

# Long run reliance on the VA: A fifteen year follow-up of VA & Medicare healthcare use for Medicare-eligible Veterans

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# Veterans have more healthcare options due to expansion of VA Community Care Initiative

- Veterans Choice Act (2014)
  - Long wait time: > 30 days
  - Live far away: > 40 miles
- Community Care Initiative
  - Building high performing community care provider networks
  - Better care coordination between VA and community care providers
- Voting on your feet
  - Cost, quality, convenience, healthcare need, or environment
- Understanding Veterans' choice of VA and community care has important policy implications
  - Access to care
  - Decisions in types of services to provide
  - Make or buy decisions

## Vast majority of Veterans have other insurance

<b>Other Insurance Coverage*</b>	<b>%</b>
Medicare	51.3
Medicaid	6.5
Tricare	18.5
Private Insurance	28.4
No insurance	20.0

\*Sum up to more than 100% because multiple insurance coverages  
Source: 2015 Survey of Veteran Enrollees' Health and Use of Health Care  
[http://vaww.va.gov/VHAOPP/SOE/2015/Survey\\_of\\_Veteran\\_Descriptive\\_Report.pdf](http://vaww.va.gov/VHAOPP/SOE/2015/Survey_of_Veteran_Descriptive_Report.pdf)

- More than half of Veterans also covered by Medicare
- Use of non-VA care is common among Veterans
- Understanding Veterans' choices from different health systems will provide important insights

# Factors Associated with Use of Non-VA Care

- Mostly from research in dual use of VA and Medicare
- Factors associated with use of VA care
  - Non-white
  - Not married
  - No VA copayment
  - Eligible for Medicare due to disability
- Factors associated with use of non-VA care
  - Older age
  - Other insurance coverage, such as private insurance, Medicaid, Medicare
  - Higher disease burden
  - Live further away from VA facilities
  - CBOC patients
  - Dissatisfaction of care

## Prior research in dual use of VA and Medicare

- Mostly cross-sectional studies, few longitudinal studies
- Include all ages of Medicare eligible Veterans
- Didn't examine choice of care among Veterans who are newly eligible for Medicare
- Lack of measures of social risk factors and health behavior

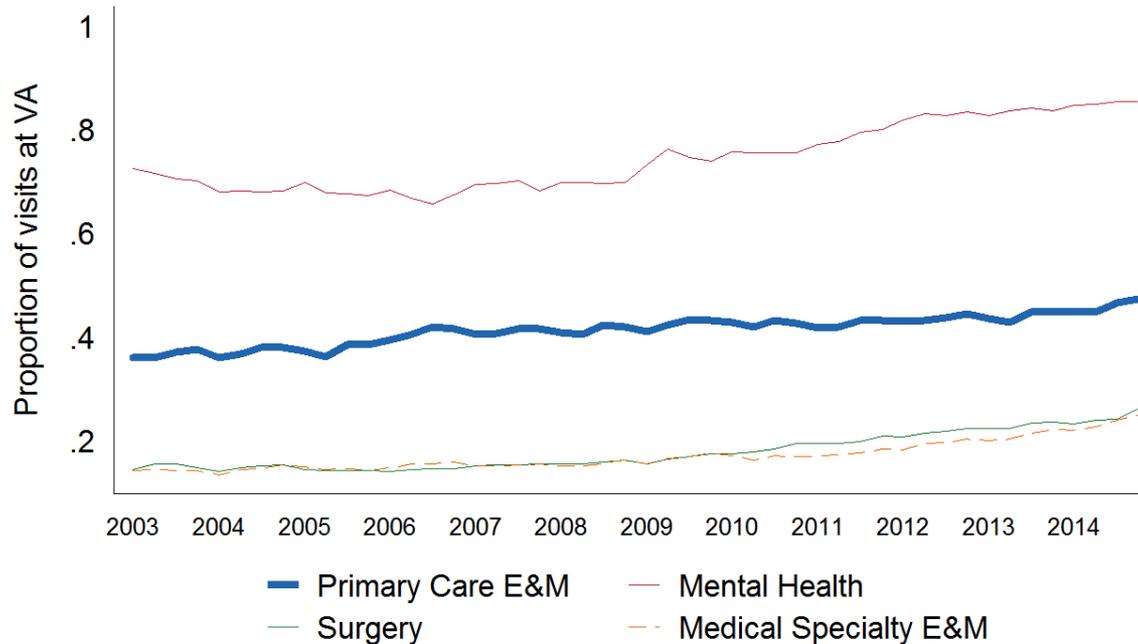
# Our previous analysis

## Cross-sectional VA reliance time trends, 2003 to 2014

### Upward trends among Medicare eligible Veterans

Reliance on the VA for care, incorporating NP visits using Tax ID+BETOS algorithm

5% sample of Medicare eligible Veterans



Include outpatient visits with an evaluation and management (E&M) CPT code and visits to surgical specialists

# Objectives

To examine long run VA reliance from 2000 through 2014 for a cohort of Veterans who turned 65 and were newly eligible for Medicare in 1999, 2000

Compared the differences between those who relied on VA and those who relied on Medicare in following two areas:

1. Socio-demographics, health and social-risk factors, and health behaviors in 1999
2. Outpatient healthcare use in VA and Medicare from 2000-2014



# Data and Methods

# Study Design and Data Sources

- A retrospective and longitudinal cohort analysis
- Followed Veterans' Medicare and VA healthcare use from 2000 to 2014.
- Data Sources:
  - Large Health Survey of Enrolled Veterans (LHSEV) in 1999
    - 887,000 Responses to a mailed survey (63% response rate)
  - VA administrative data and Medicare claims 2000 -2014
    - OPT data for VA outpatient visits
    - Carrier claims for Medicare outpatient visits

# Study Sample

- Participated in the Large Health Survey of Enrolled Veterans (LHSEV)
- Included those who were newly eligible for Medicare in 2000, age 65-67
  - Parts A and B eligible in December of 2000
  - Censored after first enrollment in Medicare HMO or loss of Part A or B
  - Excluded those eligible to Medicare due to disability
  - At least two Evaluation and Management visits during eligibility period
- Final sample: 12,908 Veterans in 2000
  - 97.5% Male
  - 77% White
  - Median years of follow-up 12.7

# Baseline Characteristics from LHSEV

- Social demographics
  - Race
  - Marital status
  - Education
  - Employment
- Social risk factors
  - Living arrangements
  - Food insecurity
  - Social support (module)
- Health behavior
  - Smoking
  - Alcohol consumption
  - Physical activity
- Health status: SF1, SF12
- Self-reported medical and mental health conditions

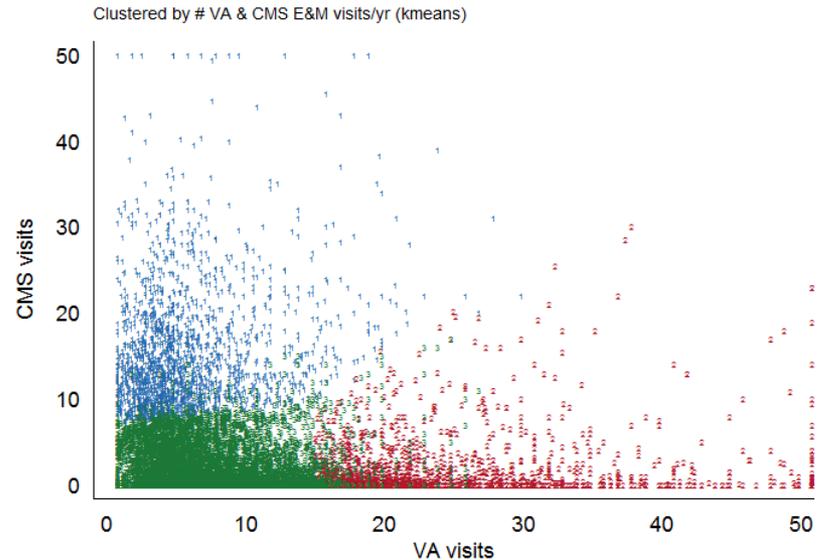
# How to define reliance on the VA: Evaluation and Management (E&M) visits

