

Does Care Consultation Affect Use of VHA Versus Non-VHA Care?

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Individuals with dementia, their families, and their friends are affected by the disease on personal, emotional, and financial levels. In 2017, 47 million individuals had dementia worldwide; that number is projected to increase to 75 million by 2030.¹ The Veterans Health Administration (VHA), the largest healthcare system in the United States, provides care to more than 270,000 veterans with dementia.²

Partners in Dementia Care (PDC) is a telephone-based care coordination and support service intervention for veterans with dementia and their family caregivers, delivered through partnerships between VHA medical centers and local Alzheimer's Association (AA) chapters. It was designed to integrate health, community, and support services to address the unmet care needs of patients and caregivers across all dementia stages.³⁻⁵ PDC has been shown to lessen dementia-related needs and improve psychosocial outcomes for patients and caregivers.³⁻⁸ Our prior work has shown that PDC can reduce inpatient admissions and emergency department (ED) visits among veterans with cognitive impairment and behavioral symptoms⁹ without significantly increasing VHA healthcare costs.¹⁰

The positive outcomes from PDC and other care coordination interventions are encouraging.¹¹⁻¹⁴ However, veterans who use VHA care also frequently use non-VHA care.¹⁵⁻¹⁸ Among veterans with dementia, veteran status (priority level) influences where veterans seek care, as do need (eg, comorbidities, functional limitations) and the presence of enabling or disabling factors (eg, possession of other insurance, income level, distance from VHA facilities, education).^{19,20} Out-of-system use places veterans at risk for poor coordination of care and possible over- or underuse of services.²⁰ Prior studies have examined factors that appear to be associated with choice of care site (VHA vs non-VHA), but these studies are descriptive. We have not found any work examining whether a care coordination intervention, such as PDC, can change patients' choices of site of care.

The PDC project (2006-2011) was intended to enhance access to VHA and non-VHA services and improve integration of medical care and the network of community service organizations. If PDC was successful in improving VHA access, we anticipated that care-seeking patterns across VHA and non-VHA facilities would shift

ABSTRACT

OBJECTIVES: The Partners in Dementia Care (PDC) intervention has shown improved psychosocial outcomes while reducing overall inpatient and emergency department (ED) utilization among veterans with cognitive impairment and behavioral symptoms. However, veterans who use the Veterans Health Administration (VHA) also seek care from non-VHA sources, potentially reducing the effectiveness of care coordination. We evaluated whether PDC affected VHA and non-VHA inpatient and ED use by veterans with dementia.

STUDY DESIGN: PDC is a telephone-based care coordination and support service program implemented in 2 VHA intervention sites that were compared with 3 VHA control sites. Veterans with a dementia diagnosis and their caregivers participated.

METHODS: Data came from administrative records and structured interviews with caregivers. We modeled the likelihood of site of care across 3 periods: preintervention (baseline), baseline to 6 months, and 6 months to 12 months.

RESULTS: Compared with veterans at control sites, veterans at intervention sites who lived closer to VHA medical centers showed an increase over time ($P \leq .01$) in the likelihood of seeking VHA inpatient care as opposed to non-VHA care, whereas the likelihood of seeking non-VHA relative to VHA inpatient care increased for veterans living further away. ED visits did not show a comparable intervention effect.

CONCLUSIONS: PDC intervention affected the choice of VHA versus non-VHA inpatient care, with its impact differing by distance from VHA medical centers. Site of ED care was not affected. Accountable care organizations share some of the VHA's vulnerabilities to out-of-system use; thus, the implications of our findings extend beyond the VHA system.

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TAKEAWAY POINTS

Non-Veterans Health Administration (VHA) care can be poorly coordinated with VHA care, which can be problematic for high-need patients with dementia. Partners in Dementia Care (PDC) is a care coordination intervention shown to lessen dementia-related needs and improve outcomes. However, the impact of care coordination on use of VHA versus non-VHA care has not been examined.

