COMPREHENSIVE SUPPORT FOR INFORMAL CAREGIVERS: IMPACT ON CARE RECIPIENT HEALTH CARE UTILIZATION AND COSTS

Evidence from the partnered evaluation of the Veterans Affairs Caregiver Support Program

Funding:
VA Caregiver Support Program
VA Quality Enhancement Research Initiative (QUERI)
Durham VA HSR&D Center of Innovation (COIN)

Outline

- Introduction
  - Veterans Affairs Caregiver Support Program Methods
- Methods
- Results
- Conclusions

Historically direct policies to support family caregivers in U.S. have been modest

- Prior to 2011
  - ~$500 tax credits in a handful of states
  - Training in the past 15 years ($150 million total annually)
  - Medicaid allows beneficiaries to pay caregivers directly (25 states)

- In 2011 the most sweeping support for family caregivers ever in the U.S. was enacted…

Creation of the VA Caregiver Support Program

The Caregivers and Veterans Omnibus Health Services Act of 2010 signed into Law by Pres. Obama May 5, 2010 (P.L. 111–163).

Title One –Sections 101-104 outlined specific new services to be provided for caregivers of Veterans.

1. Program of Comprehensive Assistance for family caregivers (PCAFC) of *eligible Veterans injured in the line of duty on or after 9/11/2001*

2. Program of General Caregiver Support for caregivers of *all Veterans in need of a caregiver*

VA Caregiver Support Program Office housed in Care Management and Social Work Services, Patient Care Services

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VA Caregiver Support Program (CSP)

Mission Statement: *To promote the health and well-being of family caregivers who care for our nation's Veterans, through education, resources, support, and services.*

- Allow Veterans to remain at home in the community
- Address needs of family caregivers with menu of programs & services
- Promote Veteran & caregiver health and well-being
- Provide one location to obtain needed information
- Provide training & information on common conditions
- Reduce isolation of family caregivers with professional & peer support
- Sensitize health care providers to the caregivers' role

Program of Comprehensive Assistance for Family Caregivers (PCAFC) Overview

- Clinical program, providing the following directly to family caregivers of eligible Veterans injured in the line of duty on or after 9/11/2001:
  - Stipend
  - Enrollment in CHAMPVA
  - Mental Health Services
  - Beneficiary Travel
  - Education and Training
  - Respite Care
- Program participation ***must***:
  - Be in the clinical best interest of the Veteran
  - Support the Veteran's progress in treatment

PCAFC – Current Data*

- Applications filed since May 2011: 73,000
- Participating caregivers/Veterans: 22,900
  - Tier 3 – 7,000 (stipend national average $2,400 per month)
  - Tier 2 – 8,900 (stipend national average $1,500 per month)
  - Tier 1 – 7,000 (stipend national average $640 per month)
- New Healthcare Coverage enrollees: 5,500

*Data current as of April 2016

VA CSP sought Information on Impacts

- What is short term return on investment?
  - $1 billion spent by May 2016

Evaluation Objectives

To **evaluate short-term impacts** of The Caregiver Support Program on Veterans and caregivers and improve the Caregiver Support Program's ability to **refine and optimize services** while continuing to meet demands of the law

- AIM 1: Does PCAFC impact Veteran health care utilization and health care costs?
- AIM 2: How does caregiver support affect caregiver well-being?
- AIM 3: How do caregivers use and value components of The Caregiver Support Program?
- AIM 4: What is the value of services offered?

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Possible Pathways →Health Care Use

- Stipend
  - Easier to accompany Veteran to appointments
- Training
  - Enhance caregiver ability to navigate the VA healthcare system
  - Improve quality of caregiving at home
- Direct counseling by Caregiver Support Coordinators (CSCs)
  - Help caregiver match Veteran w/ needed mental health care
- Net impact on Veteran utilization?
  - Seek more or more timely outpatient care; avoid unnecessary ED visits
- Net impact on Total VA Health Care Costs?
  - Unclear

Data Sources

- The Caregiver Application Tracker (CAT)
  - Application date, program determination, enrollment date.

- VA electronic health record data abstracted from
  - Corporate Data Warehouse (CDW) and Assistant Deputy Under Secretary for Health for Policy & Planning (ADUSH) Enrollment files.
  - Fee basis files (VA-purchased healthcare)

Methods

- Pre-post cohort design with a non-equivalent control group in order to understand how the program has affected those enrolled compared to similar Veterans not enrolled
  - Treatment group
    - Veterans whose caregivers were enrolled in PCAFC as of March 2014
  - Control group
    - Veterans whose caregivers applied by March 2014 but were never approved for PCAFC

Methods

- Concern: Control and treatment groups may be inherently different at time of application
  - Want to ensure estimated treatment effect is due to treatment and not baseline differences that already existed
- Solution: Use propensity scores to construct “inverse probability of treatment weights”
  - Propensity score = estimated probability of receiving treatment based on observed characteristics at time of application

Methods

- Apply weights to create a pseudo-population that is more comparable between the two groups
  - Obtain the average effect of treatment on those enrolled in PCAFC (ATT)
  - Why the ATT? Primary interest was in the policy perspective of the decision-maker.
    - Intention-to-treat perspective, purposely do not consider whether the dyad remained in the PCAFC, dropped out, or graduated.
- Evaluate performance
  - Examination of pre-application date trends after weighting;
  - Standardized differences

Primary Outcomes

OUTCOME (6 MONTH INTERVALS):	SETTING:
Hospitalization	VA/VA-purchased
Emergency Department Visit	VA/VA-purchased
Mental Health Outpatient Care	VA/VA-purchased
Primary Care	VA
Specialty Care	VA
Long Term Services and Supports (LTSS)	VA/VA-purchased
Total Costs of Healthcare	VA/VA-purchased

