

Mr. Chairman and members of the Veterans' Affairs Subcommittee, it is a pleasure to be here today and share some observations with you. I am Ronald R. Blanck, President of the University of North Texas Health Science Center at Fort Worth, Texas and former Surgeon General of the U.S. Army, having retired in July 2000.

Following the Persian Gulf War, investigations of the medical complaints of Gulf war veterans were hindered because relevant records were often inaccessible or nonexistent. Records that were available often lacked uniformity and accuracy and were generally not automated. At least partly in response, "deployment medical surveillance" became a priority of the Department of Defense. Recent advances in information management technology have enabled the development of a comprehensive public health surveillance system for the US Armed Forces.

The Defense Medical Surveillance System (DMSS) is the central repository of medical surveillance data for the US Armed Forces. Data in the DMSS document statuses of and changes in demographic and military characteristics (e.g., service, rank, military occupation) of all servicemembers. In addition, they document significant military (e.g., assignments, major deployments) and medical (e.g., ambulatory clinic visits, hospitalizations, immunizations, deaths) experiences of servicemembers throughout their military careers. The DMSS receives data from multiple sources and integrates it in a continuously expanding relational database. Longitudinal records are established and continuously updated for all individuals who have served in the Armed Forces since 1990.

All records in the DMSS are maintained in person, place and time frames of reference. The maintenance of person, place, and time relationships in the database permits, for example, nearly instantaneous assessments of the morbidity experiences of servicemembers who shared characteristics, were in specific locations, or had similar experiences on days or during periods of interest since 1990. The following are examples of the types of routinely collected data available in DMSS:

Major deployments: Since the Persian Gulf War, each Service has been required to document the participation of its members in specified major deployments. Electronic files listing participants in designated deployments—with start and end dates of each individual's participation—are provided by the Services to the Defense Manpower Data Center, which in turn provides the data to the DMSS. Currently, more than 1.2 million records document the participation of individuals in major overseas deployments.

Pre- and post-deployment health assessments: Pre- and post-deployment health assessments are used to assist the medical staffs of deploying and returning forces to identify the medical concerns of deployers at early clinical stages. Brief, standardized, self-administered questionnaires solicit categorical responses to questions regarding medical history, general health, and system-specific signs and symptoms. More than 435,000 pre- and post-deployment health assessment records are integrated in the DMSS.

Hospitalizations (in fixed military medical facilities): Since January 1990, records of all hospitalizations of active duty servicemembers in US military hospitals have been integrated in the DMSS. Each record documents up to eight discharge diagnoses that are coded using the International Classification of Disease, ninth revision, clinical modification (ICD-9-CM). The causes of injuries that result in hospitalizations are reported using standard North Atlantic Treaty Organization (STANAG) external cause of injury codes. In December 2001, more than 1.9 million hospitalizations of active duty servicemembers were documented in the DMSS.

Ambulatory visits (to fixed military medical facilities): Since approximately 1997, records of ambulatory visits of active duty servicemembers have been integrated in the DMSS. Each ambulatory visit record documents primary and up to three alternate diagnoses using the ICD-9-CM. In December 2001, more than 59.3 million ambulatory visits of active duty servicemembers were documented in the DMSS database.

Serologic Specimens: Servicemembers are routinely screened for antibodies to HTV-1 during pre-induction and periodic medical examinations, prior to overseas assignments, and before and after major overseas deployments. Since approximately 1990, serum remaining after routine HIV-1 antibody testing and sera collected before and after major deployments have been forwarded to the DoD Serum Repository (DoDSR). At the repository, specimens are stored in precisely documented locations in walk-in freezers at -30°C . In the DMSS, serum identification numbers and repository locations are linked to dates of specimen collection and to personal identifiers of donors. More than 27 million serum specimens related to over 7.1 million individuals are currently stored in the DoDSR. Approximately 4.5 million individuals (60.5% of the total) have at least two specimens in the repository. The DoDSR adds a unique and powerful seroepidemiologic surveillance capability to the overall military medical surveillance program.

Contact Information: Further information regarding the availability, use or interpretation of data contained in DMSS or access to specimens in the DoD Serum Repository may be directed to the staff at the AMSA (202) 782-0471 (DSN: 662). POC:LTC(P) Mark Rubertone, MC, USA, Chief, Army Medical Surveillance Activity, US Army Center for Health Promotion and Preventive Medicine, (202) 782-0471 (DSN:662), e-mail: mark.rubertone@amedd.army.mil.