

Pre-Implementation Evaluation of a Self-Directed Care Program in one Veterans Health Administration Regional Network: A Mixed Methods Protocol

Pranjal Tyagi, Erin DeFries Bouldin, Wendy Ann Hathaway, Derek D'Arcy, Samer Nasr, Orna Intrator, Stuti Dang

Submitted to: JMIR Research Protocols
on: February 13, 2024

Disclaimer: © The authors. All rights reserved. This is a privileged document currently under peer-review/community review. Authors have provided JMIR Publications with an exclusive license to publish this preprint on its website for review purposes only. While the final peer-reviewed paper may be licensed under a CC BY license on publication, at this stage authors and publisher expressly prohibit redistribution of this draft paper other than for review purposes.

Table of Contents

Original Manuscript..... 5

Supplementary Files..... 27

 Multimedia Appendixes 28

 Multimedia Appendix 1..... 28

 Multimedia Appendix 2..... 28

 Multimedia Appendix 3..... 28

 Multimedia Appendix 4..... 28

 Multimedia Appendix 5..... 28

 Multimedia Appendix 6..... 28

Pre-Implementation Evaluation of a Self-Directed Care Program in one Veterans Health Administration Regional Network: A Mixed Methods Protocol

Pranjal Tyagi¹ BSc; Erin DeFries Bouldin² BS, MPH, PhD; Wendy Ann Hathaway³ MA; Derek D'Arcy⁴; Samer Nasr⁵ MD; Orna Intrator⁶ PhD; Stuti Dang⁷ MD, MPH

¹South Florida Veteran Affairs Foundation for Research & Education (SFVAFRE) Miami US

²Division of Epidemiology Department of Internal Medicine University of Utah Eccles School of Medicine Salt Lake City US

³Providence Veterans Affairs Medical Center Providence US

⁴Canandaigua VA Medical Center Department of Veterans Affairs Canandaigua US

⁵Department of Veterans Affairs VISN 8 Network Office St. Petersburg US

⁶Department of Public Health Sciences University of Rochester Rochester US

⁷Miami VA GRECC Miami VA Healthcare System Miami US

Corresponding Author:

Stuti Dang MD, MPH
Miami VA GRECC
Miami VA Healthcare System
1201 NW 16th St
Miami
US

Abstract

Background: The Veteran-Directed Care (VDC) program serves to assist Veterans at risk of long-term institutional care to remain at home by providing funding to hire Veteran-selected caregivers. VDC is operated through partnerships between Department of Veterans Affairs (VA) medical centers (VAMCs) and third-party aging and disability network agency (ADNA) providers.

Objective: Our aims are to identify facilitators, barriers, and adaptations in VDC implementation across 7 VAMCs in one region: Veteran Integrated Service Network (VISN) 8, which covers Florida, South Georgia, Puerto Rico, and the US Virgin Islands. We also want to understand leadership and stakeholder perspectives on VDC programs' reach and implementation, and to describe Veterans served by the VISN 8 VDC programs and their home and community-based service use. Finally, we want to compare Veterans served by VDC programs in VISN 8 to the Veterans served in VDC programs across the VA. This information is intended to be used to identify strategies and make recommendations to guide VDC program expansion in VISN 8.

Methods: The mixed-methods study design encompasses electronically delivered surveys, semi-structured interviews, and administrative data. It is guided by the Consolidated Framework for Implementation Research (CFIR 2.0). Participants included staff of VAMCs and partnering ADNAs across VISN 8, leadership at these VAMCs and VISN 8, Veterans enrolled in VDC and Veterans who declined VDC enrollment and their caregivers. We interviewed selected VAMC site leaders in social work, Geriatrics and Extended Care, and the Caregiver Support Program. Each interviewee will be asked to complete a pre-interview survey that includes information about their personal characteristics, experiences with the VDC program, and perceptions of program aspects according to the CFIR 2.0 framework. Participants will complete a semi-structured interview that covers constructs relevant to the respondent and facilitators, barriers, and adaptations in VDC implementation at their site.

Results: We will calculate descriptive statistics including means, standard deviations, and percentages for survey responses. Interviews will be analyzed using rapid qualitative techniques guided by CFIR domains and constructs. Findings from VISN 8 will be compared to national implementation, helping identify program recommendations and strategies for VDC expansion. We will use administrative data to describe Veterans served by the programs in VISN 8 and nationally.

Conclusions: The VA has prioritized VDC rollout nationally and this study will inform these expansion efforts. The findings from this study will provide information about the experiences of staff, leadership, Veterans, and caregivers in the VDC program and identify program facilitators and barriers. These results may be used to improve program delivery and facilitate growth

within VISN 8 and inform new program establishment at other sites nationally as the VDC program expands.

(JMIR Preprints 13/02/2024:57341)

DOI: <https://doi.org/10.2196/preprints.57341>

Preprint Settings

1) Would you like to publish your submitted manuscript as preprint?

✓ **Please make my preprint PDF available to anyone at any time (recommended).**

Please make my preprint PDF available only to logged-in users; I understand that my title and abstract will remain visible to all users.

Only make the preprint title and abstract visible.

No, I do not wish to publish my submitted manuscript as a preprint.

2) If accepted for publication in a JMIR journal, would you like the PDF to be visible to the public?

✓ **Yes, please make my accepted manuscript PDF available to anyone at any time (Recommended).**

Yes, but please make my accepted manuscript PDF available only to logged-in users; I understand that the title and abstract will remain visible to all users.

