Measuring and Understanding Home Repair Needs: Results for the Cleveland Metropolitan Area

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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.
Community Development at the Federal Reserve

Each of the 12 regional branches of the Federal Reserve System has a Community Affairs or Community Development function.

Each of these departments focuses on issues affecting low- and moderate-income communities and households in their region.

By promoting community development and fair access to credit, these departments contribute to more stable and economically resilient regions.

Image from Federal Reserve Board of Governors.
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 may 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)

Calculating a Cost-Based Measure of Repair Needs

Housing Problem
(American Housing Survey)

- Broken Window(s)
- Cracked Foundation
  (Concrete Slab)
- Leak From Basement

National Average Repair Cost
(RSMeans)

- Fixed Cost
  • Assumes 1.5 windows to be repaired
- Per SF Cost
  • Assumes 25% of footprint to be repaired
  • Footprint calculated as size/stories
- Redundant repair, no cost assigned

Unit Total Repair Cost

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.
Key Findings from the 2019 Report

National aggregate cost of addressing reported housing deficiencies estimated at $126.9 billion in 2018.

- Repair needs reported by low-income households account for $50.8 billion
- Average repair cost among households with repair needs was $2,920.

Low-income homeowners with repair needs more likely to have incomes between 100-200% of poverty, more likely to be headed by married couples and older adults.
- Less likely to be severely burdened by housing costs, but this may be at the expense of housing adequacy.

Low-income renters with repair needs more likely to have incomes below the poverty line, more likely to be headed by single parents.
- Many are also heavily housing cost burdened in addition to living in units with repair needs.

Report, technical appendix, and additional data available at: [https://www.policymap.com/issues/housing-quality/](https://www.policymap.com/issues/housing-quality/)
Home Repair Needs in the Cleveland MSA

Total estimated cost of repair needs in occupied units, 2019:

$781 million

Estimated cost of repair needs in units occupied by low-income households, 2019:

$303 million

Average repair cost for households with repair needs, 2019:

$2,701

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Home Repair Needs in the Cleveland MSA

Distribution of Repair Costs by Ownership Type

<table>
<thead>
<tr>
<th></th>
<th>No Repair Costs</th>
<th>$1-$1,000</th>
<th>$1,001-$5,000</th>
<th>$5,001-$10,000</th>
<th>$10,001-$20,000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>67.2%</td>
<td>13.2%</td>
<td>14.3%</td>
<td>3.8%</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>Owner-Occupied</strong></td>
<td>69.4%</td>
<td>13.2%</td>
<td>11.7%</td>
<td>4.1%</td>
<td>1.6%</td>
</tr>
<tr>
<td><strong>Renter-Occupied</strong></td>
<td>62.9%</td>
<td>13.0%</td>
<td>19.5%</td>
<td>3.4%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Regional Variation in Repair Needs

Percent of Households with Repair Needs by Metropolitan Area

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
# Home Repair Needs in the Cleveland MSA

Repair Needs by Household Characteristics

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent with Repair Needs</th>
<th>Average Repair Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Households</td>
<td>32.8%</td>
<td>$2,701</td>
</tr>
<tr>
<td><strong>Ratio of Income to Poverty Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 100%</td>
<td>34.4%</td>
<td>$3,462</td>
</tr>
<tr>
<td>100–199%</td>
<td>35.2%</td>
<td>$2,735</td>
</tr>
<tr>
<td>200% or Above</td>
<td>31.8%</td>
<td>$2,509</td>
</tr>
<tr>
<td><strong>Race/Ethnicity of Householder</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African American†</td>
<td>42.5%</td>
<td>$2,852</td>
</tr>
<tr>
<td>White†</td>
<td>28.9%</td>
<td>$2,540</td>
</tr>
<tr>
<td><strong>Household Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married Couple</td>
<td>29.5%</td>
<td>$2,953</td>
</tr>
<tr>
<td>With Children</td>
<td>36.3%</td>
<td>$2,874</td>
</tr>
<tr>
<td>Single Female Householder</td>
<td>32.7%</td>
<td>$2,855</td>
</tr>
<tr>
<td>With Children</td>
<td>35.8%</td>
<td>$4,565</td>
</tr>
<tr>
<td>Single Male Householder</td>
<td>38.6%</td>
<td>$2,178</td>
</tr>
</tbody>
</table>

† Non-Hispanic or Latino. Bolded values denote statistically significant difference from national figures at p <0.10. Shading denotes higher values than “All Households” figure. Note: Averages are calculated for units with estimated repair costs > $0.

