Author’s response to reviews

Title: Comparison of Outpatient Health Care Utilization among Returning Women and Men Veterans from Afghanistan and Iraq

Authors:

Mona Duggal (mona.duggal@yale.edu)
Joseph L. Goulet (Joseph.Goulet@va.gov)
Julie Womack (juliewomack@sbcglobal.net)
Kirsha Gordon (Kirsha.Gordon2@va.gov)
Kristin Mattocks (Kristin.Mattocks@va.gov)
Sally Haskell (Sally.Haskell@va.gov)
Amy C. Justice (amy.justice2@va.gov)
Cynthia A. Brandt (cynthia.brandt@yale.edu)

Version: 3 Date: 14 May 2010

Author’s response to reviews: see over
Dear Editors and Reviewers,

Thank you very much for the thoughtful review.

As suggested, we have used track changes in the paper to highlight the changes.

In the letter, the reviewer’s (Dr. Maciejewski) comments are in bold and our answers are indented and normal text. The content from the paper is in italics and in quotation marks. We have combined the answers of minor revisions points (#2, #3) to major revision points (#2, #3) respectively, as they correspond to the same paragraph in the paper. The changes in these paragraphs are highlighted in yellow. The page numbers start from title page.

**In response to Dr. Maciejewski concerns, we respond as follows:**

**MAJOR COMPULSORY REVISIONS**

#1. Tables:

a. Tables 1 and 2 are very helpful and interesting as in the prior draft.

b. The addition of tables comparing female users and non-users (Table 3) and male users and non-users (Table 4) are helpful, but are not consistent with the regressions presented in Table 5. Since the logistic regression examines gender differences in outpatient care use, the relevant Table 3 would compare male non-users and female non-users. Since the negative binomial regression examines gender differences in the number of outpatient visits, Table 2 is the relevant table that presents these differences between male users and female users. The authors are strongly encouraged to reorganize the tables so Table 2 is the comparison of male non-user to female non-user and move Table 2 to Table 3.

As suggested, we have reorganized the tables. Tables are as follows:

- Table 1: Users vs. Non Users (same as before)
- Table 2: Nonusers by gender (New)
- Table 3: Users by gender (Earlier table 2 is now Table 3)
- Table 4: Regression Models (Earlier table 5 is now Table 4)

We have reported mean, median, standard deviation, range (min and max) and mean observation time for outpatient visits in Table 3 under a separate heading for Outpatient visits.

c. These tables should also report the mean observation time and some descriptives on mean, median, standard deviation, min and max number of outpatient visits (Tables 1 and 3 only, if Table 2 is non-user comparison).

We have revised the results to be consistent with theses recommended changes.

d. The discussion/results would have to be revised somewhat to be consistent with these recommended changes. It will also be important to explicitly state the comparison group in unadjusted differences, because the current text reads” Women non-users were more likely to be non-white, have private health care insurance, ...." without stating whether the comparison group was women users or male non-users. That is critical for the reader to be able to the follow the comparisons.

We have revised the results to be consistent with theses recommended changes.
We have described this on Page 7-8 under results in paragraph 2:

“Women non users compared to men non users (Table 2) were significantly younger (mean age 29 vs. 33 years, p<0.001) and were more likely to be from the army service branch (75% vs. 68%, p=0.04). There was no significant difference by race (p=0.7), marital status (p=0.13) having private health insurance (p=0.6), a service-connected disability (p=0.7) or length of service (p=0.3).”

#2 We have combined the answers of minor revisions (#2) mentioned later to this major revision (#2) as they correspond to the same paragraph in background.

Major Revision

# 2. Hypotheses. The paper states (on page 4) what the objective of the study is, but never states what the authors expected. Did they expect women to have higher probability of use and more visits than men? If so, why? It would be helpful to provide a hypothesis and rationale for it. It would also be helpful to conclude with a statement about the contribution of this paper to the literature.

As suggested, we have restated the objective as a hypothesis and have concluded it with a statement about the contribution to literature.

Minor Revision

#2 Statement about women's VA health services use being a new area. This statement may have been true in 1998 (the year the Hoff and Rosenheck paper was published), but it is no longer true. The authors cite studies by Washington and Yano later in the discussion to illustrate that there is prior work in this area. What IS new is the use of VA health services by OEF/OIF female veterans. That is a more accurate statement.

We have restated the statement as suggested.

The changes are described on page 3-4 in the Background section paragraph 3.

