability rating groups. In both women and men, the proportions with any In-Person, Telephone, or Video Telehealth care were particularly high for those with SC disability ratings of 50 percent or above.

In FY20, in each SC disability rating group, a higher proportion of women than men had any Telephone visits, and a higher proportion of women than men had any Video Telehealth visits.

IMPLICATIONS

The cumulative number of VHA-based encounters[21] decreased among all women Veteran VHA users from FY19 to FY20, driven by a steep decline in In-Person visits in the early period after the COVID-19 pandemic reached the U.S. In FY19, virtual care accounted for 17% of women Veterans' encounters, ballooning to 40% in FY20. This shift from In-Person to virtual care is consistent with previous reports of care patterns in VHA.[22,23] Drawing upon a virtual care infrastructure that VHA implemented years before the pandemic, VHA was able to adjust rapidly to the new reality. Indeed, for women Veteran VHA users the decline in In-Person visits from February 2020 to September 2020 (a net decline of 295,505 encounters) was offset by the increase in the number of virtual (Telephone and Video Telehealth) visits over the same period (a cumulative net increase of 335,788 encounters). This suggests that VHA was able to compensate for the pandemic-imposed barriers to face-to-face care via a nimble transition to virtual care, with Telephone visits ramping up most quickly, and Video Telehealth visits increasing more gradually. This presumably reduced threats to continuity of care, with possibly an exception in the earliest months of the pandemic.

There was however VISN-level and VHA Health Care System-level variability in use of virtual care. This variability may represent patient-level factors (such as preferences, access to necessary technology, or health care needs) and systems-level factors (such as conversion of in-person encounters to virtual, policy changes around which types of care could be provided virtually, incentives around use of virtual care, or staffing to support virtual care).

VHA's success with transitioning to far more virtual care does not exclude the possibility that, as has been seen outside of VHA,[24] some types of VHA care not amenable to a virtual platform (e.g., preventive or diagnostic services like pap smears, mammograms, colonoscopies, or echocardiograms) may have been delayed with the pandemic. If that occurred, it would potentially have introduced the risk of disease detection at a more advanced stage. Another consideration with the rapid shift to virtual care is that women experiencing intimate partner violence (which has a high prevalence among women Veterans[25]) or other sensitive care needs may have faced new barriers with virtual care, as some women may hesitate to speak candidly with their provider by Telephone or Video Telehealth, given privacy issues in their home setting.[26]

Why higher uptake of virtual care was observed among women versus men Veterans is unknown. It may be related to patient-level factors (e.g., women's average age, technology literacy, work/caregiving responsibilities, geographic/transportation access, health/mobility issues, or level of comfort on VHA grounds) and/or systems-level differences (e.g., the fact that many women receive care from designated Women's Health Primary Care Providers and/or in distinct VHA Women's Clinic settings). Some women Veterans avoid visiting VHA facilities, either because they have experienced harassment on VHA grounds[27,28] or because memories of military sexual trauma experiences[29] may be triggered when surrounded by other Veterans. While the goal is to ensure women experience VHA facilities as safe and welcoming,[30] virtual visits may be preferred by some women.

There was variation in women Veterans' use of virtual care by sociodemographic characteristics. For example, in FY20, among women with known race/ethnicity, the proportion with any Video Telehealth visits ranged from 32% (American Indian women or Alaska Native women and White women) to 40% (Hispanic or Latina women). Given VHA's commitment to health equity,[31] it will be important to assess whether these variations in virtual care use reflect user preference and need versus access issues

that may require more outreach and tailored approaches. Innovations like VHA's tablet distribution program may reduce barriers imposed by the digital divide.[32]

A higher proportion of urban than rural women used any virtual care. In particular, 36% of urban women had any Video Telehealth visits (versus 28% of women with a highly rural residence and 32% of those with rural residence); 37% of women with an insular island residence had any Video Telehealth visits. The more marked uptake of Video Telehealth among urban women has been noted elsewhere.[33] It is possible that rural women Veterans' use of VHA-purchased Community Care offsets some use of VHA-based services.

Women with higher SC disability ratings also had more uptake of virtual care: for example, in FY20, 24% of women with no SC disability rating versus 46% of women with 100 percent SC disability rating had any Video Telehealth visits. A heavier burden of illness could explain the higher utilization among women with greater SC disability, although access issues like co-pays could also be a factor.

The widespread shift to virtual care, if sustained, will likely come with access benefits for many women Veterans, especially those for whom In-Person visits are challenging. Given the rapid expansion of virtual care services between FY19 and FY20, VHA's programmatic/policy emphasis[34] and research emphasis[35,36] on this area is clearly warranted. Going forward as the pandemic eases, it will be important to determine the optimal, patient-centered balance of In-Person and virtual care that considers women Veterans' preferences and health care needs.

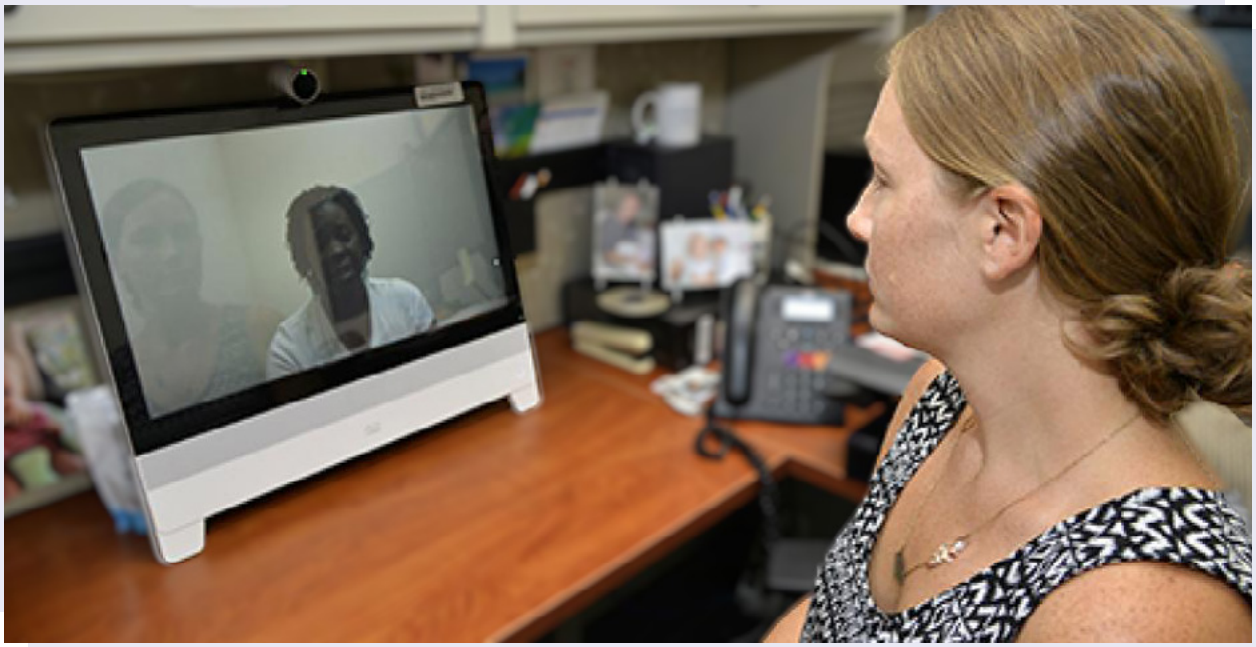


Photo credit: Ralph H. Johnson

Endnotes

1 Zulman DM, Wong EP, Slightam C, Gregory A et al. Making connections: nationwide implementation of video telehealth tablets to address access barriers in veterans. JAMIA Open. 2019; 5;2(3):323-329. doi: 10.1093/jamiaopen/ooz024
2 Spotlight on Telehealth. [Internet]. U.S. Department of Veterans Affairs Health Systems Research. Updated November 2022. https://www.hsrd.research.va.gov/news/feature/telehealth-1122.cfm. Accessed August 26, 2024.
3 For more information about VHAs history with Telehealth, see https://www.ortholive.com/blog/the-vas-long-history-with-telehealth/
4 Mazmanian, A. How VA is driving telemedicine. FCW, The Business of Federal Technology. February 13, 2014. https://www.nextgov.com/digital-government/2014/02/how-va-is-driving-telemedicine/255664/. Accessed August 13, 2022.
5 Spotlight on Telehealth. [Internet]. U.S. Department of Veterans Affairs Health Systems Research. Updated November 2022. https://www.hsrd.research.va.gov/news/feature/telehealth-1122.cfm. Accessed August 26, 2024.
6 Spotlight on Telehealth. [Internet]. U.S. Department of Veterans Affairs Health Systems Research. Updated November 2022. https://www.hsrd.research.va.gov/news/feature/telehealth-1122.cfm. Accessed August 26, 2024.
7 Ferguson JM, Jacobs J, Yefimova M, Greene L, Heyworth L, Zulman DM. Virtual care expansion in the Veterans Health Administration during the COVID-19 pandemic: clinical services and patient characteristics associated with utilization. J Am Med Inform Assoc. 2021;28(3):453-462. doi: 10.1093/jamia/ocaa284.
8 What is Telehealth? [Internet]. U.S. Department of Veterans Affairs. https://telehealth.va.gov/what-telehealth. Accessed August 18, 2022.
9 VA Telehealth. [Internet]. U.S. Department of Veterans Affairs. https://telehealth.va.gov/type/clinic. Accessed March 30, 2023.
10 In this section, "In-Person" is capitalized when it refers to the specific set of encounter types that were mapped to the "In-Person" category for this Sourcebook. See Online Technical Appendix for details of how this variable is specified.
11 Clinical Resource Hubs. [Internet]. U.S. Department of Veterans Affairs. https://www.patientcare.va.gov/primarycare/CRH.asp. Accessed March 30, 2023.
12 Frayne SM, Yu W, Yano EM, et al. Gender and use of care: Planning for tomorrow's Veterans Health Administration. J Women's Health (Larchmt). 2007;16(8):1188-1199. doi: 10.1089/jwh.2006.0205
13 Services provided in Vet Centers, which offer readjustment counseling services, are also not included. For more information, see https://www.vetcenter.va.gov/index.asp. Accessed August 12, 2022.
14 See Introduction (Chapter 1) for explanation of why only two genders are discussed in this Sourcebook.
15 Spotlight on Telehealth. [Internet]. U.S. Department of Veterans Affairs Health Systems Research. Updated November 2022. https://www.hsrd.research.va.gov/news/feature/telehealth-1122.cfm. Accessed August 26, 2024.
16 For more information about VHAs history with Telehealth, see https://www.ortholive.com/blog/the-vas-long-history-with-telehealth/
17 The literature has also documented growth in this modality from FY18 to FY19.
18 Spotlight on Telehealth. [Internet]. U.S. Department of Veterans Affairs Health Systems Research. Updated November 2022. https://www.hsrd.research.va.gov/news/feature/telehealth-1122.cfm. Accessed August 26, 2024.
19 VA exceeds 1 million video telehealth visits in fiscal year 2018. U.S. Department of Veterans Affairs. Updated February 2019. https://news.va.gov/56361/va-exceeds-1-million-video-telehealth-visits-fiscal-year-2018/
20 VHA is geographically divided into 18 regionally organized VISNs. A VISN map is available on the U.S. Department of Veterans Affairs, VISNs webpage: https://www.va.gov/HEALTH/visns.asp.
21 Care received through VHA-purchased Community Care is not examined in this section.
22 Ferguson JM, Jacobs J, Yefimova M, Greene L, Heyworth L, Zulman DM. Virtual care expansion in the Veterans Health Administration during the COVID-19 pandemic: clinical services and patient characteristics associated with utilization. J Am Med Inform Assoc. 2021;28(3):453-462. doi: 10.1093/jamia/ocaa284.
23 Rose L, Tran LD, Asch SM, Vashi A. Assessment of changes in US Veterans Health Administration care delivery methods during the COVID-19 Pandemic. JAMA Netw Open. 2021;4(10):e2129139. doi: 10.1001/jamanetworkopen.2021.29139.
24 Shukla P, Lee M, Whitman SA, Pine KH. Delay of routine health care during the COVID-19 pandemic: A theoretical model of individuals' risk assessment and decision making. Soc Sci Med. 2022 Aug;307:115164. doi: 10.1016/j.socscimed.2022.115164. Epub 2022 Jun 22. PMID: 35816834; PMCID: PMC9217083.
25 Dichter ME, Wagner C, Goldberg EB, Iverson KM. Intimate Partner Violence Detection and Care in the Veterans Health Administration: Patient and Provider Perspectives. Womens Health Issues. 2015 Sep-Oct;25(5):555-60. doi: 10.1016/j.whi.2015.06.006. Epub 2015 Jul 27. PMID: 26227208.

26 Gerber MR, Elisseou S, Sager ZS, Keith JA. Trauma-Informed Telehealth in the COVID-19 Era and Beyond. Fed Pract. 2020 Jul;37(7):302-308. PMID: 32908333; PMCID: PMC7473719.
27 Klap R, Darling JE, Hamilton AB et al. Prevalence of stranger harassment of women veterans at Veterans Affairs Medical Centers and impacts on delayed and missed care. Womens Health Issues. 2019; 23(2):107-115. doi:10.1016/j.whi.2018.12.002.
28 Fenwick KM, Golden RE, Frayne SM, et al. Women Veterans' experiences of harassment and perceptions of Veterans Affairs Health Care settings during a National Anti-Harassment Campaign. Womens Health Issues. 2021;31(6):567-575. doi:10.1016/j.whi.2021.06.005
29 Kimerling R, Gima K, Smith MW, Street A, Frayne S. The Veterans Health Administration and military sexual trauma. American Journal of Public Health. 2007;97:2160-2166. https://doi.org/10.2105/AJPH.2006.092999.
30 U.S. Department. of Veterans Affairs. VHA Assault and Harassment Prevention Office. Stand Up to Stop Harassment Now! https://www.va.gov/STOP-HARASSMENT/StandUpToStopHarassmentNow.asp. Accessed October 2, 2022.
31 Washington DL (ed). *National Veteran Health Equity Report 2021. Focus on Veterans Health Administration patient experience and health care quality.* Veterans Health Administration Office of Health Equity. Updated September 2022. https://www.va.gov/HEALTHEQUITY/docs/NVHER_2021_Report_508_Conformant.pdf. Accessed October 2, 2022.
32 Zulman DM, Wong EP, Slightam C, Gregory A et. al. Making connections: nationwide implementation of video telehealth tablets to address access barriers in veterans. JAMIA Open. 2019; 5;2(3):323-329. doi: 10.1093/jamiaopen/ooz024
33 Hogan J, Amspoker A, Walder A, Differential impact of COVID-19 on the use of tele-mental health among Veterans living in urban or rural areas. Psychiatric Services. 2022; appi-ps.doi:10.1176/appi.ps.202100363
34 Connected Care. [Internet]. U.S. Department of Veterans Affairs. https://connectedcare.va.gov/. Accessed August 13, 2022.
35 Spotlight on Telehealth. [Internet]. U.S. Department of Veterans Affairs Health Systems Research. Updated November 2022. https://www.hsrd.research.va.gov/news/feature/telehealth-1122.cfm. Accessed August 26, 2024.
36 Virtual Care CORE. https://www.hsrd.research.va.gov/centers/core/virtual_care/#:~:text=The%20Virtual%20Care%20CORE%27s%20mission,health%20care%20and%20Veteran%20experience. Accessed August 13, 2022.

6. Type of Care

Overview

In the following section, we describe varying care patterns by **type** of care, whether primary care, mental health/substance use disorder (MH/SUD) care, or specialty care for women Veterans in FY19, and compare these patterns to those of men Veterans. For both FY19 and FY20, the number of encounters per month is also presented by type of care.

- Primary care here includes primary care delivered in general primary care clinics and primary care delivered in Women's Clinics, as well as primary care delivered in special settings (home-based primary care and specialty Patient Aligned Care Teams that provide primary care).
- MH/SUD care visits include general mental health services (evaluation, consultation, and/or treatment), specialized mental health services, and substance use disorder services.
- Specialty care includes gynecology, cardiology, ophthalmology, orthopedics, clinical pharmacy, and other similar visits; specialty MH/SUD care is included in the MH/SUD care grouping.
- "Other" includes a mix of encounter types, such as ancillary services (like laboratory and radiology services), emergency department visits, physical therapy sessions, etc.

See the Online Appendix (Technical Appendix) for a full listing of the visit type categorization used. While we include data on "Other" care, the text focuses on describing primary care, mental health care, and specialty care.

The following section also briefly describe patterns of type of care by modality, whether virtual care or in-person. Consistent with Chapter 5, "telehealth" services include Video Telehealth, Store-and-Forward Telehealth, and the Home Telehealth program. "Virtual care" refers to the combination of telephone and telehealth services.