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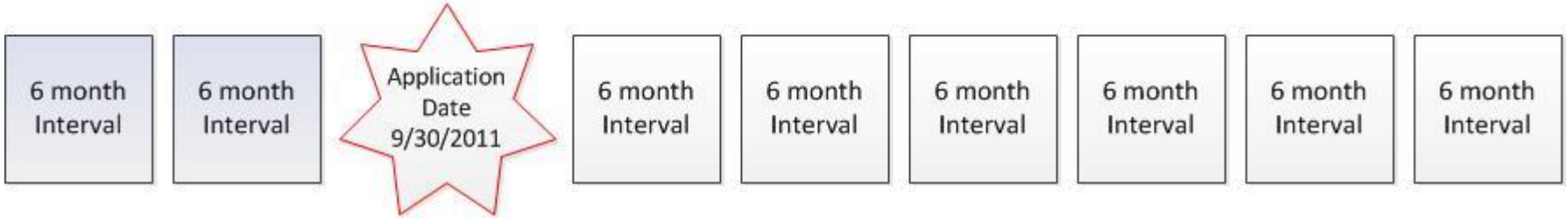
Long Term Services and Supports (LTSS)	VA/VA-purchased
Total Costs of Healthcare	VA/VA-purchased

Sample Size

-This study intended to capture early impacts of PCAFC

Tx= 15,650
Cntrl= 8,339



Tx= 2,056
Cntrl= 325

RESULTS

Most Common Physical Comorbidities

Baseline Characteristics, %	Unweighted Cohort		
	Control Group	Treatment Group	Std. Diff.
Musculoskeletal disorders/diseases	58.9	64.8	**12.3**
Pain, not including back or joint	39.8	47.7	**15.9**
Joint pain, not including back	35.7	39.9	8.7
Hyperlipidemia	28.0	28.1	0.3
Hypertension	26.3	24.4	-4.5
Traumatic brain injury	18.9	32.5	**30.7**

Most Common Mental Health Comorbidities

Baseline Characteristics, %	Unweighted Cohort		
	Control Group	Treatment Group	Std. Diff.
Post-Traumatic Stress Disorder	60.2	73.7	**29.4**
Depression	45.7	52.1	**12.7**
Anxiety	24.1	25.9	4.2
Tobacco use	19.7	22.9	7.7
Alcohol or substance abuse	19.2	20.9	4.2
Other mental health[9]	14.1	17.3	8.6
Adjustment reaction	9.8	10.2	1.3
Bipolar disorder	9.2	10.9	5.5

Characteristics of Sample

Baseline Characteristics	Unweighted Cohort		
	Control Group	Treatment Group	Std. Diff.
Female, %	10.9	7.6	**-11.5**
Age, mean (SD)	38.6 (10.3)	36.2 (8.9)	**-25.1**
Married, %	66.2	68.8	5.5
Race/Ethnicity, %			
White	58.5	69.2	**22.8**
Black	29.1	18.3	**-26.4**
Other	5.8	6.8	4.1
Unknown	6.6	5.7	-3.9
Hispanic/Latino(a)	10.0	13.6	**11.1**
Service connected, %			
High (≥70%)	64.0	72.3	**18.2**
Medium high (50-69%)	14.8	11.9	-8.7
Medium low (10-49%)	8.3	5.5	**-11.4**
Low (<10%)	12.9	10.3	-8.3
Enrollment priority group, %			
Group 1	79.8	85.1	**14.2**
Group 2-4	11.4	9.0	-8.0
Group 5-8 or missing	8.8	5.9	**-11.4**
# mental health visits prior 12 mo's, mean (SD)	4.2 (8.4)	5.5 (9.5)	**14.6**
# VA primary care clinic stops prior 12 mo's, mean (SD)	1.3 (1.6)	1.6 (1.7)	**12.8**
Nosos score prior 12 mo's, mean (SD)	1.2 (1.7)	1.5 (2.0)	**13.1**

