



### Henipaviruses and distribution of flying fox bat (*Pteropus*)

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### Pertussis in Latin America: Developing the tools to face the challenge ahead

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**Background:** Pertussis surveillance worldwide is limited by reduced clinical recognition of disease, suboptimal confirmatory testing, and poor reporting, yet adequate understanding of pertussis is necessary for implementation and evaluation of prevention and control measures. We describe the current status of pertussis and vaccination coverage in Latin America (LA) and a process to achieve enhanced pertussis surveillance.

**Methods:** We reviewed publicly available pertussis surveillance and vaccination coverage data for LA and calculated incidence rates by region and country. Field evaluations of surveillance capacity are being conducted in selected LA countries, followed by development and implementation of locally-responsive capacity building at selected sentinel sites to strengthen recognition, confirmation and reporting of pertussis.

**Results:** From 1990 to 2008, >160,000 cases of pertussis were reported in LA. Cases decreased from 25,409 in 1990 to 7,827 in 2007, with the lowest number (3,595) in 2002. The rate also decreased from 1990 (5.8 cases/100,000 pop.) to 2002 (0.68 cases/100,000 pop.), but then increased to 1.4 cases/100,000 pop. in 2007. Reported three-dose childhood diphtheria-pertussis-tetanus vaccine coverage has steadily increased from 39% in 1980 to 91% in 2008. Collaborative efforts among LA Ministries of Health and international stakeholders are now focusing on evaluating current surveillance systems for pertussis, with implementation of capacity building and enhanced surveillance activities beginning 3rd quarter 2010.

**Conclusion:** Although vaccination efforts in LA have reduced pertussis morbidity, trends indicate that incidence may be increasing again. Efforts to prevent pertussis have focused on childhood vaccination; however, burden of disease does not strictly correlate with vaccine coverage. Additionally, limitations of reported data imply that the true burden of pertussis remains uncertain. Enhanced sentinel site pertussis surveillance, endorsed by the WHO's Strategic Advisory Group of Experts on immunization, may prove an efficient method to improve pertussis surveillance and support evolving vaccination policy.

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### Establishing the tuberculosis monitoring system at Brazil's, Paraguay's and Argentina's frontier

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**Background:** Brazil shares frontiers with 10 South American countries. From 2001 to 2009, in Brazil, it was registered and treated 225 TB cases among non residents. There is no surveillance system among South American countries to detect TB cases and its contacts. Our objective was describe the proposals and activities (2008-2009) whose main goal was establishing a "Surveillance System of TB Cases at the frontier among Brazil, Paraguay and Argentina".

**Methods:** There were organized eighteen meetings with the presence of TB sector decision makers from the three countries. There was a meeting with the coordinators of the National TB Programs and the Brazilian Representation of the Pan-American Health Organization. There were two technical training courses: one about the DOT Strategy and another one about the epidemiology at the Bi-national Hydroelectric in Foz do Iguacu (Brazil).

**Results:** At the end, a total of 139 professionals were involved in the creation of the Surveillance System, and 77 technicians from different management levels of the three countries were trained. The coordinators meeting established responsibilities and identified the necessity of creating a bilingual TB notification report, a bi-national information, standards for laboratorial diagnosis, forms of identifying circulating strains, standards for the treatment at the country of origin. During the DOT Strategy course, it was introduced a methodology, activities and a proposal to standardize country actions. At the applied epidemiology course, it was discussed fundamental concepts of epidemiology surveillance and integration among countries. The municipal technicians involved have informed and have referred patients in treatment at the frontiers municipalities. It is in course the creation of a bi-national card for the identification of Tb cases and the establishing of primary care common protocols.

**Conclusion:** The Surveillance System will allow the diagnostic of the TB magnitude in the regions of frontiers, identifying the non residents' cases, widening the treatment