Most of this section focuses on FY19, to describe patterns in type of care in a year unaffected by the COVID-19 pandemic. However, given the transition to greater use of virtual care modalities in FY20, the text that examines type of care by modality (Exhibit 6.A) includes both FY19 and FY20 care, at the monthly level.

Type of Care – Encounters

Exhibits 6.A and 6.B show the total number of encounters and percentage of encounters in FY19 by type of care and by sex. Both exhibits depict data at the encounter level, rather than at the user level.

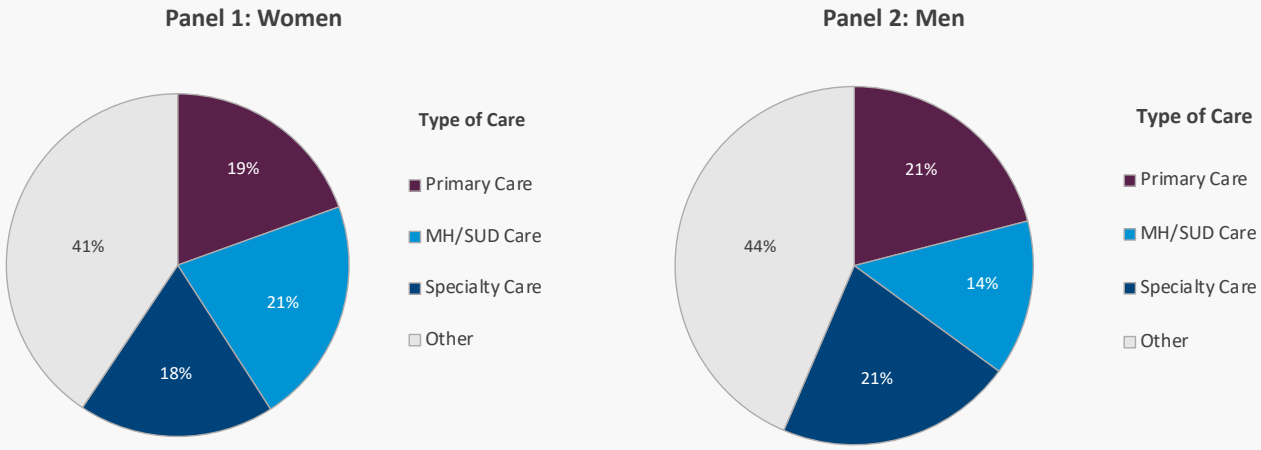
Exhibit 6.A. Number of VHA Encounters among Women and Men Veteran VHA Users by Type of Care, FY19

	Primary Care	MH/SUD Care	Specialty Care	Other	Total
Women Veterans	2,196,905	2,412,751	2,085,576	4,579,217	**11,274,449**
Men Veterans	21,429,185	14,342,345	21,851,705	44,478,515	**102,101,750**

*The total number of encounters excludes secure messaging encounters. There were 365,596 secure messages in FY19 for which encounters were recorded.

Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: 11,274,449 encounters (N= 536,636 Veterans); Men: 102,101,750 encounters (N=5,564,701 Veterans).
Source: WHEI Master Database

Exhibit 6.B Proportion of Outpatient Encounters among Women and Men Veteran VHA Users by Type of Care, FY19

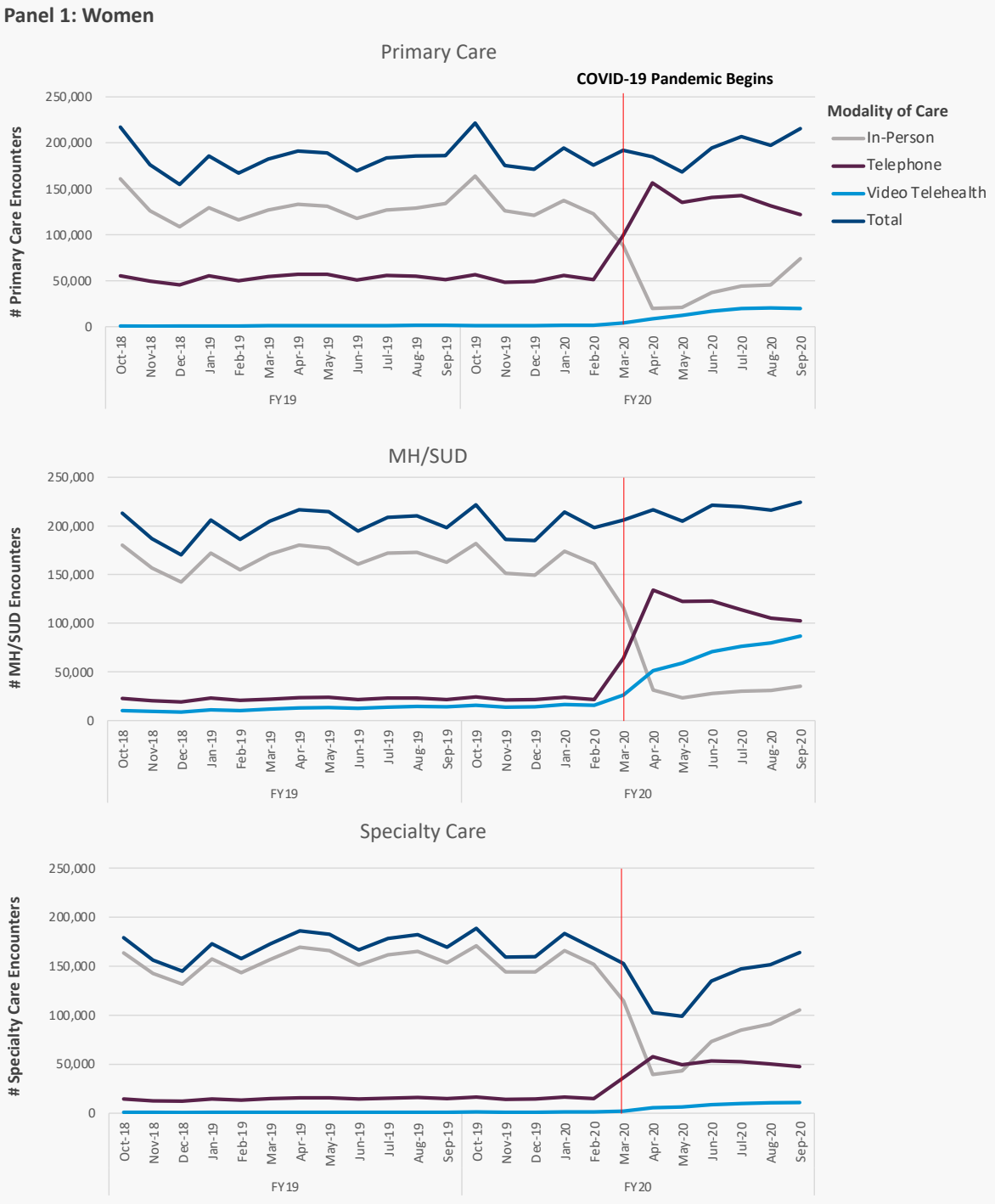


Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women and men Veteran VHA users. Women: 11,274,449 encounters (N=536,636 Veterans); Men: 102,101,750 encounters (N=5,564,701 Veterans).
Source: WHEI Master Database

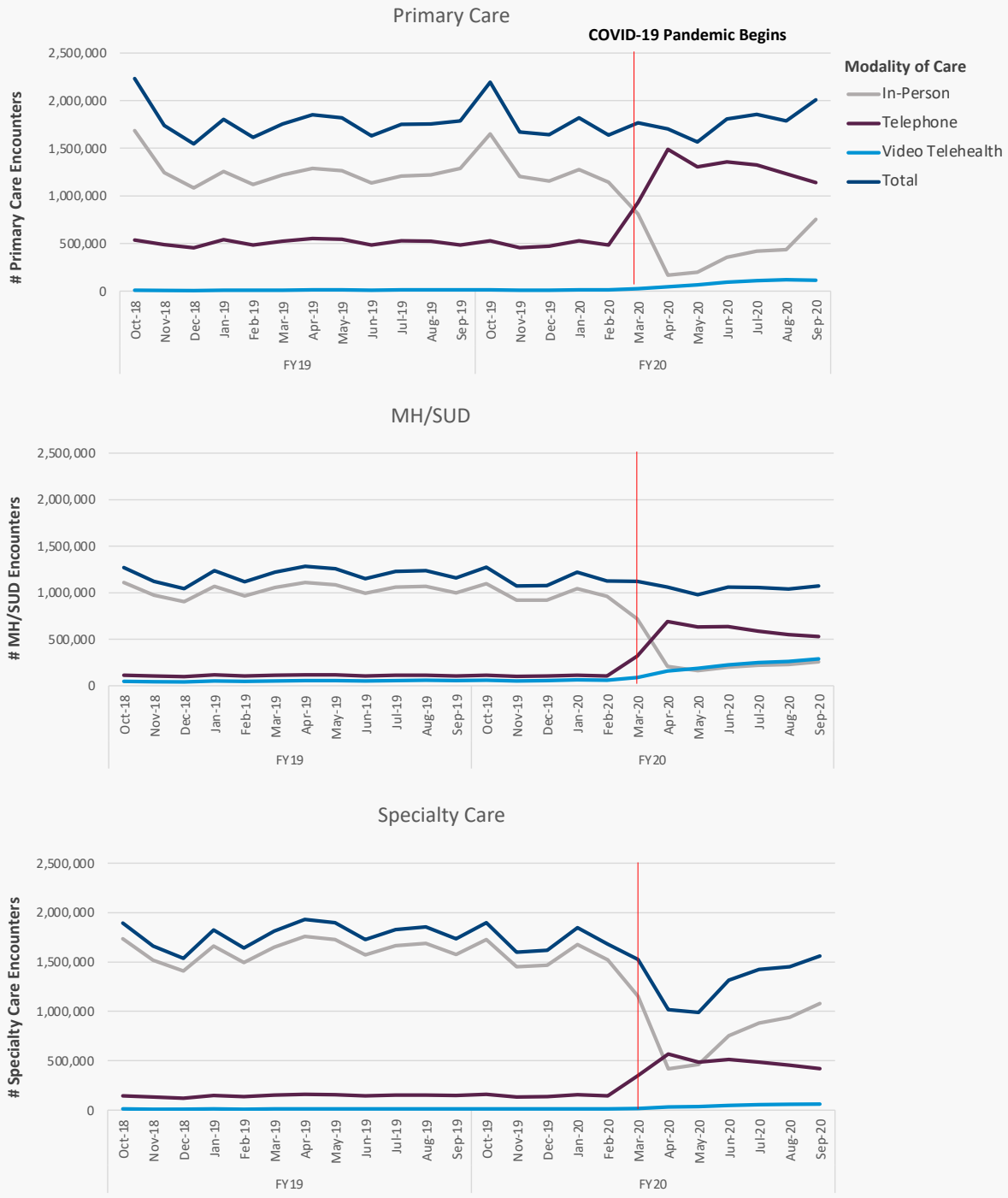
Women Veterans. As Exhibit 6.A shows, in FY19 the cumulative number of encounters for all women was 2,196,905 for primary care, 2,412,751 for MH/SUD care, and 2,085,576 for specialty care. As shown in Exhibit 6.B, these numbers translated to primary care encounters being 19% of the total number of encounters for women, MH/SUD care encounters being 21%, and specialty care being 18%.[1]

Women vs. men. Exhibit 6.A also shows that in FY19, women Veterans, compared to men Veterans, had fewer total encounters, as is expected given that women represented only 9% of FY19 VHA users. As shown in Exhibit 6.B, a higher percentage of total encounters were for MH/SUD care among women than among men (women: 21%; men: 14%).

Exhibit 6.C. Number of Encounters per Month among Women and Men Veteran VHA Users with Each Type of Care, by Modality of Care, FY19 and FY20



Panel 2: Men



Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; VHA – Veterans Health Administration

Notes: Findings portray Veteran VHA users, not the entire Veteran population. The relatively small number of encounters occurring via Store and Forward and Home Telehealth are not included in the exhibits and are not included in the line displaying total encounters. See Technical Appendix.

Cohort: Women and men Veteran VHA users. Women: FY19: 6,647,137 encounters (N=536,636 Veterans), FY20: 6,622,150 encounters (N=556,135 Veterans); Men: FY19: 56,965,070 encounters (N=5,564,701 Veterans), FY20: 52,546,939 encounters (N=5,498,487 Veterans). Total numbers of encounters for these cohorts refers to encounters in one of the three specific types of care: primary care, MH/SUD care, or specialty care by modality of care: In-Person, Telephone, or Video Telehealth

Source: WHEI Master Database

Women Veterans. The time trends in Exhibit 6.C display the number of encounters per month for each main type of care, by modality, for FY19 and FY20. This allows a more granular look at how primary care, MH/SUD care, and specialty care encounters transitioned from pre-pandemic to post-pandemic months. The black lines in Exhibit 6.C are important for understanding the trend in total encounters for each type of care that occurred across the three most common modalities (In-Person, Telephone, or Video Telehealth). Here, total encounters refer to the sum of In-person, Telephone, and Video Telehealth. Store-and-Forward and Home Telehealth are not included.

For primary care and MH/SUD care, total encounters for women appeared relatively stable throughout FY19 and FY20, despite the declaration of COVID-19 as a pandemic in March 2020. Comparing the total number of encounters among women Veterans in September 2019 (pre-pandemic) versus September 2020 (six months into the pandemic), absolute growth (Δ = 29,406 more encounters) and relative growth (1.2-fold increase in encounters) were both slightly higher for primary care than absolute growth (Δ =26,006 more encounters) and relative growth (1.1-fold increase in encounters) for MH/SUD care. For specialty care, total encounters for women declined to a nadir in April - May 2020 but returned close to pre-pandemic levels by September 2020, though still with slightly fewer encounters for specialty care in September 2020 compared to September 2019 (absolute decline = 5,517 encounters).

Drilling down to specific modalities of care (grey, blue, and yellow lines in Exhibit 6.C), In-Person visits declined with the pandemic's onset for all three types of care: primary care, MH/SUD care, and specialty care. Indeed, In-person encounters were lower in September 2020 than in September 2019 for all types of care: primary care (Δ =60,062 fewer encounters), MH/SUD care (Δ =127,457 fewer encounters), and specialty care (Δ =47,926 fewer encounters). However, the corresponding rapid uptake of virtual care (Telephone, Video Telehealth) led to the relative stability of primary care and MH/SUD total encounters and buffered the decline in total specialty care encounters. In the paragraphs that follow, monthly trends in each type of care by modality are described in more detail.

For women Veterans' primary care, Telephone was the dominant modality by September 2020. The same was true for MH/SUD care, although by September 2020 Video Telehealth had nearly reached the same level as Telephone, and both greatly exceeded In-Person MH/SUD care. In contrast, for specialty care, the uptake of Telephone and Video Telehealth care was much less pronounced, and by September 2020, In-Person encounters substantially exceeded Telephone and Video Telehealth encounters, although the number of In-Person visits in September 2020 was still substantially lower than the number that occurred a year earlier.

Comparing the number of Telephone encounters among women Veterans in September 2019 versus September 2020, both absolute growth (Δ = 80,619 more encounters) and relative growth (4.7-fold increase in encounters) was greatest for MH/SUD care. However, the number of Telephone encounters increased for all types of care: comparing September 2019 vs. September 2020, this was true for primary care (51,035 vs. 121,919 encounters, a 2.4-fold increase), MH/SUD care (21,760 vs. 102,379 encounters, a 4.7-fold increase) and specialty care (14,915 vs. 47,474, a 3.2-fold increase).

Marked increases in uptake of Video Telehealth were also seen when comparing September 2019 to September 2020. Among women, the largest absolute growth (Δ = 72,884 more encounters) was again seen for MH/SUD care, but the largest relative growth (15.0-fold increase in encounters) was seen for primary care. Specifically, comparing September 2019 vs. September 2020, the number of Video Telehealth encounters for women Veterans increased for primary care (1,323 vs. 19,907 encounters, a 15.0-fold increase), MH/SUD care (13,965 vs. 86,809 encounters, a 6.2-fold increase) and specialty care (1,051 vs. 10,901 encounters, a 10.4-fold increase).

Women vs. men. The most notable sex differences in patterns occurred for MH/SUD care via Video Telehealth. In September 2019, both women and men had low numbers of MH/SUD Telephone and MH/SUD Video Telehealth encounters. However, in September 2020, Telephone encounters accounted for 46% vs. 49% of MH/SUD care encounters among women vs. men, and Video Telehealth accounted for 39% vs. 27% of MH/SUD care encounters among women vs. men (data not displayed graphically). Total MH/SUD care encounters among women were slightly higher in September 2020 than their baseline in September 2019 (1.1-fold increase), whereas total MH/SUD care encounters among men were slightly lower post-pandemic compared to their baseline pre-pandemic. This suggests that women's higher adoption of virtual care for MH/SUD care compared to men may have supported higher total MH/SUD care (across modalities) among women compared to men, and/or that women's need for MH/SUD care was higher than that of men. The finding that women Veterans had a greater percentage of their MH/SUD care delivered via video is consistent with other recent work[2] examining patterns for women and men Veterans in FY20.

