



# Implications of the Affordable Care Act for Use of VA Primary Care: Lessons from the Massachusetts Health Reform

Edwin S. Wong, PhD

VA Puget Sound HSR&D

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# Poll

- Are you affiliated with VA?
  - Yes
  - No

# Poll

- What is your primary professional role?
  - Researcher
  - Clinician
  - Operations
  - Hospital administration
  - Student/Fellow
  - Other

# Massachusetts Health Care Reform

- April 2006 law enacting major health reform
- Key components:
  - **Individual mandate** – Requirement that everyone in Massachusetts have health insurance coverage
  - **Expansion of health insurance market**
    - Establishment of Commonwealth Health Insurance Connector
    - Subsidies to low income households
  - **Medicaid expansion**
    - Increased enrollment caps
    - Higher provider payment rates
- VA not directly affected by health reform law

# Health Care Reform Associated with:

- Lower rate of uninsurance<sup>1</sup>
  - 6.6% point decrease among non-elderly adults
- Greater private insurance enrollment<sup>1</sup>
  - 3.1% point increase in employer-sponsored coverage
- Greater Medicaid enrollment<sup>2</sup>
  - 19.4% point increase among low-income parents

<sup>1</sup>Long SK, et al. (2009). *American Economic Review* 99(2).

<sup>2</sup>Sonier J, et al. (2013). *Health Affairs* 32(7).

# Health Care Reform Associated with:

- Greater use of primary care<sup>3</sup>
  - 3% point increase in probability of having a primary care visit
- Greater use of preventative care<sup>4</sup>
  - 5.5% increase in colonoscopy rates
- Longer average wait times for appointment with an internist<sup>5</sup>
  - 33 days in 2006 to 50 days in 2009
- Limited data examining potential impact on Veterans and VA

<sup>3</sup>Miller (2012). *Inquiry* 49(4).

<sup>4</sup>Van Der Wees, et al. (2013). *Milbank Quarterly* 91(4).

<sup>5</sup>Ku L, et al. (2009). *Kaiser Family Foundation*.

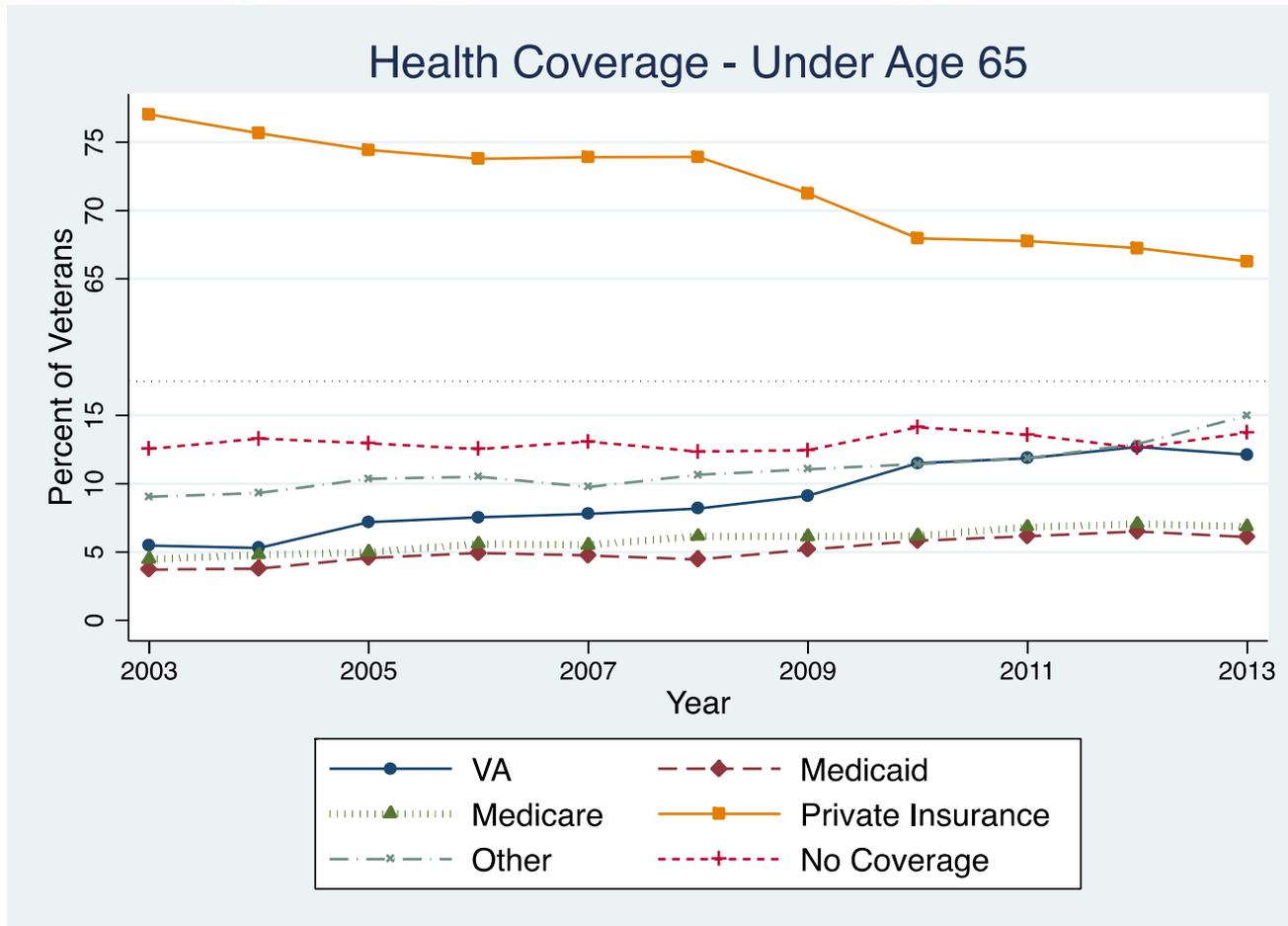
# Veterans Affairs Health Care System (VA)

- Largest integrated health care system in the U.S.
- Safety net provider for many Veterans
- Eligibility Criteria:
  - Service-connected disabilities
  - Low income
  - Special circumstances (i.e. Purple Heart Awardee)

