RESEARCHBRIEF



JULY 2025

Black and Hispanic Residents in Massachusetts Report Higher Rates of Unmet Health-Related Social Needs in Their Families

Findings from the 2023 Massachusetts Health Insurance Survey

Summary

Issue: Prior research has identified substantial racial and ethnic disparities in unmet health-related social needs (HRSNs) in Massachusetts but has yet to investigate the extent to which these gaps can be explained by other sociodemographic characteristics or whether their magnitudes vary across different types of HRSNs.

Objective: This analysis examines disparities in the rates of unmet HRSNs by race and ethnicity in Massachusetts after adjusting for sociodemographic characteristics and health status of household family members. It then separately analyzes 3 specific types of unmet HRSNs (food insecurity, financial strain, and housing instability) to determine whether the magnitude of racial and ethnic gaps differs across these 3 HRSNs.

Methods: Data from the 2023 Massachusetts Health Insurance Survey (MHIS) was analyzed to examine racial/ethnic differences in the rates that residents and their families experience any unmet HRSN, as well as each of the 3 specific types of HRSNs assessed, after accounting for differences in family income, family educational attainment, family composition, and activity limitation/health status of family members.

Findings: Compared with White residents, Black and Hispanic residents had significantly higher rates of experiencing any unmet HRSN even after adjusting for other social demographic factors. Moreover, the rates of food insecurity and housing instability among Black and Hispanic residents were 3 times that of their White counterparts.

Implications: Racial and ethnic disparities in the rates of unmet HRSNs can contribute to inequities in health care access, utilization, and affordability in Massachusetts. These findings can inform targeted policy interventions by focusing on the communities experiencing the highest rates of unmet HRSNs and addressing specific domains, such as food insecurity and housing instability, to improve health outcomes in the Commonwealth.

Introduction

Social determinants of health (SDOHs), or the physical, economic, and social environments in which people live, ¹⁻⁴ are critical predictors of health care access, utilization, costs, and outcomes. Unmet health-related social needs (HRSNs) are the downstream effects of SDOHs and are shaped by both community-level factors and individual circumstances. HRSNs thus represent a person's immediate individual or family needs which, in turn, influence health and well-being, ^{5,6}

In recognition of the importance of unmet HRSNs, the Centers for Medicare and Medicaid (CMS)⁷ and various state agencies in Massachusetts have developed initiatives to address unmet HRSNs. In 2018, the Massachusetts Health Policy Commission (HPC) funded several pilot programs targeting unmet HRSNs among patients with complex conditions, resulting in improved health and food security outcomes.^{8,9} In 2024, the Healey-Driscoll Administration launched the Advancing Health Equity in Massachusetts (AHEM) initiative. AHEM prioritizes SDOHs, aiming to reduce racial, economic, and regional health disparities in the Commonwealth through targeted interventions. The high rates of unmet HRSNs reported by Massachusetts residents and their families warrants the attention of policymakers and health care providers alike and can highlight opportunities for intervention.

This report investigates a) the association of race/ethnicity with any unmet HRSNs and b) the extent to which racial and ethnic disparities vary across 3 different types of unmet HRSNs (food insecurity, financial strain, and housing instability). To assess the extent to which racial and ethnic disparities are attributable to other factors, we account for family income, family educational attainment, family composition, and activity limitation/health status of family members in all of our analyses. These factors were selected because they have previously been associated with HRSNs and often differ by race 10 and thus may contribute to the disparate rates of unmet HRSNs among racial/ethnic minority residents in Massachusetts.

This report seeks to fill the data gap in understanding the factors associated with unmet HRSNs, particularly for historically underserved populations. This report aims to inform policies that address key social and economic factors outside of the health care system, with the ultimate goal of reducing acute care utilization and improving health outcomes.

Data Source and Methods

This analysis uses the Massachusetts Health Insurance Survey (MHIS), a statewide, population-based survey of non-institutionalized residents of the Commonwealth. The biennial survey provides information on health care coverage, access, utilization, and affordability among residents and their families. The survey asks a series of questions on food insecurity, housing insecurity, and financial strain, which are used to define unmet HRSNs in this report. Analyses in this report use MHIS data from 2023 (n = 5,266), specifically examining experiences during the 12-month period from approximately mid-2022 to mid-2023. Data has been weighted to represent all non-institutionalized Massachusetts residents. Details about the sampling design, weights, and other aspects of survey methodology are available in the methodology report. 11 Measure definitions are shown in Table 1.

