

Medicare-eligible Veterans voting with their feet: Events associated with changes in a Veteran's reliance on the Veterans Health Administration (VHA) versus Medicare for healthcare

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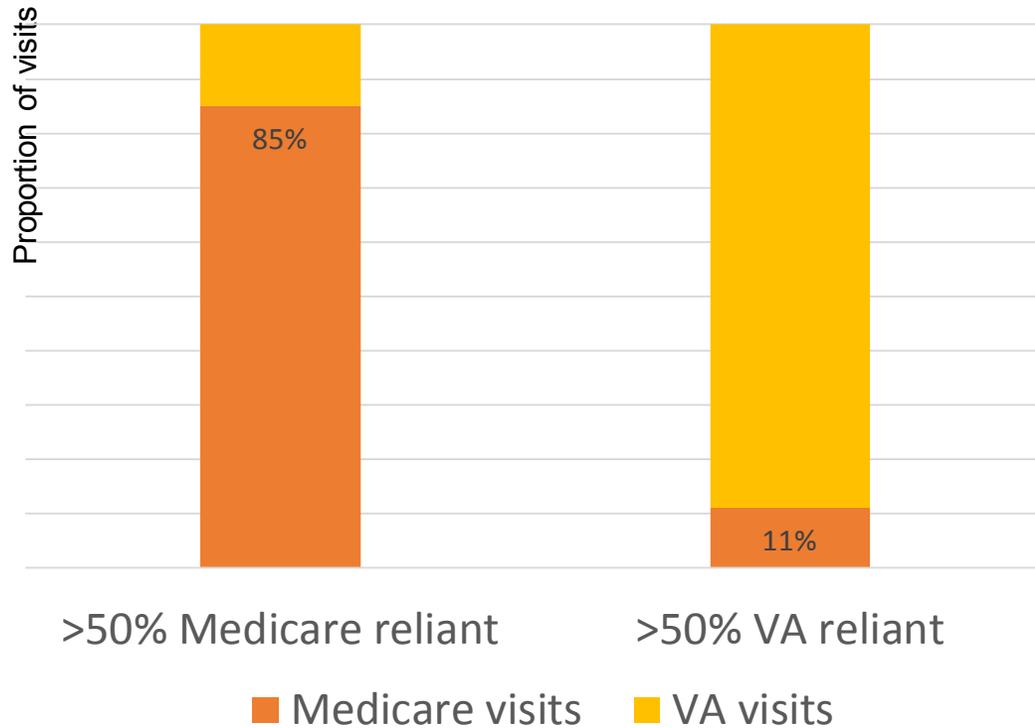
Background

- About half of all Veterans Health Administration (VHA) users are Medicare enrolled and consequently have a choice of using VHA or community providers.
- The VHA is essentially competing with community providers for the care of these dually enrolled veterans.
- Todd Wagner: We've been running a natural experiment on the VA competitiveness for the last 50 years.
- We can learn something about how the VHA is doing in this competitive marketplace by studying how Medicare eligible veterans are voting with their feet to rely on either VHA or Medicare providers.

