

Veterans' Use of Veterans Health Administration Primary Care in an Era of Expanding Choice

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Background: The Veterans Choice Program (VCP), aimed at improving access to care, included expanded options for Veterans to receive primary care through community providers.

Objectives: The objective of this study was to characterize and compare Veterans use of Veterans Health Administration (VA) primary care services at VA facilities and through a VA community care network (VA-CCN) provider.

Research Design: This was a retrospective, observational over fiscal years (FY) 2015–2018.

Subjects: Veterans receiving primary care services paid for by the VA.

Measures: Veteran demographic, socioeconomic and clinical factors and use of VA primary care services under the VCP each year.

Results: There were 6.3 million Veterans with >54 million VA primary care visits, predominantly (98.5% of visits) at VA facility. The proportion of VA-CCN visits increased in absolute terms from 0.7% in 2015 to 2.6% in 2018. Among Veterans with any VA-CCN primary care, the proportion of VA-CCN visits increased from 22.6% to 55.3%. Logistic regression indicated that Veterans who were female, lived in rural areas, had a driving distance >40 miles, had health insurance or had a psychiatric/depression condition were more likely to receive VA-CCN primary care. Veterans who were older, identified as Black race, required to pay VA copayments, or had a higher Nosos score, were less likely to receive VA-CCN primary care.

Conclusion: As the VA transitions from the VCP to MISSION and VA facilities gain experience under the new contracts, attention to factors that impact Veterans' use of primary care services in different settings are important to monitor to identify access barriers and to ensure Veterans' health care needs are met.

Key Words: primary care, veterans, outpatient health care use, community care, access

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With implementation of the Veterans Choice Program (VCP) in 2014, aimed to improve access to timely, high-quality health care for Veterans, the Veterans Health Administration (VA) Community Care program has rapidly expanded.^{1–3} The VCP marked a fundamental shift in national policy for outsourcing Veterans' care. Under the previous Fee Basis model, services were purchased from the community when patients lived >40 miles (mileage eligible) from a Veterans Health Administration facility (VAF) that could provide the service. With implementation of the VCP, Veterans were additionally authorized to seek care from a community provider if a nearby VAF could not provide the necessary service within 30 days (wait time eligible); if they lived >40 miles from the nearest VAF with a full-time primary care physician, they lived in a state without a

full-service VAF, or they experienced hardship in receiving VAF care. From FY14 to FY18, >1.8 million Veterans received any care from a community provider.⁴ Under VCP, Veterans could receive their primary care from a Veterans Health Administration community care network (VA-CCN) provider, instead of from a provider at a VAF.

Prior research on VA primary care revealed access to care issues, and the complexity of managing Veteran's health care needs.^{5–13} Studies have shown that Veterans have had mixed satisfaction under the early implementation of VCP.^{6,12,13} It was expected that the VCP would increase options for Veterans to seek care under VA auspices closer to home,^{1,2} although use of primary care under VCP has been low relative to specialty care.¹⁴ Furthermore, it is not known the extent of this uptake, or whether specific patient subgroups pursue the VCP option more than others. One study reported that during the first year of the VCP VA patients with chronic conditions who used community care were more likely to be female, White or Hispanic, to utilize more primary care at baseline, and to have long driving distances to VHA care.¹⁴ As VCP has progressed, it is not known if these trends have persisted. Understanding factors that contribute to these patterns are important to mitigating potential negative impacts on Veterans access and continuity of care, as well as the impact to VA capacity, care fragmentation, and costs.^{15–17} While there are early signs that wait times for VAF primary care have improved since implementation of VCP,¹⁸ information is lacking about the factors contributing to where Veterans receive their primary care and if these improvements extend to those who rely on VA community care. Although the VA Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act was approved in 2018,¹⁹ further expanding options for receiving care through contracted community-based providers, implementation of the network contracts was still underway during FY2020.^{19,20}

We undertook a study to examine Veterans' patterns of primary care use under 4 years of the VCP and to assess the extent to which Veteran demographic, socioeconomic, and clinical risk factors were associated with these patterns. The purpose of this paper is to characterize and compare VA patients who received primary care at a VAF with those who received primary care through a VA-CCN provider since the inception of the VCP through FY2018, before implementation of the MISSION Act.¹⁹

METHODS

Study Design

As a retrospective observational study over 4 years (FY2015–2018), after implementation of the VCP, this study provides baseline data for a larger study to compare VA primary care use before and after MISSION Act implementation. The Hines and Portland VA Research Committees approved the project.