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
### Home Repair Needs in the Cleveland MSA

#### Repair Needs by Unit Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Percent with Repair Needs</th>
<th>Average Repair Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Households</strong></td>
<td>32.8%</td>
<td>$2,701</td>
</tr>
<tr>
<td><strong>Structure Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family Home</td>
<td>33.2%</td>
<td>$2,955</td>
</tr>
<tr>
<td>Small Multifamily (2-9 Units)</td>
<td>37.0%</td>
<td>$1,725</td>
</tr>
<tr>
<td>Large Multifamily (10+ Units)</td>
<td>25.9%</td>
<td>$1,767</td>
</tr>
<tr>
<td><strong>Year Structure Built</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1939 or Earlier</td>
<td>43.5%</td>
<td>$2,821</td>
</tr>
<tr>
<td>1940-1969</td>
<td>37.3%</td>
<td>$2,974</td>
</tr>
<tr>
<td>1970-1999</td>
<td>20.1%</td>
<td>$2,010</td>
</tr>
<tr>
<td>2000 or Later</td>
<td>23.6%</td>
<td>$2,043</td>
</tr>
</tbody>
</table>

Bolded values denote statistically significant difference from national figures at p < 0.10. Shading denotes higher values than "All Households" figure. Note: Averages are calculated for units with estimated repair costs > $0.

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Home Repair Needs in the Cleveland MSA

Repair Needs by Category

<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>15.6%</td>
<td>54.9%</td>
</tr>
<tr>
<td>Leaks and Mold</td>
<td>14.2%</td>
<td>24.5%</td>
</tr>
<tr>
<td>Electrical</td>
<td>5.6%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Heating</td>
<td>4.8%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Plumbing</td>
<td>2.7%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Pests</td>
<td>2.6%</td>
<td>1.4%</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 among households with repair needs:

- Cracks or holes in walls or ceilings (18.9%)
- Leak from basement (13.5%)
- Leak from roof (11.6%)
- Cracked or crumbling foundations (11.4%)
- Exposed wiring (9.6%)

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Low-Income Homeowners with Repair Needs

Example: Low-Income Older Adults Aging in Place

Householder is an **85-year-old woman** living with her adult daughter in a **single-family home** built in the **1980s**.

She has lived in the home for **over 30 years**. Her **mortgage is paid off**.

Total household income is **below the federal poverty level**.

Repair Needs:
- Leaky interior plumbing
- Broken window(s)
- Hole in roof

**Total Repair Costs:** $1,920

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Low-Income Homeowners with Repair Needs

Example: Low-Income Recent Homebuyers

Householders are a married couple in their late twenties with two children under the age of six living in a single-family home built in the 1920s. They have lived in their home for two years. They are moderately burdened by their housing costs.

Total household income puts them between 150%-200% of the federal poverty level.

Repair Needs:

- Roof leak
- Cracked/crumbling foundation

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Low-Income Renters with Repair Needs

Example: Low-Income Renters in Smaller Multifamily Structures

The householder is a single woman in her late twenties with two children living in an apartment in a 5–9-unit structure built in the 1940s.

The apartment is subsidized, and the householder is only responsible for utility costs.

The householder is enrolled in a postsecondary education program and does not have any income.

Repair Needs:

• Roof leak
• Interior plumbing leak
• Sightings of cockroaches at least weekly

Total Repair Costs: $2,670

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Low-Income Renters with Repair Needs

Example: Low-Income Renters in Single-Family Homes

The householder is a woman in her mid-thirties living with her partner and her four children in a single-family home built in the 1960s.

Both adults work, but their total household income is below the federal poverty level.

They have a housing choice voucher that keeps their housing costs manageable.

Repair Needs:

- Mold in kitchen, bathroom, and basement
- Peeling paint
- Sightings of rodents at least weekly

Total Repair Costs: $10,500

Source: Presenter’s calculations based on 2019 American Housing Survey Microdata PUF and 2018 RSMeans data from Gordian. Figures reported in 2019 dollars, adjusted using the BEA PCE for household consumption expenditures.
Takeaways for Practitioners: Homeowners

• Among low-income homeowners, repair needs appear to be most acute for longer-term residents who likely have more equity.

• However, many low- and moderate-income (LMI) homeowners and homeowners of color struggle to access conventional home improvement financing. (1)

• Many LMI borrowers are looking from relatively small (<$10,000) loan amounts. (1)

• Higher lender risk tolerance is likely critical to expanding access. (1) There may be opportunities for public-private or philanthropic-private collaboration to mitigate risk.

• Alternative products (reverse mortgages, shared-equity loans, etc.) may be a good fit for some consumers, but counseling is key to avoid predatory offerings. (2)

(1) Carlin and Divringi 2018; (2) Weidig et al. 2018
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)

• Many municipalities administer programs that provide grants or forgivable loans to low-income homeowners for emergency or critical systems repairs.

• 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)

(1) Van Zandt and Rohe 201; (2) Bryant-Stephens 2018, Skinner, Franz and Kelleher 2019

"Allentown Row Houses" by anaxila is licensed under CC BY 2.0
Takeaways for Practitioners: Homeowners

Pre-purchase opportunities:

• Incorporate maintenance and repair costs into home purchase budgeting.

• Incorporate information about local home repair assistance programs in resources for first-time homebuyers.

Post-purchase opportunities:

• Low-income homebuyers may be interested in training on home maintenance and minor repairs. (1)

• Provide counseling for/referrals to affordable financing options when expensive repair needs arise.

• Targeted outreach to low-income parents around the child health impacts of substandard housing conditions may be an effective way to reach households. (2)

(1) Acquaye 2011; (2) Turocote et al. 2014
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) Garboden and Newman 2012

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

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References


References