Prior research on VA reliance

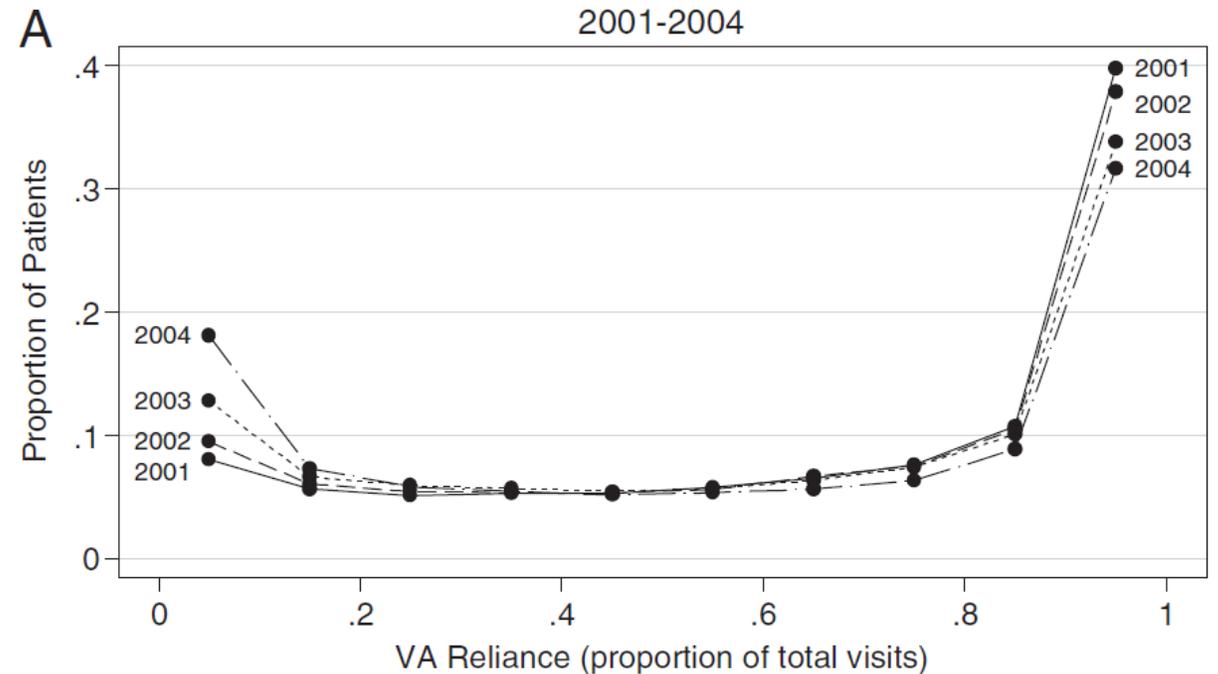


Reliance on the VHA is U-shaped



Hebert et al, HSR 2018. 53:6

Reliance on the VA decreases as a veteran gets older



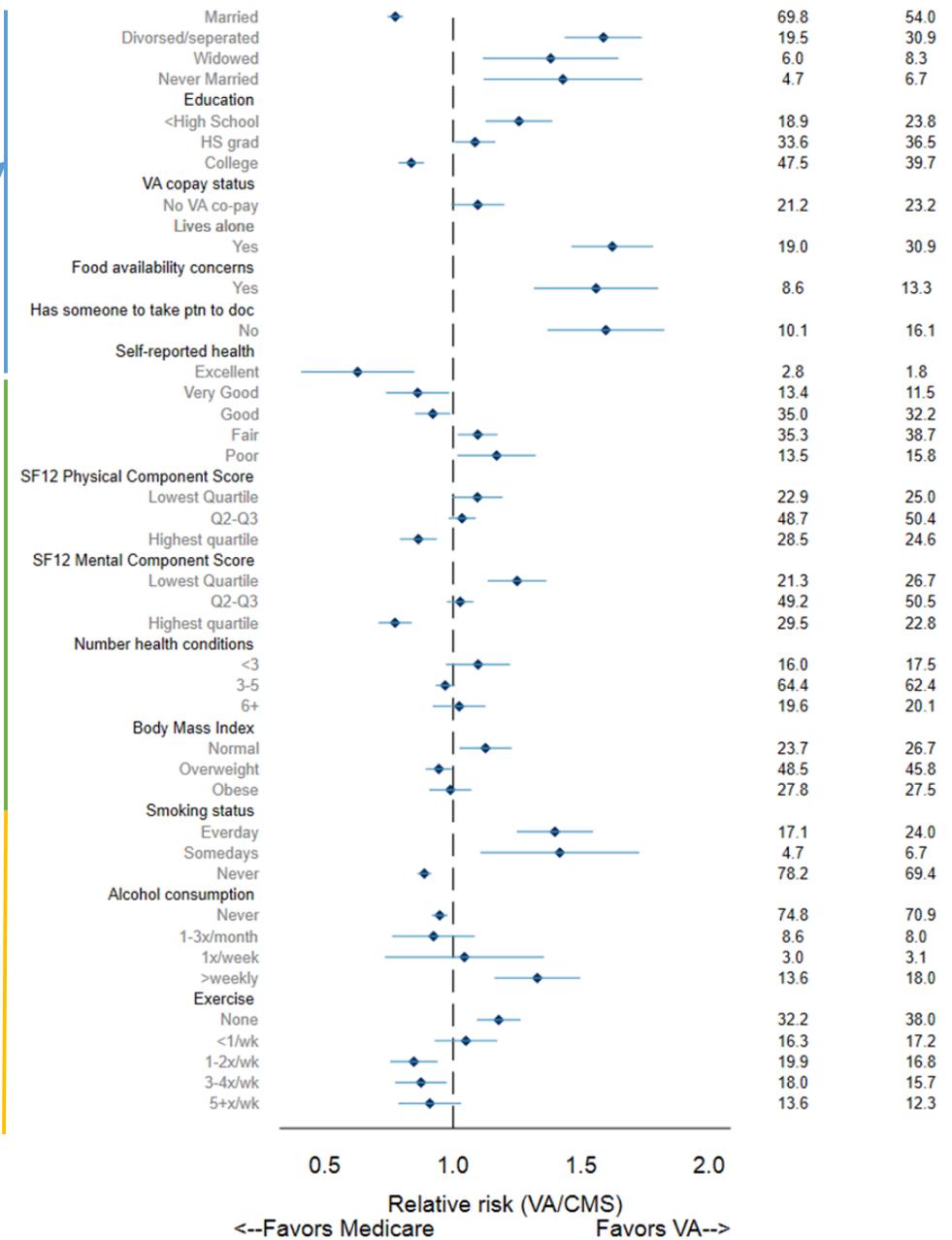
Liu et al, Medical Care 2011. 49:911-917

Poll question #1

- Compared to VA users who switch on Medicare providers when they turn 65, do VA users who rely on the VA have ...
 - Greater health risks
 - Lesser health risks
 - About the same risks?

- Among veterans who completed the Large Health Survey of Enrolled Veterans in 1999, those who choose the VA over Medicare from 2000-2016 had:

- Greater social risks
- Greater health risks
- Worse health behaviors

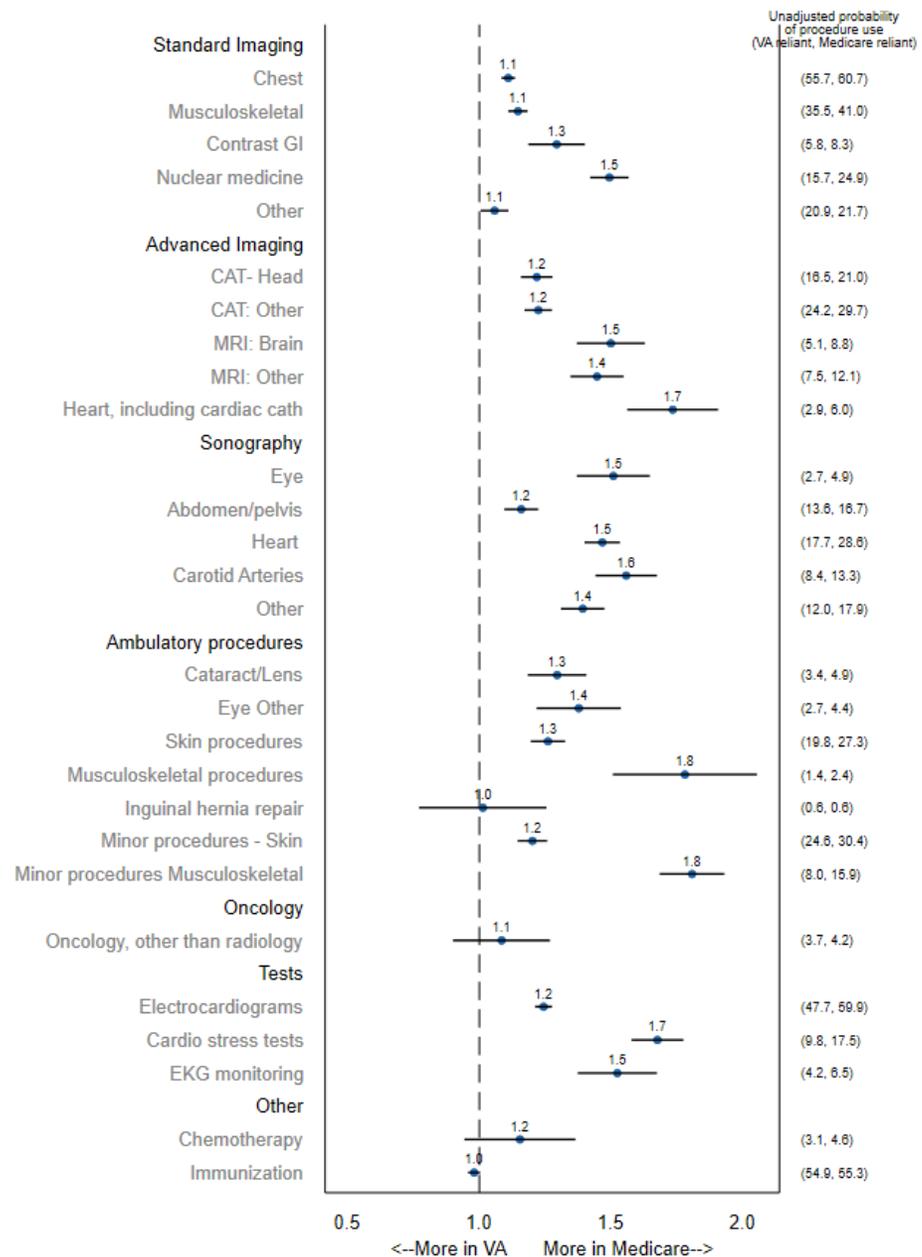


Hebert et al, HSR 2018. 53:6

Poll question #2

- Compared to VA users who switch on Medicare providers when they turn 65, do VA users who rely on the VA have ...
 - More outpatient procedures
 - Fewer outpatient procedures
 - About the same number of outpatient procedures?