Yes, but only make the title and abstract visible (see Important note, above). I understand that if I later pay to participate in <http://www.jmir.org/>

Original Manuscript

Pre-Implementation Evaluation of a Self-Directed Care Program in one Veterans Health Administration Regional Network: A Mixed Methods Protocol

Contributing Authors:

Pranjal Tyagi, BS: South Florida Veterans Affairs Foundation for Research & Education (SFVAFRE), Inc., Miami, FL, Miami VA Healthcare System

Erin D. Bouldin, PhD, MPH: Informatics, Decision-Enhancement, and Analytic Sciences Center, VA Salt Lake City Health Care System; Department of Internal Medicine, University of Utah, Salt Lake City, Utah, Department of Veterans Affairs Elizabeth Dole Center of Excellence for Veteran and Caregiver Research

Wendy A. Hathaway, MA: Center of Innovation in Long Term Services and Supports (LTSS COIN), VA Providence Healthcare System, Capt. Jonathan H. Harwood Jr. Center for Research, Providence, RI, USA

Derek D'Arcy: VA Geriatrics and Extended Care Data Analysis Center, Canandaigua, NY

Samer Nasr, MD: Clinical Manager, Rehabilitation & Extended Care Programs, VA Sunshine Healthcare Network (VISN 8), Attn:10N8, 13000 Bruce B. Downs Blvd, Tampa, FL 33612

Orna Intrator, PhD, MSc: VA Geriatrics and Extended Care Data Analysis Center, Canandaigua, NY; Department of Public Health Sciences, University of Rochester, Rochester, NY, USA

Stuti Dang, MD, MPH: Miami Veterans Affairs Geriatric Research Education and Clinical Center (GRECC); Division of Geriatrics and Palliative Care, University of Miami Miller School of Medicine, Miami, FL, USA; Department of Veterans Affairs Elizabeth Dole Center of Excellence for Veteran and Caregiver Research

Corresponding Author:

Dr. Stuti Dang, MD, MPH

Miami VAHS – 1201 NW 16th St, Miami, FL 33125

(305) 575-3388

Stuti.dang@va.gov

Sdang@med.miami.edu

The authors attest that there was no use of generative artificial intelligence (AI) technology in generation of text, figures, or other informational content of this manuscript.

Abstract

Background: The Veteran-Directed Care (VDC) program serves to assist Veterans at risk of long-term institutional care to remain at home by providing funding to hire Veteran-selected caregivers. VDC is operated through partnerships between Department of Veterans Affairs (VA) medical centers (VAMCs) and third-party aging and disability network agency (ADNA) providers. **Objective:** Our aims are to identify facilitators, barriers, and adaptations in VDC implementation across 7 VAMCs in one region: Veteran Integrated Service Network (VISN) 8, which covers Florida, South Georgia, Puerto Rico, and the US Virgin Islands. We also want to understand leadership and stakeholder perspectives on VDC programs' reach and implementation, and to describe Veterans served by the VISN 8 VDC programs and their home and community-based service use. Finally, we want to compare Veterans served by VDC programs in VISN 8 to the Veterans served in VDC programs across the VA. This information is intended to be used to identify strategies and make recommendations to guide VDC program expansion in VISN 8.

Methods: The mixed-methods study design encompasses electronically delivered surveys, semi-structured interviews, and administrative data. It is guided by the Consolidated Framework for Implementation Research (CFIR 2.0). Participants included staff of VAMCs and partnering ADNAs across VISN 8, leadership at these VAMCs and VISN 8, Veterans enrolled in VDC and Veterans who declined VDC enrollment and their caregivers. We interviewed selected VAMC site leaders in social work, Geriatrics and Extended Care, and the Caregiver Support Program. Each interviewee will be asked to complete a pre-interview survey that includes information about their personal characteristics, experiences with the VDC program, and perceptions of program aspects according to the CFIR 2.0 framework. Participants will complete a semi-structured interview that covers constructs relevant to the respondent and facilitators, barriers, and adaptations in VDC implementation at their site.

Results: We will calculate descriptive statistics including means, standard deviations, and percentages for survey responses. Facilitators, barriers, number of patients enrolled, and staffing will also be presented. Interviews will be analyzed using rapid qualitative techniques guided by CFIR domains and constructs. Findings from VISN 8 will be collated to identify strategies for VDC expansion. We will use administrative data to describe Veterans served by the programs in VISN 8.

Discussion: The VA has prioritized VDC rollout nationally and this study will inform these expansion efforts. The findings from this study will provide information about the experiences of staff, leadership, Veterans, and caregivers in the VDC program and identify program facilitators and barriers. These results may be used to improve program delivery and facilitate growth within VISN 8 and inform new program establishment at other sites nationally as the VDC program expands.

Introduction

Due to exposures during their service, Veterans are at increased risk for a variety of health conditions, such as mental disorders like depression and posttraumatic stress disorder (PTSD) which are notably higher than in the civilian population.[1-3] Additionally, higher frailty is also found among Veterans with more severe wartime exposures.[1-3] Moreover, an estimated 7% of Veterans are living with Alzheimer's disease (AD) and AD-related dementias. Many Veterans who need assistance with multiple daily activities like eating, bathing, and dressing, or have severe cognitive impairment, may need care in institutional settings like nursing homes.[4,5] However, most older adults prefer to age in their own home rather than institutional settings.[6] Institutional care is also costly.[7-9] In fiscal year 2018, the Department of Veterans Affairs (VA) spent \$6.1 billion on institutional care, a 21% increase compared to 2014.[9] By 2037, these costs are projected to double.[9] As the number of Veterans at risk for long-term institutional care (LTIC) increases, the VA Geriatrics and Extended Care (GEC) has focused on expanding the home- and community-based services (HCBS) available to Veterans.[10]

The VA's Veteran-Directed Care (VDC) is one such home- and community-based service program, which was established as a partnership between the VA and the U.S. Department of Health and Human Services Administration for Community Living (ACL) in 2008.[11] The goal of this collaboration was to help Veterans with disabilities of all ages and their families receive needed services in their own homes and communities. The program operates as a self-directed program which empowers Veterans at risk of LTIC to choose their own long-term care providers and services.[12] In the VDC program Veterans and their caregivers have direct control over the goods and services they receive; they can hire their own workers, including family or friends, to provide homemaker, home health aide services focused on delivering personal care services in the home. Patients who meet eligibility requirements, which include a clinical assessment of their needs to establish level of care needed and approval of an appropriate budget, undergo referral and enrollment in VDC. These steps are collaboratively completed by the VA staff and VDC Providers such as Area Agencies on Aging (AAA), Aging & Disability Resource Centers, Centers for Independent Living, and State Units on Aging. The VDC providers assist the Veteran in fulfilling their employer responsibilities. Both VA and VDC providers subsequently review and approve all program expenditures and regularly evaluate the Veteran's health and well-being. The management of the budget is done by third-party financial management services (FMS) staff, who receive a monthly fee for these administrative duties, which also include processing payroll and taxes.