- Patients are cared and managed at outpatient settings
- E&M visits are preferred to total visits/total costs
  - Measure the degree to which a Veteran relies on VA to orchestrate his/her care
  - Can be identified by CPT codes on both Medicare claims and VA administrative data
  - Total visits and total costs confounded by practice style
    - You “rely” on providers that give you more tests, procedures etc.
  - Hospital visits/costs might reflect emergent care rather than a choice of provider

# How to Measure VA Reliance

- Several approaches:
  1. K-median “binning” algorithm applied to sum of CMS and E&M visits, respectively over eligible period
  2. K-median “binning” on level of visits and trajectory of visits over time
  3. Simple: Ratio of VA E&M visits to total E&M visits

VA reliant if >50% E&M visits occurred in VA, otherwise CMS reliant
- Similar results from the three approaches
- Present the analysis from the simple measure



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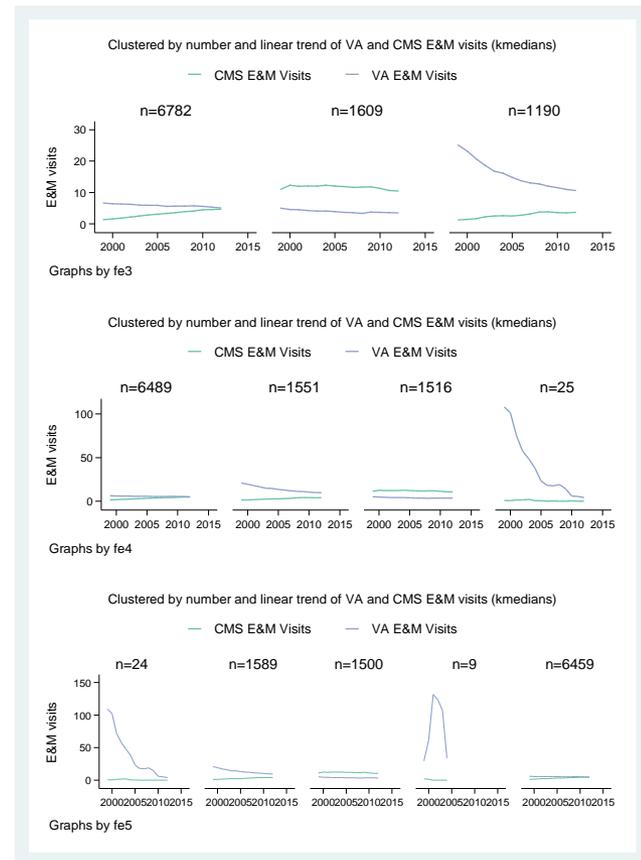
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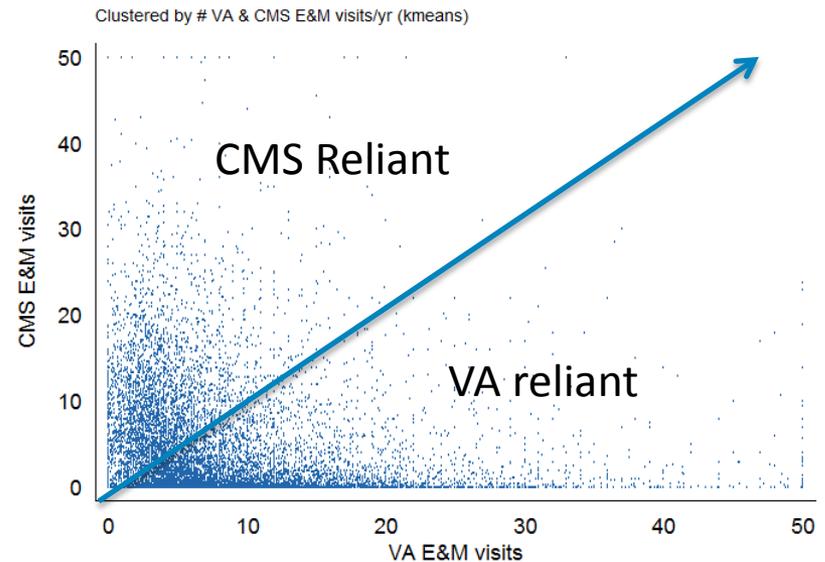
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## Outcome Measure #2: Outpatient visits

- Categories of outpatient visits:
  - Based on CPT codes and Provider Specialty
  - Primary care-E&M, mental health, medical specialty-E&M, surgery visits, Rehab visits
- Categories of procedures provided on outpatient visits
  - Berenson-Eggers Type of Service (BETOS) code

# Statistical Analysis

- Compare baseline characteristics across VA reliant and CMS reliant groups
- Count total number of visits (VA + CMS) to primary care, specialty care, mental health and rehab care per eligible veterans per year by VA reliant and CMS reliant groups
- Count number of procedures by BETOS code per eligible veteran and compare by VA reliant and CMS reliant groups
- Adjusted for survey weights but no other statistical adjustments