Study Setting/Population

Our study population includes Veterans who had at least 1 VA primary care visit (VAF or VA-CCN) during FY2015–2018 and followed through FY2018. We identified

Veterans for inclusion based on VA service line codes for any primary care (stop codes: 301-General Internal Medicine, 322-Comprehensive Women's Health; 323-Primary Care Medicine) and for VA-CCN authorizations that we could link to an outpatient provider claim related to primary care. Specifically for VA-CCN we identified Current Procedural Terminology (CPT) codes related to primary care (CPT: 99201;99202; 99203; 99204; 99205; 99211; 99212; 99213; 99214; 99215; 99215), and additional procedures indicative of primary care that could be accompanied by a primary care office visit (eg, influenza immunizations, health screening procedures).¹¹ Veterans who died during the study period were included. We excluded as outliers (at the 99.9% level) and uncertain data validity, Veterans with > 100 primary care visits per year (VAF N = 2621, VA-CCN N = 241).

Measures and Data Sources

We identified all VAF and VA-CCN primary care visits. For VAF care we relied on data from the VA Corporate Data Warehouse (CDW) domains for outpatient care and procedures.²¹ For VA-CCN care we relied on VA-CCN authorizations and claims data [VA Program Integrity Tool (PIT), fee basis (FBCS), and Purchased Care (Fee) CDW domains] for outpatient institutional and provider services.²² Authorizations were linked with claims using dates, patient identifiers, and claims type to ensure services authorized were for primary care. Since VA-CCN claims and authorizations adjudication occurring after FY2018 were incomplete, we limited our study to FY2015–2018.

Veteran demographic measures were derived from CDW and included: race, consolidated from 6 to 3 (White, Black or Other/Unknown); ethnicity (Hispanic/Latino or not); sex (male/female); age in years (calculated from birthdate to first entry in cohort) defined as a categorical variable (below 45, 45–54, 55–64, 65 years and above); marital status consolidated from 4 categories to married versus single. VA copayment categories were based on VA priority grouping and copayment levels (none: groups 1–3, some: groups 4–6, or full copay: groups 7 and 8).²³ Insurance status was categorized as: Only VA Coverage; VA and Private Insurance; VA plus Medicare and/or Medicaid; and VA with Medicare plus Private Insurance. Rural status was based on the Veteran's recorded residence and US census data (urban, rural, highly rural).²⁴ For distance to nearest VA primary care facility we used data from the VA Planning System Support Group (in miles).^{25,26}

Regarding Veteran clinical characteristics, we considered 3 risk adjustment measures. We explored the concurrent year Nosos score, designed to predict VA costs and centered around the value 1 indicating expected costs at the national average for VA patients; a value >1 indicates higher risk while a value <1 indicates lower risk.^{27–29} We also examined the VA Care Assessment Need (CAN) score for 1-year combined event (values range from 0% to 99%),³⁰ validated to predict hospitalization and in-hospital mortality. In addition, we used the Elixhauser comorbidity method to identify comorbidities for diabetes, hypertension and psychiatric/depression disorders (measured in a 2-year lookback period

starting at patient entry into cohort) since they are likely commingled by primary care providers.^{31,32}

We considered that Veterans who were newly enrolled in the VA may have different provider preferences than Veterans who had been receiving VA health care before VCP. We used VA enrollment date to create an indicator variable (yes/no) if a Veteran enrolled during the study period.

Vital status was confirmed using the VA Vital Status file, which includes mortality data from VA, Medicare and the Social Security Administration.³³

Veteran-specific health care use for primary care was determined based on date-specific services recorded; for VAF services from the CDW and for VA-CCN outpatient services from the information from the adjudicated PIT claims data.

Statistical Analysis

Descriptive summaries included frequencies and percentages for categorical measures and means and SD for continuous measures. We also calculated absolute standardized differences (ASD) between the VAF and any VA-CCN groups as effect size measures independent of sample size.^{34,35} For continuous measures, ASD are synonymous with Cohen *d* for 2-group comparisons of effect size and are generalized to categorical measures by computing standardized differences in proportions.³⁶

We used logistic regression to measure the odds of a patient receiving any VA-CCN primary care. Analyses were at the patient-year level with each patient contributing data for the years within FY2015–2018 they were included in the cohort, with their outcome receiving any primary care in the VA-CCN varying from

