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Tropical Medicine Training in the Department of Defense

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OVERVIEW

With increased emphasis by the Department of Defense (DoD) on stabilization of the peace, including medical stability operations,^{1,2} deployment to tropical environments will not decrease in the foreseeable future. Although every medical provider should have some training in the recognition of tropical diseases, a growing need exists for providers with advanced training in the diagnosis, treatment, and prevention of these illnesses. Too often, all providers are incorrectly assumed to possess detailed knowledge about these conditions rarely seen in the continental United States.

Tropical medicine practitioners must be knowledgeable in relevant aspects of infectious diseases, preventive medicine, parasitology, and entomology. They must be competent in the diagnosis of tropical diseases, including the application of laboratory and radiologic techniques in austere settings. Critically, they must understand the impact of tropical diseases on deployed military personnel and endemic communities alike.

The DoD offers several courses in tropical medicine that vary in length, scope, detail, and target audience. Here we seek to increase awareness of the availability and scope of these courses. This list is not exhaustive and excludes locally produced courses and courses that focus on a single area of tropical medicine. The courses described herein include the Masters of Tropical Medicine and Hygiene (MTM&H) at the Uniformed Services University of the Health Sciences (USU), the Masters of Public Health (MPH) with a concentration in Tropical Public Health (TPH) at USU, the Training in Tropical Medicine and Travelers' Health Course at USU, courses within the U.S. Military Tropical Medicine (MTM) program, the Global Medicine Course, the Walter Reed Army

Institute of Research (WRAIR) Tropical Medicine Course, the Military Medical Humanitarian Assistance Course (MMHAC), and the training program offered by the Armed Forces Health Surveillance Center (AFHSC) and USU.

GRADUATE DEGREE PROGRAMS AT USU

USU offers an MTM&H and an MPH with a TPH concentration. Both degree programs provide students with the necessary academic background to practice as competent public health officers and as tropical disease experts in the Uniformed Services. Graduates of both programs acquire the same analytical skills in biostatistics and epidemiology as other MPH graduates. Additionally, graduates of these programs learn to apply the basic principles of tropical medicine, malaria control, and vector biology to the epidemiology, diagnosis, treatment, prevention, and control of tropical diseases. MTM&H graduates have additional academic requirements beyond those of the MPH and must also complete an overseas rotation in which they obtain hands-on experience with the epidemiology, pathology, diagnosis, management, treatment, prevention, surveillance, and control of tropical diseases.

Length of training: 1 year

Frequency: Annual

Suitable students: For the MTM&H degree, physicians desiring specific preparation for assignment to tropical medicine clinical, research, or teaching positions. For MPH with TPH concentration, nonphysicians (veterinarians, nurses, physician assistants) and physicians obtaining an MPH with an interest in tropical health who cannot complete the requirements of the MTM&H

Average class size: 5

More information available at: <http://www.usuhs.mil/pmb/divisions/tph/tphgraded.html> and <http://www.usuhs.mil/pmb/pdf/studenthandbook2012.pdf>

TRAINING IN TROPICAL MEDICINE AND TRAVELERS' HEALTH COURSE AT USU

This course is organized to develop student competencies relevant to the practice of clinical tropical medicine in both

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civilian and operational settings in developing countries, caring for returned travelers, and operating a travel clinic in the United States. All major parasitic, bacterial, fungal, and viral diseases found in the tropics are presented, with a focus on the etiologic agent and the associated symptom complex. Laboratory and radiologic diagnosis, treatment, prevention, and control of diseases, the impact of nutrition, and local medical customs and healthcare system structure are covered. The course uses a combination of didactic, small group seminar, and laboratory instruction provided by faculty with substantial tropical medicine field experience. This course has been certified by the American Society of Tropical Medicine and Hygiene as fulfilling the didactic requirement to sit its qualifying examination for the Certificate of Knowledge in Clinical Tropical Medicine and Travelers' Health. The course is free of charge for DoD personnel, although temporary duty expenses are the responsibility of the student's command.

Length of training: 3 months

Frequency: Annual

Suitable students: Physicians, nurse practitioners, and physician assistants who are anticipating long-term or recurrent assignments to tropical/austere environments and will be practicing autonomously or with minimal oversight on single or occasional deployments

Average class size: 15

More information available at: <http://www.usuhs.mil/pmb/divisions/tph/tphtraining.html> and http://www.astmh.org/Certification_Program/3044.htm

U.S. MTM PROGRAM

The U.S. Navy Medicine Manpower Personnel Training and Education Command leads three courses for DoD medical personnel in its MTM program.

MTM-Didactics is an intense classroom and laboratory activity with weekly examinations. The course is a collaborative effort with the U.S. Army Public Health Command, the WRAIR Preventive Medicine Residency, U.S. Air Force School of Aerospace Medicine (USAFSAM), and USU. Faculty members are selected from leading civilian and military programs from around the country. The course content targets the knowledge base required to work in developing areas delivering care, assessing population health needs, and interacting with partner organizations such as preventive medicine assets, referral laboratories, and both governmental and nongovernmental agencies. Limited funding is available.