Previous research has suggested that similar self-directed services are associated with fewer unmet long-term care needs, improved patient satisfaction, and lower risk of adverse outcomes, including

injuries, compared to other home- and community-based services.[13] VDC enrollees have similar hospitalization rates and costs compared to users of other VA-purchased HCBS, despite VDC enrollees being more medically complex. Compared to other HCBS enrollees, VDC enrollees were more likely to receive aid and attendance benefits, to have a spinal cord injury, and to have higher healthcare costs.[12-17] VDC enrollees were less likely to have a VA-paid nursing home admission compared to Veterans using other personal care services paid for by VA.[14] In addition, there were fewer potentially-avoidable acute care admissions and emergency department visits among rural Veterans enrolled in VDC (but not among urban VDC enrollees).[14] Moreover, there is qualitative evidence that the VDC program is acceptable, and satisfaction among enrolled Veterans is high with participants expressing that it has given them purpose and meaning.[18] Given current workforce shortages in the healthcare sector and especially in rural areas, the ability to hire family members and neighbors as paid caregivers through self-directed services may be a particularly effective way to surmount access challenges for Veterans.[19]

VDC is currently available at 70 of the 171 VA Medical Centers (VAMCs) and served approximately 7,232 Veterans in fiscal year (FY) 2023, a nearly 15% increase from fiscal year 2022. As a solution to meet its priority of allowing Veterans to age in place if that is their preference, the VA has committed to expanding VDC to all VA facilities by the end of fiscal year 24.[20] However, there is limited understanding of factors that affect VDC expansion and program-level needs to grow enrollment.

The objective of this pre-expansion implementation evaluation is to understand the factors that affect VDC program implementation and growth in current sites in Veteran Integrated Service Network (VISN) 8, to inform implementation in new sites. This study focused on seven VDC programs within a single VISN. In the VA Healthcare System, VISNs include multiple VAMCs and community-based outpatient clinics (CBOC) and represent an important unit for oversight and service delivery.[21] VISN 8 cares for Veterans in seven VAMCs across Florida, Puerto Rico, and South Georgia and serves about 10% of Veterans over the age of 65 receiving VA care in the country.

The primary aim of this project is to evaluate the VDC program implementation in VISN 8 with the following objectives:

- (1) Describe the variability in VDC program organization and delivery across VISN 8;
- (2) Identify barriers and facilitators faced by existing VDC programs in VISN 8;
- (3) Understand leadership and stakeholder perspectives on VDC programs' reach and implementation;
- (4) Compare VDC Programs in VISN 8 to National in terms of Veterans served and

Geriatrics and Extended Care (GEC) service use; and

- (5) Use the information from aims 1-4 to identify strategies and make recommendations to guide VDC program expansion.

In this manuscript, we describe the study objectives and methods of this pre-expansion implementation evaluation.

Methods

Project site

The VA Sunshine Healthcare Network (VISN 8) is the nation's largest system of VA hospitals and clinics serving a population of more than 1.5 million Veterans in a vast 64,153 square mile area spread across 79 counties in Florida, South Georgia, Puerto Rico and the U.S. Virgin Islands.[22] VISN 8 serves a substantial proportion of older Veterans; in Fiscal Year 2020, Veterans aged 65 or older comprised a little over 50% of the entire Veteran population served in Florida.[23] Every VAMC in VISN 8 has an operational VDC program. The seven VAMCs of interest for this study are located in Bay Pines, Gainesville, Miami, Orlando, Tampa, and West Palm Beach, in Florida, and in San Juan, Puerto Rico. The catchment areas for these VAMCs also cover a portion of Southern Georgia (Gainesville VAMC) and the US Virgin Islands (San Juan VAMC).

Conceptual Framework – CFIR

We used the Consolidated Framework for Implementation Research (CFIR) to guide our evaluation plan, data collection, and analysis.[24] CFIR is a well-known determinate framework used throughout the VA and health services research to identify and describe variables influencing implementation. CFIR is an appropriate framework for providing a grounded understanding of the barriers and facilitators to the expansion and implementation of VDC programs across multiple contexts by various stakeholders. The updated CFIR 2.0 framework provides a comprehensive classification consisting of 48 constructs and 19 subconstructs over five domains: innovation, outer setting, inner setting, individual characteristics, and implementation process.[25] We identified potentially relevant CFIR constructs to assess the key determinants impacting the VDC program's operations, as well as the dynamics of organizational structure, implementation support, and other relevant domains. We then used these identified constructs to develop quantitative and qualitative data collection instruments and to guide analysis. Not all CFIR domains were represented in all the instruments (Table 1). This is consistent with other work using CFIR. Our iterative review process included project team discussions, consultation with a VA VDC staff member, and feedback from operational partners and another VA research team with expertise on VDC.

Table 1. CFIR 2.0 domains and constructs represented in data collection by study population.



Construct	VA Leadership	VA Staff	VDC Providers (AAA, ADNAs)	A ₁ . Enrolled Veterans	B ₁ . Enrolled Veterans Caregivers	C ₁ . Enrolled Veterans Employees	A ₂ . Unenrolled Veterans	B ₂ . Unenrolled Veterans Caregivers	C ₂ . Unenrolled Veterans Employees
Innovation									
Relative Advantage		X	X	X	X	X	X	X	X
Evidence Base		X	X						
Adaptability	X	X	X						
Complexity		X	X	X	X	X	X	X	X
Outer Setting									
Partnerships & Connections		X		X	X	X	X	X	X
Policy & Laws	X								
Local Conditions	X			X	X	X	X	X	X
Inner Setting									
Access to Knowledge & Information		X	X	X	X	X	X	X	X
Work Infrastructure	X	X	X						
Relative Priority		X					X	X	X
Relational Connections		X	X	X	X	X	X	X	X
Available Resources		X	X	X	X	X	X	X	X
Structural Characteristics	X	X	X	X	X	X			
Mission Alignment	X		X						
Information Technology Infrastructure		X	X	X	X	X			
Individuals									
High Level Leaders		X	X						
Implementation Facilitators	X	X	X	X	X	X			
Innovation Recipients			X	X	X	X			
Implementation Process									
Assessing Needs		X	X	X	X	X	X	X	X
Assessing Context	X			X	X	X	X	X	X
Reflecting & Evaluating	X	X	X	X	X	X			
Adapting		X							
Tailoring Strategies		X	X						
Engaging		X	X	X	X	X	X	X	X
Antecedent Assessments									

Preprint
JMIR Publications

Study Period

This three-year evaluation will use concurrent mixed methods to collect CFIR-based data about VDC implementation in VISN 8 from fiscal years 22-24.[26]

Table 2. Data collection methods, purpose, and results.