TABLE 1. Patient Characteristics by Primary Care Venue Group

Characteristic	Primary Care at VAF Only (N = 6,176,756)	Any Primary Care at VA-CCN (N = 124,940)		All (N = 6,301,696)
		Some Primary Care at VA-CCN (N = 122,337)	Only Primary Care at VA-CCN (N = 2603)	
Age, mean (SD) (y)	60.77 (16.74)	58.04 (15.26)	60.30 (17.62)	60.72 (16.71)
Age <45 y, N (%)	1,145,522 (18.5)	24,855 (20.3)	552 (21.2)	1,170,929 (18.6)
Age 45–54 y, N (%)	771,278 (12.5)	17,606 (14.4)	327 (12.6)	789,211 (12.5)
Age 55–64 y, N (%)	1,246,500 (20.2)	30,676 (25.1)	520 (20.0)	1,277,696 (20.3)
Age > 65 y, N (%)	3,013,456 (48.8)	49,200 (40.2)	1204 (46.3)	3,063,860 (48.6)
Sex, N (%)				
Female	476,938 (7.7)	12,611 (10.3)	210 (8.1)	489,759 (7.8)
Male	5,699,818 (92.3)	109,726 (89.7)	2393 (91.9)	5,811,937 (92.2)
Race, N (%)				
Black/African American	1,050,763 (17.0)	15,069 (12.3)	216 (8.3)	1,066,048 (16.9)
White	4,811,657 (77.9)	99,836 (81.6)	2206 (84.7)	4,913,699 (78.0)
Other/Unknown	314,336 (5.1)	7432 (6.1)	181 (7.0)	321,949 (5.1)
Ethnicity, N (%)				
Hispanic	391,318 (6.3)	8884 (7.3)	122 (4.7)	400,324 (6.4)
Non-Hispanic/other	5,785,438 (93.7)	113,453 (92.7)	2481 (95.3)	5,901,372 (93.6)
Marital status, N (%)				
Single, separated, divorced, other	2,701,539 (43.7)	54,935 (44.9)	1185 (45.5)	2,757,659 (43.8)
Married	3,475,217 (56.3)	67,402 (55.1)	1418 (54.5)	3,544,037 (56.2)
VA copayment category, N (%)*				
No copay	2,927,400 (47.4)	71,514 (58.5)	1261 (48.4)	3,000,175 (47.6)
Some copay	2,060,418 (33.4)	36,733 (30.0)	869 (33.4)	2,098,020 (33.3)
Full copay	1,188,938 (19.2)	14,090 (11.5)	473 (18.2)	1,203,501 (19.1)
Rurality, N (%)*				
Urban	4,032,439 (65.3)	52,869 (43.2)	733 (28.2)	4,086,041 (64.8)
Rural	2,065,465 (33.4)	63,394 (51.8)	1633 (62.7)	2,130,492 (33.8)
Highly rural	78,852 (1.3)	6074 (5.0)	237 (9.1)	85,163 (1.4)
Distance to Nearest VA Primary Care Facility, miles, mean (SD) [†]	15.68 (14.85)	30.04 (31.11)	44.68 (44.80)	15.97 (15.49)
0–5 miles	1,451,975 (23.5)	20,506 (16.8)	307 (11.8)	1,472,788 (23.4)
6–10 miles	1,420,076 (23.0)	18,611 (15.2)	298 (11.4)	1,438,985 (22.8)
11–20 miles	1,685,958 (27.3)	22,155 (18.1)	310 (11.9)	1,708,423 (27.1)
21–40 miles	1,234,723 (20.0)	21,353 (17.5)	311 (11.9)	1,256,387 (19.9)
> 40 miles	384,024 (6.2)	39,712 (32.5)	1377 (52.9)	425,113 (6.7)
New VA enrollee, N (%)				
Enrolled during 2015–2018	799,513 (12.9)	10,493 (8.6)	203 (7.8)	810,209 (12.9)
Previously enrolled	5,377,243 (87.1)	111,844 (91.4)	2400 (92.2)	5,491,487 (87.1)
Elixhauser clinical diagnoses, N (%)				
Any diabetes	1,373,013 (22.2)	32,522 (26.6)	301 (11.6)	1,405,836 (22.3)
Any psychoses/depression*	1,502,966 (24.3)	44,969 (36.8)	356 (13.7)	1,548,291 (24.6)
Any hypertension	2,605,925 (42.2)	61,017 (49.9)	664 (25.5)	2,667,606 (42.3)

*ASD > 0.20.

[†]ASD > 0.50.

ASD indicates absolute standard difference; VA, Veterans Health Administration; VA CCN, Veterans Health Administration Community Care Network; VAF, Veterans Health Administration Facility.

year-to-year. Covariates were included for FY, patient demographic and socioeconomic factors, and clinical characteristics. Time-varying covariates were Nosos score, primary care visits per FY, and insurance type. Although Nosos and CAN scores were considered and correlated ($r=0.49$); Nosos was chosen based on model fit. The regression included robust SEs clustered on the nearest VA primary care site; all analyses were conducted with R version 3.6.1.^{37,38}

We ran a sensitivity analysis by restricting to the subset of Veterans eligible for the VCP based on distance criteria (ie, living >40 miles from the nearest VA primary care site). Collinearity between variables was assessed with Pearson correlation or Cramer V, and the Generalized Variance Inflation Factor was used to test for multicollinearity in regression models.

