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Preventive Care Delivery After the Veterans Choice Program

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Abstract

Introduction: The Veterans Choice Program (VCP) expanded Veteran access to community care. The VCP may negatively impact receipt of preventive care services owing to care fragmentation. This study assesses 10 measures of preventive care in Veterans with Department of Veterans Affairs (VA) coverage before and after the VCP.

Methods: The study population was Veteran respondents to the National Health Interview Survey, during 2 time periods before and after VCP implementation: January 2011–October 2014 and November 2015–December 2018. Outcomes were preventive care services categorized as cardiovascular risk reduction (cholesterol monitoring, blood pressure monitoring, aspirin use), infectious disease prevention (influenza vaccination, HIV testing), and diabetes care (fasting blood glucose monitoring, podiatry visits, ophthalmology visits, influenza vaccination, and pneumonia vaccination). Two different analyses were conducted: (1) unadjusted and multivariable-adjusted pre–post and (2) difference-in-differences analyses. Analyses were conducted in 2019.

Results: Measures of cardiovascular risk reduction and influenza vaccination were not statistically different pre- and post-VCP implementation using the 2 different analytic approaches. In unadjusted pre–post analysis, after VCP implementation, Veterans with VA coverage had increased HIV testing (66.1% to 75.4%, $p=0.008$), podiatry visits (22.4% to 38.3%, $p=0.01$), and ophthalmology visits (62.2% to 77.2%, $p=0.02$). Using multivariable adjustment for participant sociodemographic factors, VCP implementation was associated with higher odds of podiatry (AOR=2.28, 95% CI=1.24, 4.20, $p=0.009$) and ophthalmology visits (AOR=2.11, 95% CI=1.13, 3.94, $p=0.02$) among Veterans with diabetes. In difference-in-differences analyses, VCP

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implementation was associated with increased podiatry visits (AOR=2.95, 95% CI=1.49, 5.83, $p=0.002$) among Veterans with diabetes and VA coverage, compared with those with other coverage types, but no statistically significant effect was observed for ophthalmology visits.

Conclusions: Veterans with VA coverage and diabetes had an increase in podiatry visits after VCP implementation. There was no evidence that VCP implementation had a negative impact on the receipt of preventive care services among Veterans with VA coverage.

INTRODUCTION

The Veterans Health Administration operated by the Department of Veterans Affairs (VA) is the largest fully integrated healthcare system in the U.S., providing comprehensive, coordinated care to 9 million Veterans. Amid concerns about delays in care in the VA system, the Veterans Choice Program (VCP) was implemented in November 2014, allowing Veterans facing long wait times or living large distances from a VA facility to receive health care from a non-VA community clinician.¹ The VCP grew rapidly: From November 2014 to August 2018, >5.9 million authorizations for specific services were made to receive care under the VCP, representing >2 million unique Veterans.²

Preventive care is crucial for Veterans, who face a disproportionate burden of cardiovascular disease and diabetes^{3,4} and high rates of cancer incidence.⁵ Preventive care services, including vaccinations and aspects of cardiovascular and diabetes care, have been shown to improve health outcomes and are cost effective.⁶⁻⁹ Although the VCP was primarily designed to increase access to specialty care, there are several mechanisms by which the VCP may affect preventive care via spillover effects. First, qualitative studies of both patients and clinicians have revealed substantial care fragmentation between the VA and community care under the VCP.¹⁰⁻¹³ Fragmentation may negatively impact receipt of preventive care services if the effort of VA primary care clinicians is diverted toward obtaining records and coordinating care with community clinicians, leaving less time for evidence-based preventive services. Second, if Veterans travel to VA facilities less often under the VCP, they may decrease utilization of VA primary care. Substituting VA primary care with either no care or community care could worsen preventive care delivery, given that care in VA facilities is associated with higher rates of cholesterol monitoring, cancer screening, influenza and pneumonia vaccinations, and guideline-concordant diabetes care compared with non-VA settings.¹⁴

On the other hand, 1 analysis showed that Veterans who used the VCP had less attrition from VA primary care.¹⁵ Through decreased attrition or other mechanisms, such as obtaining certain services in the community, it is possible that the VCP may improve receipt of Veteran preventive care services. Similarly, prior work has demonstrated that Veterans with more chronic conditions receive better quality of care, largely owing to an increased number of visits.¹⁶ Access to more clinician visits through the VCP may result in greater opportunities to receive care and thus higher quality of care.