- ▶ The PDC intervention is successful in changing the pattern of VHA versus non-VHA use.
- ▶ Its impact differs for inpatient versus emergency/urgent care and by distance from VHA medical centers.
- ▶ Accountable care organizations share some of the VHA's vulnerabilities to out-of-system use, extending the implications of our findings.

Intervention

PDC addressed prominent problems reported by study participants, including fragmentation and lack of coordination between medical care and community services.^{23,24} The intervention was implemented by a half-time VHA dementia care coordinator (DCC) and a half-time AA care consultant (CC). Each DCC/CC pair worked together. VHA DCCs primarily focused on veterans' medical and nonmedical needs and assisted families with effectively using VHA resources; AA CCs primarily focused on the needs of informal caregivers, such as care-

toward the VHA among intervention participants but not among participants in the control (usual care [UC]) group.

METHODS

Sample Design

Participants were recruited over 2.5 years from 5 communities.²¹ All sites were located in 1 of 2 selected Veterans Integrated Service Networks (VISNs), which provide a unifying administrative structure for VHA services within a geographic region. Study sites were matched within VISNs to assure uniformity in this administrative structure. Matched VHA medical centers were similar in size, inpatient and outpatient services, academic affiliations, research missions, and medical residency programs. Matched AA chapters were similar in size and programs. VISN 16, which includes Houston, Texas; Beaumont, Texas; and Oklahoma City, Oklahoma, was chosen because it was the location of the study's VHA principal investigator (M.E.K.). The other selected VISN (VISN 1), which includes Boston, Massachusetts, and Providence, Rhode Island, had an array of VHA and AA services similar to that of VISN 16. The intervention site was chosen randomly within each set of matched sites. Site randomization was used to allow PDC implementation throughout partnering organizations, minimizing diffusion to UC veterans. Boston and Houston served as PDC sites, and Providence, Oklahoma City, and Beaumont served as control (UC) sites.

PDC recruited veterans (Table 1) and their caregivers. Veterans' eligibility criteria included receiving primary care from the VHA, living outside an institutional setting, being 50 years or older, and having at least 1 *International Classification of Diseases, Ninth Revision, Clinical Modification* dementia diagnostic code (290.41-290.43, 291.2, 292.82, 294.1, 294.8, and 331.0) in the medical record. VHA primary care physicians confirmed eligibility prior to sampling. Eligibility was not restricted by dementia severity or symptoms. Caregivers' eligibility criteria included being an unpaid family member or friend and being the individual who provided the most assistance with a veteran's personal care, daily living tasks, and/or health-related decisions. Although infrequent, veterans with dementia could enroll without a caregiver if they were determined to have the capacity to consent using the Blessed Orientation–Memory–Concentration Test administered over the phone.²²

related strain and accessing non-VHA resources.

The intervention consisted of (1) assessment of care needs across medical and nonmedical care issues, (2) development of care goals matching the priorities of veterans and caregivers, (3) development of action steps to move participants toward goal achievement, and (4) ongoing monitoring of action steps. Patients and caregivers in both the PDC and UC arms received printed materials about dementia.²⁵ Study data came from veterans' VHA medical records and 3 structured telephone interviews conducted with caregivers at baseline, 6 months, and 12 months. The baseline interview occurred prior to distributing dementia educational materials and implementing PDC at intervention sites.²²

VHA Data

Data on hospital and ED use (including urgent care) from, or paid for by, the VHA were obtained from the VHA National Patient Care Database. Records were extracted for the periods corresponding to the time frames covered by the interviews: the 6 months prior to the baseline interview, and the two 6-month periods between the baseline, 6-month, and 12-month interviews.²⁶ Two dichotomous outcome measures representing whether veterans had any hospital admissions and any ED visits were created to represent utilization during these 3 time intervals. Hospital admissions and ED use were treated independently. An ED visit resulting in a hospital admission contributed to both indicators.