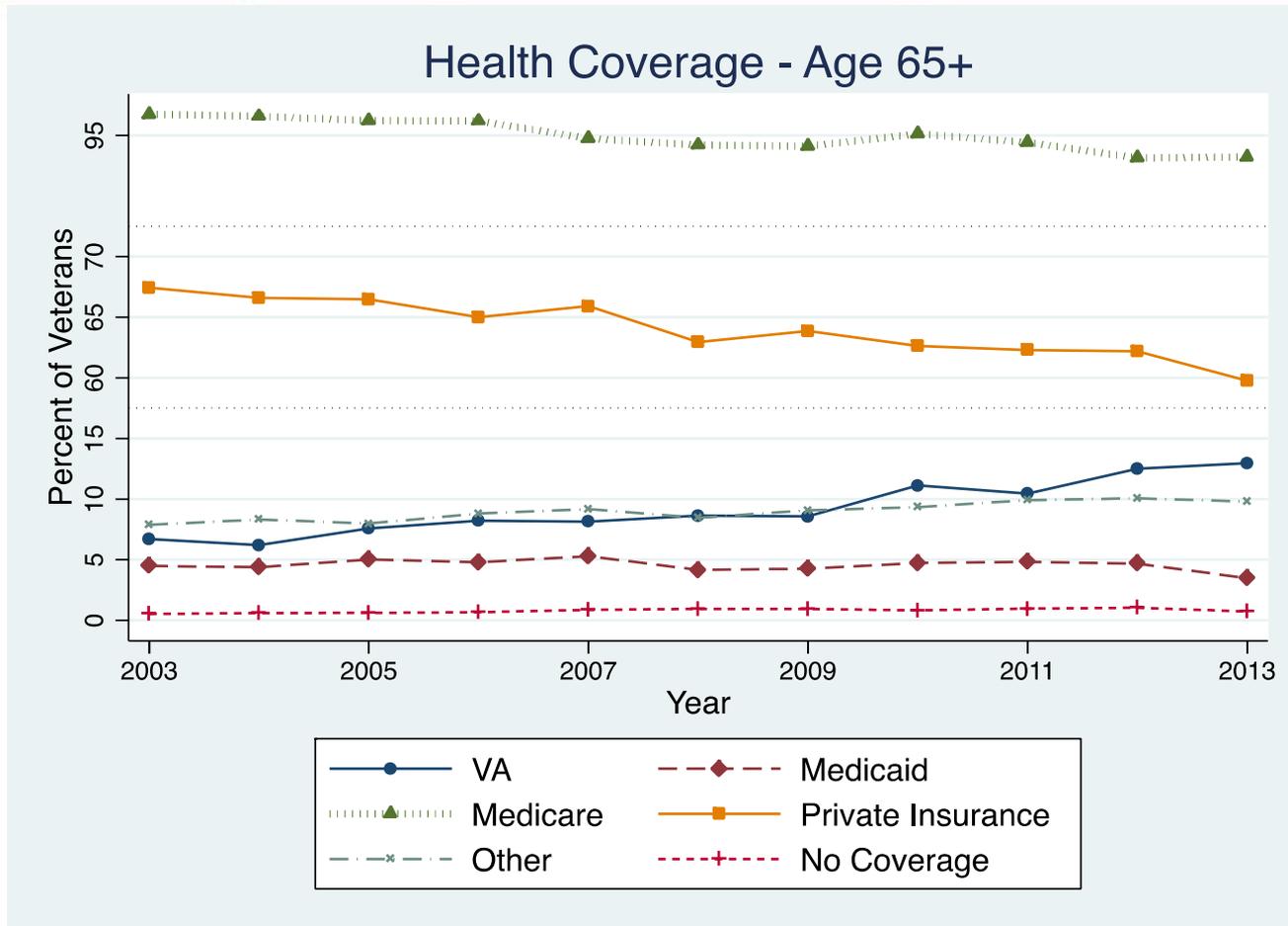
# VA Health Care System

- Outpatient copayments:
  - Primary care (\$15)
  - Specialty care (\$50)
- Exempt from copayments if:
  - $\geq 50\%$  service connected disability
  - Income below national thresholds