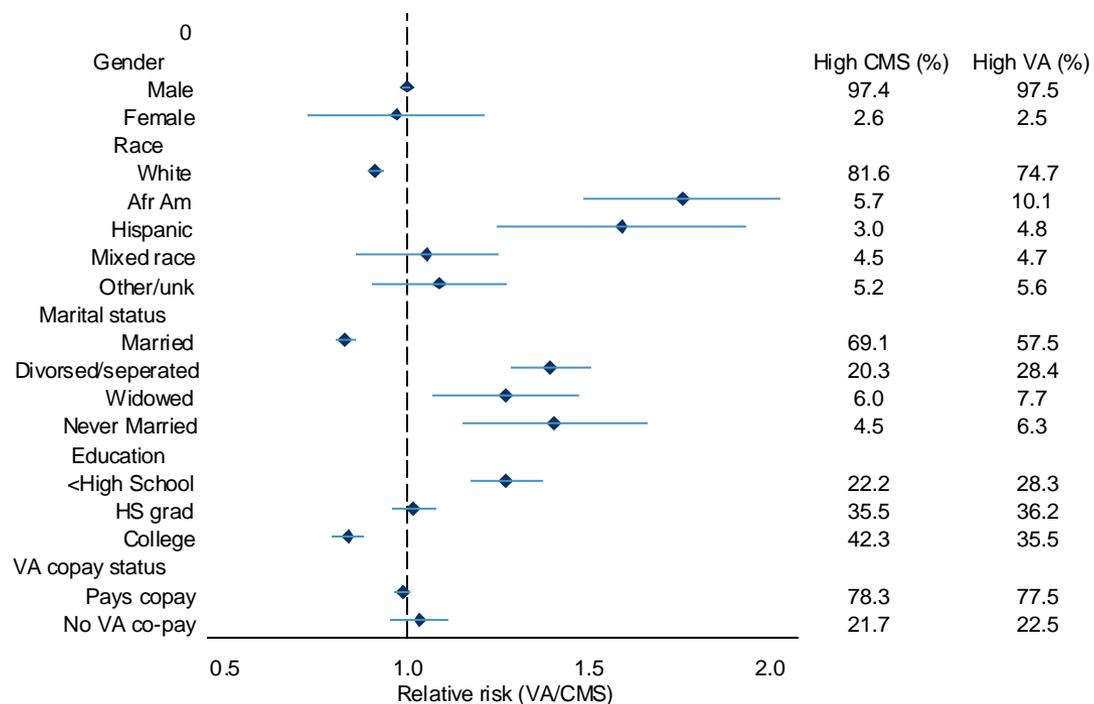


# Results

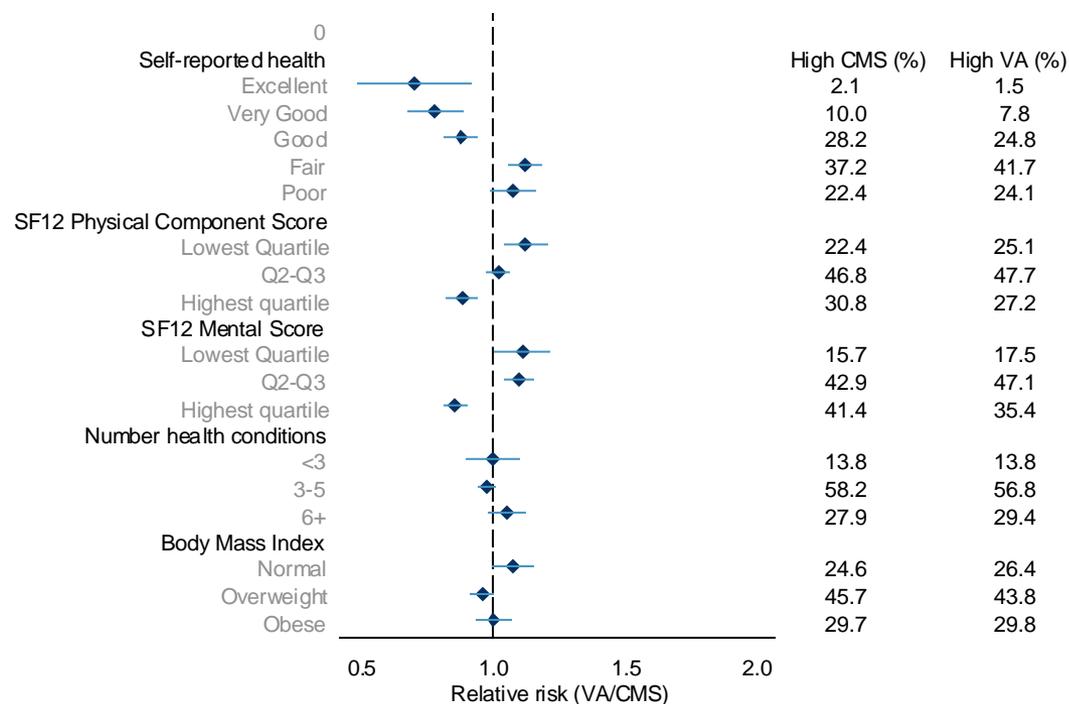
# Results: Study Sample

	<b>Total</b>	<b>VA Reliant</b>	<b>CMS Reliant</b>	<b>p-value</b>
<b>Count</b>	12908	9366 (72%)	3542(28%)	
<b>Age in 1999, mn (sd)</b>	65.1 (0.854)	65.1 (0.822)	65.1 (0.810)	<0.001
<b>Female, % (n)</b>	2.5 (319)	2.5 (230)	2.5 (89)	0.828
<b>Race/ethnicity, % (n)</b>				<0.001
<b>White</b>	77.0 (9944)	74.7 (7050)	81.6 (2894)	
<b>African American</b>	8.48 (1095)	10.1 (898)	5.73 (197)	
<b>Hispanic</b>	4.29 (554)	4.80 (445)	3.02 (109)	
<b>Asian</b>	0.248 (32)	0.227 (21)	0.347 (11)	
<b>American Indian</b>	1.05 (136)	1.08 (103)	0.886 (33)	
<b>Mixed race</b>	4.59 (593)	4.72 (438)	4.47 (155)	
<b>Other/unknown</b>	4.29 (554)	4.34 (411)	3.94 (143)	

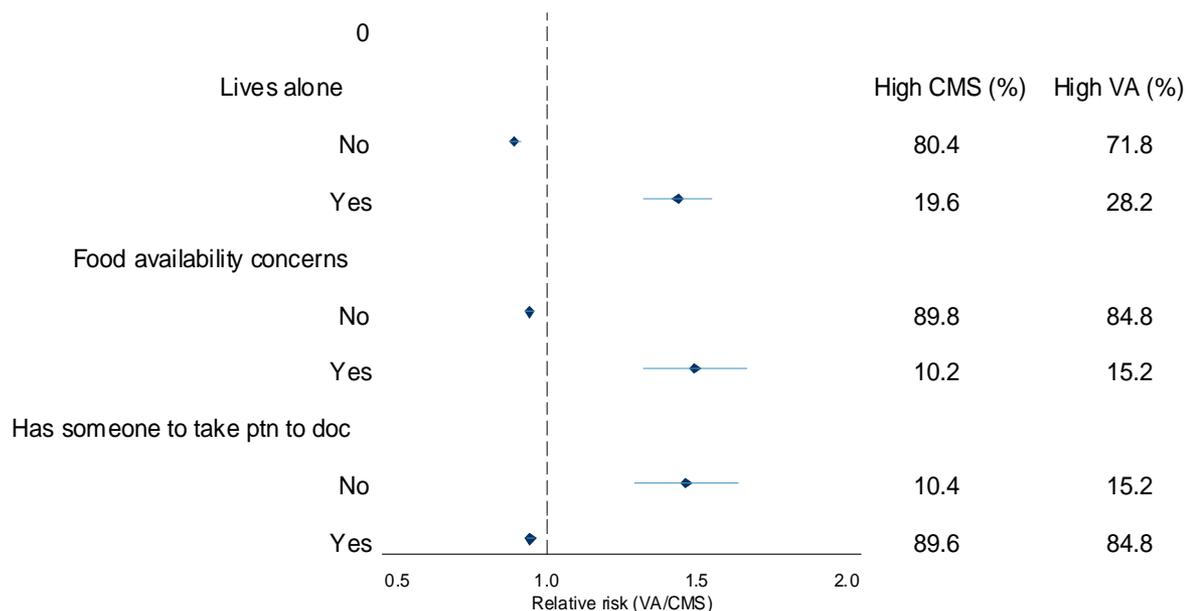
# Results (1) Differences in baseline characteristics of VA Reliant and CMS Reliant Veterans: Socio-demographics



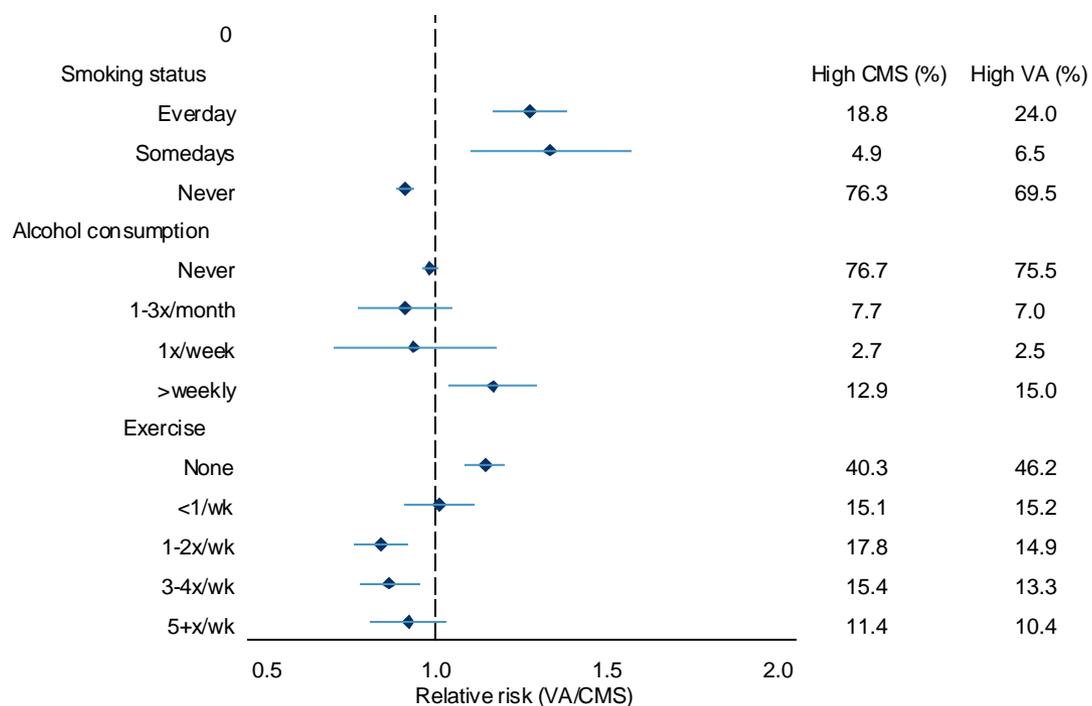
# Results (1) Differences in baseline characteristics of VA Reliant and CMS Reliant Veterans: Health risk factors



