

Bugs without borders

Earlier this year, the National Pest Management Association (NPMA) in the USA and the University of Kentucky surveyed US and international pest management companies on bedbug resurgence. The abbreviated findings, below, suggest a growing global pandemic that demands urgent action.

Bedbugs are a hot topic these days and whilst most industry observers agree that infestations are increasing, the magnitude of the problem and its global implications lack definition. This survey, conducted between January and April 2010, aimed to throw some light on this international problem. In total nearly 1,000 responses were received – 521 from US companies and 429 completed surveys from international companies, including 113 from Europe.

An overwhelming 95% of US respondents indicated their company or organisation had encountered a bedbug infestation in the past year, with similarly high frequencies reported for Canada (98%), Europe (92%) and Africa/Middle East (90%).

Many respondents had opinions as to why bedbugs are increasing. Most often mentioned were increased travel, more immigration, changing pest control products and methods as well as resistance to available insecticides. Another factor noted by many throughout the world was a lack of societal awareness and precautions (e.g. inspecting one's bed or shunning discarded furniture). As expected, many respondents also blamed the global resurgence of bedbugs on the loss of once-available, more effective insecticides.

Showing up everywhere

Bedbugs are appearing almost everywhere, from homes to hospitals to high-end clothing stores. In the US, the greatest percentage of respondents said they had encountered infestations in apartments and condominiums (mentioned by 89%), single family homes (88%), and hotels/motels (67%). Several also said they found bedbugs in college dormitories (mentioned by 35%), homeless shelters (31%), nursing homes (24%), office buildings (17%), hospitals (12%), and primary/secondary schools (10%).

Other 'atypical' places where US respondents reported bedbugs included public transport (by 9%), laundries (5%) and movie theatres (4%) as well as in churches, libraries, hostels, furniture and retail stores, restaurants, prisons, fire and police stations,

moving vans, ambulances, funeral homes and doctor's offices.

The resurgence of bedbugs in such varied places should not be too surprising. In the 1930s and '40s, infestations were common in hospitals. Entire sections of seating were infested in cinemas. Bedbugs also were common years ago on trains, buses and taxis. In Sweden in the 1930s, almost half of all moving vans inspected had bedbugs, and a survey in Iceland showed that bedbugs were often found inside televisions and radios being serviced by repair shops. The remarkable ability of this pest to 'hitchhike' from one place to another means they can materialise almost anywhere.

When asked if they felt there was a correlation in their country between bedbugs and poverty, respondents were split, with differing opinions by region. In the US, 55% of respondents said that 'problems tend to be worse among the poor' while 45% said 'all citizens are equally affected.' A wider discrepancy occurred amongst respondents from Europe, with 77% insisting that bedbugs affected all citizens equally regardless of socio-economic standing.

Nowadays, even five star hotels and high-end clothing stores are susceptible but historically the poor have suffered the most. This pattern, unfortunately, shows signs of repeating. Individuals from lower socio-economic groups often cannot afford to hire a professional to handle an infestation, nor are they as willing to discard infected items.

Public attitudes

When US firms were asked to describe the feelings of clients who have had bedbugs, 99% of respondents felt their customers were 'upset and concerned', with 77% saying customers were 'very upset and concerned.' Similar distress was echoed around the world.

The emotional strain of living with bedbugs should not be taken lightly, especially by those who have not experienced infestation personally. Some suggest that being bitten is no worse than being bitten by ticks or mosquitoes. This rationale overlooks the fact that in the developed world, ticks and



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mosquitoes bite and breed mostly outdoors. Bedbugs, however, dwell in one of the most intimate spaces of the home; the bed. Dismissing the gravity of bedbug resurgence on the basis that these pests are unproven disease vectors ignores the pain, suffering and emotional toll inflicted on their victims.

Bedbugs are so reviled that people seem willing to do anything necessary to eradicate the pests. More than half (51%) of US respondents estimated that 50% or more of their customers tried to treat the problem themselves before calling a professional. Pest control firms reported seeing many ineffective and potentially dangerous measures used by do-it-yourselfers, including ammonia, bleach, fire, smoke, kerosene, wasp spray, and bug bombs, as well as concentrated pesticides bought on the Internet.

Closing thoughts

As the most detailed portrait of bedbug resurgence to date, this study confirms that infestations are increasing worldwide. Many factors are fuelling the growing global pandemic, but it remains a mystery why there is such an abrupt increase after years of scarce encounters.