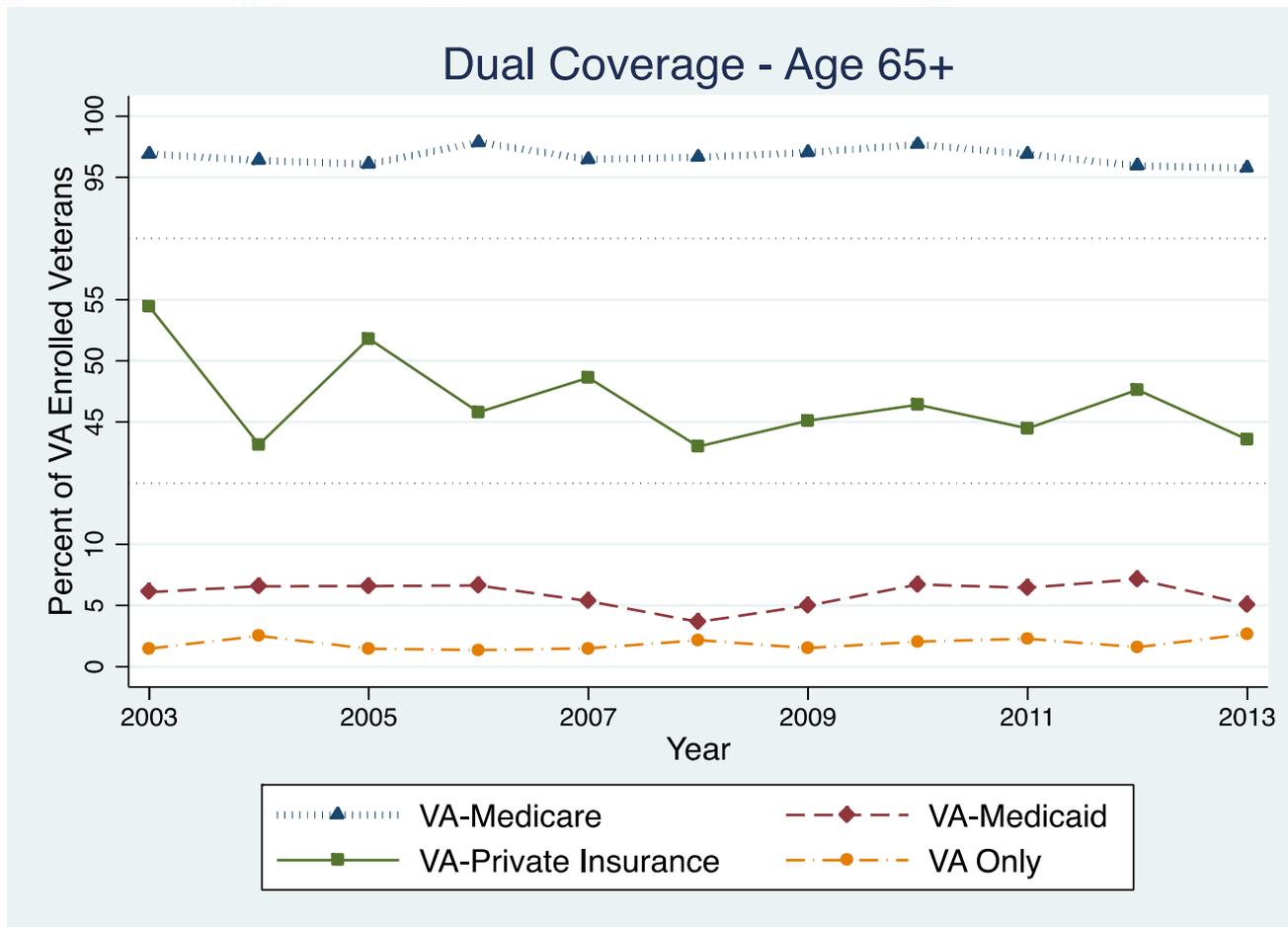
# Veterans Have Many Health Options



# Veterans Have Many Health Options



# Dual VA and Non-VA Use is Common

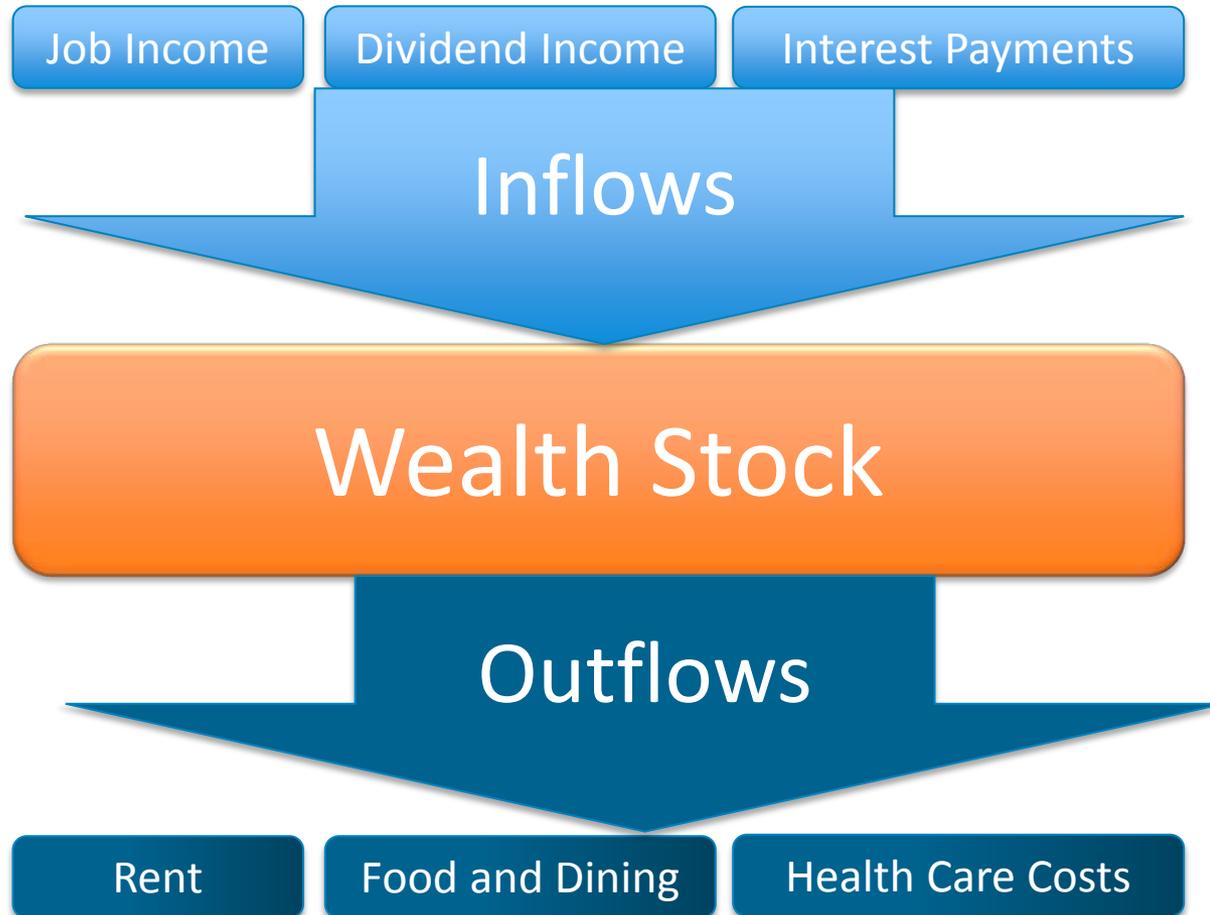


# Conceptual Model: Stock and Flow

- Example: Household wealth
  - Stock of wealth at a given point in time
  - Inflows: Increase wealth stock
  - Outflows: Decrease wealth stock

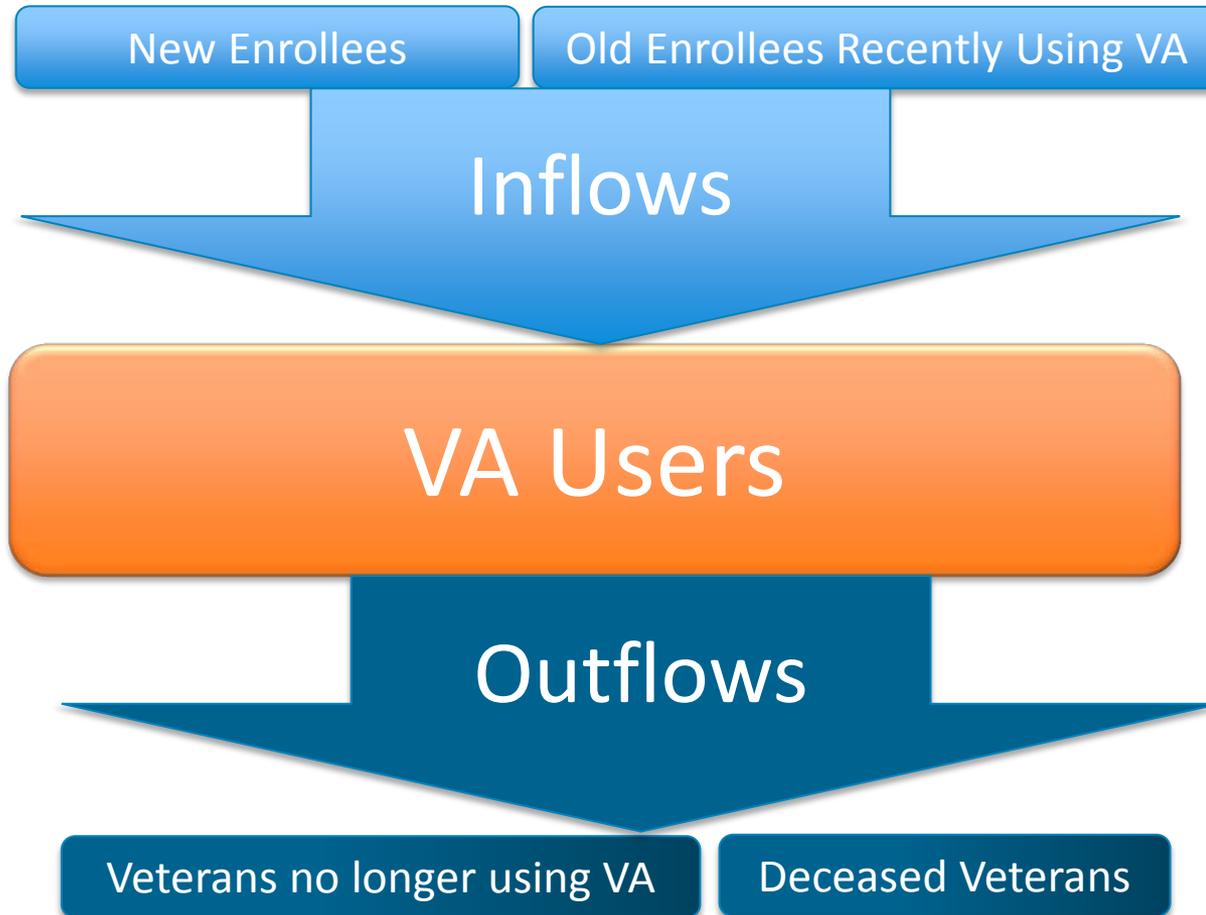
# Wealth Stock





# Applying Stock and Flow Model to VA Use

- Stock: Population of VA users
- Inflows: New VA users
- Outflows:
  - Veterans no longer using VA
  - Veterans who die



# How Health Care Reform Affects Veterans

- Changes in VA primary care use due to enrollment changes
- Three major components of health reform:
  1. Individual Mandate (inflow)
  2. Expansion of health insurance market (outflow)
  3. Medicaid Expansion (outflow)

# Composition of VA Population May Change

- VA primary care utilization may change even if health reform does not change net VA enrollment
- Characteristics of VA user “stock” following health reform may change
  - Changes in health need among remaining VA users
  - Changes in market for non-VA care

# Changes in Veterans' Health Need

- Self-selection among Veterans who remain in VA
  - Copayment-exempt status
  - High reliance on VA care
- Veterans who leave VA
  - Less reliant on VA care
- Removing less reliant Veterans increases average VA use

# Changes in Veterans' Health Need

- Younger previously uninsured Veterans
- Veterans enrolling in non-VA programs who would enroll in VA in the absence of health care reform

# Changes in Market for Non-VA Care

- Health reform externalities for dual users of VA and non-VA care
  - Increasing non-Veterans' access to community providers may result in difficulty obtaining appointments for Veterans
  - Supply constraints in short run
  - Continued users of VA may shift primary care to VA

# Goal of this research

- To examine whether health care reform in Massachusetts was associated with changes in VA primary care use.