- Greater reliance on Medicare was associated with increased probability of receiving 24 of the 28 BETOS codes we considered.
- Large effect sizes for cardiac procedures, imaging, and testing.



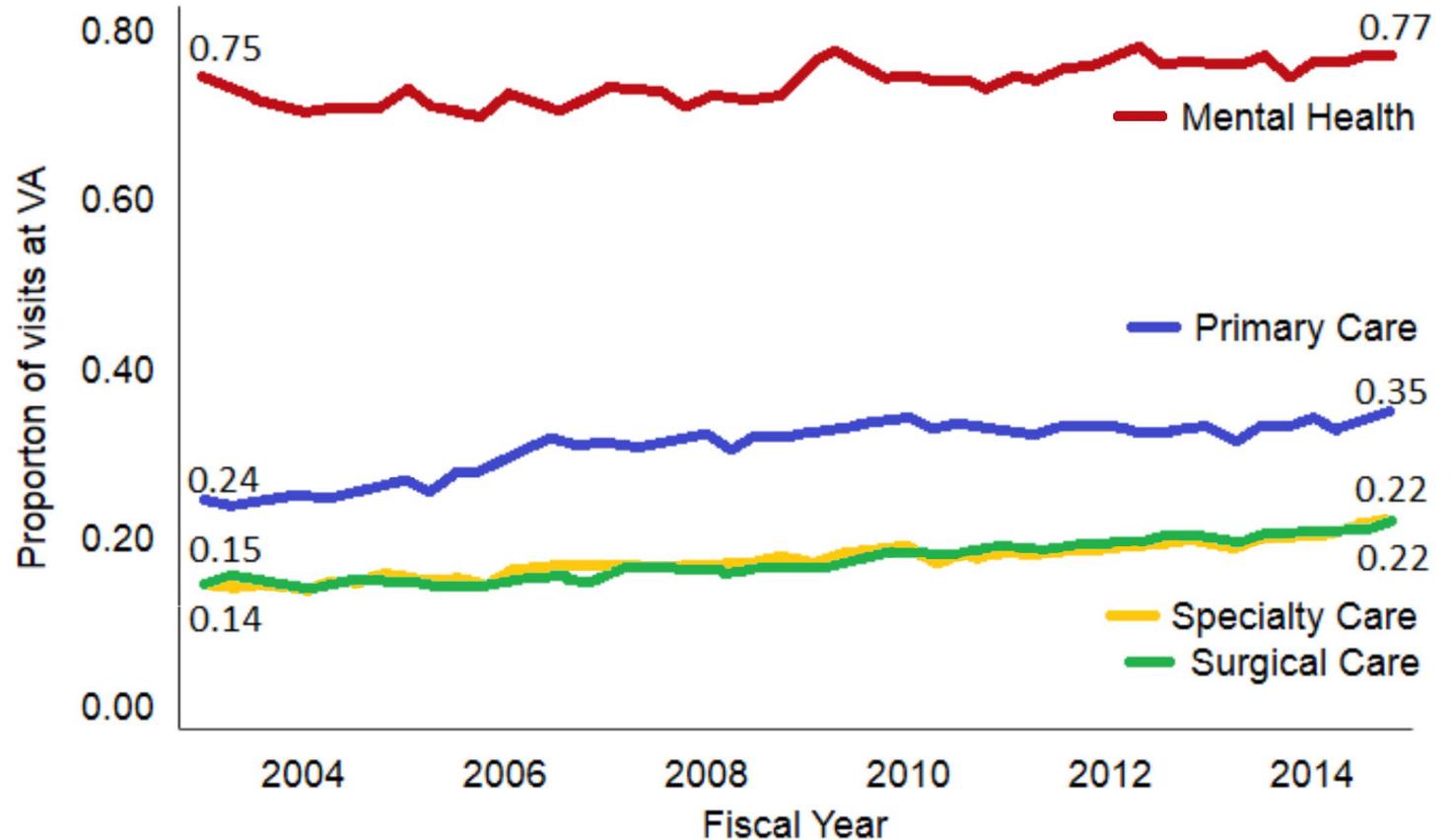
Hebert et al, HSR 2018. 53:6

Poll question #3

- From 2003-2014 have Medicare-eligible veterans
 - Increased their reliance on the VA
 - Decreased their reliance on the VA
 - Kept their reliance about the same?

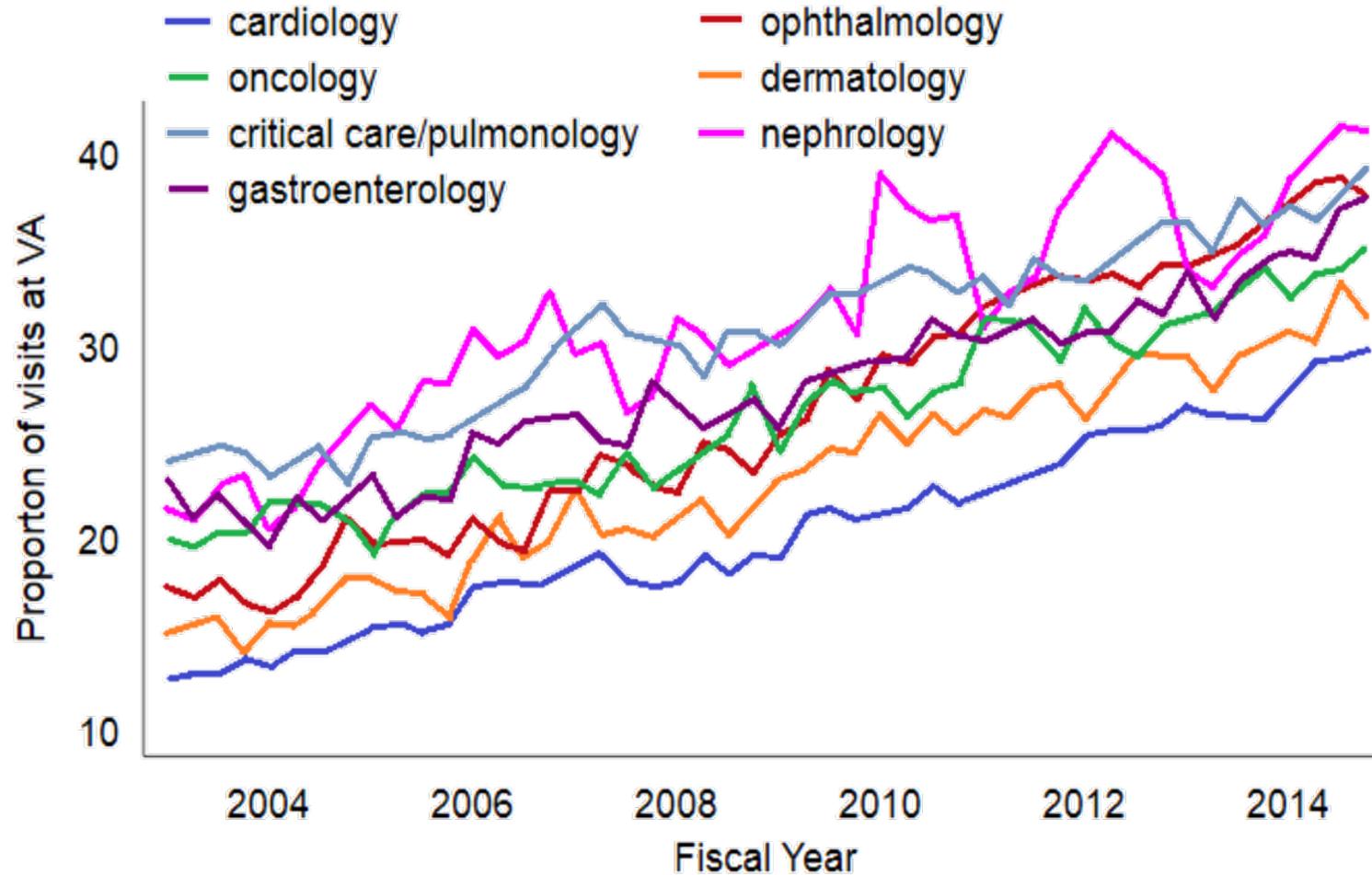
Veterans are increasingly voting with their feet to use more VA