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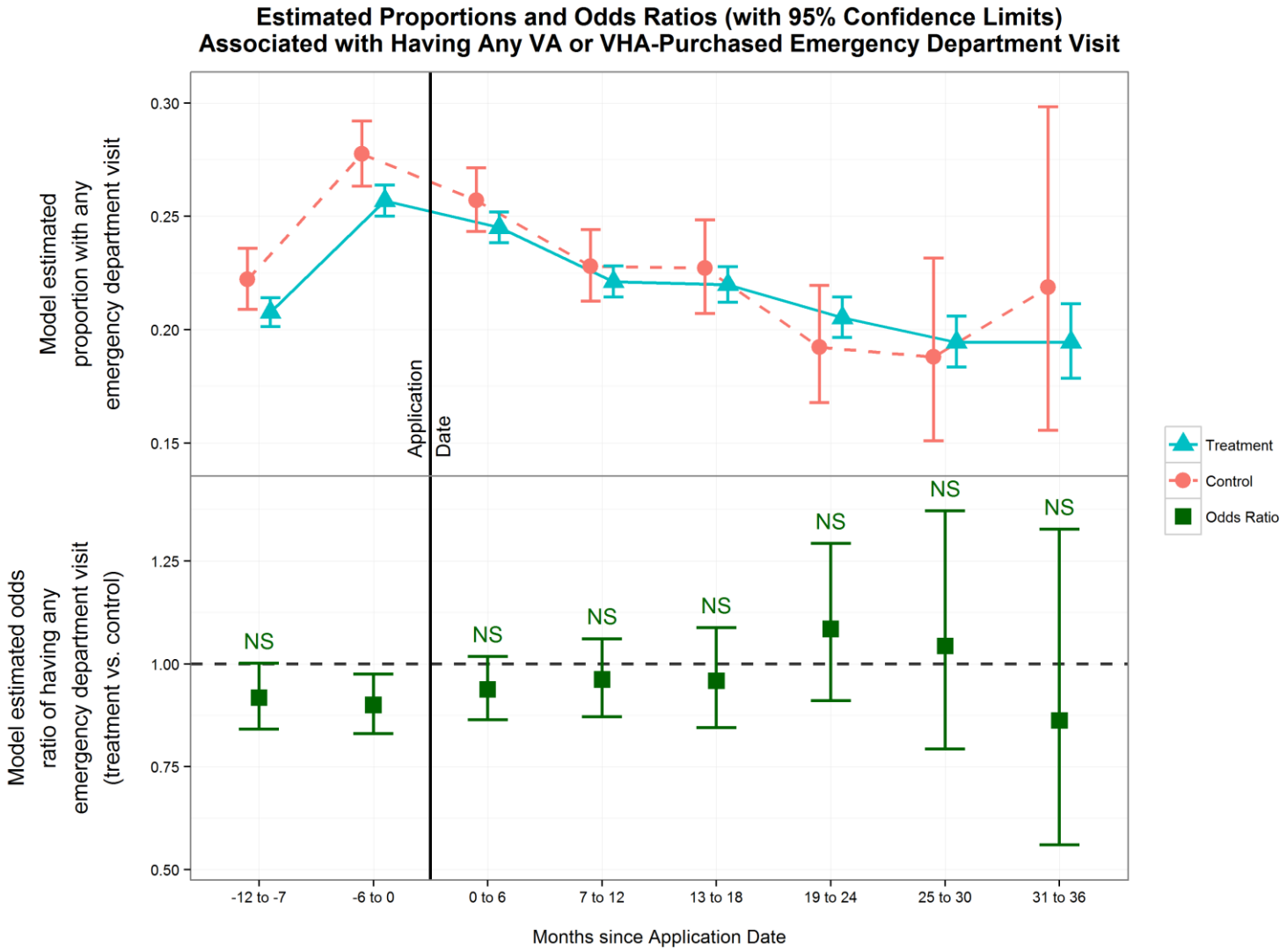
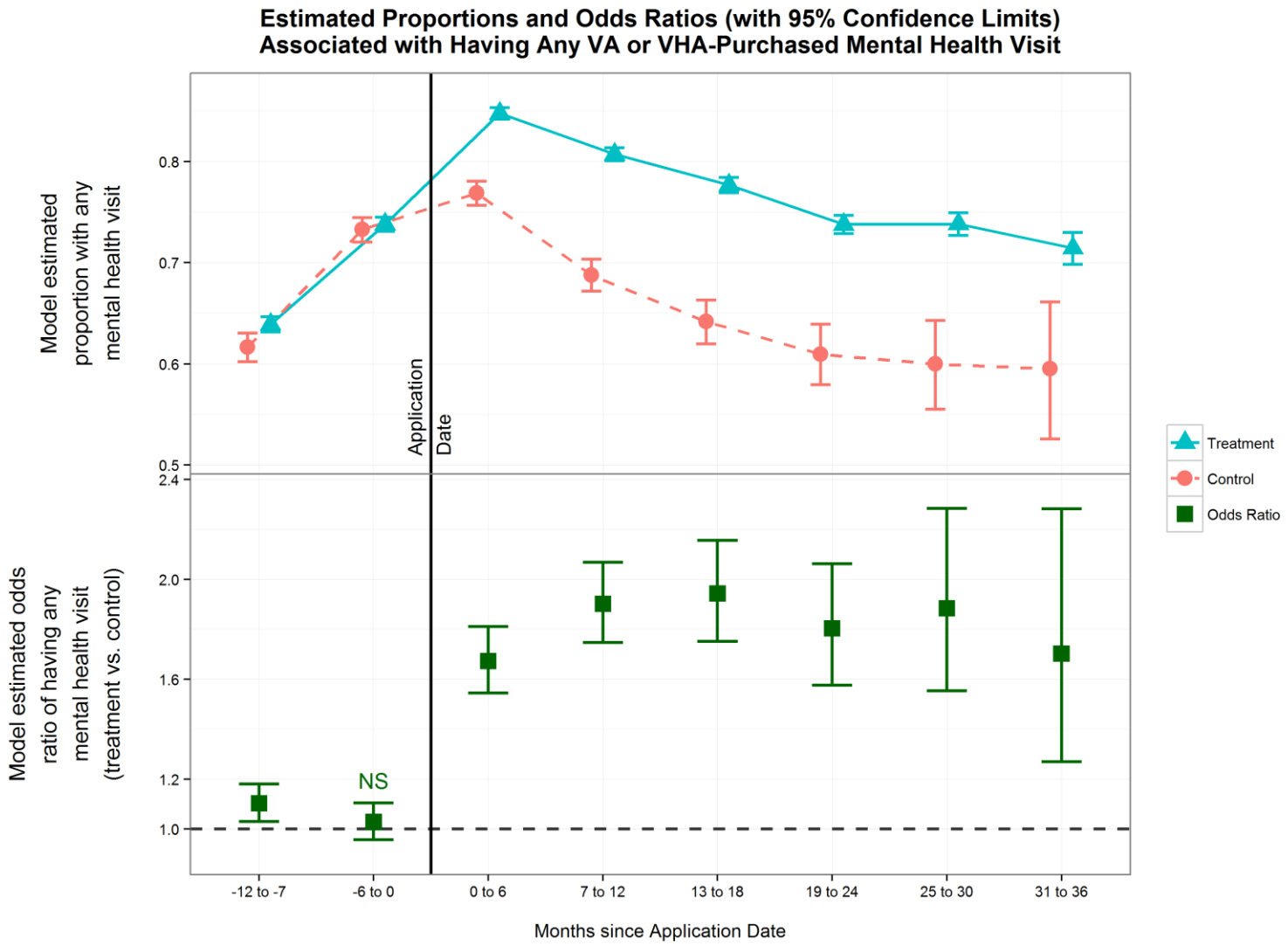
Table 1. Baseline Descriptive Characteristics of Unweighted and Weighted VA Caregiver Support Program Treatment Group and Control Group Veterans (%)

