Assessing an Individual’s Exposure by History

Background. Redeploying soldiers may have questions related to biological, chemical, and physical substance/agent exposures that they experienced, or believe they experienced, during this deployment. Their concerns will likely center on potential health effects from these exposures. They will wonder if their exposures have caused any health effects during the deployment, or that they may currently have. Some may become concerned about possible long-term health effects that could result from an exposure (such as cancer). They will also worry if any exposure may affect their spouses or children (born or unborn). There is currently little data that would suggest any long-term health risk at all from the current deployment. The fact sheet provided for each exposure attempts to relay that message. However, it is possible that some soldiers experienced unusual exposures that are not reflected in the available data. Available exposure data and summaries are archived at CHPPM, and we have data on some unique situations such as a fire in a pesticide factory, and an oil spill. We have characterized the degree of exposure and documented the acute symptoms of those exposed in those instances but do not anticipate any long-term health effects. However, we may not be aware of all situations.

Characterizing the Exposure Information. The DD form 2796 exposure questions rely on subjective data. The soldier has seen evidence of an exposure, heard a report of a possible exposure, or heard someone say something that made him/her concerned. While we prefer objective sampling data, a soldier’s experience can help in trying to determine how likely it was that a substance/agent was present and to qualitatively assess the character of exposure to the individual. At the very least, the soldier has identified the perceived exposure(s) of concern, and this concern is real and should be treated with care and empathy. Dismissing any relationship between exposure and outcome outright without at least listening to the concern is not likely to alleviate the concern.

- The source of the information to the soldier can help determine its likelihood (e.g., the soldier’s own knowledge of his/her MOS and when exposures during deployment appeared to exceed levels they experience in garrison; an exposure that the soldier and his/her comrades experienced together and had similar symptoms; a report from an official source such as a PM officer; or hearsay floating around the unit).

- The soldier may be able to characterize the exposure s/he experienced (e.g., how much exhaust or sand or particular substance did they see or breathe in and how often; how much and how long was the substance on their skin; what did they smell; what symptoms did they have at the time of exposure; or perhaps they did not see or feel anything but have heard the rumor that something was there).
The availability and compliance for use of protective equipment such as gloves, masks, or goggles at the time is an important determinant to whether a soldier was protected from a potential exposure. Did the soldier have any? What was it? Did it work?

A soldier (and possibly also his/her nearby comrades) may have experienced symptoms or health effects at the time of the real or perceived exposure. This can be an important piece of information in determining whether there is an association between the exposure and health effect, and what the level of exposure at the time could have been. Does the route of exposure (breathing it in, ingesting or application to the skin) match the symptoms (e.g. eye, nasal or lung symptoms, GI upset, skin rash)? Was the soldier lightheaded after breathing something in? Did symptoms occur immediately or later? Did they resolve? Did the soldier seek medical attention for his/her symptoms? It is highly unlikely that any long-term effects from most exposures would occur in the absence of acute effects. The soldier’s deployment medical record can be a key source of objective and/or supporting information and should always be reviewed, if available.

Providers may be interested in knowing if there is any link between exposure and health effects, if any, that the soldier may be experiencing. Much information is available regarding the association between realistic/plausible exposures and their potential health effects, both short- and long-term, as well as the levels of exposure at which these occur. Some websites include: http://www.pdhealth.mil/ and the CHPPM website (http://chppm-www.apgea.army.mil/; and including the fact sheets related to the individual DD2796 O/E exposures). In addition, consultation is available with OEM physicians/HCPs at USACHPPM and we can advise as to whether any specific evaluation is necessary. We would also like to be aware of any significant exposures that may have occurred to prevent future occurrences if possible. (DSN 584-2714)

Documentation requirements. The screening or evaluating/referral HCP will review and analyze the soldier’s answers on the DD 2796, as well as objective and subjective data related to both exposure (or perceived exposure) and symptoms or health effects. S/he can then use the fact sheets and other sources of information to make a judgment whether the soldier has had a realistic/plausible O/E exposure during deployment - either at a level high enough to place the soldier at risk for long-term health effects, and/or to warrant testing with a biomarker test for such exposure, if one exists. The HCP must document the exposure assessment and physical findings in the medical record, perform needed testing, and arrange for appropriate follow-up or long-term surveillance, as indicated. Consultation with an occupational medicine physician may be indicated if the provider needs assistance.