Reviewer's report

Title: Challenges of Self-Reported Medical Conditions and Electronic Medical Records among Members of a Large Military Cohort

Version: 1 Date: 21 January 2008

Reviewer: Lisa Iversen

Reviewer's report:

Review of 'Challenges of Self-Reported Medical Conditions and Electronic Medical Records among Members of a Large Military Cohort '

General comments: This is a well-written interesting paper. Improvements could be made particularly by a wider discussion of the implications of the findings.

Major Compulsory Revisions

1. It would be helpful to know how many military personnel were originally invited to participate in the first panel of the Millennium Cohort and how those invited compare to those who actually participated in terms of demographical information and health status. This will allow some understanding of how generalisable the cohort is to the wider population of US military personnel.

2. The authors should explain why the particular 38 conditions were chosen. For instance the cohort was asked about asthma but not about other atopic conditions such as hay fever or allergic rhinitis. I also wonder why in such a young cohort the authors have chosen to ask about a number of conditions associated with older age.

3. To help interpret the findings, Table 2 should present the 95% CI associated with the prevalence figures. Although the prevalence figures on the whole are higher when derived from self-reported information compared with electronic records for many of the conditions the proportions will not be statistically different.

4. The authors need to present a more convincing argument â##that positive agreement increased with length of serviceâ#; illustrating that self-reported diagnoses are likely to be reflected in electronic medical records given enough opportunity for capture in health encounter dataâ##. Length of service must as the authors acknowledge be related to ageing which in turn must be related to the prevalence of a number of these conditions.

5. Have the authors considered the possibility that in conditions where an individual might be likely to make a â##self-diagnosisâ## and perhaps manage the condition using over-the-counter medications might account for the discrepancy between self-reported and electronic medical records data? For example, the migraine headache and the bladder infection results might reflect
6. The authors should suggest instances where they would use the different types of information. For example, self-reported information appears to be sufficient for ruling out history of a particular condition (reflected in high negative agreement values) but for studies of the true prevalence of a condition you might want to use an objective measure of the condition (since we know that medical records are not a gold standard) etc. Such a discussion putting their findings in context would strengthen this paper.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Table 3 footnote requires amending or further explanation, the conditions included appear to be 3% or greater (not 5%) of percentage of self-report of the cohort.

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. It would be useful so see length of service information as part of the demographic and military characteristics presented in Table 1.

2. Mean age and mean length of service for the study population and for those who reported at least one condition vs. those without at least one condition would be a useful addition to the Results text.

3. Figure 2 does not contain all the conditions listed in Table 3 - the authors should provide their reasons for this decision.

4. The authors need to be careful during the Discussion. Early in the paper they argue against using kappa since it is dependent on prevalence, but on page 11 they discuss that given the low prevalence of conditions it was not surprising that negative agreement was quite high which suggests a similar dependence on prevalence.

What next?: Accept after minor essential revisions

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.

Declaration of competing interests:
I declare that I have no competing interests