CHIA reports rates of unmet HRSNs overall and by race and ethnicity in this report. Rates by race and ethnicity were adjusted for family income, family educational attainment, family composition, and activity limitations/health status of family members. For details, please see the appendix beginning on page 12.

Table 1: Measure Definitions

OUTCOME MEASURE

Any health-related social need (HRSN) (defined as experiencing at least one of the following types of HRSNs [food insecurity, housing instability, or financial strain]).

Food Insecurity

How often do the following statements describe resident/resident's parents or any member of their immediate family? (Always, Often, Sometimes (reference = Rarely, Never))

- · Resident/resident's family worries that food will run out before there is money to buy more
- · The food resident/resident's family buys doesn't last long enough
- Resident/resident's family has been hungry but couldn't afford enough food
- Resident/resident's family got emergency food from a church, food pantry, food bank, or other community program

Housing Instability

How often do(es) resident/resident's parents or any member of their immediate family worry about having a steady place to live? (Always, Often, Sometimes (reference = Rarely, Never))

At any time in the past 12 months, has resident/resident's parents or any member of their immediate family: (Yes (reference = No))

- Fallen behind in paying rent or mortgage?
- · Had problems paying for utilities?

Financial Strain

At any time in the past 12 months, has resident/resident's parents or any member of their immediate family: (Yes (reference = No))

- · Had problems affording health insurance?
- · Had problems affording prescription medications?
- Fallen behind in paying credit card or other bills?

COVARIATES

Demographic and Socioeconomic Factors

Race/ethnicity of resident

- Non-Hispanic Black/African American ("Black")
- Non-Hispanic White ("White")
- Non-Hispanic Asian ("Asian")
- Non-Hispanic Multiracial/Other Race not specified by the survey ("Multiracial/Other Races"; residents with unspecified race/ethnicity are included in this category)
- Hispanic/Latino(a) ("Hispanic")

Highest level of educational attainment in the family

- Less than high school (grades 1-11, grade 12 but no diploma)
- High school graduate or equivalent (e.g., GED)
- · Associate's degree/some college
- 4-year college degree or more

Family income relative to the federal poverty level (FPL)

- Below 139% of the FPL
- From 139% to less than 300% of the FPL
- At or above 300% of the FPL

FAMILY COMPOSITION

Residents were asked whether they had children younger than 19 in their immediate family living in the home as well as children younger than 26 who were full-time students regardless of residence. In a separate question, residents were asked whether they were married/cohabiting with a romantic partner. These two questions were combined to create a 4-category variable:

- Married/cohabiting without children (0-18) in the immediate family living in the home
- Married/cohabiting with children (0-18) in the immediate family living in the home
- Single without children (0-18) in the immediate family living in the home
- Single with children (0-18) in the immediate family living in the home

HEALTH STATUS/ACTIVITY LIMITATION IN THE FAMILY

Residents were asked to describe their health status as well as the health status of their immediate family members who reside in the home at the time of the survey as "Excellent," "Very Good," "Good," "Fair," or "Poor." Residents were also asked whether they or an immediate family member were limited in any way in their activities "due to a physical, mental, or emotional problem." Health status and activity limitation questions were then combined into a single indicator for these analyses.

- Fair or poor health or an activity limitation
- Good or excellent health and no activity limitation

How common are unmet health-related social needs among Massachusetts residents?

Overall, 39.1% of Massachusetts residents (approximately 2.6 million people) had at least one unmet HRSN in the past 12 months. Food insecurity was the most common type of unmet HRSN reported in the MHIS, followed by financial strain and housing instability (Figure 1). Among the specific HRSNs assessed, 20.2 percent of residents reported worrying that "food doesn't last long enough," and nearly the same amount reported having difficulty paying bills outside of health insurance and prescriptions. For housing instability,13.4% of residents reported having difficulty paying utility bills.