Phase	Participant Group	Data Collection Methods	Purpose	Results/ summary reports
I	VA and ADNA VDC staff	i. Surveys ii. Semi-structured interviews	Gauge knowledge base, staff experiences and perceptions, and program operation	Report on variability in VDC program organization and delivery
II	VISN 8 and VAMC leadership	Semi-structured interviews	Gain insight on leadership support, priorities and funding	Factors impacting VDC programs' reach and implementation, and organizational facilitators and barriers
III	GECDAC VDC Data	Secondary administrative data from different VA sources	Data regarding Veterans served and the utilization of home- and community-based services	Quantitative description and comparison of VISN 8 to national VDC programs on access and home- and community-based service use
IV	Veterans and caregivers	i. Semi-structured interviews ii. Surveys	Learn from the lived experiences of enrolled and non-enrolled Veterans and their Caregivers Detailed needs, social determinant, and service use data	Factors affecting VDC enrollment decision, and satisfaction with enrollment processes Health, function, quality of life, unmet needs, other HCBS program use, and socioeconomic status.
V	Research Team	Integration of findings from aims 1-4	Use the information from aims 1-4 to identify strategies to make recommendations to guide VDC program	Final report on the project summarizing data from all stakeholders to inform VDC expansion

		expansion.	
--	--	------------	--

Data Collection Procedures

We have conceptualized this project occurring in five phases (Table 2), beginning with interviews of VA and ADNA staff (Phase 1), followed by VISN and facility leadership (Phase 2). In Phase 3, existing administrative data will be used to describe the VDC participants in VISN 8 and nationally and compare results in VISN 8 to national VDC results. In Phase 4 will involve interviews with Veterans and caregivers who have been referred to or enrolled in VDC. In Phase 5, we will integrate information from Phases 1-4 to identify strategies and make recommendations to guide VDC program expansion. Both primary and secondary data will be used in this project. Primary data will be gathered through (1) VA and ADNA staff surveys; (2) VA and ADNA staff interviews; (3) VISN leadership interviews; (4) VAMC GEC leadership interviews; (5) Veteran and caregiver surveys; and (6) Veteran and caregiver interviews. See the Supplementary Appendix for all primary data collection materials. We will use secondary data from VA administrative data sources about VDC, which appear in the VHA Corporate Data Warehouse (CDW), and the Geriatrics and Extended Care Data and Analysis Center (GECDAC) data files.[27] The GECDAC collects and analyzes population-based data about Geriatrics and Extended Care programs and services, providing evidence-based information to facilitate continuous quality improvement.[27] We will collect data from participants from both the inner setting (VA program staff and leadership) and outer setting (ADNA and Financial Management System (FMS) staff, and Veterans and caregivers).

Quantitative Methods

Surveys

We have developed VDC and ADNA staff surveys and interview guides based on CFIR constructs to collect information on VDC program design, administration, and staffing. The survey and interview questions were informed by previous VDC work and are adapted from the Organizational Readiness to Change Assessment (ORCA) developed by Helfrich and colleagues.[28,29] The survey and interview guides were reviewed by a VA VDC coordinator at one VISN 8 site and by national experts in VDC and other VA HCBS. We created distinct surveys for VA and ADNA staff that covered similar topics but addressed their unique roles and responsibilities (see Supplementary Appendix).

VA staff surveys include questions about VDC program staffing, enrollment criteria, program size, referral sources, program goals and tracking, the ADNA partner(s), and the use of an external financial management system. We collect information about the respondents' professional and work experience, including how long they have worked with Veterans, in VDC, and in other HCBS programs. We ask respondents to rate a variety of VDC program aspects including referral and enrollment processes; workflow, communication, relationships, and payments between the VA and ADNA; VDC quality; and the overall program operation and delivery. The rating scale include "Excellent", "Very good", "Good", "Fair", and "Poor" response options. We ask what respondents would need at their site to be well-equipped for a hypothetical 25% increase in VDC enrollment, giving them some options like more staff; more streamlined referral and enrollment processes; more funding or quicker reimbursements, etc., and space for up to 3 additional items the respondent may enter. Response options for this question include "Yes", "No", and "Not sure". We will field the final surveys via Qualtrics, and participants will be emailed an invitation message explaining the purpose of the project along with a link to the survey.

In the interview with Veterans and caregivers, we will ask about the need for VDC service, factors affecting VDC enrollment decision, and perceptions of the VDC program's enrollment process and quality. We will also invite Veterans and caregivers to complete a survey that asks about their health, quality of life, function, unmet needs, and other HCBS program use, using the HERO CARE surveys fielded by the Elizabeth Dole Center of Excellence for Veteran and Caregiver Research.[30]

Administrative Data

We will explore Veteran demographics and health characteristics, along with utilization of other VA home- and community-based services designed to support Veterans with disabilities or long-term health care needs.[30,31] Veteran demographics and health characteristics will be retrieved from the GECDAC Core Files (GCF).[32] The GCF is a dataset that includes information on all Veterans who used the VA in a fiscal year. The GCF combines information from many VA and non-VA data sources, capturing health care utilization, costs, risk factors, and outcomes for each Veteran. A new GCF file is created each fiscal year, and we will use the GCF FY file that matches with the FY of a Veteran's VDC enrollment date when compiling demographic and health characteristic information. Variables will include Veteran age, gender, marital status, race, ethnicity, VA enrollment priority group, rurality of Veteran's residence, diagnosed health condition(s), Minnesota case-mix level, predicted long-term institutional care

