

(A98) Animal Relief Coalition of Haiti (ARCH): A Collaborative Approach to Animal Relief and Recovery*D. Green*

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Background: Following the devastating earthquake in Haiti last January, the International Fund for Animal Welfare (IFAW) and the World Society for the Protection of Animals (WSPA) developed the Animal Relief Coalition of Haiti (ARCH). 19 animal welfare agencies from around the world joined IFAW and WSPA to provide a \$1.04M managed fund to the Ministry of Agriculture, Natural Resources, and Rural Development (MARNDP).

Discussion and Observations: The relief and recovery efforts were based around six objectives: 1. Mobile veterinary clinic 2. Public Outreach emphasizing disaster preparedness, disease prevention, and animal welfare 3. Educational outreach to include an animal welfare curriculum for school-aged children 4. Cold-chain: to provide solar-powered refer/freezer units in remote sections of Haiti to keep vaccines cold 5. Dog and cat survey in Port-au-Prince 6. Rebuilding of the National Laboratory The purpose of this presentation will be to discuss how ARCH was developed and Best Practices and Lessons Learned from a collaborative approach to animal relief and recovery.

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(A99) Remote Access and Extrication, the Haiti Experience*L. Paladino, M. Lucchesi*

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Introduction: The January 12 2010 7.0 magnitude earthquake's epicenter hit just 10 miles west of Port-au-Prince and its 2 million inhabitants at 4:53 pm. Estimates of dead 222,517 at the time of writing, with thousands missing and hundreds of thousands living in tent cities. Haiti is the poorest country in the Western Hemisphere with approximately 80% of the population living under the poverty line. There is a lack of seismic risk perception and planning at the national level. As a result in many areas there are no, or poorly followed, road, highway or bridge building codes.

Need: Although assistance arrived to major ports and cities from all corners of the globe, access from rural and remote areas to centralized hospitals remained difficult. Our group, a mobile medical team able to negotiate difficult terrain by foot with vehicle support in close proximity, deployed to these remote areas. EMS systems were poor in rural areas prior to the earthquake and now are nonexistent, in areas where no access to phones or even addresses (tent cities) to respond to. We found many injured without access to transportation even a month after the earthquake. No family or friends had access to vehicles to transport them. Many knew help was available, but did not know where or how to access. They waited in situ for help not knowing if it was coming. Limb threatening injuries were left to get necrotic and infected, no doubt adding to the morbidity and mortality. Our groups identified patients requiring transport and arranged for drivers, many times using paid locals from cities.

Call for future action: Implementation of a disaster plan for International NGOs to provide organized EMS transport for remote victims without access. Coordination with local community leaders and OCHA to identify areas in need of this service.

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(A100) Building Local Resilience and Competencies in Remote Haitian Communities*R. Gore, C.M. Bloem, B. Arquilla, P. Roblin*

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Injury and trauma are major causes of premature deaths worldwide. At present, Haiti does not have an existing emergency medical system. Basic first responders training was developed for lay people and medical professionals in rural Haiti.

Methods: The training was conducted in Terrier Rouge, Haiti. Participants included medical professionals, laborers, health professionals, teachers, students, and truck drivers from six towns in northeastern Haiti. A three-day training course taught by U.S. board certified emergency medicine physicians was instituted. Basic life support (BLS), first aid, and BLS/first aid instructors courses were taught based on the American and Canadian Heart Associations curriculum. The BLS/first aid instructors course was limited to health professionals, whereas the first aid course was open to all members of the community. The program included the development of local teaching tools and manuals translated to local languages. Twelve newly trained local Haitian instructors assisted in the final day of training.

Results: The course was well received by participants. A total of 54 people completed the BLS course, 67 completed the first aid course, and 12 participants completed the BLS/first aid instructors course. Ninety-five program participants completed the end of course survey. Forty-four of the participants were male, 49 were female, and 2 did not answer. Forty-one participants had no prior BLS/first aid training or exposure. The ages of participants ranged from 13 to 52 years. The course participants included two physicians, 22 students, eight nursing students, seven nurses, 20 teachers, 12 health workers, five drivers, and 14 laborers. Of those surveyed, 92 stated they would recommend this course to a friend. Eighty-eight participants stated that hands on learning helped them better learn the course material.

Conclusion: This sustainable, locally controlled training model increased local skill level for basic first responders in rural Haiti.

