

INTEGRATED PEST MANAGEMENT PROGRAM

1. **PURPOSE:** To establish policy, responsibilities and procedures to assure that the principles of an Integrated Pest Management Program are carried out at VA Central Iowa Health Care System (VACIHCS).

2. **POLICY:** To provide a safe, healthy environment for Veterans, staff, and visitors through full implementation of an Integrated Pest Management Program which promotes safe, efficient and environmentally-preferred strategies, preventing or controlling disease vectors and other pests that may adversely affect health, impedes operations or damage property.

3. RESPONSIBILITIES:

- a. VACIHCS Director is responsible for ensuring adequate resources are available for the effective implementation of this policy.
- b. Service line directors, service chiefs and supervisors are responsible for ensuring that staff are familiar with the contents of this policy and are aware of the procedures outlined herein. They are also responsible for ensuring that appropriate environmental sanitation habits are practiced within their areas of authority to aid in the prevention of pest infestations.
- c. Environmental Management Service (EMS) Chief is responsible for preparing, documenting and providing oversight of an Integrated Pest Management Plan, supervision of EMS employees who support a practicing pest management program at the facility as well as ensuring technical compliance with the contract for pest management contractual services utilized at VACIHCS. The EMS Chief will ensure the management of pesticide program is fully integrated into the facility's Green Environmental Management System (GEMS) through collaboration with the GEMS Coordinator.
- d. The Chief of Engineering is responsible for implementing procedures intended to enhance and/or repair building structure.
- e. Learning Service will assist and support the EMS Chief in efforts to provide meaningful education to employees regarding components of the integrated pest management policy.
- f. All VACIHCS employees are responsible for practicing proper sanitation habits in all areas where they function to ensure an environment that maximizes effective pest control measures on a consistent basis.
- g. Participants in Environment of Care (EOC) rounds are responsible for considering the risk of insect infestations during site evaluations.

4. PROCEDURES:

- a. Veterans, visitors and employees are to be discouraged from eating or storing food in unauthorized areas (i.e., personal lockers, bedside stand and areas other than kitchens and food storage areas).
- b. Veterans, visitors and employees should refrain from throwing food on the Health Care System grounds or feeding animals (i.e., pigeons) since the presence of food encourages the appearance and breeding of pests and animals that may carry disease bearing organisms.
- c. Employees working in ward areas, kitchens, garbage rooms, dirty utility rooms, and warehouse or supply rooms should exercise good sanitary practices regarding spillage, storing and covering of food and garbage containers and proper disposal of contaminated articles and linens.
- d. All items requiring storage which might attract vermin should be stacked or arranged on platforms or trucks at least six inches off the floor and six inches from the wall, wherever possible. The purpose of this is twofold: to prevent or deter pests and to facilitate monitoring and the application of control measures against these pests.
- e. When there is noted damage to the hospital structure such as holes, loose rails, loose base board, etc., employees should enter work orders for needed repairs to decrease harborage for pests.
- f. EMS will be represented during routine scheduled environmental rounds and will monitor areas for cleanliness and pest management.
- g. Appropriate pest treatments will be provided on a regular, reoccurring schedule and on an emergency basis as needed.
- h. A Pest Management Plan will be utilized to ensure the best technical approach to an integrated, economical, effective, and safe pest management program. The plan will include a description of problems, risks, costs, resources, materials, equipment, related topics, with attachments with detailed information on pest management operations. The plan will be reviewed at two-year intervals, when there is a significant change to the plan or a change in the contractual services.
- i. Essential to an Integrated Pest Management Program is the use of chemical controls only as a last resort. Maintenance of proper sanitation, physical barriers, and biological controls will be exhausted before chemical controls are utilized.
- j. Pest sightings/problems are to be reported through use of the engineering work order system.

