

Reprinted from One Health Newsletter Winter Issue, January 2010

## ProMED-mail and ONE HEALTH

**Jack Woodall, PhD, Lawrence C. Madoff, MD, Alison Bodenheimer, MPH\*, Peter Cowen, DVM, MPVM, PhD, Dipl. AVES (Hon), Thanis Damrongwatanapokin, DVM, PhD, Fabian Ekue, DVM, MSc, PhD, Tam Garland, DVM, PhD, D.ABVT, Martin Hugh-Jones, VetMB, MPH, PhD, FACE, MRCVS, Arnon Shimshony, DVM, Tom Yuill, PhD**

### **ProMED-mail since its inception, has espoused the “One Health” concept.**

ProMED's beginnings date back to 1993, when, due to the spread of HIV and a renewed threat of biological warfare, many were beginning to recognize the growing role emerging infectious diseases play in global health. At the same time, the internet was enjoying increased interest and attention, finally being shared by the general public rather than exclusively a research tool among scientists. From these fortuitous trends was born ProMED, the Program for Monitoring Emerging Diseases. ProMED was founded by Dr. Stephen Morse, then of Rockefeller University, Dr. Barbara Rosenberg of the State University of New York at Purchase, and Dr. Jack Woodall, then of the New York State Department of Health. Since its inception, ProMED has covered the emergence of infectious diseases and acute exposure to toxins in humans, domestic, wild and captive animals, and crop plants. Thus, ProMED-mail adopted a “One Health” focus well before the recent widespread acceptance of the concept by the wider biomedical community. ProMED's founding focus on the emergence of new diseases anywhere in the world and in any species made the choice of an integrated “One Health” approach covering humans, animals and plants an obvious one. After all, a “One Health” methodology is the only way to accurately report what is happening in the world of emerging disease and to alert people to the spread of new diseases that may affect them directly or put human or animal food crop supplies at risk.

**ProMED-mail** is a web- and e-mail-based reporting system dedicated to rapid global dissemination of information on outbreaks of infectious diseases and acute exposures to toxins that affect human health, including those in animals and in plants grown for food or animal feed. Electronic communications enable ProMED-mail to provide up-to-date and reliable news about threats to human, animal, and food plant health around the world, seven days a week. By providing early warning of outbreaks of emerging and re-emerging diseases, public health precautions at all levels can be taken in a timely manner to mitigate epidemic transmission and to save lives.

ProMED is open to all sources and free of political constraints. Sources of information include media reports, official reports, online summaries, local observers, and others. Reports are often contributed by ProMED subscribers. A team of expert human, plant, and animal disease moderators screen, review, investigate the reports and add explanatory notes, evaluations and background information before posting them to the network. Reports are distributed by email to direct subscribers and posted immediately on the ProMED website. ProMED-mail currently reaches over 55,000 subscribers in at least 185 countries.

A central purpose of ProMED is to promote communication amongst the international infectious disease community, including scientists, physicians, veterinarians, epidemiologists, public health professionals, and others interested in infectious diseases on a global scale. ProMED encourages subscribers to participate in discussions on infectious disease concerns, to respond to requests for information, and to collaborate together in outbreak investigations and

prevention efforts. ProMED also welcomes the participation of interested persons outside of the health and biomedical professions.

ProMED has several regional networks in multiple languages, including Portuguese (ProMED-PORT) and Spanish (ProMED-ESP). Both of these lists cover disease news and topics relevant to Portuguese and Spanish-speaking countries in Latin America and elsewhere. ProMED-RUS offers Russian-language reports relevant to Russia and the independent states of the former Soviet Union. PRO/MBDS posts reports in English on six countries in Southeast Asia bordering the Mekong River. Under a recent grant from Google.org, ProMED is working to enlarge our networks in Francophone Africa (ProMED-FRA) posted in French, and East Africa (ProMED-EAFR) posted in English, as well as to improve the multilingual capacity of PRO/MBDS. ProMED is partnering with HealthMap on this project. This collaboration has already resulted in some exciting new visuals for ProMED, including our shared interactive map which plots ProMED disease reports on HealthMap, and a more user-friendly design for the youngest ProMED regional network, ProMED-EAFR based in East Africa.

Since October 1999, ProMED has operated as an official program of the International Society for Infectious Diseases (ISID), a nonprofit professional organization with 20,000 members worldwide. ISID fully espouses the One Health concept and promotes a synergistic approach to health in its conference programs and its International Journal of Infectious Diseases. ISID's next International Congress on Infectious Diseases (ICID, March 9-12, 2010 in Miami) and International Meeting on Emerging Diseases (IMED, February 4-7, 2011 in Vienna) will continue to provide fora for discussing new research findings and global trends in animal, human, and food plant health.