Overall health burden, measured by the Charlson-Deyo Index,²⁷ was calculated from the 6 months of prebaseline utilization data. Each veteran's VHA priority for service score was also collected from VHA administrative data. Priority scores range from 1 to 8b, with 1 being the highest service priority. Veterans were grouped into 3 priority groups (ie, 1, 2-6, and 7a-8b), broadly differentiating co-payment levels and out-of-pocket maximums.²⁸

Non-VHA Use, Patient Symptoms, and Background Data

Data on non-VHA hospital and ED use (including urgent care) came from the structured caregiver interviews. Caregivers were given dates of their baseline and 6-month interviews to use as reference points when reporting service use between months 1 to 6 and 7 to 12. Non-VHA utilization was represented using a dichotomous

indicator of any non-VHA hospital admissions and any non-VHA ED visits during the reporting periods. As with the VHA indicators, hospital admissions and ED visits were treated independently.

Additionally, caregiver reports of cognitive impairment (eg, difficulties with remembering names and addresses, knowing the day of the week, repeating things) and behavior problems (eg, acting agitated, yelling or swearing, interfering with family members) were measured using subscales from a previously published 22-item instrument.²⁹ In our sample, the cognitive impairment subscale had a Cronbach's α of 0.84 and the behavior problems subscale had an α of 0.77. Personal care dependency was measured using the activities of daily living (ADLs).³⁰ Seven background or context characteristics were collected to control for baseline differences. These were patient race, patient and caregiver ages, patient and caregiver education levels, caregiver status as a spouse versus nonspouse, and caregiver location at a Northeast or Southwest study site. We excluded self-rated patient and caregiver health due to substantial missing data for those variables, and we excluded caregiver race due to high collinearity with other variables in the model.

Statistical Methods

Baseline differences between PDC and UC participants were examined using *t* tests for continuous measures and contingency table analysis with a χ^2 test statistic or Fisher's exact test for categorical measures.

Our analyses examined change over time in site of care using patient-level outcome measures, with patients clustered by VHA site. Consequently, we conducted a within-patient, difference-in-differences (DID) analysis using a generalized estimating equation (GEE) with a population-averaged approach to model dichotomous dependent variables representing either hospital or ED use. For our models, our data consisted of longitudinal data with multiple observations on the same patient over three 6-month intervals, beginning with the preintervention baseline. We adjusted our standard errors to account for clustering by VHA site and included patient baseline characteristics, as described above, to help control for patient differences across sites.

All models included variables distinguishing PDC/UC groups (1, PDC; 0, UC); baseline, 6-month, and 12-month cognitive, behavioral, and ADL scores; baseline Charlson-Deyo Index scores; VHA/non-VHA site of encounter (1, VHA; 0, non-VHA); VHA priority level; and the

TABLE 1. Descriptive Statistics for All Variables Used in the Analysis of Any VHA Admission or Any ED Visit