Baseline Characteristics	Unweighted Cohort			Inverse Probability of Treatment Weighted Cohort		
	Control Group	Treatment Group	Std. Diff.	Control Group	Treatment Group	Std. Diff.
Gender, %						
Female	10.9	7.6	**-11.5**	7.8	7.6	-0.7
Male	89.1	92.4	**11.5**	92.2	92.4	0.7
Age, mean (SD)	38.6 (10.3)	36.2 (8.9)	**-25.1**	35.8 (11.7)	36.2 (8.9)	3.6
Marital status, %						
Married	66.2	68.8	5.5	68.4	68.8	0.9
Never married/single/ widowed	17.0	18.1	3.0	18.4	18.1	-0.8
Divorced/separated	12.9	11.2	-5.4	11.5	11.2	-1.0
Unknown	3.9	1.9	**-12.3**	1.7	1.9	1.5
Race, %						
White	58.5	69.2	**22.8**	71.0	69.2	-3.8
Black	29.1	18.3	**-26.4**	17.1	18.3	3.0
Other	5.8	6.8	4.1	6.6	6.8	0.7
Unknown	6.6	5.7	-3.9	5.2	5.7	1.9
Ethnicity, %						
Not Hispanic/Latino(a)	86.0	83.0	-8.3	83.0	83.0	-0.1
Hispanic/Latino(a)	10.0	13.6	**11.1**	13.3	13.6	0.7
Unknown	4.0	3.5	-3.1	3.7	3.5	-1.2

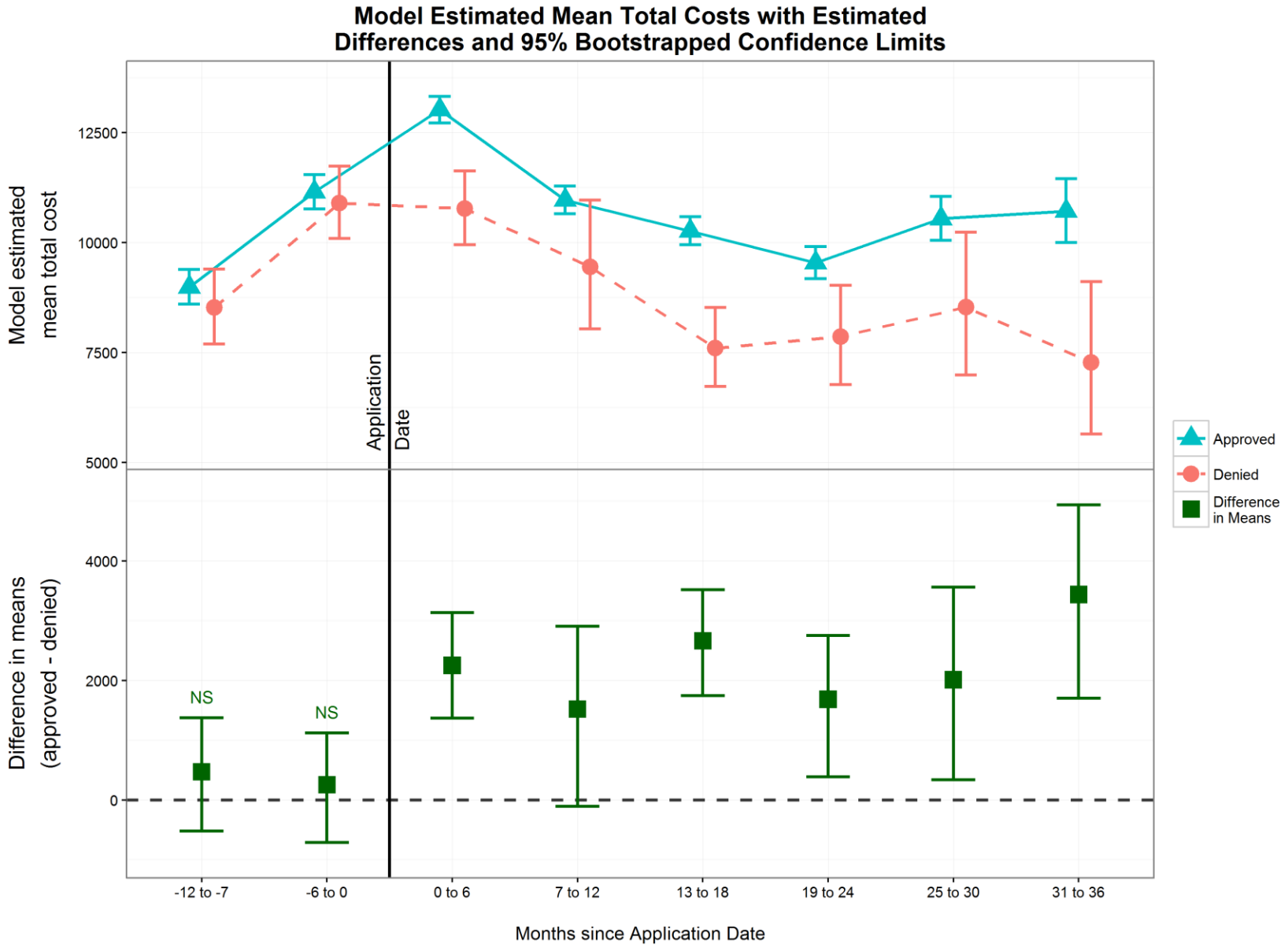
No Difference in Emergency Dept. Utilization



