

(MCI). Eli Jaffe, Avi Dagan, Eyal Zahavi, Einat Aviel, Bruria Adini. The Department of Emergency Medicine, Ben-Gurion University of the Negev Magen David Adom (MDA) is the national emergency organization in Israel. Over the past few decades MDA personnel have been required to deal with MCIs involving large numbers of casualties. Recently, there have been fewer terrorist related MCIs, however, there is a continuing need for to maintain the knowledge and skills of paramedics to manage MCIs.

Objective: To examine performance of paramedics exposed to a CS compared to a control group exposed to a traditional lecture based learning experience.

Method: An interactive CS based on the MDA standard operating procedure for managing MCIs was developed. The participants were randomly divided into two groups. Group 1 received the lecture format, and Group 2 the CS. Both groups were given a pre-test (Group 1 average score 56.3, Group 2 average score 53.1), and two post-tests. One immediately following completion of the intervention, and a second a month after completion of the course.

Results: Average scores for the CS Group (n = 15) was significantly different on the first post-test (Group 1 average score 53.2, Group 2 average score 68.7), by 30% and on the second (Group 1 average score 71.9, Group 2 average score 80.8) by 12% compared to the Lecture Group (N = 17) (P = < 0.00).

Conclusion: CS allow for the use of multiple media formats based on real events, and are able to replicate reality using real media material. MDA has recommended that continuing education interventions for emergency medical personnel for maintaining knowledge and skills required for the management of MCIs utilize a CS based training methods.

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(A321) Animals in Emergency Management: Veterinary Medical Triage and Treatment

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Veterinarians have been engaged in emergency preparedness and response activities for many years. The American Veterinary Medical Association (AVMA) founded in 1863 and representing approximately 83% of United States veterinarians, and the American Veterinary Medical Foundation, established by the AVMA in 1963, have been active in emergency preparedness and response, including the development of a world class veterinary disaster response program (VMAT) since 1993. Animals and humans share a special bond in the United States. According to the 2007 AVMA US Pet Ownership and Demographics Sourcebook, there are 72 million dogs, 81.7 million cats, 11.2 million birds and 7.3 million horses in US households. Approximately 60% of all US households own at least one pet, and 64% own more than one pet. Additionally, nearly 60% of pet owners consider their pets to be members of the family, and nearly 50% of pet owners consider their pets to be companions. Few US pet owners consider their pet to be property (approximately 2%). Following Hurricane Katrina, the Pets Evacuation and Transportation Standards Act of 2006 (PETS Act) became US law to ensure that state and local emergency preparedness

plans address the needs of individuals with household pets and service animals following a major disaster or emergency. Recently a US effort to identify best practices in disaster veterinary care was sponsored by the US Department of Agriculture and the National Alliance of State Animal Agriculture Emergency Programs and chaired by members of the AVMA. Best practices were identified, including physical examination and triage, vaccination and parasite treatment and prophylaxis, decontamination, euthanasia, medical care of search and rescue dogs, field diagnostics, and components of a disaster veterinary medical equipment cache.

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(A322) Animals in Disasters and Emergencies: A Version of Wild Kingdom

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Dr. Madigan will discuss the evolution of awareness of the need for emergency preparedness and response for the animal component in disasters and emergencies in the United States and internationally. Emergencies and disasters affect animals and those who own them, including companion animals, animals who's use is for sustenance or groups of animals which serve as a key component of individuals economic existence. Numerous studies have shown the public will delay or refuse evacuation from impending risks if they have to leave their animals behind. A significant component of the public will refuse use of non pet associated shelters which then affects public safety and wellbeing. Emergency responders can be put at risk because of rescues required of non-evacuated individuals staying with their animals. Emergency responders may be called to be involved in animal rescues or animal evacuation. Animals impacted by disasters may incur injury, entrapment, and lack of food and water. Veterinary triage, emergency rescue, treatment and humane euthanasia are driven by animal welfare concerns as well as legislation mandating care of animals in declared disasters in some countries. Dr. Madigan's presentation will provide discussion and video examples of organized response to small and large scale animal emergency and disasters associated with 15 years as Chief of the UC Davis Veterinary Emergency Response Team. Additionally the training components needed for effective and safe preparedness and response will be discussed.

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(A323) Wildfire Associated Burn Injury of 1400 Sheep in Northern California: A Coordinated Mass Casualty Veterinary Response

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Introduction: Wildfires can injure animals both from burns and inhalation of smoke and particulates. In 2006 a rapidly moving grass wildfire burned 12 square miles in Yolo County.