# Results (1) Differences in baseline characteristics of VA Reliant and CMS Reliant Veterans: Social risk factors



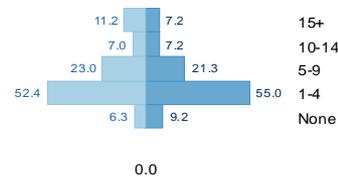
# Results (1) Differences in baseline characteristics of VA Reliant and CMS Reliant Veterans: Health behaviors



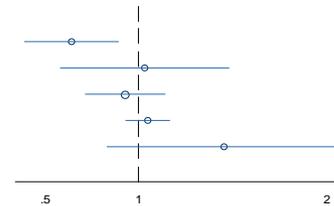
# Results (1) Differences in baseline characteristics of VA Reliant and CMS Reliant Veterans: Social support module (subsample 2260 LVHS respondents)

## Number of close friends or relatives

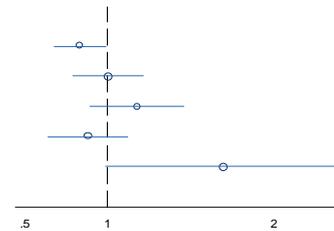
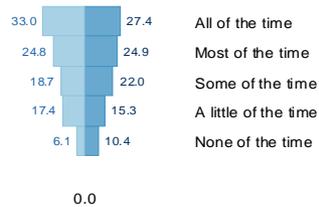
Frequency



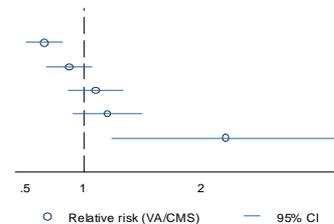
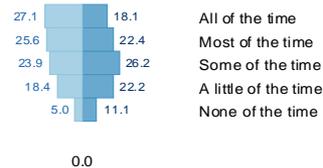
Relative Risk



## How often is there someone to confide in

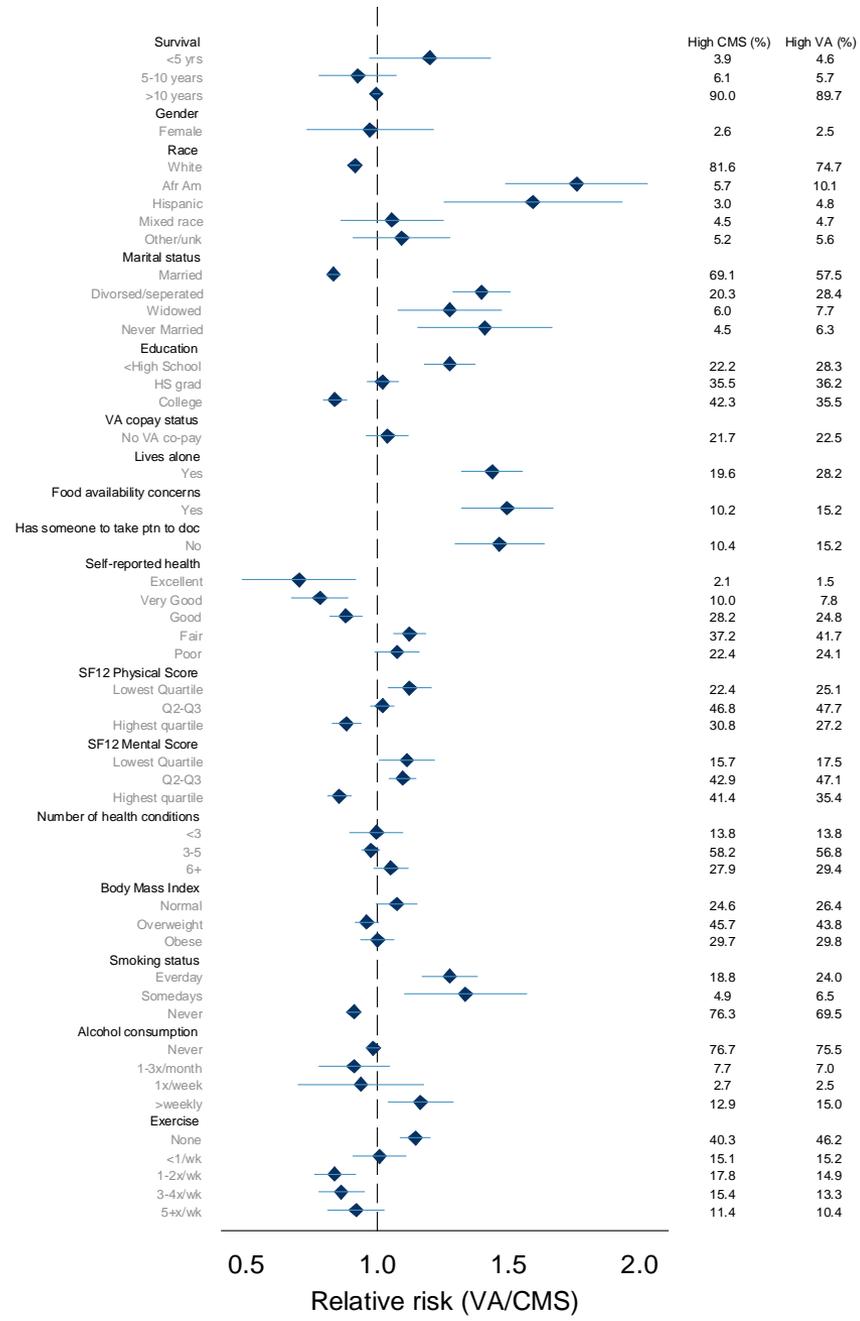


## How often is there someone to relax with



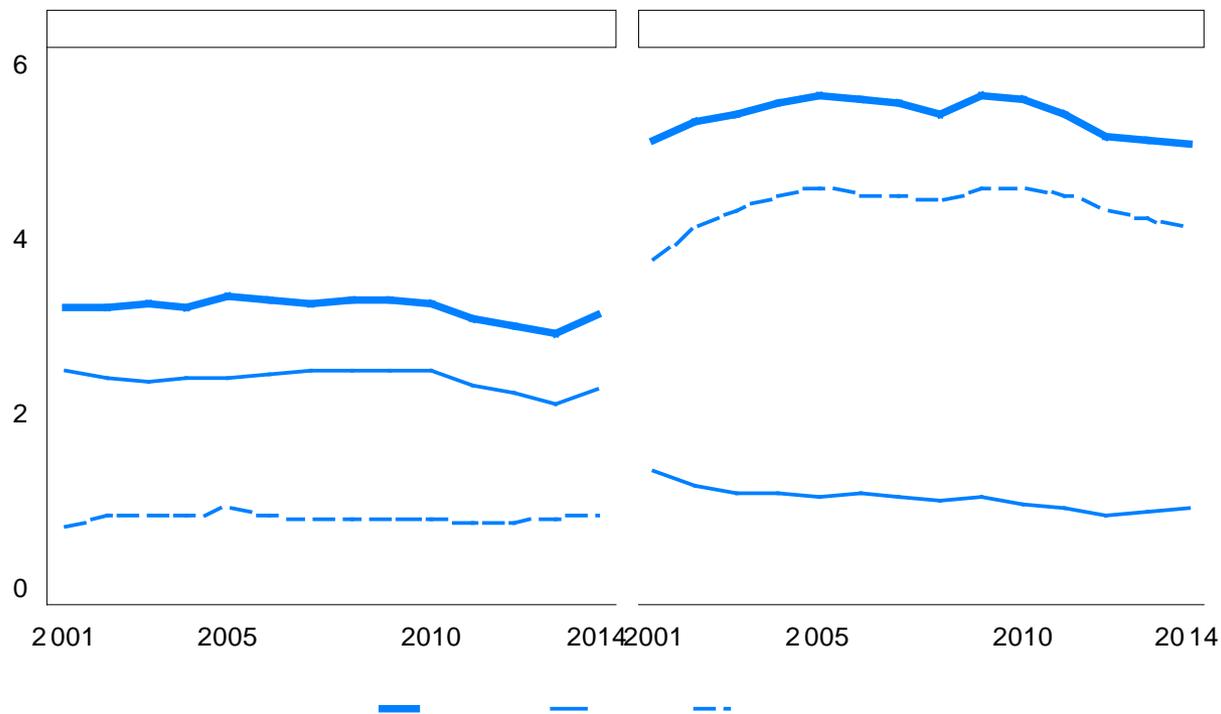
High CMS High VA

○ Relative risk (VA/CMS) — 95% CI



# Results (2) Differences in outpatient healthcare use between VA Reliant and CMS Reliant Veterans: Primary Care E&M Visits

