Disasters and diseases in Africa: Information support for animal and human health

T. Coetsee, A. Lourens, M. Nel and E. van der Westhuizen

IFLA Satellite Session: Health & Biosciences, Durban, 18 August 2007
Disasters

[Image of damaged structure with a horse amidst debris]
Hurricane Katrina, USA
Help Pets Hurt by Katrina

Please donate to our Disaster Rescue Teams today.
Floods (Wales)
Recent floods in the UK

- July 2007
Fires
Types of disasters in Africa

- Drought
- Oil spills
- Fires
- Floods
- Zoonoses
- Emerging diseases
Drought
Oil spills along coast
Oil spills

- Cleaning operation, Cape Town
Bush fires, Pilanesberg, SA
Floods Mozambique

- Sunday, 27 February, 2000, 20:58 GMT
- Eyewitness: Flying over the flood
  - Awaiting rescue on a rooftop
Floods, Mozambique 2000

- Pre-flood and during flood
Disease outbreaks

- Animal diseases – disastrous for the economy

2001 Foot & Mouth, UK - nearly 2,000 cases
  - 3.5 million animals slaughtered
Foot and Mouth in pigs, UK
South Africa
Examples in South Africa

- Newcastle disease – ostriches
South Africa

- Avian flu – ostriches
South Africa's government has begun the slaughter of 6,000 ostriches in an effort to contain an outbreak of bird flu in the south of the country.

*BBC News / Africa 10 August 2004*
Diseases in South Africa

- African horse sickness
Zoonoses

- Crimean-Congo
- Ebola
- Anthrax
- Avian flu
- HIV
Chimps - bushmeat

- Nature news item on chimps as source of HIV
  - Nature 1 June 2006 : 553
Chimps and HIV

Chimps harbour HIV in wild

Wild chimpanzees (pictured above) have long been suspected as the source of the human immunodeficiency virus, HIV. Now that theory has been confirmed: evidence from southern Cameroon shows that wild members of the chimpanzee subspecies Pan troglodytes troglodytes harbour the strain of simian immunodeficiency virus (SIV) that is most closely related to pandemic HIV.

Researchers led by Beatrice Hahn of the University of Alabama at Birmingham report the presence of antibodies against the SIV strain in droppings left by wild chimps. This strain had previously only been detected in captive animals.

The virus, which does not seem to cause disease in the chimps, was probably transmitted to humans by exposure to blood during bushmeat hunting or butchery. The number of wild chimps in Cameroon has declined by 75% since 1980.
Emerging diseases

- Avian flu
Epidemic and Pandemic Alert and Response (EPR) WHOsite

- Diseases covered by EPR
  - Anthrax
  - Avian influenza
  - Crimean-Congo haemorrhagic fever (CCHF)
  - Dengue/dengue haemorrhagic fever
  - Ebola haemorrhagic fever
  - Hepatitis
  - Influenza
  - Lassa fever
  - Marburg haemorrhagic fever
  - Meningococcal disease
  - Plague
  - Rift Valley fever
  - Severe Acute Respiratory Syndrome (SARS)
  - Smallpox
  - Tularaemia
  - Yellow fever
References


Biosecurity

- To prevent exportation of infectious agents or noxious materials
UK laboratory (F&M)
Biosecurity

- Laboratory in UK foot-and-mouth probe

- Speculation that foot-and-mouth virus may have leaked from a laboratory

- Foot-and-mouth disease found on farm in Surrey, southern England

- European Union bans livestock imports from Britain

- 2001 epidemic led to slaughter of more than 3.5 million sheep, cows and pigs
Biosecurity and the veterinarian

Biological disasters of animal origin
The role and preparedness of veterinary and public health services

Catastrophes biologiques d’origine animale
Le rôle et la préparation des Services vétérinaires et de santé publique
Desastres biológicos de origen animal
Papel y preparación de los servicios de sanidad animal y salud pública

