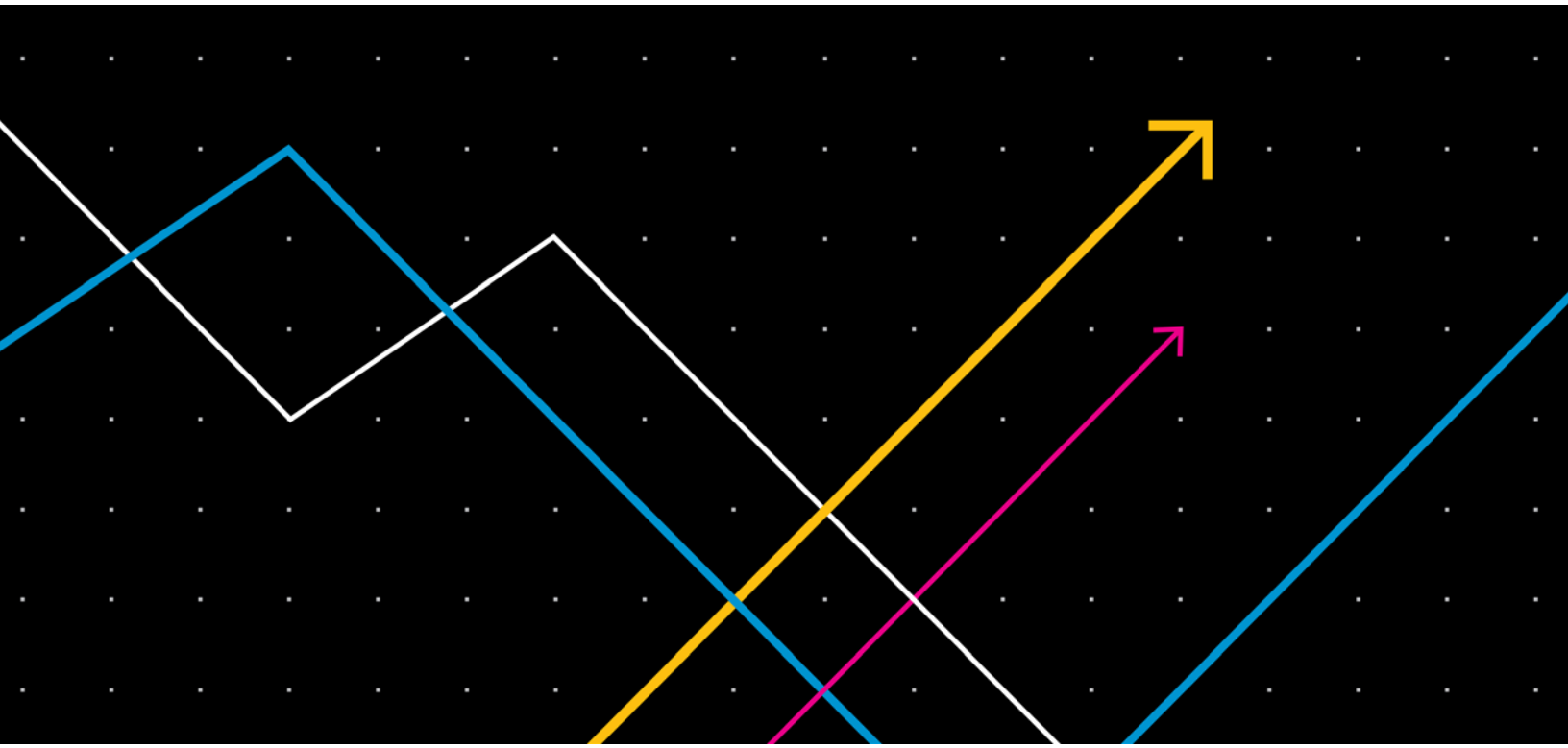

RESEARCH REPORT

Housing Insecurity in the District of Columbia

Results from a Representative Survey

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November 2023 (updated November 29, 2023)

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Errata

This report was updated on November 28, 2023, to correct wording about the shares of people in DC experiencing housing insecurity who are children and youth and transition-age youth, add an endnote providing additional context for the survey weights used throughout the report, and clarify two percentages.

In the third paragraph of page vi, the fourth sentence was corrected to reflect that children and youth make up 24 percent of people experiencing housing insecurity in DC; the previous wording suggested that 24 percent of this age group is housing insecure. Similarly, the next sentence about transition-age youth was corrected to reflect that this age group makes up 12 percent of people experiencing housing insecurity. These corrections were repeated on pages 2 and 21.

On page 14, endnote 18 was added to provide clarification on the numbers used throughout the report and direct readers to appendix C.

At the bottom of page 16, the authors added percentages in parentheses to provide more precise numbers for children and youth and transition-age youth experiencing housing insecurity.

Executive Summary

This study is among the first efforts in the District of Columbia to identify the population of people facing housing insecurity and better understand their characteristics in order to build an informed and properly targeted infrastructure of support. From late 2022 to early 2023, we conducted a representative survey of DC households using a more comprehensive definition of housing insecurity and estimated the number of people experiencing various forms of housing insecurity. We designed the survey instrument based not only on the literature, but also on input from people with lived experience and staff of service organizations who work directly with people seeking housing stabilization services.

Overall, our study finds that more than 1 in 10 DC residents (12 percent) are experiencing housing insecurity, corresponding to an estimated 82,452 DC residents.[1] Among those facing housing insecurity, the most common type is unaffordability, followed by inadequate housing and frequent or unwanted moves. Slightly more than half of people facing housing insecurity in DC predict instability in the next three months, and more than 3 in 10 people facing housing insecurity are involuntarily living with another household temporarily.

The probability of experiencing housing insecurity in DC was higher for some groups, including people in households with children, children and youth and transition-age youth, Black and Hispanic residents, and residents in Wards 7 and 8. While people in households with children make up 35 percent of the total DC population, they make up 52 percent of people experiencing housing insecurity. Although the most common type of housing insecurity is unaffordability, regardless of household type, inadequate housing is the second-most common type of insecurity among people in households with children, at a significantly higher rate than that experienced by people in adult-only households. Children and youth ages 0 to 17 who are accompanied by at least one adult make up 24 percent of people experiencing housing insecurity even though they represent just 15 percent of the DC population. Transition-age youth ages 18 to 24 make up 12 percent of people experiencing housing insecurity even though they represent only 7 percent of the overall DC population. Inadequate housing is the most common type of housing insecurity among young residents.

Although people ages 15 and older who identify as Black[2] non-Hispanic make up 41 percent of the DC population, they make up an estimated 68 percent of the housing-insecure population. People who identify as Hispanic make up 14 percent of those experiencing housing insecurity but represent 7

percent of the DC population overall. People who identify as white non-Hispanic are substantially underrepresented among those experiencing housing insecurity in DC (9 percent) even though they make up 40 percent of DC population. The type of housing insecurity experienced also differs between Black and white residents: unaffordability is the most common type for Black non-Hispanic residents, while involuntarily living with a household temporarily and frequent or unwanted moves are the most common types among white non-Hispanic residents. The probability of experiencing housing insecurity is also higher for people living in Wards 7 and 8 compared with the rest of DC. An estimated 42 percent of people experiencing housing insecurity live in Wards 7 and 8, despite those wards representing just 24 percent of DC's population.

With more than 1 in 10 people in DC experiencing housing insecurity, the need for services and support is extensive. One of the most critical strategies to alleviate housing insecurity is the expansion of affordable housing, either through building new affordable housing or preserving and restoring existing affordable housing. Subsidized housing through the Housing Choice Voucher (HCV) program has proven to be an effective tool (Gubits et al. 2015; Fischer 2015; Wood, Turnham, and Mills 2008) and has worked as well to stabilize Black non-Hispanic families as white non-Hispanic families (Solari, Walton, and Khadduri 2021). Providing incentives for landlords to participate in the HCV program has been shown to further improve the supply side of affordable housing (Nisar et al. 2018). Residents experiencing housing insecurity also indicated that they need services that reduce the cost of housing, such as housing vouchers and mortgage assistance, and services that improve housing quality and reduce formal or informal forced moves. These services should be targeted in a way to better reach groups disproportionately experiencing different types of housing insecurity, such as residents in Wards 7 and 8, households with children, and Black non-Hispanic and Hispanic residents.

Other tools that have been used to address housing insecurity include incentive programs to support housing rehabilitation, which can expand options for higher-quality housing stock in DC, as well as eviction prevention services (such as landlord-tenant mediation, eviction defense, housing counseling) to reduce rates of forced moves. DC can use these programs and services to help address the sizable need for greater housing security identified by this survey.

Further research is needed to better define and operationalize the definition of housing insecurity (Murdoch et al. 2022). For instance, although this report documents that housing insecurity most commonly arises from unaffordability, inadequate housing, and frequent or unwanted moves, it also includes people involuntarily living with a household temporarily. Additional data could provide greater insight into the reasons leading people to live in these situations or help identify characteristics that make this outcome more or less likely. This study adds to our understandings of housing insecurity,

offers estimates of the housing-insecure population in DC, and analyzes the characteristics of people experiencing insecurity. This methodology and further explorations of defining and understanding housing insecurity should be extended to other communities in various areas of the county.

Housing Insecurity in the District of Columbia

Communities are aware that housing insecurity is a problem, but the extent of the problem is unclear because we do not have a clear definition of housing insecurity or a standardized way to measure it. One form of housing insecurity that the US Department of Housing and Urban Development (HUD) defines and measures is literal homelessness—an extreme form of housing insecurity.[3] In 1987, HUD offered a standardized definition of homelessness[4] and, at the charge of Congress in 2001, pioneered a nationwide data collection system with specified guidelines on how to measure homelessness and the numbers it must produce (HUD 2007, HUD 2018). Communities across the country have adopted this system to better measure the number of people experiencing homelessness nationwide (Henry et al. 2023). However, this same effort has not been taken to measure other broader forms of housing insecurity (Watson and Carter 2020; Cox et al. 2019; Leopold et al. 2016; Frederick et al 2014).

Sparked by a desire to plan for a potential fallout from the COVID-19 pandemic, the Community Partnership for the Prevention of Homelessness (TCP)—an independent nonprofit that coordinates the District of Columbia's Continuum of Care (CoC) on behalf of the city and manages the city's Homeless Management Information Systems—partnered with the Urban Institute to look further upstream from the homelessness services system to get a broader perspective on housing insecurity and identify the groups most at risk of experiencing homelessness. TCP aims to most efficiently resource the CoC's homelessness prevention services using evidence gathered directly from DC residents. Based on feedback from people with lived experiences of housing insecurity and front-line service staff, as well as in-depth guidance and input from TCP, we designed a survey to cover topics around housing and neighborhood quality, housing affordability, frequency of moves, past and present forced moves or evictions, unwanted moves due to housing crowding or violence, couch surfing or doubling up, and projected housing stability and housing alternatives. The diverse circumstances contributing to housing insecurity can result in different approaches to service administration and resource allocation.