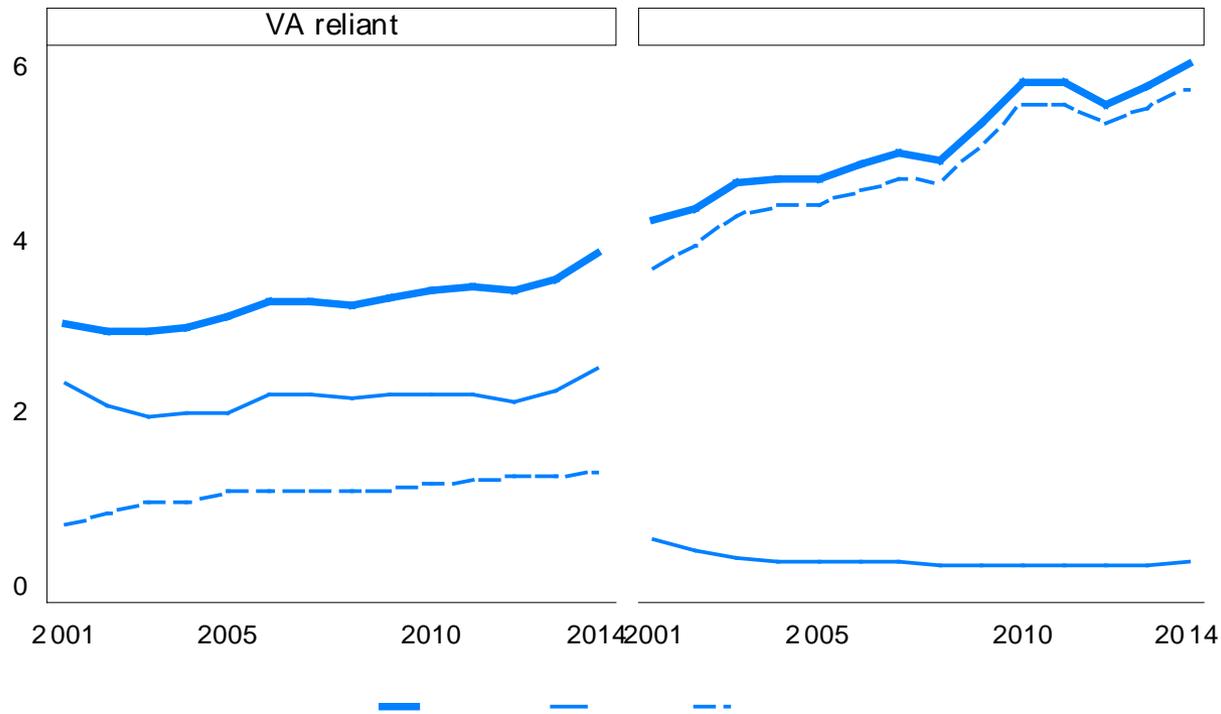
## Primary Care



Graphs by Reliance category

# Results (2) Differences in outpatient healthcare use between VA Reliant and CMS Reliant Veterans: Specialty E&M visits

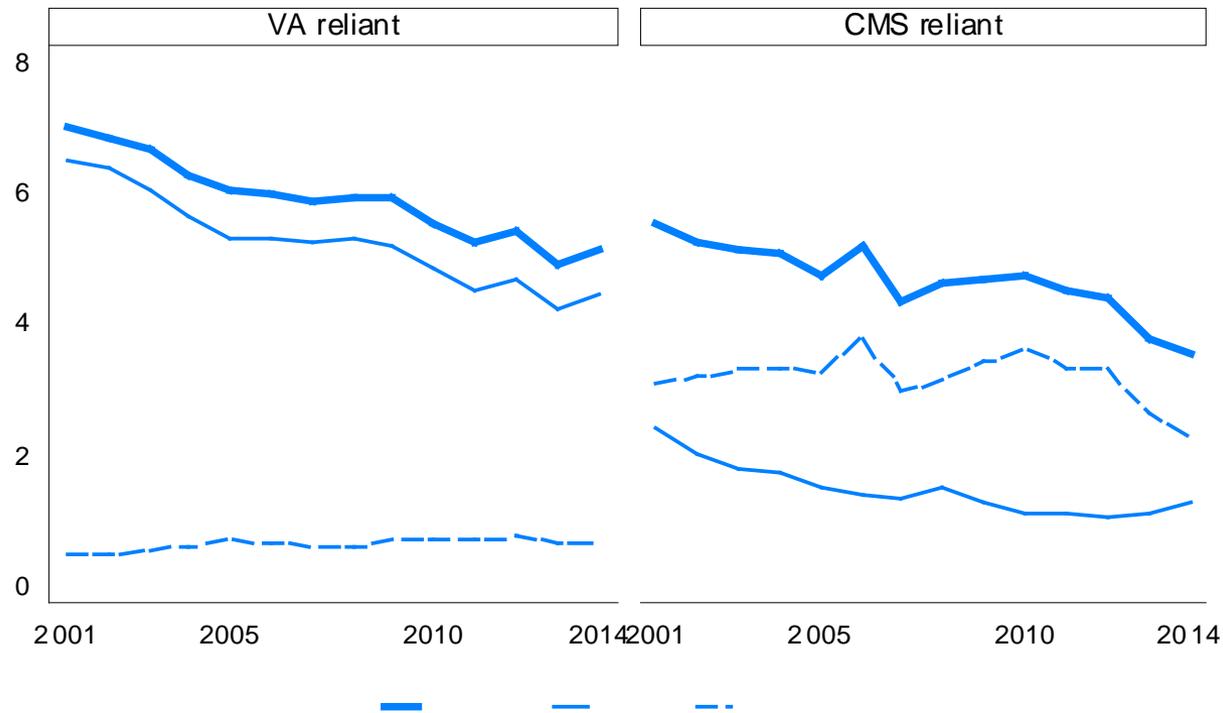
## Specialty E&M



Graphs by Reliance category

# Results (2) Differences in outpatient healthcare use between VA Reliant and CMS Reliant Veterans: Mental Health Visits

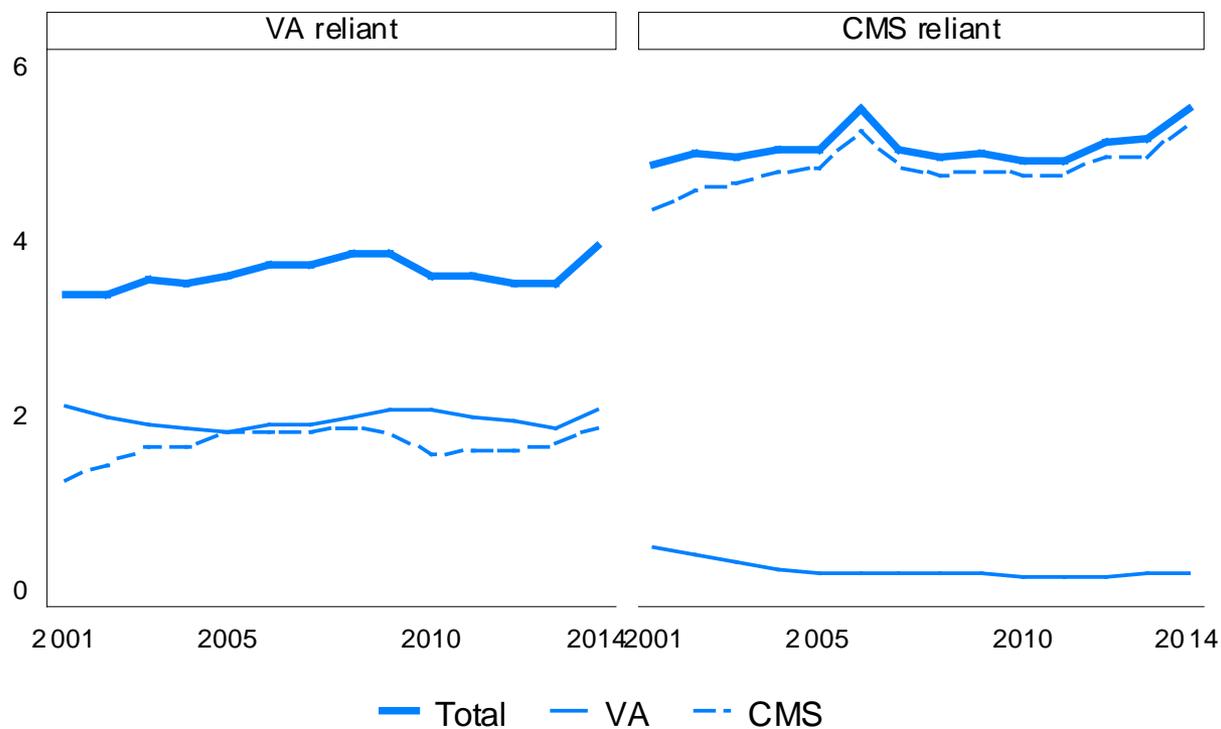
## Mental Health



Graphs by Reliance category