- 5% random sample of Veterans in each year
 - 65 years or older
 - on a primary care panel
- With Medicare parts A and B
- Excluded Medicare Advantage enrollees
- Final sample: 877,291 person-year observations



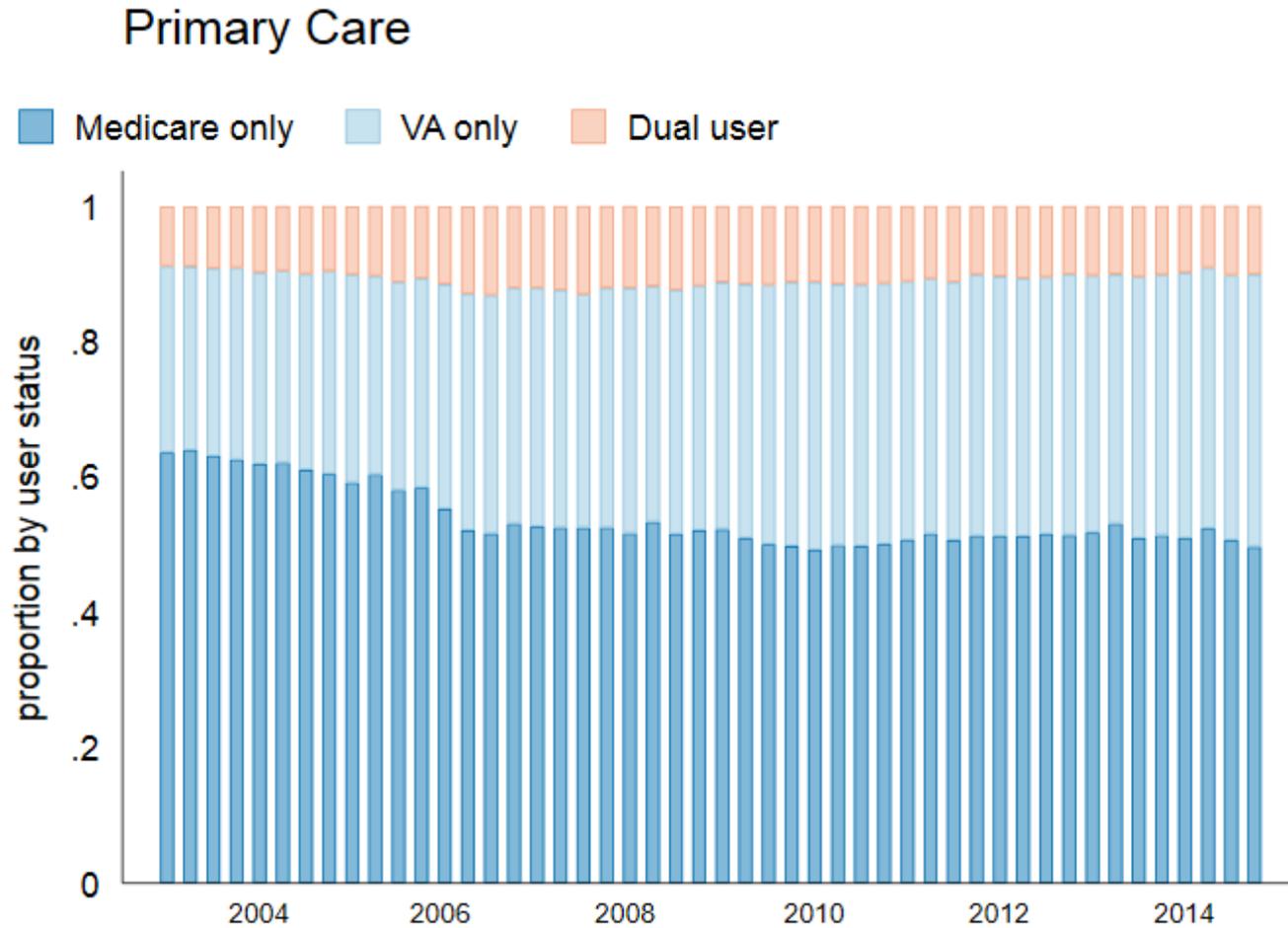
Liu et al, HSR 2018. 53:6

Reliance on the VHA is increasing for each specialty service investigated



Liu et al, HSR 2018. 53:6

VA-only Users Increased Over Time, While Medicare-only Users Decreased Over Time for All Measures



Liu et al, HSR 2018. 53:6

We know less about longitudinal changes in a veteran's VA reliance

- As a veteran ages, s/he uses more Medicare and less VA outpatient care (Liu, 2011)
- Veterans respond to poor patient experiences at the VA by voting with their feet to use less VA and more Medicare
 - Reported delays in care were associated with a subsequent-year decrease in VA reliance of 1.6 percentage points (Wong et al, 2018)
 - Following a Large Scale Adverse Event notification of possible exposure to infectious agents, Medicare-eligible veterans decreased their use of VA provided ambulatory surgery (Adjusted Odds Ratio AOR 0.75; $p < 0.05$) and increased their use of Medicare provided ambulatory surgery (AOR 2.1; $p < 0.01$). (Wagner 2016)

Liu C, et al, *Medical Care* 2011:911-917

Wong ES, et al, . 2018. *Healthcare*, 180-85.

Wagner, TH et al 2016. *BMJ quality & safety*, 24: 295-302.

Research Questions

1. How soon after becoming Medicare eligible does a veteran decide to become predominantly Medicare- or VA-reliant?
2. Are there events that influence whether a Veteran chooses the VA or Medicare for his/her subsequent care?
 - Receiving an incident life-threatening diagnoses?
 - Experiencing Medicare-provided hospital care?
 - Moving further from a VA Medical Center?