“OEF/OIF women Veterans' use of VA health services is a relatively new area of research. Few published peer-reviewed studies to date have examined the association between gender and health care service utilization rates among OEF/OIF Veterans. In previous eras of military service, women Veterans were much less likely to use VA services than their male counterparts, with differences between men and women in seeking VA health care services attributed to biases in the provision of care for women Veterans.[2, 16, 17] Overall, however, more than 40% of men and women OEF/OIF Veterans have enrolled for VA health care services.[1, 2] Due to this surge in women Veterans seeking health care services from the VA greater insight into gender differences in utilization of VA outpatient care clinics may determine if there are any gender-related disparities in utilization. Therefore, the objective of this study was to
examine gender differences in utilization of outpatient VA health care services among OEF/OIF Veterans at a single VA facility. We hypothesized that among OEF/OIF Veterans women have higher utilization of outpatient VA health care services than men. Our findings expand upon current literature on health care services utilization among Veterans by examining gender differences in use and intensity of use of outpatient healthcare services of enrolled OEF/OIF Veterans.

#3 We have combined the answers of minor revisions (#3, #6) mentioned later to this major revision (#3) as they correspond to the same paragraph in discussion.

**Major Revisions**

#3. Implications. Related to the hypotheses is the summary of the contribution in the revised discussion (page 9, paragraph 2), which the authors revised. The authors state: "The issues discussed here represent contributions to current health services research and suggest general recommendations to improve health care utilization by women...Our preliminary data suggest the need to provide high quality, gender-specific care." This revised statement raises two questions:

a. As in my prior review, what are the contributions exactly? Please state them instead of positing that to be the case.

b. It is not clear how recommendations can be suggested on the basis of this analysis, because there is no inference from the results that health care utilization is suboptimal in any way. If the paper explicitly stated that no improvements would be needed if women had similar or more use than men, then that might be a basis for suggesting improvement. If the paper had considered clinical outcomes or costs, that might have been another basis for defining improvement. However, no such outcomes were considered and no criteria for defining needing improvement or "just fine" were provided. So, it is not clear what is meant by this statement. No recommendations are actually provided, so please revise this paragraph.

We thank Dr. Maciejewski for the outstanding point. We agree that this is a preliminary study and further studies are required to inform new policy decisions and recommendations. We have revised the paragraph and dropped the lines describing contributions to research and recommendations.

**Minor Revisions**

a) It is not clear why CBOC as a "usual site" was not controlled in the analysis. If the authors got the utilization data from OPC, then it is possible to identify CBOC users using the STA5A indicator. If OPC data was used, then the authors should construct such a variable and add it to the Tables, regression and discussion. That would preclude the need to discuss this as a limitation in the discussion. If local data was extracted, then it may still be possible to identify a CBOC user.
b) Need to add a limitation that the insignificant main effects and interactions may have simply been due to insufficient power.

a) We agree with the reviewer, but as we have mentioned this is, a preliminary study of a single site. Our limitation is the sample size of women is very small and for meaningful comparison we needed to combine the utilization of CBOCs and the main site. We have revised our statement to clarify combining of utilization of CBOC and the main site.

b) As suggested we have added the limitation in the discussion.

The revisions are described on page 9-10 in discussion in paragraph 2: The changes in the paragraph are highlighted in yellow.

“Our study has some important strengths and limitations. Although this analysis is reflective of only those Veterans who sought health care at a specific VA facility and may not reflect OEF/OIF Veterans in other VA networks or those using services outside the VA, the results of our study support our hypothesis that OEF/OIF women veterans had higher overall utilization of VA health care compared to men. Additionally, insufficient power, may explain why the intensity of utilization and interaction terms were insignificant. Because of the small number of women included in our study population, we combined utilization at VA facilities with that at CBOCs to increase the sample size. This site effect may have altered our findings, as initiation and/or utilization rates may differ between the VA Medical Center and the CBOCS. Recent studies have shown differences in the overall characteristics of Veterans utilizing CBOCS and VA Medical Centers.[25] A larger representative sample of OEF/OIF Veterans visiting other VA healthcare facilities is therefore required to better explore gender differences in health care utilization. Further analysis on types of services utilized over time and factors influencing satisfaction are required to better inform new policy decisions or recommendations. Finally, despite not having data on several important variables, such as socioeconomic status, education, and provider characteristics, the main strength of this study is that we had complete information on selected independent predictors of health care utilization variables for both users and non-users, as well as assessing sufficient numbers of women and men to allow for meaningful comparisons.[26, 28-30] ”