Together with TCP, we sought to answer five primary research questions:

- What is the share of people living in DC experiencing housing insecurity?
- Among those experiencing housing insecurity, what is the share of people living in households of families with children compared with adult-only households?
- Among those experiencing housing insecurity, what are the shares of different age groups?

- Among those experiencing housing insecurity, what are the shares of different racial or ethnic groups?
- Among those experiencing housing insecurity, what is the share of people living in Wards 7 and 8 compared with the remaining wards in DC?

We designed a multimode survey focused on various dimensions of housing insecurity that would reach a representative sample of households across the eight wards in DC. We scanned existing literature, data sources, and surveys to determine how housing insecurity had been defined in the past to measure its various forms and understand the extent of housing insecurity in DC.

Overall, our study finds that 12 percent of residents and 15 percent of households in DC[5] are experiencing housing insecurity, corresponding to an estimated 82,452 DC residents.[6] Among those facing housing insecurity, the most common type is unaffordability, followed by inadequate housing and frequent or unwanted moves. Slightly more than half of people facing housing insecurity in DC predict that they will experience instability in the next three months, and an estimated 3 in 10 people facing housing insecurity are involuntarily living with another household temporarily.

The probability of experiencing housing insecurity in DC was higher for some groups, including people in households with children, children and youth and transition-age youth, Black and Hispanic residents, and residents in Wards 7 and 8. While people in households with children make up 35 percent of the total DC population, they make up 52 percent of people experiencing housing insecurity. Although the most common type of housing insecurity is unaffordability, regardless of household type, inadequate housing is the second-most common type of insecurity among people in households with children, at a significantly higher rate than that experienced by people in adult-only households. Children and youth ages 0 to 17 who are accompanied by at least one adult make up 24 percent of people experiencing housing insecurity even though they represent 15 percent of the DC population. Transition-age youth ages 18 to 24 make up 12 percent of people experiencing housing insecurity in DC even though they represent only 7 percent of the overall DC population. Inadequate housing is the most common type of housing insecurity among the youngest residents.

Although people ages 15 and older who identify as Black non-Hispanic[7] make up 41 percent of the DC population, they make up an estimated 68 percent of the housing-insecure population. People who identify as Hispanic make up 14 percent of those experiencing housing insecurity but represent 7 percent of the DC population overall. People who identify as white non-Hispanic are substantially underrepresented among those experiencing housing insecurity in DC (9 percent) even though they make up 40 percent of the DC population. The type of housing insecurity experienced differs between

Black and white residents: unaffordability is the most common type for Black non-Hispanic residents, while involuntarily living with a household temporarily and frequent or unwanted moves are the most common types among white non-Hispanic residents. The probability of experiencing housing insecurity is higher for people living in Wards 7 and 8 compared with the rest of DC. An estimated 42 percent of people experiencing housing insecurity live in Wards 7 and 8, despite those wards having just 24 percent of DC's population.

Background

Our study sits at the intersection of a broad history of research that attempts to define and measure housing insecurity and growing pressure to understand and mitigate housing insecurity in DC.

Conceptualizing Housing Insecurity

Although the term housing insecurity is widely used, no consensus around a standard definition or measure exists. Part of the challenge inherent to developing a shared definition is that housing insecurity is not a single experience but rather has multiple dimensions (Routhier 2019; Leopold et al. 2017; Cox et al. 2019). Housing insecurity encompasses the inability to afford housing, substandard living conditions in a housing unit or neighborhood, overcrowding, homelessness, and more (Cox et al. 2019). Other forms of insecurity include forced moves, such as informal and formal evictions; living in unsafe neighborhoods or neighborhoods lacking essential resources; and doubling up (e.g., living with friends or family to share housing costs) or couch surfing (e.g., living from house to house for short periods) (Leopold et al. 2017; Morton et al. 2018). The lack of housing affordability, safety, stability, and quality may also precede or lead to an episode of homelessness (Routhier 2019). These inconsistencies in the conceptualization of housing insecurity translate into a difficulty measuring its prevalence.

Not only is housing insecurity multidimensional with no standardized definition, but the data are also limited (Cox et al. 2019; Leopold et al. 2017; Federick et al. 2014). Some representative surveys aim to measure specific aspects of housing insecurity, such as the American Community Survey (ACS) and the Survey of Income and Program Participation (SIPP). However, a limitation of each of these surveys is that while they measure some dimensions of housing insecurity, none capture all dimensions or explicitly offer a clear definition (see table A.1 in appendix A for a list of definitions). Moreover, without a consensus on measurement, some dimensions overlap, making it difficult to estimate the prevalence and extent of housing insecurity in the United States (Leopold et al. 2017). For example, some federal

agencies consider doubling up or couch surfing as a form of homelessness (DOE 2001; Richard et al. 2022; Morton 2018), while other federal agencies consider it a form of housing insecurity (Henry et al. 2022).

Particularly in light of the COVID-19 pandemic and its economic impacts, other attempts have been made in recent years to measure the extent of housing insecurity. Recent findings from the US Census Bureau's Household Pulse Survey indicate that one in five renter households felt pressure to move from their current home in the prior six months, with 40 percent reporting increased rent as a cause.[8] In 2020, almost a third of households were considered cost burdened, defined as households devoting more than 30 percent of their incomes toward housing (Joint Center for Housing Studies 2022). In 2018, more than 3.5 million eviction cases were filed.[9] And in 2019, 7.77 million renter households experienced "worst case needs," meaning that they have very low incomes, pay more than half of their incomes toward rent, and/or live in severely inadequate conditions and do not receive rental or other housing assistance from the government (Alvarez and Steffen 2021).

One data source well positioned to foster an operational definition and measurement of housing insecurity is the American Housing Survey (AHS), a biennial HUD–sponsored survey. The AHS provides national-level information on housing quality and cost, including the number of moderate and severely rent-burdened households and other markers of residential instability, such as doubling up and evictions (Alvarez and Steffen 2021; Leopold et al. 2017). Along with a doubled-up module in 2013, the AHS recently released a housing insecurity research module for the 2019 AHS with the intention of working toward a comprehensive national definition of housing insecurity (Henry, Mahathey, and Takashima 2020; Watson and Carter 2020). The results from this module were recently released, leading to the first stage in determining a national measure of housing insecurity (Murdoch et al. 2022).[10]

The Washington, DC, Context

As with much of the country, the District of Columbia shows signs that housing insecurity is a growing issue. Recent data have shown that District residents report high frequency of insecurity indicators such as unaffordability, instability, poor living conditions, and concerns about future housing (DC Office of Planning 2021), and nearly 66 people per 10,000 were experiencing homelessness as of 2022 (de Sousa et al. 2022). Following the end of DC's eviction moratorium[11] in September 2021, which allowed landlords to resume filing all types of eviction cases starting January 1, 2022, the number of eviction filings and scheduled evictions has been increasing steadily since (Abraham et al. 2023). With eviction

filings and granted evictions disproportionately affecting Black people in DC, evictions are inequitable at all stages of the process (McCabe and Rosen 2020).

Unaffordability has been a growing concern among residents in the District (DC Office of Planning 2021). Among low-income households—defined as those with incomes below 30 percent of median family income (MFI)—more than three-quarters are moderately or severely cost burdened (Aurand et al. 2023). In a survey of District residents in 2018, 14 percent reported that they had not been able to pay their full amount of rent sometime in the past three months, with the lowest-income households (those below 50 percent MFI) most affected. Additionally, more than a quarter of low-income households expressed that they were either currently experiencing or felt at risk of future housing instability (Office of the Deputy Mayor for Planning and Economic Development 2019).

As is the case across the country, there are several disparities in who faces housing insecurity within DC. For example, in 2018, Black households were more likely to report a forced move (e.g., being asked to leave by the landlord or a bank in a foreclosure or short sale) compared with white households or households of other races, and Black residents were more likely to perceive risk of becoming residentially unstable (Office of the Deputy Mayor for Planning and Economic Development 2019). About one-fifth of residents in both Wards 7 and 8 felt that they would be asked to leave their housing within the next three years, and more than a third of residents in Ward 8 reported having at least two housing-related issues, such as broken appliances, peeling paint, or broken locks (Office of the Deputy Mayor for Planning and Economic Development 2019). These circumstances in Washington, DC, along with the unknown consequences of the pandemic, shaped the research questions for this study.

Operationalizing a Measure of Housing Insecurity

Our operational definition of housing insecurity accounts for several dimensions, including housing inadequacy, unaffordability, frequent or unwanted moves, predicted instability, and involuntary temporary status (table 1, box 1).[12] We intentionally exclude those experiencing homelessness from the survey and from our analyses because TCP already has detailed datasets and a clearer understanding of this population, and we wanted to focus our efforts on people experiencing less severe housing insecurity (TCP 2022).

A respondent or household qualifies as experiencing housing insecurity through one of two avenues: automatic inclusion or cumulative signals of insecurity (table 1). Automatic inclusion means the respondent faces at least one of three conditions that the literature and reviewers universally agree identify someone as being housing insecure based on that condition alone. The cumulative signals are

based on a count of any 5 of 17 conditions that signal housing insecurity in combination but would not alone constitute housing insecurity. Thus, a respondent who does not experience any of the three automatic inclusion response conditions can still be flagged as experiencing housing insecurity if they demonstrate five or more signals of insecurity (see appendix A, figure A.1 and table A.2).

BOX 1

Involuntary Temporary Status Definition

Involuntary temporary status reflects the condition of one or more people who have joined a household in their housing unit in the past 12 months temporarily, are still living there, and moved in because they cannot afford another place or have trouble finding a place to live on their own because of a past eviction, poor credit, or similar condition that limits their choice. The design of the question set is inspired by the doubled-up rotating topical module in the American Housing Survey (Solari et al. 2017). Couch surfing is also considered a temporary living situation, often attributed to young people temporarily living with a family member or friends out of necessity (Curry et al. 2017). However, "couch surfing" and "doubling up" are both terms that are filled with assumptions and do not have clear definitions of their own. Rather than use these terms, we use "involuntary temporary status" to avoid assumptions of what this means or the types of people who have faced these experiences.