risk score, Care Access and Needs (CAN) score, Nosos score, and Jen Frailty Index (JFI) score.[33-35] We will extract data on chronic conditions including but not limited to dementia, cancer, stroke, diabetes, COPD (Chronic Obstructive Pulmonary Disease), paraplegia, congestive heart failure and chronic kidney disease, and spinal cord injury. These diagnoses indicators will be identified by using Hierarchical Condition Category (HCC) Version 24-Community variables applied to combined VA and Medicare data. A Veteran will be considered to have dementia if HCC indicators HCC51 (dementia with complication) or HCC52 (dementia without complication) are flagged. Similarly, cancer will be indicated if HCC8 (Metastatic Cancer and Acute Leukemia), HCC9 (lung and other severe cancers), HCC10 (lymphoma and other cancers), HCC11 (colorectal, bladder, and other cancers), or HCC12 (breast, prostate, and other cancers and tumors) are flagged. Congestive heart failure is indicated if MCVA_V24_HCC85 (congestive heart failure) is flagged, and chronic kidney disease (CKD) is indicated if MCVA_V24_HCC136 (chronic kidney disease, stage 5), MCVA_V24_HCC137 (chronic kidney disease, severe (stage 4)), or MCVA_V24_HCC138 (chronic kidney disease moderate (stage 3)) are flagged.

Healthcare utilization data will be retrieved using the GECDAC Residential History File (RHF). The RHF uses data from VA, Medicare, and Medicaid and nursing home resident assessments to provide a daily summary of an individual's health service utilization and location of care.[36] Using the RHF, we will extract data from all inpatient visits, emergency department visits, inpatient rehabilitation, VA or non-VA nursing home, or home health care use 180 days pre- and/or 180 days post-VDC enrollment date.

Qualitative Methods

Interviews

We have developed interview guides based on the CFIR constructs discussed below and as shown in **Table 1**. The interview guides are tailored for each type of participant (i.e., VA staff, ADNA staff, VAMC GEC leadership, VISN leadership, enrolled Veterans, caregivers of enrolled Veterans, non-enrolled Veterans, and caregivers of non-enrolled Veterans). Interviews will focus on site and program specific contexts and the facilitators and barriers to VDC program implementation and administration. We will request verbal consent from all participants before the interviews.

VA and ADNA staff interviews will cover 6 CFIR domains.[24] Survey responses will be reviewed and incorporated into our interview templates to allow for the interviewer to inquire

about specific ratings or information from the interviewee's responses. Questions will ask about roles and responsibilities, enrollment and referral procedures, expansion barriers and facilitators, adaptations or best practices, local leadership support, available and needed resources, and their personal anecdotes about the VDC program.

VISN 8 administration and leadership interviews will include 7 CFIR domains. Questions will ask about their roles in overseeing program operations, comparisons to other NIC services, experiences with program expansion and/or initiation, and the most impactful aspects of VDC when advocating for medical center support.

Veteran and caregiver interviews will include 7 CFIR domains. Questions will ask about their experiences with the recruitment and referral processes, factors they considered when choosing (or not choosing) VDC, how the program has helped or hindered receiving care, and how VDC delivery could be improved.

Procedures for all interviews are similar. Interviews will be semi-structured and conducted by at least two qualitatively trained project staff, including one facilitator and one dedicated note-taker. In the event two project staff are unable to attend due to scheduling conflicts, one facilitator will conduct the interview and the note-taker will watch the recorded interview to develop notes. Interviews will last about an hour, with leadership interviews lasting about 30 minutes, and will be conducted via Microsoft Teams. Veteran and caregiver interviews maybe conducted by telephone as needed based on available technology access. Interview participants will be asked for their permission to record and transcribe the conversation; transcriptions will be created using Microsoft Teams' built-in transcription function and edited by project staff using the audio recording for reference. Detailed notes will be taken, reviewed for completeness against transcripts, and then finalized.

Participant Recruitment

We will identify participants by their relationship to each of the seven VISN 8 VDC programs. Each VDC program has a designated VDC program coordinator who oversees their local program; we will therefore recruit seven VDC coordinator participants. The project will be presented in a VISN 8 call to all the VDC coordinators by the VISN 8 GEC manager to stress the importance of the project. Following that, the seven VA VDC Coordinators will be invited to participate via email, with follow-up in a week, with up to three invitations. These VA VDC coordinators will be asked to provide contact information for the ADNA staff with whom they work, and we will invite these seven ADNA staff to participate. ADNA representatives will be

recruited via email consistent with the VA Coordinator protocol. We will interview the GEC leads at all VAMCs, and VISN leads from GEC and the Caregiver Support Program.

We will ask VDC coordinators at each VAMC to contact Veterans who are eligible for interviews and ask their permission to share their contact information with our team. The eligibility requirements for these patients includes their having undergone referral processes of VDC but includes both those that decided to enroll as well as those who did not enroll. We will invite them to participate and schedule interviews, with the intended aim of interviewing a dyad of Veteran/caregiver that is enrolled and unenrolled from each of the seven sites, for a total of fourteen interviews. We will ask Veterans for their caregiver's contact information if they have one and invite them to participate.

Ethics and Considerations

This evaluation was determined to be a quality improvement project by the VA Miami Research and Development Service and received exemption from a full Institutional Review Board review. Therefore, formal informed consent is not required. However, participants will be made aware of the interview process, their rights to stop the interview at any time; how evaluators plan to use the data being collected; and of the measures and processes that will be followed to ensure confidentiality.

All data will be collected with the permission of the participant. Interview notes, transcripts and matrix analysis will be stored in a secure folder behind the VHA firewall. The folder will only be accessible to approved team members.

Data Analysis

Quantitative Survey Data

Both survey and administrative data will be analyzed by calculating frequencies for categorical variables or means, standard deviations (SD), medians and inter-quartile ranges for continuous variables. Responses to open-ended questions will be synthesized into key summary points. Our aim is to characterize the Veterans served by VDC at each site in VISN 8 and to identify any potential differences, recognizing that the underlying Veteran populations across the state may vary by many of the demographic and health characteristics that will be

evaluated.

We will compare responses between groups of interest using chi-square tests for categorical responses and t-tests for continuous responses and consider any p-value less than 0.10 to indicate a statistical difference. Given the small number of responses and our focus on learning about and describing VDC-related needs and experiences, we will not rely heavily on formal statistical tests.

