Reviewer's report

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.

Version: 3 Date: 21 July 2009

Reviewer: Holger Ursin

Reviewer's report:

The selfreported mental health problems ("PreDHA") are entered into the Defense Medical Surveillance System (DMSS). This database also contains data on the cohort prevalence of "recent diagnosis of a pertinent mental health disorder" during the pre-deployment period. The finding is that for those that have a PreDHA and a "recent diagnosis" only half of them reported any mental problem on the PreDHA.

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?

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 selfreport compared with what? This other data set is your gold standard, please explain why this is a valid and reliable gold standard.

"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??

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
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.