Vol. 25 (1), 2006
UK Biosecurity - Pirbright
Disciplines - Disaster management

- Epidemiology
- Public Health
- Veterinary Public Health
- Virology
- Parasitology
- Zoonoses
- Ecology
Veterinarian’s role
Veterinarian’s role

- Assessment of medical needs of animals
- Medical treatment of animals
- Animal disease surveillance
- Zoonosis surveillance
- Ensure food and water safety
- Biological and chemical terrorism surveillance
- Animal decontamination
- Police, rescue dogs
Veterinarian’s role

- …the first line of defense in biological attach
- …key to bioterrorism preparedness
- Biological terrorism and veterinary medicine… JAVMA 1 September 2000
Curriculum

- Are our students adequately prepared for their role?
University of Pretoria – Veterinary curriculum

- PHE 500 (Vet Pub Health & Applied Epidemiology)
  - Role of vet
  - Vet food hygiene
  - Meat / milk hygiene
  - Legislation – safe foods
  - Environ. Health
  - Zoonoses
  - Vet epidemiology
University of Pretoria – Veterinary curriculum

- PHE 600 Applied Vet Pub Health
  - Practicals
  - Assignment in Library – emergency / disaster plan
University of Pretoria – Veterinary curriculum

- Postgraduate (VPH 784 Veterinary Public Health)
  - Environmental health (zoonoses, dead animals)
  - Animal wastes
  - Pollution
  - Occupational hazards/diseases during disasters
Curricula – other veterinary schools

- Univ of Tennessee
- Norway Veterinary School
- Univ of Missouri
- Univ of Edinburgh
- Univ of Illinois
Univ of Tennessee website

- Disaster preparedness and biosecurity
- [www.utextension.utk.edu/topics/Biosecurity/default.asp](http://www.utextension.utk.edu/topics/Biosecurity/default.asp)

The University of Tennessee Extension is preparing to meet the needs of Tennessee communities related to biosecurity and disaster management. Through the Extension Disaster Education Network (eDEN), extension agents are preparing to provide educational programs on disaster preparation and mitigation, to assume locally appropriate roles during disasters, and collaborate in recovery efforts. For more information on programs available in your county, contact your local UT Extension office.

What's Contained in this Site:

- **Hot Topics**
- Resource/Teaching Materials
- News and Highlights
- Educational Programs and Services
- Department and Unit Web Sites Related to Biosecurity and Disaster Management
- Publications Related to Crops and Nursery
Information sources in Libraries

- Are we able to support veterinarians in dealing with disasters and emergencies?
US National Library of Medicine
Disaster management

- Health planning & policies
- Health facilities management
- Public health training
- Communicable disease control
- Emergency medical services
- Health information systems
- Laboratory diagnosis
- Bioterrorism/chemical weapons
Benchmarking collections in 8 libraries

- University of Guelph
- University of Illinois
- University of Missouri
- University of Cambridge
- University of Edinburgh
- University of Melbourne
- National University of Singapore
- University of Pretoria
LC Subject Headings

- Disaster medicine
- Emergency management

- *Classification Web of LC*
- *DC numbers*
### Number of catalogue entries

#### Catalogue entries of university libraries

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Journal & book titles

Journals and books available in catalogues

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South African collections

- Are we able to serve our clients’ information needs adequately?
Catalogue entries in South African university libraries

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Journal & book titles – South Africa

Total items owned (%)

- University of Pretoria: 83%
- University of Cape Town: 33%
- University of Stellenbosch: 33%
- University of the Free State: 50%
- University of Johannesburg: 33%
- University of the Witwatersrand: 33%
- University of South Africa (UNISA): 16%
- University of Kwazulu Natal: 0%
Information on the Web

- Is it adequate?
- For South Africa? NO!
Web information for SA

- SA Veterinary Association
- SA Medical Association
- Dept of Agriculture (Veterinary)
- Agricultural Research Council
- Dept of Health
- Health Sciences Faculties (universities)
Websites for SA - food safety

- Directorate Veterinary Services
- SA Government Services
  - Importation documents – requirements and procedures for import of meat etc.
  - BUT NO OTHER INFO on disaster management
Creating a website on Disaster Management

- For whom?
- Who are the experts?
- What type of info?
- With whom should we collaborate?
- What info should be excluded?
Relevant websites

- AVMA (American Veterinary Medical Association)
- University of Tennessee
- CDC (Centers for Disease Control)
- UK Institute of Animal Health
- UK DEFRA (Dept for Environ., Food & Rural Affairs)
Animal Health

AVMA disaster preparedness

The educational materials listed below are provided to assist veterinarians, animal owners, and others interested in the well-being of animals to prepare for animal safety in the event of a disaster.

