**Relationship Between Interior Problems and Exterior Problems**

Based on the American Housing Survey - 2007 National Data for Occupied Housing

<table>
<thead>
<tr>
<th>Exterior Problem</th>
<th>Homes (000s)</th>
<th>Likelihood of Finding an Interior Problem if an Exterior Problem is Reported Compared to the Likelihood of Finding an Interior Problem if an Exterior Problem is Not Reported*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Leaks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>From Interior</td>
</tr>
<tr>
<td>Sagging roof</td>
<td>1,860.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Missing roofing material</td>
<td>3,846.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Hole in roof</td>
<td>1,288.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Sloping outside walls</td>
<td>1,172.6</td>
<td>2.3</td>
</tr>
<tr>
<td>Missing bricks, siding, other outside wall material</td>
<td>2,116.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Broken windows</td>
<td>2,947.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Boarded up windows</td>
<td>806.6</td>
<td>1.9</td>
</tr>
<tr>
<td>Foundation crumbling or has open crack or hole</td>
<td>2,147.4</td>
<td>2.1</td>
</tr>
<tr>
<td>One or more ext. problem</td>
<td>10,086.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Two or more ext. problem</td>
<td>3,250.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Three or more ext. problem</td>
<td>1,434.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Four or more ext. problem</td>
<td>656.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Five or more ext. problem</td>
<td>364.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Six or more ext. problem</td>
<td>202.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Seven or more ext. problem</td>
<td>127.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Eight or more ext. problem</td>
<td>64.1</td>
<td>5.7</td>
</tr>
</tbody>
</table>

* A home is L times as likely to have a specific interior problem (column heading) if the exterior problem is reported (row heading) than if the exterior problem is not reported. For example, a home is 2.7 times as likely to have a leak from the interior if it has a sagging roof than if it does not have a sagging roof.
The National Center for Healthy Housing developed the table to help communities make homes healthier by giving them a better understanding of the direct relationship between exterior problems such as a sloping outside wall and interior problems such as rats, large holes in the floor, and water damage that can impact resident health and safety. With this understanding, communities can more effectively and efficiently identify homes with serious health and safety threats and set priorities for assessments of the interior. The table is based on the American Housing Survey (AHS). The AHS tracks some but not all items related to health. For example, it does not track cockroaches, radon, lead-based paint, and carbon monoxide levels.

**Relationship Between Interior Problems and Exterior Problems**

- **Exterior Problem:** The exterior problem must be present for at least one year on the property.
- **Exterior Problem:** The exterior problem must be at least one year old on the property.
- **Exterior Problem:** The exterior problem must appear on the interior floor of the unit. The holes are any size that could be reached by someone for the purpose of mitigating the risk of injury to the resident.

- **Exterior Problem:** The exterior problem must appear on the interior floor of the unit.

- **Exterior Problem:** The exterior problem must appear on the interior floor of the unit. The holes are small enough to reach by someone for the purpose of mitigating the risk of injury to the resident.

- **Exterior Problem:** The exterior problem must appear on the interior floor of the unit. The holes are large enough for someone to trip in.

**Key Definitions Related to Healthy Homes**

- **Leaks** – Exterior: Resident reported leakage that occurred in the 12 months prior to the interview or while the household was living in the unit if less than 12 months. Housing units with water leakage are classified by whether the water leaked in from outside the building (roof, basement, walls, closed windows, or doors) or inside the building (piping). Areas of leaks include: (a) walls that leak water from the roof, (b) windows that leak water from the roof, (c) doors that leak water from the roof, (d) areas of piping, (e) areas of closed windows, or doors.

- **Rodents** – Rats or Mice: Resident reported mice or rats if they saw mice or rats or signs of mice or rats inside the house or building during the 3 months prior to interview or while the household was living in the unit if less than 3 months. Signs of mice or rats include droppings, holes in the walls or floors, and direct observation of mice or rats.

- **Heating** – Fire / CO Danger: Resident reported using a space heater without a flue (i.e., any room heater that burns kerosene, gas, or oil, and that does not connect to an existing chimney or flue system) or an open flame heater as a primary source of heat. Housing units with heating problems are classified by whether the heating system is unsafe for the residents.

- **Structural** – Cracks in Walls: The resident reported open cracks or holes in the interior wall or ceilings of the housing unit. Included are cracks or holes that do not go all the way through to the exterior or to the next room. Hairline cracks or cracks that appear in the walls near the floor are not counted. Very small holes caused by nails or other similar objects are also not counted.

- **Structural** – Holes in Floors: The resident reported holes in the interior floors of the unit. The holes are counted if large enough for someone to trip in.

- **Structural** – Paint / Plaster: The resident reported peeling paint or broken plaster. The area of peeling paint or broken plaster must be at least one square foot of the interior floor of the unit.

- **Resident Dissatisfied:** The resident rated structure based on a scale from 1 to 10, where 1 is the worst and 10 is the best. A resident is dissatisfied if the structure is rated 1, 2, or 3.