The views expressed here are those of the presenter and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.
**Why Do We Care About Housing Quality?**

**Affordability vs. quality tradeoff**
- Low-cost market-rate rental units may be older and undermaintained (1)
- Low-income homebuyers may only be able to afford homes in relatively poor condition (2)
- Low-income homeowners often struggle to afford major home repairs (3)

**Effects on health and well-being**
- Potential harm to both physical and mental health of occupants (4)
- Negative effects may be more acute for parents and children, older adults, and people with disabilities (5)

**Impact on wealth building**
- Deferred maintenance and unaddressed repairs can worsen over time, lowering home values (6)

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Calculating a Cost-Based Measure of Repair Needs

Housing Problem (American Housing Survey)  National Average Repair Cost (RSMeans)

- **Broken Window(s)**  - Fixed Cost
  - Assumes 1.5 windows to be repaired

- **Cracked Foundation (Concrete Slab)**  - Per SF Cost
  - Assumes 25% of footprint to be repaired
  - Footprint calculated as size/stories

- **Leak From Basement**  - Redundant repair, no cost assigned

Limitations

• The AHS lacks contextual information about building materials and the magnitude of reported issues.

• Certain questions are not asked of multifamily units.
  – E.g., structural issues related to roofs, exterior walls, or foundations; issues in common areas; etc.

• Some health and safety issues are not covered in the standard housing problems questionnaire.

• Issues that are not readily observed by AHS respondents are not captured in the survey.
  – E.g., indoor air quality issues, lead exposure, water contaminants, etc.

• Estimates are not available for vacant units.
National Findings

Total estimated cost of repair needs in occupied units, 2022:

$149.3 billion

Estimated cost of repair needs in units occupied by low-income households, 2022:

$57.1 billion

Average repair cost for households with repair needs, 2022:

$3,359

Sources: Author’s analysis of 2021 AHS data and 2022 RSMeans data from Gordian.
Occupied Units by Estimated Repair Cost, 2022

<table>
<thead>
<tr>
<th>Category</th>
<th>None</th>
<th>Under $1,000</th>
<th>$1,000-$5,000</th>
<th>$5,000-$10,000</th>
<th>$10,000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>65.4%</td>
<td>10.8%</td>
<td>16.8%</td>
<td>4.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Owners</td>
<td>66.8%</td>
<td>10.0%</td>
<td>15.8%</td>
<td>4.1%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Renters</td>
<td>62.8%</td>
<td>12.3%</td>
<td>18.7%</td>
<td>3.8%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

Sources: Author’s analysis of 2021 AHS data and 2022 RSMeans data from Gordian. Nominal dollar values.
# Percent with Repair Needs, 2022

<table>
<thead>
<tr>
<th>Household Characteristics</th>
<th>Overall, 34.6%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Level</td>
<td>40.1%*</td>
</tr>
<tr>
<td>Less than 100%</td>
<td>40.1%*</td>
</tr>
<tr>
<td>100%-199%</td>
<td>38.6%*</td>
</tr>
<tr>
<td>200% or Above</td>
<td>32.6%*</td>
</tr>
<tr>
<td>Race/Ethnicity of Householder</td>
<td></td>
</tr>
<tr>
<td>AAPI</td>
<td>27.6%*</td>
</tr>
<tr>
<td>Black</td>
<td>39.8%*</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>37.7%*</td>
</tr>
<tr>
<td>Native American</td>
<td>48.0%*</td>
</tr>
<tr>
<td>White</td>
<td>33.1%*</td>
</tr>
<tr>
<td>Multiracial</td>
<td>46.8%*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufactured Home</td>
</tr>
<tr>
<td>Single-Family</td>
</tr>
<tr>
<td>Small Multifamily (2-9)</td>
</tr>
<tr>
<td>Large Multifamily (10+)</td>
</tr>
<tr>
<td>Year Built</td>
</tr>
<tr>
<td>1939 or Earlier</td>
</tr>
<tr>
<td>1940-1969</td>
</tr>
<tr>
<td>1970-1999</td>
</tr>
<tr>
<td>2000 or Later</td>
</tr>
</tbody>
</table>