| Covariate Name | Control (n = 108) | Intervention (n = 186) | Difference |
|---|--------------------------------|--------------------------------|------------|
| | % Frequency or Mean (SD) | % Frequency or Mean (SD) | P |
| Patient age in years | 79.88 (6.50) | 79.06 (8.31) | .35 |
| Caregiver age in years | 72.06 (10.30) | 68.88 (12.42) | .02 |
| Spouse caregiver | 86% | 72% | ≤.01 |
| Patient race (white) | 94% | 81% | ≤.01 |
| Caregiver education (high school graduate or lower) | 51% | 54% | .58 |
| Caregiver education (some post-high school) | 28% | 20% | .15 |
| Caregiver education (college graduate or higher) | 21% | 25% | .44 |
| Patient education (high school graduate or lower) | 46% | 39% | .20 |
| Patient education (some post-high school) | 26% | 36% | .07 |
| Patient education (college graduate or higher) | 28% | 25% | .64 |
| Distance in miles to nearest VHA facility | 36.85 (34.55) | 20.86 (16.54) | <.01 |
| Charlson-Deyo Index score | 1.81 (1.63) | 2.52 (2.30) | <.01 |
| ADLs (time ₁) | 2.77 (3.44) | 2.86 (3.22) | .82 |
| ADLs (time ₂) | 3.76 (4.11) | 2.97 (3.18) | .09 |
| ADLs (time ₃) | 4.37 (4.40) | 3.93 (3.53) | .38 |
| Behavioral problems (time ₁) | 2.67 (2.63) | 2.56 (2.54) | .75 |
| Behavioral problems (time ₂) | 2.48 (2.32) | 2.56 (2.45) | .78 |
| Behavioral problems (time ₃) | 2.63 (2.24) | 2.72 (2.39) | .77 |
| Cognitive impairment (time ₁) | 6.75 (3.59) | 6.85 (3.77) | .83 |
| Cognitive impairment (time ₂) | 6.99 (3.79) | 7.12 (3.72) | .77 |
| Cognitive impairment (time ₃) | 7.67 (3.76) | 7.93 (3.75) | .57 |
| Medicare (≥65 years) | 96% | 91% | .06 |
| PDC region (North) | 56% | 42% | .02 |
| Priority group (1) | 8% | 11% | .42 |
| Priority group (2-6) | 55% | 61% | .30 |
| Priority group (7, 8) | 37% | 28% | .11 |
| Site of care (VHA inpatient) | 14% | 24% | .04 |
| Site of care (non-VHA inpatient) | 38% | 33% | .42 |
| Site of care (VHA ED) | 52% | 35% | .01 |
| Site of care (non-VHA ED) | 28% | 39% | .05 |

ADLs indicates activities of daily living; ED, emergency department; PDC, Partners in Dementia Care; time₁, 6 months preintervention; time₂, 0-6 months post intervention; time₃, 7-12 months post intervention; VHA, Veterans Health Administration.

7 previously mentioned background and context characteristics. Because we did not have information on Medicare enrollment for the veterans in our sample, we constructed a dichotomous variable to indicate patients 65 years or older (1, 65 years or older; 0, younger than 65 years) as a proxy for Medicare enrollment. We also added the geodesic distance to the nearest VHA medical center, using patient residential zip codes, as a covariate to adjust for geographic access to care in our model. In all, we had 6 observations per participant, representing VHA and non-VHA use over the 6-month periods preceding each interview (baseline, 6-month, and 12-month).

TABLE 2. Generalized Estimating Equation Logistic Models for Any Hospital Admission and ED Visit With Interaction Terms^a