# Data

- VA Administrative Databases
  - Corporate Data Warehouse
  - Outpatient Care Files
- Fee-for-Service Medicare Data
  - Carrier File
  - Outpatient File
- Area Health Resource File
- RUCA ZIP Code files

# Study Design

- Natural experiment
  - Massachusetts Veterans subject to health reform starting in June 2006
  - Exogenous change in health policy

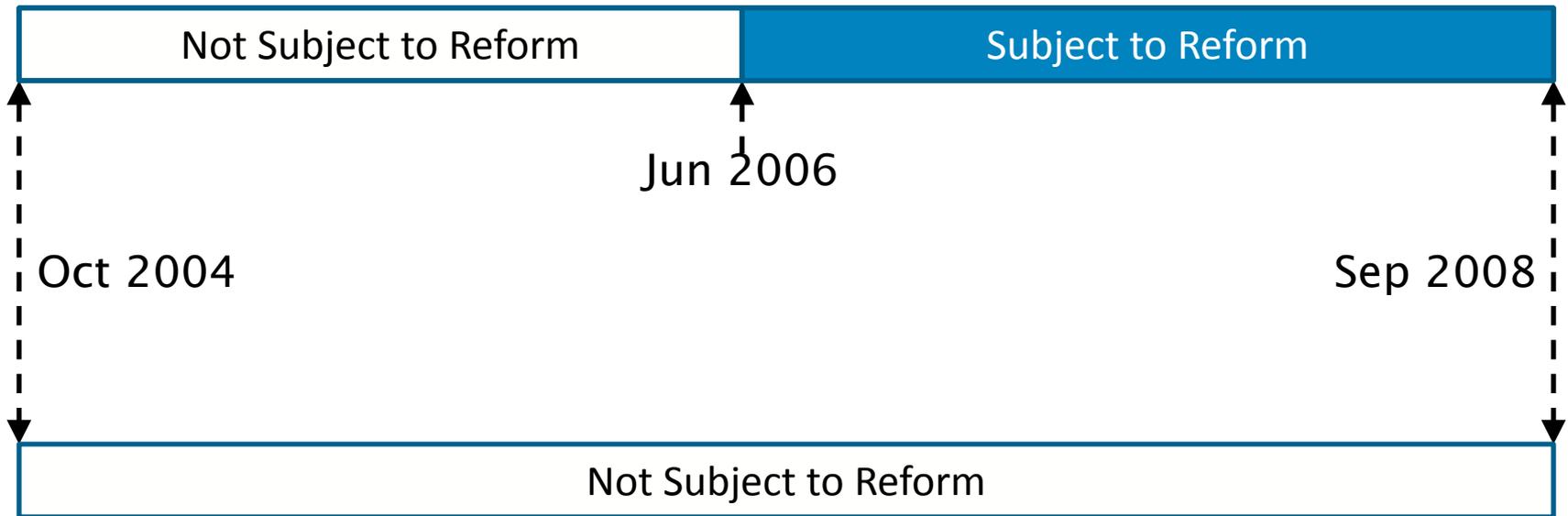
# Study Design

- Treatment and control group determined by exposure to health reform

<b>Group</b>	<b>State of Residence</b>
<b>Treatment Group</b>	Veterans residing in Massachusetts
<b>Control Group</b>	Veterans residing in all other New England States (Connecticut, Maine, New Hampshire, Rhode Island, Vermont)

# Study Timeline

## Massachusetts Veterans



## Other New England Veterans

# Study Sample

- 262,335 unique Veterans present in the Primary Care Management Module (PCMM) and residing in New England
  - Reflects nearly all active VA primary care users
  - Present in PCMM if any VA use within 24 months
- Exclusions:
  - Veterans who lived in both Massachusetts and other New England states (N=3,870)
  - Veterans missing covariate data (N=2,070)
- **Final Study Sample:** 256,395 VA users present in PCMM during period FY2005-Q1 to FY2008-Q4

# Study Sample

- **Unit of analysis:** Repeated Veteran-quarter observations
- Analyses stratified by age group (under 65 and 65+) to account for Medicare eligibility.

# Outcomes

- Count of quarterly primary care visits in:
  - **VA** – defined by stop codes
  - **Fee-for-service Medicare** – calculated using algorithm based on CPT and provider specialty codes<sup>1</sup>

# Statistical Analysis

- Difference-in-difference (DID) approach
  - Account for common trends among all Veterans
  - Calculate pre-post change in primary care use for:
    - Massachusetts Veterans
    - Other New England Veterans
  - Subtract pre-post changes

# Statistical Analysis

- Fixed effects negative binomial regression
  - Mundlak correction
  - Account for time-invariant unobserved patient variables affecting primary care use
- Control Variables:
  - Individual demographics
  - Health status and comorbidity
  - Prior VA use
  - Economic conditions
  - Seasonality
  - County-level characteristics

# Descriptive Statistics – Under 65 Massachusetts VA Users

<b>Variable</b>	<b>Baseline (FY2005-Q1)</b>	<b>Study End (FY2008-Q4)</b>
Age (mean/SD)	53.2 (9.3)	52.2 (11.3)
Male	93.3%	92.5%
Exempt from Copayments	79.9%	85.2%
Race - White	66.8%	66.9%
Race - Black	6.1%	6.1%
Elixhauser Score (mean/SD)	1.7 (1.5)	1.6 (1.6)
Miles to Nearest VA (mean/SD)	6.2 (5.1)	6.5 (5.2)
Local Unemployment Rate (mean/SD)	5.5 (0.9)	6.0 (0.9)
# VA Users	19,093	23,148

# Descriptive Statistics – Under 65 Other New England VA Users

<b>Variable</b>	<b>Baseline (FY2005-Q1)</b>	<b>Study End (FY2008-Q4)</b>
Age (mean/SD)	53.6 (9.1)	53.1 (10.8)
Male	92.8%	92.3%
Exempt from Copayments	74.8%	81.3%
Race - White	72.6%	73.3%
Race - Black	5.0%	5.9%
Elixhauser Score (mean/SD)	1.7 (1.6)	1.6 (1.6)
Miles to Nearest VA (mean/SD)	12.4 (10.2)	12.0 (9.8)
Local Unemployment Rate (mean/SD)	5.5 (1.3)	6.5 (1.5)
# VA Users	26,434	32,392

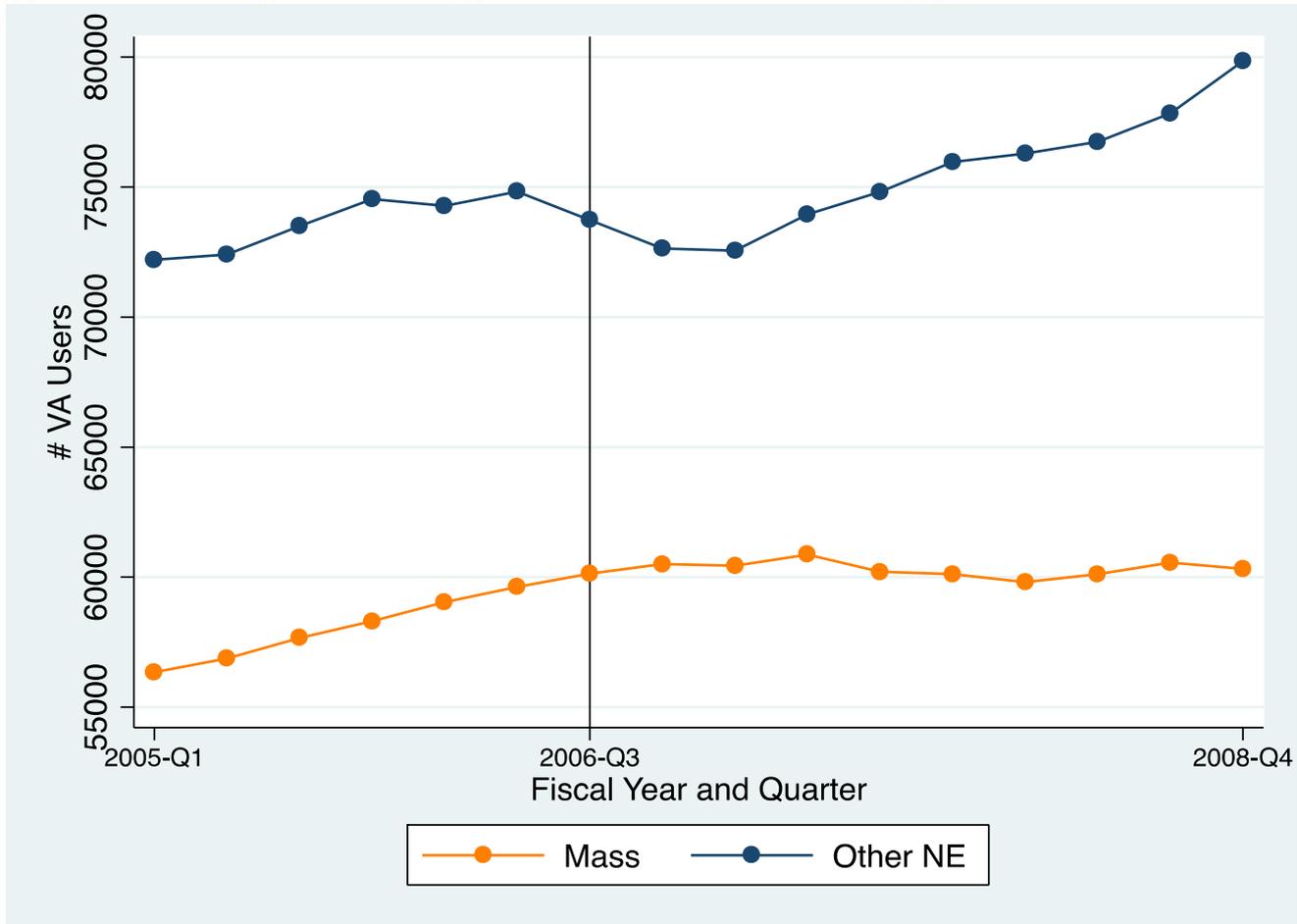
# Descriptive Statistics – Age 65+ Massachusetts VA Users

