ASM/CDC/NIH Training in Emerging and Reemerging Infectious Diseases[1]

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President Clinton's directive on emerging and reemerging infectious diseases calls for the development of domestic and international training programs in this new and expanding field. A training workshop, which coincided with the International Conference on Emerging Infectious Diseases, provided an opportunity to exchange information on current training activities; discuss future plans in clinical, public health, and research training; and, more importantly, generate discussion on unmet needs and improvement of present activities.

NIH Academic Partnerships: Needs and Future Directions

This part of the training workshop was chaired by the National Institute of Allergy and Infectious Diseases (NIAID) Deputy Director, John R. La Montagne. Each participant was asked to address the following five questions: 1) What is emerging infectious disease training? 2) What are its most important priorities and needs? 3) What are your recommendations for curriculum development? 4) What resources are needed to address training and curriculum needs? and 5) How can the American Society for Microbiology (ASM), Centers for Disease Control and Prevention (CDC), National Institutes of Health (NIH), and partners in academia, government, industry, and professional organizations promote and support the training?

Adel Mahmoud, Case Western Reserve University, spoke about the problem of incorporating emerging infections training into medical school curricula. He was followed by David Stephen, Emory University, who spoke on the integration of emerging disease training into infectious disease training; Mary E. Wilson, Harvard School of Medicine, who discussed continuing medical education; Gail Cassell, Eli Lilly and Company, who brought in perspectives from industry and academia; and Robert Webster, St. Jude Children's Research Hospital, who recounted lessons learned from research in Hong Kong during the recent avian influenza outbreak. After questions and answers cochaired by John La Montagne and Joel Breman, Fogarty International Center (FIC), D.A. Henderson, Johns Hopkins University, summed up the discussions and extracted recommendations.

The workshop had the following conclusions. 1) A number of emerging infectious disease training initiatives either under way or under consideration at CDC, the Armed Forces, NIAID, and FIC are modest (given the training needs) and, without exception, underfunded. 2) There is considerable public, private, and Congressional interest in emerging infections, particularly in food safety and vector-borne diseases. 3) Recently, a new element, biological warfare and terrorism, has been added to the equation. 4) Several CDC training initiatives directed at local and state public health authorities are frustrated by lack of resources in the public health trenches. 5) Army and Navy overseas laboratories represent an underappreciated and underutilized resource for training of both U.S. citizens and foreign nationals. 6) NIH training is limited to formal training; it sets ceilings on research training slots and its domestic mission. As a result, most NIH research training is carried out through research awards. The expansion of the NIAID International Collaboration in Infectious Disease Research Program (with increased emphasis on training U.S. scientists) and the announcement of FIC international Actions for Building Capacity are welcome but are still short of what is needed. 7) Industries' contributions, such as Merck's Mectizan and SmithKline Beecham's Albendazole Donation Programs, are welcome. In addition, Lilly's decision, announced this week, to provide CDC with funds for international participants in its training program is an innovative approach to

[1]Summary of satellite session

promote intersectorial cooperation. 8) The recent Hong Kong avian influenza outbreak is a paradigm on how the research, clinical, public health, and industrial communities can cooperate in an emergency situation and prevent a recurrence of an influenza pandemic. Hong Kong may have been a very close call; influenza is the only reemerging infectious disease for which a contingency plan involving all these players exists and is operational.

The workshop recommended the following. 1) Current CDC, NIH, and Department of Defense training programs should receive additional funding and be expanded through increased U.S. government resources and through innovative cooperative efforts with the private sector. 2) U.S. Agency for International Development (USAID), World Health Organization (WHO), and other international organizations should join forces with domestic agencies to provide for training of foreign nationals. 3) Increased communication and coordination between the clinical, public health, and research communities are needed. The veterinary educational model, which looks at populations rather than individual patients, might serve as a model for the medical community. 4) An intersectorial emerging infectious diseases group composed of U.S. members from government agencies (CDC, NIH) and state health departments, universities, industry, schools of public health, professional organizations (e.g., ASM, Infectious Disease Society of America, American Society of Tropical Medicine and Hygiene, and international organizations (USAID, WHO) should be organized to identify training needs. 5) ASM and other professional organizations should work with academic institutions to promote curriculum changes at the professional student, clinical training, and research training levels to increase awareness of and capacity to recognize and treat or prevent emerging infections. 6) continuing medical education courses, audiovisual programs, and interactive educational materials should be developed to address these training needs and should provide opportunities for cooperation with industry and the private sector. 7) Intersectorial efforts should be undertaken to train personnel and support work plans for training and research that will help anticipate and control emerging diseases other than influenza.