Author's response to reviews

Title: Low validity of self-report in identifying recent mental health diagnosis among U.S. service members completing Pre-Deployment Health Assessment (PreDHA) and deployed to Afghanistan, 2007: A retrospective cohort study.

Authors:

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Author's response to reviews: see over
Dear Dr. Norton,

I am in receipt of correspondence from your office of August 6th, 2009, from Ms. Natalie Pafitis, containing two reviewers' reports for manuscript 7200930162964107, entitled “Low validity of self-report in identifying recent mental health diagnosis among U.S. service members completing Pre-Deployment Health Assessment (PreDHA) and deployed to Afghanistan, 2007: A retrospective cohort study”.

As with my prior revision, I appreciate the two reviewers' careful re-reading of my manuscript. I apologize particularly for the difficulty Reviewer #2 faced in identifying my prior manuscript edits. In response to these concerns, I have explicitly stated in my rebuttal where the current edits can now be found.

In the absence of specific editorial direction, I have modified the manuscript slightly to include an exploration of the principal concerns of Reviewer #2; this represents a compromise between my making the requested major edits; and my previously articulated preference of deferring these edits and deferring comment in the manuscript, pending editorial direction. I trust that the inclusion of this text will be acceptable to all parties and will meet with editorial approval.

Sincerely,

Dr. Remington Nevin
Reviewer Comments:

"...The rationale for not breaking out the different diagnoses in this analyses should be addressed in the discussion, and not just the letter to the editor."

As recommended by the reviewer, I have modified the manuscript such that much of the discussion of ADHD outlined in my prior rebuttal comments are now included in the discussion section, found at the bottom of page 15, amidst the discussion of study limitations. As a result, the references have been modified slightly (and corrected) to include the Young paper as reference #30.

I thank the reviewer for their persistence on this point; I trust manuscript is improved significantly as a result of these changes and now reflects a good compromise in addressing the important topic of ADHD.

"I did not understand that the recording of mental illness only took place in the pre-deployment period, and even before that: "A recent mental health disorder diagnosis was defined as one or more pertinent primary or secondary ICD-9CM codes recorded in the full year prior to the deployment date". This indicates to me that there are medical data available from the pre deployment period, I cannot figure out what this period is, and where they are. Are they in the military? In training? Between deployments? Where do these diagnoses on medical and mental health problems come from, from whom, and from what kind of exposure and observation setting?"

The cohort and methodology on which this study is based may admittedly be more familiar to those with a very specific interest in this field. A detailed reading of references #5 and #8 are recommended for background understanding of the longitudinal cohort and data on which the present analysis is based. Due to space constraints a discussion of these points is beyond the ability of the present manuscript to describe in detail.

In brief, this analysis, as with many recent major studies in the field (for example, the work of Hoge, et al), harness data contained within DMSS, which tracks health data accumulated during a U.S. military service member's career. The medical data reviewed in the present analysis will reflect, depending on the specific individual, either those diagnoses made during initial basic and advanced individual training, or at the unit of assignment prior to deployment; or in the case of service members who have previously deployed, those diagnoses occurring following their deployment, for example, upon return to their regular unit of assignment.

"I thought you were interested in the predictive value of PreDHA for deployment, as a predictor for performance and coping ability with the
deployment. If I understand it now, it is about the sensitivity or reliability of self-report compared with what? This other data set is your gold standard, please explain why this is a valid and reliable gold standard."

This study was conducted to assess the validity of self-reporting in PreDHA to identify deployed service members who have had a recent mental health disorder diagnosis. The gold standard against which self-report is compared is the record of electronically documented diagnoses occurring during the pre-deployment period, typically while the service member is already on active duty or activated in preparation for deployment.

"Among the study cohort, there were a total of 210 subjects who were deployed when their most recent PreDHA was annotated by the health care provider to say their final medical disposition was "not deployable". What does this mean? Who is the health care provider that "annotates", and where does this provider come into the picture of selection and evaluation? This, again, suggests that they probably are in the service already?"

Yes, this is correct. As previously described, this is a cohort study of individuals who are already in the service and therefore potentially deployable. The discussion section of the manuscript describes in further detail issues related to enforceability of a "not deployable" determination.

"It strikes me as a potential factor for the lack of sensitivity of the PreDHA that I might hesitate to reveal too much on a form that is to be reviewed immediately by a "medic, nurse, medical technician or corpsman", and that any positive responses "requires referral to a trained care provider (physician, physician assistant, nurse practitioner, advanced practice nurse, independent duty corpsman, independent duty medical technician, or Special Forces medical sergeant)."

The reviewer is independently reaching conclusions similar to those identified by the Department of Defense Task Force on Mental Health, reference #31, and described in the manuscript at the top of page 17.

"I am still concerned about the prevalence of antimalarial drug treatment, mental illness is not only a contraindication, it is an established complication of the treatment. Since I am confused as to the exposure during pre deployment, I am curious as to whether they did receive any treatment (or immunisations?) during this period. This part of the data set may become important for later processes, cfr the litigation processes following the Gulf war exposures."

As alluded to in the prior rebuttal comments, this is a very pertinent line of inquiry. I can only ask the reviewer's patience on this topic. The relationship and relevance of the present study's findings to the broader topic of the safe
The prescribing of mefloquine is the subject of a related manuscript, which is currently under consideration with another journal, and which will explore these issues in significantly greater detail.