Length of training: 4 weeks

Frequency: Annual

Suitable students: Physicians and other medical providers (subject to approval) who are anticipating single or recurrent assignments to tropical/austere environments and will be practicing autonomously or with minimal oversight

Average class size: 120

More information available at: <http://www.usuhs.mil/pmb/divisions/tph/tphtraining.html> and <http://www.med.navy.mil/>

[SITES/NAVMEDEMPTE/COURSES/Pages/MilitaryTropicalMedicineCourse.aspx](http://www.usuhs.mil/pmb/divisions/tph/tphtraining.html)

MTM-Field is an advanced in-field, mentored training course. It is open to all graduates of either the MTM-Didactics or the Training in Tropical Medicine and Travelers' Health Course within 5 years of graduation. Recent mission sites have included Ecuador, Ghana, Guyana, Honduras, Kenya, and Peru.

Length of training: 2 to 3 weeks

Frequency: Annual

Suitable students: As above

Average class size: 40

More information available at: <http://www.usuhs.mil/pmb/divisions/tph/tphtraining.html> and <http://www.med.navy.mil/SITES/NAVMEDEMPTE/COURSES/Pages/MilitaryTropicalMedicineCourse.aspx>

MTM Just-In-Time-Training: Distributed Operations is tailored to the needs and training level of the recipients and is provided on-site by MTM faculty.

Length of training: Up to 1 week

Frequency: As needed

Suitable students: Deploying physicians, nurses, and allied health professionals to include Independent Duty Corpsmen preparing for single deployment who will not be practicing independently and are not able to schedule one of the other available courses

Average class size: 25

More information available at: <http://www.usuhs.mil/pmb/divisions/tph/tphtraining.html> and <http://www.med.navy.mil/sites/navmedmpte/courses/Documents/MTM%20Brief%20Sheet%20v24Jun2011.pdf>

GLOBAL MEDICINE COURSE

This is an operationally focused tropical medicine course held at the USAFSAM at Wright Patterson AFB, OH. This course provides didactic and laboratory-based disease threat training in the basics of diagnosis, treatment, and surveillance of tropical diseases in the deployed setting. Limited funding is available.

Length of training: 2 weeks

Frequency: Annual

Suitable students: Physicians nurse practitioners, physician assistants, experienced Independent Duty Corpsmen, and senior Independent Duty Medical Technicians

Average class size: 120

More information available at: <http://www.usuhs.mil/pmb/divisions/tph/tphtraining.html> and <http://www.med.navy.mil/SITES/NAVMEDEMPTE/COURSES/Pages/GlobalMedicineCourse.aspx>

WRAIR TROPICAL MEDICINE COURSE

Steeped in history, this course was reintroduced in 2010 because of the operational needs of the Special Operations Command and U.S. Africa Command. It is a targeted short course providing a broad spectrum of individuals with the

knowledge they need to combat international infectious disease threats relevant to operational demands. Morning didactic sessions presented by world-class experts in tropical medicine are combined with hands-on afternoon laboratories that focus on deployment-relevant diagnostics.

Length of training: 5 days

Frequency: Quarterly

Suitable students: Physicians, physician assistants, nurse practitioners, environmental science officers, 18D medics, 91S preventive medicine technicians, and other medical personnel

Average class size: 20

More information available at: http://wrair-www.army.mil/OtherServices_TropicalMedicine.aspx

MILITARY MEDICAL HUMANITARIAN ASSISTANCE COURSE

The MMHAC's goal is to prepare military primary care providers to administer appropriate medical care to civilian populations in austere settings. The content focuses on managing those conditions associated with high mortality among the most vulnerable populations, particularly diarrhea, malnutrition, measles, malaria, and respiratory infections. The instructional strategy is interactive with scenario exercises and case-management skill stations to complement didactics. The course is sponsored by the Center for Disaster and Humanitarian Assistance Medicine at USU and is locally taught by the Department of Pediatrics at Walter Reed National Military Medical Center, Naval Medical Center Portsmouth, San Antonio Uniformed Services Health Education Consortium, Naval Medical Center San Diego, and the Defense medical Readiness Training Institute. Satellite course offerings can be arranged.

Length of training: 2 days

Frequency: Variable

Suitable students: Physicians, physician assistants, nurse practitioners, experienced Independent Duty Corpsmen, senior Independent Duty, and 91D medics Medical Technicians

Average class size: Variable

More information available at: <http://www.cdham.org/the-military-medical-humanitarian-assistance-course-mmhac>

AFHSC/USU TROPICAL MEDICINE TRAINING PROGRAM

This is an overseas training opportunity for medical students, residents in their final year of training, and fellows who are interested in careers in tropical medicine or TPH. The nature and scope of the training varies, but can include clinical practice, research, and public health practice in the tropics. Rotations are typically performed at the DoD overseas research laboratories in Kenya, Peru, and Thailand. All participants must read a selection of articles and present a scholarly seminar to their hosts.

Length of training: 4 weeks

Frequency: Continuous

Suitable students: Medical students, residents, and fellows

Average class size: 40 per year

More information available at: <http://www.usuhs.mil/pmb/divisions/tph/tphtraining.html>

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