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RESEARCH

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New Insights into Connection Between Housing Quality and Population Health

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“The Housing Quality Metric (HQM) provides a comprehensive view of housing quality, serves as a valuable new tool for public health research and policy.”

Housing quality is a fundamental determinant of health, yet efforts to quantify poor housing conditions nationally have been limited. [A new study](#) addresses this gap by introducing the [Housing Quality Metric \(HQM\)](#). Developed by researchers from Johns Hopkins Bloomberg School of Public Health, including [Craig Pollack](#), MD, MSc, MHS, professor in the Department of Health Policy and Management, the innovative tool

predicts the likelihood that a U.S. census tract contains a large share of poor-quality housing, accounting for multiple dimensions of housing inadequacy.

The HQM was developed using microdata from the 2021 American Housing Survey together with the 2018–2022 American Community Survey. The metric assesses housing quality at the census tract level across three key domains:

1. **Physical Inadequacy** – Structural deficiencies including plumbing issues, mold exposure, and poor insulation.
2. **Housing Cost Burden** – The proportion of household income spent on housing, which can limit financial flexibility for essential needs like healthcare and nutrition.
3. **Poor Neighborhood Perception** – Indicators such as abandoned buildings, high vacancy rates, and crime reports that influence residents' well-being.

To evaluate the HQM's validity, the researchers examined its association with area-level health metrics derived from the PLACES dataset, which provides small-area estimates of self-reported health outcomes. The study focused on three key indicators: fair or poor general health, poor mental health, and poor physical health. Regression models were used to assess the relationship between census tract HQM scores and these health measures in unadjusted analyses and models controlling for potential confounders.

The study found that higher HQM scores—indicating poorer housing conditions—were significantly associated with negative self-reported health outcomes. Specifically, census tracts with higher HQM scores had higher proportions of adults reporting fair or poor general health. In addition, poor mental health outcomes were more prevalent in census tracts with worse housing conditions, and poor physical health was significantly associated with higher HQM scores. These associations remained significant even after adjusting for other factors, highlighting the independent impact of housing quality on population health.

These findings support the pressing link between health and housing. Poor housing conditions can expose residents to environmental risks, including mold, vermin, and inadequate heating, all of which are precursors for long-term conditions like asthma, cardiovascular disease, and respiratory disease. Financial burdens due to high housing

costs may also trigger pressure, food insecurity, and delays in seeking medical care. Neighborhood perceptions also play a role in health outcomes. The presence of abandoned buildings and signs of neglect can contribute to anxiety, depression, and an overall decline in mental well-being.

According to Pollack, “Housing is more than just a place to live—it shapes people’s health in ways that go beyond the walls of their homes. The HQM allows us to capture the broader impact of housing quality and its role in shaping health disparities.”

The introduction of the HQM has significant implications for public health policy, research, and intervention efforts. Policymakers and health officials can use this metric to identify high-risk communities where poor housing conditions may drive health disparities, strategically allocate resources to improve housing conditions and reduce health risks and monitor changes over time to assess the impact of housing policies and interventions.

Unlike previous measures focusing solely on housing affordability or structural inadequacies, the HQM captures a more complete picture of housing quality, integrating physical, financial, and neighborhood-level factors.

The HQM is available for download and use [here](#).

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