For primary care and specialty care, patterns were similar for women and men Veterans. In September 2020, comparing women vs. men, telephone accounted for 57% vs. 57% of total primary care encounters and 29% vs. 27% of total specialty care encounters; Video Telehealth accounted for 9% vs. 6% of total primary care encounters and 7% vs. 4% of total specialty care encounters (data not displayed graphically).

Notes to interpretation: *The preceding text focuses on the raw numbers of encounters and not user-level patterns. User-level patterns are presented in the subsequent section. When interpreting differences across women and men Veterans or across types of care, it is important to recognize that these analyses present raw comparisons, without comment on the statistical significance of those differences.*

The number of Telephone encounters is included in the preceding text. This could represent an under-count of Telephone encounters: if a provider has an unscheduled telephone conversation with a user about a clinical matter (for example, to follow-up on a radiology result or to respond to a message from a user) but the provider does not generate an encounter form for the call, the Telephone encounter will not be recorded. This section also does not include other types of clinical interactions with users, such as My HealtheVet secure messages that providers send to users and letters that providers send to users with clinical information.

Care provided through VA-purchased Community Care (VACC) is not included in counts of VHA encounters in Chapter 6.

Type of Care – User Level

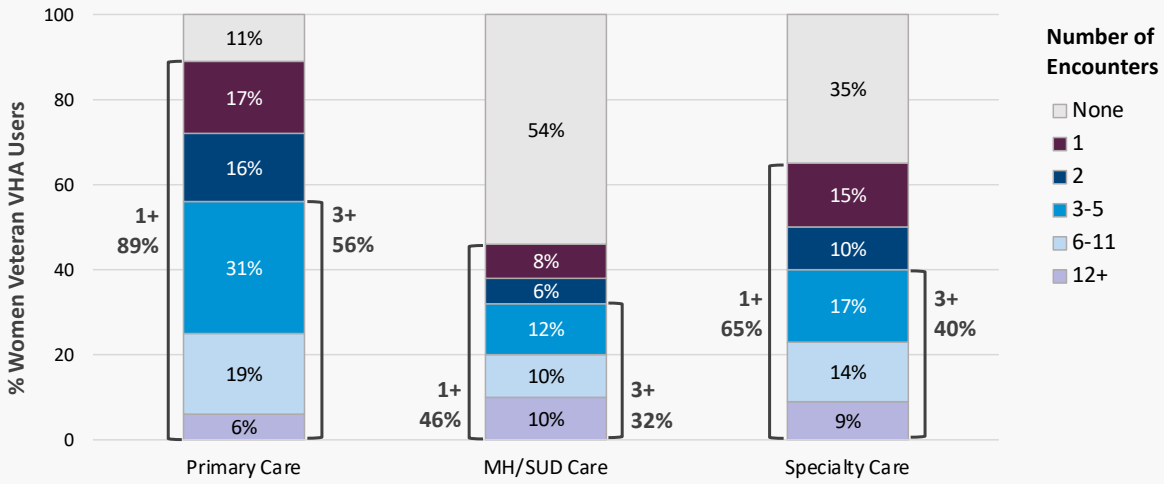
The remainder of Chapter 6 focuses on type of care in FY19 only.

Whereas the preceding text examined what share of **encounters** occurred for different types of health care visits, the remainder of Chapter 6 examines type of care at the user level: that is, what proportion of **users** had different numbers of encounters (0, 1, 2, 3-5, 6-11, or 12+) for each type of care examined in FY19. It is helpful to examine the data patterns at the user level to understand how many users, (overall and specific subgroups), are accessing different types of health care in any given year across all VHA users.

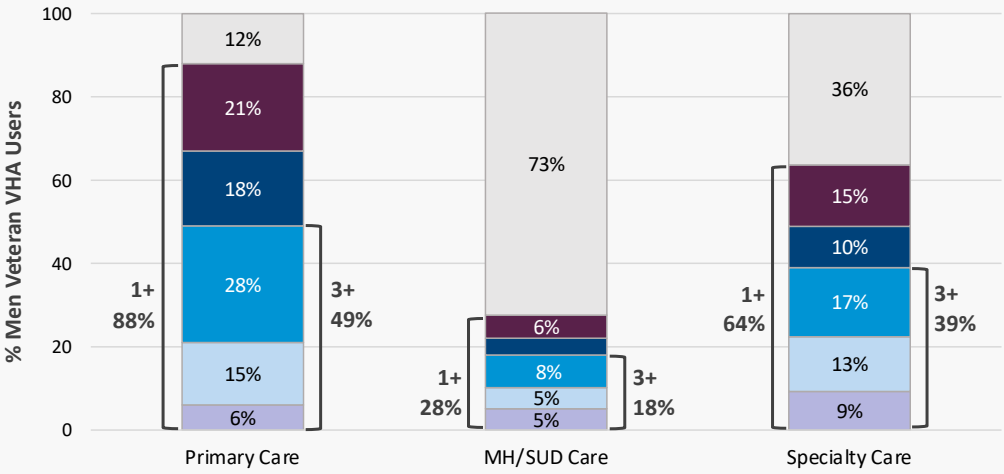
Notes to interpretation: *Some Veterans could have received some or all of their care through VACC in FY19. In VACC, eligible Veterans receive care from a community provider, but the care is paid for by VHA. In the user-level utilization text that follows, the proportion of Veterans receiving each type of care represents the proportion using that type of care in a VHA setting. Veterans who receive a particular type of care in a VHA setting only, or who receive that type of care in both a VHA setting and a VACC setting, would be counted in these proportions, but Veterans who receive that type of care in a VACC setting only would not be counted. Therefore, the total proportion of Veteran VHA users receiving primary care, MH/SUD care, or specialty care across VHA and VACC settings combined may be higher than the numbers reported here for care provided in a VHA setting. See Chapter 4 for more details about VACC utilization.*

Exhibit 6.D. Proportion of Women and Men Veteran VHA Users with Each Type of Care by Number of Encounters, FY19

Panel 1: Women



Panel 2: Men



Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; VHA – Veterans Health Administration

Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. The proportion of Veterans receiving each type of care represents the proportion using that type of care in a VHA setting; VA-purchased Community Care (VACC) use is not included.

Cohort: Women and men Veteran VHA users. Women: 11,274,449 encounters (N= 536,636 Veterans); Men: 102,101,750 encounters (N= 5,564,701 Veterans).

Source: WHEI Master Database

Women Veterans. As shown in Exhibit 6.D, among women Veterans in FY19:

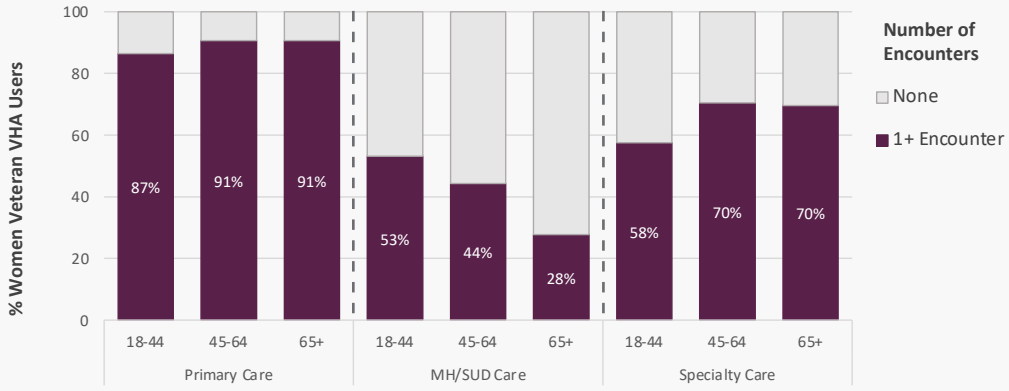
- For primary care, 89% had 1+ encounter, 56% had 3+ encounters, and 6% had 12+ encounters.
- For MH/SUD care, 46% had 1+ encounter, 32% had 3+ encounters, and 10% had 12+ encounters.
- For specialty care, 65% had 1+encounter, 40% had 3+ encounters, and 9% had 12+ encounters.

AGE

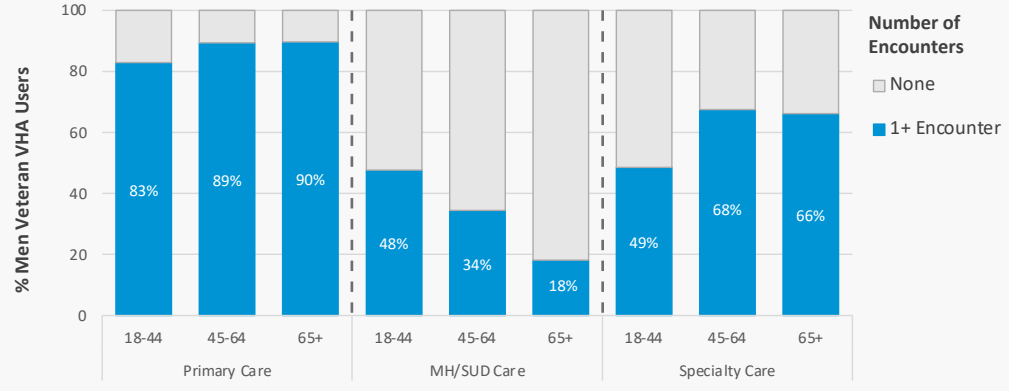
Women vs. men. Exhibit 6.D shows similar patterns for women and men Veterans with respect to their usage of primary care and specialty care in FY19. However, a far larger proportion of women Veterans than men had any MH/SUD care in the year (women: 46% had 1+ encounter for MH/SUD care; men: 28% had 1+ encounter for MH/SUD care). In addition, a greater proportion of women than men had 3+ encounters for primary care (56% vs. 49%), MH/SUD care (32% vs. 18%), and specialty care (40% vs. 39%).

Exhibit 6.E. Women and Men Veteran VHA Users with 1+ Encounter for Each Type of Care by Age, FY19

Panel 1: Women



Panel 2: Men



Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. The proportion of Veterans receiving each type of care represents the proportion using that type of care in a VHA setting; VA-purchased Community Care (VACC) use is not included.
Cohort: Women and men Veteran VHA users. Women: N=536,636; Men: N=5,564,701.
Source: WHEI Master Database

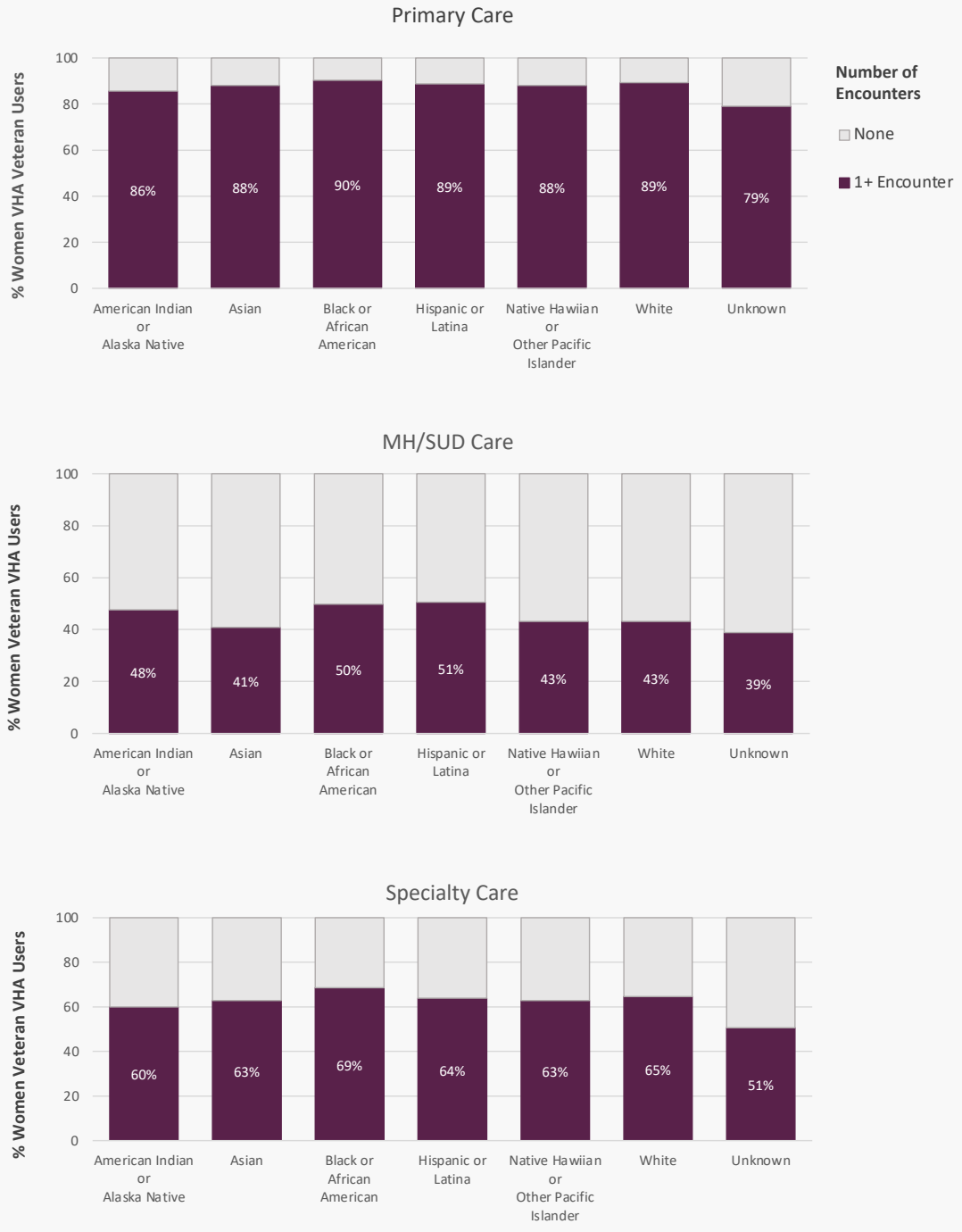
Women Veterans. Exhibit 6.E shows that for women Veteran VHA users in FY19, there was little variation by age in the proportion with any primary care (18-44: 87%; 45-64: 91%; 65+: 91%), but pronounced age variation in the proportion with any MH/SUD care (18-44: 53%; 45-64: 44%; 65+: 28%), and moderate age variation in the proportion with any specialty care (18-44: 58%; 45-64: 70%; 65+: 70%). That is, for primary care and specialty care, a lower proportion of women aged 18-44 had at least one encounter compared to those aged 45-64 and those aged 65+. In contrast, for MH/SUD care, a higher proportion of younger women, compared to older women, had at least one MH/SUD care visit.

Women vs. men. Exhibit 6.E also shows that for every type of care in every age category, a higher percentage of women than men had at least one encounter. This pattern was particularly pronounced for MH/SUD care for women vs. men (18-44: 53% vs. 48%; 45-64: 44% vs. 34%; 65+: 28% vs. 18%). In the youngest age group, there was also a notable gender difference in the proportion with any specialty care (18-44: 58% vs. 49%).

