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Bed Bug Complaints on the Rise

Background

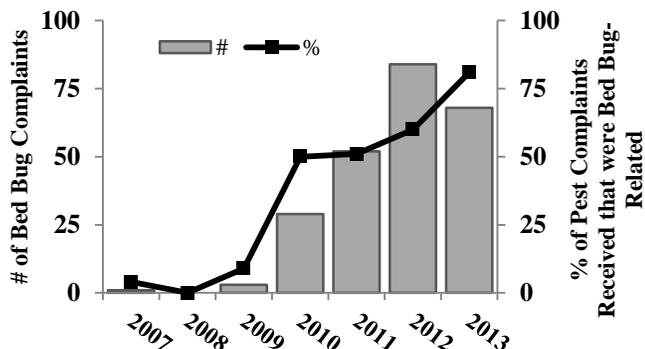
The occurrence of bed bug infestations in public and private dwellings has increased considerably in the United States since the 1980s.¹ Factors that have likely contributed to this rise include increased travel, immigration, and insecticide resistance.² Bed bug infestations are not reportable in Alaska.

Bed bugs (*Cimex lectularius*) are small, flat, reddish-brown insects, about the size of an apple seed. They commonly live in blankets, mattresses, furniture, floors, and walls near sleeping areas. Although bed bugs are not known to transmit disease, they are considered a public health *nuisance* and can cause adverse physical, mental, and economic consequences. Bed bugs have an average life span of 6–12 months. They survive on human blood meals that are typically taken every 3–7 days; however, they can live for many months without eating. Rooms with clutter and “favorable furnishings” (e.g., wooden bed frames) contribute to bed bug infestation. A healthy bed bug population can double every 16 days.

Municipality of Anchorage Bed Bug Complaints

Since 2007, the Municipality of Anchorage Environmental Health Services (MOA EHS) Program has been tracking the number of bed bug-related complaints and concerns received from private businesses and the public. Complaints increased considerably during 2007–2013 (Figure).

Figure. Bed Bug Complaints Received by the MOA EHS Program — Anchorage, 2007–2013



Considerations for Health Care Providers

Bite Management and Prevention

Bed bug bite management rarely requires more than minimal symptomatic treatment and good hygiene to prevent itching and secondary infections. For situations involving extensive bites and/or scratching, topical steroid creams with or without systemic anti-H1 receptor antihistaminics may be warranted. Excessive scratching can also cause secondary infections like impetigo—easily confused for an underlying eczema or contact dermatitis—that require antibiotic therapy. A high index of suspicion by health care providers will aid in timely diagnosis. Because bites on the skin are nonspecific, the most reliable indicators of bed bug infestation include:

- molted exoskeletons shed by nymphs during growth;
- live bed bugs in bedding and bedroom cracks/crevasses;
- eggs and eggshells (white, ~1mm in size); and
- excrement, which appears as small, dark spots on fabric (e.g., rusty or reddish stains on bed sheets).

Looking for these signs when travelling or before acquiring used items can prevent exposure and expedite intervention.

Harmful Pesticide Exposures

A recent summary of acute insecticide exposures resulting from attempts to control bed bugs demonstrated that the most

common triggering factors included excessive application, failure to wash treated bedding, and inadequate notification of pesticide application.³ In 2010, pyrethrins and pyrethroids were the most frequent pesticide exposures reported to poison control centers (PCC) nationwide (25% of all exposures).⁴ During 2002–2012, pyrethrins and pyrethroids accounted for nearly 22% of all pesticide exposures reported to Alaska’s PCC; 42% of these exposures involved children aged <5 years.⁵ Pyrethrins and pyrethroids are found in many over-the-counter bed bug bombs, foggers, and treatments.

In a helpful reference guide available for clinicians on recognition and management of pesticide poisonings (see: www2.epa.gov/pesticide-worker-safety), providers are advised to incorporate a few screening questions in their routine patient intake forms to identify potential pesticide exposures.

Considerations for the Public

Bed bugs must be positively identified in the dwelling to avoid treating the wrong pest. Insect identification can be performed by the University of Alaska Cooperative Extension Office (see: www.uaf.edu/ces/pests/). Once identified, most bed bug infestations are likely to require an integrated pest management (IPM) approach for control, which utilizes information on the bug’s life cycle and incorporates both nonchemical and chemical control methods.^{2,6} Nonchemical control steps include the following:

- eliminating clutter and “favorable furnishings” in rooms;
- heat treating or cold treating rooms and furniture;
- putting linens in a high-heat dryer cycle, vacuuming, and steam cleaning;
- sealing floor and wall cracks with sealants (e.g., caulk);
- using diatomaceous earth or other nonchemical pesticides;
- using bed bug traps and monitoring devices; and
- using physical barriers to encase mattresses.^{2,6}

Before using chemical pesticides, the following steps should be taken to prevent harmful exposures:

- consult with a licensed pest control professional;
- refer to EPA’s “Registered Bed Bug Products” search tool to find an appropriate EPA-registered bed bug product (see: <http://cfpub.epa.gov/oppref/bedbug/>);
- only use “indoor” pesticides with an EPA registration number (never use “outdoor” pesticides indoors); and
- read and follow instructions on the product label.^{2,6}

Persons who have been harmfully exposed to pesticides should call the Alaska Poison Control Center (1-800-222-1222) and seek medical attention immediately.

Additional information on bed bugs is available at:

- www.epi.alaska.gov/id/dod/bedbugs
- www.michigan.gov/documents/emergingdiseases/Getting_the_Bed_Bugs_Out_Guide_442175_7.pdf

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