Training Veterinarians in Disaster Management using a One Health Approach

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Why do we need veterinarians?

- Veterinary care
- Animal handling
- Public health skills
- Organizational skills
- Communication skills
- Leadership?

Are veterinarians prepared to deal with disasters?
Assessing Disaster Preparedness of Licensed Private Veterinary Practitioners

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Survey methods

- Target population: licensed private practitioners in Mississippi (n=705)
  - Private practice = practicing veterinary medicine in a non-governmental sponsored facility such as a clinic or privately-owned hospital

- Dillman’s Total Design Method
Survey methods

- **Independent variables:**
  - Veterinary school graduation date
  - Gender
  - Personal disaster experience
  - MS Emergency Management Agency (MEMA) district

- **Dependent variables:**
  - Response plans (personal and clinic)
  - Formal training
  - Interest in training
  - Knowledge of disaster-related organizations
Survey results

Years since graduation
- Range 0-61 years (mean – 19.6 years)
- Negative association between years since graduation and interest in training (OR=0.95, 95% CI = 0.928, 0.974)
- No difference between years since graduation and training obtained

Gender
- Respondents = 58% male, 42% female
- Females 2.57 times more likely to desire small animal training than males
- No difference between gender and training obtained
Survey results

Personal Disaster Experience

- **Most commonly experienced disaster = hurricane (45.9%)**
- 2.2 times more likely to be interested in training (95% CI = 1.17, 4.13)
- No significant difference in having obtained formal training (p=0.08)
- 4.55 times more likely to have a personal disaster plan (95% CI = 2.47, 8.37)
  - Most common plan: tornado (49.8%)
- 4.11 times more likely to have a veterinary clinic plan (95% CI = 2.28, 7.44)
  - Most common plan: fire (43.1%)
Survey results

- 20% of veterinarians had any formal training in disaster management
  - Incident Command System (ICS), Haz-Mat
- 68% of veterinarians desired more training in disaster management
  - Small animal care, large animal care, human first aid, PPE, WMD
- 10.0% knew to contact EMA following a large-scale disaster involving animals
  - 83.2% would contact State Veterinarian/Board of Animal Health
Survey conclusions

- Veterinarians heavily rely upon personal experiences when it comes to disaster preparedness
- There is a need for greater education on “All-Hazards” disaster management for Mississippi veterinary practitioners
“All Hazards”

- Non-intentional/Natural Disasters
  - Blizzards
  - Flooding
  - Hurricanes
  - Emerging and Foreign Animal Diseases

- Intentional/Man-made Disasters
  - Agroterrorism
    - Emerging and Foreign Animal Diseases
  - CBRNE hazards: Chemical, Biological, Radiological, Nuclear, Explosive
Disaster Management and One Health

Common disaster tasks:
- Animal, facility, EV assessments
- Veterinary services
- Animal evacuation
- Sheltering/Feed
- Public health
  - Food safety
- Cleaning and disinfecting
- Mortality management
Deepwater Horizon oil spill response 2010

Photos: Chris Magee
Southern Colleges of Veterinary Medicine Disaster Alliance

- Auburn University
- University of Florida
- University of Georgia
- Louisiana State University
- Mississippi State University
- North Carolina State University
- University of Tennessee
- Texas A&M
- Virginia Maryland Regional
Southern CVM Disaster Alliance

- **Challenges**
  - Student involvement
    - Scheduling
    - Liability
  - Faculty involvement
    - FTE obligations
    - Licensure, reciprocity
  - Funding
    - Training, CE
    - Meetings
  - Supplies, equipment
  - Core curricula
    - “Opportunistic” offerings
MSU CVM Training

- DVM courses
  - CVM 5011/CVM 5021 Professional Development
  - CVM 5133 Veterinary Preventive Medicine (core)
  - DVM 3 Food Animal clinical rotation (core)
  - DVM 3 Shelter Medicine clinical rotation (core)
  - CVM 5180 Disaster Preparedness (elective)

- Student Disaster Animal Response Team
MSU CVM Training

- Partnerships
  - MS Board of Animal Health
  - MS Animal Response Team
  - MS Veterinary Medical Association
  - MS Office of Homeland Security
  - Federal partners (USDA, FBI, DHS)
  - American Veterinary Medical Foundation
  - Other NGO’s
Other continuing education opportunities

- Advanced Emergency Management
- Animal Rescue and Sheltering
- Foreign Animal Disease control
- WMD (Agroterrorism/Bioterrorism)
- Haz-Mat, PPE and Decontamination
- ARC First Aid, CPR, Wilderness Rescue
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*The All-Hazards approach to disaster management is a One Health approach*
THANK YOU

The price of greatness is responsibility.
--Winston Churchill

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