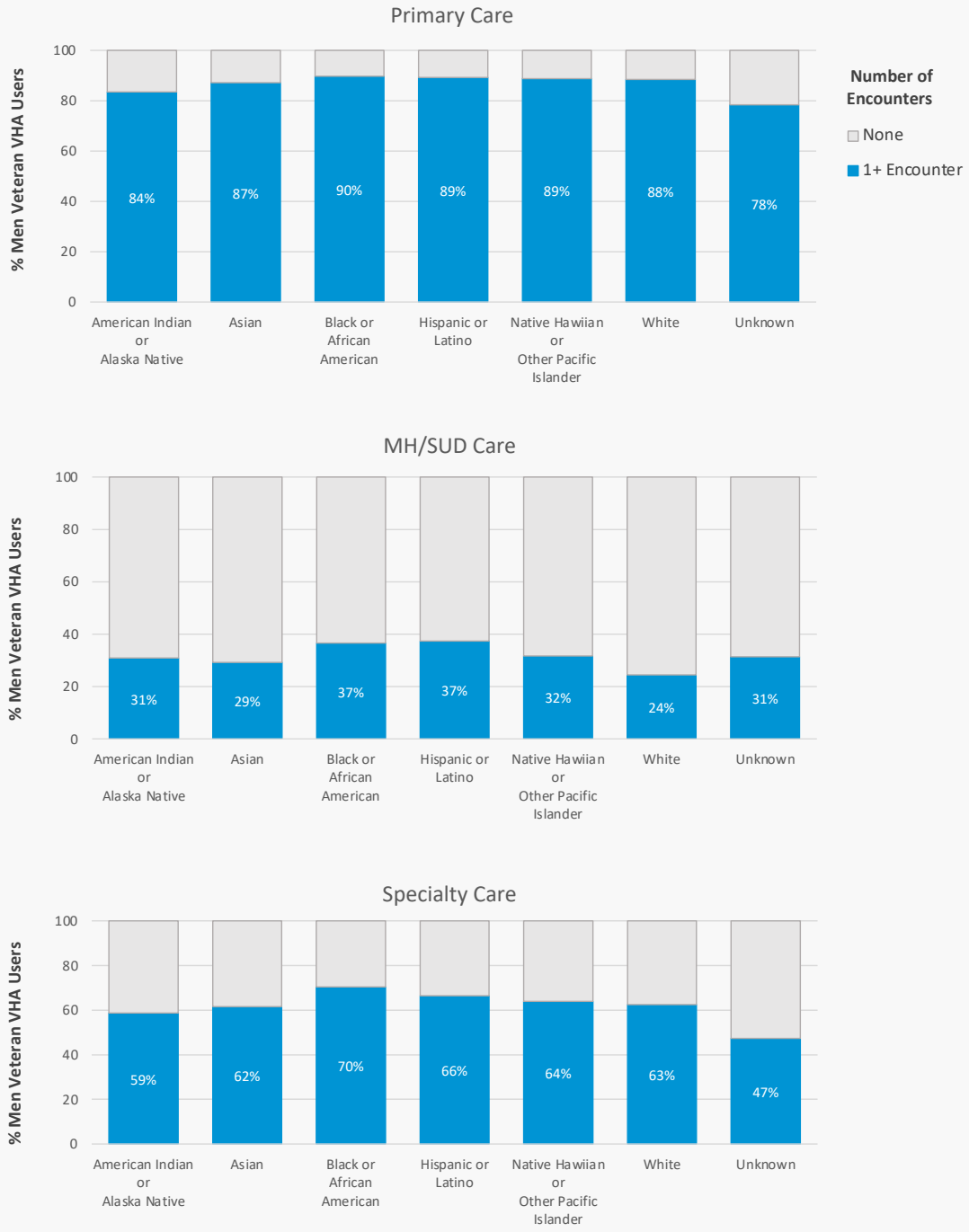
RACE/ETHNICITY

Exhibit 6.F. Women and Men Veteran VHA Users with 1+ Encounter for Each Type of Care by Race/Ethnicity, FY19

Panel 1: Women



Panel 2: Men



Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; VHA – Veterans Health Administration

Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. The proportion of Veterans receiving each type of care represents the proportion using that type of care in a VHA setting; VA-purchased Community Care (VACC) use is not included.

Cohort: Women and men Veteran VHA users. Women: N=536,636; Men: N=5,564,701.

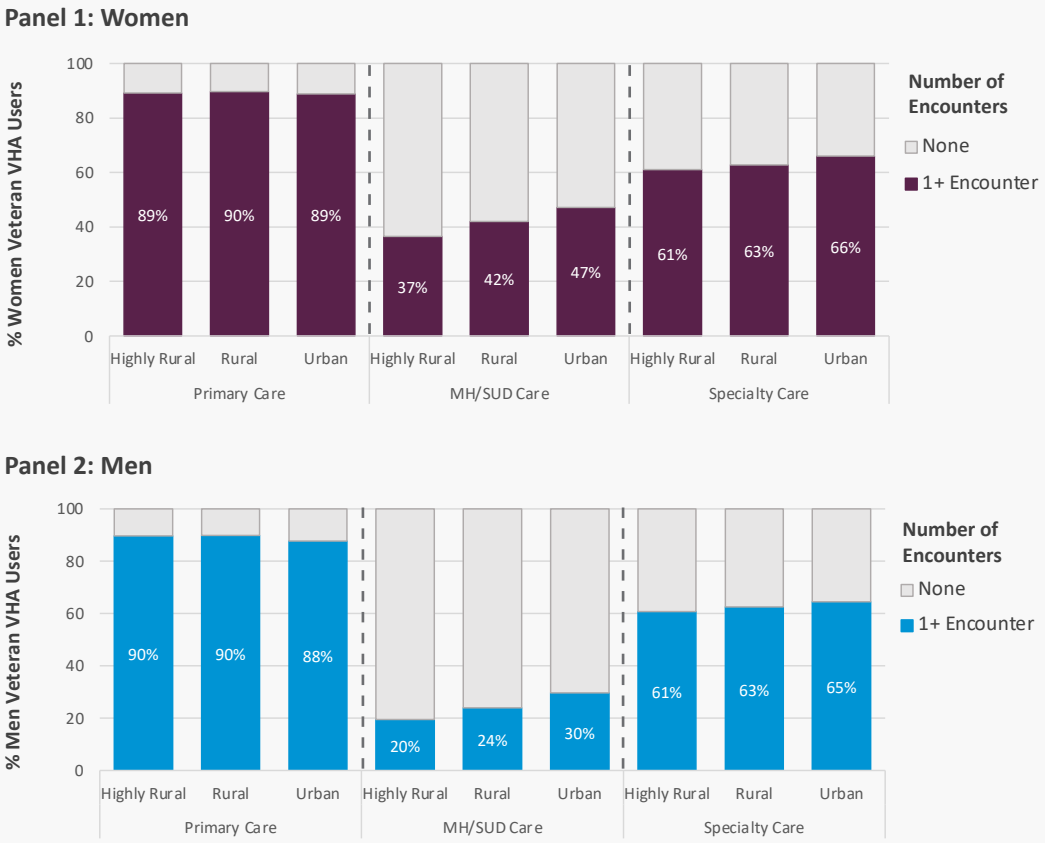
Source: WHEI Master Database

Women Veterans. As shown in Exhibit 6.F, in FY19, the percentage of women Veterans with at least one encounter in each care type was roughly similar by race/ethnicity, with Black or African American women Veterans being among the most likely, by small percentage points, to have at least one encounter for primary care (90%) and specialty care (69%). Hispanic or Latina women Veterans were the most likely, by small percentage points, to have at least one encounter for MH/SUD care (51%) followed by Black or African American women Veterans (50%).

Women vs. men. Exhibit 6.F shows that the patterns of care type by race/ethnicity were generally similar for women and men Veterans except that within each racial/ethnic group, women Veterans were more likely than men Veterans to have at least one MH/SUD care encounter.

URBAN/RURAL STATUS

Exhibit 6.G. Women and Men Veteran VHA Users with 1+ Encounter for Each Type of Care by Urban/Rural Status, FY19



Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; VHA – Veterans Health Administration

Notes: Findings portray Veteran VHA users, not the entire Veteran population. Veterans with an insular island residence are excluded from this exhibit due to small numbers (N= 657 women, N= 4,759 men). Among Veterans with an insular island residence, comparing women vs. men, 91% vs. 90% had 1+ encounter for primary care, 30% vs. 30% had 1+ encounter for MH/SUD care, and 45% vs. 44% had 1+ encounter for specialty care.
The proportion of Veterans receiving each type of care represents the proportion using that type of care in a VHA setting; VA-purchased Community Care (VACC) use is not included.

Cohort: Women and men Veteran VHA users with non-missing rurality. Women: N=535,467; Men: N=5,554,583.

Source: WHEI Master Database

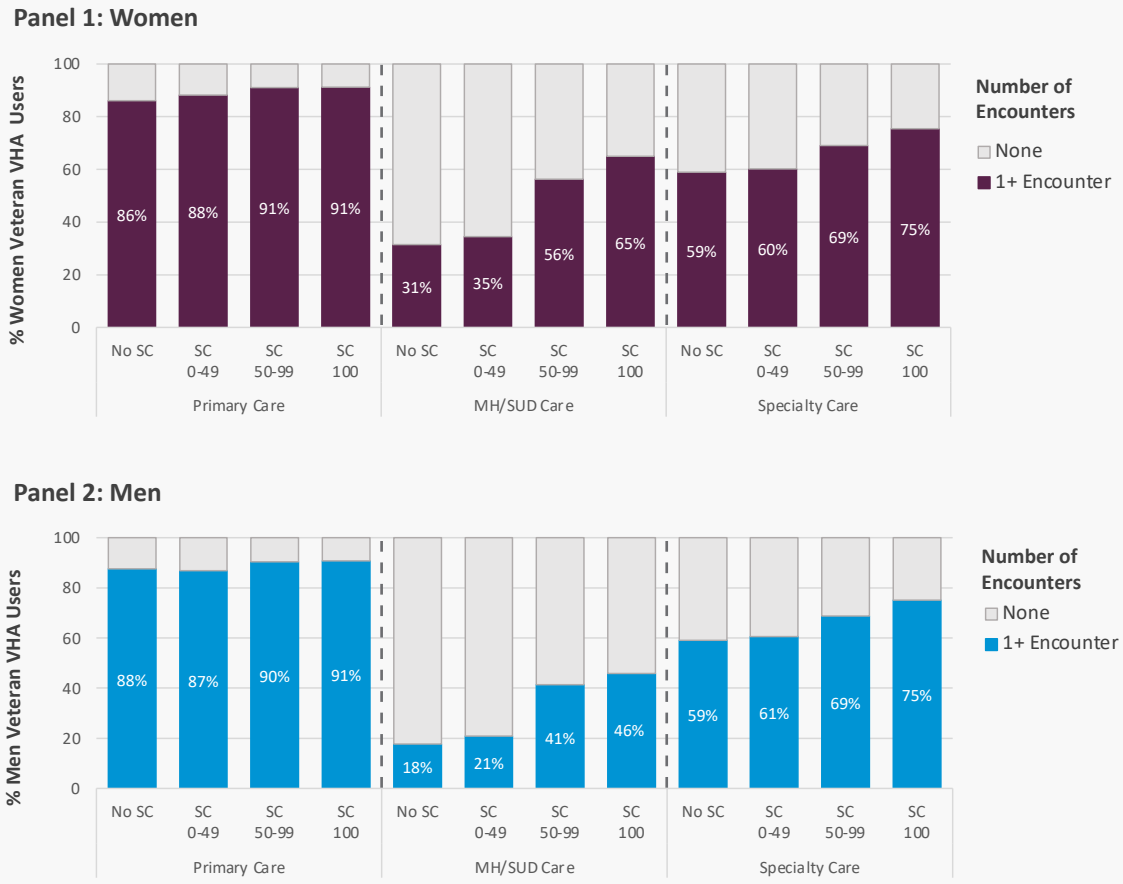
Women Veterans. Exhibit 6.G shows that in FY19, 89-90% of women Veterans residing in either highly rural, rural, or urban areas had at least one primary care encounter; urban/rural status had essentially no impact on whether women received at least some primary care in FY19. In contrast, for MH/SUD care, there was a substantial gradient from highly rural to rural to urban, with women residing in urban areas being most likely to have at least one MH/SUD care encounter (highly rural: 37%; rural: 42%; urban: 47%). A similar gradient existed for specialty care (Exhibit 6.G), but it was less pronounced than the gradient observed for MH/SUD care.

Women residing on insular islands represent a fourth category of urban/rural residence status. This group is not represented graphically in Exhibit 6.G due to its relatively small size (N=657). The proportion of women with at least one primary care visit was similar for women living on insular islands (91%) compared to other groups. However, the proportion of women with at least one visit for MH/SUD care was lower for women living on insular islands vs. women living in highly rural, rural or urban areas (insular islands: 30%; highly rural: 37%; rural: 42%; urban: 47%). The same pattern was seen for specialty care (insular island: 45%; highly rural: 61%; rural: 63%; urban: 66%).

Women vs. men. As shown in Exhibit 6.G, patterns of type of care by urban/rural status were very similar for women and men Veterans, except that a higher percentage of women than men had at least one encounter for MH/SUD care for Veterans with highly rural, rural and urban residences; this pattern did not hold true for Veterans residing on insular islands: 30% of both women and men living in insular island regions had at least one MH/SUD encounter.

SERVICE-CONNECTED DISABILITY RATING

Exhibit 6.H. Women and Men Veteran VHA Users with 1+ Encounter for Each Type of Care by Service-Connected (SC) Disability Rating, FY19



Key: FY – Fiscal Year; MH/SUD care – Mental Health/Substance Use Disorder care; SC: Service-connected disability rating; VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. The proportion of Veterans receiving each type of care represents the proportion using that type of care in a VHA setting; VA-purchased Community Care (VACC) use is not included.
Cohort: Women and men Veteran VHA users with non-missing SC disability rating. Women: N=534,752; Men: N=5,546,798.
Source: WHEI Master Database

Women Veterans. Exhibit 6.H broadly shows that in FY19 the percentage of women Veterans with at least one type of encounter in each type of care increased with increasing service-connected (SC) disability rating. This relationship was very strong for MH/SUD care, substantial for specialty care, and very modest for primary care.

Women vs. men. Exhibit 6.H also shows that patterns in type of care by SC disability rating were similar for women and men Veterans, except that within each SC disability rating category, a higher percentage of women Veterans than men Veterans had at least one MH/SUD care encounter.

IMPLICATIONS

System-wide, women Veterans had 2.2 million primary care encounters, 2.5 million mental health/substance use disorder (MH/SUD) encounters, and 2.1 million specialty care encounters in VHA-based settings in FY19; these counts do not include any additional services provided through VA-purchased Community Care. The fact that women are choosing to receive these services in VHA substantiates that it is essential to ensure women can access a wide range of services in VHA settings.

In FY19, nearly all women Veteran VHA users (89%) used VHA-based primary care, and nearly two-thirds of women used VHA-based specialty care. Nearly half of women used VHA-based MH/SUD care, a far higher proportion than seen for men (women: 46%; men: 28%). The highest proportions of women using VHA-based MH/SUD care were those in the youngest age group (18-44 years old: 53%), Black or African-American women (50%), Hispanic or Latina women (51%), and women with a SC disability rating of 50-99 percent (56%) or 100 percent (65%). MH/SUD services may need to be tailored to women's unique needs, such as high rates of experiences with military sexual trauma.[3,4] The high rate of MH/SUD service use in the youngest group of women points to the importance of continuing programs that support the smooth transition to VHA care at the time of separation from the military.[5] A substantially lower proportion of women residing in insular island areas (30%) or highly rural areas (37%) than women residing in urban areas (47%) used VHA-based MH/SUD care, despite the availability of VHA-based MH/SUD care via telephone or video visits. Future work can clarify whether women residing on insular islands or highly rural areas have lower MH/SUD care needs, whether they are receiving MH/SUD care through VACC or through non-VHA sources (Vet Centers or private care), or whether they are facing access issues that lead to unmet needs.

With the COVID-19 pandemic's onset, for every type of care came a sharp decline in the number of In-Person encounters for women Veterans, with a compensatory rise in Telephone and Video Telehealth visits. By September 2020, Telephone visits exceeded In-Person visits for primary care and MH/SUD care, but in the case of specialty care, in-person visits had rebounded enough to exceed Telephone visits once more. In the case of MH/SUD care, comparing the number of encounters in September 2020 to the number a year earlier, there was a nearly 5-fold increase in Telephone encounters and a more than 6-fold increase in Video Telehealth encounters. For MH/SUD care, both Telephone and Video Telehealth encounters far outstripped In-Person encounters in September 2020. Primary care likewise saw a substantial shift to reliance upon Telephone encounters and to a lesser extent Video Telehealth encounters, whereas for specialty care by September 2020, In-Person encounters again exceeded Telephone and Video Telehealth encounters, although by a much smaller margin than was seen a year earlier.