RESULTS

In FY2015–2018, there were 6.3 million Veterans in our cohort with >54 million VA primary care visits, predominantly (98.5%) at VAF. The proportion of VA-CCN primary care visits increased from 0.7% in FY2015 to 2.2% in FY2018. Among Veterans in the cohort, 98.0% had all their

primary care at a VAF; 124,940 Veterans had at least 1 VA-CCN primary care visit; of these 97.9% used some and 2.1% used only VA-CCN primary care (Table 1).

Bivariate (unadjusted) analyses comparing those using VAF versus any VA-CCN primary care are shown in Table 1. Veterans who lived in rural areas (ASD = 0.481), had a driving distance >40 miles (ASD 0.772), or had a psychiatric/depression diagnosis were more likely to use VA-CCN primary care. Whereas those with VA copays (ASD = 0.253) were less likely to use VA-CCN primary care.

Among Veteran's with any VA-CCN primary care, the number of Veterans with some VA-CCN primary care nearly doubled from 39,423 in FY2015 to 71,013 in FY2018. The proportion of VA-CCN to VAF primary care also increased over time from 22.8% to 51.4% (Fig. 1) for Veterans with some VA-CCN primary care.

Table 2 shows the bivariate (unadjusted) results for time varying characteristics for the VAF and VA-CCN groups. Having other health insurance (ASD range: 0.226–0.435) was higher among the VA-CCN group in each year, as was the number of primary care visits. CAN (ASD range: 0.142–0.253)