5. REFERENCES:

- a. VHA Handbook 1850.02 Pest Management Operations, December 7, 2011
- b. VHA Program Guide 1850.2 Integrated Pest Management, October 5, 1998
- c. Springer Professional Home Services; www.trustspringer.com
- d. Joint Commission, current manual
- e. EPA Federal Insecticide, Fungicide and Rodenticide Act, 1996
- f. VHA Environmental Programs Service Bed Bug Management Guide
- g. Polk County Manual for the prevention and Control of Bed Bugs.
- h. Iowa Department of Public Health, Division of Environmental Health, www.idph.state.ia
- i. University of California Statewide Integrated Pest Management Program Agriculture and Natural Resources; Pest Notes; Publication 7454, May 2009.
- j. New York State Integrated Pest Management Program; Cornell Cooperative Extension; www.nysipm.cornell.edu
- k. MHR RTP SOP No. 2; Standard Operating Procedures Bed Bug Prevention, Treatment, and Use of Heat Treatment Cabinet; Dated August 2012.

6. RESCISSION: None

7. REVIEW AND RESPONSIBILITY: Chief of EMS is responsible for the contents of this policy, and it will be reviewed annually and reissued on or before May 2016.

DONALD C. COOPER
Director

Attachments:

- A – Bed Bug Prevention & Infestation Control
- B – Life Cycle of the Bed Bug
- C – Iowa Department of Public Health, Bed Bug Fact Sheet

Distribution: VACIHCS Policy SharePoint Site

Attachment A

BED BUG PREVENTION & INFESTATION CONTROL

The following process will be followed when bed bugs are suspected and/or identified to ensure a safe, healthy environment for Veterans, employees, and visitors. Employees will follow this process when bedbugs are identified or suspected. Following this guidance, Veterans exposed to bed bugs will always receive treatment.

1. BACKGROUND:

- a. The United States (U.S.) essentially eradicated bed bugs in the 1940's after the widespread use of broad-spectrum synthetic insecticides. However, during the past 10 years, bed bug infestations have increased in a number of countries, including the United States.
- b. The common bed bug, *Cimex lectularius* Linnaeus (L.) primarily causes the bed bug infestations in the U.S.
- c. Adult bed bugs are about ¼ inch long, wingless, flat, oval, segmented with brown or reddish-brown bodies. Bed bugs appear larger and “plumper” after feeding. Young bed bugs (nymphs) are nearly colorless and very small. Nymphs require a blood meal before they can advance to the next of the five life stages (See Attachment B).
- d. The bed bug only feeds on blood. The main source for blood meals is humans. Bed bugs use their elongated mouthpart to feed, which takes about ten minutes. A single bed bug may take multiple blood meals from separate bites during a single feeding session. Bed bug bites often occur on the arms, shoulders, neck and legs because these are areas exposed while people sleep. Body heat and carbon dioxide attract the bed bug to the host. The female requires a blood meal to produce eggs. Nymphs require blood meals weekly. The adult female can survive for 12 to 18 months and can lay hundreds of eggs during her lifetime.
- e. Bed bugs are nocturnal and hide during the day unless extremely hungry. Preferred harborages are relatively close to the host, such as mattress seams and folds. However, bed bugs can travel several feet from a host and may conceal themselves in window and door frames, bed frames, drapery, baseboards, floor and wall cracks, drawers, electrical receptacles and boxes, telephones, furniture, wall-to-wall carpeting, loose wallpaper and behind wall hangings and headboards. Bed bugs don't fly or jump, but move by crawling. Bed bugs prefer to cluster together in clumps.

- f. The typical life span of a bed bug is between 10 months and a year, although they can live considerably longer. While bed bugs generally take a blood meal once a week, adult bed bugs can survive for a year between feedings.
- g. Bed bugs do not transmit disease. However, they are a clear nuisance. Bed bug bites usually will cause large itchy welts on the skin. These welts may not appear for 24 to 48 hours after the bite.
- h. In general, the sanitary condition of an area is not an indication of whether or not bed bugs are present. Bed bugs are not limited to any social or economic group of people. Bed bug infestations may occur in very clean rooms. Once bed bugs are in an area, they only require blood meal to survive.