| | Any Hospital Admission | | | Any ED Visit | | |
|--|------------------------|-------|------|--------------|-------|------|
| | β | SE | P | β | SE | P |
| Intercept | 4.469 | 1.204 | ≤.01 | -4.463 | 1.161 | ≤.01 |
| Control (UC group) | Ref | | | | | |
| Intervention (PDC group) | 0.419 | 0.533 | .43 | -0.372 | 0.201 | .06 |
| Patient race (black) | Ref | | | | | |
| Patient race (white) | 0.163 | 0.265 | .54 | -0.169 | 0.217 | .44 |
| Caregiver education level | | | | | | |
| High school graduate or lower | Ref | | | | | |
| Some post-high school | -0.621 | 0.235 | .01 | -0.171 | 0.182 | .35 |
| College graduate or higher | -0.062 | 0.227 | .79 | 0.014 | 0.186 | .94 |
| Charlson-Deyo Index score | 0.098 | 0.044 | .03 | 0.045 | 0.035 | .20 |
| Caregiver age | -0.007 | 0.013 | .56 | -0.025 | 0.009 | .01 |
| Patient age | 0.040 | 0.018 | .03 | 0.063 | 0.016 | ≤.01 |
| Spouse caregiver (no) | Ref | | | | | |
| Spouse caregiver (yes) | 0.174 | 0.348 | .62 | 0.676 | 0.283 | .02 |
| Medicare, ≥65 years (no) | Ref | | | | | |
| Medicare, ≥65 years (yes) | -0.473 | 0.522 | .37 | -0.316 | 0.421 | .45 |
| PDC region (South) | Ref | | | | | |
| PDC region (North) | 0.180 | 0.197 | .36 | 0.693 | 0.153 | ≤.01 |
| ADLs | 0.090 | 0.024 | ≤.01 | 0.093 | 0.020 | ≤.01 |
| Behavioral problems | 0.023 | 0.035 | .52 | -0.016 | 0.028 | .56 |
| Cognitive impairment | 0.017 | 0.027 | .53 | -0.004 | 0.021 | .84 |
| Non-VHA site | Ref | | | | | |
| VHA site | -1.179 | 0.667 | .08 | 3.674 | 1.575 | .02 |
| Time intervals | | | | | | |
| Time ₁ | Ref | | | | | |
| Time ₂ | 0.288 | 0.552 | .60 | -0.113 | 0.133 | .40 |
| Time ₃ | 0.065 | 0.489 | .90 | -0.157 | 0.141 | .27 |
| Distance (nearest VHA medical center) | -0.001 | 0.008 | .97 | 0.001 | 0.003 | .65 |
| Interaction Terms Shown for Main Effects Only | | | | | | |
| VHA × patient age | - | - | - | -0.061 | 0.019 | ≤.01 |
| VHA × intervention | -0.748 | 0.886 | .40 | 0.929 | 0.312 | ≤.01 |
| VHA × intervention × time ₂ × distance | -0.052 | 0.037 | .16 | - | - | - |
| VHA × intervention × time ₃ × distance | -0.120 | 0.044 | .01 | - | - | - |

ADLs indicates activities of daily living; ED, emergency department; PDC, Partners in Dementia Care; ref, reference; SE, standard error; time₁, 6 months preintervention; time₂, 0-6 months post intervention; time₃, 7-12 months post intervention; UC, usual care; VHA, Veterans Health Administration.

^aPatient education and priority group variables not shown (not statistically significant).

If the PDC intervention affected choice of site of care, we expected to see a change in the relative likelihood of VHA versus non-VHA use over time among the intervention group, with no change among the UC group. Consequently, our primary DID test was an interaction between the PDC/UC group, VHA/non-VHA site of care, and time (baseline, 6 months, 12 months). Because distance from VHA facilities has been shown to affect use of VHA services, we also included our distance measure, yielding a 4-way test of interaction. Analyses were conducted using Stata version 13 (StataCorp LLC; College Station, Texas).

RESULTS

Signed consent forms were received for 508 veterans and 486 caregivers who completed the baseline interview and were randomized. During the 1-year follow-up period, 36 of 316 (11.4%) PDC participants and 18 of 192 (9.4%) UC participants died. This difference was not significant. Of the 454 remaining participants, 328 veterans with caregivers completed the follow-up interviews. Of these, 17 had missing information on the cognitive, behavioral, or personal care dependency scores. Another 17 observations were removed due to missing information on other covariates. Our final data set had a sample size of 294. With 6 observations per participant, we had 1764 observations in our analysis data set.

Table 1 describes the baseline characteristics of PDC and UC participants. There were no differences in participant ages between the PDC and UC groups, although the spouses of PDC participants were younger than those of UC participants (mean [SD], 69.0 [12.4] vs 72.0 [10.3]; $P \leq .02$). PDC participants had a higher percentage of spouse caregivers (86% vs 72%; $P \leq .001$) and higher mean (SD) prebaseline Charlson-Deyo Index scores (2.5 [2.3] vs 1.8 [1.6]; $P \leq .01$). The PDC group had a lower proportion of white participants than the control group (81% vs 94%) and, on average, lived closer to the nearest VHA medical center (mean [SD] distance in miles, 20.9 [16.5] vs 36.9 [34.6]; $P \leq .01$).