VHA was able to shift to virtual care rapidly across a wide range of services. The longer-term implementation of optimal models of hybrid in-person and virtual care will need to take various issues into consideration. For example: To what extent does virtual care substitute for versus augment in-person care for women Veterans? What scenarios (such as gynecologic procedures, mammograms, and cardiac exams) require an in-person encounter versus which can be accomplished equally well remotely? What safety considerations must be addressed in a remote visit (such as for women experiencing intimate partner violence whose partner may be hovering during a remote visit)?[6] How can VHA efficiently canvas women for their patient-centered preferences around modality of care for various types of care and ensure they understand the implications of different choices? Fortunately, VHA has been investing substantially in such issues, including via its national Office of Connected Care[7] and research initiatives like VHA's Virtual Care CORE[8] and Virtual Care QUERI.[9]

Photo credit: Monica Magalhaes

Endnotes

1 "Other" care is not a focus of the remainder of this section.
2 Lindsay JA, Caloudas A, Hogan J, et al. Getting connected: a retrospective cohort investigation of video-to-home telehealth for Mental Health Care utilization among women Veterans. J Gen Intern Med. 2022 Sep;37(Suppl 3):778-785. doi: 10.1007/s11606-022-07594-2
3 Wilson LC. The prevalence of military sexual trauma: A meta-analysis. Trauma Violence Abuse. 2018;19(5):584-597. doi: 10.1177/1524838016683459.
4 Kimerling R, Gima K, Smith MW, Street A, Frayne S. The Veterans Health Administration and military sexual trauma. American Journal of Public Health. 2007;97:2160-2166. doi:10.2105/AJPH.2006.092999.
5 US Dept. of Veterans Affairs. Outreach, Transition and Economic Development. Your VA Transition Assistance Program (TAP). https://www.benefits.va.gov/transition/tap.asp. Accessed October 2, 2022.
6 Gerber MR, Elisseou S.,Sager, ZS, Keith, JA. Trauma-informed telehealth in the COVID-19 era and beyond. Federal Practitioner, 2020; 37(7):302-308.
7 For more information about VHA's Office of Connected Care, see https://connectedcare.va.gov/. Accessed October 2, 2022.
8 For more information about VHA's Virtual Care CORE, see https://www.hsrd.research.va.gov/centers/core/virtual_care/. Accessed October 2, 2022.
9 For more information about VHA's Virtual Care QUERI, see https://www.queri.research.va.gov/centers/health_tech.cfm. Accessed October 2, 2022.

7. Emergency Department and Urgent Care

Overview

In recent years VHA has increased resources, services, and capabilities to meet the acute care needs of Veterans. As of FY19, VHA had 111 facilities with on-site Emergency Departments (ED), and another 35 with stand-alone urgent care centers. A VHA directive provides guidance related to topics such as staffing, recommended ED equipment, and laboratory capabilities; the directive also recognizes that the practice of VHA emergency care is "congruent with the facility's capabilities."[1] Research has demonstrated substantial variations across VHA EDs in resources and processes for treating gynecologic emergencies.[2] In response, VA Central Office has released policies and guidance specifying resources and processes that VHA EDs should have in place to care for female-specific conditions.[3,4,5,6]

Supplementing these on-site services, VHA has a long history of partnering with the non-VHA health care community to ensure Veterans receive timely access to emergency care when unscheduled acute care needs arise. Since the 1950s, the U.S. Congress has passed various legislations authorizing VHA to provide emergency care to Veterans in non-VHA settings. However, the result was a complicated web of programs with overlapping criteria for each method of purchasing care, creating a confusing landscape for Veterans, VHA employees, and community providers.[7]

Under more recent legislative authority, VHA substantially expanded its role as a purchaser of care with greatly increased opportunities for Veterans to receive care outside of VHA, through VA-purchased Community Care (VACC). In an effort to specifically improve access to unscheduled, acute care services, on June 6, 2019, as part of the VA Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act,[8,9] VA began offering a new urgent care benefit that allows eligible Veterans to receive urgent care from providers within VHA's community network, without prior authorization from VHA. Concomitant changes in emergency care payment authorities, notification processes, and reimbursement rates also simplified the process of approving and paying for community emergency care. As a result, VHA has experienced increased demand for VACC-based emergency care. As of FY20, emergency care was the single largest contributor to VACC spending.[10]

Emergency Department and Urgent Care Encounters

Notes to Interpretation: *The section that follows focuses on the raw numbers of encounters and not patient-level patterns. Patient-level patterns appear in the subsequent section.*

Because this section examines temporal patterns in encounters, two secular changes that occurred during the FY19-FY20 time frame examined here are of note. First, the COVID-19 pandemic took hold in the U. S. in March 2020, with its marked impact on many aspects of health care utilization within and beyond VHA. Second, VACC urgent care was not an offered benefit until June 2019, which is why VACC urgent care data are not presented for the early part of FY19.

This section does not provide information about VHA urgent care use. This is because on-site acute care needs are addressed at most VHA facilities via a mix of VHA ED services plus primary care-based same-day clinic slots; only 35 VHA facilities have stand-alone urgent care centers. Such primary care-based services would not be captured in the VHA data as urgent care visits.

Given the lack of VHA comparator urgent care data, and since women Veterans had relatively few VACC urgent care encounters in FY19 and FY20, subsequent sections examining patient-level data focus on ED care and not urgent care services.

Exhibit 7.A, Panel 1, presents the number of VHA and VACC ED encounters and VACC urgent care encounters each month among women Veteran VHA users in FY19 and FY20.

VHA ED visits. Exhibit 7.A, Panel 1, shows relative stability for VHA ED encounters among women Veteran VHA users from October 2018 through February 2020. With the onset of the COVID-19 pandemic, the number of encounters dropped sharply in March and April 2020 (VHA ED encounters: February 2020: 18,863; March 2020: 16,897; April 2020: 10,389), followed by a rebound. There was a 1.5-fold increase in VHA ED encounters among women Veterans between April 2020 and September 2020 (VHA ED encounters: April 2020: 10,389; September 2020: 15,706). However, the number of VHA ED encounters among women Veterans at the end of FY20 was still lower than at the end of FY19 (VHA ED encounters: September 2019: 19,062; September 2020: 15,706).

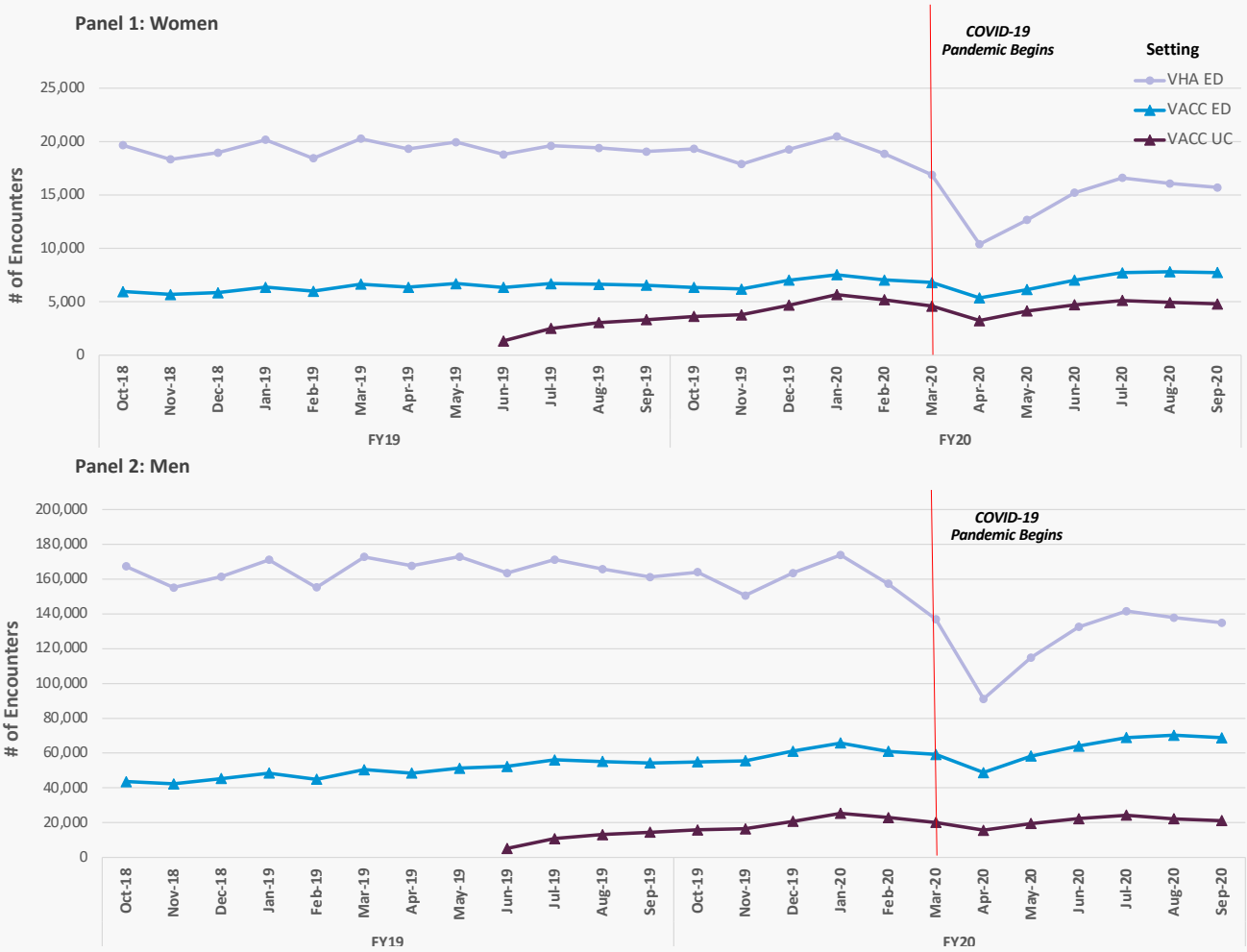
VACC ED visits. Exhibit 7.A, Panel 1, also shows that overall, far fewer VACC ED encounters than VHA ED encounters occurred throughout FY19 and FY20. For example, in September 2019, VHA ED encounters accounted for 74% of all ED encounters, and VACC ED encounters accounted for 26%. In September 2020, VHA ED encounters accounted for 67% of all ED encounters, and VACC ED encounters accounted for 33% (data not represented graphically).

Turning to VACC-based ED encounters among women Veterans, the number of VACC ED encounters was on a slightly increasing trajectory until the COVID-19 pandemic's onset in March 2020, when encounters declined abruptly (VACC ED encounters: February 2020: 7,039; March 2020: 6,801; April 2020: 5,364) before starting to rise again. Unlike VHA ED encounters, the number of VACC ED encounters was higher at the end of FY20 than at the end of FY19 (VACC ED encounters: September 2019: 6,547; September 2020: 7,736; a 1.2-fold increase).

VACC urgent care visits. Exhibit 7.A, Panel 1, also provides the number of VACC urgent care visits among women Veteran VHA users in FY19 and FY20, starting with June 2019 when this benefit was implemented. The overall number of VACC urgent care encounters was much lower than the overall number of VACC ED encounters, but the patterns of change were similar. The number of VACC urgent care encounters was on a slightly increasing trajectory until the COVID-19 pandemic, at which point there was a marked decrease in encounters (VACC urgent care encounters: February 2020: 5,198; March 2020: 4,595; April 2020: 3,236). The number of VACC urgent care encounters among women Veterans then began to increase again (VACC urgent care encounters: April 2020: 3,236; September 2020: 4,800; a 1.5-fold increase). By the end of FY20, the number of VACC urgent care encounters was higher than at the end of FY19 (VACC urgent care encounters: September 2019: 3,324; September 2020: 4,800; a 1.4-fold increase).

Women vs. men. Exhibit 7.A, Panel 2, shows the number of encounters in VHA and VACC ED settings among men Veteran VHA users in FY19 and FY20. When compared, the two panels show that patterns among men VHA users were similar to patterns among women VHA users. As with women, men had more VHA ED encounters than VACC ED encounters. The decline in VHA ED, VACC ED, and VACC urgent care encounters with the COVID-19 pandemic's onset, and the subsequent rise in encounters, was similar for women and men. In addition, the increase in the number of VACC ED encounters between the end of FY19 and the end of FY20 was similar for women and men (1.2-fold increase for women, 1.3-fold increase for men), as was the magnitude of increase in VACC urgent care encounters (1.4-fold increase among women; 1.5-fold increase among men).

Exhibit 7.A. Number of Emergency Department and Urgent Care Encounters among Women and Men Veteran VHA Users, by Setting, FY19-FY20*



Key: ED – Emergency Department, FY – Fiscal Year, UC – Urgent Care, VACC – VA-purchased Community Care, VHA – Veterans Health Administration

Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Implementation of the VACC Urgent Care benefit began on June 6, 2019.

Cohort: Women and men Veteran VHA users each year. Women: FY19: N=536,636, FY20: N=556,135; Men FY19: N=5,564,701, FY20: N=5,498,487

Source: WHEI Master Database

*Panels 1 and 2 are presented on different vertical scales.

User-Level VHA and VACC Emergency Department Use

Notes to Interpretation: *Whereas the preceding text examined the number of* ***encounters*** *that occurred in VHA vs. VACC emergency departments, the next section describes that use at the user level. That is, the section examines what proportion of women Veteran and men Veteran* ***users*** *(in various sociodemographic subgroups) had at least one ED encounter, by setting (VHA vs. VACC).*

This section focuses on FY19 care. FY20 care is not included. Fiscal Year 2020 began October 1, 2019, which means that the COVID-19 pandemic affected half of FY20, so FY20 care patterns did not represent a steady state.

This section describes ED care and does not examine urgent care. The VACC urgent care benefit did not begin until June 2019 and so a full year of FY19 data are not available. Furthermore, as explained above, in the case of urgent care there is not an equivalent VHA-based comparator.

This section first examines the number of Veteran VHA users with VHA or VACC ED use overall, and by sex and age group in FY19. Then, among women only, this section examines the number with VHA or VACC ED encounters, by other sociodemographic characteristics: race/ethnicity, rural/urban status, and service-connected disability rating. The text focuses on the proportions of women with 1+ ED encounters (i.e., with "any ED use") and the proportion with 4+ ED encounters (i.e., "frequent ED users", a group with known excess burden of medical and mental illness, as well as detrimental social determinants of health[11]).

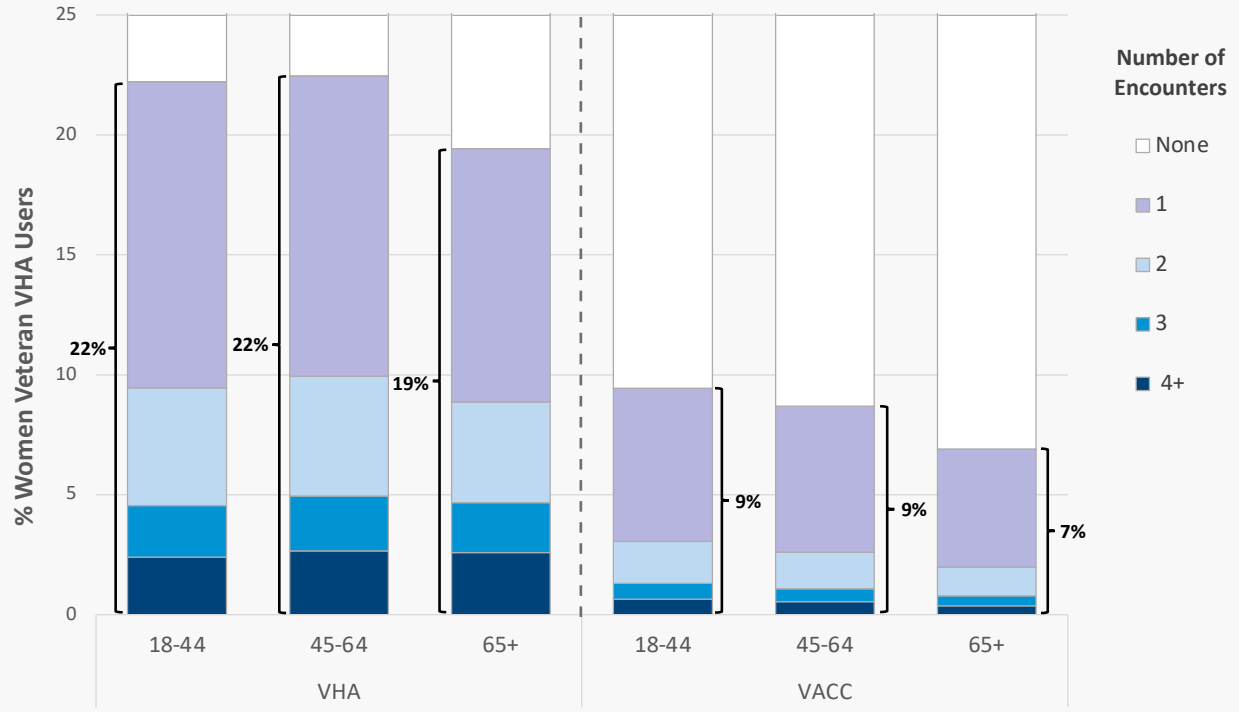
ED encounters, overall. While not shown in the exhibits, among the 536,636 women Veteran FY19 VHA users overall, 117,719 (22%) had any VHA ED use in FY19, and 46,932 (9%) had any VACC ED use in FY19. Overall, 149,844 women (28%) had ED use in either setting in FY19.[12] Overall among women Veterans, 13,619 (3%) had 4+ ED visits in VHA, and 3,006 (1%) had 4+ ED visits in VACC. (Data not represented graphically.)

Among men Veteran FY19 VHA users overall, 976,240 (18%) had any VHA ED use in FY19, and 376,068 (7%) had any VACC ED use in FY19. Overall, 1,237,622 men (22%) had ED use in either setting in FY19. Overall, among men Veterans, 122,911 (2%) had 4+ ED visits in VHA, and 22,175 (<1%) had 4+ ED visits in VACC. (Data not represented graphically.)