2. PREVENTION:

- a. To prevent bed bug infestations, VACIHCS facilities do the following:
 - (1) Areas where Veterans, visitors or staff enters the facility with their own luggage or belongings are more susceptible to bed bugs.
 - (2) Remove clutter from work areas to provide an unobstructed view and elimination of bed bug harborages.
 - (3) Employees will submit repair work orders or contact the Community Based Outpatient Clinic (CBOC) coordinator for repair of environmental deficiencies such as cracks in walls so repairs will prevent harborages.
 - (4) Immediately remove torn furniture from use. Contact EMS for replacement furniture.
 - (5) Immediately remove a torn mattress from service and contact Bio-Med for a replacement.
 - (6) Move beds away from direct contact with the wall. Keep linens off the floor.
 - (7) When nursing removes linens from beds or carts, they will check the bedding then for dark spots, bugs or other bed bug signs such as bloodstains from crushed bed bugs or “empty shells”.
 - (8) EMS will check the mattress, bed frame and attachments to the bed/cart after the linens have been removed. Use of a flashlight will aid in the inspection process.
 - (9) Clinical staff will educate Veterans, families and visitors on bed bug prevention.

b. Employees that provide care in the Veteran's home or a community setting must prevent the transfer of bed bugs to the health care facility or employee residences.

- (1) Bring only necessary bags or equipment into the Veteran's home or a community setting. Use carrying cases that are non-fabric (e.g., plastic storage containers or bags), or those with minimal seams and folds.
- (2) Avoid placing bags, equipment and coats on or next to beds, upholstered furniture or walls. If possible, avoid sitting on upholstered furniture.
- (3) Provide information on bed bug prevention and interventions if there is evidence of an infestation in the Veteran's home or at the community setting (See Attachments B & C).

c. Visitors and Volunteers

- (1) Always respect the visitors/volunteers dignity and privacy.
- (2) Clinical staff will provide visitors/volunteer education on bed bug prevention, detection and control issues when appropriate (see Attachments B & C).

3. PROCESS: If bed bugs are suspected, do the following:

a. Inpatient Procedure – Always respect the Veteran's dignity and privacy.

- (1) During admission or subsequent inspections if bed bugs are found on a Veteran, in the room or in the Veteran's belongings, make the Veteran aware of the presence of bed bugs or other insects. Have the Veteran undress, take a shower and redress in hospital pajamas. Employees will carefully inventory and double bag the Veteran's clothing items. Label the bag(s) with the Veteran's full name, date of birth and unit location.
- (2) Notify EMS through the electronic work order package of the potentially infested room and clothing. Notify the appropriate supervisor of the situation.
- (3) If the Veteran agrees, make arrangements for the appropriate provider to examine the Veteran to determine if there are bed bug bites.
- (4) Take the labeled bag(s) containing ONLY washable clothing to the laundry washroom Bldg 1W Room B210. Domiciliary Veterans will launder their own clothing using the domiciliary facilities or employees will place the domiciliary Veteran's clothing in the bed bug oven for eradication.