Community care utilization among Veterans is expected to continue to expand after the Maintaining Internal Systems and Strengthening Integrated Outside Networks Act (MISSION) Act of 2018, so it is critical to understand the effect of the VCP on the delivery

of preventive care in the Veteran population. This study assesses 10 measures of preventive healthcare delivery in Veterans with VA coverage before and after the VCP. It is hypothesized that the fragmentation in care delivery caused by VCP implementation resulted in worse receipt of preventive care among Veterans.

METHODS

Study Population

Investigators performed a serial cross-sectional analysis of the National Health Interview Survey (NHIS), a nationally representative telephone-based survey conducted by the Centers for Disease Control and Prevention. The exposure of interest was VCP implementation, and the exposure group was Veterans that had only VA coverage and not other health insurance coverage types, to enrich the sample with Veterans who were most likely to be affected by the VCP. Veteran status was ascertained using the question: *[Have you] ever served on active duty in the U.S. Armed Forces, military Reserves, or National Guard?* VA coverage was assessed using the question: *What kind of health insurance or health care coverage [do you] have?* and *What types of military health care [are you] covered by?* The comparison group was all other Veterans with alternate coverage types, including VA coverage and private insurance, Medicare, Medicaid, exchange plans, HMO, TRICARE coverage, Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA) coverage, or other military coverage. Two time periods were analyzed: before (January 2011–October 2014) and 1 year after (November 2015–December 2018) implementation of the VCP. November 2015, which was 1 year after VCP implementation, was chosen as the start of the second time period to allow time for changes in preventive health service delivery to take effect.

Measures

Study outcomes were self-reported preventive health service receipt according to guideline recommendations during the study period (Table 1). Outcomes were categorized as cardiovascular risk reduction (cholesterol monitoring in high-risk individuals,¹⁷ blood pressure monitoring,¹⁸ aspirin use¹⁹), infectious disease prevention (influenza vaccination,²⁰ HIV testing²¹), and diabetes care (fasting blood glucose monitoring, podiatry visits, ophthalmology visits, influenza vaccination, pneumonia vaccination).²²

Cholesterol monitoring in high-risk individuals was defined as checking cholesterol in the past year among those with a history of hypertension, hyperlipidemia, or cardiovascular disease. Blood pressure and aspirin use was assessed according to U.S. Preventive Services Task Force recommendations. Diabetes preventive care services were according to American Diabetes Association guidelines.²² Although the American Diabetes Association does not require specialist visits for foot or eye exams, the authors used the available NHIS variables, which asked if participants have seen or talked to a foot/eye doctor during the past 12 months.

Statistical Analysis

This study described the sociodemographic and clinical characteristics of Veterans with VA coverage only (exposure group) and Veterans with alternate coverage types (comparison group). Then, the prevalence of receipt of preventive care services in Veterans with VA coverage was determined, stratified by time period. The authors first performed an unadjusted pre–post analysis using chi-square tests to compare the differences in preventive care delivery before and after VCP implementation. Multivariable logistic regression was used to examine the odds of receipt of preventive care among Veterans with VA coverage after VCP implementation compared with before implementation, adjusting for participant characteristics of age, sex, race, employment, and marital status. Finally, a difference-in-differences analysis was performed to test the robustness of the findings to different analytic methods. The difference-in-differences analysis used logistic regression with an interaction term to estimate the odds of receipt of preventive care services over time among Veterans with VA coverage compared with Veterans with alternate coverage types. The parallel trends assumption was checked by splitting the first time period into 2 segments. Multiple comparisons were accounted for with a Bonferroni correction, where a 2-sided p -value of 0.005 was considered statistically significant for all analyses. Data analyses were performed in 2019 using Stata/IC, version 15.1. NHIS data were publicly available, fully de-identified, and not subject to IRB approval. All analyses took into account the complex survey design and incorporated person-level weights included in the NHIS data sets.

Several sensitivity analyses were performed to add to the robustness of the results. First, the comparison group was changed to Veterans with no VA coverage, to remove participants in the comparison group who may have been affected by the VCP. The exposure group was then changed to any Veterans with VA coverage, including those with other coverage types, to allow for a less strict definition of the exposure population. To account for Medicaid expansion, which was a possible co-intervention during the same time period, the authors excluded participants with low family incomes who were most likely to enroll in Medicaid as part of the Affordable Care Act. Medicaid expansion targeted those <138% of the federal poverty line; the analysis excluded those <149% of the Census Bureau poverty thresholds based on thresholds in NHIS calculated variables.