The survey questions that are reflected in the involuntary temporary status (see questions 31, 32, 41, and 42) were intended to capture both scenarios, as well as other precarious situations among people whose housing histories and futures likely differ from those of permanent household members. Our survey captures people temporarily living place to place if those places are within the geographic bounds of DC at the time of the survey, but not if they are temporarily living in another jurisdiction. Although the survey language indicates to the respondent that information about people living with them temporarily will not be reported to anyone with influence over their housing (appendix B), it is possible that survey participants underreported these individuals out of concern that it could compromise their safety or housing situation.

TABLE 1

Housing Insecurity Levels and Indicator Responses

Selection criteria	Response conditions
Automatic inclusion (any of these responses trigger housing insecurity status)	▪ **Eviction notice:** an affirmative answer to the question, "For your current residence, have you received an eviction notice from a court or been given notice from or asked to leave by your current landlord?" ▪ **Likely eviction/foreclosure:** a response of "very likely" to the question, "How likely is it that you or members of your household will have to leave your house or apartment within the next 3 months because of eviction or foreclosure?" on a five-point scale ▪ **Involuntary temporary status:** an affirmative answer to the question, "Are you living in this household temporarily?" as well as the answer "can't afford to stay anywhere else" in response to the follow-up question, "Are you living in this household temporarily because you can't afford to stay anywhere else or due to another situation?"
Cumulative signals (selection of any 5 of the 17 conditions indicates housing insecurity)	***Housing inadequacy*** ▪ **Poor housing quality:** (1) selection of two of the following issues (not including unsafe neighborhood) OR (2) at least three of the following issues: plumbing or electrical, air conditioning or heating, lack of kitchen appliances, mold or pests, noise issues, disability access issues, structural issues, unsafe neighborhood[b], any other issue ▪ **Overcrowding[a]:** (3) reported number of residents to rooms yields a total of greater than one person per room, excluding bathrooms, basements, halls, porches, and foyers ***Unaffordability*** ▪ **Rent/mortgage payment uncertainty:** (4) a response of "not too confident" OR (5) a response of "not at all confident" to the question, "How confident are you about your household's ability to pay your next rent or mortgage payment?" ▪ **Difficulty paying expenses:** (6) a response of "very difficult" to the question, "In the past 3 months, how difficult, if at all, has it been for your household to pay for usual household expenses, such as food, rent or mortgage, car payments, medical expenses, student loans, and so on?" ▪ **Insufficient rental assistance:** an affirmative response to the question of, "In the past 12 months, have you used any COVID–related emergency rental assistance programs such as STAY DC, ERA, or mortgage assistance, to help pay for any of your housing costs?" AND an answer of either (7) "somewhat unlikely" OR (8) "very unlikely" to the follow-up question, "How likely is it that the assistance you received will allow you to remain in your housing unit for the next 3 months?" ▪ **Lack of financial backup:** (9) an answer of "no" to the question, "If you or your household are short on money to pay the rent or mortgage, do you have someone who can lend you money?" ***Frequent or unwanted moves*** ▪ **Frequent prior moves:** (10) reporting three or more places of residence in the past 12 months in response to the question, "In the past 12 months, how many places have you lived including this one?" ▪ **Forced move stress**: (11) an affirmative answer to the question, "In the past 12 months, were you ever worried or stressed about being forced to move?" ▪ **General forced move:** (12) an affirmative answer to the question, "In the past 12 months, have you been forced to leave your housing or evicted?"

Selection criteria	Response conditions
	▪ **Kicked out, violence, or crowding-induced move:** (13) a response of "asked to leave," "housing crowding," or "conflict or violence" when asked to "indicate if this was a reason (you/this person) left (your/their) prior housing."
	Predicted instability
	▪ **No stable place in 3 months:** (14) a response of "somewhat unlikely" or (15) a response of "very unlikely" to the question, "In the next 3 months, how likely are you to have a stable place to stay?"
	▪ **Lack of safe housing alternative:** (16) an answer of "no" to the question, "If you had to leave your home permanently, for any reason, do you have a safe place to go?"
	▪ **Anticipated forced move:** (17) a response of "somewhat likely" to the question, "How likely is it that you or members of your household will have to leave your house or apartment within the next 3 months because of eviction or foreclosure?"

Sources: Author-generated indicators for housing insecurity. For more information on scholarly sources for these indicators, see appendix A.

[a] Crowding is defined by the US Census Bureau as occupied units with more than one person per room (Blake, Kellerson, and Simic 2007). Note that living in overcrowded housing conditions alone would not qualify a person or household as experiencing housing insecurity.

[b] Neighborhood safety is specifically excluded from the AHS housing insecurity index (Murdoch et al. 2022), but we include a marker for unsafe neighborhood because feedback from people with lived experience emphasized its importance in not feeling safe or secure in their home.

To arrive at this definition, we reviewed literature on the different metrics researchers have used to measure housing insecurity (appendix A) and identified several indicators across existing studies and surveys. We used these studies and surveys to form the initial questions for the survey instrument, which were refined and adjusted to the local DC context using procedures described in more detail below.

Without a consistent definition of housing insecurity from the literature, we still needed to determine what answer options and sets of conditions resonate locally and would cause a person to seek or become eligible for resources. To aid in this effort, TCP engaged in focus groups with local organizations to get their feedback on what conditions and answer combinations would flag a person as experiencing housing insecurity. Based on a set of discussion questions designed by the research team, TCP staff held focus groups with staff in organizations working in homelessness prevention, eviction prevention, rental and mortgage assistance, and homelessness services and recorded transcripts of the discussions. Our definition of housing insecurity was therefore informed by existing research, as well as expressed realities on the ground from community members and people with lived experience.

The spread of response conditions across the five types of insecurity—housing inadequacy, unaffordability, frequent or unwanted moves, predicted instability, and involuntary temporary status—are not equally distributed, with some categories containing one condition and others containing six (table 2). Housing inadequacy and unaffordability consist only of cumulative signals of insecurity, which means that people facing these types exhibit several signals of insecurity. Response conditions for frequent or unwanted moves and predicted instability are a mix of an automatic inclusion condition—eviction notice and likely eviction or foreclosure, respectively—and cumulative signal conditions. Involuntary temporary status is a condition that community members agreed was an automatic marker of housing insecurity. For some residents experiencing involuntary temporary status, we may not have information on the other signals of housing insecurity because responses offered by a permanent household member are assumed not to apply to temporary stayers and are therefore set to "missing" for temporary residents. In these cases, the number of cumulative signals of insecurity is likely underestimated.

TABLE 2

Count of Conditions for Each Housing Insecurity Type

Insecurity type categories	Number of conditions
Housing inadequacy	3
Unaffordability	6
Frequent or unwanted moves*	4
Predicted instability*	6
Involuntary temporary status*	1

* Contains one condition that alone would automatically qualify someone as housing insecure.

Survey Instrument and Implementation Design

Based on the literature and work described above to generate a set of questions, we drafted a series of topics related to housing insecurity we could cover in the survey. These topics included current household tenure, housing unit characteristics, housing crowding, housing quality satisfaction, ability to cover housing costs, experience with and concerns about eviction, temporarily hosting someone without another place to stay, expectations about housing security in the next three months, support systems, and events that led to their current housing situation. To better inform the development of our survey instrument, we engaged in two waves of cognitive testing with people with lived experience and staff of service programs working with people seeking housing stabilization and homelessness prevention services (see appendix B for a more detailed description of the cognitive testing).

We incorporated all feedback into the final survey invitation and instrument (appendix B). The survey contains approximately 25 standard questions related to different dimensions of housing insecurity, as well as a household roster that loops through 10 questions on each person (age 15 or older) living in that housing unit to gather key demographic characteristics and to determine permanent versus temporary status.

SURVEY IMPLEMENTATION

In partnership with SSRS, a research firm specializing in fielding surveys, we determined a sampling plan and administered this multimode survey online, by mail, and by phone. We designed the sample based on an integration of a traditional address-based sample (ABS) with a sample of prepaid[13] cell phone users. The benefit of ABS is that it offers effective strategies to reach a probability sample of households, but respondents of this sampling approach tend to have lower response rates (Boyle et al. 2012; McPhee et al. 2018; Brick, Williams, and Montaquila 2011). To ensure we reached these underrepresented groups—lower-income populations, less literate and educated populations, and populations of color—more effectively, we incorporated a small second sample of those who use prepaid cell phones. These underrepresented groups with lower response rates in ABS samples are overrepresented among prepaid cell phone users (Dutwin 2014).[14] We assumed a 10 percent cooperation rate for the ABS sample overall, meaning 1 response for every 10 households sampled.

We use a stratified sampling method in the ABS that oversamples households who live in census block groups with higher proportions of Black or African American, Hispanic, and lower-income households. This was designed to enhance representation in the ABS sample from these lower-response-rate groups. People who did not currently reside in DC, were under age 18, or who were currently experiencing homelessness were ineligible to take the survey. We used a two-wave collection approach in order to give us the flexibility to readjust our sample design and assumptions to ensure we received a representative distribution of respondents.

We initiated the first wave on October 13, 2022. The sample received an envelope containing a personalized cover letter and a pre-incentive of a dollar bill and a quarter. The dollar was visible through a window in the envelope to encourage the recipient to open it, while the quarter added weight and texture to incite further curiosity. The letter explained the purpose of the survey; included the web address to take the survey online, along with a personal passcode and QR code for direct access to the survey using their phone; a hotline phone number in case they had questions or wanted to take the survey by phone; and information on the $15 post-incentive[15] (see appendix B for the invitation letter). We then followed up with a reminder postcard approximately a week later. About a week and a half

after sending out the postcard, we mailed a final letter to those in the sample who had still not completed the survey, which contained a cover letter, a printed paper version of the survey, and a prestamped return envelope. People in the sample who were identified in the high Hispanic stratum received mailers that contained both English and Spanish language versions. Using the same procedures as the first wave, we launched the second wave of data collection on December 14, 2022. We closed the survey to all respondents on February 10, 2023.

SURVEY RESPONSES

We received our first survey responses on October 14, 2022, and we obtained a total of 1,807 responses. Of those, 201 respondents (11 percent) were reached via prepaid cell phone, and the remainder (89 percent) came from responses to our address-based sample outreach. Within the 1,606 address-based sample responses, 1,223 (77 percent) responded online through the web platform, 281 (or 17 percent) responded by mailing back the hard-copy survey form, and the remaining 102 (6 percent) responded via in-bound calling lines.