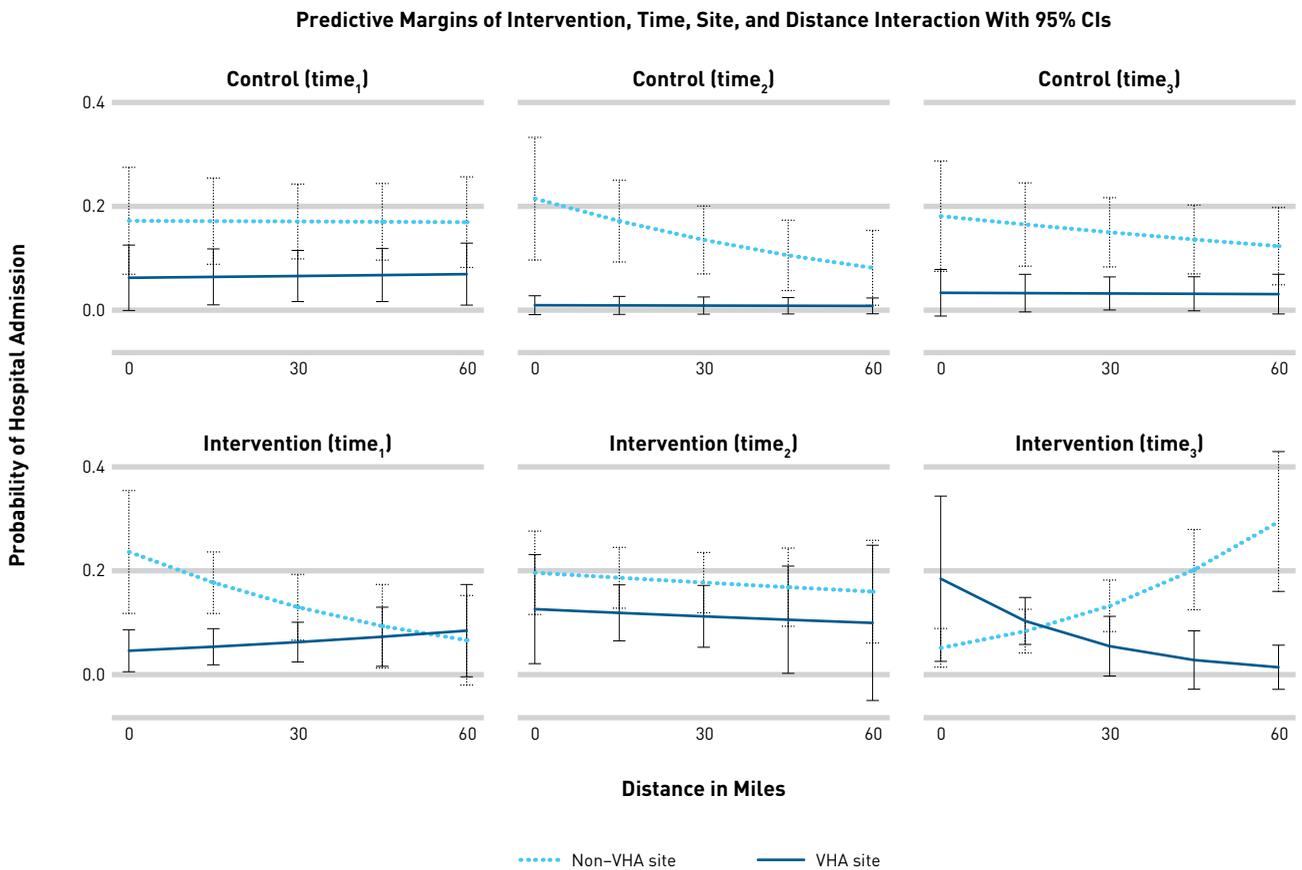
Overall, the PDC group had a higher proportion of participants with at least 1 VHA hospital admission over the study period (24% vs 14%; $P \leq .04$) but a lower proportion with at least 1 VHA ED encounter (35% vs 52%; $P \leq .01$) than the UC group over the 3 periods. A higher percentage of non-VHA ED encounters occurred in the PDC group versus the UC group (39% vs 28%; $P \leq .05$).

