



RABIES WATCH

YOUR SOURCE FOR RABIES AWARENESS AND EDUCATION

FALL 2017, Issue #6

Travel-Related Rabies Virus Exposure Comes Home to Virginia

Rabies in the United States has changed substantially over the past century.¹ Interventions that include routine vaccination of domestic animals against rabies and accessibility to modern postexposure prophylaxis (PEP) have greatly reduced exposure incidents and raised the efficacy of PEP to essentially 100%.¹ In contrast, in developing countries that have inadequate health resources in general, lack rabies surveillance programs and diagnostic facilities, and provide limited access to rabies vaccine and PEP, the impact of rabies continues to be substantial.² In many parts of the world, exposure to rabid dogs continues to account for more than 90% of human rabies virus exposures and more than 99% of human deaths due to rabies.² While human exposure to rabid dogs in the US has been essentially eliminated through programs to eliminate the canine rabies virus variant, the issue and challenges of human exposure to rabid dogs by Americans traveling abroad and the potential development of symptomatic rabies in these people once they return to the US is a growing issue.³

Americans may rarely be exposed to a rabid dog in the US, but this risk may not be very rare outside the US.^{2,4}

Societal Impact of Rabies in the US Has Been Greatly Reduced Versus Developing Countries

	US	Developing Countries
Rabies cases reported in animals	~5500 (2015) ³	Underestimated due to chronic underreporting and political neglect ⁵
Human rabies deaths reported	Decreased from >100 annually in early 1900s to 1-2 annually by the 1990s ¹	Also underreported but estimated at 59,000 annually ^{6,7}
Rabies vectors	Wildlife (wild carnivores and bats account for >90% of animal rabies cases) ¹	Dogs (account for >90% of human rabies cases, >99% of human rabies deaths) ^{2,6}



RABIES WATCH

In May 2017, the Virginia Department of Health (VDH) reported a confirmed case of human rabies in a state resident who had been bitten by a dog while traveling in India.⁸ Due to privacy concerns, the VDH had not released further details about this case through June 2017. However, the VDH noted that it has been working with the Centers for Disease Control and Prevention (CDC) to identify any other people, from family members and close contacts to healthcare professionals at centers where the patient sought care, to evaluate other possible rabies virus exposures. The VDH has taken this step out of “an abundance of caution” even though the only documented human-to-human cases of rabies transmission have involved organ transplantation. The last reported case of human rabies in Virginia also involved a person who was bitten by a dog in India in 2009.⁸

Of the 38 reported cases of human rabies in the US since 2003, 11 cases (29%) involved patients who were infected outside the US and its territories.³

This recent rabies case of a person returning home to Virginia from India and the worldwide rabies data provide an important warning for Americans traveling abroad: do not assume that the standards we expect in the US for dog rabies vaccination programs and access to postexposure prophylaxis (PEP) apply in other countries.⁴ This is especially true in parts of Asia, Africa, and Central and South America.⁴ Americans who are planning to travel to these areas should be sure to talk with their doctor and consider consulting local or state departments of health about the risk of rabies virus exposure and what to do if a potential exposure occurs.⁴ Travelers can also visit the World Health Organization’s rabies epidemiology web page (<http://www.who.int/rabies/epidemiology/en/>) for country-specific rabies information.

REFERENCES

1. Centers for Disease Control and Prevention. Rabies in the U.S. <https://www.cdc.gov/rabies/location/usa/index.html>. Updated April 22, 2011. Accessed June 2, 2017. 2. Centers for Disease Control and Prevention. Rabies around the world. <https://www.cdc.gov/rabies/location/world/index.html>. Updated April 22, 2011. Accessed June 2, 2017. 3. Birhane MG, Cleaton JM, Monroe BP, et al. Rabies surveillance in the United States during 2015. *J Am Vet Med Assoc*. 2017;250(10):1117-1130. 4. Centers for Disease Control and Prevention. Information for travelers. https://www.cdc.gov/rabies/specific_groups/travelers/index.html. Updated April 22, 2011. Accessed June 2, 2017. 5. World Health Organization. What is rabies? <http://www.who.int/rabies/about/en/>. Accessed April 14, 2017. 6. World Health Organization. Rabies fact sheet. <http://www.who.int/mediacentre/factsheets/fs099/en/>. Updated March 2017. Accessed June 23, 2017. 7. Hampson K, Coudeville L, Lembo T, et al; on behalf of the Global Alliance for Rabies Control Partners for Rabies Prevention. Estimating the global burden of endemic canine rabies. *PLoS Neglect Trop Dis*. 2015. doi:10.1371/journal.pntd.0003709. 8. Virginia Department of Health. Health officials investigate rare human case of rabies. <http://www.vdh.virginia.gov/news/public-relations-contacts/news-releases/2017-statewide-news-releases/health-officials-investigate-rare-human-case-of-rabies/>. May 12, 2017. Accessed June 6, 2017.

This article may be downloaded, printed, and distributed freely without copyright restriction.

For more information, go to www.rabieswatch.com

FALL 2017, Issue #6