For both women Veterans and men Veterans, overall and across sociodemographic subgroups, the majority of VHA users had no ED encounters, and a larger proportion used VHA EDs than used VACC EDs.

AGE

Exhibit 7.B. VHA and VACC Emergency Department Use among Women Veteran VHA Users by Age, FY19



Key: FY – Fiscal Year, VHA – Veterans Health Administration, VACC – VA-purchased Community Care
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) in FY19. N=536,418.
Source: WHEI Master Database

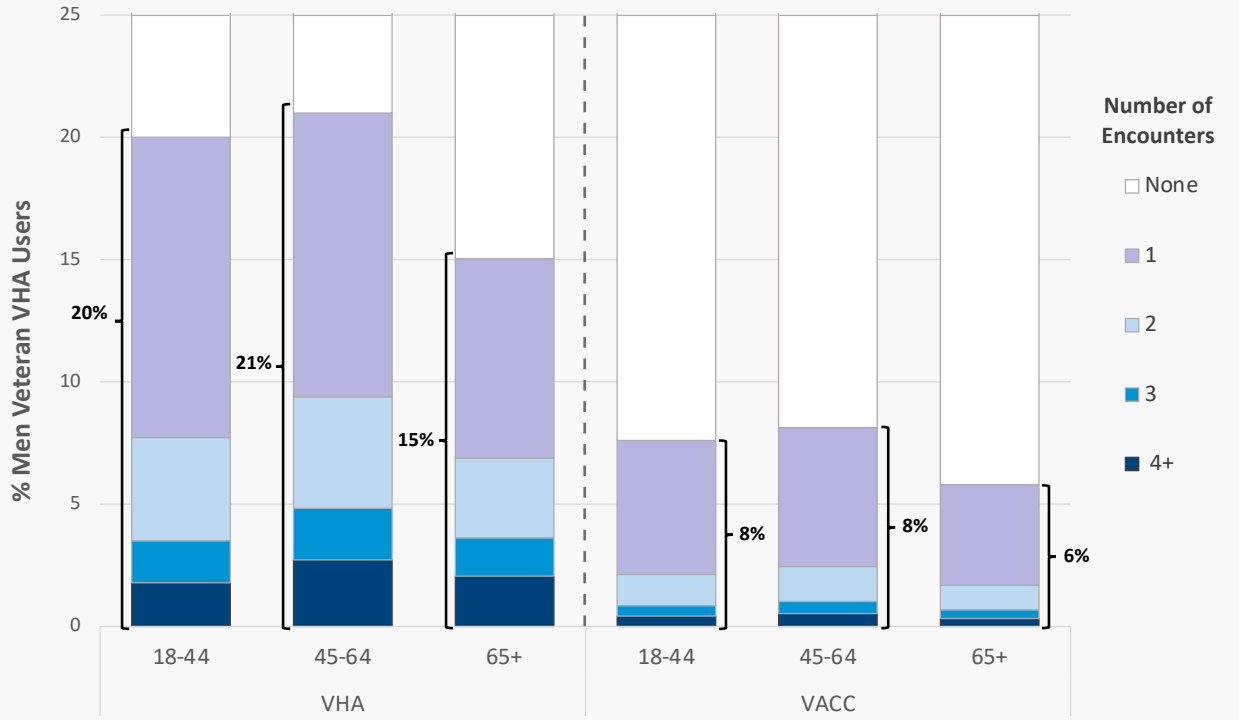
Exhibit 7.B examines ED encounters by setting (VHA ED and VACC ED) among women Veteran VHA users in each age group in FY19. It demonstrates that across all age groups and in both settings, most women had no ED encounters. Within each age group, a larger proportion of women used VHA EDs than VACC EDs.

VHA ED encounters. The proportion of women with at least one VHA ED encounter was the same for women age 18-44 (22%) and 45-64 (22%), but slightly smaller for women age 65+ (19%). There was a different pattern by age group in the proportion with 4+ visits: a smaller proportion of women age 18-44 had 4+ VHA ED visits compared to women in other age groups (18-44: 2%; 45-64: 3%; 65+: 3%).

VACC ED encounters. The proportion of women with at least one VACC ED encounter was likewise the same for women age 18-44 (9%) and 45-64 (9%) and slightly smaller for women age 65+ (7%). However, unlike the pattern seen for VHA ED encounters, larger proportions of women under age 65 years had 4+ VACC ED encounters compared to the oldest women (age 18-44: 1%; age 45-64: 1%; age 65+: <1%).

ED encounters, any context. While not shown in the exhibits, among the 536,418 women Veteran FY19 VHA users with non-missing age, larger proportions of women in the youngest age groups had ED use in either setting compared to the oldest women: 18-44 years old 29% (N=62,834); 45-64 years old 28% (N=68,985); 65+ years old 24% (N=18,025). (Data not represented graphically.) Among the 5,564,416 men Veteran VHA users with non-missing age in FY19, the largest proportion of ED users in either setting were men in the middle age group (27%, N=420,870), followed by those age 18-44 (25%, N=228,638) and those age 65 years or older (19%, N=588,114).

Exhibit 7.C. VHA and VACC Emergency Department Use among Men Veteran VHA Users by Age, FY19



Key: FY – Fiscal Year, VHA – Veterans Health Administration, VACC – VA-purchased Community Care
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Men Veteran VHA users with non-missing ages 18-110 years (inclusive) in FY19. N=5,564,416.
Source: WHEI Master Database

Women vs. men. Exhibit 7.B compares VHA and VACC ED visits by men Veteran VHA users in each age group in FY19. When compared to Exhibit 7.B it demonstrates that as with women, across all age groups and settings, most men had no ED visits and a larger proportion of men used VHA EDs than VACC EDs.

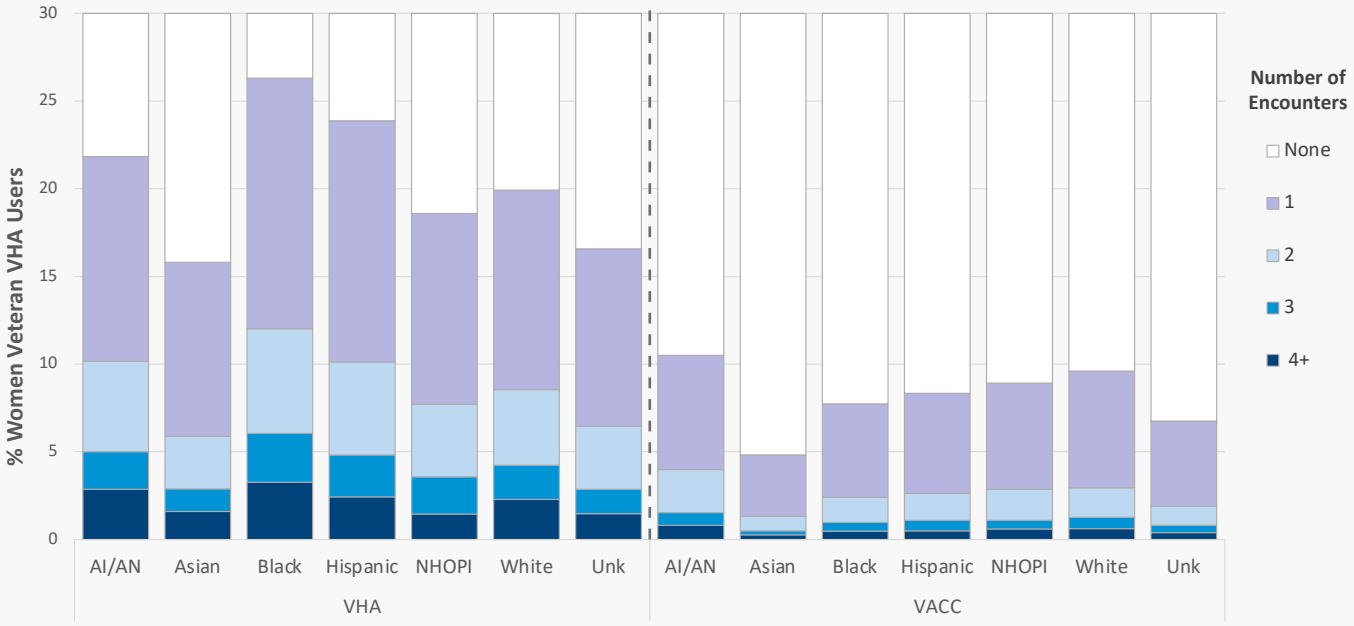
Women vs. men: VHA ED visits. Comparing Exhibits 7.B and 7.C shows similar patterns in the proportions of women vs. men with any VHA ED use in the two younger age groups (18-44: 22% vs. 20%; age 45-64: 22% vs. 21%). A slightly larger proportion of women than men age 65+ had any VHA ED use (19% vs. 15%). Patterns in the proportion of women vs. men with 4+ VHA ED visits were similar (age 18-44: 2% vs. 2%; age 45-64: 3% vs. 3%; age 65+: 3% vs. 2%).

Women vs. men: VACC ED visits. Comparing Exhibits 7.B and 7.C also shows similar patterns in the proportion of women vs. men with any VACC ED visits (18-44: 9% vs. 8%; 45-64: 9% vs. 8%; 65+: 7% vs. 6%). As with women, the proportion of men with 4+ VACC ED visits was also small (women vs. men: 18-44: 1% vs. <1%; age 45-64: 1% vs. 1%; 65+: <1% vs. <1%).

RACE/ETHNICITY

This Sourcebook uses five race categories (American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White) and one ethnicity category (Hispanic or Latino/Latina). For data reported herein, race/ethnicity is presented as a composite. A Veteran's race/ethnicity is considered to be "Hispanic or Latino/Latina" if ethnicity is Hispanic or Latino/Latina (independent of the Veteran's race); for all other Veterans, race/ethnicity is considered to be the Veteran's race. See Chapter 2 and Online Appendix (Technical Appendix), for further details.

Exhibit 7.D. VHA and VACC Emergency Department Use among Women Veteran VHA Users by Race/Ethnicity, FY19



Key: FY – Fiscal Year, VHA – Veterans Health Administration, VACC: VA-purchased Community Care; AI/AN – American Indian or Alaska Native; Black – Black or African American; Hispanic – Hispanic or Latina; NHOPI – Native Hawaiian or Other Pacific Islander; Unk – Unknown
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users in FY19: N=536,636
Source: WHEI Master Database

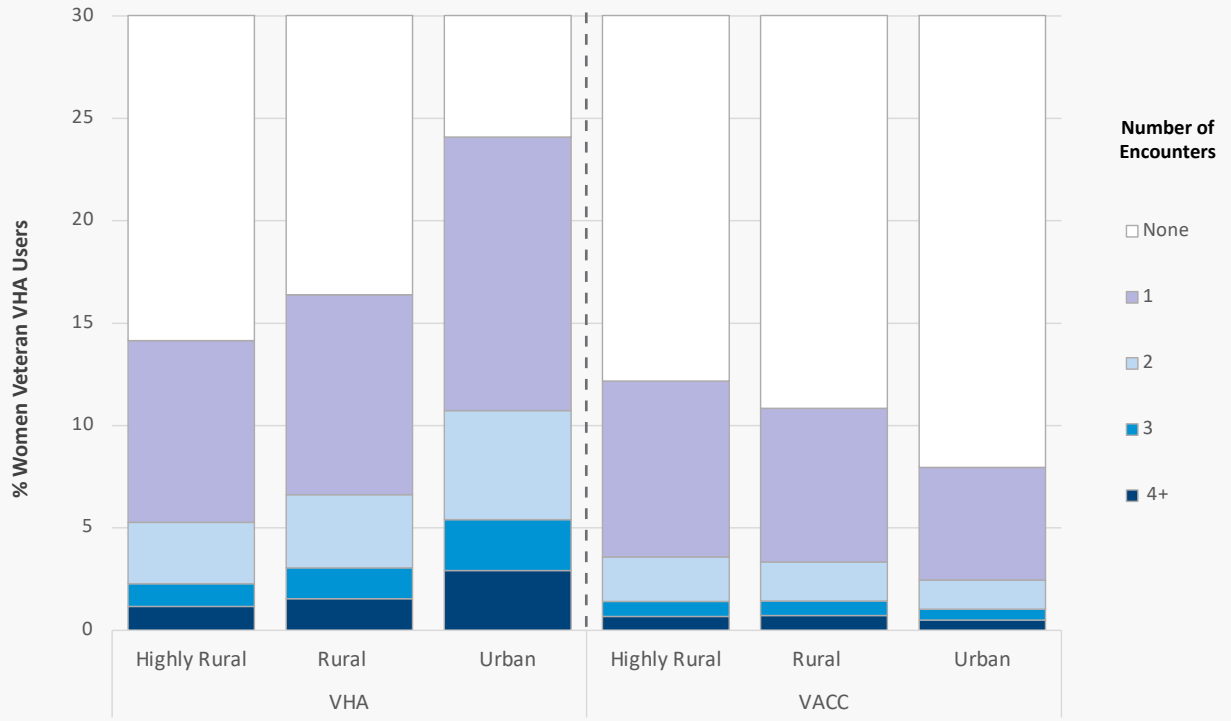
Exhibit 7.D compares the proportion of women Veteran VHA users with VHA and VACC ED encounters in FY19 across racial/ethnic groups in FY19. While not shown in the exhibit, patterns were similar among men Veterans.

VHA ED use. Exhibit 7.D shows that among women Veteran VHA users, the proportion with any VHA ED use was largest for Black or African American women (26%), followed by Hispanic or Latina women (24%), and American Indian or Alaska Native women (22%). Among the other racial/ethnic groups, the share of users with any VHA ED use was 20% or lower: White women (20%), Native Hawaiian or Other Pacific Islander women (19%), Asian women (16%), and women with unknown race/ethnicity (17%). The pattern was slightly different when looking at women with 4+ VHA ED visits. The proportion with 4+ VHA ED visits was largest for Black or African American women (3%) and American Indian or Alaska Native women (3%), followed by Hispanic or Latina women (2%), Asian women (2%), White women (2%), Native Hawaiian or Other Pacific Islander women (1%), and women with unknown race/ethnicity (1%).

VACC ED use. Exhibit 7.D shows a somewhat different pattern for VACC ED use. Among women Veteran VHA patients, the proportion with any VACC ED use was largest for American Indian or Alaska Native women (10%) and White women (10%), followed by Native Hawaiian or Other Pacific Islander women (9%), Hispanic or Latina women (8%), Black or African American women (8%), women with unknown race/ethnicity (7%), and Asian women (5%). Across all racial/ethnic groups, few women had 4+ VACC ED visits: American Indian or Alaska Native women (1%), Asian women (<1%), Black or African American women (<1%), Hispanic or Latina women (1%), Native Hawaiian or Other Pacific Islander women (1%), White women (1%), and women with unknown race/ethnicity (<1%).

URBAN/RURAL STATUS

Exhibit 7.E. VHA and VACC Emergency Department Use among Women Veteran VHA Users by Urban/Rural Status, FY19



Key: FY – Fiscal Year, VHA – Veterans Health Administration, VACC: VA-purchased Community Care
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Women residing on insular islands (N=657) are not included in this Exhibit; 5% of this group had any VHA ED use in FY19 and 9% had any VACC ED use in FY19. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing urban/rural status in FY19. N=535,467.
Source: WHEI Master Database

Exhibit 7.E compares VHA and VACC ED encounters among women Veteran VHA users across urban/rural residences in FY19. While not shown in an exhibit, patterns were similar among men Veterans.

