Occult Exposures to Bats in Oregon: Implications for Rabies Post-Exposure Prophylaxis
P.R. Cieslak, E.E. DeBess, W.E. Keene, D.W. Fleming. 1998. Abstract from the International Conference on Emerging Infectious Diseases, Atlanta, GA, Vol. 58.

"To estimate the prevalence of bat exposure and the potential cumulative cost PEP [post-exposure prophylaxis] for such exposures, we used Oregon's Behavioral Risk Factor Survey. Since January, 1997, we have asked "During the last 12 months, did anyone see a bat inside your home? Through the first 9 months of data collection, 29 (1.3%) of 2,176 respondents indicated that a bat had been seen inside their homes. To clarify the nature of the encounters, we attempted to recontact these 29 households; contact was made with 18, comprising 45 persons. In 2 households, the bat was found in a room in which someone was sleeping. In 1 household, the bat was found in a room
with someone unable to give an adequate history. In 8 households, the bat was found in a room open to other rooms where people had been sleeping with potential exposure of an additional 14 persons. Thus, according to current guidelines 17 (38%) of the 45 persons in these households were "exposed" to bats. None of these persons consulted a physician or health department; one person contacted a veterinarian; none received PEP. Extrapolating these findings to Oregon's population of 3,181,000, we estimate that each year 16,000 Oregonians are potentially exposed to bats and fall under CDC guidelines for PEP consideration. If all of these exposures were reported to health officials, if 90% of bats associated with these exposures could be captured and tested for rabies, if none of these bats tested positive for rabies, and if the remaining 1,600 "exposed" persons received PEP per CDC guidelines, at an average cost of $1,500 for PEP biologicals and administration, $2,400,000 would be spent annually on PEP in Oregon. Assuming an incidence of occult bat-associated rabies in Oregon equal to the U.S. average ($4.2/10^9$/yr), one Oregon case is expected every 75 years. Assuming 100% efficiency for PEP, we estimate the cost of preventing a single case in Oregon to be $180,000,000. That's a lot. Furthermore, this estimate does not reflect the cost to health departments of dealing with an average of 44 exposures per day or the cost of testing bats. Although bat "exposure" is common, bat associated rabies is extremely rare. The high cost per case prevented should be considered when PEP recommendations are developed."

Oregon Health Division, Portland, OR9