RESULTS

Survey responses from 1,435 Veterans with VA coverage only were included in the analysis. Veterans with VA coverage surveyed after implementation of the VCP were younger, less likely to smoke (36.2% in 2011–2014 to 29.2% in 2015–2018, $p=0.029$), and less likely to have hyperlipidemia (44.8% to 32.0%, $p<0.001$) than those surveyed prior to VCP implementation (Table 2). In unadjusted pre–post analysis, after VCP implementation, Veterans with VA coverage had increased HIV testing (66.1% to 75.4%, $p=0.008$), podiatry visits (22.4% to 38.3%, $p=0.01$), and ophthalmology visits (62.2% to 77.2%, $p=0.02$) (Table 3), although these did not reach statistical significance at a level of $p=0.005$. Using multivariable adjustment for participant demographics, employment, and marital status, VCP implementation was associated with higher odds of podiatry (AOR=2.28, 95% CI=1.24, 4.20, $p=0.009$) and ophthalmology visits (AOR=2.11, 95% CI=1.13, 3.94, $p=0.02$)

among Veterans with diabetes (Table 3). Other preventive health services were not statistically significant different after VCP implementation in unadjusted or adjusted analyses.

In difference-in-differences analyses, measures of cardiovascular risk reduction and influenza vaccination were not statistically different pre- and post-VCP implementation in the exposure and comparison groups. VCP implementation was associated with increased podiatry visits (AOR=2.95, 95% CI=1.49, 5.83, $p=0.002$) for Veterans with diabetes and VA coverage, in difference-in-differences analyses compared with Veterans with alternate coverage types, after adjustment for participant sociodemographics. VCP implementation was not statistically significantly associated with changes in other measures of diabetes care in difference-in-differences analyses.

In the sensitivity analyses, VCP implementation was also associated with an improvement in podiatry visits comparing Veterans with VA coverage with those with no VA coverage (Appendix Tables 1 and 2). VCP implementation was not associated with changes in preventive health services over time in Veterans with VA coverage, including those with other coverage types, compared to those with no VA coverage (Appendix Tables 3 and 4). When excluding Veterans with low incomes, VCP implementation remained associated with an increase in podiatry visits (Appendix Tables 5 and 6).

DISCUSSION

In a nationally representative sample, Veterans with VA coverage and diabetes had an increase in podiatry visits after VCP implementation. There was also evidence of an increase in ophthalmology visits in adjusted serial cross-sectional analyses, although this was not statistically significant when accounting for multiple comparisons. VCP implementation was not associated with statistically significant changes in other cardiovascular, infectious disease, and diabetes preventive care measures among Veterans with VA coverage. These findings were consistent across 2 different analytic methods and several sensitivity analyses.

The findings have implications for VA policy and research. Notably, the results showing increases in podiatry service attainment indicate that the VCP may differentially benefit preventive care services that require the involvement of a specialist. These effects may increase in magnitude after 2018 with the VA MISSION Act, which relaxes the requirements needed to obtain community care.²³ Future research could evaluate the impact of the VCP on podiatry wait times, to determine if decreased wait times played a role in improving diabetes preventive care. For other preventive services involving specialists, recent evidence indicates that gastroenterology wait times did not decrease after the VCP, so it is unclear if the VCP will result in improved colorectal cancer screening among Veterans.²⁴

The results are reassuring as they did not find strong evidence of a reduction in preventive health services to Veterans after the VCP, contrary to the hypothesis. Several considerations for this finding deserve mention. First, not all Veterans in the exposure group (VA coverage only) used the VCP, which decreases the ability to observe changes in preventive care services. Second, the VA MISSION Act will result in greater expansion of community care,

which is likely to worsen scheduling difficulties, care fragmentation, and coordination challenges.^{10,11,25–27} Thus, ongoing evaluation is crucial because negative effects on cardiovascular, infectious disease, and diabetes preventive care may be seen after 2018. Third, future studies should also specifically evaluate measures of harm, such as hospitalizations or health outcomes. Barriers to viewing electronic health record data outside of the VA system may lead to worse care quality and patient safety concerns. For example, fragmented medication prescribing among Veterans with both VA coverage and Part D prescription drug benefit system was associated with an increased risk of potentially unsafe medication exposures and severe drug–drug interactions.²⁸