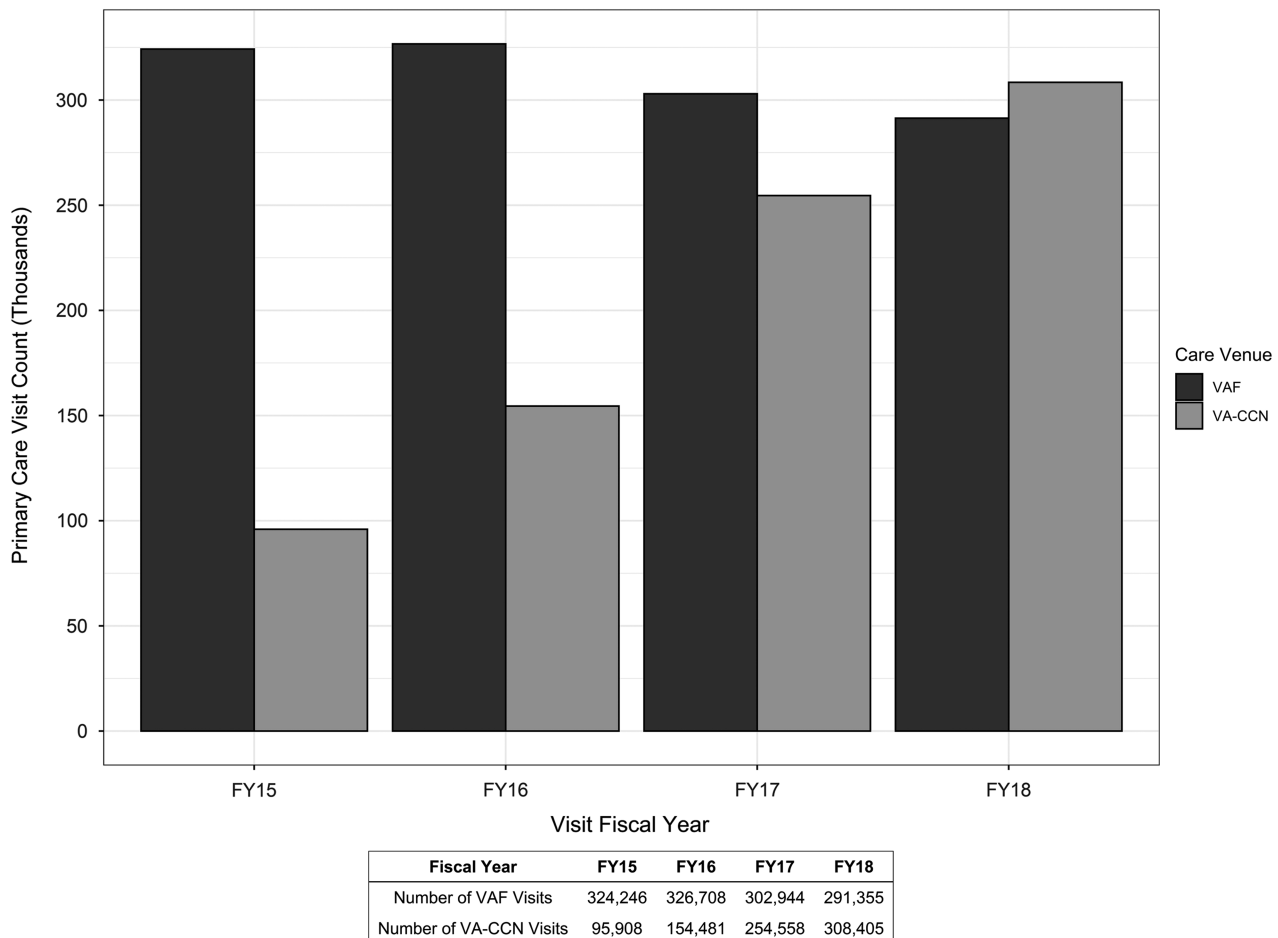


FIGURE 1. Count of VAF and VA-CCN primary care visits during fiscal years 2015–2018 for Veterans who used any VA-CCN primary care. VA-CCN indicates Veterans Health Administration Community Care Network Facility; VAF, Veterans Health Administration Facility.

and Nosos (all ASD < 0.11) scores were slightly higher for the VA-CCN group.

Table 3 shows the logistic regression results [odds ratios (ORs) and 95% confidence intervals (CIs)] for the odds of a Veteran receiving any VA-CCN primary care each year, adjusted for covariates. The odds of primary care being provided at a VA-CCN increased significantly with each year compared with FY15 [OR (CI); FY 16: 1.39 (1.32–1.48), FY 17: 1.79 (1.67–1.92), FY 18: 1.96 (1.83–2.09)].

For demographic and socioeconomic factors, regression results show that Veterans who were female (OR: 1.19; CI: 1.11–1.28); identified as races other than Black or White (OR: 1.33; CI: 1.15–1.53), lived in rural (OR: 1.38; CI: 1.19–1.62) or highly rural areas (OR: 1.83; CI: 1.52–2.2), had a driving distance > 40 miles (OR: 6.63; CI: 5.65–7.77), or who had any Medicare/Medicaid (OR: 2.64; CI: 2.51–2.78) or Medicare and Private (OR: 1.74; CI: 1.62–1.87) insurance were significantly more likely to receive some VA-CCN primary care. On the other hand, those who were older, especially those over 65 years (OR: 0.34; CI: 0.31–0.37), identified as Black race (OR: 0.71; CI: 0.64–0.80), or who were required to make VA copayments (OR: 0.62; CI: 0.59–0.66) were less likely to receive VA-CCN primary care. Veterans who were new VA enrollees were slightly more likely to receive VAF primary care (OR: 0.94, CI: 0.88–1), although this effect was insignificant. Interaction terms for year and race by rurality were explored but insignificant.

Regarding clinical characteristics, of the 3 conditions included (diabetes, hypertension, and psychiatric/depression), Veterans with diabetes or hypertension (OR: 0.95, CI: 0.92–0.99; OR: 0.97, CI: 0.94–1.00, respectively) were slightly less likely to receive primary care at VA-CCN, while those with psychiatric/depression conditions (OR: 1.23; CI: 1.19–1.28) were more likely to receive some VA-CCN primary care. Those with higher Nosos risk scores were less likely to use VA-CCN (OR: 0.8; CI: 0.78–0.82).

Sensitivity analysis of Veterans living > 40 miles from the closest VA primary care site showed little difference in the regression coefficients, indicating robustness of results for those with greater distance to care. Sensitivity analyses were also conducted using robust SEs clustered on patients, as well as clustered on both patients and the nearest VA primary care site. Both analyses showed little or no change in SEs.

DISCUSSION

This study is among the first to examine VCP impacts on Veterans' primary care use.^{39,40} We found that the volume of VA-CCN primary care increased from 0.7% in 2015 to 2.2% in 2018. While Veterans reliance on community care options increased under the VCP, Veterans overwhelmingly relied on VAF primary care.

