

# City of Cincinnati

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Bed bug infestation is a very important QUALITY OF LIFE issue. City and County governments are appropriately concerned and interested in pursuing effective ways to improve the quality of life and decrease distress related to this infestation. To date, no instances of transmission of infectious diseases have been documented through bed bug bites in either public experience or in research studies. However, selected individuals may have very vigorous allergic reactions to bites.

To discuss what is currently being done, and to develop coordinated approaches to addressing the bed bug problem, representatives from Cincinnati Health Department, the Hamilton County General Health District, and Dr. Susan Jones, an expert entomologist with the Ohio State University County Extension office, have met twice in joint meetings, on January 28, and on February 4,. We have had very productive meetings.

Some of the factual issues that have been discussed include:

- Need for simultaneous inspection and treatment, since if you disturb bedbugs they may scatter and disperse to other areas, spreading the infestation
- Need for repeated applications of chemicals and dusts by knowledgeable pest control operators with rotation of type of chemicals
- High mobility of bed bugs such that an infestation in one room or unit can rapidly spread through cracks in walls and baseboards, through water lines and pipes, etc. Need for structural modifications as well as pesticide applications
- Bed bugs and eggs are easily hidden in cracks and fabrics
- Eggs are extremely durable, and aren't killed by pesticides. Need to have repeated treatments over 2-3 week period to kill insects that are newly hatched from eggs.
- Extensive knowledge about effective treatment for bed bug infestation may not be wide spread, even among pest control operators
- Prevention of infestation is an important focus
- Early intervention when the first bed bug or fecal sign is seen gives the greatest chance for eradication from a building
- If more than 1 unit in an apartment complex is infested, all units should be checked for infestation. At minimum, need to check all units on the same floor as the one known to be

- infested, as well as all units one floor above, and one floor below infested unit must be checked and treated.
- Need to increase public's understanding of ways to maximize treatment effectiveness, ie rigorously reduce debris and clutter, obsessively vacuum, etc
- Routine discarding of furniture is not recommended
- Legal enforcement actions are a last resort rather than a primary eradication tool

An issue of particular importance to both the City of Cincinnati and Hamilton County is the highly resistant species of bed bugs that are found in our area, which means that there are fewer effective pesticides and the type of pesticide used must be changed for successive treatments. Targeted application to all harborage sites is critical, which necessitates in depth inspections and highly trained personnel. Another issue is the desperation of homeowners and tenants, who may use toxic and ineffective methods in an attempt to eradicate the infestation.

Chemical treatment alone cannot resolve a bed bug infestation. There must be an integrated Pest Management plan including multiple actions on the part of the occupant as well as the owner/management of the affected building. Failure on the part of either party can result in treatment failure for the building. These actions can include removing all clutter, vacuuming all surfaces, caulking cracks, treating clothes and fabric upholstered furniture, turning furniture over to clean it, removing pictures from walls, light plates, taking out baseboards, raising carpeting, etc.

Within the context of this introduction, I would like to present some thoughts about what we are doing about enforcement.

#### City and County Similarities

- Need for effective **educational outreach** to citizens at all levels of education and financial resources on ways to
  - Prevent infestation
  - Treat infestation with goal of eradication and prevention of spread
- Need for **ongoing coordinated surveillance**, tracking, and reporting of trends in complaints and other indicators of the extent of infestation
- Need for effective **treatments** that kill both adult insects and eggs
- Need to increase the availability and encourage the use of known effective treatment methods (intensive steam) for companies and individuals
- Need for effective **oversight** of companies and individuals offering bedbug control services to ensure safe application of chemicals, and appropriate use of chemicals according to gold standard protocols for pest control
- Need to **limit toxic and hazardous exposures** to chemicals, dusts, and flammable alcohol fumes due to incorrect use of these substances on mattresses and other surfaces by concerned citizens
- Need for expanded **services** to be made available for citizens
  - Mattress encasement covers and instructions (at cost or subsidized for indigent citizens)
  - Wrapping and labeling materials for infested furniture that is being discarded
  - Educational resources for individuals and groups
- Need for effective ways to **prevent infestations** among city and county workers who are exposed to infestations during their normal job duties