Quantitative GECDAC data analysis

We will summarize VDC participants' healthcare service utilization, including home- and community-based services, inpatient visits, emergency department visits, inpatient rehabilitation, VA or non-VA nursing home, or home health care, 180 days pre and post VDC enrollment date in periods of 30 days in the first 3 months and then the most distant quarter 91-180 days pre or post VDC enrollment, and compare these to national VDC data.

Qualitative data analysis

Semi-structured Pre-Implementation Interviews

Qualitative data from interviews will be analyzed using rapid qualitative techniques guided by CFIR domains and constructs.[37-41] Interview notes and Microsoft Teams transcriptions eliminate the need for traditional transcription processes and specialized qualitative analysis software. A structured interview summary template will be created based on each of the interview guides. Interview notes will be divided amongst team members and summary points will be derived for each interview. These summary notes will be compared across at least two qualitative team members and will be refined and finalized. Summary points will then be entered in individual rows of a Microsoft Excel spreadsheet. Qualitative analysts will review summary notes and identify key concepts and will be added to the matrix as column headers. Summary note entries will then be coded at the intersection of the row and column. Team members will review codes for discrepancies and develop consensus by adding new codes or splitting summary notes. These codes will be used to develop themes within the CFIR constructs. These themes will then be reviewed and discussed with the full analytic team during weekly meetings and analysis memos will be drafted to document relevant findings.

Results

The current status of this project is ongoing through the end of fiscal year 2024 (September 2024), with recruitment of participants and data collection having begun in October

2022. Data collection and data analyses are both ongoing; as of April 2024, we have recruited seven VDC coordinators, fifteen ADNA representatives, one FMS representative, and ten pairs of veterans and caregivers that have been referred to VDC in the past.

Discussion

The possibility of making VDC available to Veterans nationwide depends on identifying barriers and facilitators to VDC implementation and expansion. Given that Veterans prefer not to be in institutional settings, there is a palpable interest in expanding care options to include VDC for these patients. This evaluation will fill a critical gap in the literature related to VDC implementation in existing programs across the VA healthcare network.

Our proposed evaluation has several strengths. Our project uses a mixed methods approach with quantitative data using both surveys and administrative data, and qualitative data using interviews. Moreover, data will be gathered not only through engagement of VDC staff and leadership at multiple organizational levels, both within VA and their partnering community agencies, but also directly from veterans and caregivers on how VDC, in its current iteration, addresses their needs. This study will strengthen our understanding of the barriers and facilitators impacting VDC-eligible Veterans and examine the factors that influence Veterans to choose VDC or elect to use other home- and community-based services.

Potential weaknesses of this study include that these practices can be unique to the VA ecosystem. Moreover, it is only studying one VISN alone in the VA, a VISN which has a higher proportion of older veterans than other VA regions, thus potentially affecting availability of services. Therefore, these results may not be generalizable to non-VA self-directed programs, nor to other VA regions. We also anticipate challenges associated with recruitment, especially of veterans who chose not to enroll in VDC.

This examination is particularly timely as President Biden required the VA to expand VDC to all VAMCs by the end of FY 2025 via Executive Order 14095 – “Increasing Access to High-Quality Care and Supporting Caregivers”.[42] Our results will provide guidance to not only VDC programs wishing to expand their VDC patient roster but for those VAMCs newly implementing VDC services for the first time. Our long-term aim is to use this work to inform best practices, and policy decisions for VDC.

Funding: This work was supported in part by funding from the VISN 8 and the Miami VA GRECC.

Disclaimer: The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.

Previous Presentation: Portions of this work were presented as a poster at the 15th Annual Conference on the Science of Dissemination and Implementation in Health, co-hosted by the National Institutes of Health and AcademyHealth, on December 12, 2022, and as a paper presentation at the Gerontological Society of America annual meeting on November 8, 2023.

Keywords

long-term institutional care, self-directed care, veteran directed care

Abbreviations

AAA	–	Area	Agency	on	Aging
ACL	–	Administration	for	Community	Living
AD	–	–	Alzheimer's	–	Disease
ADNAs	–	Aging	Disability	Network	Agencies
CAN	–	Care	Assessment	–	Need
CBOC	–	Community-Based	Outpatient	–	Clinic
CDW	–	Corporate	Data	–	Warehouse
CFIR	–	Consolidated	Framework	for	Implementation
COPD	–	Chronic	Obstructive	–	Pulmonary
FMS	–	Financial	Management	–	Service
GEC	–	Geriatrics	and	Extended	Care
GECDAC	–	Geriatrics	and	Extended	Care
HCBS	–	Home-	and	Community-Based	Services
HCC	–	Hierarchical	Condition	–	Category
JFI	–	Jen's	Frailty	–	Index
LTIC	–	long	term	institutional	care
ORCA	–	Organizational	Readiness	to	Change
PTSD	–	Post	Traumatic	Stress	Disorder
RHF	–	Residential	History	–	File
SD	–	Standard	–	–	Deviation
VA	–	Veteran	Affairs	Medical	Centers
VAMCs	–	Veteran	Affairs	Medical	Centers
VDC	–	Veteran-Directed	Health	–	Care
VHA	–	Veterans'	Health	Administration	–
VISN – VHA Integrated Service Network					