This study adds to a growing body of literature on the impact of the VCP on a broader range of preventive services. Mental health, including suicide prevention and post-traumatic stress disorder care, may be more negatively impacted by the VCP, because care for Veterans is highly specialized and comprehensive in VA settings.^{29,30} Surveys indicate that community clinicians may be less knowledgeable about guideline-recommended treatments for post-traumatic stress disorder³¹ and had variable interest in providing mental health care under the VCP.³² The VCP also has different implications for male and female Veterans. The VA pays for obstetric care obtained in the community, and women have reported difficulties in accessing prenatal care under the VCP, so targeted expansion of the VCP for obstetric care and potentially other aspects of care for women Veterans may improve care quality.^{33,34} Thus, the findings for preventive health services in cardiovascular, infectious disease, and diabetes care may be different from other aspects of Veteran care, including mental health services and prenatal care.

The major strength of these results is the national analysis using an expansive set of preventive care measures. Additional strengths include the choice of a difference-in-differences analysis, which accounts for unobserved time invariant confounding to the extent possible. This study also adjusts for differences in patient sociodemographics over time. Lastly, the authors carefully considered other co-interventions that occurred during same time period as the VCP, and account for Medicaid expansion in the sensitivity analysis that excludes low-income participants.

Limitations

This study has several limitations. NHIS includes limited numbers of Veterans, which resulted in some imprecise estimates and limited the ability to detect associations that may have been present, especially for preventive services that are not repeated annually. Owing to limited sample size, the authors did not perform a subgroup analysis of rural Veterans, who are more likely to participate in the VCP. Although the exposure groups differed from the comparison groups in covariates such as age, difference-in-difference estimates allow for covariate imbalance, and the authors did not find violations in the parallel trends assumption. In addition, NHIS data are self-reported and may overestimate the prevalence of certain preventive care services.^{35,36} It is possible that preventive services occurring in the past may have greater recall inaccuracy, as opposed to annual services, resulting in recall bias. Finally, the number of Veterans with only VA coverage was increasing over time during the study period, which may have resulted in changes in population characteristics.³⁷ For example,

Veterans are tested for HIV while on active duty, which may additionally confound the HIV testing findings in the post-implementation period as younger Veterans comprised a larger proportion of the post-implementation group with VA coverage. This study accounted for the population differences by adjusting for sociodemographic factors in the analysis; however, the results are likely subject to residual confounding.

CONCLUSIONS

Veterans with VA coverage had increases in 1 measure of diabetes care post-VCP implementation in adjusted analyses, and this study did not find evidence that VCP implementation was associated with substantially worse receipt of preventive care services. Ensuring high-quality preventive care for Veterans is essential amid changing national policies.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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The author contributions are as follows: research idea and study design: SLT, SK; data acquisition and analysis: SLT; data interpretation: SLT, EV, KJH, SK; supervision or mentorship: EV, KJH, SK.

Dr. Tummalapalli has performed consulting work for Bayer AG, outside the submitted work. Dr. Vittinghoff, Dr. Hoggatt, and Dr. Keyhani have nothing to disclose.

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Table 1.

Definitions of Preventive Health Services

Preventive health service	Numerator	Denominator	Guideline	Strength of recommendation
Cardiovascular risk reduction				
Cholesterol monitoring in high-risk individuals	Cholesterol checked in the past 1 year	History of HTN, HLD, or CVD	AACE ¹⁷	C ^c
Blood pressure monitoring	Blood pressure checked in the past 1 year	All participants age 18 years	USPSTF ¹⁸	A ^a
Aspirin use	Regular aspirin use	Men age 45 to 79 years and woman age 55 to 79 years excluding taking aspirin is unsafe	USPSTF ¹⁹	A ^a
Infectious disease prevention				
Influenza vaccination	Influenza vaccination in the past year	All participants	CDC ACIP ⁵	—
HIV screening	Ever tested for HIV	Participants age 18 to 65 years	USPSTF ²¹	A ^a
Diabetes care				
Cholesterol monitoring	Cholesterol checked in the past 1 year	History of DM	ADA ²²	E ^e
HbA1c monitoring	HbA1c measurement in the past 1 year	History of DM	ADA ²²	E ^e
Foot examination	Foot examination in the past 1 year	History of DM	ADA ²²	B ^b
Eye examination	Dilated eye examination in the past 1 year	History of DM	ADA ²²	B ^b
Influenza vaccination	Influenza vaccination in the past 1 year	History of DM	ADA ²²	C ^c
Pneumonia vaccination	Pneumonia vaccination ever	History of DM	ADA ²²	C ^c

^aA - “The USPSTF recommends the service. There is high certainty that the net benefit is substantial” or “Clear evidence from well-conducted, generalizable, RCTs that are adequately powered or Supportive evidence from well-conducted randomized controlled trials that are adequately powered or Compelling nonexperimental evidence”¹⁶

^bB - “The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial” or “Supportive evidence from well-conducted cohort studies or Supportive evidence from a well-conducted casecontrol study”¹⁶

^cC - “The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small” or “Supportive evidence from poorly controlled or uncontrolled studies or Conflicting evidence with the weight of evidence supporting the recommendation” or Recommendation grade weak (AACE).