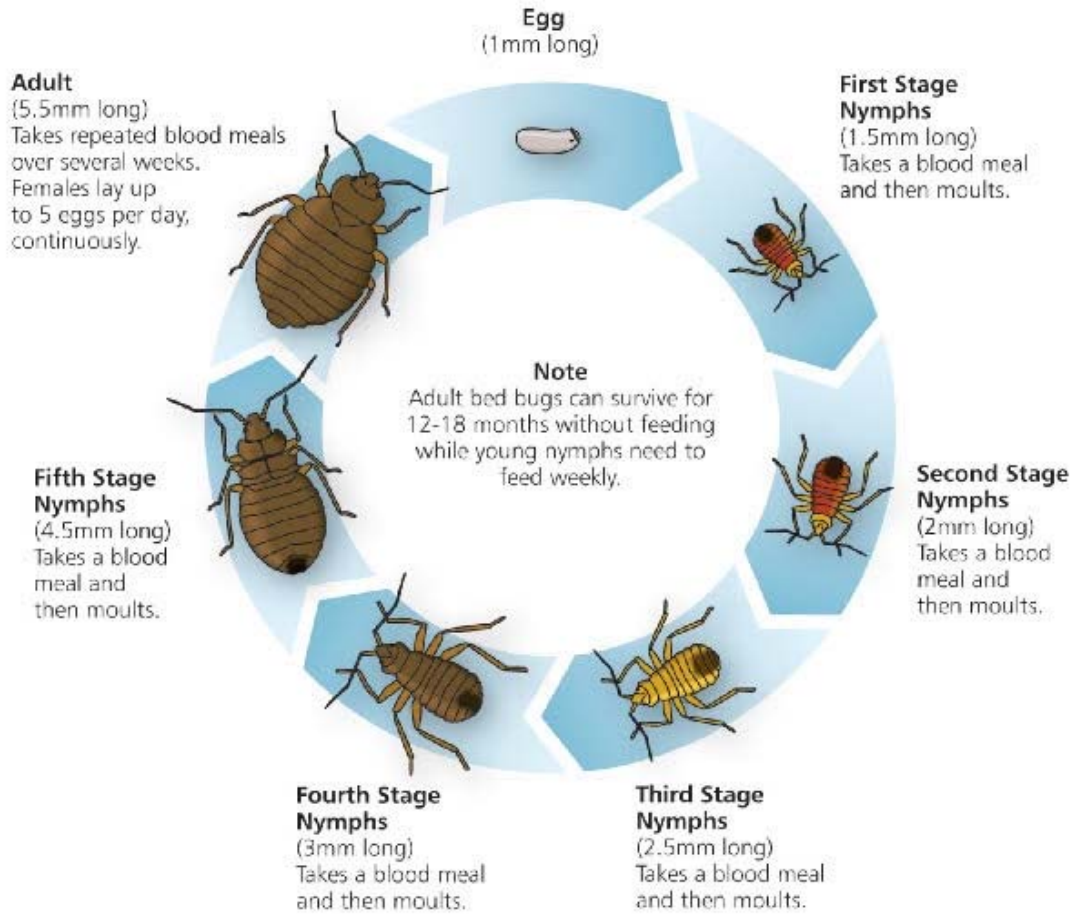
- (5) Inventory and double bag in clear plastic bags non-washable items including wallet, purse, etc. and heat treat them in the bed bug oven if at all possible. Items heat treated may be returned to the Veteran afterward.
- (6) Clearly label sealed bag(s) of belongings that may contain bed bugs with an additional label that clearly reads – Do Not Open Live Bed Bugs. Do not allow Veterans access to the bagged contents during their VA stay. Encourage the Veteran to identify friends/family who can pick up the bag(s) to take to the Veteran's home. Return untreated bag(s) that remain at VACIHCS to the Veteran at discharge. Do not destroy or discard items without the knowledge of the Veteran or surrogate.
- (7) Perform hand hygiene before and after contact with the Veteran and their belongings. Use appropriate Personal Protective Equipment at staff discretion.
- (8) Close off the room and/or immediate area used by the Veteran and place appropriate signage indicating the room is out of use. Leave the room intact without cleaning or removal of furniture to facilitate determination of the extent of the infestation and to help prevent the spread of bugs to other areas. This room is to remain out of use until released by EMS or Pest Control.
- (9) If possible, capture a bed bug (alive or dead) to assist pest management in their assessment and identification. Place the bug in a sealable container (specimen cup) containing an alcohol wipe. Label the container with the Veteran's full name, full Social Security Number (SSN) and the date. A provider must order the "anthropoid identification" test in CPRS in the Veteran's record. If capture of a bed bug is not associated with a Veteran, then label the specimen with room area of collection and date. Laboratory service will order the test under the environment manual orders once the specimen is received. Have all specimens delivered to the lab as soon as possible for positive identification. Microbiology will identify the pest during administrative hours. If a pest is identified as a bed bug, microbiology staff will notify EMS (ext. 3036) of positive results. No calls will be placed for negative test results. All test results will be entered in CPRS.
- (10) EMS will determine further actions based upon the results of the laboratory information. Further actions may include contacting the contract exterminator to come and assess the area for infestation.
- (11) Clinical staff will provide Veteran/family/surrogate education on bed bug prevention; detection and control issues when appropriate (see Attachments B & C).

