Prevention and Control of Bed Bugs in Retail Facilities

Dr. Stephen A. Kells
Associate Professor
Department of Entomology
University of Minnesota

September 27, 2010

Bed bugs, a growing pest in society

Bed bugs have been a resurging problem in North America since 2000 (approximately). With their continued spread over the last 11 years, their numbers have reached a level where we are beginning to see them appear in non-residential areas with increasing frequency. In addition to hotels, they have been found in hospitals, libraries, office buildings, movie theaters, and other places where people may temporarily stay for a short period. Also, as the infestations continue to increase in residential areas, we will begin to see their appearance in other areas such as retail stores. This has already happened in retail stores in New York City, but over the next year or two, we will likely encounter increasing incidences in other regions of the country.

It is critical for retail stores to have a bed bug prevention and response plan prepared so that when bed bugs happen, the issue is quickly handled with minimal panic. Bed bugs are a fact of life in present society and there are a few simple steps that you can follow to reduce the worry, negative publicity and loss of revenue related to bed bugs being found in a store. Having contingency plans to control a situation, responding directly and quickly to customer (and employee) concerns will ensure that a situation does not become overblown. The following sections provide background information to help you determine your risk and set appropriate steps in place to prevent bed bug issues, or respond to an infestation.
Why would they appear in retail stores?

Bed bugs appear in retail stores because people who frequent stores may have bed bugs hitchhiking with their personal belongings. Bed bugs may be carried on purses, backpacks, and potentially shoes and other items. They may hitchhike on clothing, but this is a relatively rare occurrence unless clothes have been placed in direct contact with an infestation. At particular risk for bed bug transference are stores that serve low income areas and this is due to the current difficulties in obtaining control of bed bugs in low income regions of cities. However, as the NYC situation shows, bed bugs can be associated with mid- and upper income patrons as well.

Within a retail store, bed bugs may appear in several key areas depending on the activity of customers or employees at that site. For example, if there is an area where someone would put their purse down for a time (such as a fitting room), this would have a greater chance of allowing bed bugs to move off the purse and into the surrounding area. Sometimes, employees may be having difficulty controlling an infestation at home. The following are possible and likely areas where bed bugs could be encountered:

**Possible locations (Lower risk)**

- Metal or plastic shopping carts (there are few hiding areas and it is difficult for a bed bug to hang on).
- Checkout counters (without returns)
- General shopping areas

**Probable or likely locations (Higher risk)**

- Employee locker rooms
- Returned merchandise areas (check out and service counters; backroom storage)
- Fitting rooms
- Shopping carts that have cloth bags
- Places with upholstered chairs

There is potentially a more insidious side to bed bugs and that is the possibility for fraudulent claims or “planting bed bugs” in stores. This may occur for personal gain, or a revenge type tactic caused by an unhappy customer. Early in the resurgence, there were a few cases where furniture sales companies would supply a new mattress to someone disposing of an infested mattress. After delivery, the customer would blame the company for bed bugs and attempt to claim damages – usually in an attempt to reduce the cost of the new mattress. People are usually relying on a “surprise factor” or ignorance to
get the claim satisfied. While this would be a rare occurrence, it can still occur. A bed bug prevention and response plan is the best way to counter both real and “constructed” bed bug issues.

**Prevention and control measures**

Below is a quick summary of practices to consider when constructing a bed bug prevention and response plan. What components you consider will depend on the type of store.

1. In high risk areas, reducing clutter and using preventive inspections will reduce chances that bed bugs will be found by a customer. The preventive inspections should be conducted by a pest management professional or someone knowledgeable with bed bug inspections.

2. Product returns to stores pose a particular risk. All clothing, bedding and mattress (and similar) returns should be placed and stored in plastic bags until they are returned to the supplier, inspected and/or heat treated (see below for control options). All electronics, furniture should be placed in an uncluttered area away from other items. Again, see below for control options such as heat treatments or Nuvan® Propest Strips.

3. Provide employees with the training and resources they need to be able to identify bed bugs and encourage an earlier response in all areas.

4. Make sure employees have access to information about properly controlling bed bugs in their own homes. Avoid sending people home if it is discovered that they are dealing with bed bugs in their place of residence. Using plastic bags (or plastic boxes) for personal belongings will prevent the spread of bed bugs into lockers. It is far more productive to get proper information to an employee that would help with their situation, than to force a person to silently suffer under the threat of lost hours.

5. Managers and supervisors should be prepared to encounter bed bug complaints. When dealing with a complaint they should:
   a. Obtain a sample for identification – bed bugs are insects, but not all insects found in retail are bed bugs! Samples can easily be collected on shipping tape or clear adhesive tape.
   b. Explain to the customer that there is a prevention program in place (as a result of recent news coverage or this factsheet). However, under the current circumstances with resurgence, bed bug issues may still occur and the store is prepared for this unlikely event.
   c. Ascertain where the bed bug was found and how the customer found it.
   d. Have the pest management company dispatch a technician to the site. See control tactics, below.
   e. If there are nearby clothes and other goods that could have been in contact with the infested area, quickly and quietly remove adjacent materials from the sales floor. Move them into the backroom placing them in an area where they can be sealed in bags (or

---

When using any insecticide, read and understand the label, and follow all directions.
plastic boxes) and will not contact other materials. You do not necessarily need to close whole sections or the store itself. For example, if a bed bug was found in a fitting room, isolate the clothes found in the fitting room and have that room closed until inspected/cleared. Have other fitting rooms inspected and cleared of clothing, but it is not necessary to close all rooms unless bugs were found in these other areas.

f. Avoid ignorance, inactivity and indifference; or overreaction and panic!

6. If bed bugs are found, (in addition to tape for identification) a vacuum can be useful for addressing other possible bed bugs in the area. This will not eliminate all bed bugs, but can reduce their numbers especially those that are easily dislodged. Vacuums used to pick up bed bugs must have the bag removed and sealed prior to disposal. Place tape over the bag inlet and request the Pest Management Company handle bag disposal. Bed bugs like to hide, so use a crevice tool and concentrate vacuuming along cracks and crevices, edges and corners.

7. Ahead of time, discuss with a pest management company the methods they will use to respond to a store with bed bugs. In addition to inspections, one or more of the following methods may be used:
   a. Steamers to heat surfaces to 160 – 180°F
   b. Dry heat (>120°F) – either specialty equipment for large areas, or a clothes dryer (med-high heat) for 20 minutes. For returns of smaller durable goods (non-wax), a Pac-tite® heater may be an option. In higher risk situations consider setting up an area that permits containerized heat treatments.
   c. Contact and residual spray insecticides. The use of insecticide foggers has little effect! Make sure the labels are followed with all insecticides
   d. Nuvan® Pro-Pest strips is another option for materials (returns) that can be placed in a closet or large bin. Follow label and exposure-time directions.

Copyright © 2010, Regents of the University of Minnesota. All rights reserved.

The information given in this publication is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the University of Minnesota Extension Service is implied.

In accordance with the Americans with Disabilities Act, this material is available in alternative formats upon request. Please contact the University of Minnesota Extension Service Distribution Center at (800) 876-8636.

The University of Minnesota Extension Service is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.