# Results (2) Differences in outpatient healthcare use between VA Reliant and CMS Reliant Veterans: Surgical Care

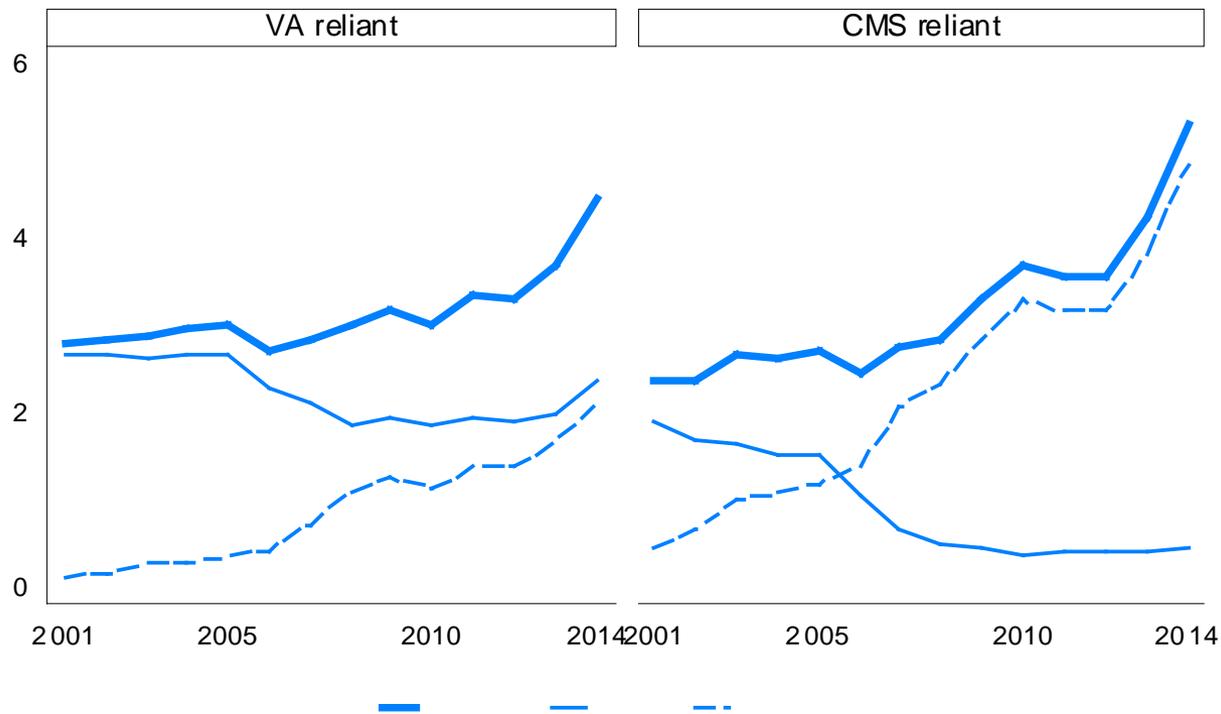
## Surgical Care



Graphs by Reliance category

# Results (2) Differences in outpatient healthcare use between VA Reliant and CMS Reliant Veterans: Rehab visits

## Rehab

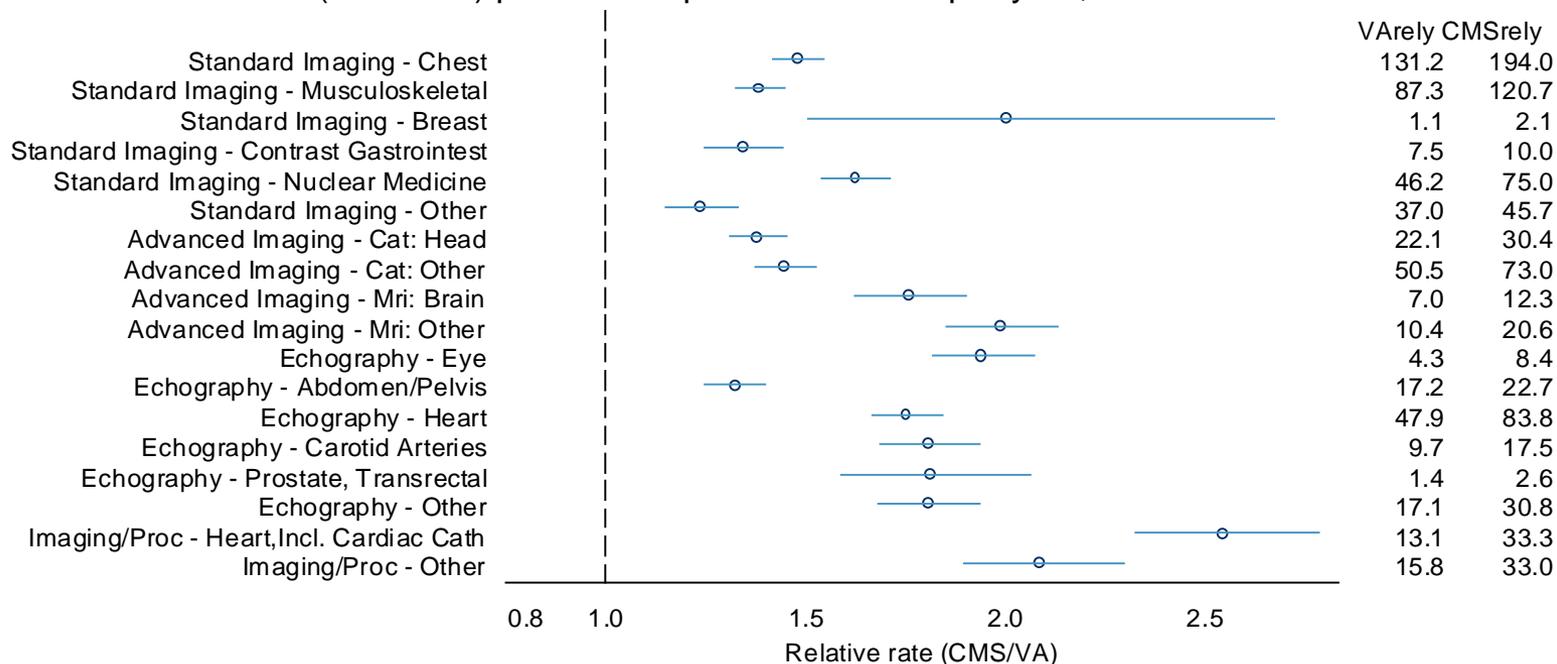


Graphs by Reliance category

# Results (3) Differences in number of outpatient procedures between VA Reliant and CMS Reliant Veterans: Imaging

## Imaging

Total (CMS+VA) procedures per 100 Veteran per year, 2001 to 2014

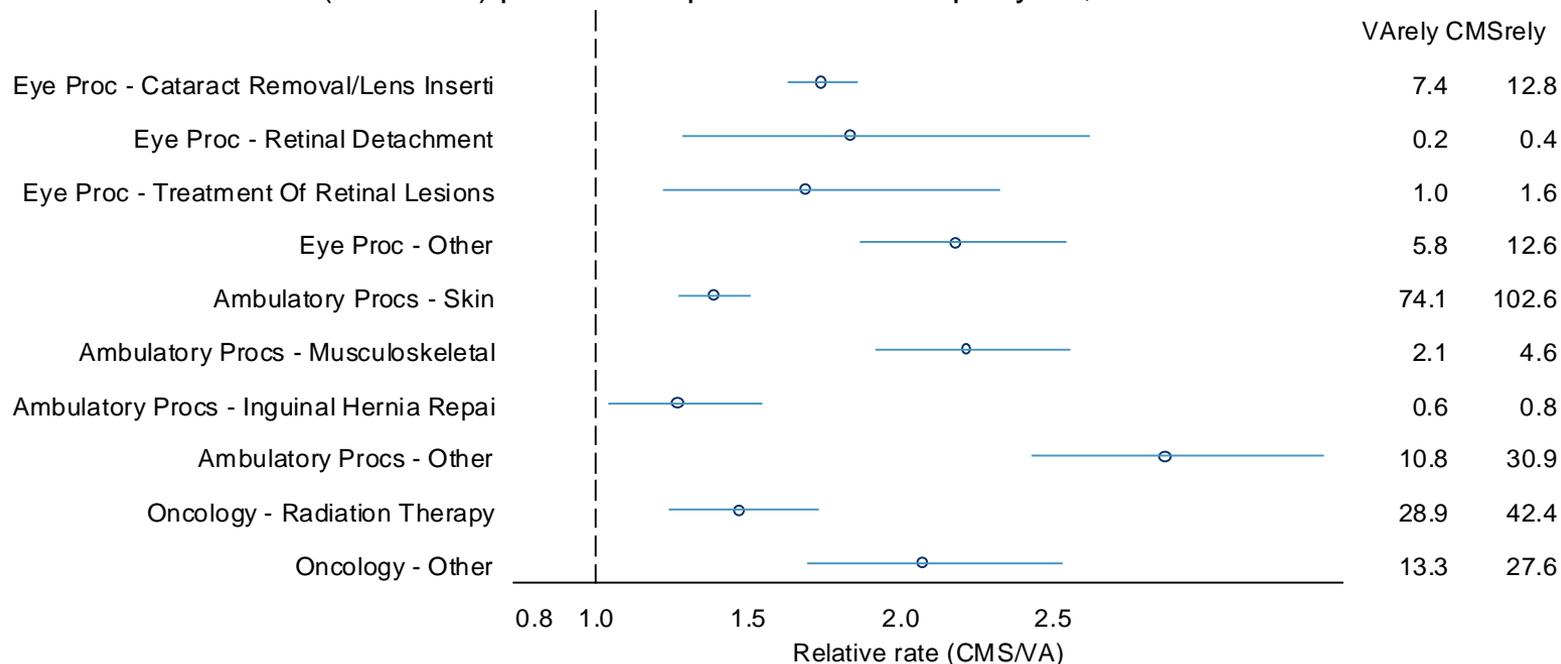