- b. Outpatient Procedure on site - Always respect the Veteran's dignity and privacy.
- (1) If bed bugs are suspected (e.g., bite marks are noted) or bugs are identified visually, briefly inform the Veteran and ask if he/she is aware of the presence of bed bugs or other insects. Offer the Veteran the option to change into hospital pajama's and robe. Carefully double bag and seal all clothing and personal items. Give the sealed bag(s) to the Veteran.
 - (2) Limit the Veteran's movements within the facility as much as possible without interfering with treatment needs.
 - (3) Notify the appropriate provider to determine if there are bed bug bites. Care providers will come to the Veteran in the contaminated room when possible unless the services required are not able to be safely completed in that room (e.g. dental, x-ray, surgery, etc.). During the continuum of care, all areas the Veteran came in contact with will be notified by the staff that initially identified the bug problem.
 - (4) Close off the room(s) and/or immediate area used by the Veteran and place appropriate signage indicating the room is out of use. Leave the room intact without cleaning or removal of furniture to facilitate determination of the extent of the infestation and to help prevent the spread of bugs to other areas. This room is to remain out of use until released by EMS or Pest Control.
 - (5) Notify EMS through the electronic work order package of the potentially infested room. Notify the appropriate supervisor/CBOC coordinator of the situation.
 - (6) If possible, capture a bed bug (alive or dead) to assist pest management in their assessment and identification. Place the bug in a sealable container (specimen cup) containing an alcohol wipe. Label the container with the Veteran's full name, full SSN and the date. A provider must order the "anthropoid identification" test in CPRS in the Veteran's record. If capture of a bed bug is not associated with a Veteran, then label the specimen with room area of collection and date. Laboratory service with order the test under the environment manual orders once the specimen is received. Have all specimens delivered to the lab as soon as possible for positive identification. Microbiology will identify the pest during administrative hours. If a pest is identified as a bed bug, microbiology staff will notify EMS (ext. 3036) of positive results. No calls will be placed for negative test results. All test results will be entered in CPRS.

- (7) EMS will determine further actions based upon the results of the laboratory information. Further actions may include contacting the contract exterminator to come and assess the area for infestation.
 - (8) Clinical staff will provide Veteran/family/surrogate education on bed bug prevention; detection and control issues when appropriate (see Attachment B & C).
 - (9) The Veteran will change back into their own clothing prior to leaving the facility.
- c. Open areas and/or general areas on site where people congregate such as waiting rooms, dayrooms, entrances etc.
- (1) If bed bugs are suspected and/or found, close off the room(s) and/or immediate area from use and place appropriate signage indicating the room/area is out of use. Notify EMS through the electronic work order system. Employees will leave the room intact without cleaning or removal of furniture to facilitate determination of the extent of the infestation and to help prevent the spread of bugs to other areas.
 - (2) If possible, capture a bed bug (alive or dead) to assist pest management in their assessment and identification. Place the bug in a sealable container (specimen cup) containing an alcohol wipe. Label the container with the Veteran's full name, full SSN and the date. A provider must order the "anthropoid identification" test in CPRS in the Veteran's record. If capture of a bed bug is not associated with a Veteran, then label the specimen with room area of collection and date. Laboratory service will order the test under the environment manual orders once the specimen is received. Have all specimens delivered to the lab as soon as possible for positive identification. Microbiology will identify the pest during administrative hours. If a pest is identified as a bed bug, microbiology staff will notify EMS (ext 3036) of positive results. No calls will be placed for negative test results. All test results will be entered in CPRS.
 - (3) EMS will determine further actions based upon the results of the laboratory information. Further actions may include contacting the contract exterminator to come and assess the area for infestation.