Higher Outpatient Mental Health Care



Increase in Total Health Care Costs to VA



Summary of Key Findings

Average Treatment Effect among the Treated (ATT)

- No significant change in Veteran ED Visits (or Hospital Use, not shown) in any time period after the application date
- Increased use of mental health care 0-36 months (and primary care, specialty care, number of outpatient visits, not shown)
- Increased total costs 0-36 months after application date

Limitations

- Varying Observation Periods:
  - Sample size decreases over time

- Coding of PCAFC utilization
  - Careful consideration to remove codes associated with eligibility and quarterly visits.
  - Due to lack of standardized coding of program-required utilization, may be overstating increase of outpatient care.

Limitations

- Potential for Bias:
  - Unable to define certain characteristics so unobserved characteristics, e.g. education, could be imbalanced between groups
  - Considered instrumental variables estimation but no valid IV exists (e.g. distance to VAMC predicts Tx and Outcomes)
  - The relative balance in utilization prior to application suggests unobserved differences were likely not present at baseline

It is untestable whether estimated associations were *caused by* or *associated with* PCAFC due to such external factors impacting both outcomes and selection into PCAFC (e.g. unobserved higher need)

Conclusions

- Comprehensive caregiver support could yield improved access to outpatient care

- Increased access could lead to better health outcomes.
  - Timeliness of services
  - Better continuity of care
  - Increased diagnoses of mental health conditions
  - Reduced unmet need for treatment

- Future work should make the link between utilization and health outcomes.