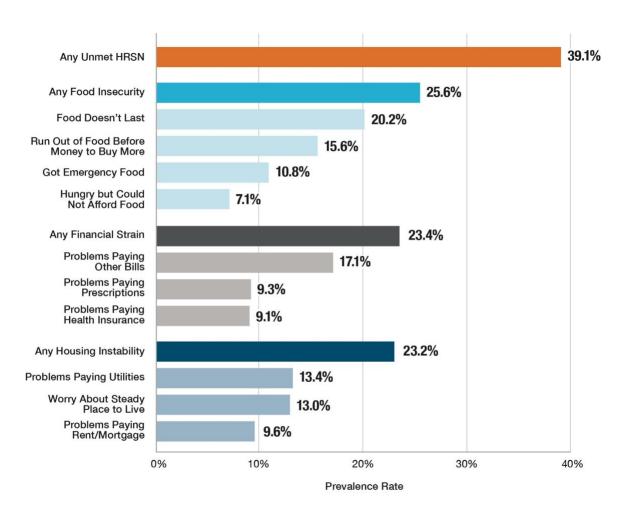


Figure 1. Rates of unmet HRSNs among all Massachusetts residents, 2023

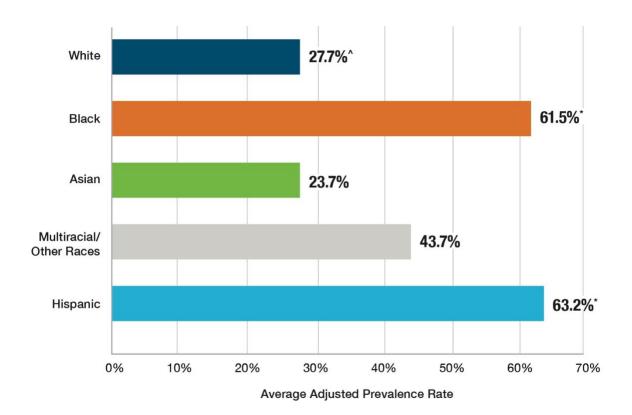
Note: All rates refer to the 12 months preceding survey interview (2023). **Food insecurity** was assessed by asking whether residents or their immediate family members in the home always, sometimes, or often worried that food would run out before there was money to buy more, found that the food they bought didn't last long enough, were hungry but could not afford food, or got emergency food from a church, food pantry, food bank, or other community program. **Financial strain** was assessed by asking whether residents or their immediate family members in the home had problems affording health insurance, had problems affording prescription medications, or had fallen behind in paying credit card or other bills. **Housing instability** was assessed by asking whether residents or their immediate family members in the home always, sometimes, or often worried about having a steady place to live, had fallen behind in paying rent or mortgage, or had problems paying for utilities.

How do unmet health-related social needs differ by race and ethnicity?

Black residents and Hispanic residents experienced unmet health-related social needs more than twice as often as White residents.

After adjusting for family income, family educational attainment, family composition, and activity limitations/health status of family members, Black residents and Hispanic residents were more than twice as likely to experience at least one unmet HRSN compared with White residents (Figure 2).

Figure 2. Adjusted rates of any unmet HRSN among Massachusetts residents by race/ethnicity, 2023

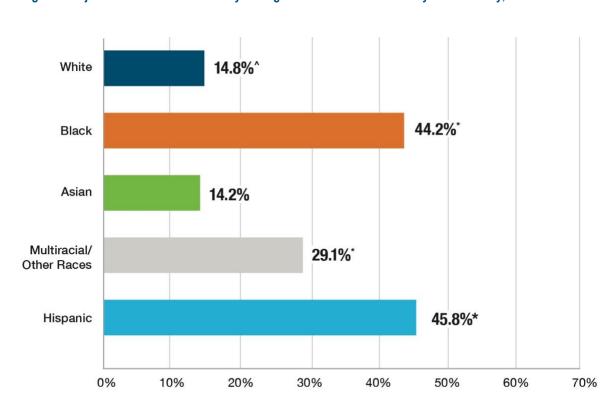


[^]Reference category: Race/Ethnicity = White.

^{*}Measure is significantly different from the reference category (ρ <0.05).

Black residents and Hispanic residents had triple the rates of food insecurity of White residents.

After adjusting for family income, family educational attainment, family composition, and activity limitations/health status of family members, Black residents and Hispanic residents were 3 times as likely to experience food insecurity as White residents. Residents who identified as multiracial or other races experienced food insecurity about twice as often as White residents (Figure 3).



Average Adjusted Prevalence Rate

Figure 3. Adjusted rates of food insecurity among Massachusetts residents by race/ethnicity, 2023

[^]Reference category: Race/Ethnicity = White.