References

1. Bhattarai, J. "Jackie", Oehlert, M. E., Multon, K. D., & Sumerall, S. W. (2019). Dementia and Cognitive Impairment Among U.S. Veterans With a History of MDD or PTSD: A Retrospective Cohort Study Based on Sex and Race. *Journal of Aging and Health*, 31(8), 1398-1422. <https://doi.org/10.1177/0898264318781131>
2. Zachary Zimmer, Kim Korinek, Yvette Young, Bussarawan Teerawichitchainan, Tran Khanh Toan, Early-Life War Exposure and Later-Life Frailty Among Older Adults in Vietnam: Does War Hasten Aging?, *The Journals of Gerontology: Series B*, Volume 77, Issue 9, September 2022, Pages 1674–1685, <https://doi.org/10.1093/geronb/gbab190>
3. Krishnan LL, Petersen NJ, Snow AL, Cully JA, Schulz PE, Graham DP, Morgan RO, Braun U, Moffett ML, Yu HJ, Kunik ME. Prevalence of dementia among Veterans Affairs medical care system users. *Dement Geriatr Cogn Disord*. 2005;20(4):245-53. doi: 10.1159/000087345. Epub 2005 Aug 8. PMID: 16088141.
4. Selim AJ, Berlowitz DR, Fincke G, et al. The health status of elderly veteran enrollees in the Veterans Health Administration. *J Am Geriatr Soc*. 2004;52(8):1271-1276. doi:10.1111/j.1532-5415.2004.52355.x
5. Vaughan Sarrazin M, Rosenthal GE, Turvey CL. Empirical-Based Typology of Health Care Utilization by Medicare Eligible Veterans. *Health Serv Res*. 2018;53 Suppl 3:5181-5200. doi:10.1111/1475-6773.12995
6. AARP. Where We Live, Where We Age: Trends in Home and Community Preferences. Published November 2021. Accessed March 24, 2022. <https://livablecommunities.aarpinternational.org/>
7. Chidambaram P, 2022. 10 Things About Long-Term Services and Supports (LTSS). KFF. Published September 15, 2022. Accessed September 19, 2022. <https://www.kff.org/medicaid/issue-brief/10-things-about-long-term-services-and-supports-ltss/>
8. Guo J, Konetzka RT, Manning WG. The causal effects of home care use on institutional long-term care utilization and expenditures. *Health Econ*. 2015;24 Suppl 1:4-17. doi:10.1002/hecl.3155
9. Government Accountability Office. *Veterans' Use of Long-Term Care Is Increasing, and*

VA Faces Challenges in Meeting the Demand. US Government Accountability Office; 2020:42. Accessed December 13, 2023. <https://www.gao.gov/assets/710/704690.pdf>

10. US Department of Veterans Affairs. Geriatrics and Extended Care Home. Accessed June 16, 2023. <https://www.va.gov/GERIATRICS/index.asp>

11. Office of the Inspector General, Department of Veterans Affairs. *Opportunities Exist to Improve Management of Noninstitutional Care through the Veteran-Directed Care Program.*; 2021:65. Accessed December 13, 2023. <https://www.oversight.gov/report/VA/Opportunities-Exist-Improve-Management-Noninstitutional-Care-through-Veteran-Directed-Care>

12. Yuan Y, Thomas KS, Frakt AB, Pizer SD, Garrido MM. Users Of Veteran-Directed Care And Other Purchased Care Have Similar Hospital Use And Costs Over Time. *Health Aff (Millwood)*. 2019;38(6):1037-1045. doi:10.1377/hlthaff.2019.00020

13. Kevin J. Mahoney, Ellen K. Mahoney, Carmen Morano & Andrew DeVellis (2019) Unmet needs in self-directed HCBS programs, *Journal of Gerontological Social Work*, 62:2, 195-215, DOI: [10.1080/01634372.2018.1451421](https://doi.org/10.1080/01634372.2018.1451421)

14. Yuan Y, Thomas KS, Van Houtven CH, et al. Fewer potentially avoidable health care events in rural veterans with self-directed care versus other personal care services. *J Am Geriatr Soc*. Published online January 13, 2022. doi:10.1111/jgs.17656

15. Savla J, Sapra M, Hagemann L, Luci K. Home and Community Based Service Use Among Veterans With Dementia Living in Rural Virginia. *Innovation in Aging*. 2021;5(Supplement_1):108. doi:10.1093/geroni/igab046.412

16. Coburn AF, Ziller EC, Paluso N, Thayer D, Talbot JA. Long-Term Services and Supports Use Among Older Medicare Beneficiaries in Rural and Urban Areas. *Res Aging*. 2019;41(3):241-264. doi:10.1177/0164027518824117

17. Roberto KA, Savla J, McCann BR, Blieszner R, Knight AL. Dementia Family Caregiving in Rural Appalachia: A Sociocultural Model of Care Decisions and Service Use. *The Journals of Gerontology: Series B*. Published online December 24, 2021:gbab236. doi:10.1093/geronb/gbab236

18. Mahoney EK, Milliken A, Mahoney KJ, Edwards-Orr M, Willis DG. "It's Changed Everything": Voices of Veterans in the Veteran-Directed Home and Community Based Services Program. *J Gerontol Soc Work*. 2019;62(2):129-148. doi:10.1080/01634372.2018.1458054

19. House, W. (2023a). Executive Order on Increasing Access to High-Quality Care and Supporting Caregivers. *The White House*. <https://www.whitehouse.gov/briefing-room/presidential-actions/2023/04/18/executive-order-on-increasing-access-to-high-quality-care-and-supporting-caregivers/>

20. U.S. Department of Veterans Affairs. (n.d.). *VA Veteran Directed Care: Accelerated Expansion* [Slide show; Presentation slides]. Applied Self-Direction. <https://appliedselfdirection.com/sites/default/files/VDC%20Slides.pdf>

21. Veterans Health Administration. (n.d.). *VA.gov | Veterans Affairs*. <https://www.va.gov/HEALTH/visns.asp>

22. US Department of Veterans Affairs, Veterans Health Administration. (n.d.). *VA.gov | Veterans Affairs*. <https://www.visn8.va.gov/VISN8/about/index.asp>