Within our address-based sample, we had an overall 14 percent completion rate (table 3) and a response rate of 28 percent (table C.8). The prepaid cell phone sample resulted in an overall response rate of 4 percent. The completion rates for the address-based sample differed by neighborhood characteristics, with a higher completion rate in areas targeted as having a high African American population (18 percent) and a lower rate in high-poverty neighborhoods (10 percent). Completion rates of residents in high Hispanic population neighborhoods were 13 percent, near the average completion rate across all neighborhoods. The remaining neighborhoods, which have higher incomes and a higher share of white residents, had a 19 percent completion rate.

We received survey responses from all areas of DC with some variation in rates. Completion rates across the city ranged from 11.1 to 20 percent by ZIP code and from 13.4 percent to 15.2 percent by ward (figures 1 and 2).

TABLE 3

ABS Sample and Completed Interviews by Strata and Wave

	Wave 1		Wave 2		Total		
	Sample	Completed Interviews	Sample	Completed Interviews	Sample	Completed Interviews	Unweighted completion rate
High poverty	1,330	198	2,849	221	4,179	419	10%
High African American population	290	48	588	112	878	160	18%
High Hispanic population	1,010	153	1,826	223	2,836	376	13%
Remaining neighborhoods	1,110	171	2,237	480	3,347	651	19%
Total	**3,740**	**570**	**7,500**	**1,036**	**11,240**	**1,606**	**14%**

Source: SSRS tabulations are based on 2023 DC housing insecurity survey response and nonresponse data.
Note: Strata are based on neighborhoods or census blocks, grouped based on the specified characteristics of residents in those neighborhoods and placed into one of the four categories.

FIGURE 1

Completion Rates by ZIP Code

Percentage of address-based sample reached that responded to the survey

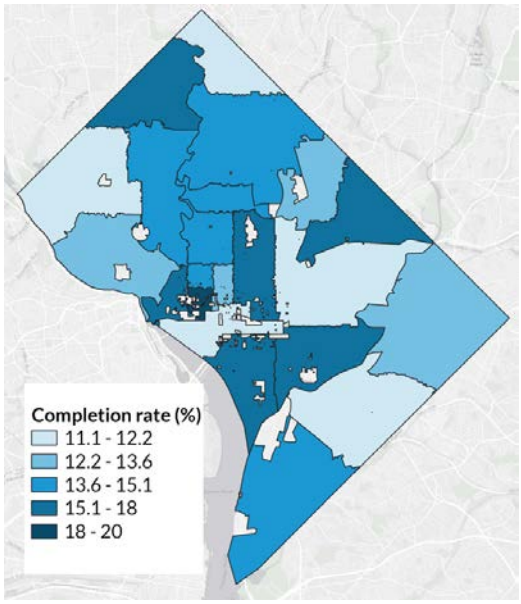
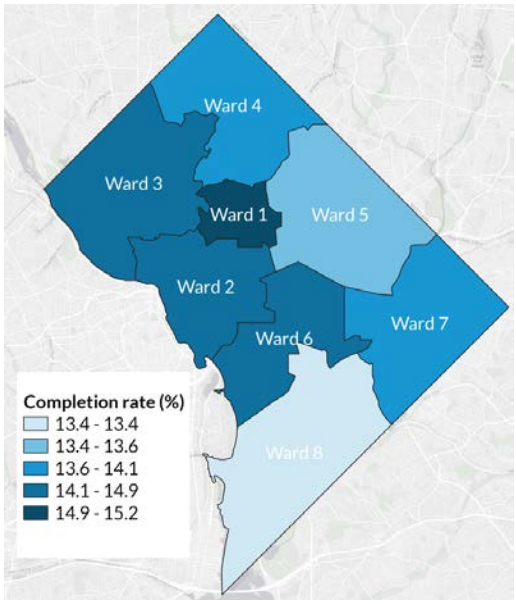


FIGURE 2

Completion Rates by Ward

Percentage of address-based sample reached that responded to the survey



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Source: Authors' analysis of 2023 DC housing insecurity survey completion rate data
Notes: Divisions use five natural breaks in completion rate distributions. Administrative ZIP codes were excluded from the sample. Ward and ZIP code completion rate data do not include prepaid cellphone respondents. Figure 2 reflects ward boundaries as of 2022.

Although households are sampled, respondents offer information on the household overall as well as on the people living within that household, meaning we can generate results for both households and DC residents. The sample resulted in survey responses from 1,807 households representing 3,747 people. People who had moved into their household in the past 12 months were defined as temporarily living with that household. No households could have only temporary members, so those with at least one temporary member were mixed with at least one permanent member. If the respondent was deemed part of the permanent household, the temporary household would have missing data on several questions related to history of the household that we assumed did not apply to the temporary household. Similarly, if the respondent was a temporary household member, household members with permanent status were assigned missing values for survey questions related to past history of the household. For the main body of this report, we use the person as the unit of analysis.

SURVEY WEIGHTS

We generated several weights to apply to different sets of survey questions. Household-level weights are applied to survey questions that apply to the household only. These weights correct for disproportionate probabilities of selection as well as household eligibility and nonresponse. For the ABS, the household weight adjusts for differing sampling probabilities across the four census block group–based strata. The prepaid cell phone sample is also adjusted for sampling rates, eligibility, and nonresponse. Because the ABS and prepaid cell phone samples are drawn from separate but overlapping frames, they are combined and adjusted based on the estimated number of prepaid cell phones in ABS households. The household-level weight is then post-stratified to six characteristics of DC households based on benchmarks derived from the American Community Survey.[16]

We computed a second weight for analyses conducted at the individual level. This is calculated differently for people ages 15 or older than for those ages 14 or younger because we collected information in a household roster of all people ages 15 and older. Each person age 15 or older was weighted to represent the population parameters of DC residents ages 15 or older based on eight characteristics from the American Community Survey.[17] People ages 14 or younger are adjusted based on a survey question that counts the number of people ages 14 or younger in the household and multiplies that by the household weight. It is then balanced to represent the number of people ages 14 or younger in DC based on the American Community Survey. A full accounting of the methods for fielding the survey and developing the weights can be found in appendix C.I. In appendix C.II, we also offer a table of unweighted and weighted person-level frequencies of the survey respondents and their household members for transparency about the raw sample sizes before and after they are weighted.

All analyses presented in the main body of the report use people as the unit of analysis, rely on person-level weighted data, and reflect the overall population of people in DC.[18] This means that questions about the household overall are applied to each member of the household. When setting our weighted estimate specifications for person-level analyses, we grouped people at the household level (assigning all people within a single household who identified themselves as living within that household temporarily to their own household) before applying the weight to our tabulations. A few respondent attitude questions apply only to the respondent, which requires a respondent-level weight. Respondents were required to be 18 or older, and therefore, the weight used for analyses of respondent-specific questions is based on the person-level weight calibrated to represent the population of people ages 18 or older in DC based on the American Community Survey. We offer household-level analyses using a household-level weight, and the respondent attitude findings using the respondent-level weight with confidence intervals can be found in appendix D.

LIMITATIONS

This survey is representative of people in DC, but it faces several limitations. The sample size allows us to make larger-scale observations about people experiencing housing insecurity, but it is limited in its ability to look within groups to identify more nuance in the experiences of smaller groups. Because this is based on a sample of households, numbers and percentages reported are all estimates, whereby the true value falls within a margin of error. In some cases, the margins of error are wide; if the margins of error overlap for groups we are comparing, we cannot be confident that the estimated relationship is not different or even reversed. Because we require respondents to be at least 18, households members ages 17 or younger are necessarily accompanied by at least one person who is 18 or older; this study therefore does not include unaccompanied youth.

Findings

Using the data from our survey, we were able to generate estimates of housing insecurity among DC residents. Below, we present answers to the five primary research questions.[19]

What Is the Share of Residents in DC Experiencing Housing Insecurity?

Overall, 12 percent of DC residents (with 95 percent confidence that the true value is between 11 and 14 percent) are experiencing housing insecurity, which translates to an estimated 82,452 residents (with 95 percent confidence that the true value is between 69,808 and 95,095 people) (table 4). People

experiencing housing insecurity face multiple types of insecurity at the same time, so the types of insecurity are not mutually exclusive. Among DC residents experiencing housing insecurity, the most dominant type of insecurity is unaffordability (89 percent). Inadequate housing, such as housing crowding or facing multiple housing quality issues, is the second most common type, experienced by 81 percent of people experiencing insecurity. More than three-quarters (78 percent) of people experiencing housing insecurity in DC have faced or are facing frequent or unwanted moves, while 52 percent predicted instability in the next three months or indicated that they have no safe housing alternative if they were forced to move. Additionally, 31 percent of people facing housing insecurity were involuntarily living with a household temporarily.

TABLE 4

People Experiencing Housing Insecurity

	Weighted estimates	Weighted share	95% confidence interval
Total people in DC	661,845	—	—
Total people experiencing housing insecurity	82,452	12%	(11%, 14%)
Automatic inclusion	35,400	42%	(34%, 52%)
Cumulative signals only	47,052	58%	(44%, 70%)
Type of housing insecurity among people experiencing housing insecurity			
Inadequate housing	66,795	81%	(75%, 86%)
Unaffordability	72,987	89%	(84%, 92%)
Frequent or unwanted moves	64,510	78%	(72%, 83%)
Predicted instability	42,628	52%	(45%, 58%)
Involuntary temporary status	25,350	31%	(25%, 37%)