Sources: Author’s analysis of 2021 AHS data and 2022 RSMeans data from Gordian. * Denotes statistically significant difference from overall value at the p<0.10 level.
### Home Repair Needs by Category, 2022

<table>
<thead>
<tr>
<th>Issue</th>
<th>Share of Units Reporting Issue*</th>
<th>Share of Aggregate Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td>45.8%</td>
<td>58.0%</td>
</tr>
<tr>
<td>Leaks and Mold</td>
<td>45.1%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Electrical</td>
<td>16.2%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Heating</td>
<td>14.3%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Plumbing</td>
<td>12.8%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Pests</td>
<td>11.9%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

* For units with repair costs >$0. Column does not sum to 100% because units may report housing problems in more than one category.

Most common housing problems:

- Inside walls or ceiling have open holes or cracks (16.1%)
- Outside water leak from roof (12.9%)
- Foundation has holes, cracks, or crumbling (11.4%)
- Inside water leak from pipes (10.0%)
- Windows boarded up or broken (9.8%)

Source: Presenter’s calculations based on 2021 American Housing Survey Microdata PUF and 2022 RSMeans data from Gordian.
Typology of Households with Repair Needs

Low-Income, New Homeowners in Moderate-Age Units
Example Household:
Multigenerational family in a manufactured home in a rural area of the South.

Low-Income, Long-Term Homeowners in Moderate-age Units
Example Household:
Single older woman living alone in a row house in a large metropolitan area of the Middle Atlantic.

Low-Income Renters in Moderate-age Multifamily Units
Example Household:
Grandparent caring for grandchild living in a medium-sized apartment building in a large metropolitan area in the Northeast.

Source: Divringi et al., 2019, *Measuring and Understanding Home Repair Costs: A National Typology of Households*
Change in Aggregate Repair Costs From 2018 to 2022

Sources: Authors’ analysis of 2017 and 2021 AHS PUF and 2018 and 2022 RSMeans data from Gordian.

Note: The percent decrease in repair needs ("Repairs Made") is calculated as the aggregate decrease in repair costs for units that had lower repair costs in 2022 compared with 2018 divided by aggregate repair costs in 2018. The percent increase in repair needs ("New Problems") is calculated as the aggregate increase in repair costs for units that had higher repair costs in 2022 compared with 2018 divided by aggregate repair costs in 2018. Survey weights for the 2017 AHS are used for both years. Only units that were occupied in both 2017 and 2021 are included in this analysis.

Households with incomes <100% of federal poverty guidelines (FPG) were nearly twice as likely as households with incomes ≥200% of FPG to experience persistent repair needs across survey years (14.9% versus 7.7%).
Takeaways for Practitioners: Homeowners

• Grants are likely to be a better/preferable option for the lowest income homeowners who may not be able to support additional debt and may be reluctant to re-encumber homes that are fully paid off. (1)

• Local programs may be able to blend different state and federal funding sources (weatherization, lead remediation, emergency repairs, etc.) if they can align eligibility requirements. (1)

• Health care institutions are increasingly interested in addressing housing quality as a social determinant of health. (2)

• Low-income homebuyers may be interested in training on home maintenance and minor repairs. (3)

(1) Van Zandt and Rohe 201; (2) Bryant-Stephens 2018, Skinner, Franz and Kelleher 2019; (3) Acquaye 2011
Takeaways for Practitioners: Renters

• Rental units with repair needs are disproportionately likely to be occupied by people of color, households with children, and individuals with incomes below the federal poverty level.

• Low-income renters living in units with repair needs are likely to experience multiple forms of housing insecurity simultaneously, including severe housing cost burdens. (1)

• Policies to improve the rental housing stock may need to be attentive to tenant circumstances to avoid or mitigate the risk of destabilizing vulnerable households.

• Small-scale landlords may lack the operating margins, access to capital, and/or property management expertise needed to adequately maintain or repair units. (2)

(1) Routhier 2019; (2) Newman and Garboden 2012

*Small apartment building, 2648-2650 Maryland Avenue, Baltimore, MD 21218* by Baltimore Heritage.
Thank you

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References