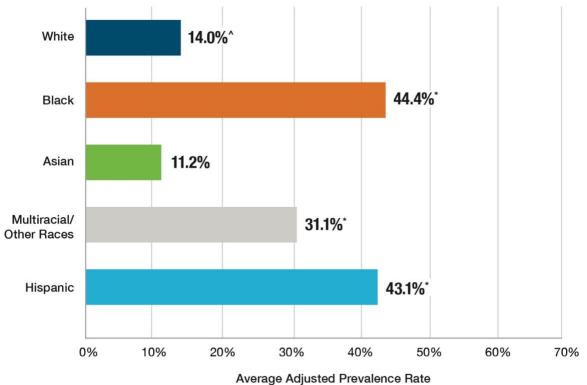
^{*}Measure is significantly different from the reference category (ρ <0.05).

Rates of housing instability among Black residents and Hispanic residents were more than 3 times as high as for White residents.

After adjusting for family income, family educational attainment, family composition, and activity limitations/health status of family members, Black residents and Hispanic residents were nearly 3 times as likely to experience housing instability as White residents. Residents of multiple or other races also had significantly higher adjusted rates of housing instability, more than twice that of White residents (Figure 4).



Figure 4. Adjusted rates of housing instability among Massachusetts residents by race/ethnicity, 2023



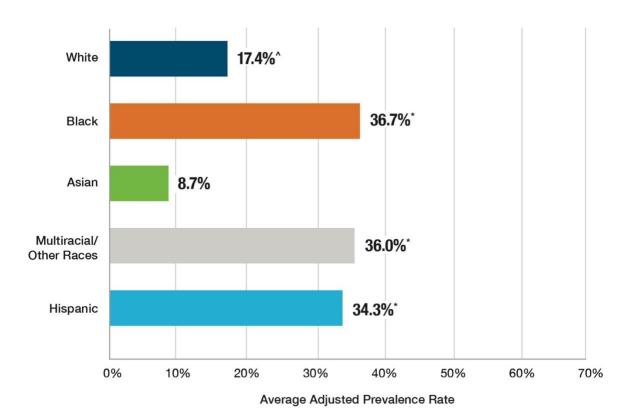
[^]Reference category: Race/Ethnicity = White.

^{*}Measure is significantly different from the reference category (ρ <0.05).

Black residents and Hispanic residents reported financial strain at twice the rate of White residents.

When we examined whether there were racial or ethnic differences in the adjusted rates of financial strain, rates were higher for most racial or ethnic minority groups than for White residents. The adjusted rates of financial strain among Black residents and Hispanic residents, as well as those who identified as multiracial or other races, were all approximately double the adjusted rate of White residents (Figure 5).





[^]Reference category: Race/Ethnicity = White.

^{*}Measure is significantly different from the reference category (p < 0.05).

Discussion

This analysis finds that race and ethnicity remain strongly associated with unmet HRSNs even after adjusting for family income, educational attainment, family composition, and activity limitations/health status of family members. Black and Hispanic residents and their families consistently reported experiencing any type of unmet HRSN at higher rates, as well as higher likelihood of experiencing each specific type of HRSN (food insecurity, housing instability, and financial strain), compared with White residents and their families. Racial and ethnic disparities were particularly pronounced for food insecurity and housing instability; disparities in financial strain were smaller but still significant.

The high rates of food insecurity and housing instability identified among Massachusetts residents mirrors research from a CMS-funded study designed to identify and address unmet HRSNs in 28 Accountable Health Communities (AHCs) across the country, which found that these were the most commonly reported HRSNs nationally. ^{12,13} Racial and ethnic disparities in HRSNs are likely rooted in community-level differences, along with structural inequities that limit access to resources, which adversely affects health outcomes among members of communities who have been historically underserved on the basis of race and ethnicity. ¹⁴⁻¹⁶

Furthermore, when food, housing, and financial needs go unmet, individuals and families may decrease their use of preventive health care, which may lead to higher acute care utilization, increased health care costs, and poorer health outcomes. ¹⁷⁻²³ The national AHC pilot study by CMS found reductions of 4 percent to 5 percent in emergency department (ED) visits and reductions of 4 percent to 6 percent in inpatient stays across Medicare and Medicaid patients who received assistance and/or referrals for services for unmet HRSNs. Moreover, there were reductions in health care expenditures of 3 percent to 4 percent among patients who received direct assistance rather than simply referrals. ^{24,25} In a study of commercial insurance enrollees in Georgia and Indiana, access to healthy food and stable housing, among other HRSNs, were associated with fewer physically and mentally unhealthy days; a higher number of unmet HRSNs was associated with more ED visits, higher prevalence of hypertension, and higher overall health care spending. ²⁶ A national study also found that unmet HRSNs were associated with reduced access to and quality of preventive care and immunizations. ²⁷