THANK YOU TO…
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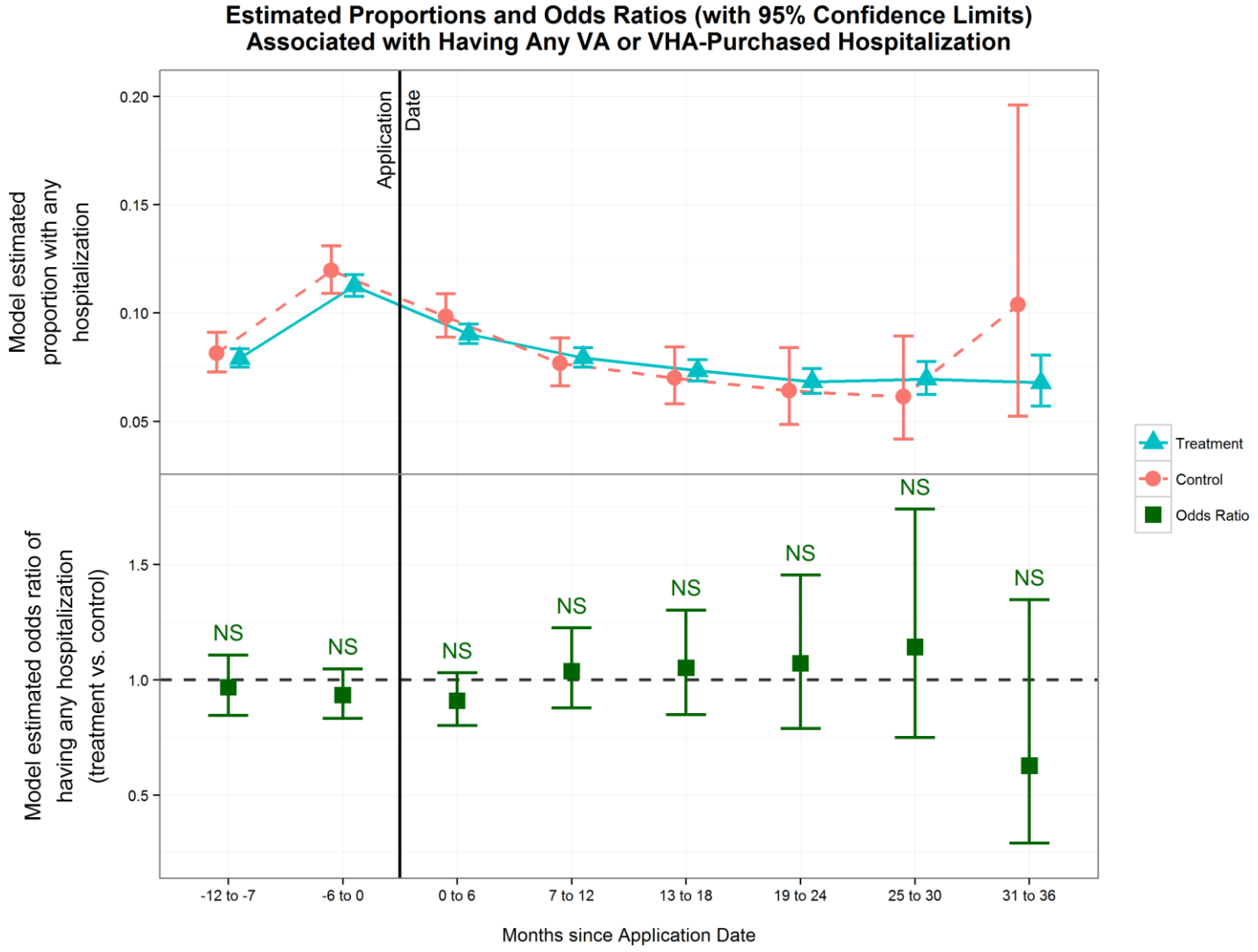