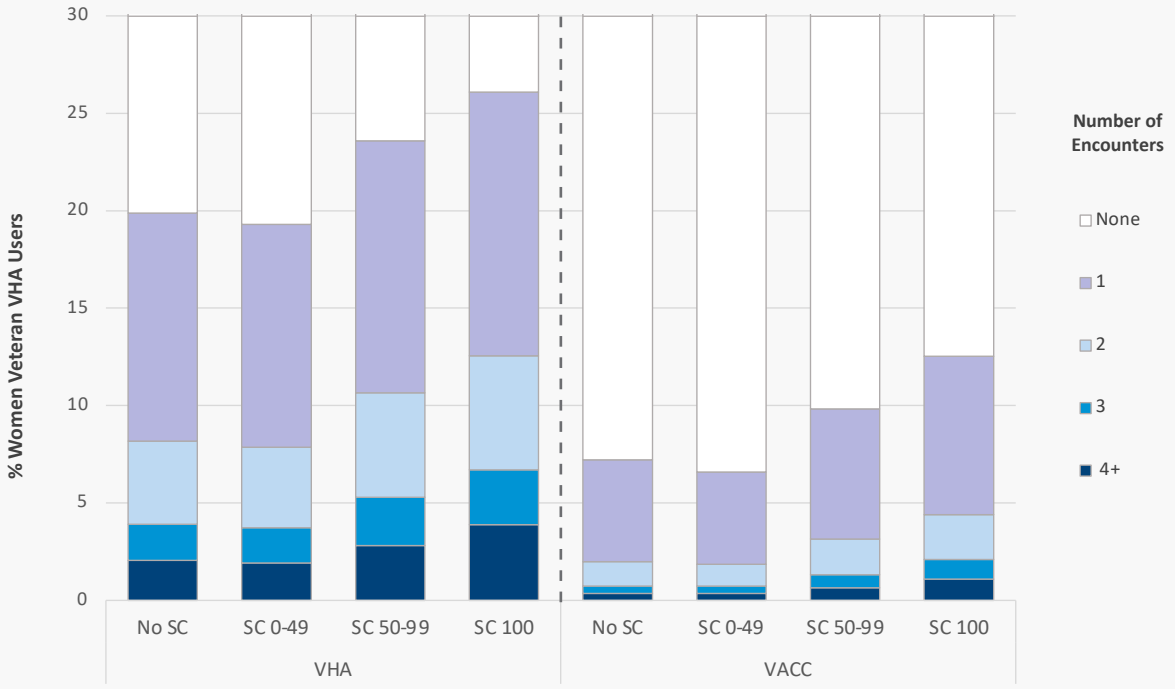
VHA ED use. The largest proportion of women Veteran VHA users with any VHA ED use were those living in urban areas (24%), followed by women living in rural areas (16%) and highly rural areas (14%). The pattern of proportions with 4+ VHA ED visits was similar (urban: 3%; rural: 2%; highly rural: 1%). The proportion of users with any VHA ED use was lowest for women living in insular island areas (5%), as was the proportion with 4+ VHA ED visits (1%) (data not presented graphically).

VACC ED use. VACC ED use showed the opposite pattern (compared to the pattern for VHA ED use) across rural-urban status. The proportion of women Veteran VHA users with any VACC ED use was largest among women living in highly rural areas (12%), followed by women living in rural areas (11%), and women living in urban areas (8%); however, the proportion of women with 4+ VACC ED visits did not vary by urban/rural category (urban: 1%; rural: 1%; highly rural: 1%). Among women living in insular island areas, 9% had any VACC ED use and 1% had 4+ VACC ED visits (data not presented graphically).

SERVICE-CONNECTED DISABILITY RATING

A service-connected (SC) disability rating indicates an injury or illness deemed to have been incurred or aggravated while serving in the armed forces. Chapter 2 describes disability ratings.[13]

Exhibit 7.F. VHA and VACC Emergency Department Use among Women Veteran VHA Users by Service-Connected (SC) Disability Rating, FY19



Key: FY – Fiscal Year, VHA – Veterans Health Administration, VACC: VA-purchased Community Care
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing SC disability rating in FY19. N=534,752.
Source: WHEI Master Database

Exhibit 7.F compares VHA and VACC ED visits by women Veteran VHA users across SC disability rating in FY19. While not shown in an exhibit, patterns were similar among men Veterans.

VHA ED use. The proportion of women with any VHA ED visits increased with increasing SC disability rating. The proportion of women Veteran VHA users with any VHA ED use was largest among women with 100 percent SC disability rating (26%), followed by women with 50-99 percent SC disability rating (24%), and was similar among women with 0-49 percent SC disability rating (19%) and no SC disability rating (20%). A similar pattern emerged for the proportion of women Veteran VHA users with frequent ED use: the proportion of women with 4+ VHA ED visits was highest for women with 100 percent SC disability rating (4%), followed by women with 50-99 percent SC disability rating (3%), and then those with 0-49 percent SC disability rating (2%) and no SC disability rating (2%).

VACC ED use. Patterns of association between SC disability rating and ED use among women Veterans were similar for VHA ED use and VACC ED use, although the proportions with VHA ED use were higher than the proportions with VACC ED use. The proportion of women with any VACC ED use was highest for women with 100 percent SC disability rating (13%), followed by women with 50-99 percent SC disability rating (10%), and those with 0-49 percent SC disability (7%) and no SC disability (7%). The proportions of women with 4+ VACC ED visits were low across all SC disability ratings (100 percent SC disability rating: 1%; 50-99 percent SC disability rating: 1%; 0-49 percent SC disability rating: <1%; no SC disability rating:<1%).

Diagnostic Codes Assigned to VHA and VACC Emergency Department Encounters

Notes to Interpretation. *This section reports on diagnoses associated with specific ICD-10 codes. This differs from Chapter 4, which reports on what this Sourcebook calls "conditions", i.e., pre-specified groups of ICD-10 diagnostic codes. So, for example, in this section, a "low back pain"* ***diagnosis*** *would represent a single ICD-10 diagnostic code, whereas in Chapter 4 there is a "Spine Disorders - Lumbosacral"* ***condition*** *which represents the presence of at least one of 73 ICD-10 diagnosis codes. As another example, acute upper respiratory infection, unspecified and acute bronchitis, unspecified show up as two separate diagnoses in these analyses, but in Chapter 4, both would have been mapped to the same condition.*

This subsection reports on encounters as opposed to individual patients. In other words, it examines the number of times a particular ICD-10 diagnosis code appears as the primary diagnosis code for any ED encounter, rather than the number of patients for whom a particular ICD-10 diagnosis code appears as the primary diagnosis code.

ICD-10 diagnosis codes are presented for both VHA ED encounters and VACC ED encounters. Differential coding practices between VHA and the private sector may influence findings; unlike VACC, VHA uses global budgeting, so coding may receive less attention due to the lack of financial incentives.

Women age 18-44. Exhibit 7.G shows the top 10 ICD-10 diagnostic codes assigned during VHA and VACC ED encounters in FY19 among women Veteran VHA users age 18-44. This exhibit **does not represent the prevalence of diagnoses** among women Veterans. Instead, it indicates what percent of all ED encounters for women in this age group were assigned the primary ICD-10 code in FY19 in VHA or VACC records, indicating that services were provided related to the diagnostic code, at least in part.

The top ten ICD-10 diagnostic codes assigned to VHA ED visits for women age 18-44 in FY19 were:

1. Low back pain
2. Urinary tract infection, site not specified
3. Acute upper respiratory infection, unspecified
4. Headache
5. Unspecified abdominal pain
6. Chest pain, unspecified
7. Acute pharyngitis, unspecified
8. Suicidal ideations
9. Acute bronchitis, unspecified
10. Lower abdominal pain, unspecified

The top ten ICD-10 diagnostic codes assigned to VACC ED visits for women age18-44 in FY19 were:

1. Other chest pain
2. Headache
3. Chest pain, unspecified
4. Urinary tract infection, site not specified

5. Migraine, unspecified, not intractable, without status migrainosus
6. Threatened abortion (i.e., possible miscarriage)
7. Low back pain
8. Unspecified abdominal pain
9. Nausea with vomiting, unspecified
10. Acute upper respiratory infection, unspecified

Exhibit 7.G. Top Ten ICD-10-CM Diagnostic Codes Assigned to Emergency Department Encounters among Women Veteran VHA Users Age 18-44, by Setting, FY19

VHA Emergency Department Encounters N=93,076			**VACC Emergency Department Encounters N=33,979**		
Rank	ICD-10 Code	% of VHA ED visits with diagnosis	Rank	ICD-10 Code	% of VACC ED visits with diagnosis
1	Low back pain	4%	1	Other chest pain	2%
2	Urinary tract infection, site not specified	3%	2	Headache	2%
3	Acute upper respiratory infection, unspecified	3%	3	Chest pain, unspecified	2%
4	Headache	2%	4	Urinary tract infection, site not specified	2%
5	Unspecified abdominal pain	2%	5	Migraine, unspecified, not intractable, without status migrainosus	2%
6	Chest pain, unspecified	2%	6	Threatened abortion (i.e., possible miscarriage)	2%
7	Acute pharyngitis, unspecified	2%	7	Low back pain	1%
8	Suicidal ideations	2%	8	Unspecified abdominal pain	1%
9	Acute bronchitis, unspecified	2%	9	Nausea with vomiting, unspecified	1%
10	Lower abdominal pain, unspecified	1%	10	Acute upper respiratory infection, unspecified	1%

Key: ED: Emergency Department, FY – Fiscal Year, VHA – Veterans Health Administration, VACC: VA-purchased Community Care
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Percent reflects the proportion of encounters with the ICD-10 diagnostic code in the primary position among women Veteran VHA users within the specified age group (18-44) in VHA or VACC EDs.
Cohort: Women Veteran VHA users with non-missing age 18-44 (inclusive) in FY19. N=218,473.
Source: WHEI Master Database

Women age 45-64. Exhibit 7.H shows the top 10 ICD-10 diagnostic codes assigned to VHA and VACC ED encounters among women Veteran VHA users age 45-64 in FY19. This exhibit **does not represent the prevalence** among women Veterans. Instead, it indicates what percent of all ED encounters for women in this age group were assigned the primary ICD-10 code in FY19 in VHA or VACC records indicating that services were provided related to the diagnostic code, at least in part.

The top ten ICD-10 diagnostic codes assigned to VHA ED visits for women age 45-64 in FY19 were:

1. Low back pain
2. Chest pain, unspecified
3. Acute upper respiratory infection, unspecified
4. Urinary tract infection, site not specified
5. Acute bronchitis, unspecified
6. Headache
7. Unspecified abdominal pain
8. Other chest pain
9. Cough
10. Encounter for issue of repeat prescription

The top ten ICD-10 diagnostic codes assigned to VACC ED visits for women age 45-64 in FY19 were:

1. Other chest pain
2. Chest pain, unspecified
3. Headache
4. Chronic obstructive pulmonary disease with (acute) exacerbation
5. Urinary tract infection, site not specified
6. Low back pain
7. Dizziness and giddiness
8. Sepsis, unspecified organism
9. Unspecified abdominal pain
10. Syncope and collapse

Exhibit 7.H. Top Ten ICD-10-CM Diagnostic Codes Assigned to Emergency Department Encounters among Women Veteran VHA Users Age 45-64, by Setting, FY19

VHA Emergency Department Encounters N=108,946			**VACC Emergency Department Encounters N=33,938**		
Rank	ICD-10 Code	% of VHA ED visits with diagnosis	Rank	ICD-10 Code	% of VACC ED visits with diagnosis
1	Low back pain	4%	1	Other chest pain	4%
2	Chest pain, unspecified	3%	2	Chest pain, unspecified	4%
3	Acute upper respiratory infection, unspecified	2%	3	Headache	2%
4	Urinary tract infection, site not specified	2%	4	Chronic obstructive pulmonary disease with (acute) exacerbation	2%
5	Acute bronchitis, unspecified	2%	5	Urinary tract infection, site not specified	1%
6	Headache	2%	6	Low back pain	1%
7	Unspecified abdominal pain	1%	7	Dizziness and giddiness	1%
8	Other chest pain	1%	8	Sepsis, unspecified organism	1%
9	Cough	1%	9	Unspecified abdominal pain	1%
10	Encounter for issue of repeat prescription	1%	10	Syncope and collapse	1%

Key: ED: Emergency Department, FY – Fiscal Year, VHA – Veterans Health Administration, VACC: VA-purchased Community Care
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Percent reflects the proportion of encounters with the ICD-10 diagnostic code in the primary position among women Veteran VHA users within the specified age group (45-64) in VHA or VACC EDs.
Cohort: Women Veteran VHA users with non-missing age 45-64 (inclusive) in FY19. N=243,563
Source: WHEI Master Database

Women age 65+. Exhibit 7.I shows the top 10 ICD-10 diagnostic codes assigned to VHA and VACC ED encounters among women Veteran VHA users age 65+ in FY19. This exhibit ***does not represent the prevalence*** among women Veterans. Instead, it indicates what percent of all ED encounters for women in this age group were assigned the primary ICD-10 code in FY19 in VHA or VACC records indicating that services were provided related to the diagnostic code, at least in part.

The top ten ICD-10 diagnostic codes assigned to VHA ED visits for women age 65+ in FY19 were:

1. Urinary tract infection, site not specified
2. Low back pain
3. Chest pain, unspecified
4. Chronic obstructive pulmonary disease with (acute) exacerbation
5. Acute bronchitis, unspecified
6. Acute upper respiratory infection, unspecified
7. Essential (primary) hypertension
8. Cough
9. Unspecified abdominal pain
10. Other chest pain

The top ten ICD-10 diagnostic codes assigned to VACC ED visits for women age 65+ in FY19 were:

1. Other chest pain
2. Chronic obstructive pulmonary disease with (acute) exacerbation
3. Sepsis, unspecified organism
4. Urinary tract infection, site not specified
5. Chest pain, unspecified
6. Syncope and collapse
7. Hypertensive heart disease with heart failure
8. Dizziness and giddiness
9. Pneumonia, unspecified organism
10. Low back pain

Exhibit 7.I. Top Ten ICD-10-CM Diagnostic Codes Assigned to Emergency Department Encounters among Women Veteran VHA Users Age 65+ by Setting, FY19

VHA Emergency Department Encounters N=29,940			**VACC Emergency Department Encounters N=7,898**		
Rank	ICD-10 Code	% of VHA ED visits with diagnosis	Rank	ICD-10 Code	% of VACC ED visits with diagnosis
1	Urinary tract infection, site not specified	4%	1	Other chest pain	3%
2	Low back pain	3%	2	Chronic obstructive pulmonary disease with (acute) exacerbation	3%
3	Chest pain, unspecified	3%	3	Sepsis, unspecified organism	3%
4	Chronic obstructive pulmonary disease with (acute) exacerbation	2%	4	Urinary tract infection, site not specified	3%
5	Acute bronchitis, unspecified	2%	5	Chest pain, unspecified	2%
6	Acute upper respiratory infection, unspecified	2%	6	Syncope and collapse	1%
7	Essential (primary) hypertension	1%	7	Hypertensive heart disease with heart failure	1%
8	Cough	1%	8	Dizziness and giddiness	1%
9	Unspecified abdominal pain	1%	9	Pneumonia, unspecified organism	1%
10	Other chest pain	1%	10	Low back pain	1%

Key: ED: Emergency Department, FY – Fiscal Year, VHA – Veterans Health Administration, VACC: VA-purchased Community Care
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix. Percent reflects the proportion of encounters with the ICD-10 diagnostic code in the primary position among women Veteran VHA users within the specified age group (65+) in VHA or VACC EDs.
Cohort: Women Veteran VHA users with non-missing age 65-110 (inclusive) in FY19. N=74,382.
Source: WHEI Master Database

IMPLICATIONS:

Far more women Veterans used VHA Emergency Departments (EDs) than used VA-purchased Community Care (VACC) EDs. This highlights the continued importance of the availability of acute, unscheduled care in VHA-based settings, even as access to VACC expands. In FY19, 9% of women had any VACC ED use; efforts to examine the quality of and Veterans' experiences with such purchased ED care and to identify optimal approaches to coordination between VHA and VACC settings are of great relevance for women as they navigate across distinct settings of care.

During the pandemic, a substantial decline in the number of VHA ED encounters occurred, and even six months into the pandemic, the number of VHA ED encounters had not yet recovered to pre-pandemic levels. While the reason for the lack of a more complete rebound is unknown, explanations could potentially include expanded access to VHA virtual care created during the pandemic or increased reliance upon VACC ED services.

Among racial/ethnic groups, Black or African American and Hispanic or Latina women were the two groups for whom the largest proportions visited VHA EDs. Outside VHA, it has been suggested that these groups face critical differences in health care access owing to higher rates of uninsurance and a variety of structural, cultural, and linguistic barriers.[14] Many of these barriers should be reduced for Veterans in an integrated health system like VHA, although research has shown Black or African American Veterans are more likely than White Veterans to lack a non-ED usual source for health care.[15]

While VHA has a robust network of over 1,000 geographically distributed primary care clinics, VHA currently operates only 111 EDs in the country, plus another 35 urgent care centers. Thus, it is not surprising that in FY19 the proportion of women Veteran VHA patients using VACC EDs was greatest for women living in highly rural areas. This is consistent with a prior study that found that driving time to a VHA ED/urgent care center was the greatest predictor of VACC urgent care use.[16] Likewise, among racial/ethnic groups, the proportion using VACC ED services was largest for American Indian or Alaska Native women. This could reflect alternatives to VHA (for example, they may have access to care through the Indian Health Service that could be captured in VACC data files) and geographic barriers in accessing VHA-based acute care (for example, there is no VHA ED in the state of Alaska).