MINOR ESSENTIAL REVISIONS

1. **Background: Discussion of non-VA literature on male-female differences.**

   a. The addition of gender differences from non-VA literature is a great addition. The mention that women report higher health care use than men is not quite right, however. The Mustard 1998 NEJM reference actually shows that expenditures by women is lower than that of men below age 15 or so and above age 70 or so. The authors should qualify this statement and highlight that expenditures are higher in the age range of the study sample. The authors may
Also want to refer to a 2007 paper by Kjerulff KH, Frick KD, Rhoades JA, Hollenbeck in Women's Health Issues that shows the incremental cost differences associated with female-only health issues.

b. The mention of age, marital status, income and education levels being associated with healthcare utilization needs to be clarified about whether these factors differ between men and women, and prior literature showing the interactive effect of these factors with gender to make the point clearly, which would provide clear motivation for the interaction terms that were examined in this paper.

We have revised the paragraph to clarify the aforementioned points and cited the reference. This is described on page 3 in Background in paragraph 2: The changes in the paragraph are highlighted in yellow.

“Gender differences in health care use are a combination of interacting economic, social, psychological and biological factors. Although, men ≥ 59 years have higher health care utilization, women report higher use of health care services than men during their child bearing years.[5, 6] These differences may be associated with reproductive biology, gender-specific conditions and higher morbidity rates in women in this age group.[5, 7-10] Approximately 85% of OEF/OIF women Veterans are under 40 years.[11] In addition, other socio-demographic characteristics such as being single, low income and education levels, and belonging to a minority group have been found to negatively affect health care utilization.[12-15] Therefore understanding the effect of gender and other underlying determinants on use of health care services is important in promoting equal access to health care.”

2. Statement about women’s VA health services use being a new area. This statement may have been true in 1998 (the year the Hoff and Rosenheck paper was published), but it is no longer true. The authors cite studies by Washington and Yano later in the discussion to illustrate that there is prior work in this area. What IS new is the use of VA health services by OEF/OIF female veterans. That is a more accurate statement.

We have described this under Point#2 of Major revisions.

3. It is not clear why CBOC as a "usual site" was not controlled in the analysis. If the authors got the utilization data from OPC, then it is possible to identify CBOC users using the STA5A indicator. If OPC data was used, then the authors should construct such a variable and add it to the Tables, regression and discussion. That would preclude the need to discuss this as a limitation in the discussion. If local data was extracted, then it may still be possible to identify a CBOC user.

We have described this under Point#3 of Major revisions.

4. Please clarify for readers (particularly people not familiar with VA data) what specific types of outpatient care are included in this aggregate category. Some readers might think that outpatient visits refer only to face-to-face care (e.g., primary care, specialty care, mental health), so it is important to clarify that lab
visits, radiology visits, visits to outpatient pharmacy, telephone care, and a host of other types of outpatient care (e.g., chaplaincy) are included in this broad category.

We have clarified our definition of outpatient care use.

This is described on page 5 in the Methods section under Outcome Variables: lines 3-7

“We defined a visit as a face-to-face outpatient encounter on a unique date and location. The outpatient VA services include basic care (e.g., primary care, mental health) specialty care (e.g., services by clinical specialist such as surgeon, radiologist, cardiologist etc.) and other ancillary care services like preventive screening, immunization, visits to outpatient pharmacy, counseling sessions for weight, smoking etc, labs and EKGS.[20]”

5. The discussion of unadjusted visits on the top of page 8 is provided without a supporting table. Please add that data into the respective tables, so the reader can see these numbers themselves.

As suggested earlier we added the information to Table 3 under Outpatient visits.

6. Need to add a limitation that the insignificant main effects and interactions may have simply been due to insufficient power.

We have described this under Point#3 of Major revisions

DISCRETIONARY REVISIONS

1. Consider citing the 1983 Duan Manning paper that is the classic reference for the two part model in addition to reference 18 (page 5).

We have added the reference. The new references are [21,22]

2. Consider providing the specific % of male users (44.8%) and female users (53.3%) with the p-value on page 7.

We have provided the percentage with p value on pg 8 under results: paragraph 3: line 1

“Among the individuals who utilized healthcare (746/1620), women were more likely to utilize care than men (53% vs.45%, p<0.01).”

Thank You for your constructive comments. We hope that we have sufficiently addressed the editors and reviewer’s concerns. Please let us know if we can do more to make the paper worthy of your standards.

Sincerely,

Mona Duggal and Cynthia Brandt (for the authors)