



# **Women returning from Operation Iraqi Freedom/Operation Enduring Freedom: Comparison of Healthcare Utilization among Women & Men Veterans**

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# Health Care at Veterans Affairs (VA)

- VA Medical Centers geared to treat men
- Women fastest growing segment
- Proportion estimated to double
- Concern about utilization

# Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Veterans

- Nationally 600,000 eligible for VA health care
- 31% (185,000) have sought care
- 13% (24,050) seeking care are women

# Study Question

Among returning veterans registered at our facility are there gender differences in:

- initiation of health care utilization

- rate of utilization once health care is initiated

# Methods

- Design
  - Retrospective cohort
- Data abstracted
  - Electronic records
- Sample includes Veterans from 2001-2006
  - Registered in West Haven, CT
  - Addresses within a 100 mile radius

# Variables

- **Outcomes**

Any visit to outpatient primary care clinic at VA or community based outpatient clinics

Total count of visits to primary care clinics

- **Variables**

Gender

Other demographics

Service connected disability

Private health insurance

Military experience

# Analysis

- Bivariate tests (chi-square & t tests)
- Logistic Regression
- Negative binomial regression

# Sample Characteristics by Gender

<u>Variables</u>	Women n=240 (16%)	Men n=1380(84%)	P value
<b>Age</b>			
<29	55	40	
29-39	31	34	<0.001
≥ 40	14	26	
<b>Black race</b>	17	9	<0.001
<b>Single</b>	72	60	0.01
<b>Private health insurance</b>	42	40	0.94
<b>Service connected disability</b>			
No disability	69	65	
<50%	19	18	0.5
>50%	6	5	

# Sample Characteristics by Gender (cont)

<u>Variables</u>	Women n=240(%)	Men n=1380(%)	P value
<b>Service Branch</b>			
Army	73	67	
Navy	10	8	0.001
Air force	9	7	
Marine Corps	6	16	
<b>Combat exposure</b>	38	41	0.2
<b>Mean length of service (months)</b>	39	34	0.02

# Comparison of Outpatient Visit by Gender

	<b>N</b>	<b>Women</b>	<b>Men</b>	<b>P value</b>
Outpatient visit (ever)	1620	76%	71%	0.09
Mean count of visits	1163	15	14	0.9
Median count of visits	1163	8	7	0.89

# Adjusted Model for Health Care Utilization (ever)

<b>Variables (N=1620)</b>	<b>Odds Ratio (95% CI)</b>	<b>P value</b>
<b>Sex (Ref # men)</b>		
Women	1.31(0.94-1.84)	0.11
<b>Age (Ref # &lt;29 years)</b>		
29-39	0.75(0.58-0.98)	0.03
≥40	0.72(0.52-0.92)	0.02
<b>Marital Status (Ref # Married)</b>		
Single	1.35(1.06-1.73)	0.02
<b>Service connected disability (Ref # No disability)</b>		
<50%	2.16(1.51-3.11)	<0.001
≥ 50%	3.92(2.21-6.94)	<0.001
<b>Length of service (Ref # &lt;36 months)</b>		
≥ 36	0.75(0.60-0.90)	0.02

# Negative Binomial Model for Count of Visits

<b>Variables (N=1163)</b>	<b>IRR (95% CI)</b>	<b>P value</b>
<b>Sex (Ref # men)</b>		
Women	1.08(0.87-1.35)	0.11
<b>Age (Ref # &lt;29 years)</b>		
29-39	1.25(1.03-1.49)	0.03
≥40	1.77(1.44-2.18)	0.001<
<b>Marital Status (Ref # Married)</b>		
Single	1.14(0.95-1.35)	0.15
<b>Service connected disability (Ref # No disability)</b>		
<50%	2.37(1.88-2.96)	<0.001
≥ 50%	4.65(3.51-6.21)	<0.001
<b>Length of service (Ref # &lt;36 months)</b>		
≥ 36	1.00(0.77-1.29)	0.98

# Initiation of health care utilization among registered veterans is

- Similar among men and women
- Higher
  - if single
  - with increasing service connected disability
- Lower
  - in the age group 29-39 years
  - if length of service more than 3 years

# Among veterans initiating care utilization rates are

- Similar
  - for men and women
  - for those having length of service > 3years
  - if single
- Higher with increasing
  - age
  - service connected disability

# Limitations

- Data limited to single facility
- Cannot compare non VA utilization
- Did not include inpatient and emergency visits

# Conclusion

- Women were similar to men in initiation and maintaining continuity of health care
- Further analyze types of services utilized over time and factors influencing satisfaction
- Need for provision of high quality and gender sensitive care

# Future work

- A 5 year multi-site grant to study OEF/OIF women veterans has recently been funded at VA, CT to study the effect of gender on health outcomes, utilization and cost

# Questions