<b>Variable</b>	<b>Baseline (FY2005-Q1)</b>	<b>Study End (FY2008-Q4)</b>
Age (mean/SD)	76.9 (6.4)	77.9 (6.9)
Male	97.5%	97.5%
Exempt from Copayments	64.9%	68.3%
Race - White	95.5%	95.6%
Race - Black	2.8%	2.6%
Elixhauser Score (mean/SD)	1.8 (1.6)	1.6 (1.6)
Miles to Nearest VA (mean/SD)	6.6 (4.9)	6.8 (5.0)
Local Unemployment Rate (mean/SD)	5.4 (1.0)	6.0 (0.9)
# VA Users	37,257	37,175

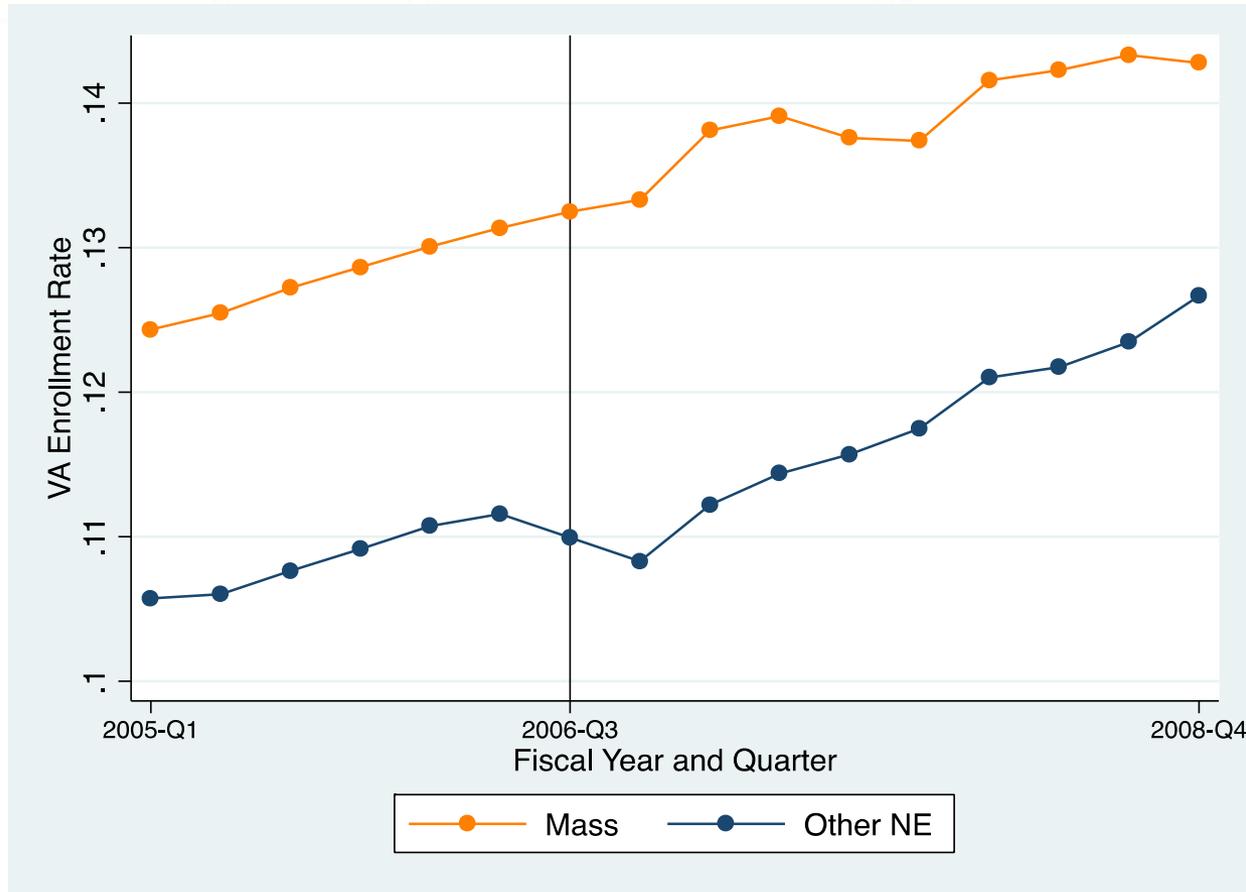
# Descriptive Statistics – Age 65+ Other New England VA Users

<b>Variable</b>	<b>Baseline (FY2005-Q1)</b>	<b>Study End (FY2008-Q4)</b>
Age (mean/SD)	76.5 (6.3)	77.2 (6.9)
Male	97.9%	97.9%
Exempt from Copayments	53.8%	56.9%
Race - White	96.8%	96.4%
Race - Black	2.0%	2.3%
Elixhauser Score (mean/SD)	1.8 (1.5)	1.6 (1.6)
Miles to Nearest VA (mean/SD)	11.1 (9.1)	11.1 (8.7)
Local Unemployment Rate (mean/SD)	5.4 (1.1)	6.4 (1.5)
# VA Users	45,769	47,452