Materials and Methods

1. Data Sources

- 1999 Large Health Survey of Enrolled Veterans (LHSEV)
- Identify veterans who became age-eligible for Medicare from 1999-2001
- Medicare and VA Administrative data 2000-2016
- Stopped following veterans when they joined Medicare Advantage

2. Outcome: reliance on the VA 2000-2016

- Reliance measured by Evaluation and Management (E&M) CPT codes in VA and Medicare for face-to-face visits to primary care, specialty care, and mental health physician or nurse practitioner in outpatient settings.
 - Included only visits that could have occurred in either setting
 - Did not include visits in hospital settings because some are emergent

3. Statistical methods

- RQ1: Calculate concordance between VA-reliance over the entire period and the cumulative VA reliance at each year.
- RQ2: Longitudinal logistic regression

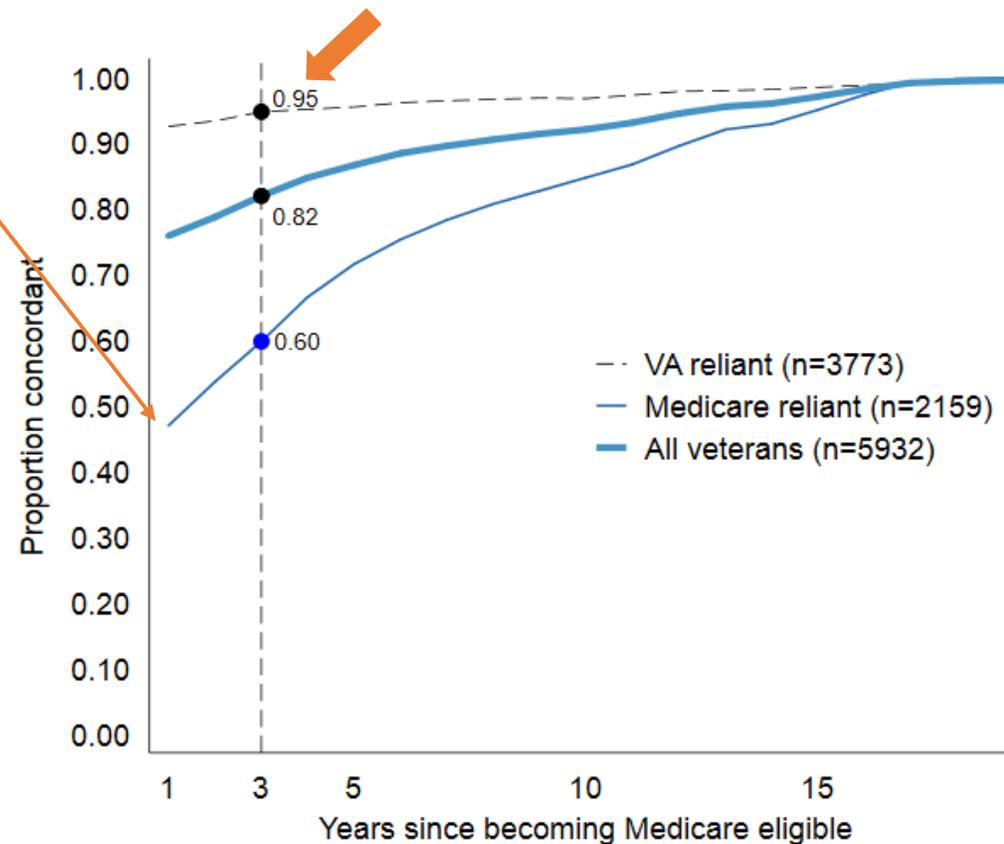
Study Characteristics

	MEDICARE RELIANT	VA RELIANT
COUNT	2,159	3,773
YEARS OF FOLLOW-UP	11.3	11.2
AGE IN 1999	65.1	65.1
FEMALE, %	2.7	3.1
RACE, %		
WHITE	81.2	76.2
AFRICAN AMERICAN	5.7	9.8
HISPANIC	3.7	4.2
MARITAL STATUS, %		
MARRIED	68.9	56.2



Results RQ1: How soon after becoming Medicare eligible does a veteran decide to become predominantly Medicare- or VA-reliant?

- **Half of all veterans who would be Medicare reliant over the total follow-up period were Medicare reliant in their first year of Medicare eligibility.**
- 60% of veterans who would go on to be Medicare reliant were Medicare reliant at year 3.
- 95% of veterans who would go on to be VA reliant were VA reliant at year 3.



Results RQ1: How soon after becoming Medicare eligible does a veteran decide to become predominantly Medicare- or VA-reliant?

- **For veterans who consistently relied on Medicare their Medicare visits increased every year but average VA visits held constant.**
- **For veterans who consistently relied on the VA, their VA visits each year decreased and Medicare visits increased**
- **For veterans who started out relying on the VA and switched to Medicare, average Medicare visits increased sharply.**
- **A small percentage of veterans relied more on Medicare than VA in 2001 but used more VA than Medicare over 2001-2016.**
- 2014-16 not shown due to small sample size.

Consistently relied on VA or Medicare

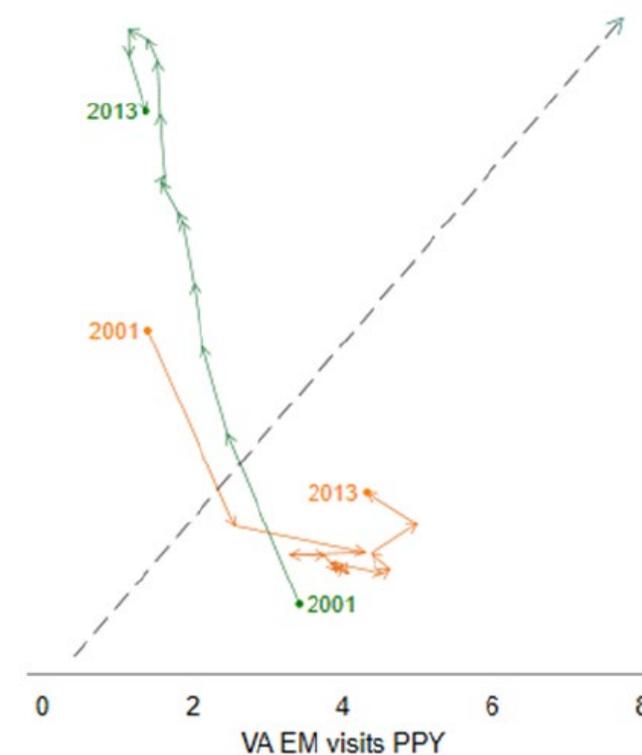
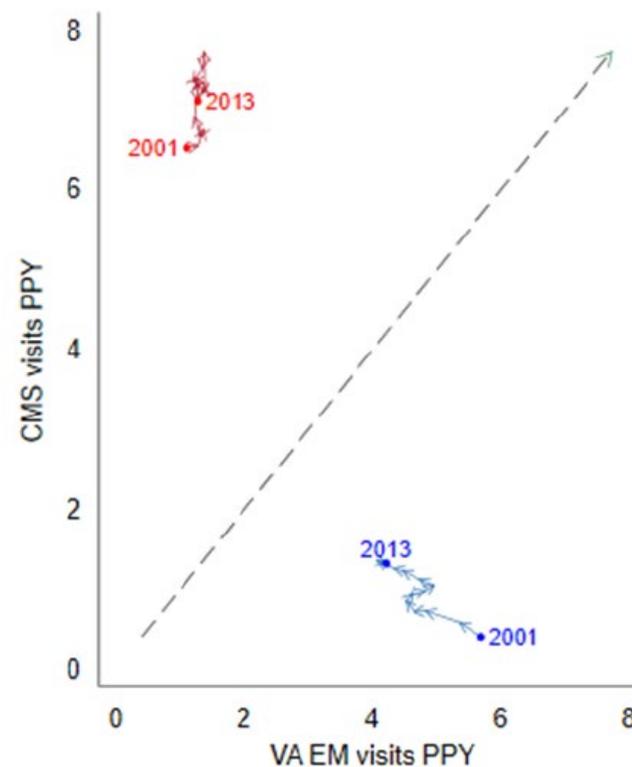
MC->MC n=1036