City/County Differences also exist that may affect the strategies that will be effective, the risk of spread of infestation, the ability of affected citizens to effectively respond to infestations with the recommended protocol of action, the willingness of owners and residents to extensively treat affected structures rather than moving to a different structure, and the ability of residents to dispose of heavily infested and unsalvageable furniture in the face of continuing infestation after appropriate treatment

- Percent of residential units that are rental units vs. owner occupied
  - In Cincinnati 58% are rental units vs. 37% in Hamilton County
- Different types of housing stock in city vs. county
  - Higher proportion of old buildings which may have numerous cracks and crevices for harborage of bed bugs
- Percent of population living below the poverty line
  - In Cincinnati 28% live below the poverty line vs. 15% in Hamilton County
- Number of transient residential structures (Shelters, hotels, motels, ....)
- Mobility of population
- Laws and regulations that govern quality of life issues, treatment of nuisances, and maintenance of buildings and structures
  - City and county nuisance codes vary in where the financial onus of responsibility for abatement lies, as well as procedures that can be done to enhance inspections (ex: ability of health department to enter an apartment with a management representative without a warrant for inspections, when tenant is not present, assuming that tenant has received notification)

The Cincinnati Health Departments current and ongoing efforts with respect to education include:

- Bed Bug Brochure
- Bed Bug DVD with extensive information about bedbugs
- Presentations to community groups
- Presentations to landlords
- Information on the CHD Website
- Development of a procedure for how public employees going into infested buildings can protect themselves from spreading the infestation
- Continuing and expanding vigorous educational outreach to affected citizens, through the following mechanisms.

We are also working collaboratively with the Hamilton County General Health District and the Ohio State University Extension to develop a regional approach to the bed bug problem. Two working meetings held to date, on Jan 28 and Feb 4, and continued meetings are planned. There is agreement between the Cincinnati Health Department, the Hamilton County General Health District, and Dr. S. Jones (Ohio State University entomologist) that **education** of occupants, owners, pest control operators, and businesses is the most effective procedure for fighting the bed bug infestation

The Coordinated Health Department Working group will work together to:

- Develop inspection protocols and procedures and forms
- Develop similar resources to be offered to citizens to respond to bedbug infestations:
  - Complaint lines and surveillance system
  - Standardized educational materials,
  - Infested material disposal policies
  - Information on how to assess and choose between prospective PCOs in terms of licensure, complaints history

- Brainstorm creative strategies to encourage responsiveness on the part of owners (and occupants) of multi-unit buildings that are infested
- Develop municipal and county codes, and best practices protocols to regulate businesses and practices that may contribute to spreading infestations:
  - Protocols for businesses that sell used furniture, especially mattresses and upholstered furniture which can easily harbor hidden infestations
  - Protocols for removal of infested furniture
  - Protocols for moving companies to prevent infestation during transport of household goods
- In the rare case that owners and occupants appear recalcitrant in doing what is needed to optimize bed bug treatment efficacy, our working group is developing a flow sheet describing how we would pursue citation and enforcement.

Future plans:

- Hotline /Database:
  - Hotline and complaints database already exist for the city through CSR system, because complaints are logged in CSR and can be mapped by CAGIS. (provide maps of city complaints)
  - Development of scripts relevant to specific questions about bed bugs, including scripts specific for Tenants, Landlords/Management, etc will be provided to CSR call takers. Referral of clients who are calling to make a complaint rather than ask for information will be to the relevant General Environmental Health Department (city or county) based on address of caller. Both health departments will continue to respond to direct calls, and will input those calls into the CSR system.
  - Potential 'How To' scripts that may be provided:
    - What is an Integrated Pest Management System?
    - What to expect if your home is being treated for bedbugs
    - How to adequately clear your apartment or home prior to pesticide treatment for bedbugs
    - How to evaluate a pest control operator
    - How to find out the complaint history of a pest control operator
    - How to choose a mattress and bed spring encapsulating cover
- Tracking and reporting
  - Because of the high volume of calls to date in the city compared to the county, would still need to present both a city map (for detail) and a county map (where the city portion would just be black because of the number of complaints)
    - We are working with CSR and CAGIS to add capability for county health department to participate in CSR.
- Collaboration with Ohio State University Extension Service. Dr. Jones has agreed to review educational materials produced by both health departments involved in our collaborative working group, so that we have a standardized and current state of the art educational content that is provided to our citizens. Dr. Jones will also help the city/county collaborative by developing and providing training opportunities for pest control operators