# # Active VA Users by Group

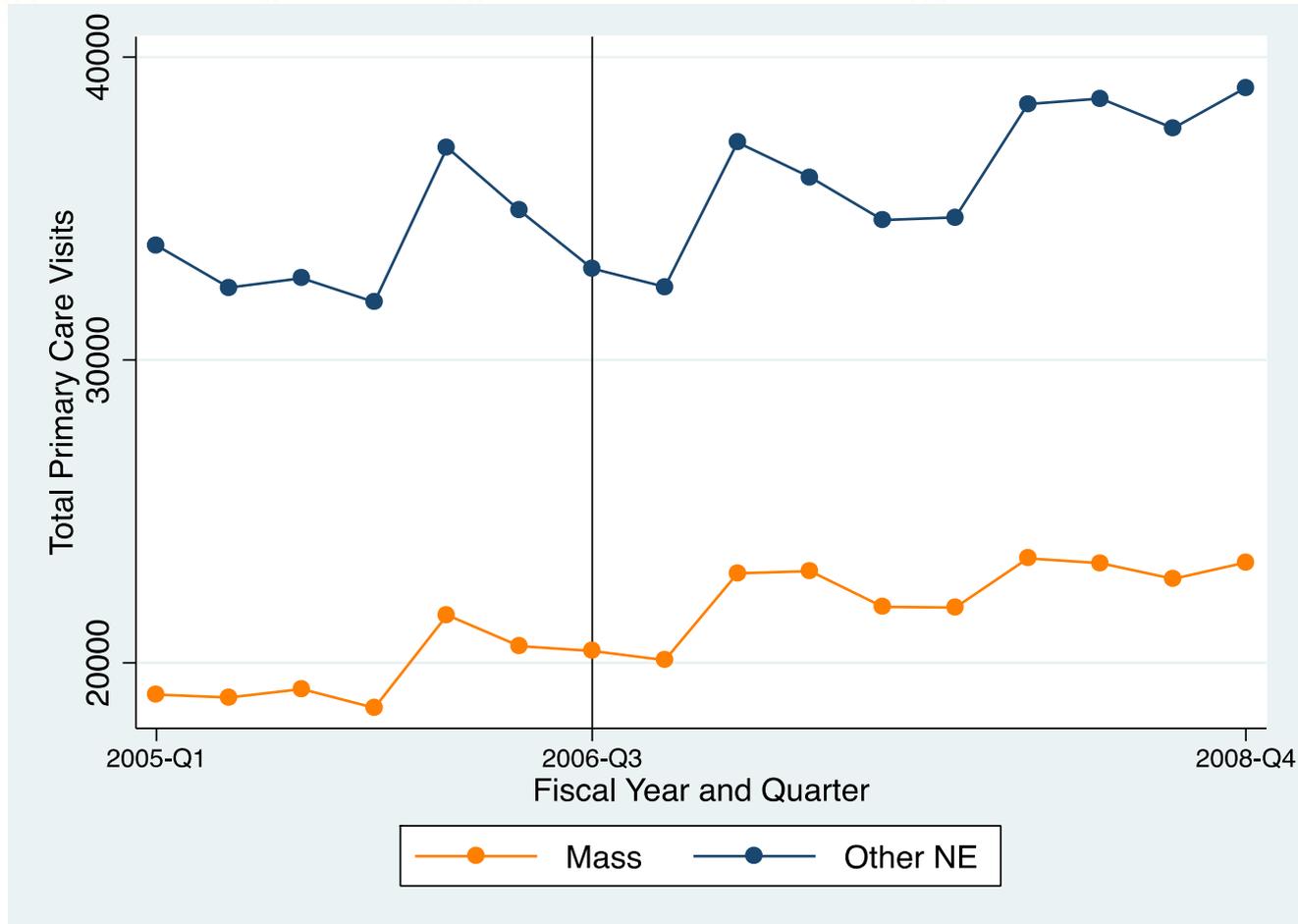


# Difference in Enrollment Rate Decreasing

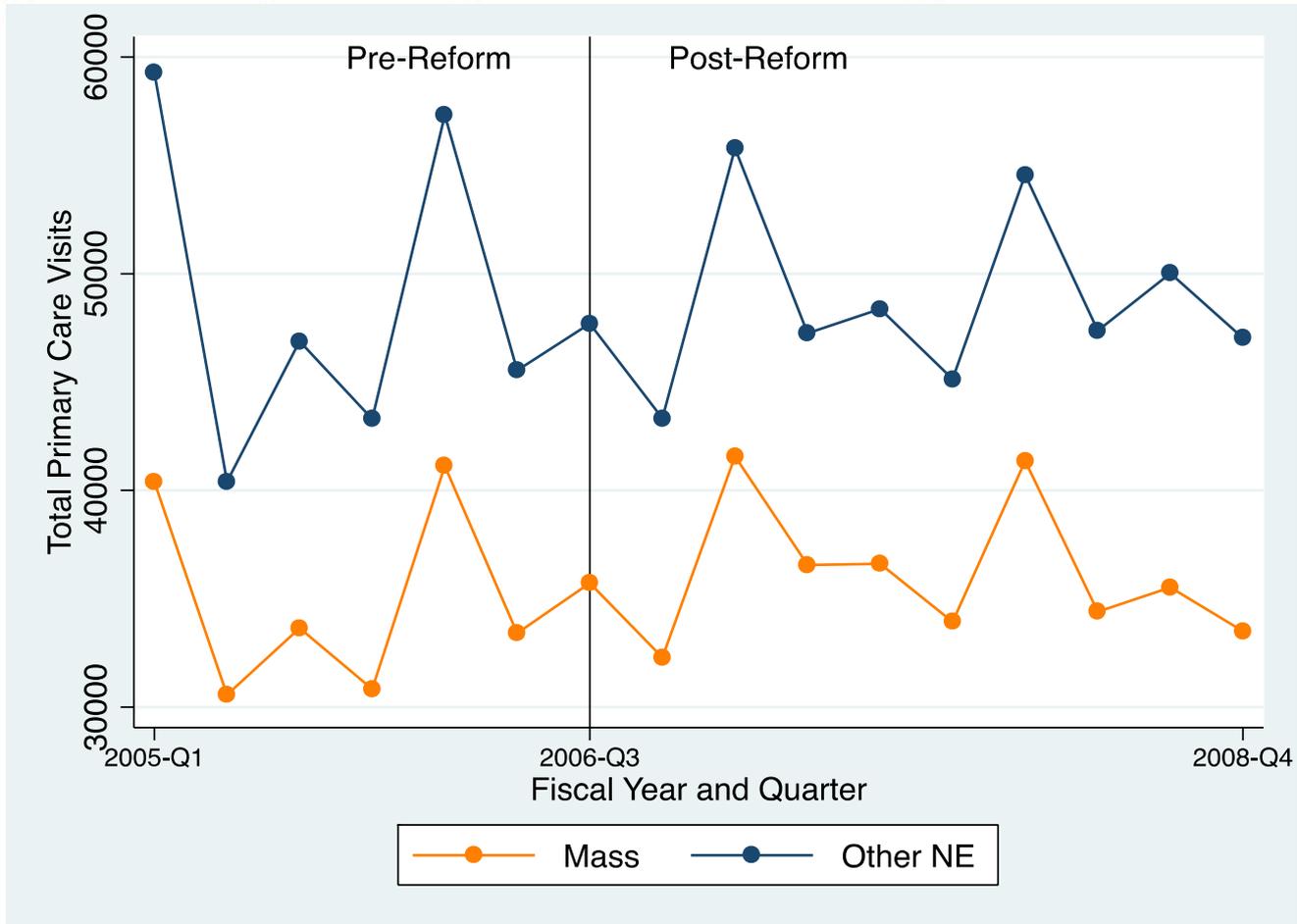


User Rate = # of VA users / # of all Veterans in group

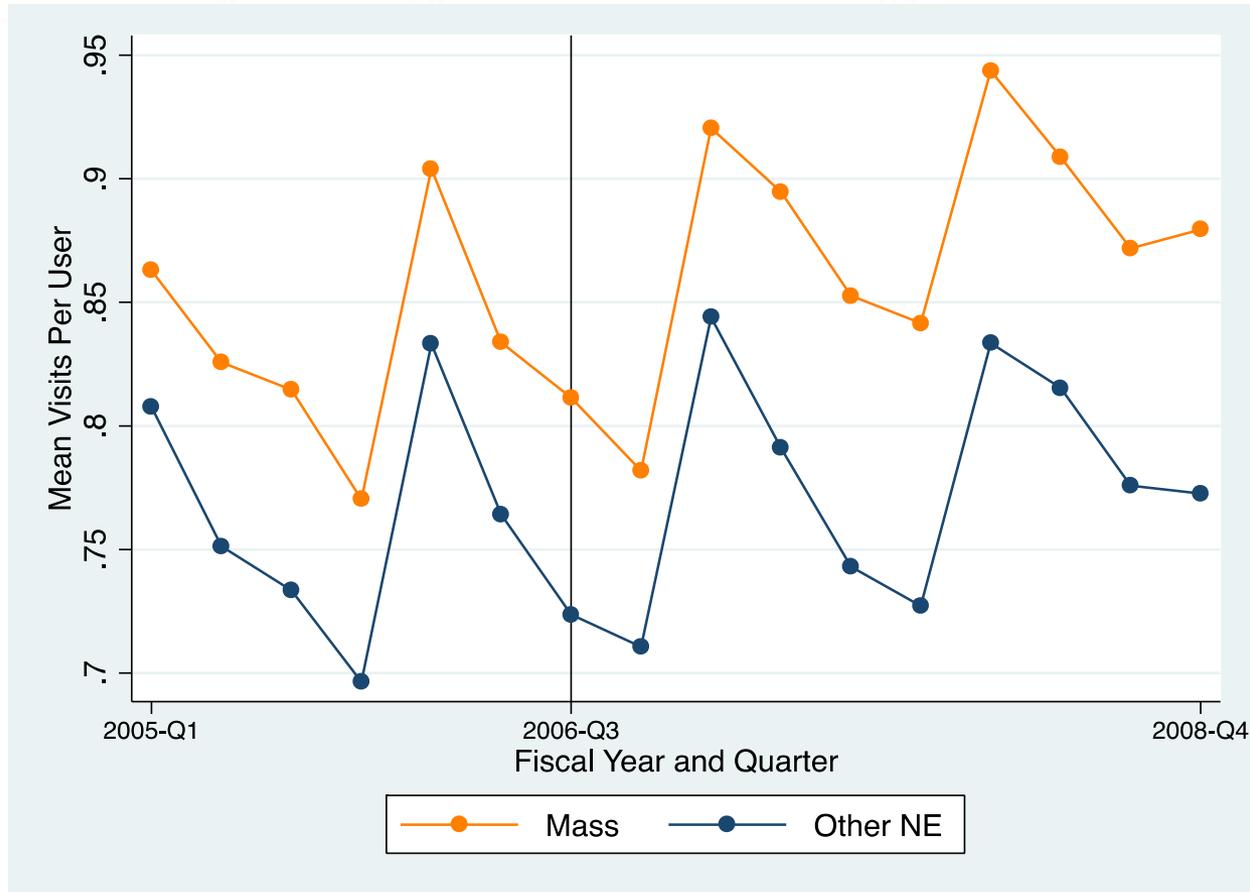
# Total Primary Use Increasing for Under 65 VA Users