The reasons women Veterans visit an ED provide insights about the breadth of services that should be available to them. While ED diagnoses vary by age group and setting, chest pain, low back pain, and urinary infections are among the most frequent diagnoses. VHA and VACC EDs must ensure that appropriate reproductive care is available, but in addition, the high frequency of gender-neutral diagnoses is a reminder that women need access to the full range of standard ED services; for example, VHA and VACC providers must have knowledge of how conditions like cardiovascular disease can manifest differently in women than in men. In VHA EDs, abdominal pain was among the most common diagnoses. Evaluation of abdominal pain in women may require access to specialty gynecology care, pelvic ultrasound, and exams attentive to privacy (especially in crowded EDs) and to principles of trauma-informed care.[17] The only mental health issue appearing in the leading diagnoses was suicidal ideation, which appeared in the top ten diagnoses only among women 18-44 years old, and only in the VHA ED setting (not in a VACC ED setting). VHA is committed to addressing suicide among women Veterans and with its particularly strong mental health services, is well-positioned to address such issues. Finally, threatened abortion (i.e., possible miscarriage) was among the top ten diagnoses for women 18-44 years old in a VACC setting but not in a VHA ED setting, perhaps because VHA refers most obstetric care to the community.

VA Health Connect is a new program designed to modernize VHA Clinical Contact Centers (CCCs) which will ultimately be available to Veterans 24 hours a day, 7 days a week.[18] Intended as an alternative to VHA EDs/urgent care centers or primary care clinics for many low-acuity conditions, the CCCs will include services like scheduling and administrative services, clinical triage, virtual clinic visits, and pharmacy services. VHA-wide implementation of CCCs is ongoing and could have implications for VHA ED/urgent care center use, particularly for Veterans facing temporal and geographic barriers to acute care. This service may be useful for those women Veterans who visit VHA EDs for low-acuity conditions like upper respiratory infections, urinary tract infections, and prescription refill-related visits.

Photo credits: Top right, VA Emergency Room Entrance at the Roudebush Medical Center. (jetcityimage - stock.adobe.com) Bottom left, Bill Lackey

Endnotes

1 Veterans Health Administration. Emergency Medicine (VHA Directive 1101.14). Washington, DC: US Department of Veteran Affairs, 2023. Available at: https://www.va.gov/vhapublications/publications.cfm?pub=1&order=asc&orderby=pub_Number. Accessed August 26, 2024.

2 Cordasco, K.M., Zephyrin, L.C., Kessler, C.S., et al. An inventory of VHA emergency departments' resources and processes for caring for women. J Gen Intern Med 28 (Suppl 2), 583–590 (2013). https://doi.org/10.1007/s11606-012-2327-7

3 Veterans Health Administration. Emergency Medicine (VHA Directive 1101.14). Washington, DC: US Department of Veteran Affairs, 2023. Available at: https://www.va.gov/vhapublications/publications.cfm?pub=1&order=asc&orderby=pub_Number. Accessed August 26, 2024.

4 Veterans Health Administration. Health Care Services for Women Veterans (VHA Directive 1330.01[7]). Washington, DC: US Department of Veterans Affairs, 2010. Available at: https://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=5332.

5 Veterans Health Administration. Emergency Medicine (VHA Directive 1101.14). Washington, DC: US Department of Veteran Affairs, 2023. Available at: https://www.va.gov/vhapublications/publications.cfm?pub=1&order=asc&orderby=pub_Number Accessed August 26, 2024.

6 Veterans Health Administration. Health Care Services for Women Veterans (VHA Directive 1330.01[7]). Washington, DC: US Department of Veterans Affairs, 2010. Available at: https://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=5332.

7 Nevedal AL, Wong EP, Urech TH, Peppiatt JL, Sorie MR, Vashi AA. Veterans' Experiences With Accessing Community Emergency Care. Military medicine. 2023 Jan 1;188(1-2):e58-64.

8 VA Office of Public and Intergovernmental Affairs. VA launches new health care options under MISSION Act. June 6, 2019. https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5264. Accessed August 12, 2022.

9 Vashi AA, Urech T, Wu S., et al. Community urgent care use following implementation of the Veterans Affairs Maintaining Internal Systems and Strengthening Integrated Outside Networks Act. Med Care. 2021 Jun 1;59(Suppl 3):S314-S321.

10 Vashi A. Emergency care in the community: an emerging priority area for HSR&D. VA HSR&D Forum. Winter 2023: Community Care. https://www.hsrd.research.va.gov/publications/forum/winter23/default.cfm?ForumMenu=winter23-4. Accessed on March 9, 2023.

11 Doran KM, Raven MC, Rosenheck RA. What drives frequent emergency department use in an integrated health system? National data from the Veterans Health Administration. Ann Emerg Med. 2013 Aug;62(2):151-9.

12 The proportion of women with any VHA ED care cannot be added to the proportion with any VACC ED care to yield the proportion with any ED care, because some women use ED care in both settings.

13 To enhance the clarity and readability of this report, an editorial decision has been made to spell out "percent" in reference to SC disability ratings, e.g., "SC disability rating of 100 percent." In all other measures of percentage, the percent symbol (%) is used. Also note that "0 percent" refers to a patient who does have SC disability rating, but whose severity rating is 0 (zero) percent; this is distinct from a patient who has no SC disability rating.

14 Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care, Board on Health Sciences Policy Staff, Institute of Medicine (IOM) Staff. Introduction and literature review. In: Smedley BD, Stith AY, Nelson AR, editors. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, DC: National Academies Press (2002).

15 Washington DL, Villa V, Brown A, Damron-Rodriguez J, Harada N. Racial/ethnic variations in veterans' ambulatory care use. Am J Public Health. 2005 Dec;95(12):2231-7.

16 Vashi AA, Urech T, Wu S, Boothroyd D, Mehta P, Dalton AL, Brill E, Kessler C, Asch SM. Community urgent care use following implementation of the Veterans Affairs Maintaining Internal Systems and Strengthening Integrated Outside Networks Act. Med Care. 2021 Jun 1;59(Suppl 3):S314-S321.

17 Substance Abuse and Mental Health Services Administration. (2014). SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach. HHS Publication No. (SMA) 14-4884. Rockville, MD: Substance Abuse and Mental Health Services Administration.

18 Petersen H. Clinical Contact Center ready to answer Veterans' questions. Available at: https://www.blogs.va.gov/VAntage/70771/clinical-contact-center-ready-answer-veterans-questions/. Accessed November 19, 2020.

8. VHA-covered Births

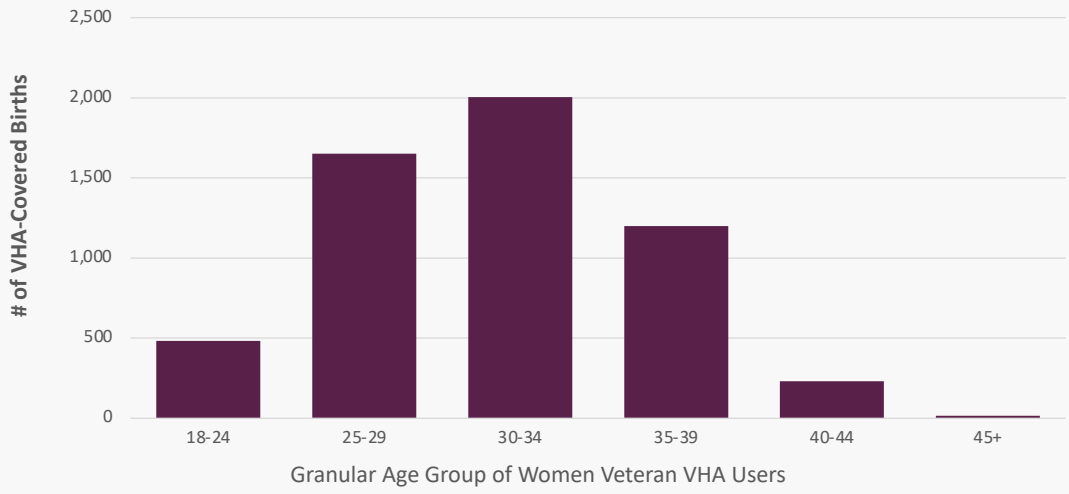
Overview

Women Veteran VHA users who gave birth using VA benefits are identified via an algorithm[1] that draws on VA Community Care (VACC) records.[2,3] Women with at least one such record in the year being examined are considered to have had a birth (i.e., an obstetric delivery).[4]

Women, by age (granular age groups). Over 5,000 women[5] Veteran VHA users received care through VACC related to a birth in FY19 (N=5,583). This represents a substantial increase over time (based on the prior Sourcebook,[6] 260 women Veteran VHA users gave birth in FY00 and 1,902 in FY10). Exhibit 8.A shows the number of women Veteran VHA users who gave birth with care covered through VACC, applying more granular age groups than are examined in other sections of Sourcebook Volume 5. The exhibit indicates that most of the FY19 births occurred among women between the ages of 25 and 34, but a substantial number of older Veterans also gave birth (age 18-24: 482 women gave birth; 25-29: 1,650; 30-34: 2,004; 35-39: 1,200; 40-44: 231; 45+: 16).

A larger proportion of younger than older VHA women users gave birth (age 18-24: 4%; 25-29: 4%; 30-34: 4%; 35-39: 2%; 40-44: <1%; 45+: <1%; data not presented graphically in Exhibit 8.A). Note that these percentages do not represent the birth rate among women Veteran VHA users in these age groups, because only births covered through VACC are captured. Women Veteran VHA users who gave birth and had care covered through private insurance, Medicaid, or other sources are not identified.[7]

Exhibit 8.A. Number of Births Covered by VHA among Women Veteran VHA Users by Granular Age Group, FY19



Key: FY – Fiscal Year, VHA – Veterans Health Administration
Notes: Findings portray Veteran VHA users, not the entire Veteran population. See Technical Appendix.
Cohort: Women Veteran VHA users with non-missing ages 18-110 years (inclusive) in FY19: N=536,418.
Source: WHEI Master Database

Women, race/ethnicity. Of the VHA-covered births in FY19, 43% were to women Veterans of color, 52% to White Veterans, and 5% to women with unknown race/ethnicity (data not represented graphically). Black or African American women made up 26% of VHA-covered births, followed by Hispanic or Latina women (13%), Asian women (2%), American Indian or Alaska Native women (1%), and Native Hawaiian or Other Pacific Islander women (1%). The racial/ethnic diversity of women VHA users with VHA-covered births largely reflects the diverse representation of women VHA users overall in FY19. However, among those receiving birth-related care Hispanic or Latina users were represented slightly higher than their proportion of VHA women users (8%) overall while Black or African American users were represented slightly lower than their proportion of VHA women users (30%) overall.

Women, race/ethnicity, by granular age groups. Overall, 26% of the VHA-covered births were in women 35 years of age or older (advanced maternal age). Subgroups of women with VHA-covered births with higher prevalence of advanced maternal age included Black or African American women, Asian women, and Native Hawaiian or Other Pacific Islander women (29%, 30%, and 36%, respectively; data not represented graphically).

IMPLICATIONS

VHA covered more than 5,000 Veterans who gave birth in FY19, triple the number of Veterans who gave birth just ten years prior, and 22 times the number from twenty years prior. This rise in VHA-covered deliveries occurred contemporaneously with major VHA policy changes favorable to parenting Veterans, including the FY10 expansion of benefits to cover the newborn's first week of life.[8] More recent developments include legislation requiring VHA to offer training for community care providers on perinatal care of Veterans,[9] expansion of fertility services,[10] and maturation of the VHA-wide Maternity Care Coordinator program. Coordinated and inclusive services respectful of patient preferences[11,12] are crucial given that many Veterans who use VHA have often intersecting characteristics associated with adverse pregnancy outcomes[13] and severe maternal morbidity,[14] such as belonging to a minoritized racial/ethnic group, advanced maternal age (35+ years old), or serious comorbidities like posttraumatic stress disorder (PTSD).[15,16,17]

Photo credit: Benjamin Hager

Endnotes

1 Kuklina EV, Whiteman MK, Hillis SD, et al. An enhanced method for identifying obstetric deliveries: Implications for estimating maternal morbidity. Matern Child Health J. 2008;12(4):469-477. doi:10.1007/s10995-007-0256-6
The Kuklina et al. algorithm was adapted to the VHA data sources and incorporated updates to the ICD-10 diagnosis codes and procedure codes (CPT, DRG, and ICD) used to detect births. See Online Technical Appendix.

2 A small number of U.S. births occur out of hospital (e.g., see https://www.cdc.gov/nchs/products/databriefs/db144.htm). These can occur at home, birthing centers, emergency departments, or other outpatient settings. Most deliveries captured in VACC data are hospital-based.

3 VHA facilities generally do not provide birth-related obstetrical services, which is why birth data focuses on VA-purchased Community Care, i.e., VACC data.

4 Although uncommon, it is medically possible to give birth twice in one year. Were this to happen, the woman would be counted only once for that year.

5 Individuals who do not identify as women can give birth. The analyses here include individuals classified as women based upon the sex variable in VHA databases, which primarily reflects sex assigned at birth; see Online Technical Appendix, and also see Chapter 1, Introduction, for a discussion of sex versus gender. Some individuals capable of giving birth but who do not identify as women will be included in the "women Veteran" cohort; these births would be captured here. A small number of individuals capable of giving birth may be missed due to being classified herein as "men Veterans;" this can occur if an individual petitioned to have their VHA "sex" classification changed to reflect their gender identity. It can also occur as a result of data entry errors in the "sex" field. With in-process upgrades to VHA databases, the ability to distinguish sex from gender among Veterans who use VHA will improve in the future.

6 Frayne SM, Phibbs CS, Saechao F, et al. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 4: Longitudinal trends in sociodemographics, utilization, health profile, and geographic distribution. Women's Health Evaluation Initiative, Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. February 2018.

7 For reference, national birth rates among U.S. women in 2019 were: age 20-24: 6.7%; 24-29: 9.4%; 30-34: 9.8%; 35-39: 5.3%. Source: Martin JA, Hamilton BE, Osterman MJK, Driscoll AK. Births: Final Data for 2019. National Vital Statistics Reports; vol 70 no 2. Hyattsville, MD: National Center for Health Statistics. 2021. DOI: https://dx.doi.org/10.15620/cdc:100472. Accessed August 26, 2024.

8 Caregivers and Veterans Omnibus Health Services Act of 2010. Section 206. Pub. L. No: 111-163, 111th Congress (2009-2010). https://www.congress.gov/bill/111th-congress/senate-bill/1963. Accessed August 24, 2022.
For more information about VHA maternity care see: https://www.womenshealth.va.gov/topics/maternity-care.asp.

9 Protecting Moms Who Served Act of 2021. H.R.958, 117th Congress (2021-2022). https://www.congress.gov/bill/117th-congress/house-bill/958. Accessed August 24, 2022.

10 Office of Federal Register. Fertility Counseling and Treatment for Certain Veterans and Spouses. Department of Veterans Affairs. March 7, 2019. 8254-8257. 38 CFR Part 17. https://www.federalregister.gov/documents/2019/03/07/2019-04096/fertility-counseling-and-treatment-for-certain-veterans-and-spouses. Accessed September 7, 2022.

11 Callegari LS, Tartaglione EV, Magnusson SL, et al. Understanding women Veterans' family planning counseling experiences and preferences to inform patient-centered care. Womens Health Issues. 2019;29(3):283-289. doi:10.1016/j.whi.2019.03.002

12 Callegari LS, Aiken AR, Dehlendorf C, Cason P, Borrero S. Addressing potential pitfalls of reproductive life planning with patient-centered counseling. Am J Obstet Gynecol. 2017;216(2):129-134. doi:10.1016/j.ajog.2016.10.004

13 Shaw JG, Joyce VR, Schmitt SK et al. Selection of higher risk pregnancies into Veterans Health Administration programs: Discoveries from linked Department of Veterans Affairs and California birth data. Health Serv. Res. 2018;53:5260-84. doi:10.1111/1475-6773.13041

14 Combellick JL, Bastian LA, Altemus M et al. Severe maternal morbidity among a cohort of post-9/11 women Veterans. J Womens Health (Larchmt). 2020;29(4):577-584. doi:10.1089/jwh.2019.7948

15 Shaw JG, Asch SM, Kimerling R, Frayne SM, Shaw KA, Phibbs CS. Posttraumatic stress disorder and risk of spontaneous preterm birth. Obstet Gynecol. 2014;124(6):1111-1119. doi: 10.1097/AOG.0000000000000542.

16 Shaw JG, Asch SM, Katon JG, et al. Post-traumatic stress disorder and antepartum complications: A novel risk factor for gestational diabetes and preeclampsia. Paediatr Perinat Epidemiol. 2017;31(3):185-194. doi:10.1111/ppe.12349

17 Katon JG, Washington DL, Cordasco KM, Reiber GE, Yano EM, Zephyrin LC. Prenatal care for women Veterans who use Department of Veterans Affairs health care. Womens Health Issues. 2015;25(4):377-381. doi:10.1016/j.whi.2015.03.004