VA->VA n=3433

Switched reliance

VA->MC n=1123

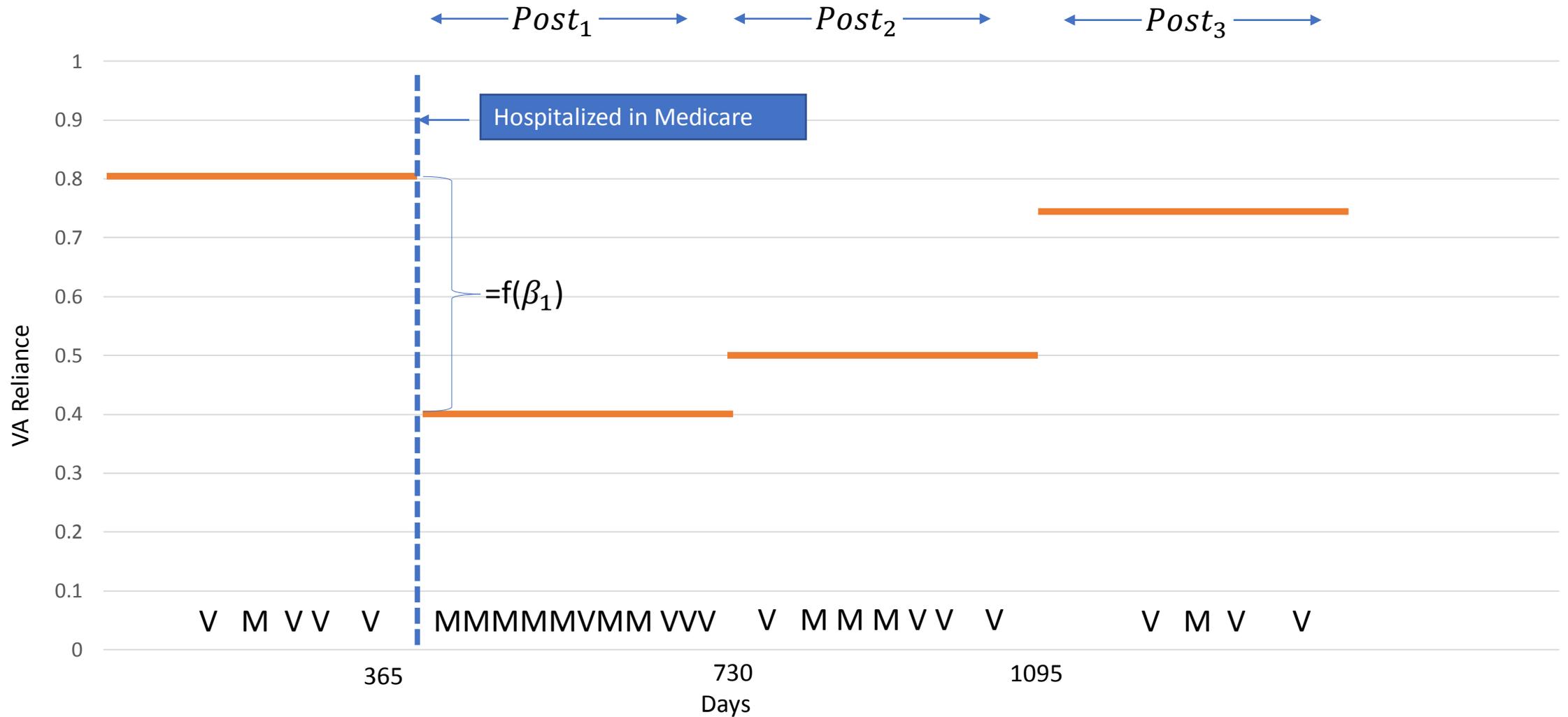
MC->VA n=340



Methods RQ2: Are there events that influence whether a Veteran chooses the VA or Medicare for his/her subsequent care?

- Unit of analysis: day (t) on which a veteran (i) had an E&M visit (y) in VA or Medicare
- Primary outcome: $y_{it} = 1$ if VA E&M; 0 if Medicare
- Explanatory variable of interest: Events
 - Hospitalization in VA or Medicare
 - Incident diagnosis of cancer, CHF, dementia, kidney failure
 - Move further from or closer to the VA
- Goal: Estimate adjusted reliance 1 year prior to and three years following an event, for veterans who were VA- and Medicare-reliant at year 3, respectively
- Adjust for
 - Demographics and health risks at baseline,
 - Comorbidity in the year prior to the event
 - Time

$$\text{Logit}(E(y_{it}|w^j)) = \beta_0 + \beta_1 \text{Post}_1 + \beta_1 \text{Post}_2 + \beta_1 \text{Post}_3$$