In Massachusetts, the HPC funded several pilot programs to address unmet HRSNs among patients with medically complex diagnoses and found reduced rates of uncontrolled asthma, acute care utilization, and 30-day hospital readmission rates. Additionally, receiving nutritional services ("food is medicine") through the Commonwealth's Flexible Services Program (FSP)—a pilot program connecting MassHealth Accountable Care Organization (ACO) members to community resources—was associated with a 13 percent reduction in ED visits and a 23 percent reduction in hospitalizations compared with eligible nonparticipants. These findings demonstrate that food assistance programs reduce health care needs and suggest that expanding eligibility screening for and enrollment in these programs could yield further benefits.

In addition to the specific initiatives noted above, systematic screenings for HRSNs have increasingly been incorporated into routine health care. The findings from this analysis suggest that limited resources may be more efficiently used by prioritizing populations with the greatest needs, such as racial and ethnic minority communities and other residents who may benefit most from such screenings,³⁰ and by improving access to primary care, where such screenings may occur. Furthermore, research suggests that initiatives to address HRSNs reach more potentially eligible participants, particularly racial and ethnic minority residents, when they are conducted in collaboration with local partners and/or community health organizations that employ members of the communities being served.

This report is limited by the use of self-reported data, which is subject to reporting biases. Additionally, it was not possible to adjust for regional variation in the rates of unmet HRSNs by race/ethnicity across the Commonwealth due to small sample size. Overall, rates of experiencing any unmet HRSN ranged from 30.5 percent in Metro West to 47.8 percent in the South Coast region. Although differences in race/ethnicity, socioeconomic status, and HRSNs exist by region, it is not possible to assess whether the magnitude of gaps in HRSNs by race/ethnicity vary across the different regions with a single survey.

CHIA anticipates combining data from multiple survey years (e.g., 2023 and 2025) in future analyses to enhance our ability to detect differences by race/ethnicity within different geographic regions. Ideally, future research would also investigate how the availability of health care providers in rural settings, transportation challenges, employment stability, and other community-level social factors may contribute to HRSNs.^{31,32}

The current findings provide a baseline understanding of the overall rate of unmet HRSNs and which racial and ethnic groups may benefit most from targeted interventions. By tracking the rates of unmet HRSNs among the general population, as well as gaps by race/ethnicity and other key sociodemographic characteristics, we can examine associations with ED visit rates, acute care utilization, and other clinically relevant outcomes over time. Ongoing refinement and evaluation of policies targeting HRSN inequities would not only enhance services for underserved populations and resource-limited communities but also help reduce the overall prevalence of unmet HRSNs in Massachusetts. In turn, this could lessen the demand for acute hospital care and improve health outcomes across the Commonwealth.

Appendix

Table A1. Rates and Odds of Experiencing Any Unmet Health-Related Social Need by Sociodemographic Characteristics and Activity Limitation/Health Status

	%	Odds Ratio ^a	95% CI of the OR	
			Lower CI	Upper CI
Race/Ethnicity of Resident (unadj.)				
White	31.8%^	Ref	-	-
Asian	27.9%	0.8	0.6	1.2
Black/African American	66.0%*	4.2	3.0	5.9
Hispanic/Latino(a)	68.4%*	4.6	3.6	5.9
Multiracial/Other races	47.0%*	1.9	1.0	3.7
Race/Ethnicity of Resident (adj. for covariates)				
White	27.7%^	Ref	-	-
Asian	23.7%	0.9	0.6	1.3
Black/African American	61.5%*	2.9	1.7	4.8
Hispanic/Latino(a)	63.2%*	2.7	2.0	3.5
Multiracial/Other races	43.7%	1.6	0.8	3.3
Family Educational Attainment				
Less than high school	64.5%	1.3	0.7	2.4
High school graduate or GED	57.9%*	1.8	1.3	2.4
Some college/associate's degree	55.4%*	2.1	1.7	2.7
4-year degree or more	25.2%^	Ref	-	-
Family Income				
Below 139% of FPL	63.4%*	2.4	1.7	3.2
139% to less than 300% of FPL	52.6%*	2.1	1.7	2.7
At or above 300% of FPL	23.2%^	Ref	-	-
Activity Limitation/ Health Status in Family				
Fair/poor health or activity limitation in family	49.4%*	2.7	2.3	3.2
Everyone in family had good or excellent health/no activity limitation	22.8%^	Ref	-	-
Family Composition				
Married/cohabiting, no child(ren) 0-18 years old in family living at home	22.3%^	Ref	-	-
Married/cohabiting, with child(ren) 0-18 years old in family living at home	31.0%*	1.7	1.4	2.2
Single, no child(ren) 0-18 years old in family living at home	40.4%*	1.7	1.3	2.3
Single, with child(ren) 0-18 years old in family living at home	64.8%*	3.2	1.8	5.7