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(A101) Gender Difference of the Damage in Haiti Earthquake Disaster*M. Hata,¹ J. Tanaka,² Y. Yamahata,³ K. Okuchi¹*

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An earthquake struck Haiti on 12 January 2010. More than 200,000 people were killed and more than 300,000 people were injured in this earthquake. The Japanese government dispatched the Japan Disaster Relief Medical Team (JDR-MT) to Haiti on 16 January. This is the report of the medical activities

of JDR-MT in Haiti. The JDR-MT consisted of 27 members, including four medical doctors, seven nurses, one pharmacist, one radiologist, one medical technologist, two emergency medical technicians, and 11 logisticians. The JDR-MT was equipped with medicines for 1,000 patients, a portable x-ray system, and ultrasound diagnostic equipment. The JDR-MT performed relief activities at Leogane City, which was 40km west of the capital of Port-au-Prince, and was the first medical team that entered the Leogane area after the earthquake. The JDR-MT treated 534 patients for eight days. The male-female ratio of total patients was 180/354, and the male-female ratio of 242 injured cases treated by the JDR-MT was 80/162. Among the patients treated by the JDR-MT, 100 were diagnosed as bone fractures with the portable x-ray system. There were 17 cases of open bone fractures and 15 cases of pelvic fractures. The male-female ratios were 28/72, 4/13, and 1/14 respectively. The total number of female patients was approximately double compared with the number of male patients in this experience. The proportion of female patients was much higher in the cases of severe injury, such as open bone fractures and pelvic fractures.

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(A102) Training Agricultural Emergency Responders

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Training Agricultural Emergency Responders by Paula L. Cowen, D.V.M., Director, Professional Development Staff, Veterinary Services, Animal Plant Health Inspection Service, United States Department of Agriculture

Abstract: Background Emergency Response is a critical component of our Animal Agriculture infrastructure. The ability to deploy trained personnel to handle any kind of emergency is key to quickly containing any disaster and mitigating the effects. This training is provided by a number of federal agencies, universities as well as at the state and local level. Body Several training strategies are employed by a number of different entities. Training is available on-line, in the classroom, with wet labs using live animals, through exercises and case studies. An overview of training and education of Agricultural Emergency Response personnel across the United States will be covered with a more in depth look at the training provided by the Animal Plant Health Inspection Service.

Conclusion: The Professional Development Staff provides technical training in disease identification and control, emergency response, import/export, and other topics as needed. Protecting and promoting American Animal Agriculture is our core mission. Veterinary Services provides leadership at the intersection of Animal and Public Health concerns.

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(A103) Understanding Terror Medicine

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The term terror medicine emerged early in the 21st century to describe medical issues associated with terrorist events.

While related to emergency and disaster medicine, the field also includes several features that are specific to terrorist attacks. The Israeli healthcare experience as related to terrorist attacks during the intifada (2000–2006), provides a base for comparison to responses elsewhere including to events in Oklahoma City (1995), Madrid (2004), and London (2005). Terror medicine covers four broad areas. First is preparedness, which encompasses hospital surge capacity, training and exercises, and the stockpiling of medical provisions for conventional and non-conventional attacks. Second is incident management, which includes protocols for on-site care, triage, distribution of victims to hospitals, and hospital-receiving procedures. Third is mechanism of injuries and responses, which ranges from determining treatment priorities in someone with multiple injuries (burn, crush, ruptured organs, etc.) to dealing with biological, chemical, or radiological exposures. Fourth, psychological consequences, involves care for acute and long-term emotional effects of a terrorist attack. Growing interest in terror medicine has been manifested in recent publications and conferences. (Egs., SC Shapira and LA Cole, *Terror Medicine: Birth of a Discipline*, J Homeland Security and Emerg Management, Vol. 3, No. 2 [2006] http://www.terrormedicine.com/publications_files/Terrormedicine.pdf; SC Shapira, JS Hammond, LA Cole, eds., *Essentials of Terror Medicine*, NY: Springer [2009]; Symposiums on Terror Medicine and Security, University of Medicine and Dentistry of New Jersey [Newark, NJ, July 2009; Montclair, NJ, Sept. 2010]). Efforts to prevent terrorist attacks should be among a society's highest priorities. No less important are the requirements to prepare for, respond to, and recover from these events. The more that individuals and institutions become familiar with the essentials of terror medicine, the greater the protection they can provide to others.

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(A104) Simulation in Disaster and Emergency Medicine

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Simulation: An activity or situation that produces conditions which are not real, but have the appearance of being real, used especially for testing something. Longman Dictionary of Contemporary English. Simulation has evolved over the centuries but has not been applied to medicine until the 20th century with the introduction of virtual reality and computers. Prior to the 20th century simulation took the forms of physical models and cadavers. With the introduction of flight simulation there was an effort to move similar approaches into medicine. This was pushed by the demands of minimally invasive surgery and the introduction of robotics in surgery. In the 21st century in addition to cognitive task analysis tools we are beginning to see the migration of advanced intelligence tools to simulation. We are just at the beginning of how we will use adversarial reasoning in the medical environment and in high risk time constrained situations like Emergency Medicine. The practitioner of emergency medicine is at high risk for errors because of multiple factors including high decision density, high levels of diagnostic uncertainty, high patient acuity, and frequent distractions. Some