We also found that the odds of using VA-CCN versus VAF primary care were 1.38–1.83 times higher among Veterans who lived in rural areas. Our findings align with one of the key goals of the VCP—allowing for care closer to a Veteran's home, especially in areas where the nearest VAF primary care site is a greater distance than the nearest VA-CCN primary care site. That Veterans living a farther distance from a VAF were more likely to receive primary care at

VA-CCN is consistent with our prior work focused on Veterans' use of sleep medicine diagnostic services,⁴¹ and that of others.^{5,9–11} Increased uptake of telehealth modes during the SARS-COV2 pandemic will likely impact how Veterans continue to seek care, as evidenced by VA telehealth visits climbing to over 3 million in 2020.⁴² The extent to which VA expands telehealth options and thereby reduces travel requirements could impact Veterans choices for primary care in the future.^{42,43}

That women Veterans in our study were more likely to use VA-CCN primary care specifically, is in line with prior research that shows that women Veterans disproportionately rely on VCP care in general.⁴⁴ However as one qualitative study noted, women Veterans experience scheduling challenges accessing VA-CCN care and timeliness of results reporting.⁴⁵ Ongoing assessment of women Veterans' experiences with their care, wherever they receive it, is important if VA is to ensure that women Veterans receive the care they need.

We found that Veterans who identified as Black had significantly lower odds of using VA-CCN primary care compared with White Veterans. This result could mean that Black Veterans prefer care at VAF and/or have strong relationships with their VAF primary care provider. On the other hand, there may be fewer options for VA-CCN primary care near where they live. As the new CCN contracts are established under the MISSION Act¹⁹ equitable access policies should consider the geographic areas where Veterans live and their preferences, as well as the quality of care delivered by community providers in the networks.

Older Veterans had progressively lower odds of using VA-CCN primary care compared with the youngest Veterans. Considering this result together with our finding that those with the highest Nosos scores were more likely to use VAF suggests that VA may continue to manage those at greater health risk and with specialty care needs within VA. As specialty follow-up care would most likely occur within VA for these individuals, coordination of care across providers will be increasingly important to ensure satisfactory patient outcomes.⁴⁶ For elderly Veterans who also have Medicare coverage, seeking non-VA care is also possible. As Veterans' choices for where to receive VA care continue to emerge under MISSION Act implementation,¹⁹ care coordination that includes both VAF, VA-CCN, and Medicare providers will also be important to consider.

That those with higher Nosos risk scores had lower odds of using VA-CCN primary care implies that those with greater health risk and health care costs may continue to use VAF primary care. How the population health risk-mix balances between VAF and VA-CCN options could result in differential costs and resources by setting. In a resource constrained environment, it will be important for VA to monitor these trends to ensure high quality care wherever Veterans seek care.

Of the of the 3 clinical conditions included (diabetes, hypertension, and psychiatric/depression), we found that only those with psychiatric/depression conditions had higher odds of receiving VA-CCN primary care. This result may reflect the likely frequency of visits needed or the complexity of care needed, as well as a preference to have this care provided closer to home. Consideration of whether Veterans with psychiatric/depression conditions have greater travel burdens

