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## Alaska Rabies Post-Exposure Prophylaxis: 2008–2012 Data Summary and Policy Change

### Background

In Alaska, rabies is enzootic in northern and western coastal fox populations and is occasionally transmitted to susceptible animals, such as unvaccinated dogs. Animal exposures to humans are not specifically reportable to the Section of Epidemiology (SOE); however, animal bites may be reportable to local health or animal control authorities in some jurisdictions.<sup>1</sup> In the event that rabies exposure is considered following an animal bite, SOE rabies experts are available to help guide health care providers in determining whether rabies post-exposure prophylaxis (PEP) is warranted. SOE follows national recommendations, mirrored in Alaska regulations, for the management of animals that bite humans.<sup>2</sup>

For decades, SOE's rabies control program has provided rabies PEP at no charge to the public;<sup>3</sup> this has helped ensure that patients received PEP only when warranted. While centralized distribution of PEP is efficient, it is also costly—a full PEP series for a 175-pound adult costs approximately \$3000, not including shipping, personnel, or administration costs. For immunocompetent persons not previously vaccinated against rabies, PEP consists of a single dose of human rabies immune globulin (HRIG) given on a per weight basis and four doses of vaccine given over a 2-week period.

The purpose of this *Bulletin* is to characterize the distribution of rabies PEP by SOE during 2008–2012, and to inform providers and other stakeholders of a change in SOE's PEP policy effective January 1, 2014.

### Methods

We reviewed rabies treatment sheets for each PEP incident that was reported to SOE during 2008–2012.<sup>4</sup> Incidents were summarized by patient demographics and other characteristics.

### Results

During 2008–2012, SOE supplied PEP for 107 persons (mean: 21 per year, range: 16–26); of these 107 persons, 91 (85%) were Alaska residents. A total of 359 doses of vaccine and 386 2-ml vials of HRIG were administered to the 107 persons (estimated cost: \$235,445); 331 (92%) vaccine doses and 380 (98%) HRIG vials were administered to Alaska residents (estimated cost: \$226,965). Of the 91 Alaska residents who received PEP, 30 (33%) were exposed to an animal outside of Alaska while traveling as tourists, visiting family, or working; none had received a pre-exposure rabies vaccine series. Of the 16 non-Alaska residents who received PEP, all were exposed outside of Alaska.

Of the 61 persons who received PEP due to an animal exposure in Alaska,

- 34 (56%) were male;
- the mean age was 23 years (range 6 months to 69 years);
- 51 (84%) were exposed in the Yukon-Kuskokwim Delta (27, 44%) and the Northern (24, 39%) regions;
- 20 (33%) received PEP because of exposure to confirmed rabid animals, 18 of which were due to exposures to one of three rabid dogs;
- 41 (67%) received PEP because the animal could not be reliably identified for observation or testing (two of the animals were too decomposed to be tested); and
- 5 (8%) did not complete their PEP series—two discontinued the series because the animals they were exposed to were alive 10 days after the exposure, and three did not receive their final dose of vaccine despite numerous reminder calls.

Of the 46 animals involved in the 61 Alaska exposures,

- 33 (72%) were dogs, five (11%) were bats, four (9%) were foxes, and two (4%) were wolves;
- all of the terrestrial animals involved were living in areas of Alaska known to be enzootic for rabies;<sup>5</sup> and
- five (11%; four dogs and one wolf) were laboratory-confirmed as being positive for rabies.

### Discussion

Rabies PEP distributed by SOE during 2008–2012 did not vary substantially from previous summaries with regard to volume or exposure characteristics.<sup>6</sup> SOE has spent approximately \$45,000 annually in recent years to provide PEP mainly to Alaskans, but also to some non-residents. Costs associated with PEP shipping and handling, consultation, and administration are not tabulated, and vary widely depending on where the incident occurs, how many people are involved, and other logistics.

### 2014 Policy Change

For decades, SOE's 24/7 commitment to consult on animal exposures and coordinate rabies testing has resulted in the efficient use of PEP. This commitment continues; however, SOE can no longer afford to supply rabies PEP. Therefore, as of January 1, 2014, health care providers and hospitals will need to ensure that they either stock PEP for emergencies, or that they are able to obtain PEP from a supplier of their choice in a reasonable time frame. Current manufacturers of human rabies vaccine include Sanofi-Pasteur and Novartis.<sup>7</sup> Patient assistance programs that provide medications to uninsured or underinsured patients are available for rabies PEP.<sup>8</sup>

### Recommendations

1. Contact SOE for consultation regarding exposures that may warrant PEP, diagnosing suspected human rabies, informing the appropriate regional animal control authorities, and determining how to manage missed doses (call 907-269-8000 Mon-Fri 8AM–5PM, or 800-478-0084 after hours).
2. Health care providers and hospitals—especially those that have routinely obtained PEP from SOE in the past—should ensure that they either stock PEP for emergencies, or are familiar with ordering PEP from a supplier of their choice.
3. Contact SOE to facilitate submitting animals for rabies testing (ASVL submission instructions are available at: <http://dhss.alaska.gov/dph/Labs/Pages/publications>).
4. Health care providers and veterinarians should familiarize themselves with local ordinances for mandatory reporting of animal bites/exposures.<sup>1</sup>
5. Health care providers should offer rabies pre-exposure vaccine to persons traveling overseas in high-risk areas.

### References

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