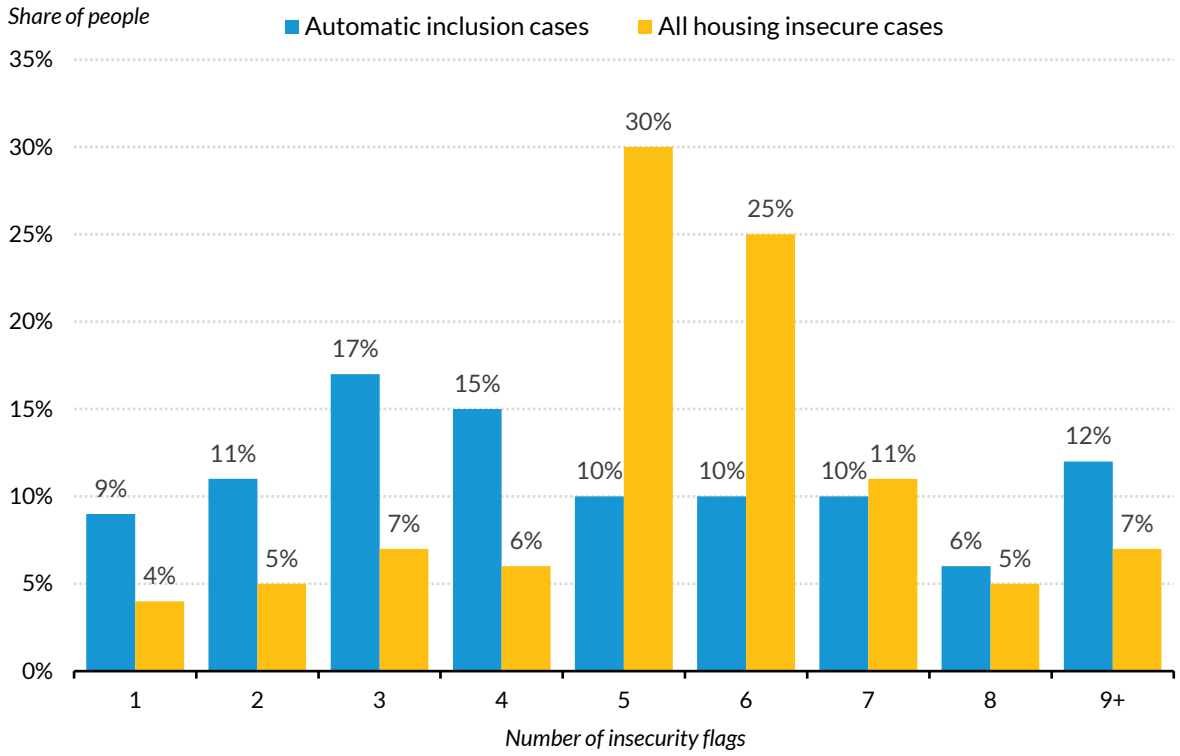
Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: N=82,452. These estimates were generated at the person level and are weighted to reflect the population of people in DC. Housing insecurity types do not sum to 100 percent: people can experience multiple types of housing insecurity, and thus the categories should not be treated as mutually exclusive. The 95 percent confidence interval refers to the range of values within which we have 95 percent confidence the true value lives. Housing insecurity does not include those experiencing homelessness.

Among people who are housing insecure, 42 percent (or 35,400 people) had at least one of the three conditions of housing insecurity that automatically flag a person as housing insecure (i.e., involuntary temporary status, have an eviction notice, or one or more household members are very likely to leave due to eviction or foreclosure in the next three months). The remaining 58 percent (or 47,052 people) are identified as housing insecure based on having at least five signals of housing insecurity. By definition, a person must demonstrate at least five signals to be flagged as housing insecure, but 48 percent of all people facing housing insecurity have six or more conditions. Those with automatic inclusion conditions also tend to experience other signals of housing insecurity. Nearly half (48 percent)

of those with automatic inclusion conditions also face five or more conditions, including their automatic condition (figure 3).

FIGURE 3

Share of People Experiencing Housing Insecurity by Count of Conditions, for Automatic Inclusion and Overall



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Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. Those who experience involuntary temporary status who are not the primary respondent will have missing values of the other survey questions used to calculate the number of flags, and therefore may be the majority of cases with one or two signals in the automatic inclusion cases. This may underestimate the number of flags among those experiencing involuntary temporary status.

Not everyone in DC shared an equal probability of experiencing housing insecurity, as the rate of insecurity was higher for households with children, for children and youth and transition-age youth, for Black and Hispanic residents, and residents in Wards 7 and 8 (table 5). Indeed, the estimated housing insecurity rate was twice as high for families with children than for adult-only households (18 percent versus 9 percent), and six times as high for Black and Hispanic residents than for white residents (18 percent and 18 percent versus 3 percent). An estimated one in every five (19 percent) children and youth (ages 0 to 17) accompanied by an adult and one in five (21 percent) transition-age youth (ages 18

to 24) were experiencing housing insecurity, while an estimated one in four residents in Ward 8 reported experiencing housing insecurity. These differential rates of insecurity point to profound gaps in household incomes and expenses, housing quality, and resource networks across the city and across population groups.

TABLE 5

Housing Insecurity Incidence Rates by Household Type, Age, Race/Ethnicity, and Ward

	Housing Secure		Housing Insecure		Total
	Share	95% confidence interval	Share	95% confidence intervals	Share
Household type					
Adult-only household	91%	(87%, 95%)	9%	(8%, 11%)	100%
Household with children	82%	(71%, 92%)	18%	(13%, 23%)	100%
Age					
0 to 17	81%	(74%, 86%)	19%	(14%, 26%)	100%
18 to 24	79%	(72%, 84%)	21%	(16%, 28%)	100%
24 to 55	89%	(87%, 91%)	11%	(9%, 13%)	100%
55+	91%	(88%, 93%)	9%	(7%, 12%)	100%
Race (ages 15+)					
Black non-Hispanic	82%	(78%, 84%)	18%	(16%, 22%)	100%
White non-Hispanic	97%	(95%, 98%)	3%	(2%, 5%)	100%
Hispanic	82%	(75%, 87%)	18%	(13%, 25%)	100%
Other or mixed race or ethnicity	91%	(86%, 95%)	9%	(5%, 14%)	100%
Ward					
1	91%	(86%, 94%)	9%	(6%, 14%)	100%
2	93%	(88%, 96%)	7%	(4%, 12%)	100%
3	97%	(94%, 98%)	3%	(2%, 6%)	100%
4	87%	(82%, 91%)	13%	(9%, 18%)	100%
5	87%	(80%, 92%)	13%	(8%, 20%)	100%
6	90%	(85%, 94%)	10%	(6%, 15%)	100%
7	82%	(76%, 87%)	18%	(13%, 24%)	100%
8	75%	(67%, 82%)	25%	(18%, 33%)	100%
Total	**88%**	**(87%, 90%)**	**12%**	**(11%, 14%)**	**100%**

Source: Authors' analysis of 2023 DC housing instability survey data.

Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval. Children and youth ages 0 to 17 are necessarily accompanied by an adult because survey respondents need to be at least age 18. Racial and ethnic data was only available for household members ages 15 and older.

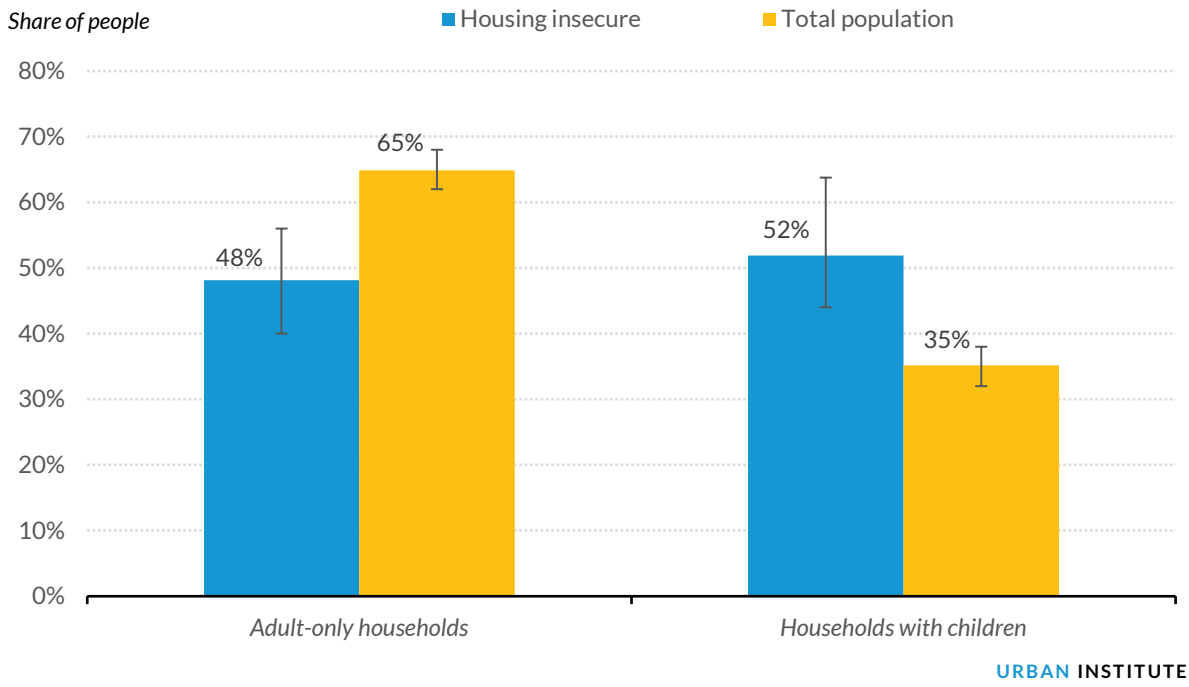
While the table above explains the share of DC residents belonging to different groups who are experiencing housing insecurity, the following sections explore the nature and composition of the housing insecure population in DC.

Shares of Housing-Insecure DC Residents Living in Households of Families with Children versus Adult-Only Households

To better anticipate possible service use, it is important to understand share of this group by household types. Adult-only households consist of one or more adults ages 18 or older and have no children, defined as people ages 17 or younger. Households with children are those that have at least one adult age 18 or older and at least one child. Based on the survey responses, 48 percent of people experiencing housing insecurity reside in adult-only households, while 52 percent of people are in households with children.[20] While people in households with children make up 35 percent of the total DC population, they make up 52 percent of people experiencing housing insecurity (figure 4). Additionally, households with children experiencing housing insecurity tend to have more children compared with the broader DC population of households with children. Among households with children experiencing housing insecurity, nearly a quarter (24 percent) have three or more children ages 0 to 17 in the household, compared with 12 percent of total households with children in DC (appendix D, table D.16).