^eE - “Expert consensus or clinical experience”¹⁶

USPSTF, U.S. Preventive Services Task Force; HTN, hypertension; HLD, hyperlipidemia; CVD, cardiovascular disease; AACE, American Association of Clinical Endocrinologists; DM, diabetes mellitus; ADA, American Diabetes Association; CDC ACIP, Centers for Disease Control Advisory Committee on Immunization Practices.

Table 2.

Characteristics of Veterans With VA Coverage Only (N=1,435) or Alternate Coverage Types^a (N=4,950) in 2011–2014 and 2015–2018

Characteristics	VA coverage only 2011–2014, % (n=839)	VA coverage only 2015–2018, % (n=596)	<i>p</i> -value	Alternate coverage 2011–2014, % (n=2,652)	Alternate coverage 2015–2018, % (n=2,298)	<i>p</i> -value
Sociodemographic characteristics						
Age, years			0.002			0.078
18 to 29	12.3	10.2		5.6	5.2	
30 to 49	22.9	34.5		16.4	17.7	
50 to 64	54.3	43.8		29.5	24.8	
65	10.5	11.6		48.6	52.4	
Sex			0.66			0.25
Male	89.9	89.0		90.1	88.7	
Female	10.1	11.0		9.9	11.3	
Race/Ethnicity			0.87			0.81
Non-Hispanic White	69.4	67.1		76.5	75.6	
Non-Hispanic Black	18.8	21.1		13.2	13.0	
Hispanic	9.3	8.9		7.2	7.7	
Asian	1.5	1.9		2.1	2.1	
Other	1.1	1.1		1.1	1.6	
Employment			0.63			0.82
Employed for wages	43.8	46.7		37.1	38.3	
Unemployed or unpaid	8.6	9.0		3.0	3.0	
Not in labor force	47.6	44.3		59.8	58.7	
Marital status			0.31			0.14
Married	40.9	38.9		68.3	65.9	
Divorced, separated, or widowed	33.3	30.9		23.5	23.9	
Never married	25.8	30.2		8.2	10.1	
Region			0.87			0.20
Northeast	10.7	12.0		9.3	9.8	
Midwest	21.3	21.3		18.9	20.9	
South	45.4	43.5		49.9	44.8	
West	22.7	23.3		22.0	24.5	
Clinical characteristics						
Current smoker	36.2	29.2	0.029	16.6	15.3	0.35
Obesity (BMI ≥ 30)	41.7	39.7	0.56	32.0	36.4	0.016
Hypertension	43.6	38.3	0.081	51.0	48.8	0.27
Hyperlipidemia	44.8	32.0	<0.001	49.0	44.0	0.035
Diabetes	15.1	16.7	0.49	21.5	22.1	0.70
Cardiovascular disease ^b	15.4	12.7	0.24	24.6	23.5	0.53

Notes: Percentages may not add to 100% due to rounding. *P*-values reflect chi-square tests for Veteran characteristics in 2011–2014 compared with 2015–2018. Boldface indicates statistical significance ($p < 0.05$).

^a Alternate coverage types include – VA coverage and/or private insurance, Medicare, Medicaid, exchange plans, HMO, TRICARE coverage, CHAMPVA coverage, or other military coverage.

^b Includes coronary heart disease, angina, stroke, or myocardial infarction.

VA, Veterans Affairs; CHAMPVA, Civilian Health and Medical Program of the Department of Veterans Affairs.

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Table 3.