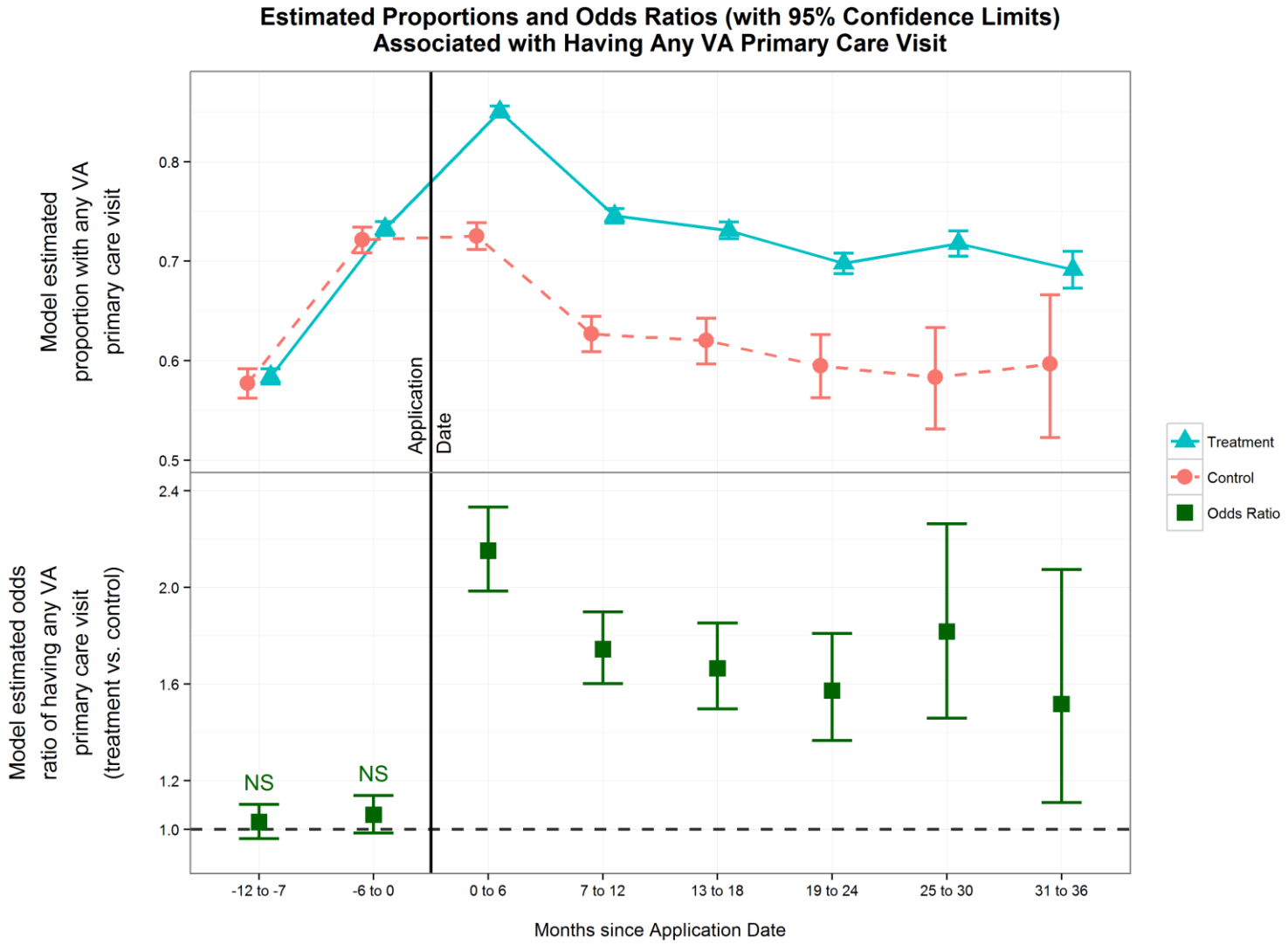
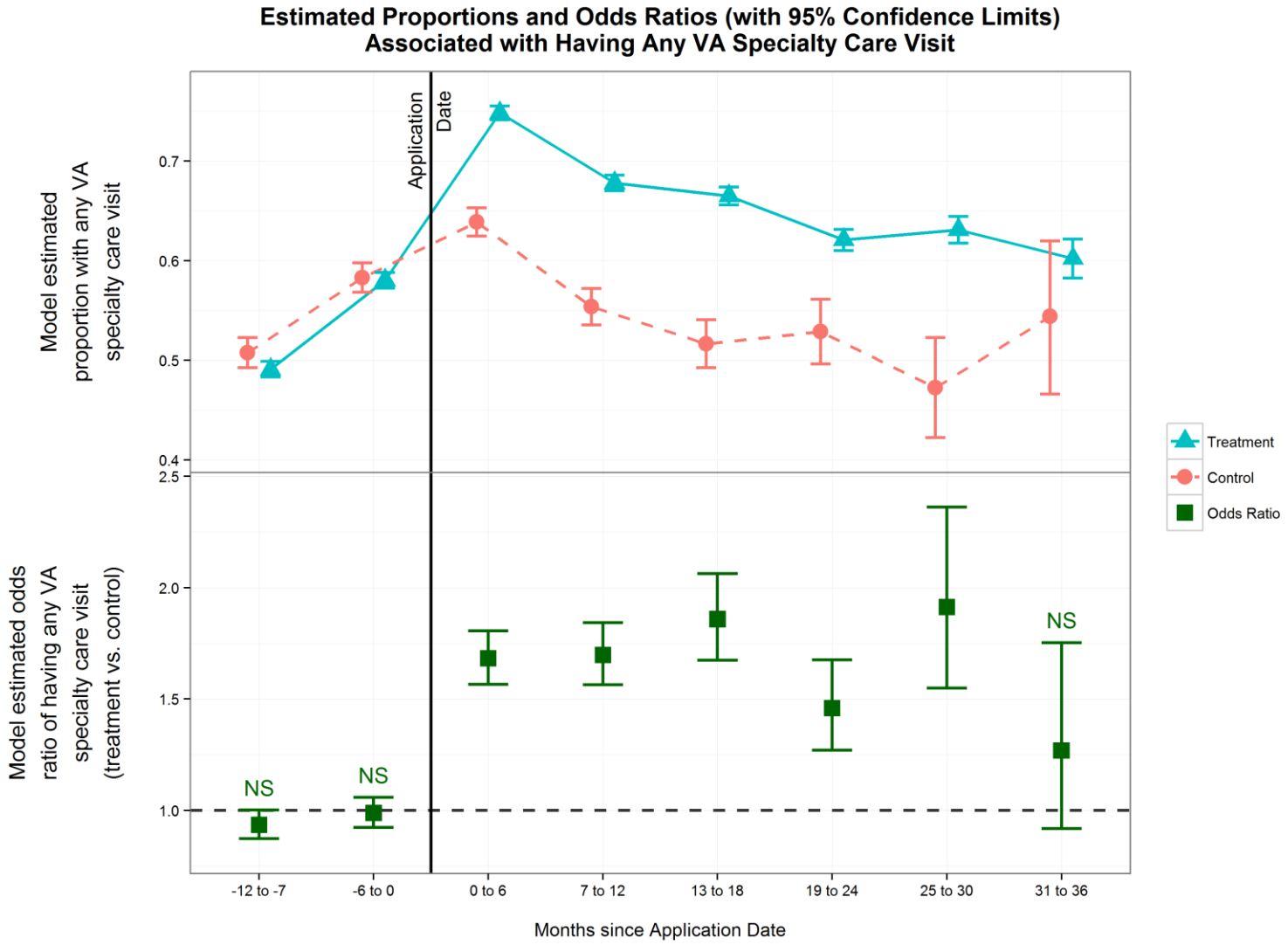
No Difference in Hospitalizations