There were no differences between PDC and UC participants in any of the 3 periods in terms of the ADLs that they needed assistance with, their behavior problem scores, or their levels of cognitive impairment.

GEE Models

Hospital admissions. The results from our GEE logistic models are shown in Table 2. There was no overall intervention effect on site of hospital admissions. However, we found a significant 4-way interaction among time, intervention, distance from VHA facility, and site of care for hospital admissions ($P \leq .01$). This interaction indicated that the likelihood of a VHA versus non-VHA admission

FIGURE 1. Effects of the PDC Intervention, Time, and Site of Care on the Probability of Any Hospital Admission by Distance From Nearest VHA Facility



PDC indicates Partners in Dementia Care; time₁, 6 months preintervention; time₂, 0-6 months post intervention; time₃, 7-12 months post intervention; VHA, Veterans Health Administration.

changed over time, depending on whether the veteran was in the PDC or UC group and how far from the closest VHA medical center the veteran lived (Figure 1). During the prebaseline period, PDC participants appeared more likely to use non-VHA inpatient services than VHA services, with this likelihood decreasing as distance from the closest VHA facility increased. By months 7 to 12, this pattern changed. VHA admissions became more likely compared with non-VHA admissions for the PDC group veterans living closest to the nearest VHA facility, with the likelihood of VHA admissions declining with distance. The pattern of hospital admissions did not change over time for the UC veterans.

Increasing ADL scores ($P \leq .01$), Charlson-Deyo Index scores ($P \leq .03$), and patient age ($P \leq .03$) were each associated with a higher likelihood of overall inpatient utilization. We also found a significant negative association in inpatient utilization for caregivers with midlevel education (some post-high school education) compared with those with a lower level of education ($P \leq .01$). We did not see significant associations for the remainder of our covariates.

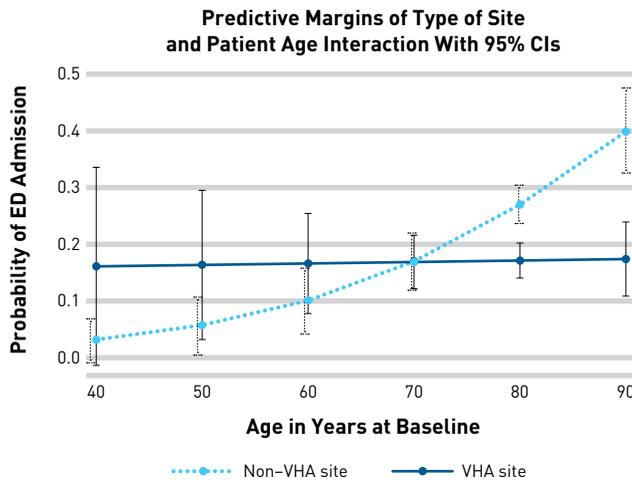
ED visits. There was a significant intervention effect for site (VHA vs non-VHA) of ED care at baseline. However, there was not a

significant site (VHA vs non-VHA) \times intervention \times time interaction, nor a significant 4-way interaction including distance, indicating that the PDC versus UC differences in VHA versus non-VHA use that existed at baseline remained throughout the follow-up period. There was also a significant interaction between patient age and site of care (Table 2). As Figure 2 indicates, as veterans aged, the likelihood of a non-VHA ED visit increased, whereas the likelihood of a VHA ED visit remained stable. The relationship did not vary by intervention status. Other covariates, such as patient age ($P \leq .01$), having a spouse caregiver ($P \leq .01$), number of ADLs ($P \leq .01$), and living in the North PDC region ($P \leq .01$), displayed a positive association with ED utilization, whereas caregiver age ($P \leq .02$) displayed a negative association.