TABLE 2. Time Varying Characteristics by Primary Care Group and Fiscal Year

Characteristic	Any VA-CCN Primary Care (N = 124,940)*, Mean (SD) [Minimum–Maximum]			
	Primary Care at VAF Only (N = 6,176,756)*	Some Primary Care at VA-CCN (N = 122,337)*	Only Primary Care at VA-CCN (N = 2,603)*	All (N = 6,301,696)*
Care assessment need (CAN) score				
FY2015	47.40 (28.90) [0–99]	51.69 (27.69) [0–99]	37.84 (26.73) [0–99]	47.48 (28.89) [0–99]
FY2016	47.24 (28.29) [0–99]	51.94 (26.96) [0–99]	35.82 (25.78) [0–99]	47.34 (28.28) [0–99]
FY2017	46.59 (28.37) [0–99]	51.99 (27.08) [0–99]	37.68 (28.71) [0–99]	46.70 (28.35) [0–99]
FY2018†	46.90 (28.48) [0–99]	54.03 (27.13) [0–99]	37.13 (28.24) [0–99]	47.04 (28.47) [0–99]
Nosos score				
FY2015	1.04 (1.70) [0.15–47.12]	1.13 (1.53) [0.16–36.76]	0.73 (1.07) [0.16–12.65]	1.04 (1.70) [0.15–47.12]
FY2016	1.07 (1.75) [0.15–53.62]	1.18 (1.64) [0.16–35.60]	0.73 (1.36) [0.18–17.72]	1.08 (1.75) [0.15–53.62]
FY2017	1.06 (1.75) [0.15–44.30]	1.18 (1.67) [0.16–29.92]	0.71 (1.32) [0.18–13.12]	1.06 (1.75) [0.15–44.30]
FY2018	1.07 (1.71) [0.15–40.44]	1.25 (1.77) [0.17–30.53]	0.77 (1.30) [0.18–10.95]	1.08 (1.71) [0.15–40.44]
Primary care visits (VAF or VA-CCN) (per person per year)				
FY2015†	2.78 (2.66) [1–96]	3.97 (3.52) [1–74]	2.82 (3.24) [1–45]	2.80 (2.69) [1–96]
FY2016†	2.78 (2.64) [1–96]	4.38 (3.86) [1–79]	3.56 (3.75) [1–39]	2.82 (2.68) [1–96]
FY2017‡	2.77 (2.62) [1–95]	5.06 (4.57) [1–75]	4.08 (4.17) [1–44]	2.82 (2.71) [1–95]
FY2018‡	2.80 (2.61) [1–99]	5.79 (5.33) [1–82]	4.72 (4.99) [1–43]	2.87 (2.74) [1–99]
Insurance FY2015, N (%)†				
VA only	1,756,057 (28.4)	24,832 (20.3)	479 (18.4)	1,781,368 (28.3)
VA and private	1,044,146 (16.9)	12,203 (10.0)	177 (6.8)	1,056,526 (16.8)
VA and public	1,806,718 (29.3)	56,584 (46.3)	1269 (48.8)	1,864,571 (29.6)
VA private and public	1,569,835 (25.4)	28,718 (23.5)	678 (26.0)	1,599,231 (25.4)
Insurance FY2016, N (%)†				
VA only	171,2753 (27.7)	23,383 (19.1)	481 (18.5)	1,736,617 (27.6)
VA and private	1,093,855 (17.7)	12,618 (10.3)	176 (6.8)	1,106,649 (17.6)
VA and public	1,789,276 (29.0)	56,931 (46.5)	1281 (49.2)	1,847,488 (29.3)
VA private and public	1,580,872 (25.6)	29,405 (24.0)	665 (25.5)	1,610,942 (25.6)
Insurance FY2017, N (%)†				
VA only	1,752,734 (28.4)	22,508 (18.4)	498 (19.1)	1,775,740 (28.2)
VA and private	1,122,031 (18.2)	12,533 (10.2)	185 (7.1)	1,134,749 (18.0)
VA and public	1,750,119 (28.3)	57,467 (47.0)	1291 (49.6)	1,808,877 (28.7)
VA private and public	1,551,872 (25.1)	29,829 (24.4)	629 (24.2)	1,582,330 (25.1)
Insurance FY2018, N (%)†				
VA only	1,933,734 (31.3)	37,591 (30.7)	1156 (44.4)	1,972,481 (31.3)
VA and private	1,247,261 (20.2)	19,539 (16.0)	374 (14.4)	1,267,174 (20.1)
VA and public	1,611,775 (26.1)	43,649 (35.7)	679 (26.1)	1,656,103 (26.3)
VA private and public	1,383,986 (22.4)	21,558 (17.6)	394 (15.1)	1,405,938 (22.3)

*Number (n) varies for each cell.

†ASD > 0.20.

‡ASD > 0.50.

ASD indicates absolute standardized difference; CAN, Care Assessment Need score; FY, Fiscal Year; VA, Veterans Health Administration; VA-CCN, Veterans Health Administration Community Care Network Facility; VAF, Veterans Health Administration Facility.

that could be mediated by expanded VA telehealth deserves further exploration.⁴³

We found that those with Medicare and/or Medicaid coverage had greater odds of VA-CCN primary care compared with those with only VA coverage. This result contrasts with the result we found for those 65 years and older, which is the age at which most Veterans become age-eligible for Medicare. Those with Medicare coverage due to disability

eligibility may be driving this result. Prior research has shown that Veterans who have Medicare coverage often use non-VA care in addition to VA services.^{47–51} However, that merely having Medicare coverage may be associated with VA-CCN primary care use suggests that Veterans may have strong ties to community providers and when given the choice for setting of their VA covered care, may choose to use their VCP benefits. We could not explore if community providers seen

