

Infectious disease surveillance update

Global burden of disease

Africa accounts for nine out of every ten child deaths directly attributable to malaria worldwide, nine out of ten child deaths caused by HIV/AIDS, and half of the world's child deaths due to diarrhoeal disease and pneumonia, according to WHO's latest global burden of disease report.

According to the new report, which contains data from 2004, in low-income countries the leading causes of death are infectious and parasitic diseases (including malaria) and perinatal conditions. In high-income countries, only one of the ten leading causes of death is a communicable condition (lower respiratory infections).

The study also provides projections of deaths and burden of disease by cause and region to 2030. Large declines in mortality between 2004 and 2030 are projected for all of the principal communicable, maternal, perinatal, and nutritional causes, including HIV/AIDS, tuberculosis, and malaria. Global HIV/AIDS deaths are projected to rise from 2.2 million in 2008 to a

maximum of 2.4 million in 2012, and then to decline to 1.2 million in 2030, under a baseline scenario that assumes that coverage with antiretroviral drugs continues to rise at current rates.

Colin Mathers (WHO, Geneva, Switzerland), the lead author of the study, said that the report "enables policy makers and countries to identify the gaps and ensure that help and efforts are directed to those who are most in need".

Arenavirus in South Africa

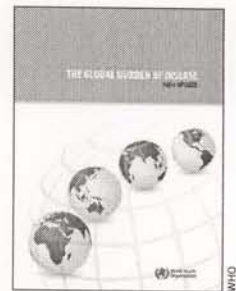
The viral haemorrhagic fever that killed four people in South Africa has been identified as an arenavirus infection. Arenaviruses are associated with rodents, their natural hosts. The primary case was a safari booking agent in Zambia who was flown to South Africa for treatment. "The professional activities of the index case could have favoured possible exposure to rodent excreta in a rural area", said Hervé Zeller (European Centre for Disease Prevention and Control, Stockholm, Sweden).

In a report, the South African National Institute for Communicable Diseases said, "There are currently no additional suspected cases. The outbreak appears to be contained and has been confined to individuals with very close contact in a health-care setting". A fifth case—a nurse who cared for one of the patients who died—is currently being treated for the infection.

"This is the first identification of an arenavirus causing human disease in a southern African country. Further laboratory investigation will allow characterisation of the virus associated with this outbreak and its relation with the existing Lassa virus present in west Africa", Zeller commented.

The Zambian government has closed its border to any refugees arriving from the Democratic Republic of the Congo. It has been reported that this action is in response to the health threat posed by arenavirus infection rather than any security threats.

Jennifer Horwood



For more on the **The global burden of disease: 2004 update** see http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html

For more on the **viral haemorrhagic fever in South Africa** see *Newsdesk Lancet Infect Dis* 2008; 8: 669

For more on the **identification of arenavirus** see *Euro Surveill* 2008; 13: pii=19008; <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19008>

For the **report from the National Institute for Communicable Diseases** see http://www.nicd.ac.za/pubs/communiquet/2008/NICDCommOct08Vol07_10.pdf

Tuberculosis vaccine for HIV-infected patients shows promise

A new tuberculosis vaccine reduces the incidence of the disease by 37% in HIV-positive people, according to phase III study data presented at the 39th Union World Conference on Lung Health, Paris, France (Oct 16–20, 2008).

The DarDar trial, which took place in Tanzania, involved 2000 HIV-positive people with an average CD4 count of 400 cells per μL . Patients were randomly assigned to receive either five immunisations with an inactivated whole-cell vaccine, *Mycobacterium vaccae*, or a placebo vaccination over a 12-month period. According to investigators, during an average 3-year follow-up there were 33 cases of confirmed tuberculosis in the vaccine group and 52 cases in the

placebo group, indicating a vaccine efficacy of 37%.

The loss to follow-up in the study over 7 years was only 16% compared with the 27% that was predicted. Principal investigator Ford von Reyn (Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA) told *TLID*: "The study team in Tanzania, led by Lillian Mtei, is to be congratulated for achieving the high rates of compliance and follow-up".

von Reyn said that the multiple-dose schedule used in the study meant the patients received regular general HIV health care and this may be a positive benefit. However, the study team does plan to study a shorter regimen of three doses in a future trial. von Reyn estimated

that if 50% of HIV-positive people in Tanzania received the vaccine, tuberculosis incidence in those with HIV could decline by about 3300 new cases a year. *M vaccae*-based vaccine would be cheap to produce and could be in use within 3 years.

Mario Raviglione, director of WHO's Stop TB department, said: "Any new vaccine would be of benefit to the tuberculosis world since the existing BCG vaccine has only limited efficacy in preventing adult forms of tuberculosis". He added: "This research finding is welcome, especially if the vaccine works among the most immunocompromised individuals, such as people with HIV".

Jacqui Wise

For more on the **39th Union World Conference on Lung Health** see <http://www.worldlunghealth.org/Conf2008/website/index.php>