



Zoonotic tuberculosis and brucellosis in Africa: the way forward

Output of a multidisciplinary workshop held in Pretoria on 19 & 20 November 2007

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Zoonoses

- Diseases transmissible from animals to man
- Neglected zoonoses: anthrax, cysticercosis, brucellosis, bovine tuberculosis (WHO)
- Endemic in many developing countries
- Reservoir in man, domestic animals or wildlife
- Dramatic lack of collaboration between veterinary public health workers, physicians and sociologists

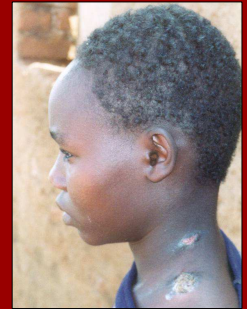
Objectives of the workshop

- To share experiences on the impact of zoonotic tuberculosis and brucellosis in an African changing environment
- To identify priority research needs
- To propose a framework for improved collaboration between the medical and veterinary sectors

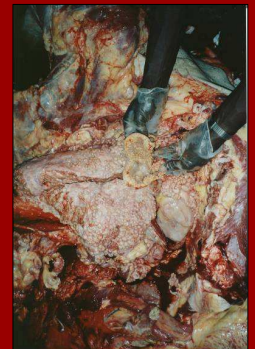


Why focusing on Brucellosis and Tuberculosis?

- Occurrence in people, livestock and wildlife
- Morbidity in people (acute febrile illness and TB)
- Lack of control in the traditional livestock sector in Africa
- Incidence and impact on public health largely unknown
- Transmission in endemic conditions poorly understood



Fence of the Hluhluwe-iMfolozi National Park (South-Africa)



Impact and epidemiology

- Presence of zoonotic pathogens in livestock is a serious **hazard** to public health in the absence of surveillance
- **Marginal** impact on public health compared to human tuberculosis, HIV/AIDS and malaria
- **Research priorities:**
 - Burden on human welfare
 - Relation with poverty
 - Socio-cultural practices and beliefs (anthropology)
 - Effects on animal productivity
 - Effect on wildlife and tourism
 - Reservoir role of wildlife

Diagnosis

- Diagnostic capacities
 - Improve **basic** diagnostic capacities
 - **Quality** control, standardisation and validation of diagnostic tools
 - Facility and **information sharing** (between sectors and countries)
- **Research priorities**
 - Improved diagnostic tools (pen-side tests, improved *M. bovis* test in man and wildlife...)
 - Detection of shedders
 - Molecular typing of isolates
 - Detection of residual pathogens in products and environment

Control

- Control strategies should fit the **communities' needs and perceptions**
- **Research priorities:**
 - Appropriateness of "test and slaughter"
 - Effect of BCG on *M. bovis* infection in man
 - Effect of brucellosis vaccination
 - Effectiveness of awareness and behaviour changes
 - Control in wildlife (conservation and "reservoir" perspectives)

Multidirectional collaborations

- **Networking** between reference laboratories (ring control & training)
- Sharing of ideas, knowledge and facilities among veterinary, medical and anthropological professionals in industrialised and developing countries
- Medical and veterinary **collaboration** in pre and postgraduate education,
- **Cross-reporting** of outbreaks between veterinary and medical services
- **Co-ownership** of control programmes
- Increasing **awareness** in policy makers for collaboration on neglected zoonoses