^{*}Measure is significantly different than reference category (p <0.05).

[^]Reference category for variable.

^aOdds ratios reflect the likelihood of experiencing any unmet HRSNs for one group (e.g., Black residents) compared with the reference group (e.g., White residents). Bivariate models (shown on top) examine relationships between two variables without adjusting for any other factors; multivariable models (shown on bottom) predict the likelihood of experiencing any unmet HRSN after adjusting for all the other factors included in the models.

Table A2. Rates and Odds of Experiencing Food Insecurity by Sociodemographic Characteristics and Activity Limitation/Health Status

	%	Odds Ratio ^a	95% CI of the OR	
			Lower CI	Upper CI
Race/Ethnicity of Resident (unadj.)				
White	18.6%^	Ref	-	-
Asian	18.6%	1.0	0.7	1.5
Black/African American	50.2%*	4.4	3.3	6.0
Hispanic/Latino(a)	52.6%*	4.9	3.6	6.5
Multiracial/Other races	33.0%*	2.2	1.4	3.4
Race/Ethnicity of Resident (adj. for covariates)				
White	14.8%^	Ref	-	-
Asian	14.2%	1.1	0.8	1.6
Black/African American	44.2%*	2.8	1.8	4.4
Hispanic/Latino(a)	45.8%*	2.4	1.8	3.2
Multiracial/Other races	29.1%*	1.8	1.1	2.8
Family Educational Attainment				
Less than high school	57.1%*	2.1	1.1	4.0
High school graduate or GED	44.8%*	2.3	1.6	3.3
Some college/associate's degree	38.3%*	2.3	1.5	3.7
4-year degree or more	12.1%^	Ref	-	-
Family Income				
Below 139% of FPL	50.9%*	3.3	2.3	4.6
139% to less than 300% of FPL	35.6%*	2.6	2.0	3.3
At or above 300% of FPL	10.2%^	Ref	-	-
Activity Limitation/ Health Status in Family				
Fair/poor health or activity limitation in family	33.0%*	2.9	2.4	3.6
Everyone in family had good or excellent health/no activity limitation	11.3%^	Ref	-	-
Family Composition				
Married/cohabiting, no child(ren) 0-18 years old in family living at home	11.0%^	Ref	-	-
Married/cohabiting, with child(ren) 0-18 years old in family living at home	17.1%*	1.8	1.2	2.8
Single, no child(ren) 0-18 years old in family living at home	25.4%*	1.6	1.1	2.5
Single, with child(ren) 0-18 years old in family living at home	49.2%*	3.2	1.8	5.8

^{*}Measure is significantly different than reference category (p <0.05).

[^] Reference category for variable.

^aOdds ratios reflect the likelihood of experiencing food insecurity for one group (e.g., Black residents) as compared with the reference group (e.g., White residents). Bivariate models (shown on top) examine relationships between two variables without adjusting for any other factors; whereas multivariable models (shown on bottom) predict the likelihood of experiencing food insecurity after adjusting for all the other factors included in the models.

Table A3. Rates and Odds of Experiencing Housing Instability by Sociodemographic Characteristics and Activity Limitation/Health Status