23. Planning, O. O. P. A. (n.d.). *VA.gov | Veterans Affairs*. https://www.va.gov/vetdata/Veteran_Population.asp
24. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci*. (2009) 4:50. doi: 10.1186/1748-5908-4-50
25. Damschroder, L.J., Reardon, C.M., Widerquist, M.A.O. *et al*. The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation Sci* **17**, 75 (2022). <https://doi.org/10.1186/s13012-022-01245-0>
26. Tariq, S., & Woodman, J. (2013). Using mixed methods in health research. *JRSM short reports*, 4(6), 2042533313479197.
27. U.S. Department of Veterans Affairs. (2023, July 18). *Geriatrics and Extended Care Data Analysis Center*. Geriatrics and Extended Care. Retrieved December 19, 2023, from https://www.va.gov/GERIATRICS/Geriatrics_and_Extended_Care_Data_Analysis_Center.asp
28. Sperber NR, Miech EJ, Clary AS, Perry K, Edwards-Orr M, Rudolph JL, Van Houtven CH, Thomas KS. Determinants of inter-organizational implementation success: A mixed-methods evaluation of Veteran Directed Care. *Healthc (Amst)*. 2022 Dec;10(4):100653. doi: 10.1016/j.hjdsi.2022.100653. Epub 2022 Sep 12. PMID: 36108526; PMCID: PMC10174078.
29. Helfrich CD, Li YF, Sharp ND, Sales AE. Organizational readiness to change assessment (ORCA): development of an instrument based on the Promoting Action on Research in Health Services (PARIHS) framework. *Implement Sci*. 2009;4:38. doi:10.1186/1748-5908-4-38
30. Dang S, Garcia-Davis S, Noël PH, Hansen J, Brintz BJ, Munoz R, Valencia Rodrigo WM, Rupper R, Bouldin ED, Trivedi R, Penney LS, Pugh MJ, Kinoshian B, Intrator O, Leykum LK; Elizabeth Dole Center of Excellence for Veteran and Caregiver Research Team. Measuring the unmet needs of American military Veterans and their caregivers: Survey protocol of the HERO CARE survey. *J Am Geriatr Soc*. 2023 Sep 12. doi: 10.1111/jgs.18577. Epub ahead of print. PMID: 37698336.
31. Dang S, Bouldin E, Hathaway W, Penney L, Panellas I, Intrator O, Nasr S. A System Level Pre-Implementation Evaluation to Inform Program Expansion of Veteran Directed Care. Poster Presentation at the *15th Annual Conference on the Science of Dissemination and Implementation*, Washington, D.C. December 11-14, 2022.
32. Dally S, Wesgate S, Phibbs C, Kinoshian B, Intrator O. Guidebook for Use of the GECDAC Core Files, Version 2. July 2022.
33. Ruiz JG, Priyadarshni S, Rahaman Z, Cabrera K, Dang S, Valencia WM, Mintzer MJ. Validation of an automatically generated screening score for frailty: the care assessment need (CAN) score. *BMC Geriatr*. 2018 May 4;18(1):106. doi: 10.1186/s12877-018-0802-7. PMID: 29728064; PMCID: PMC5935952.
34. Wagner, T, Stefos T, Moran E, Cashy J, Shen ML, Gehlert E, Ash S, and Almenoff P. 2016a. Risk Adjustment: Guide to the V21 and Nosos Risk Score Programs. Technical Report 30. Menlo Park, CA: VA Palo Alto, Health Economics Resource Center (HERC).

35. Kinosian B, Wieland D, Gu X, Stallard E, Phibbs CS, Intrator O. Validation of the JEN frailty index in the National Long-Term Care Survey community population: identifying functionally impaired older adults from claims data. *BMC Health Serv Res*. 2018 Nov 29;18(1):908. doi: 10.1186/s12913-018-3689-2. PMID: 30497450; PMCID: PMC6267903.
36. Intrator O, Makineni R. [Geriatrics and Extended Care Data Analysis Center Residential history File \(GECDAC RHF\)](https://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=5258). VIREC Webinars 9 January 2023, https://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=5258.
37. Dang S, Bouldin E, Hathaway W, Tyagi P, Penney L, Intrator O, Nasr S. Veteran Directed Care: A Mixed Methods Study to Inform Self Directed Care Program Expansion for Veterans Affairs (VA). Abstract submitted for professional paper presentation at *The Gerontological Society of America's 2023 Annual Scientific Meeting*, Tampa, FL, November 8-12, 2023.
38. Vindrola-Padros C, Johnson GA. Rapid Techniques in Qualitative Research: A Critical Review of the Literature. *Qual Health Res*. 2020 Aug;30(10):1596-1604. doi: 10.1177/1049732320921835. PMID: 32667277.
28. Beebe, J. (2014). *Rapid qualitative inquiry: A field guide to team-based assessment*. Rowman & Littlefield.
39. Koenig CJ, Abraham T, Zamora KA, Hill C, Kelly PA, Uddo M, Hamilton M, Pyne JM, Seal KH. Pre-Implementation Strategies to Adapt and Implement a Veteran Peer Coaching Intervention to Improve Mental Health Treatment Engagement Among Rural Veterans. *J Rural Health*. 2016 Sep;32(4):418-428. doi: 10.1111/jrh.12201. Epub 2016 Aug 10. PMID: 27509291.
40. Hamilton, Alison B., PhD, MPH Rapid Qualitative Analysis: Updates & Developments VA HSR&D Cyberseminar, September 29, 2020
41. Lewinski, Allison A., Crowley, Matthew J., Miller, Christopher, Bosworth, Hayden B., Jackson, George L., Steinhauer, Karen, White-Clark, Courtney, McCant, Felicia, Zullig, Leah L. Applied Rapid Qualitative Analysis to Develop a Contextually Appropriate Intervention and Increase the Likelihood of Uptake. *Medical Care* 59():p S242-S251, June 2021. | DOI: 10.1097/MLR.0000000000001553.
42. House, W. (2023, April 18). *Executive Order on Increasing Access to High-Quality Care and Supporting Caregivers*. The White House. Retrieved December 19, 2023, from <https://www.whitehouse.gov/briefing-room/presidential-actions/2023/04/18/executive-order-on-increasing-access-to-high-quality-care-and-supporting-caregivers/>.

Supplementary Files

Multimedia Appendixes

VISN 8 VDC Coordinator Interview Guide.

URL: <http://asset.jmir.pub/assets/37793d99815ab69ad32f9304c624abfb.docx>

VISN 8 VDC Community Providers Interview Guide.

URL: <http://asset.jmir.pub/assets/5399c55a6f907f53e029e70961a8e678.docx>

VISN 8 VDC Financial Management Services Interview Guide.

URL: <http://asset.jmir.pub/assets/eeaba707932ac62360974a523088901c.docx>

VISN 8 VDC Leadership Interview Guide.

URL: <http://asset.jmir.pub/assets/7ce9fc3d7e59aad138f25921bcb066dd.docx>

VISN 8 VDC Enrolled Veterans and Caregivers Interview Guide.

URL: <http://asset.jmir.pub/assets/fdadfed742b45c429672f3f39bdd71ab.docx>

VISN 8 VDC Non-enrolled Veterans and Caregivers Interview Guide.

URL: <http://asset.jmir.pub/assets/26d325ed51daa788479f5a7e040a5f06.docx>