For information about ordering these materials, or for further information about the AVMA Disaster Preparedness Program, please contact us.

Animal disaster plans and resources by state

Click on the map to view disaster resources by state

AVMA Disaster Preparedness and Response Guide
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Hot Topics
UK Institute of Animal Health

INSTITUTE FOR ANIMAL HEALTH
good science, useful science

IAH is an international research centre working to improve the health of farm animals worldwide

Information on...
- The Institute
- Research
- Publications
- People
- Applied Research
- News
- Events
- Disease Fact files
- Schools
- 2006/7 BT Outbreak in Northern Europe
- FMDV Fact File

New to this site...
- Statement from the Institute for Animal Health regarding allegations on biosecurity - 12 August 2007
- Statement from Institute for Animal Health - 9th August 2007
- Institute for Animal Health statement on allegations of Legionella contamination - 9th August 2007
- Institute for Animal Health transcript of Director’s statement to media - 7th August 2007 at 20:30
- Initial HSE Report
- HSE Letter
- Institute for Animal Health transcript of Director’s statement to media - 5th August 2007 at 15:00
- Institute for Animal Health statement on Foot and Mouth Disease outbreak - 5th August 2007 at 00:01
- For further information concerning the FMDv outbreak see: http://www.defra.gov.uk/footandmouth/
- Bluetongue active again near the Belgian coast (23 July 2007)
- Development in Germany heightens the concern that bluetongue virus may come to UK this year (press release of 22 June 2007)
International sites

- OIE (World Organisation for Animal Health)
- WHO (World Health Organisation)
- FAO (Food & Agriculture Organisation)
- UN Early Warning Programme
International Early Warning

- In 2000, the United Nations launched the International Early Warning Programme to address the underlying causes of vulnerability and to build disaster-resilient communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development, with the goal of reducing human, social, economic and environmental losses due to hazards of all kinds (UN/ISDR, 2000).
FAO (Food and Agriculture Organisation)

- FAO Animal Health Manual No. 6
Disease Emergency Preparedness

- a gateway to National Disease Contingency Plans and Disease Introduction Simulation Exercises between OIE Member Countries
The role and preparedness of veterinary and public health services

- “facing health threats of animal origin “
- “coping with provoked and accidental disasters”
WHO website

- **Avian influenza**
- WHO is coordinating the global response to human cases of H5N1 avian influenza and monitoring the corresponding threat of an influenza pandemic. Information on this page tracks the evolving situation and provides access to both technical guidelines and information useful for the general public.

- **Latest information**
- **25 July 2007**
  Avian influenza - situation in Egypt - update 19
  [Full text](#)
AVMA Website

Animal Health

Animal health > Disaster preparedness

AVMA disaster preparedness

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AVMA Disaster Preparedness and Response Guide
New website for Southern Africa

- For one-stop info
Our ultimate goal
Librarians and Disasters

- Essential part of the team
  - Listservs
  - Blogs

  *e.g.* Recent F&M outbreak in UK
Blogs keep us up-to-date

- August 06, 2007 - Foot & Mouth
- Blog: “Hand-picked and carefully sorted”
- Run by Robert Taylor, CABI
Listservs

- VetLib-L
- CNN.com items posted on listserv by colleague in USA
- This alerted us to the F&M outbreak
Librarians and Information

- The quicker the authorities can take the necessary steps, the lesser the negative impact
- The Right Information in the right place at the right time!