Reviewer's report

Title: A review of epidemiologic research assessments of United States Gulf War I era veterans

Version: 3 Date: 20 September 2012

Reviewer: Maxine Krengel

Reviewer’s report:

The revised manuscript entitled “A review of the epidemiologic research assessments of US Gulf War I era veterans” continues to address a very important issue considering that GW I veterans continue to experience health symptoms. However, the paper in its current form continues to lack clarity in terms of the necessity of review of the assessment tools without discussing psychometric properties, methodological issues of the papers, and cohort effects.

In addition, in reviewing the revised manuscript, several issues remain as major concerns and several issues of all reviewers were not addressed in a thorough manner.

Major Compulsory Revisions:

1. Using the term survey studies in the background and abstract is confusing in that the authors include physical examinations and other evaluations in the abstract.

2. In the last line of the abstract, the authors should be aware that a follow-up study of the Deven’s cohort is currently underway and these issues are being directly addressed.

3. The background refers to a “novel” approach to unify and harmonize the research, however, reviews of studies published in the RAC report and IOM report refer to these specific ideas.

4. It is the belief of this reviewer that it would still be necessary to not only review the names of the assessment tools, but to document psychometric properties of the studies otherwise, it is not clear what this review adds to the literature.

5. In the inclusion/exclusion criteria, it is unclear as to what is meant by “methodological quality.”

6. The conclusion section refers to the “limitations” in the studies, however, no mention is made of these limitations in prior sections of the paper.

7. It appears that there is some confusion as to the ways in which to measure CMI and MCS. These are assessed by checklists referring to symptomatology.

8. Many of the previously mentioned studies did use consent forms to re-contact original cohort participants. The earlier studies were developed prior to that being necessary according to IRBs.

9. It is the belief of this reviewer that the premise of this article is not fully
developed and it does not add much in the way of documenting what has occurred or what should occur in the literature.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.