

VIETNAM

I.) BACKGROUND INFORMATION

Vietnam covers 331,210 sq. km and shares its borders with Cambodia, China and Laos. Vietnam's population is estimated at around 93.4 million (2014), with about 31 percent living in urban areas (2011). Its GDP per capita (PPP) amounts to 4,000 USD (2013). In 2012 an estimated 11.3 percent of the population lived below the poverty line. With a high income inequality it is ranked according to the Human Development Index of 2013 in 127th place, amongst the countries with medium human development.^{i,ii}

Rabies is endemic in Vietnam. The most common lyssavirus present is Genotype 1 (Rabies virus, RABV), with human infections being mostly due to its canine biotypeⁱⁱⁱ. Since bat lyssavirus specific surveillance is limited, there is no information available to the presence of lyssaviruses in bats.

Rabies has been a notifiable disease in Vietnam for more than 10 years. A national case definition is provided, which includes probable and confirmed human rabies cases. The National Program for rabies prevention and control (2011-2015) is headed by the Veterinary department of the Ministry of Agriculture and Rural Development and the National Institute of Hygiene and Epidemiology of the Ministry of Health.^{iv}

II.) HUMAN RABIES EPIDEMIOLOGY

Human rabies cases are sometimes laboratory confirmed, but mostly diagnosed on clinical grounds only. According to the OIE World Animal Health Information System in 2013 Vietnam reported 102 cases of rabies in humans^v. Data presented to the 9th Asian Rabies Expert Bureau Meeting, indicate 110 human deaths due to rabies in 2011, and 98 in 2012^{vi}. A recent study estimates that around 230 people die from rabies every year in Vietnam^{vii}.

III.) RABIES VECTORS^{viii}

The main vector for rabies in Vietnam is the domestic dog. According to the OIE World Animal Health Information Database, in 2011, Vietnam indicated an unknown number of dog rabies cases. In the following year, 2012, 86 rabies cases in dogs were reported, while 239,651 animals were routinely vaccinated. In 2013, there were 105 dog rabies cases, and 10,895 ring vaccinations.

IV.) RABIES BIOLOGICS AVAILABILITY

Rabies post-exposure prophylaxis (PEP) is available in urban areas^{ix}.

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- ⁱ CIA (2013). The World Factbook: Vietnam. <https://www.cia.gov/library/publications/the-world-factbook/geos/vm.html> [accessed 24.04.2014]
- ⁱⁱ UNDP (2013). The Rise of the South: Human Progress in a Diverse World. Human Development Report 2013. New York: UNDP. http://hdr.undp.org/sites/default/files/reports/14/hdr2013_en_complete.pdf [accessed 24.04.2014]
- ⁱⁱⁱ Yamagata J, K Ahmed, P Khawplod, K Mannen, DK Xuyen, HH Loi, NV Dung, and A Nishizono (2007). Molecular epidemiology of rabies in Vietnam. *Microbiol Immunol*; (51(9):833-40.
- ^{iv} Taylor LH, L Knopf and Partners for Rabies Prevention (in prep). Surveillance of Human Rabies by National Authorities - A Global Survey.
- ^v OIE World Animal Health Information System. Vietnam. http://www.oie.int/wahis_2/public/wahid.php/Countryinformation/reporting/reporthistory [accessed 23.04.2014]
- ^{vi} Nguyen TH (2013). Rabies in Vietnam: Situation, Challenges and Prevention Strategies. Presentation given at the 9th Asian Rabies Expert Bureau Meeting.
- ^{vii} Hampson K and Partners for Rabies Prevention (in prep). Estimating the global burden of endemic canine rabies.
- ^{viii} OIE World Animal Health Information System. Vietnam. http://www.oie.int/wahis_2/public/wahid.php/Countryinformation/reporting/reporthistory [accessed 23.04.2014]
- ^{ix} Nguyen TH (2013). Rabies in Vietnam: Situation, Challenges and Prevention Strategies. Presentation given at the 9th Asian Rabies Expert Bureau Meeting.