DISCUSSION

Our findings extend the existing literature on non-VHA and VHA use by veterans by demonstrating that the PDC intervention appeared to affect where veterans with dementia sought hospital care. Prebaseline, veterans with dementia were more likely to seek

FIGURE 2. Predictive Margins Depicting the Main Interaction Effect of Site of Care on the Probability of ED Utilization Across Incremental Increases in Patient Age



ED indicates emergency department; VHA, Veterans Health Administration.

hospital care from non-VHA sites, regardless of patients' proximities to VHA facilities. In contrast, by the 12-month interview, veterans receiving the PDC intervention who lived closer to a VHA medical center showed a preference for using VHA inpatient care. We did not see a similar change in site of ED care. In contrast to inpatient care, need for ED care may be more likely to result in the use of facilities that are nearby, regardless of VHA affiliation. Inpatient care may be more affected by physician and/or patient preference and thus more susceptible to influence by PDC.

The implications of our findings potentially extend beyond the VHA system. Accountable care organizations (ACOs) share some vulnerabilities of the VHA. In both, coordination of care is essential to delivery of high-quality services, yet patients often seek care "out-of-network." PDC successfully includes health promotion and assistance for self-management, known to increase patient engagement and activation, which are important for the success of ACOs,³¹ and improved satisfaction with providers, which is important for retaining patients in care.²¹

In our models, we examined several factors that have previously been shown to be related to choice of VHA versus non-VHA care. Several of these factors were associated with use in our models as well. For inpatient admissions (Table 2), these included the number of ADLs and comorbidity burden, both positively related (ie, higher scores associated with a higher likelihood of utilization), and caregiver education. For ED use, these included patient age and having a spouse caregiver (positively related), caregiver age (negatively related), number of ADLs (positively related), and PDC region (North > South). However, we did not find some associations that we were expecting. This included VHA priority status. Priority status is partly dependent on service-related disability; consequently,

it may have overlapped with other measures, such as the Charlson-Deyo Index or ADL scores, both of which were significant in the models. Unfortunately, we did not have measures of household income and possession of other insurance, both of which have been shown to be related to inpatient and ED use; thus, we could not include them in the models. Our proxy measure for Medicare enrollment was nonsignificant, although that may have been due to its age dependence and the significance of age in our models.

Limitations

A major limitation of this study was the lack of randomization within site. There were significant site-related differences in use among PDC and UC participants prior to implementing the intervention. This suggests that some differences in use are driven by differences in patient comorbidity levels or in the service structure across the individual sites. We attempted to account for these site effects by using a within-patient DID approach, controlling for comorbidities, and estimating robust standard errors to account for natural clustering in the data.

CONCLUSIONS

Our findings suggest that the PDC intervention can affect the choice of VHA versus non-VHA care by veterans with dementia, with its impact differing in meaningful ways by type of care (inpatient vs ED) and distance from VHA medical centers. We were not able to address whether increasing use of the VHA for hospital admissions among veterans closest to VHA facilities was directly linked to better outcomes. Notably, the likelihood of non-VHA hospital services increased for veterans living further away. However, we have shown previously that participants in the PDC intervention group demonstrated significant improvements in psychosocial outcomes, as well as reduced overall inpatient and ED utilization among the subgroup of veterans with cognitive impairment and behavioral symptoms.^{26,32} As shown by our prior work, these positive outcomes appear to come without significantly increasing VHA costs over a 1-year follow-up period compared with UC.¹⁰ Future efforts should focus on testing implementations of PDC on a larger scale as a step toward demonstrating real-world impact and sustainability. ■

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