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Antibiotic Resistance Monitoring: The Infection Control Perspective. Judith F. English, RN, MSN, CIC, National Naval Medical Center, Bethesda, MD.

The Infection Control Branch, Infectious Diseases Division of the National Naval Medical Center, has coordinated participation in the beta Project ICARE and 1998–1999 Project ICARE. Project ICARE's hypothesis is that patients hospitalized in ICUs are more likely to receive large doses of antibiotics for extended periods and are therefore more likely to exhibit antimicrobial resistance patterns than patients in inpatient or outpatient areas. Pharmacy personnel collected data on quantities of selected antibiotics used in each intensive care unit and inpatient non-intensive care unit, excluding outpatient areas. Microbiology personnel collected data for selected bacteria for which antibiotic susceptibility testing had been performed. Data were stratified by specific adult intensive care units, all other non-intensive care inpatients and all outpatients. Findings specific to the Naval Medical Center were compared with those of the overall ICARE study.

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The growth and use of laboratories in identifying bioterrorist threats and other emerging agents and the desire to improve services in general have prompted several initiatives. The Department of Defense (DoD) Laboratory Joint Working Group supports laboratory integration through automation of data transfer among facilities. A prerequisite is the standardization of test nomenclature. Public Law 100–578, Clinical Laboratory Improvement Amendments of 1988 (CLIA 88), established national standards for laboratory practice and performance in areas such as personnel qualifications and quality control. In DoD this effort is the Clinical Laboratory Improvement Program (CLIP). Detection of new or different infectious agents often requires unusual capabilities found only in research laboratories. CLIA/CLIP compliance is generally not a consideration for laboratories other than established clinical laboratories, but it is needed to use laboratory results for clinical purposes. This session addressed laboratory test data standardization and transfer. CLIA/CLIP compliance and the need for regulatory compliance by medical research laboratories.

No. 13

Accreditation of a Medical Research Laboratory. CAPT Gregory C. Gray, MC USN, and Julie M. Hochwalt. Naval Health Research Center, San Diego, CA.

Having sophisticated infectious disease diagnostic capabilities, a medical research laboratory may be asked to support public health outbreak investigations or to assist in clinical evaluations. The Department of Defense requires that each laboratory have a Clinical Laboratory Improvement Program (CLIP) certificate of accreditation whenever laboratory results may be used for clinical purposes. The CLIP requirement can be achieved by accreditation through one of the following agencies: Joint Commission on Accreditation of Healthcare Organizations, used for hospital laboratories; College of American Pathologists (CAP), the chosen Navy standard for laboratories; and Commission on Laboratory Accreditation for smaller laboratories with limited services, such as physician office laboratories. Our laboratory chose the CAP accreditation. This presentation discussed the value of accreditation to a research laboratory, the work involved in preparing for inspection and the benefits experienced in the quest.

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The need for improved disease surveillance systems has become increasingly apparent with the emergence and reemergence of infectious diseases. Many installations and organizations have few or no ongoing surveillance systems, and some that are in place use questionable data sources and have long lag times between disease occurrence and reporting. A comprehensive system to collect and analyze data from active duty service members is available as the Defense Medical Surveillance System. In order to respond to emerging diseases early enough to make an impact on disease incidence and morbidity and mortality, we also need real-time access to infectious disease surveillance information. Work on these systems is ongoing. Combining laboratory data with morbidity data is another way to rapidly detect emerging diseases. The Project Gargle influenza surveillance system at Brooks Air Force Base, TX, has demonstrated this ability to map disease outbreaks through a combination of laboratory and patient morbidity information.

No. 15

The Defense Medical Surveillance System: Comprehensive Worldwide Medical Surveillance of U.S. Military Service Members. LTC Mark V. Rubertone, MC USA, Army Medical Surveillance Activity, U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD.

The U.S. Army Medical Surveillance Activity (AMSA) is a central resource for collecting, analyzing, interpreting, and reporting surveillance data. AMSA developed an automated system to receive standardized data relevant to all active duty soldiers. Data are communicated from Department of Defense (DoD) information systems and reporting sites worldwide and integrated into a comprehensive longitudinal database. Authorized users have immediate remote access through customized queries and standardized reports. AMSA epidemiologists design and conduct more complex analyses in response to internal and external requirements. Selected case reports, outbreak investigation summaries, and results of routine and special analyses are published in the Medical Surveillance Monthly Report. The Army's medical surveillance system has been designated as the DoD Medical Surveillance System, which as of August 1999 contained more than 150 million records on more than 6 million service members. The system also links service members to the DoD serum repository, which has more than 24 million serologic specimens.

No. 16

A Department of Defense (DoD) Virtual Public Health Laboratory Directory. Peter D. Rumm, MD, MPH, Wisconsin State Department of Health and Family Services, Madison, WI; Maj Jay Mansfield, MAS, COL Joel C. Gaydos, MC USA (Ret.), and COL Patrick W. Kelley, MC USA. The DoD Global Emerging Infections Surveillance and Response System (DoD GEIRS), Walter Reed Army Institute of Research, Washington, DC.

Many requests for laboratory services within the DoD are directed to civilian laboratories. Yet DoD retains a significant laboratory infrastructure that can test for most diseases of public health and military significance. Therefore, we have developed a public health directory on the DoD-GEIRS web site that will catalog the available tests for many diseases of potential military importance. Information was obtained from major medical centers and tertiary laboratories, military research laboratories, the Armed Forces Institute of Pathology, and several Centers for Disease Control and Prevention laboratories. This directory specifies available test sites with contact telephone numbers, includes the list of DoD reportable diseases and conditions, links to a directory of the Association of Public Health Laboratories, and provides information on sample submissions to the DoD veterinary laboratory in Texas. This should increase utilization of military and federal laboratories and maximize cooperation between the laboratory and infectious disease and preventive medicine communities.