Hazard 15: Domestic Hygiene, Pests & Refuse

Housing Health and Safety Rating System
Description of the Hazard

• Domestic hygiene, pests and refuse refer to hazards which can result from:
  – Poor design, layout and construction such that the dwelling cannot be readily kept clean and hygienic;
  – Access into, and harborage within, the dwelling for pests; and
  – Inadequate and unhygienic provision for storing and disposal of household waste.
Potential for Harm

• All age groups may be vulnerable to infections associated with dirt, dust and those passed on by pests.

• Young children may be the most vulnerable to infection and cuts associated with poorly stored refuse, through lack of awareness of dangers.

• Asthmatics and those with pest allergies are most vulnerable to allergic reactions to pests.
# Potential for Harm

## Domestic hygiene, pests and refuse
Average likelihood and health outcomes by persons of all ages^1

<table>
<thead>
<tr>
<th>Dwelling type and age</th>
<th>Average likelihood (1 in...)</th>
<th>Spread of health outcomes</th>
<th>Average HHSRS scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Class I</td>
<td>Class II</td>
</tr>
<tr>
<td>All Dwellings</td>
<td>5,585</td>
<td>0</td>
<td>0.1</td>
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^1Table from HUD Guidance Manual on HHSRS, p. 106:
“There is a weak quantitative evidence base. The average given use a base of all dwellings. They have been calculated from those used in Version 1 of the HHSRS which used a base population of people living in dwellings with defective cleanability in the kitchen or bathroom, or where pests are present.”
Health Effects and Causes

• Structural defects, such as broken vents or suspended timber floors, can enable entry of pests or rodents into dwelling. Drains, as well as damaged or ill-fitting doors, can also provide means of access for rats and mice.

• Poorly stored food will attract pests including flies, cockroaches, ants, wasps, mice, rats, birds and others. Pathogenic organisms carried by these pests may breed in food-associated waste.

• Service ducts and holes around pipes can provide harborage for insects such as cockroaches and ants.
Relevant Matters Affecting Likelihood and Harm Outcome

1. **Internal walls and ceilings** – uneven and/or cracked walls and/or ceilings
2. **External walls & roof** – missing or damaged brickwork to external walls and other disrepair to external walls and roof
3. **Ventilators** – other unprotected ventilators to walls and/or roofs
4. **Solid floors** – uneven and/or cracked solid floors
5. **Suspended floors** – uneven and/or open-jointed boarding to suspended timber floors
6. **Under floor space** – ill fitting covers or lack of means of access to under floor spaces to facilitate treatment
7. **Roof space** – ill fitting covers or lack of means of access to roof spaces to facilitate treatment
8. **Skirting and architraves** – loose and/or ill-fitting skirting boarding or architraving
9. **Windows and doors** – ill fitting doors and/or windows
10. **Windows and door frames** – open joints between window and/or door frames and adjacent walls
11. **Ducts and pipework** – open joints to service ducting and/or pipework
12. **Access to ducts** – lack of means of access into service ducting to facilitate treatment
13. **Service entry points** – open joints to service entry points
14. **Water seals** – defective water seals to wc basins and/or drainage inlets
15. **Disrepair to drains** – including sewers and/or inspection chambers
16. **Open vent pipes** – missing guards to drainage vent pipes
17. **Design deficiencies** – harborage points created through poor design and/or construction
18. **Internal refuse areas** – the lack of, or defects to, any internal refuse storage space
19. **External refuse areas** – the lack of, or defects to, any clearly defined area for refuse containers
20. **Refuse chutes etc.** – the lack of or defects to means of disposal of refuse to each floor of multi-occupied buildings
Hazard Prevalence: National

• Of a national sample of 111,806 units:
  – 613 (0.5%) reported signs of rats in the last 3 months
  – 6,122 (5.5%) reported signs of mice in the last 3 months
  – 353 (0.3%) reported signs of unidentified rodents in the last 3 months
  – 1,141 (1.0%) reported having holes in their floor
  – 5,517 (4.9%) reported having open cracks or holes in their interior
  – 74 (0.0006%) had severe problems with upkeep
  – 1,177 (1.1%) had moderate problems with upkeep
Hazard Prevalence: Metro Detroit (MI)