Approximately 1400 sheep on the range suffered variable degrees of burns. A coordinated effort of triage and individual treatment or humane euthanasia was performed by the UC Davis Veterinary Emergency Response Team.

Methods: Animals: Two sheep ranches with 1100 (ranch A) and 300 (ranch B) adult sheep of different breeds, ranging in age from 1–6 years of age. Initial owner evaluation: Both ranchers considered humane destruction of all sheep showing evidence of burned discoloration, estimated to be over 95% of 1400 sheep. Ranch B attempted shooting comprised sheep but stopped and requested aid from UC Davis as did ranch A. Veterinary initial evaluation and communications: Several burned sheep were visible from the roadway. Many sheep were standing with limited movement and some were recumbent. Triage was performed by bringing food and water sources to the sheep and those not eating and drinking were evaluated first. Gunshot euthanasia following AVMA guidelines based on veterinary determination of hopeless prognosis was used. Veterinary team members ($N = 25$) coordinated treatments, communications with public health, animal control, and press media, carcass disposal, volunteer management, and acquisition of office of emergency services resources.

Treatment: Topical treatment of eyes and skin burns with silver sulfadiazine ointment, administration of systemic antibiotics (LA 200), pain relief (flunixin meglumine), wound debridement, and cesarean section of late term terminal sheep were performed.

Results: Over 500 sheep were euthanized by gunshot and the remainder (approximately 900) recovered lasting from 1–42 days. Progression of burn injury to skin, udder, face, and hoofs persisted for 42 days.

Conclusion: A coordinated veterinary response provided humane care and triage of this mass casualty animal emergency.

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(A324) Emergency Management Preparedness and Response Planning in the US: Aphis Foreign Animal Disease Preparedness and Response Plan (FAD PREP)

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Background: Preparing for and responding to foreign animal diseases are critical missions to safeguard any nation's animal health and food supply. A specific challenge of foreign animal disease preparedness and response is the ability to rapidly incorporate and scale-up veterinary functions and countermeasures into emergency management operations during a disease outbreak. The United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services has established a Foreign Animal Disease Preparedness and Response Plan (FAD PREP) which provides a framework for FAD preparedness and response. The FAD PREP goal is to integrate, synchronize, and de-conflict preparedness and response capabilities, as much as possible, before an outbreak by providing goals, guidelines, strategies, and procedures that are clear, comprehensive, easily readable, easily updated, and

that comply with the National Incident Management System (NIMS). An overview of FAD PREP will be presented.

Body: The APHIS FAD PREP incorporates and synchronizes the principles of the National Response Framework (NRF), the National Incident Management System (NIMS), and the National Animal Health Emergency Management System (NAHEMS). The FAD PREP contains general plans and disease specific plans that include incident goals, guidelines, strategies, procedures and timelines for local, State, Tribal and Federal responders. The FAD PREP helps raise awareness of the required veterinary functions and countermeasures, helps identify gaps or shortcomings in current response preparedness and planning, and helps to provide a framework to the States, Tribes, and Industry sectors in developing their individual response plans for specific diseases such as HPAI and FMD. The FAD PREP will also identify resources and personnel for potential zoonotic disease outbreaks and large-scale outbreaks, define stakeholder expectations for successful and timely outcomes, identify and resolve issues that may become competing interests during an outbreak and provide a systems approach to preparedness issues that need additional time, attention and collaboration.

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(A325) Educational and Technical Considerations of Veterinary Personnel Involved in Animal Welfare during Disasters

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Training and education of healthcare and government workers has long been accepted as integral to disaster preparedness, although, up until recently, veterinarians and veterinary paraprofessionals have not participated in such practices. It is well documented that when disasters occur, there are dramatic increases in the occurrence and spread of zoonotic diseases, significant contamination of food, water and soil, and reductions in food supply for both humans and animals. These effects reflect the interdependence of humans, animals and their environment, and the importance of managing animal health and welfare after such disasters. Currently, animal welfare emergency management (AWEM) is neither evidence-based nor standardized. Most veterinary schools do not include AWEM in their curriculum, even though AWEM is an essential part of the veterinary professions obligations to both animals and humans. With this gap identified, research was undertaken to derive educational competencies and objectives in criteria-based preparedness and responses that were relevant to veterinarians and veterinary paraprofessionals involved in AWEM. The results have been used to inform the development of Animal Emergency Response training for inclusion in both veterinary and veterinary paraprofessional curriculums. A systematic evidence-based consensus building method was used to derive the educational competencies and objectives. This included the following steps: (1) review of peer-reviewed literature on relevant content areas and educational theory; (2) a review of existing competencies and training objectives within other sectors involved in disaster management; (3) a survey of international