# Total Primary Use for Age 65+ VA Users

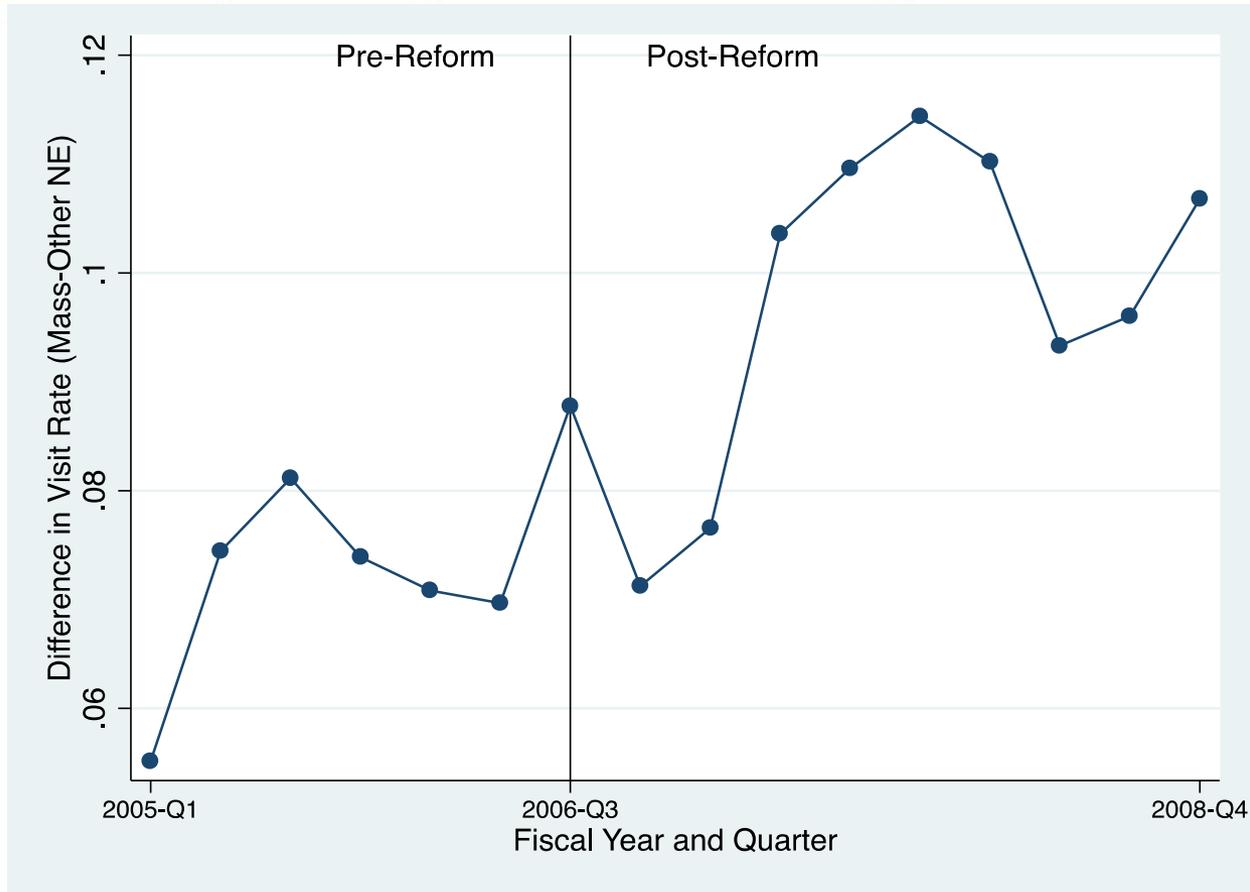


# Rate of Primary Care Use for Under 65 VA Users



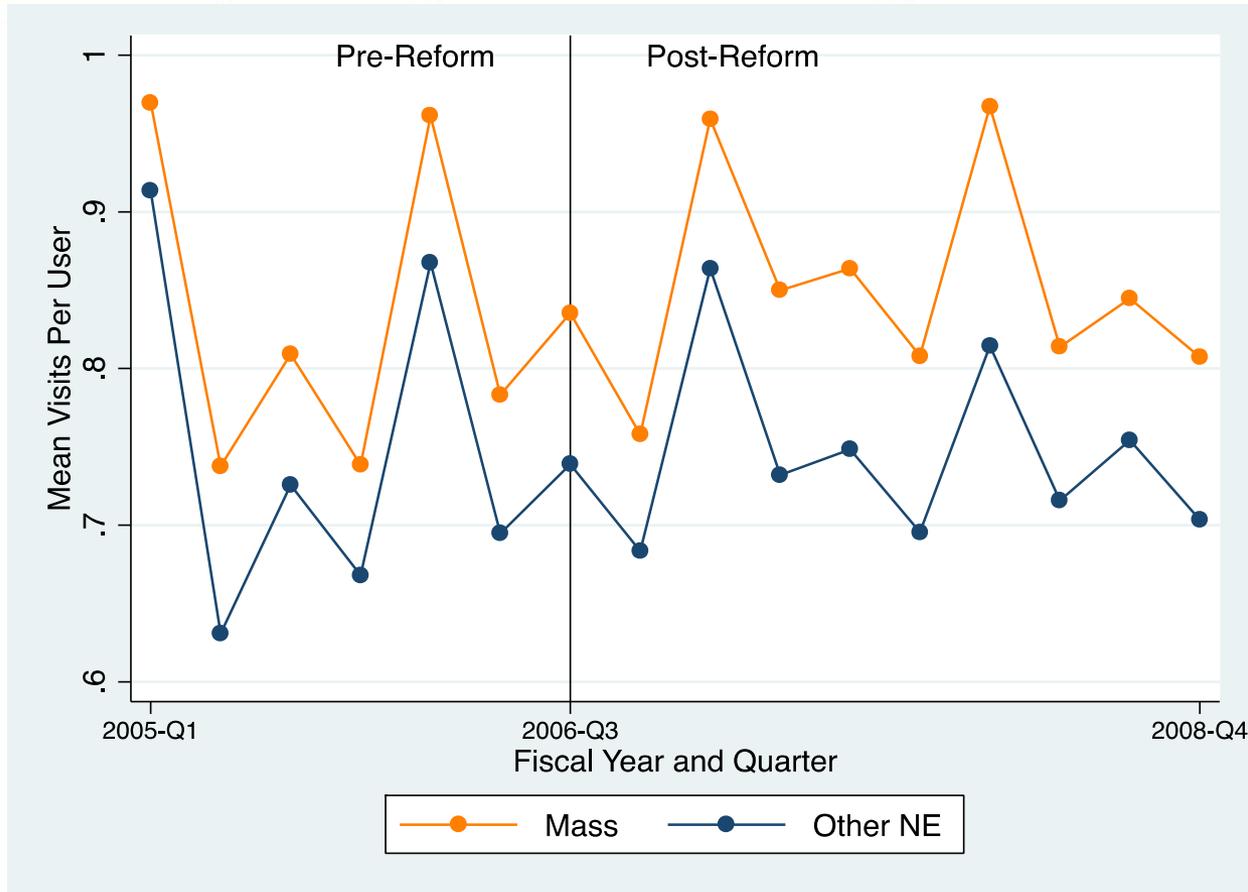
Visit Rate = # of VA Primary Care Visits / # VA Users

# Increasing Differences in Visit Rates



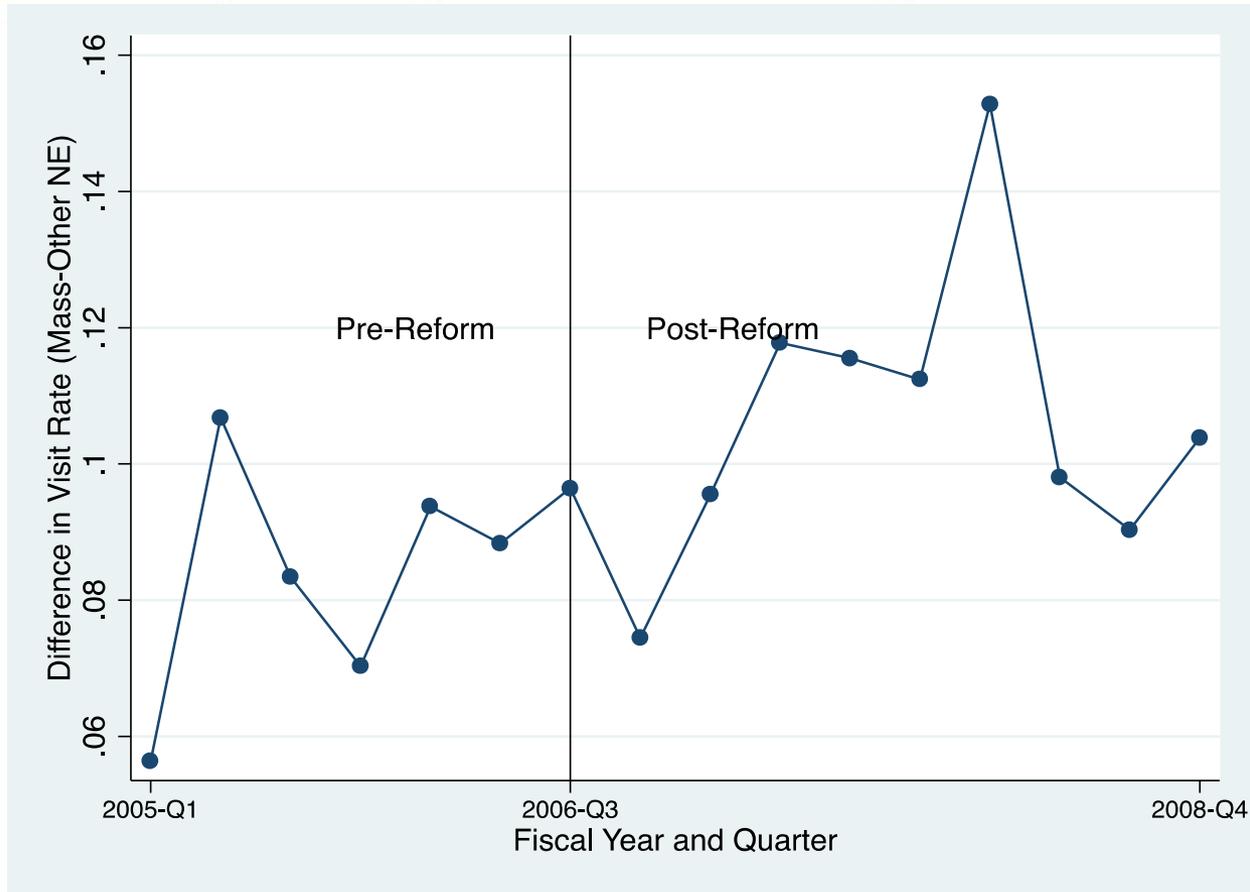
Visit Rate = # of VA Primary Care Visits / # VA Users

# Rate of Primary Care Use for Age 65+ VA Users



Visit Rate = # of VA Primary Care Visits / # VA Users

# Increasing Differences in Visit Rates



Visit Rate = # of VA Primary Care Visits / # VA Users

# Health Reform Associations – Under 65 VA Users

Net Effect	P-Value
<b>All Under 65 VA Users</b>	
0.022 visits	< 0.001
<b>Continuous Enrollees</b>	
0.036 visits	< 0.001

\* Difference-in-difference estimates after adjusting for Veteran covariates and fixed effects

\*\* Net effects reflect change in quarterly PC visits attributable to health reform

# Health Reform Associations – Age 65+ VA Users

Net Effect	P-Value
<b>All Age 65+ VA Users</b>	
0.022 visits	< 0.001
<b>Continuous Enrollees</b>	
0.021 visits	< 0.001
<b>FFS Medicare Visits</b>	
-0.031 visits	< 0.001

\*Difference-in-difference estimates after adjusting for Veteran covariates and fixed effects

\*\* Net effects reflect change in quarterly PC visits attributable to health reform

# Extrapolating DID Estimates

- Health care reform associated with a 0.022 increase in per-quarter VA visits
  - ~ 1 additional visit per 45 VA users
  - 89,089 VA users residing in Massachusetts in FY2008-Q4
  - 1,980 additional primary care visits attributable to health reform
  - ~ 160 additional visits per week

# Limitations

- Veterans living in Massachusetts may be legal residents of another state
- Only VA and fee-for-service Medicare primary care use measured
- Generalization of results should consider unique characteristics of New England Veterans

# Policy Implications

- Key ACA components also in Massachusetts Health Care Reform
- Results may inform changes in VA use in the post-ACA era
  - Health reform may slow the growth in VA enrollment by providing other health care options
  - Greater use of primary care among Veterans who remain in VA
  - VA an important source of care for age 65+ Veterans likely due to higher overall demand among non-VA providers

# Thank You!



## **Edwin S. Wong, PhD**

Career Development Awardee  
VA Health Services Research &  
Development Center of Excellence

VA Puget Sound Health Care System  
1100 Olive Way, Suite 1400  
Seattle, WA 98101

Tel: (206) 277-4703  
Fax: (206) 764-2935  
[eswong@uw.edu](mailto:eswong@uw.edu)