TABLE 3. Logistic Regression Model for Odds of Having Any VA-CCN Primary Care

Variables	Odds Ratio Estimate	Lower 95%	Upper 95%	Significance
Intercept	<0.01	0	0.01	***
FY2015	Reference	—	—	—
FY2016	1.39	1.32	1.48	***
FY2017	1.79	1.67	1.92	***
FY2018	1.96	1.83	2.09	***
Age group <45 y	Reference	—	—	—
Age group 45–54 y	0.84	0.81	0.87	***
Age group 55–64 y	0.64	0.61	0.67	***
Age group > 65 y	0.34	0.31	0.37	***
Sex = Male	Reference	—	—	—
Sex = Female	1.19	1.11	1.28	***
Race = White	Reference	—	—	—
Race = Black/African American	0.71	0.64	0.8	***
Race = Other/Unknown	1.33	1.15	1.53	***
Marital Status = Married	Reference	—	—	—
Marital Status = Single separated, divorced, other	1.02	0.98	1.07	—
Urban residence	Reference	—	—	—
Rural residence	1.38	1.19	1.62	***
Highly rural residence	1.83	1.52	2.2	***
Distance to VA Primary Care Facility 0–5 miles	Reference	—	—	—
Distance to VA Primary Care Facility 6–10 miles	0.99	0.89	1.12	—
Distance to VA Primary Care Site 11–20 miles	0.94	0.81	1.1	—
Distance to VA Primary Care Site 21–40 miles	1.14	0.97	1.35	—
Distance to VA Primary Care Site 40+ miles	6.63	5.65	7.77	***
No VA copayment required	Reference	—	—	—
Some VA copayment required	0.81	0.78	0.84	***
Full VA copayment required	0.62	0.59	0.66	***
Insurance = VA only [†]	Reference	—	—	—
Insurance = VA plus private insurance [†]	0.75	0.7	0.8	***
Insurance = VA plus Medicare and/or Medicaid [†]	2.64	2.51	2.78	***
Insurance = VA plus private and Medicare [†]	1.74	1.62	1.87	***
Nosos score [†]	0.8	0.78	0.82	***
Any diabetes = yes	0.95	0.92	0.99	**
Any hypertension = yes	0.97	0.94	1	*
Any psychiatric/depression = yes	1.23	1.19	1.28	***
Primary Care Visits (VAF or VA-CCN) per FY [†]	1.23	1.22	1.24	***
New VA enrollee = yes	0.94	0.88	1	—

[†]Time-varying.

FY indicates Fiscal year; VA, Veterans Health Administration; VA-CCN, Veterans Health Administration Community Care Network Facility; VAF, Veterans Health Administration Facility.

* $P < 0.05$, ** $P < 0.01$.

*** $P < 0.001$.

are the same as those a Veteran might also access through their Medicare coverage. Further research about potential provider and coverage shifting and its impact on VA health care use and costs is warranted.

Although during these early years the number of Veterans seeking community-based primary care is very low, over time we observed a shift toward VA-CCN. This trend could reflect a learning curve on the part of Veterans and VA providers recognizing VA-CCN as a viable option, particularly for those living greater distances from VA. The overwhelming majority of Veterans continue to receive their primary care within VAF, despite the availability of care closer to home. This result may reflect the positive relationship that Veterans have with their VAF primary care providers; prior research has shown better patient experience among Veterans receiving primary care at VA compared with in the community for communication, coordination and provider ratings.^{12,13} It is possible that Veterans value the ability to use technologies such as secure messaging and telehealth modalities to communicate and interact with their VAF providers between visits. Our findings are also in line with prior research during the first year of VCP, which found that Veterans who used some VA community outpatient care were still very likely to stick with their VA primary care provider.⁵ Monitoring these trends, especially gauging experiences of both patients and primary care providers in VAF and VA-CCN,¹³ is vital to ensuring the implementation of community care is aligned with patient and provider needs.

There are limitations to our study. First, as a retrospective study using routinely collected clinical and administrative VA data there may be aspects around patient's choice of venue of care that we could not observe and measure. Future studies that include patient perspectives could provide more context about the factors impacting their choice of VAF versus VA-CCN primary care. Second, we focused on Veterans receiving primary care under VA auspices. These results may not be generalizable to Veterans receiving VA care for specialty services, which may have different dynamics depending on if the VA primary care provider is at a VAF or VA-CCN. Third, we did not include non-VA covered care, an omission which could add to unobserved bias. Future research should directly measure the extent to which Veterans use of non-VA care influences Veterans provider choice for primary care. Fourth, we did not include primary care delivered virtually such as video visits or telehealth. Although during the study period (2015–2018) this mode of care delivery was infrequent for primary care, future studies will need to include telehealth as telehealth has increased substantially since this time and during the SARS-COV2 pandemic. Finally, we limited our analyses to those VA-CCN primary care services that we could associate with a VA authorization, which in turn limited our analyses through FY2018. Although more recent VA-CCN claims have become available, the methods for linking authorizations and claims has not been validated. As VA improves its claims processing, methods for validating claims will enhance research access to and use of these data. Future research is needed to address this methods gap.

CONCLUSION

This study is among the first to describe primary care use for Veterans with the expanded community care options under the VCP. While most Veterans continued to receive their primary care at a VAF, use of VA-CCN for primary care has increased over time. As we found that several sociodemographic and

clinical risk factors were associated with use of VA-CCN primary care, attention to these issues to minimize potential care fragmentation due to having multiple providers will be critical. Given the pivotal role that primary care holds for care coordination, ensuring that providers in all settings have the tools and resources needed to coordinate care will be important to meet Veterans' health care needs.

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