FIGURE 4

Share of Total DC Population and People Experiencing Housing Insecurity by Household Type

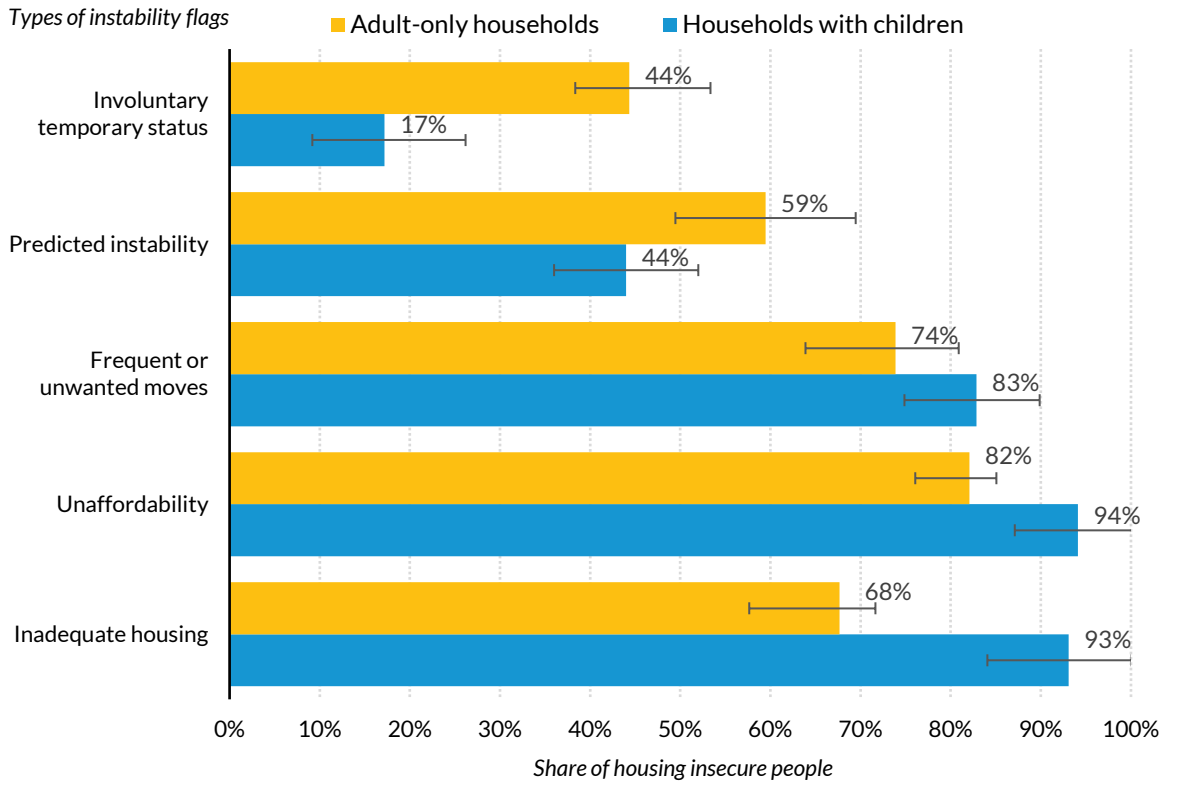


Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. Adult-only households are those where all people living in the housing unit are 18 or older. Households with children have at least one adult age 18 or older and at least one child age 17 or younger. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lies.

Among people experiencing housing insecurity, housing unaffordability is the most common type of housing insecurity regardless of their household type. And among people in households with children experiencing housing insecurity, inadequate housing (93 percent) is the second-most common type of insecurity they face, though this is less common among adult-only households (68 percent) (figure 5). Among people living in adult-only households, frequent or unwanted moves is the second-most common type of housing insecurity (74 percent). Although living in temporary housing involuntarily is the least common type of insecurity for all people regardless of their household type, it is 2.5 times more prevalent among people in adult-only households compared with people in households with children (44 percent versus 17 percent).

FIGURE 5

Type of Insecurity Experienced by Household Type among Housing Insecure Population



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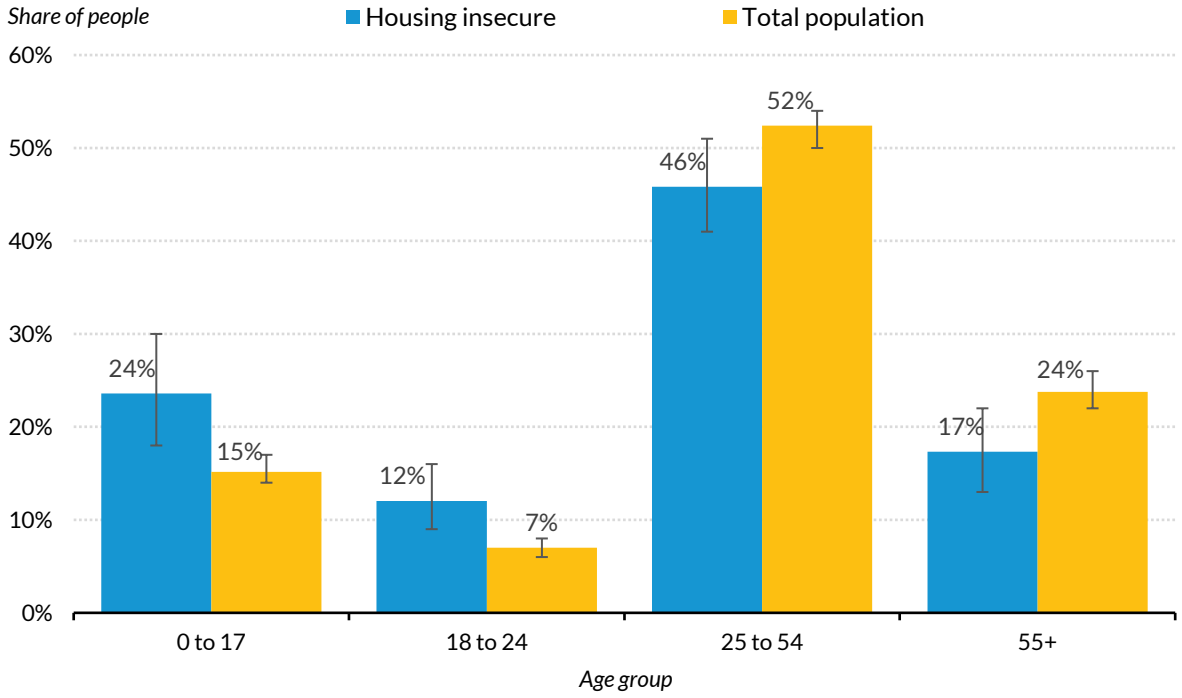
Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. Adult-only households are those where all people living in the housing unit are age 18 or older. Households with children have at least one adult age 18 or older and at least one child age 17 or younger. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

Shares of Different Age Groups among Housing-Insecure DC Residents

As resources to assist people to help prevent and exit homelessness are different for children and youth in families compared to people alone, or to adults and older adults, it is important to know the age characteristics of those experiencing housing insecurity. Among people experiencing housing insecurity, 17 percent are ages 55 and older, slightly more than half (52 percent) are ages 25 to 54, 12 percent are transition-age youth ages 18 to 24, and nearly a quarter are 17 or younger (24 percent), though these children and youth are accompanied by at least one adult age 18 or older (figure 6). Comparing the shares of housing insecure people of different age ranges to the broader population in DC, the population of people experiencing housing insecurity tends to be younger. Young people are overrepresented among those experiencing housing insecurity. Children and youth ages 0 to 17 who are accompanied by at least one adult make up 24 percent of people experiencing housing insecurity even though they represent 15 percent of the DC population).[21] Transition-age youth ages 18 to 24 make up 12 percent of people experiencing housing insecurity in DC even though they represent only 7 percent of the overall DC population. These transition-age youth and people ages 25 and older can either be in an adult-only household or in a household with children under 18. Although older people are underrepresented among those experiencing housing insecurity than their share of the overall DC population, a sizable population of prime working-age adults ages 25 to 54 (nearly 37,800 estimated people) and older adult residents ages 55 and older (about 14,300 estimated people) are experiencing housing insecurity.

FIGURE 6

Share of Total DC Population and People Experiencing Housing Insecurity by Age Groups



URBAN INSTITUTE

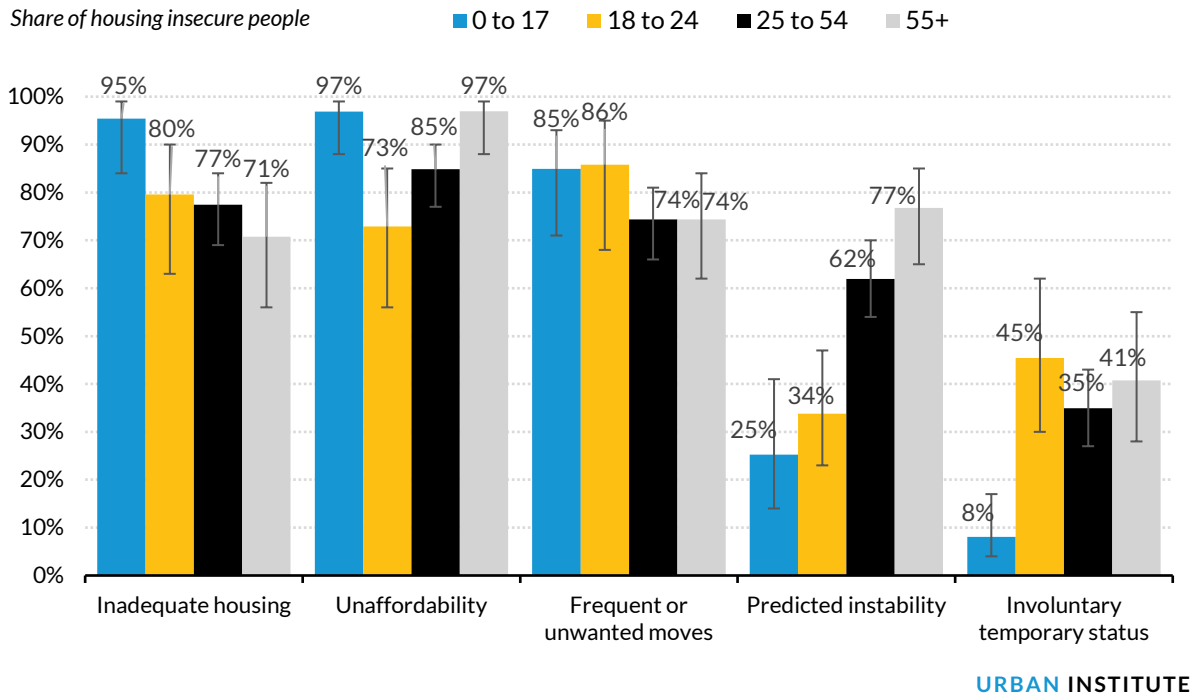
Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives. Children and youth (ages 0 to 17) are accompanied by at least one adult, but other age groups can be in either adult-only households or households with children.