Infestations are showing up in all the same places they did years ago. Perhaps most unsettling about 21st century bedbugs from a societal standpoint is that we are in uncharted waters. There will be new challenges this time around, including unprecedented movement of people from across town and around the globe; more clutter and belongings in which bugs can hide; less potent insecticides for both householder and professional use; and a mindset today that when someone is harmed they should sue.

The crux of bedbug management remains hard work, public education and constant vigilance to prevent or detect infestations in the early stages.

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Summarised from a report prepared by Michael F Potter (University of Kentucky), Bob Rosenberg and Missy Henriksen (NPMA). A full copy of the report can be found on the [Pest](http://www.pestmagazine.co.uk) website in the News section.

Knowledge is key to getting to grips with bedbugs, says MITIE's Peter Trotman



The time for industry-led proactive contracts for bedbugs to replace client reactive emergency call-outs may not be far away, says MITIE Pest Control's managing director, Peter Trotman.

"An analysis of the calls we have received about bedbugs has suggested two things. First, and unsurprisingly, there has been an increase in first-time bedbug complaints, but second we have also seen a rise in the number of requests for urgent action following the apparent failure of treatments supplied by previous pest control companies," says Peter.

"These observations prompted a review of the industry-accepted norms we follow in response and treatment for bedbugs and led us to identify several factors in apparent instances of re-infestation, in particular:

- Inadequate detection of the full scope of the original infestation;
- Reliance on a single method of treatment, for every situation and every location, within an infested area;
- Lack of adequate post-treatment monitoring to check for newly-emerging nymphs from eggs surviving the initial treatment.

"In addition, in the hospitality and residential sectors, the risks of an indiscriminate 'transported-in' problem is



Bedbug monitors won't replace the skilled technician but they do provide valuable information about the extent of an infestation

now very real," adds Peter. "In our strategy of identifying the extent of a bedbug problem, we view the development of the bedbug monitor as a key contributor. Monitors are also useful when following up to confirm eradication," he says.

"However they are not the complete answer. They don't replace inspection by trained pest controllers and bedbugs will still be found in places where it is impossible to discreetly place monitors. And, of course, selecting the correct treatment technique is essential. But 'knowledge is key' and the added insight from the use of monitors in every room is paying dividends," he stresses.

For example, following repeated failure to control a long-standing bedbug infestation in a prestigious, 80 bedroom city centre hotel, MITIE was called-in. "We were able to identify the true extent of the problem using a combination of visual inspection and BB Alert bedbug monitors from Midmos Solutions." The monitors were selected for their reliable detection, ease of inspection and cost. The team found that the hotel's estimated 75% infestation was in fact 100% – every room had an active infestation.

The next step is to move to proactive monitoring. This offers a widening of the inspection and monitoring area beyond the 'cube' of adjacent rooms to the whole floor and even the whole property.

It is being driven by the development of low



Positioning a bedbug monitor

cost monitors and recognition of the true costs of an undetected infestation. For the hotel, emergency reactive treatments, often when the infestation is widespread and well established, can be high. But these are dwarfed by the consequential costs of customer compensation, lost room revenues, capital costs in furniture and bedding replacement and the risks to reputation and brand given ever more publicity by national press and dedicated international websites.

"Controlling the costs of this increased surveillance will be critical to obtaining client buy-in," warns Peter.

Changed relationships

For the future, proactive inspection and monitoring contracts will change the relationship between pest controller and client. With all-room monitoring programmes in large hotels, hostels etc., first-line checking of monitors will become the responsibility of on-site cleaning staff. But the training of these staff in identifying potential problems may well fall to the pest control contractor, so further deepening the relationship with the client. At the same time, the response to any suspected infestation most certainly stays with the pest experts who must select the correct treatment."

Currently most treatments rely on conventional chemical insecticides but looking to the future, MITIE is pioneering a combination of steam heat and the use of diatomaceous earth. This provides a totally green solution, releasing the room on the night following treatment. In one recent example, a single targeted treatment with steam heat resolved the problem, as proven by the follow-up monitoring programme.

"Innovation in products and techniques based on improved knowledge of the pest are helping us get to grips with bedbug problems. The pest control industry is listening to client demands for a more dynamic response. The time for industry-led proactive contracts replacing client reactive emergency call-outs may not be far away," concludes Peter.