VAREly:  $\geq 50\%$  of E&M codes in VA; CMSREly:  $< 50\%$  of E&M codes in VA  
 Rate per 100 Veterans per year (right axis) and relative rate (xaxis)

# Results (3) Differences in number of outpatient procedures between VA Reliant and CMS Reliant Veterans: Minor procedures

## Minor Procedures

Total (CMS+VA) procedures per 100 Veteran per year, 2001 to 2014

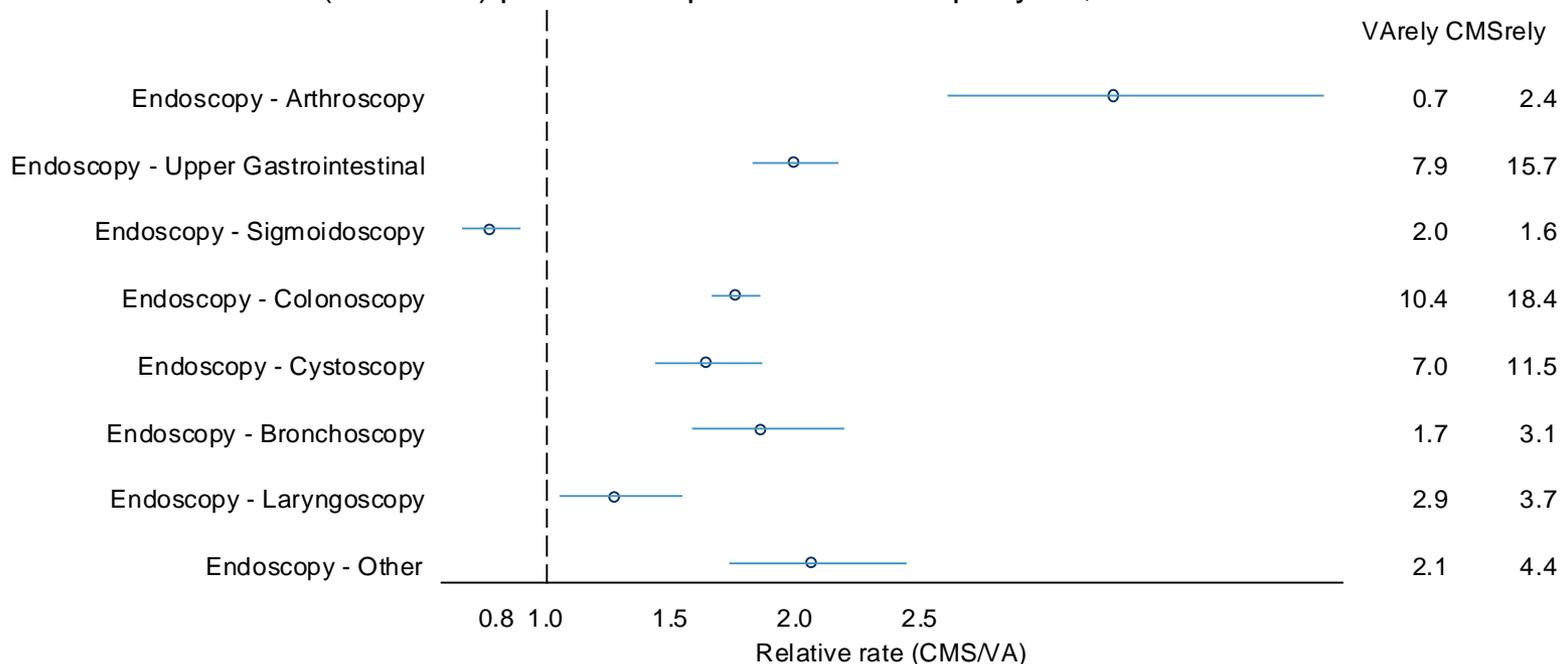


VA Reliant:  $\geq 50\%$  of E&M codes in VA; CMS Reliant:  $< 50\%$  of E&M codes in VA  
 Rate per 100 Veterans per year (right axis) and relative rate (xaxis)