Following the launch of ProMED-EAFR in June of 2009, ProMED and HealthMap held a workshop highlighting the importance of informal sources in disease surveillance in conjunction with the Training Programs in Epidemiology and Public Health Interventions NETwork (TEPHINET) and The African Field Epidemiology Network (AFENET) conference held in Mombasa, Kenya in August of 2009.

ProMED's focus on human, animal and food plant health fit well with the One Health theme of the conference, and attendees were very interested in the use of informal information sources such as ProMED and HealthMap as adjuncts to disease surveillance in Africa. Existing partnerships with public health, infectious disease and veterinary organizations in the region were strengthened, new connections were forged, and over 150 health professionals subscribed to the ProMED-FRA and ProMED-EAFR email lists.

ProMED's commitment to one-health principles is manifest in a number of ways. ProMED's current staff of around 30 individuals in 16 countries includes 7 veterinarians and veterinary medical health specialists (one in Thailand, one in Cameroon, one in Israel, 4 in the USA). We know that ProMED is widely read in the veterinary medical and veterinary public health world; nearly 20% of our 57,000 subscribers belong to the AHEAD (Animal Health and Emerging Animal Diseases) mailing list. We recently reviewed ProMED postings from 1996 to 2004 (Cowen P, et al. Evaluation of ProMED-mail as an electronic early warning system for emerging animal diseases: 1996 to 2004. *J Am Vet Med Assoc* 2006; 229(7): 1090-9) and found that over 10,000 reports on animal disease were posted during that interval. Approximately 30% covered zoonotic diseases; the remainder related to animal diseases in both domestic animals and wildlife, both free and captive.

ProMED-mail is a part of the team that has recently been awarded the PREDICT grant from the USAID Avian and Pandemic Influenza and Zoonotic Disease Program. The team is headed by the UC Davis School of Veterinary Medicine and includes such influential members as the Wildlife Conservation Society, Wildlife Trust, Global Viral Forecasting Inc., Smithsonian Institute, HealthMap, Google and Veratect. Together, these highly experienced and active groups will develop global capacity to anticipate and prevent emerging infections of the future.

In addition, ProMED will participate in the USAID RESPOND initiative along with Tufts University's Cumming's Veterinary School, the University of Minnesota and DAI to help veterinary field epidemiologists learn to better use informal sources of emerging disease information.

**ProMED-mail website:** <http://www.promedmail.org>

**Publications and Presentations by ProMED Authors**

[http://www.isid.org/publications/promed\\_mail\\_publications.shtml](http://www.isid.org/publications/promed_mail_publications.shtml)

**ProMED in the News**

[http://www.isid.org/publications/promed\\_mail\\_inthenews.shtml](http://www.isid.org/publications/promed_mail_inthenews.shtml)

*Jack Woodall is a co-founder and Associate Editor of ProMED-mail, a viral epidemiologist and retired Director of the Nucleus for the Investigation of Emerging Infectious diseases, Institute of Medical Biochemistry, Center for Health Sciences at the Federal University of Rio de Janeiro, Brazil.*

*Lawrence C. Madoff is the Editor of ProMED-mail. He is an infectious disease physician and is Professor of Medicine, Division of Infectious Diseases and Immunology at the University of Massachusetts Medical School and director of the Division of Epidemiology and Immunization for the Massachusetts Department of Public Health.*

*Alison Bodenheimer is Project Manager of ProMED-mail and prior to joining the ProMED team worked as a Consultant for UNICEF's Operational Research Unit.*

*Peter Cowen is Associate Professor of Epidemiology and Public Health, College of Veterinary Medicine, North Carolina State University and ProMED-mail Assistant Animal Disease Moderator.*

*Thanis Damrongwatanapokin is based in Bangkok, Thailand and joined the ProMED-mail team in February 2009 as Veterinary Moderator for the PRO/MBDS network.*

*Fabian Ekue is the Veterinary Moderator for ProMED-FRA, the francophone Africa network. He is Research Professor in Veterinary Medicine in the specialty of veterinary virology and has worked for the past 30 years in the Institute of Agricultural Research for Development (IRAD), Cameroon.*

*Tam Garland, a veterinary toxicologist, is an Animal Disease and Zoonoses Moderator for ProMED-mail.*

*Martin Hugh-Jones is Emeritus Professor, Pathobiological Sciences, School of Veterinary Medicine; Emeritus Professor, Environmental Sciences, School of the Coast & Environment, Louisiana State University, Baton Rouge, LA, USA; Coordinator, WHO Anthrax Working Group; ProMED Anthrax Moderator.*

*Arnon Shimshony is Animal Disease and Zoonoses Moderator for ProMED-mail and was formerly Chief Veterinary Officer of Israel and Associate Professor at the Koret School of Veterinary Medicine, Hebrew University.*

*Thomas Yuill is an Emeritus Professor of Pathobiological Sciences in the School of Veterinary Medicine and is Emeritus Director and Professor of the Nelson Institute for Environmental Studies at the University of Wisconsin-Madison.*