Hospitalizations

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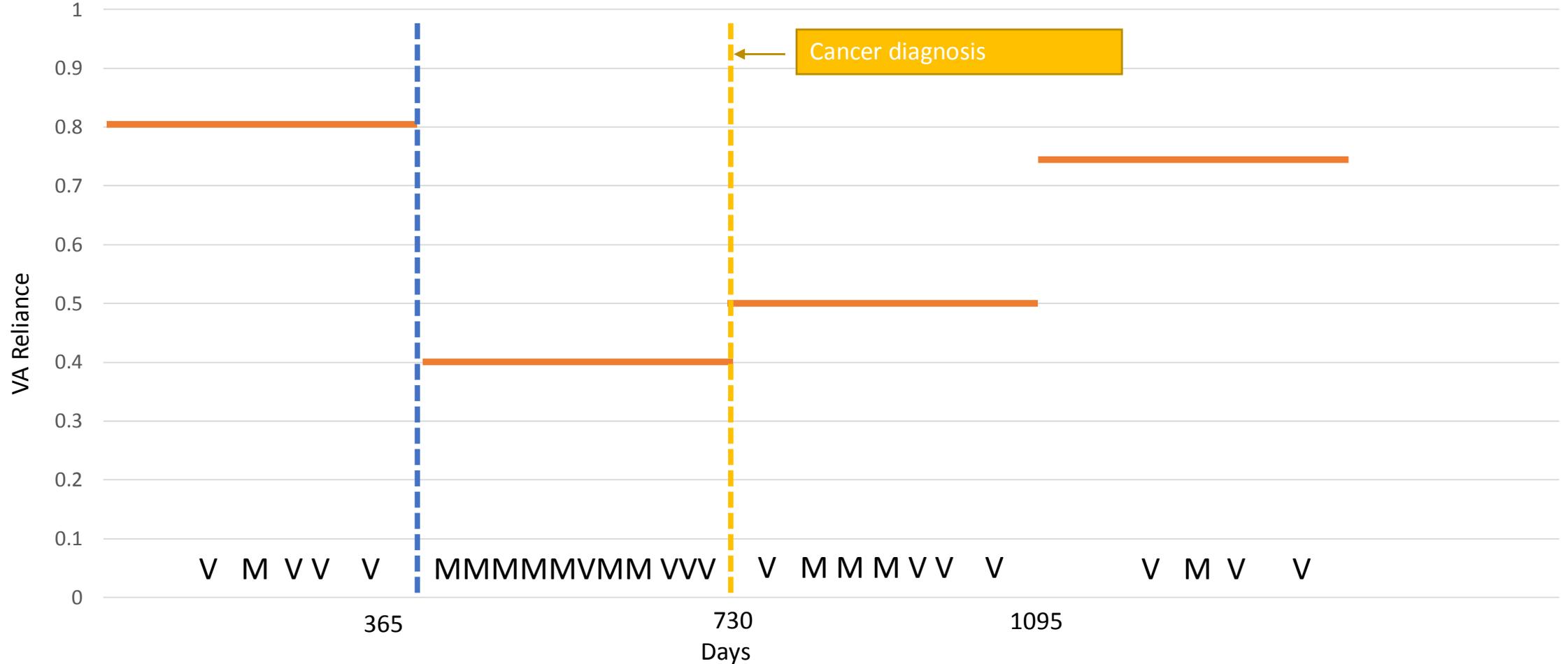
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$$\text{Logit} \left(E(y_{it} | w^j) \right) = \beta_0 + \beta_0 r_i + \sum_{j=MC,VA} \beta_{1j} \bar{w}_{it}^j + \sum_{j=C,H,D,K} \beta_{2j} \bar{w}_{it}^j + \beta_M \bar{w}_{it}^M$$

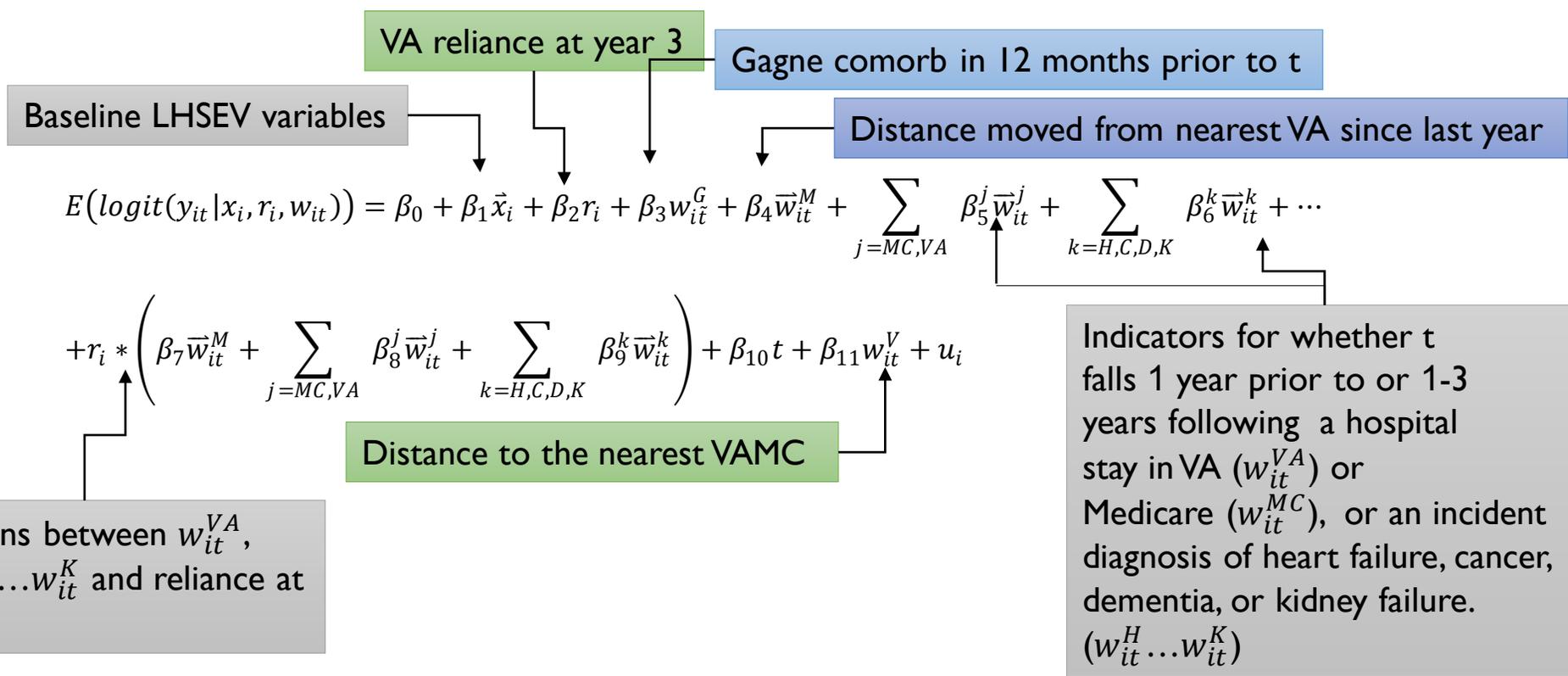
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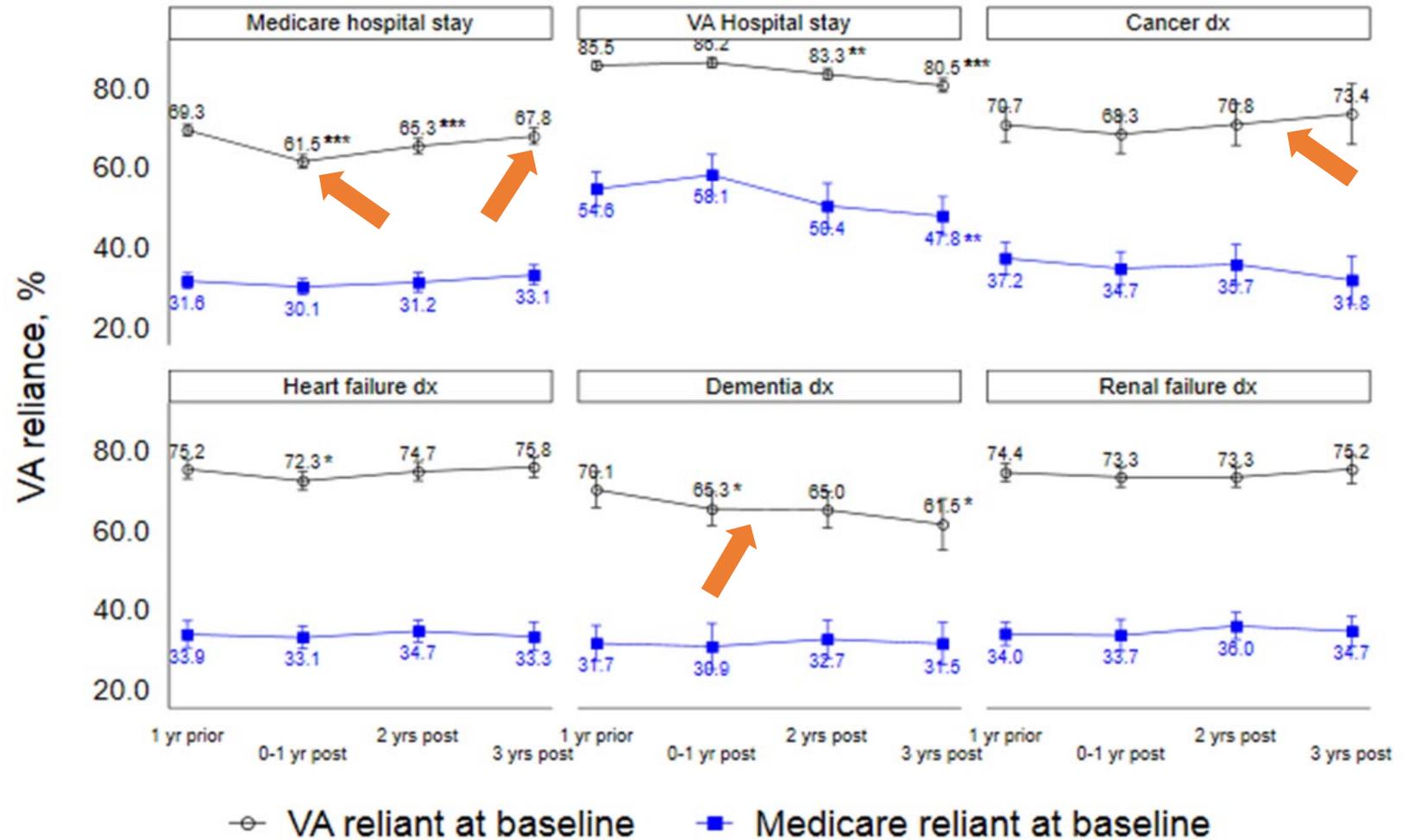
Results RQ2: Events associated with changes in reliance- Methods