• In metro Detroit (1,731,500 units located in Lapeer, Livingston, Macomb, Monroe, Oakland, St. Clair, & Wayne counties):
  – 4,400 (0.2%) reported signs of rats in the last 3 months
  – 76,700 (4.4%) reported signs of mice in the last 3 months
  – 5,100 (0.3%) reported signs of unidentified rodents in the last 3 months
  – 12,900 (0.7%) reported having holes in their floor
  – 82,100 (4.7%) reported having open cracks or holes in their interior
  – 2,000 (0.1%) had severe problems with upkeep
  – 22,100 (1.3%) had moderate problems with upkeep

Source: 2003 American Housing Survey, Detroit Metropolitan Area
http://www.census.gov/housing/ahs/files/detroit03.pdf
Hazard Prevalence: Oakland (CA)

• In the Oakland region (855,700 units located in Alameda & Contra Costa counties):
  – 16,200 (1.9%) reported signs of rats in the last 3 months
  – 62,300 (7.3%) reported signs of mice in the last 3 months
  – 5,400 (0.6%) reported signs of unidentified rodents in the last 3 months
  – 9,100 (1.1%) reported holes in floors
  – 78,800 (9.2%) reported open holes or cracks in the interior
  – 600 (0.0007%) reported severe problems with upkeep
  – 18,400 (2.2%) reported moderate problems with upkeep

Source: 1998 American Housing Survey, Oakland Metropolitan Area
Hazard Prevalence: Hartford (CT)

• In the Hartford region (463,000 occupied units, located in parts of Hartford, Litchfield, Middlesex, New London, Tolland, and Windham counties):
  – 1,300 (0.3%) reported signs of rats in the last 3 months
  – 42,700 (9.2%) reported signs of mice in the last 3 months
  – 500 (0.1%) reported signs of unidentified rodents in the last 3 months
  – 3,000 (0.6%) reported having holes in their floor
  – 21,400 (4.6%) reported having open cracks or holes in their interior
  – 100 (0.0002%) had severe problems with upkeep
  – 5,000 (1.1%) had moderate problems with upkeep

Source: 2004 American Housing Survey, Hartford Metropolitan Area
Hazard Prevalence: Los Angeles (CA)

• In the Los Angeles-Long Beach area (3,227,000 occupied units located in Los Angeles County):
  – 76,300 (2.3%) reported signs of rats in the last 12 months
  – 125,700 (3.9%) reported signs of mice in the last 12 months
  – 31,900 (0.9%) reported signs of unidentified rodents in the last 12 months
  – 575,400 (17.8%) reported signs of cockroaches in the last 12 months
  – 23,500 (0.7%) reported holes in floors
  – 129,800 (4.0%) reported open holes or cracks in the interior
  – 1,000 (0.0003%) reported severe problems with upkeep
  – 30,600 (0.009%) reported moderate problems with upkeep

Source: 2011 American Housing Survey, Los Angeles-Long Beach
http://www.census.gov/housing/ahs/files/2011/Los%20Angeles.xls
Associated outcomes

• Potential health outcomes include:
  – Gastro-intestinal disease (from the spread of infection);
  – Asthma and allergic rhinitis from allergens;
  – Physical hazard of cuts from household waste, which is mostly associated with young children; and
  – Emotional distress.
**Healthy Home Rating System Project Leadership**

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<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyke Thompson</td>
<td>Director</td>
<td>CUS/WSU</td>
<td>(313) 577-5209 <a href="mailto:ad5122@wayne.edu">ad5122@wayne.edu</a></td>
</tr>
<tr>
<td>Allyson Lindsey</td>
<td>Research Assistant</td>
<td>CUS/WSU</td>
<td>(313) 577-9382 <a href="mailto:ap2854@wayne.edu">ap2854@wayne.edu</a></td>
</tr>
<tr>
<td>Angie Sarb</td>
<td>Research Assistant</td>
<td>CUS/WSU</td>
<td>(313) 577-8911 <a href="mailto:angie.sarb@wayne.edu">angie.sarb@wayne.edu</a></td>
</tr>
<tr>
<td>David Ormandy</td>
<td>Professorial Fellow</td>
<td>University of Warwick</td>
<td>+44 (0) 76524 936 <a href="mailto:david.ormandy@warwick.ac.uk">david.ormandy@warwick.ac.uk</a></td>
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