Life Cycle of the Bed Bug

Cimex lectularius



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Iowa Department of Public Health

Division of Environmental Health

Bed Bugs

Overview: Bed bugs are small insects without wings. At one time they were almost eliminated from the United States. However, currently are found in all 50 states including Iowa. Bed bugs are not known to spread disease. Bed bug bites usually will cause large itchy welts on the skin. These welts may not appear for 24 to 48 hours after the bite.

What are bed bugs?

A bed bug is a small insect without wings. Adult bed bugs look similar to a tick and have flat copper colored bodies that are about ¼ inch in length. Young bed bugs (nymphs) are nearly colorless and very small. Bed bugs mostly feed on the blood of humans.

Where are bed bugs found?

Bed bugs are found most often around areas where people sleep or rest. Adult bed bugs or evidence of their presence can be found with the aid of a flashlight and careful inspection. Small bloodstains from crushed bed bugs or dark brown spots from bed bug droppings may be evident on mattresses. Because bed bug nymphs shed their skin several times, the “empty shells” may also be evident.

Why don't people see bed bugs?

Bed bugs are most active between midnight and 3 am. They are rarely active during daylight hours, and only come out when they sense the warmth and odors of a body at rest.

Because of their small flat bodies, they can hide in the cracks and crevices of mattresses, bedding, furniture, and draperies, and are difficult to spot without careful inspection.

Are bed bugs dangerous?

Bed bugs do not transmit disease. However, bed bug bites can cause large itchy welts on the skin. A person's reaction to insect bites is an immune response and can vary widely from person to person. The bites themselves are usually painless and rarely awaken a sleeping person.

How long do bed bugs live?

The typical life span of a bed bug is between 10 months and a year. In general, bed bugs seek a meal of blood every 4 or 5 days. However, they can survive for weeks to several months without eating.

What should I do if I find bed bugs?

Integrated pest management, which uses multiple ways to get rid of pests, is one of the best ways to rid your home of bed bugs. Prevention, sanitation, and pesticide/insecticide use are several tactics that can be applied.

Prevention

Items infested with bed bugs should not be brought into your home.

Check luggage and clothing carefully after travel looking for bed bugs and bug droppings.

Launder clothing immediately and scrub luggage with a stiff brush after return to remove any eggs.

Carefully examine any secondhand furniture, bedding, or beds before bringing home.

Sanitation

Although infestation with bed bugs does not necessarily indicate a sanitation problem, it is important to thoroughly clean rooms infested with bed bugs, as well as other rooms as bed bugs can travel throughout the home.

Launder bedding in hot water.

Scrub infested surfaces (mattress, box spring, bed frame, couch, etc.) with a stiff brush to remove eggs.

Remove drawers from furniture and clean, and turn furniture over to inspect and clean.

Vacuum the affected item and area (paying special attention to cracks and crevices), then place the vacuum bag in a plastic bag, seal tightly, and dispose of it in a container outdoors.

The affected item(s) may be discarded, although new ones may become infested if bed bugs are still present.

When disposing of an infested item, destroy the item and mark as infested with bed bugs so it will not be acquired by someone else, infecting their residence.

Seal cracks in plaster, holes in walls, and loose wallpaper to eliminate hiding places for bed bugs.

Remove clutter as it can also hide bed bugs.

Mattresses and box springs can be enclosed in a zippered mattress cover that has no tears or holes. Trapped bugs will eventually die. This should be left in place for a year or more as bed bugs can live for long periods without feeding.

Pesticide/Insecticide

A licensed pest control operator with experience in controlling bed bug populations may be able to work with you on a plan to manage the infestation in a residence you own. Tenants should contact their property manager to work on a plan to manage the infestation.

Take care to **read all labels** before applying any pesticides. Do not apply the product unless you understand all directions. Do not apply the product unless you have proper training or certification.

Never apply pesticide or insecticide to a mattress or a surface that would come in direct contact with a person unless the label instructions state that the product should be used in this manner. Make sure you read and understand the label.

If live bed bugs are still present after two weeks it may be necessary to treat again.

If you seek professional help, request a written plan from the pest control operator that explains what they will do in your home and what products they will use.

For More information contact: Iowa Department of Public Health at **(515) 281-7726**