# Results (3) Differences in number of outpatient procedures between VA Reliant and CMS Reliant Veterans: Endoscopy

## Endoscopy

Total (CMS+VA) procedures per 100 Veteran per year, 2001 to 2014

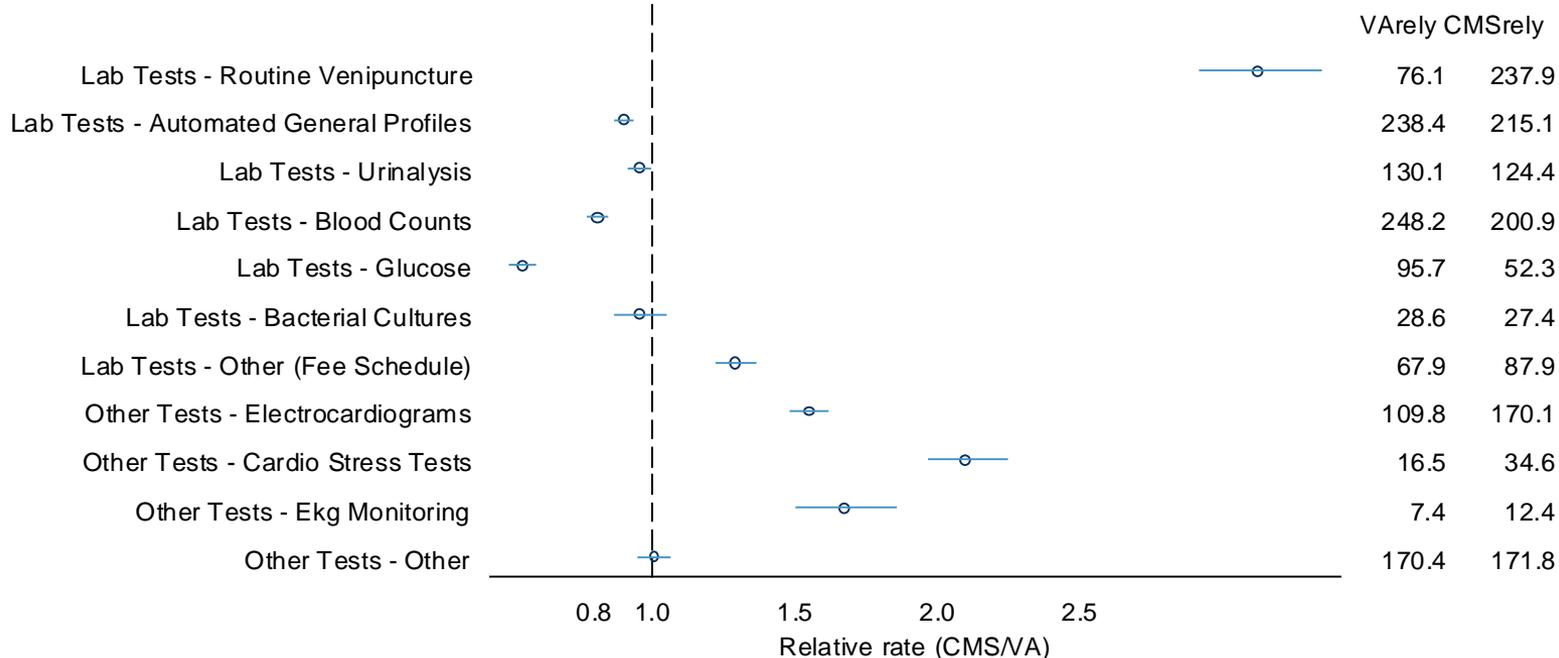


VArely:  $\geq 50\%$  of E&M codes in VA; CMSrely:  $< 50\%$  of E&M codes in VA  
 Rate per 100 Veterans per year (right axis) and relative rate (xaxis)

# Results (3) Differences in number of outpatient procedures between VA Reliant and CMS Reliant Veterans: Labs

## Laboratory and other tests

Total (CMS+VA) procedures per 100 Veteran per year, 2001 to 2014

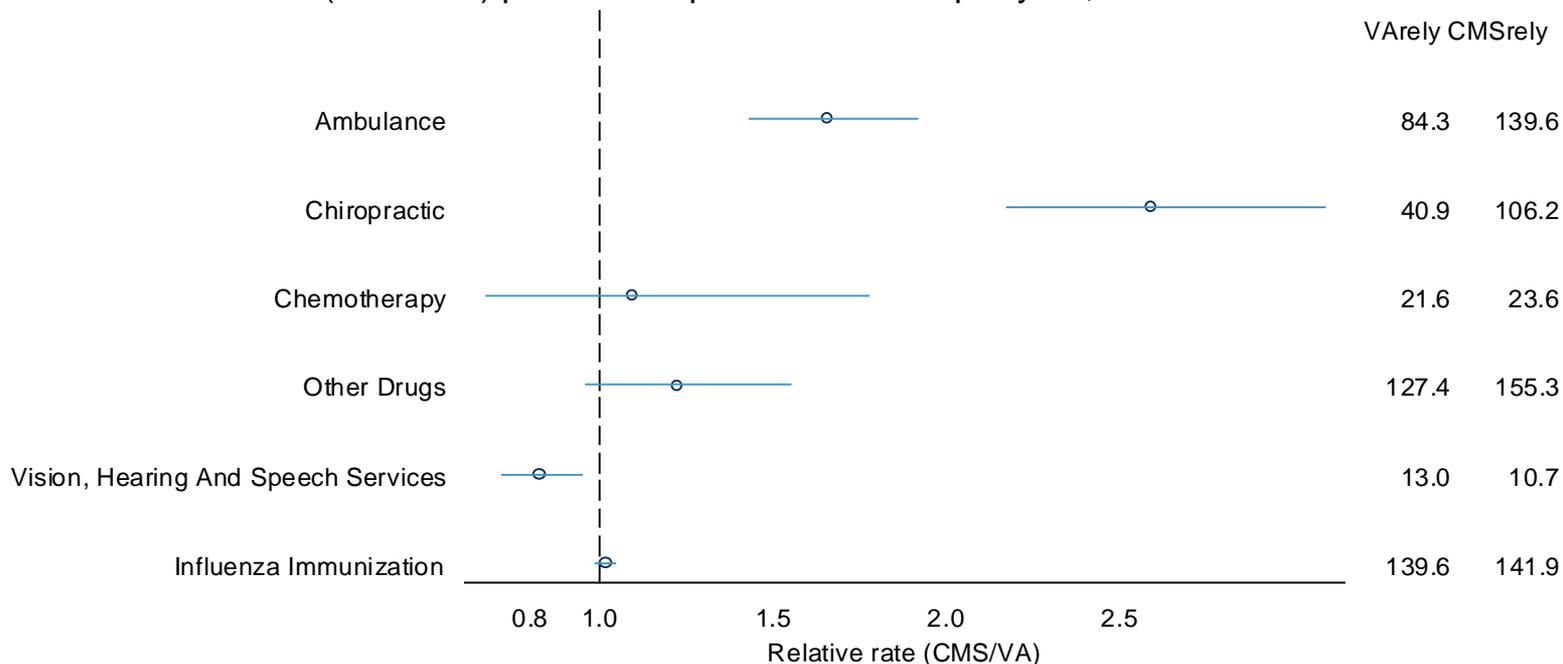


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Total (CMS+VA) procedures per 100 Veteran per year, 2001 to 2014



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 Rate per 100 Veterans per year (right axis) and relative rate (xaxis)

# Summary

- In 2000, newly Medicare eligible Veterans who would go on to rely on the VA for their care over the next 15 years had substantially higher health and social risk factors compared to veterans who would become CMS reliant.
- Over the subsequent 15 years, Veterans who relied on CMS for their care had substantial more visits and more procedures than veterans who relied on the VA to orchestrate their care

# Limitations and next steps

- Results are preliminary
- Veterans data are censored when they enroll in a Medicare HMO
- Fee basis data are not yet included
- Hospitalization data not incorporated
- Next steps
  - Adjusted analyses of health care use and survival
  - Include hospitalizations and Fee basis
  - Include costs
  - Causal longitudinal analysis of the effects of VA reliance on subsequent healthcare use and costs.

# Comments/Questions?

## Contact Information

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