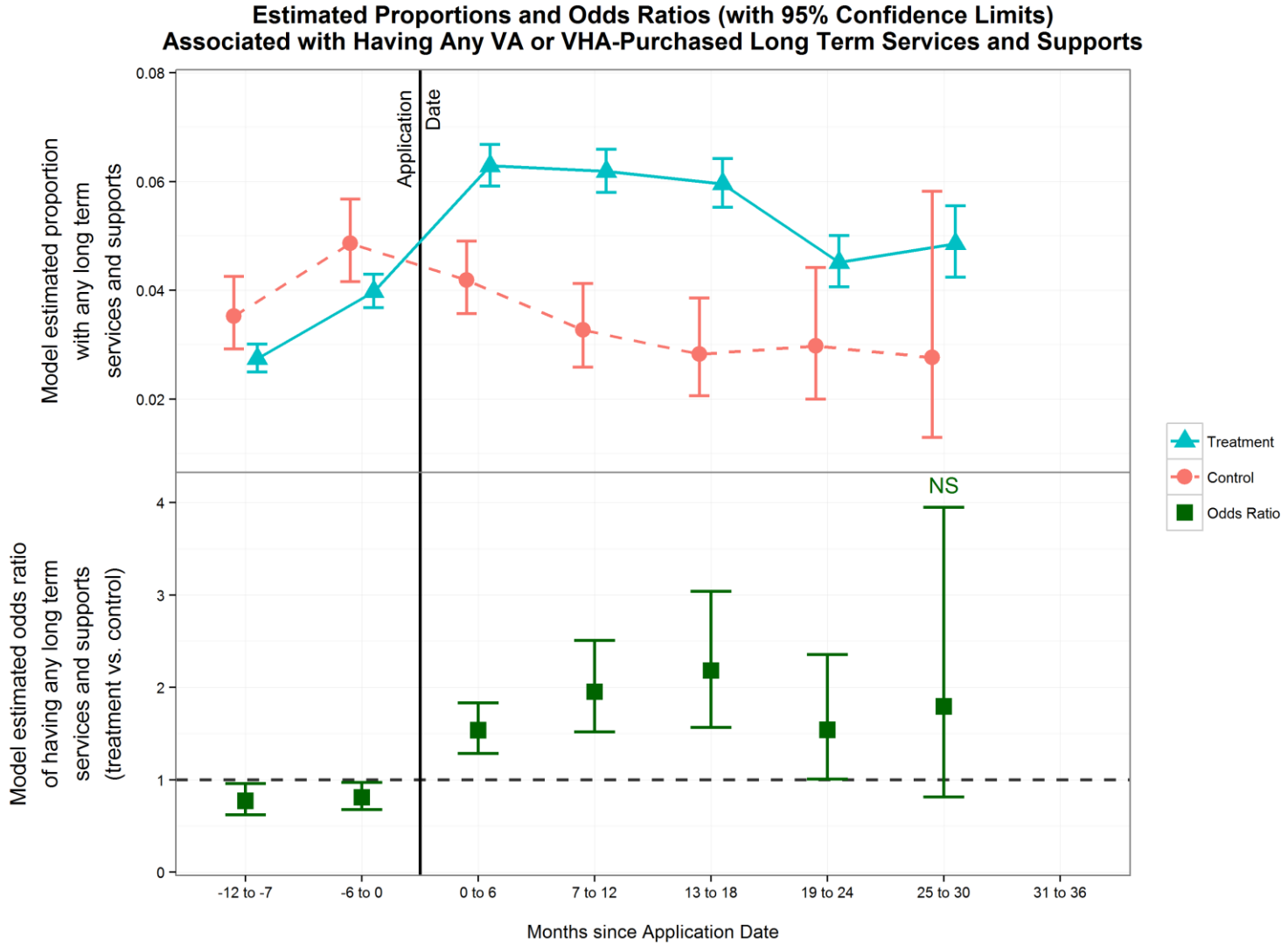
Higher VA Primary Care Utilization



Higher VA Specialty Care Utilization

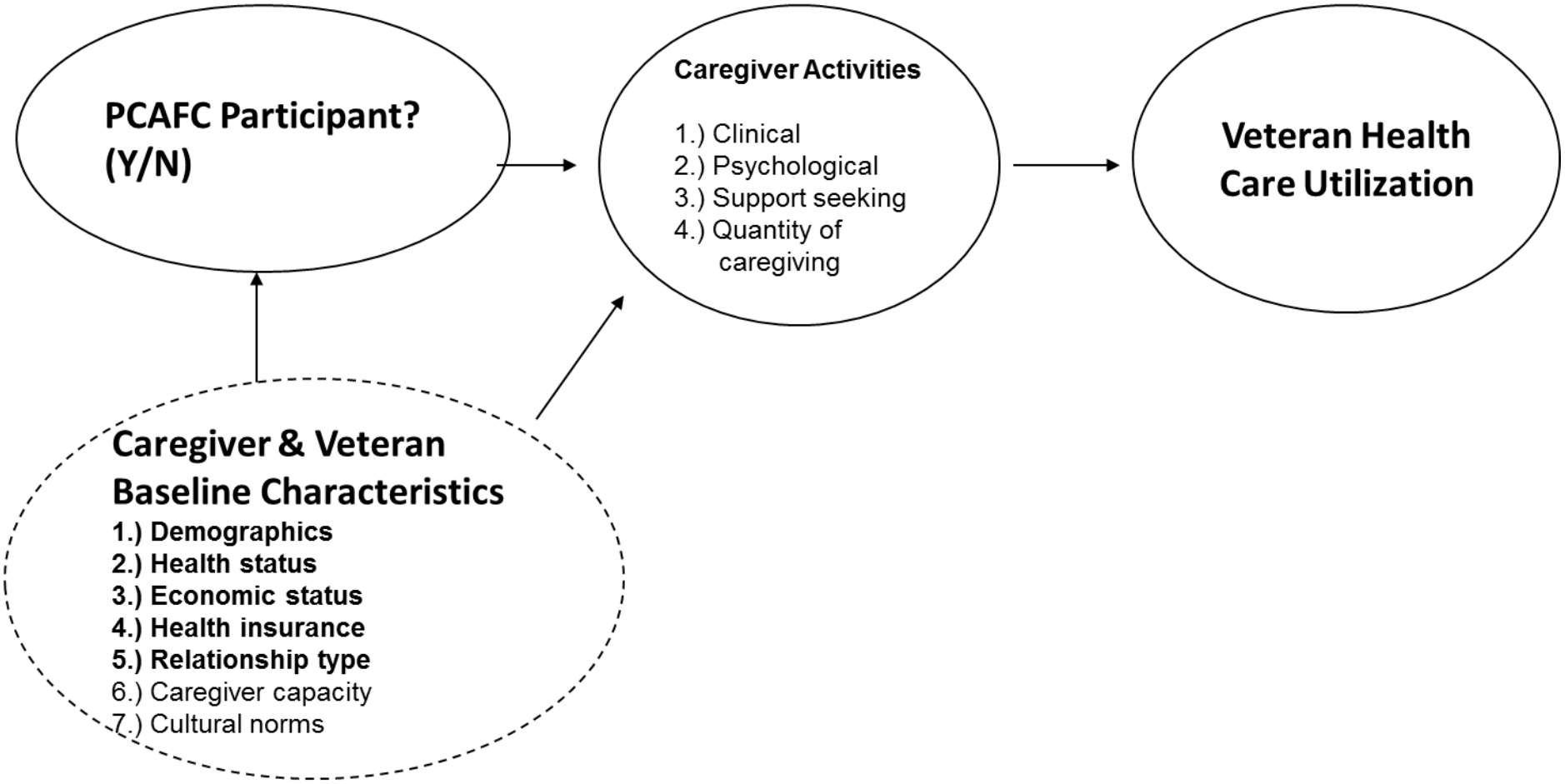


Higher Long Term Services and Supports Utilization



Possible Pathways →Health Care Use

Figure 1. Conceptual Model of Caregiver Support and Veteran Utilization



Source: Model adapted from Van Houtven, Voils and Weinberger, 2011