Among those experiencing housing insecurity, we can further examine the type of insecurity experienced by people in different age groups, though with less accuracy. Predicted instability is increasingly common as people get older: it is least common among people ages 17 or younger (25 percent) and most common among those ages 55 and older (77 percent) (figure 7). Inadequate housing is most common among the youngest residents (95 percent) and decreases as people age, with 71 percent of those ages 55 or older living in inadequate housing. The youngest people (essentially those ages 15 to 17 due to missing information on people under age 15) are less likely to experience involuntary temporary status compared with older age groups. This might suggest that households with children have a more difficult time finding temporary support with friends or family than do individuals. Among transition-age youth experiencing housing insecurity, 45 percent are involuntarily living with a household temporarily. We also find that a large share of older adults ages 55 and older (41 percent) are involuntarily living with a household temporarily. With growing concerns about the increase[22] in older adults experiencing homelessness (Henry et al. 2023; Culhane et al., 2019; Rowland 2023), it is

important to look further upstream at the types of housing insecurity they are facing to better target resources to prevent homelessness.

FIGURE 7

Share of Housing-Insecure People by Age Category and Insecurity Type



Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. Children and youth ages 0 to 17 are accompanied by at least one adult. Involuntary temporary status is determined only for those ages 15 or older, so this is an under-estimate for the 0 to 17 age group. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

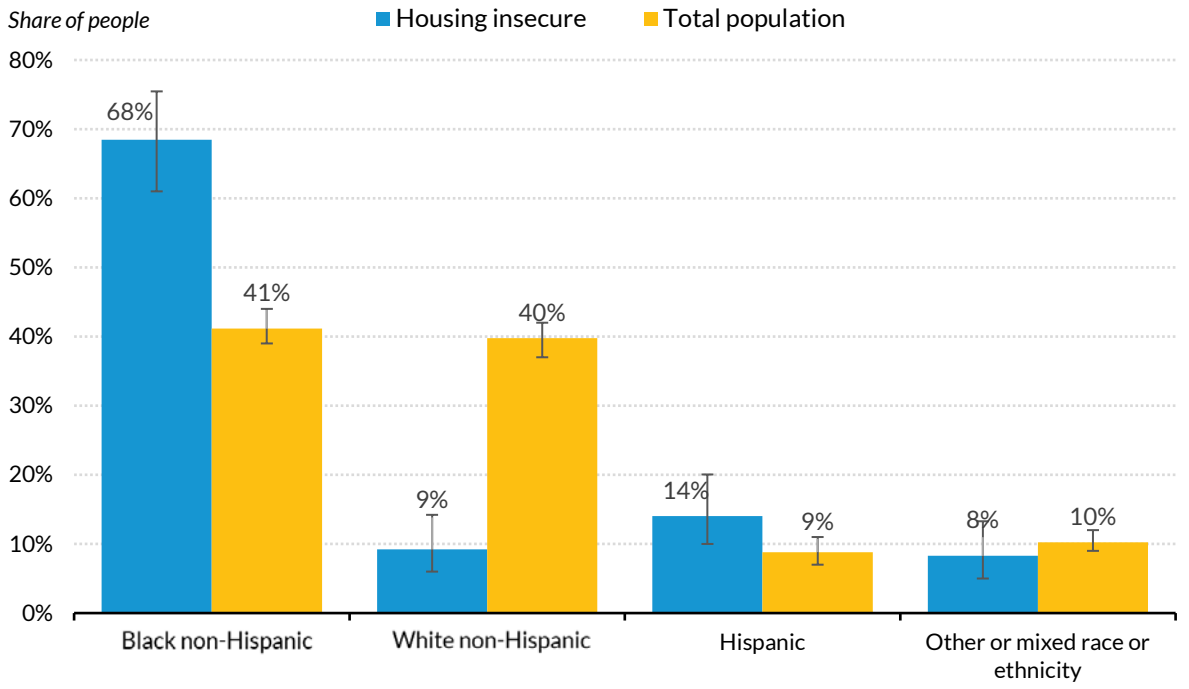
Shares of Different Racial and Ethnic Groups among Housing-Insecure DC Residents

Nationwide, people who are Black or African American experience homelessness at a disproportionately high rate compared with the rest of the US population (Edwards 2021; Jones 2016; Olivet 2018; Solari et al. 2016; Henry, Mahathey, and Takashima 2020; Henry et al. 2022; Henry et al. 2023); this is also true in the District (TCP 2023). More than two-thirds (68 percent) of people experiencing housing insecurity in DC identify as Black non-Hispanic, 14 percent identify as Hispanic of any race, 9 percent identify as white non-Hispanic, and 8 percent are some other or mixed race/ethnicity (figure 9). It is important to understand the racial and ethnic composition of people experiencing housing insecurity to determine whether any group is overrepresented within this

population. We find that although Black non-Hispanics age 15 and older make up 41 percent of the population in DC, they make up an estimated 68 percent of the housing insecure population. People who identify as Hispanic make up 9 percent of the DC population, but 14 percent of the housing insecure population. In contrast, only 9 percent people who identify as white non-Hispanic residents (ages 15 and older) are experiencing housing insecurity even though they make up 40 percent of the overall population in DC.

FIGURE 8

Share of Total DC Population (Ages 15+) and People Experiencing Housing Insecurity (Ages 15+) by Race and Ethnicity



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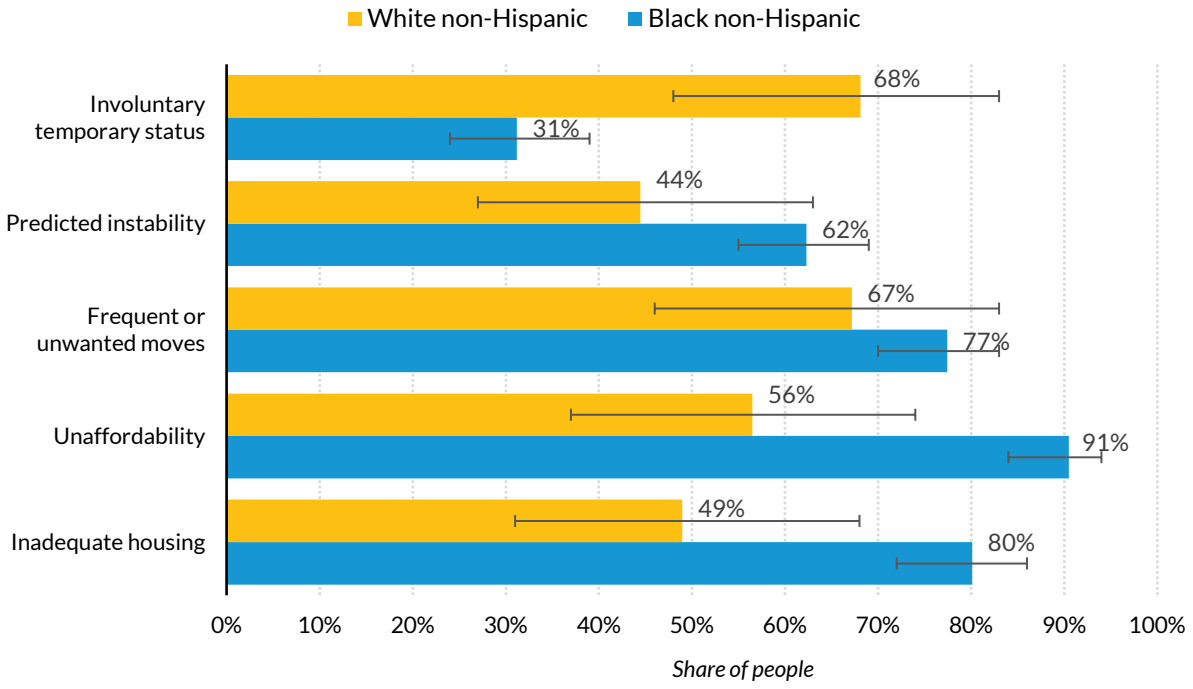
Source: Authors' analysis of 2023 DC housing instability survey data.
Note: Estimates are generated at the person level and are weighted to reflect the population of people ages 15 and older in DC. The survey did not capture racial demographic data for people younger than 15. NH stands for non-Hispanic. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

To better understand the experiences of housing insecurity between Black non-Hispanic and white non-Hispanic residents, we look deeper into the types of insecurity (figure 9). Among Black residents ages 15 and older in DC experiencing housing insecurity, the most common type is unaffordability (91 percent), compared with just 56 percent of housing-insecure white non-Hispanic people (ages 15 and older) facing unaffordability. While 80 percent of housing-insecure Black non-Hispanic residents are

living in inadequate housing, about half (49 percent) of housing-insecure white non-Hispanic residents live in inadequate housing. In contrast, it is far more common for housing-insecure white non-Hispanic residents than Black non-Hispanic residents to be living involuntarily with a household temporarily (68 percent versus 31 percent). This may reflect that living with another household involuntarily still suggests that the temporary person has more resources and options available to them, and white non-Hispanic residents may have better-resourced social networks to rely on than do Black non-Hispanic residents in DC.

FIGURE 9

Housing Insecurity Type among Housing-Insecure Black Non-Hispanic and White Non-Hispanic DC Residents (Ages 15+)



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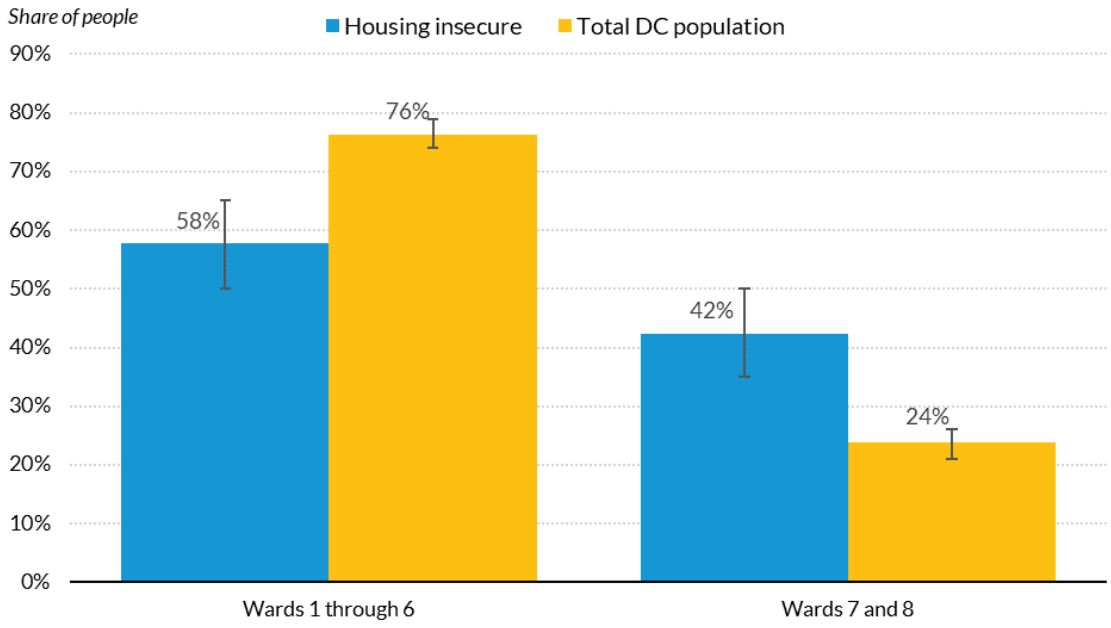
Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people ages 15 and older in DC. The survey did not capture racial demographic data for people younger than 15. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

Share of Housing-Insecure DC Residents in Wards 7 and 8 Compared with the Remaining Wards

Of people experiencing housing insecurity, 58 percent are living in Wards 1 through 6 and 42 percent are living in Wards 7 and 8 (figure 10). An estimated 42 percent of people experiencing housing insecurity live in Wards 7 and 8 even though only 24 percent of DC's population live in those wards. . These findings are consistent with the Emergency Rental Assistance Priority (ERAP) Index[23] tool for DC renters, with census tracts in Wards 7 and 8 identified as higher priority for targeted policies and resources for housing stabilization.[24] Wards 7 and 8 also have higher rates of people of color, which aligns with the findings noted above in DC's patterns of the overrepresentation of Black and Hispanic residents among people facing housing insecurity.[25] Identifying where in DC housing insecurity is overrepresented can help better target resources equitably to areas of the city.

