Learning to Care for Those in Harm's Way

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News Release

Pseudoepidemics of Tuberculin Skin Test Conversions Common in Army Population

BETHESDA, Md. — A recent study led by Army Major James Mancuso, M.D., MPH, Department of Preventive Medicine and Biometrics at the Uniformed Services University of the Health Sciences (USU), identifies that the tuberculin skin test (TST) has many sources of error. The study, titled "Pseudoepidemics of Tuberculin Skin Test Conversions in the U.S. Army after Recent Deployments," is published in thefirst June issue of the American Journal of Respiratory and Critical Care Medicine, a journal of the American Thoracic Society.

Co-authors of the study, Army Colonel Lisa Keep, M.D., MPH, Department of Preventive Medicine and Biometrics, USU, and Steven Tobler, M.D., MPH, Army Medical Surveillance Activity, along with Dr. Mancuso, have described eight pseudoepidemics of TST conversions in the Army population, five of which are associated with overseas deployments.

According to the findings, false-positive TST conversions result from several factors to include: error and variability in skin test administration, reading, interpretation, and documentation; product variability; and cross-reactivity to non-turberculous mycobacteria.

Concerns about TB exposure have been raised by recent deployments to Iraq and Afghanistan, which are reported to have among the highest rates of active TB in the world. However, many service members do not have sufficient contact with locals to raise their risk of contracting TB.

Dr. Mancuso and his colleagues conducted outbreak investigations in deployed where they collected and reviewed medical records of reported active and latent TB cases in deployed U.S. Army service members. They then obtained the medical histories of positive service members, including prior diagnoses and treatments, and determined current symptoms, interviewed the subjects to identify other possible risk factors. Finally, they retested all available converters. The study reports that after repeat testing of positive converters, 30 to 100 percent were found to be negative upon retesting. In one case, 95 percent of positive TB tests (38 of 40 tests) from Army National Guard servicemen in Kosovo were subsequently found to be negative, and the pseudoepidemic was primarily attributed to variability with the test administration and reading as well as to the specific test used.

The study suggests that moving to targeted rather than universal testing of the Army population should be considered. It has been a recommended strategy for the prevention of latent tuberculosis infection in the United States since 2000. The U.S. Air Force implemented a targeted program for redeploying members using a questionnaire in 2005 although not formally evaluated.

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Located on the grounds of Bethesda's National Naval Medical Center and across from the National Institutes of Health, USU is the nation's federal school of medicine and graduate school of nursing. The university educates health care professionals dedicated to career service in the Department of Defense and the U.S. Public Health Service. Students are active-duty uniformed officers in the Army, Navy, Air Force and Public Health Service, who are being educated to deal with wartime casualties, national disasters, emerging infectious diseases, and other public health emergencies. Of the university's more than 4,000 physician alumni, the vast majority serve on active duty and are supporting operations in Iraq, Afghanistan, and elsewhere, offering their leadership and expertise.

For more information about Dr. Mancuso's research, contact the Uniformed Services University of the Health Sciences' Office of External Affairs at (301) 295-1219 or visit the American Thoracic Society Web site at: http://www.thoracic.org/.

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Information obtained from NIH press release