promoting public health and relieving animal suffering. Public safety is enhanced when animal health is addressed in disaster management. Obstacles to functional disaster responses that include animals may be due to limited 1) evacuation/sheltering plans; 2) integration of professionals 3) training opportunities.
Methods: A general review of legislature, literature, training reports, incident debriefings, community group meetings and agency consultations was conducted to assess the availability and effectiveness of veterinarians in disaster response. A veterinary student survey (Davis) was used to assess disaster response understanding, skill set and interest for training.
Results: Recent fires illuminate the need for local veterinary involvement in response. Community organizers report difficulty in securing veterinary services in disasters. A veterinary student survey showed the majority are interested in training as part of their medical education. Fire services report gaps in animal handling. Law enforcement reports public safety concerns. These professionals don't regularly interact, and time is lost when faced with an incident involving animals. England and France have models for integrating veterinarians into fire service. A working group of veterinarians, consultants and community organizers developed a 10 module lecture and lab disaster curriculum that covers all hazards-all species animal handling, evacuation, sheltering, biosecurity, triage, and Incident Command System.
Conclusion: Veterinarians are skilled in animal movement/capture, husbandry, and triage; first responders have skills in technical rescue; law enforcement is charged with public safety and traffic control. Training veterinary students in disaster response, aligns with the veterinary oath and creates the next generation of professionals capable of participating in disaster response. Trainings that include first responders foster a seamless response further maximizing positive outcomes.

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Co-Location and Close Proximity Facilities for Animal and Human Sheltering as Part of a Community Disaster Preparedness Plan: Application of GIS

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Study/Objective: The objective of this study is to establish a Geographic Information System (GIS) report for animal shelter facilities that are co-located or in close proximity to human shelter locations for Yolo County, California.
Background: The inclusion of animals in emergency management is gaining more attention from the general public, government agencies and academic institutions worldwide. Addressing the needs of animals during disasters is crucial, not only for the welfare of animals, but also safety for people. Animals that are abandoned experience starvation, injury and death. People's concern for animals puts their own physical and psychological well being in danger, because of their reluctance to comply with evacuation orders. Animal owner non-compliance in turn, jeopardizes first responder safety. Shelter location is critical to the development and implementation of emergency planning. In the US, jurisdictions that have variable plans in place, are likely to exclude animals in paper documents only. GIS data management and analysis can facilitate efficacious emergency planning for human and animal sheltering needs.
Methods: Base maps were obtained from county websites. Facility locations were acquired from Red Cross, Office of Emergency Services and Google, and stored in attribute tables. All data was downloaded into ArcGIS. Multiple ring buffers identified animal facilities within 500, 1,000 and 1,500 meters (.31 mi., .62 mi., .93 mi.) of human facilities. A proximity analysis was performed to determine the nearest shelter sites for people and pets and was reported in near tables.
Results: Red Cross shelters, veterinary clinics, pet-friendly hotels, outdoor sites and county animal shelters were identified. The majority of Red Cross shelters were not within 1500 meters of animal housing. Less than 10% of Red Cross shelters were within 500 meters of veterinary clinics.
Conclusion: The GIS reports provide quick visual assessments of relative locations of human and animal facilities for pre-disaster planning. Utilizing GIS analysis can identify gaps and be instrumental in emergency preparedness community planning for animals and people.

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Epidemiological Evaluation of Cat Health at a First-response Animal Shelter in Fukushima, following the Great East Japan Earthquakes of 2011

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Study/Objective: The purpose of this study was to retrospectively evaluate the incidence of Upper Respiratory Infection (URI) and diarrhea in cats at the first response animal shelter in Fukushima, and investigate factors affecting the duration of disease and determinants of treatments performed.
Background: Unplanned animal rescue, in addition to unregulated and/or unstandardized sheltering of affected animals during disaster, caused secondary damage to animals such as disease epidemics. Stress-related disease such as URI and diarrhea were extremely common in cats at the first response shelter in Fukushima, imposing not only animal welfare and cat health issue, but also public health concern.
Methods: A retrospective cohort study was performed at a first response temporary disaster shelter in Ihno, Fukushima Prefecture, Japan. Between April 27, 2011 to December 31, 2012 there were 189 cats brought in by animal control officers from the restricted area to the temporary disaster shelter as part of an animal rescue operation. The incidences of URI and diarrhea were compared between the first and second years, and related to factors predictive of disease duration and frequency, including choice of treatment options.