

Name: Housing Stress

Short Description: Percentage of households experiencing housing stress, as defined by meeting one or more of the following conditions:

- (1) housing expense/income threshold—monthly housing costs, including utilities, exceed 30% of income;
- (2) crowding—more household members than rooms;
- (3) incomplete plumbing—home lacks necessary bathroom facilities; and
- (4) incomplete kitchen—home lacks essential kitchen facilities.

Data Source:

- **Name:** United States Department of Housing and Urban Development, Consolidated Planning/Comprehensive Housing Affordability Strategy (CHAS)
- **Link to Source:** https://www.huduser.gov/portal/datasets/cp.html#2006-2017_data

Year(s): 2015-2019, 5-year averages

Source Geographic Level: Census tract

Stratification: Black populations

Selection Rationale: This measure accounts for the effect of households' physical environment and affordability on mental health and wellness. Substandard housing has been linked with poor mental health outcomes due to stressors such as living in housing in poor condition or worrying about paying rent. The ability to afford housing and the physical amenities of a household (both of which are included in this measure) are important social determinants of health.¹ Low-income and racial/ethnic minority groups are more likely to inhabit substandard housing in neighborhoods with adverse health attributes due to current and historic inequities.²

Strengths and Limitations

- **Strengths:**
 - *[Importance]* Substandard housing has been linked with poor mental health outcomes such as increased allostatic load, stress, anxiety, depression, and social isolation, and has even been found to have neighborhood-level effects on mood.³ Additionally, households struggling with a high household expense-to-

¹ Health Resources and Services Administration, Office of Health Equity. (2020). Health Equity Report 2019-2020: Special Feature on Housing and Health Inequalities. U.S. Department of Health and Human Services. <https://www.hrsa.gov/sites/default/files/hrsa/health-equity/HRSA-health-equity-report.pdf>

² Swope, C. B., & Hernández, D. (2019). Housing as a determinant of health equity: A conceptual model. *Social Science & Medicine*, 243. <https://doi.org/10.1016/j.socscimed.2019.112571>

³ Krieger, J., & Higgins, D. L. (2002). Housing and health: time again for public health action. *American Journal of Public Health*, 92(5), 758-768. <https://doi.org/10.2105/ajph.92.5.758>

income ratio have fewer financial resources available for other important health needs relevant to mental health and well-being, such as health insurance, medications, and medical visits.^{4,5} By including information about the ability to afford housing as well the quality of housing, this measure captures multiple elements of housing stress.

- *[Relevance and Usability]* People with mental illnesses or substance use disorders may experience higher rates of housing stress due to cascading effects.⁶ Conversely, people who do not have secure and stable housing may be at greater risk for mental illnesses or substance use disorders due to the cascading effects of housing loss and stress. Information about levels of housing stress in a community can be used to direct resources to improve housing quality and affordability to mitigate these cascading effects.
- *[Feasibility]* The data for this measure are readily available from the U.S. Department of Housing and Urban Development, and are maintained on an annual basis utilizing Consolidated Planning/CHAS data from the U.S. Census Bureau's American Community Survey.
- *[Scientific Soundness]* This measure is calculated based on valid and reliable data collected to understand the need for housing assistance among U.S. households.
- *[Equity]* This measure captures many of the dimensions of housing stress, including the ability to afford housing, ensuring housing has essential plumbing and kitchen facilities, and overcrowding.

Limitations:

- *[Scientific Soundness]* Our calculation is based on the widely adopted standard that housing costs should not exceed 30% of household income. However, there is some evidence to suggest that this 30% standard could overstate housing affordability for high-cost markets and higher-income and smaller households.⁷

Calculation:

Overall Population:

⁴ Ma, C. T., Gee, L., & Kushel, M. B. (2008). Associations between housing instability and food insecurity with health care access in low-income children. *Ambulatory Pediatrics*, 8(1), 50–57.

<https://doi.org/10.1016/j.ambp.2007.08.004>

⁵ Levy, H., & DeLeire, T. (2008). What Do People Buy When They Don't Buy Health Insurance and What Does That Say About Why They are Uninsured? *Inquiry*, 45(4), 365–379.

<https://doi.org/10.5034/inquiryjrnl.45.04.365>

⁶ Thompson Jr, R. G., Wall, M. M., Greenstein, E., Grant, B. F., & Hasin, D. S. (2013). Substance-use disorders and poverty as prospective predictors of first-time homelessness in the United States. *American Journal of Public Health*, 103(Suppl 2), S282-S288. <https://doi.org/10.2105/AJPH.2013.301302>

⁷ Herbert, C., Hermann, A., & McCue, D. (2018). *Measuring Housing Affordability: Assessing the 30-percent of Income Standard*. Joint Center for Housing Studies of Harvard University. https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Herbert_Hermann_McCue_measuring_housing_affordability.pdf

$$Housing\ Stress_{Overall} = \frac{\text{owner and renter occupied housing units with 1 or more housing unit problems}^*}{\text{all owner occupied and renter occupied housing units}} \times 100\%$$

* The following are counted as housing unit problems:

- (1) housing expense/income threshold—monthly housing costs, including utilities, exceed 30% of income;
- (2) crowding—more household members than rooms;
- (3) incomplete plumbing—home lacks necessary bathroom facilities; and
- (4) incomplete kitchen—home lacks essential kitchen facilities.

Variables Used:

- Numerator:
 - T1_est3: Owner occupied, 1 or more of the 4 housing unit problems, all household income levels, all race-ethnicity
 - T1_est127: Renter occupied, 1 or more of the 4 housing unit problems, all household income levels, all race-ethnicity
- Denominator:
 - T1_est2: Owner occupied, all household income levels, all race-ethnicity
 - T1_est126: Renter occupied, all household income levels, all race-ethnicity

Black Populations:

$$Housing\ Stress_{Black} = \frac{\text{Black owner and renter occupied housing units with 1 or more housing unit problems}^*}{\text{all Black owner occupied and renter occupied housing units}} \times 100\%$$

* The following are counted as housing unit problems:

- (1) housing expense/income threshold—monthly housing costs, including utilities, exceed 30% of income;
- (2) crowding—more household members than rooms;
- (3) incomplete plumbing—home lacks necessary bathroom facilities; and
- (4) incomplete kitchen—home lacks essential kitchen facilities.

Variables Uses

- Numerator:
 - T1_est6, T1_est14, T1_est22, T1_est30, T1_est38: Owner occupied, 1 or more of the 4 housing unit problems, all household income levels, Black or African American alone, non-Hispanic
 - T1_est130, T1_est138, T1_est146, T1_est154m T1_est162: Renter occupied, 1 or more of the 4 housing unit problems, all household income levels, Black or African American alone, non-Hispanic

- Denominator
 - T1_est6, T1_est14, T1_est22, T1_est30, T1_est38, T1_est47, T1_est55, T1_est63, T1_est71, T1_est79, T1_est88, T1_est96, T1_est104, T1_est112, T1_est120: Owner occupied, all household income levels, Black or African American alone, non-Hispanic
 - T1_est130, T1_est138, T1_est146, T1_est154, T1_est162, T1_est171, T1_est179, T1_est187, T1_est195, T1_est203, T1_est212, T1_est220, T1_est228, T1_est236, T1_est244: Renter occupied, all household income levels, Black or African American alone, non-Hispanic