	%	Odds Ratio ^a	95% CI of the OR	
			Lower CI	Upper CI
Race/Ethnicity of Resident (unadj.)				
White	16.5%^	Ref	-	-
Asian	13.3%	0.8	0.6	1.3
Black/African American	48.8%*	4.8	3.4	6.9
Hispanic/Latino(a)	47.8%*	4.6	3.6	5.9
Multiracial/Other races	34.0%*	2.6	1.6	4.1
Race/Ethnicity of Resident (adj. for covariates)				
White	14.0%^	Ref	-	-
Asian	11.2%	0.9	0.5	1.5
Black/African American	44.4%*	3.3	1.7	6.5
Hispanic/Latino(a)	43.1%*	2.6	1.9	3.6
Multiracial/Other races	31.1%*	2.2	1.5	3.3
Family Educational Attainment				
Less than high school	49.9%	1.6	0.9	3.0
High school graduate or GED	37.1%*	1.6	1.1	2.4
Some college/associate's degree	32.2%*	1.7	1.2	2.3
4-year degree or more	13.0%^	Ref	-	-
Family Income				
Below 139% of FPL	43.0%*	2.2	1.6	3.1
139% to less than 300% of FPL	31.3%*	2.0	1.5	2.6
At or above 300% of FPL	11.3%^	Ref	-	-
Activity Limitation/Health Status in Family				
Fair/poor health or activity limitation in family	30.0%*	2.6	2.0	3.4
Everyone in family had good or excellent health/no activity limitation	11.6%^	Ref	-	-
Family Composition				
Married/cohabiting, no child(ren) 0-18 years old in family living at home	10.4%^	Ref	-	-
Married/cohabiting, with child(ren) 0-18 years old in family living at home	15.5%*	1.6	1.1	2.3
Single, no child(ren) 0-18 years old in family living at home	24.3%*	1.9	1.1	3.1
Single, with child(ren) 0-18 years old in family living at home	49.1%*	3.8	1.4	10.4

^{*}Measure is significantly different than the reference category (p <0.05).

[^] Reference category for variable.

aOdds ratios reflect the likelihood of experiencing housing instability for one group (e.g., Black residents) as compared with the reference group (e.g., White residents). Bivariate models (shown on top) examine relationships between two variables without adjusting for any other factors; whereas multivariable models (shown on bottom) predict the likelihood of experiencing housing instability after adjusting for all the other factors included in the models.

Table A4. Rates and Odds of Experiencing Financial Strain by Sociodemographic Characteristics and Activity Limitation/Health Status

	%	Odds Ratio ^a	95% CI of the OR	
			Lower CI	Upper CI
Race/Ethnicity of Resident (unadj.)				
White	19.7%^	Ref	-	-
Asian	10.2%	0.5	0.3	8.0
Black/African American	39.3%*	2.6	1.8	3.9
Hispanic/Latino(a)	36.8%*	2.4	1.8	3.1
Multiracial/Other races	38.0%*	2.5	1.4	4.4
Race/Ethnicity of Resident (adj. for covariates)				
White	17.4%^	Ref	-	-
Asian	8.7%	0.5	0.3	0.9
Black/African American	36.7%*	2.1	1.2	3.6
Hispanic/Latino(a)	34.3%*	1.8	1.3	2.5
Multiracial/Other races	36.0%*	2.3	1.3	3.9
Family Educational Attainment				
Less than high school	20.1%	0.5	0.3	0.8
High school graduate or GED	33.7%	1.4	1.0	1.9
Some college/associate's degree	35.7%*	1.8	1.3	2.3
4-year degree or more	16%^	Ref	-	-
Family Income				
Below 139% of FPL	32.7%*	1.5	1.0	2.1
139% to less than 300% of FPL	35.3%*	2.1	1.5	2.9
At or above 300% of FPL	14.7%^	Ref	-	-
Activity Limitation/ Health Status in Family				
Fair/poor health or activity limitation in family	32.3%*	2.9	2.3	3.7
Everyone in family had good or excellent health/no activity limitation	12.6%^	Ref	-	-
Family Composition				
Married/cohabiting, no child(ren) 0-18 years old in family living at home	14.7%^	Ref	-	-
Married/cohabiting, with child(ren) 0-18 years old in family living at home	19.7%*	1.6	1.2	2.2
Single, no child(ren) 0-18 years old in family living at home	23.0%	1.4	0.9	2.1
Single, with child(ren) 0-18 years old in family living at home	39.4%*	2.2	1.4	3.5

^{*}Measure is significantly different than the reference category (p <0.05).

[^] Reference category for variable.

aOdds ratios reflect the likelihood of experiencing financial strain for one group (e.g., Black residents) as compared with the reference group (e.g., White residents). Bivariate models (shown on top) examine relationships between two variables without adjusting for any other factors; whereas multivariable models (shown on bottom) predict the likelihood of experiencing financial strain after adjusting for all the other factors included in the models.

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