Use of Recommended Preventive Health Services in Veterans With VA Coverage Only, 2011–2014 and 2015–2018 (N=1,435)^a

Preventive health service	N VA coverage only	2011–2014, % (n=839)	2015–2018, % (n=596)	<i>p</i> -value	AOR (95% CI) in 2015–2018 (ref=2011–2014) ^l	<i>p</i> -value
Cardiovascular risk reduction						
Cholesterol monitoring in high-risk individuals ^b	771	92.8	90.7	0.33	0.63 (0.34, 1.15)	0.13
Blood pressure monitoring ^c	1,411	90.4	87.0	0.18	0.74 (0.46, 1.20)	0.22
Aspirin use ^d	810	41.0	36.7	0.29	0.77 (0.55, 1.07)	0.12
Infectious disease prevention						
Influenza vaccination ^e	1,413	46.9	45.5	0.68	0.98 (0.75, 1.27)	0.85
HIV testing ^f	1,205	66.1	75.4	0.008	1.34 (0.96, 1.89)	0.087
Diabetes care						
Fasting glucose monitoring ^g	236	87.6	89.3	0.70	1.27 (0.58, 2.79)	0.54
Podiatry ^h	239	22.4	38.3	0.011	2.28 (1.24, 4.20)	0.009
Ophthalmology ⁱ	239	62.2	77.2	0.018	2.11 (1.13, 3.94)	0.02
Influenza vaccination ^j	238	71.4	63.1	0.16	0.67 (0.36, 1.24)	0.20
Pneumonia vaccination ^k	232	58.1	62.9	0.50	1.13 (0.60, 2.13)	0.69

Notes: Boldface indicates statistical significance ($p < 0.005$).

^aJanuary 2011–October 2014 and November 2015–December 2018.

^bCholesterol checked in the past year among those with a history of hypertension, hyperlipidemia, or cardiovascular disease.

^cBlood pressure checked in the past year among all participants age ≥ 18 years.

^dAspirin use in men age 45 to 79 years and women age 55 to 79 years, excluding those who reported having a health condition that makes taking aspirin unsafe.

^eInfluenza vaccination in past year among all participants.

^fEver tested for HIV among participants age 18 to 65 years.

^gFasting blood glucose checked in the past year among participants with diabetes.

^hSeen/talked to foot doctor in the past year among participants with diabetes.

ⁱSeen/talked to eye doctor in the past year among participants with diabetes.

^jInfluenza vaccination in the past year among participants with diabetes.

^kEver received pneumonia vaccination among participants with diabetes.

^lAdjusted for age, sex, race, employment, and marital status.

VA, Veterans Affairs.

Table 4.

Difference-in-Differences Analysis of Preventive Health Services in Veterans With VA Coverage Only (N=1,435) Compared to Veterans With Alternate Coverage Types (N=4,950), Adjusted for Participant Sociodemographics^a

Preventive health service	AOR (95% CI) DiD analysis ^l	p-value ^l
Cardiovascular risk reduction		
Cholesterol monitoring in high-risk individuals ^b	0.77 (0.36, 1.65)	0.50
Blood pressure monitoring ^c	0.90 (0.48, 1.67)	0.74
Aspirin use ^d	1.05 (0.70, 1.58)	0.80
Infectious disease prevention		
Influenza vaccination ^e	0.86 (0.94, 1.29)	0.23
HIV testing ^f	0.98 (0.63, 1.53)	0.93
Diabetes care		
Fasting blood glucose ^g	1.40 (0.48, 4.07)	0.53
Podiatry ^h	2.95 (1.49, 5.83)	0.002
Ophthalmology ⁱ	1.87 (0.90, 3.87)	0.092
Influenza vaccination ^j	0.59 (0.28, 1.23)	0.16
Pneumonia vaccination ^k	0.87 (0.39, 1.93)	0.73

Notes: Boldface indicates statistical significance ($p < 0.005$).

^aAdjusted for age, sex, race, employment, and marital status.

^bCholesterol checked in the past year among those with a history of hypertension, hyperlipidemia, or cardiovascular disease.

^cBlood pressure checked in the past year among all participants age ≥ 18 years.

^dAspirin use in men age 45 to 79 years and women age 55 to 79 years, excluding those who reported having a health condition that makes taking aspirin unsafe.

^eInfluenza vaccination in past year among all participants.

^fEver tested for HIV among participants age 18 to 65 years.

^gFasting blood glucose checked in the past year among participants with diabetes.

^hSeen/talked to foot doctor in the past year among participants with diabetes.

ⁱSeen/talked to eye doctor in the past year among participants with diabetes.

^jInfluenza vaccination in the past year among participants with diabetes.

^kEver received pneumonia vaccination among participants with diabetes.

^lAORs and p-values are for the interaction term of coverage type and time period.

VA, Veterans Affairs; DiD, difference-in-differences.