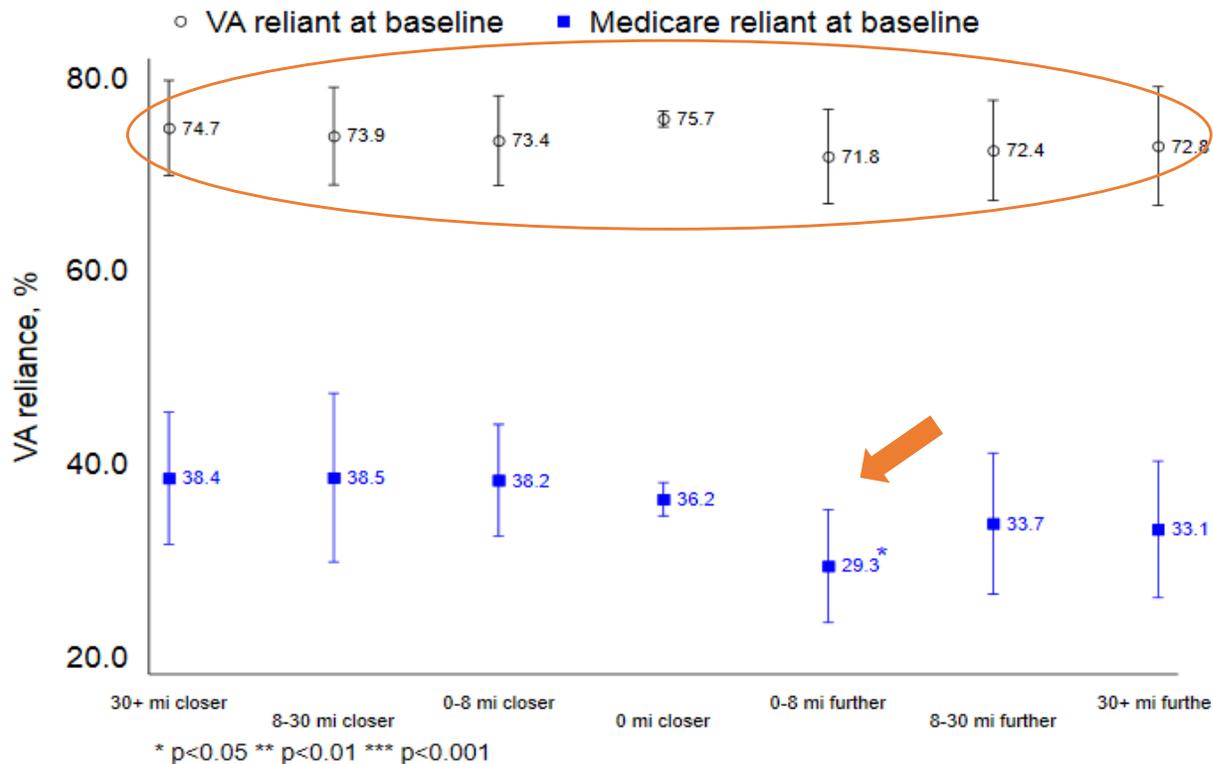
RQ 2: Are there events that influence whether a Veteran chooses the VA or Medicare for his/her subsequent care?

RESULTS

- VA-reliant Veterans reduced their reliance on the VA in the year after a Medicare hospital stay, but reliance recovered by year 3.
- Cancer, heart failure, and renal failure diagnoses were not associated with a reduction in VA reliance, although a dementia diagnosis was



The association between moving further from the VA and VA reliance differed between patients who were initially VA reliant



- Approximately 5% of veterans experienced a move during follow-up.
 - Half moved further from the VA and half moved closer to the VA
- Veterans who were reliant on the VA in their first three years of Medicare eligibility (black line) did not reduce their reliance after moving further from the nearest VAMC.
- Veterans who were reliant on the Medicare in their first three years of Medicare eligibility (blue line) further reduced VA reliance after moving further from the VA

Summary

- Most veterans voted with their feet in favor of preserving the VHA as a source of comprehensive healthcare.
- Veterans who chose the VHA over their first 3 years of Medicare eligibility did not significantly modify this decision after having the experience of community care, the threat of a new diagnosis, or the inconvenience of a move away from the nearest VHA.
- Nevertheless, about half of veteran who would become Medicare reliant did so as soon as they became Medicare eligible.

Implications

- Our findings are consistent with a model of VHA healthcare in which the VHA has a core customer base that is satisfied with their experience in the VHA.
- For most of these veterans, the VHA can offer community care to alleviate bottlenecks without fear that having experienced community care the veterans will not want to return.
- Although VA-reliant veterans gradually reduced their reliance on the VHA over time, this appears to be largely due to transient effects of Medicare hospitalizations.
- More research is needed on why some veterans vote with their feet to become Medicare reliant immediately after become Medicare eligible.

Thanks!

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