FIGURE 10

Share of Total DC Population and People Experiencing Housing Insecurity by Ward Groups



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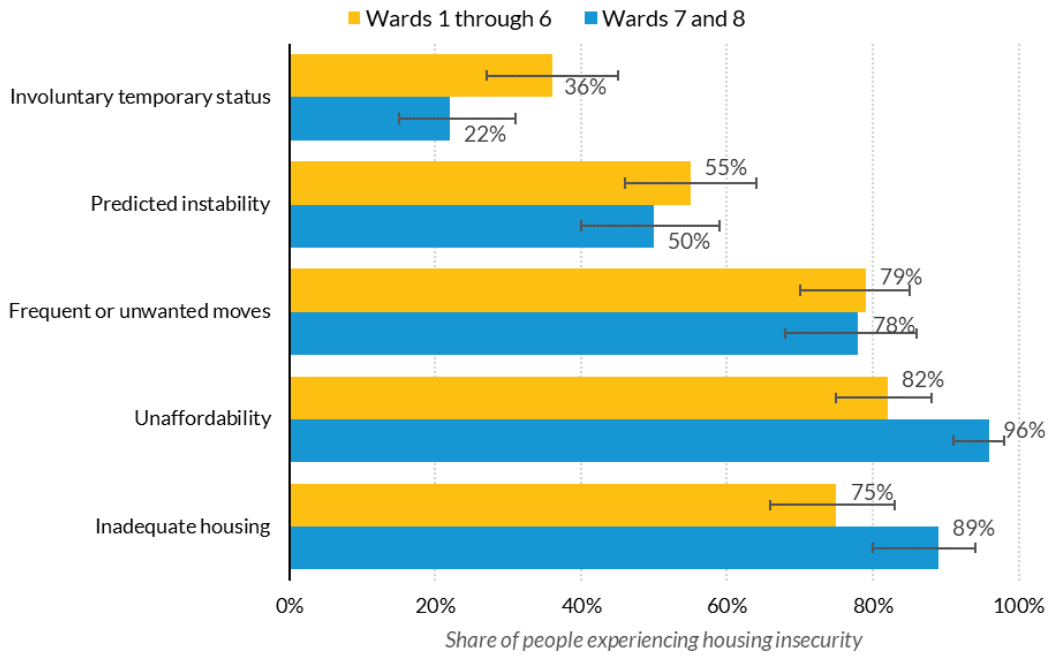
Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This includes responses from prepaid cellphone users, though their ward was assigned by asking what ZIP code they live in and assigning that ZIP code to a ward based on the ZIP code's centroid. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

Residents in Wards 7 and 8 experiencing housing insecurity most commonly face unaffordability (96 percent), and this is at a significantly higher rate than residents in the rest of DC (82 percent) (figure 11). Although median rents and housing costs are significantly lower in Wards 7 and 8 than in the rest of the city, unaffordability remains the dominant struggle among those experiencing housing insecurity.[26] Residents in Wards 7 and 8 experiencing housing insecurity also have high rates of facing inadequate housing (89 percent). Among those facing housing insecurity, predicted instability is commonly experienced in both ward groups, about half of residents in each group. Although the two ward groups do not show clear statistically different types of insecurity among their residents, with the exception of unaffordability, the direction of the data suggests that the differences in involuntary temporary status by ward groups are worth addressing. Residents experiencing housing insecurity in Wards 1 through 6 are 1.6 times more likely to be involuntarily living in a household temporarily than residents in Wards 7 and 8. People could be living in this situation for various reasons (see appendix D, figure D.2 for an analysis of this population's prior living situations). Among people involuntarily living with a household temporarily, we estimate that nearly a quarter (24 percent) were asked to leave their prior housing situation. Anecdotally, one respondent noted that their eviction history made it difficult to find a landlord to accept their rental application, suggesting eviction prevention services could help alleviate housing insecurity for people in a similar situation. But 37 percent of those involuntarily living with a household temporarily had left their last housing situation because it cost too much, 23 percent because of a household shock such as divorce or the death of a loved one, 19 percent because of conflict or violence, and 16 percent because of housing crowding. Another 42 percent of people living involuntarily in a household temporarily were in another housing situation, and more research is needed to better understand what situations this population is facing and what services might be most appropriate to alleviate their housing insecurity.

FIGURE 11

Housing Insecurity Type by Ward Group



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Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This includes responses from prepaid cellphone users, though their ward was assigned by asking what ZIP code they were located in and assigning that ZIP code to a ward based on the ZIP code's centroid. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

Conclusion

Housing insecurity has been a topic of increasing focus as pandemic-era stabilization programs end and housing costs in DC rise along with rising inflation. These forces squeeze households' abilities to make rent and mortgage payments and make it more difficult to sustain adequate housing quality. This in turn leads to greater household uncertainty around being able to remain in their housing unit in the near future and leads people to move frequently, face unwanted or forced moves, or have to live temporarily with another household. This report creates a framework and methodology by which to define and measure housing insecurity, and the results offer both an understanding of the need for services and guidance for practitioners on better targeting services in DC.

With more than 1 in 10 people in DC experiencing housing insecurity, the need for services and support is extensive. Expanding affordable housing, both by building new affordable housing and

preserving and restoring existing affordable housing, is a primary need to alleviate this insecurity. One tool that the District could make better use of to produce and preserve affordable housing is the Housing Production Trust Fund and Preservation Fund; this tool should be distributed equitably in areas of the city where residents are in disproportionate need of affordable and quality housing (Golding 2022). Rigorous evidence shows that subsidized housing through the Housing Choice Voucher (HCV) program is an effective tool to address housing insecurity (Gubits et al. 2015; Fischer 2015; Wood, Turnham, and Mills 2008) and has shown to work as well for Black non-Hispanic families as white non-Hispanic families (Solari, Walton, and Khadduri 2021). Incentives for landlords to participate in the HCV program have also been shown to further improve the supply side of affordable housing (Nisar et al. 2018).

Services that reduce the cost of housing, including housing vouchers and mortgage assistance, as well as services that improve housing quality and reduce formal or informal forced moves are needed by most residents experiencing housing insecurity in DC. Additional programs that reduce costs and increase supplies of higher-quality and larger-unit housing for large families burdened by crowding or subject to live in substandard housing (Tatian, Hendey, and Bruton 2019) would help alleviate housing insecurity among households with children.

Certain groups disproportionately experience housing insecurity, including residents in Wards 7 and 8, households with children, and Black non-Hispanic and Hispanic residents. The HCV program and other housing affordability services should be targeted to better reach populations disproportionately experiencing housing unaffordability. Other tools to address housing insecurity include incentive programs to support housing rehabilitation, which can expand options for higher-quality housing for DC residents, as well as eviction prevention services (such as landlord-tenant mediation, eviction defense, and housing counseling) to reduce rates of forced moves. These programs and services can be used in DC to help address the sizable need among people experiencing housing insecurity identified by this survey.

Further research is needed to better define and operationalize the definition of housing insecurity (Murdoch et al. 2022). For instance, although this report documents that housing insecurity most commonly arises from unaffordability, inadequate housing, and frequent or unwanted moves, many people experiencing housing insecurity are also involuntarily living with a household temporarily. Additional data could provide greater insight into the reasons leading people to live in these situations or help identify characteristics that make this outcome more or less likely. Some respondents noted that their history of eviction made it hard to find a landlord to accept them as a tenant, suggesting that

eviction prevention services would help, but more information is needed to better understand the reasons leading people to live in these situations.

This study adds to our understandings of housing insecurity by providing estimates of housing insecurity in DC and exploring the characteristics of those experiencing it. This report also further enhances our operational definition and overall conceptualization of housing insecurity. Our definition was not only informed by the literature, but also by people with lived experiences with housing insecurity and staff of services programs on the front lines working with people seeking housing stabilization and homelessness prevention services. This definition and methodology should be further tested in other communities throughout the country. Future research on housing insecurity should also enhance efforts to engage with the community and people who have experienced housing insecurity to strengthen our understanding of the various dimensions of housing insecurity.

Appendix A. Definitions of Housing Insecurity

This appendix contains a table of studies identified in our review that contained measures of housing insecurity. We list the definition as well as the source.

TABLE A.1

Housing Insecurity Dimensions Defined in the Literature

Definition	Sampling of source(s)
Housing inadequacy	
Neighborhood quality and household's perception of safety	Goetz 2010
An occupied unit that has moderate or severe physical problems (e.g., deficiencies in plumbing, heating, electricity, hallways, and upkeep) as defined by the American Housing Survey	Raymond, Wheeler, and Brown 2011
Housing quality and safety: open wires; lack of insulation or heating; holes in exteriors, roofs, or floors; lack of water access; pests in the unit; dilapidated exterior of building; peeling paint in the interior of the unit; lack of access to functional appliances; not having bathroom fixtures and/or flushing toilets; and having utilities that experience frequent breaking or stopping, including sewage, water, electricity, heat, etc.	Cox et al. 2019
Crowding, as defined by more than two people per bedroom or more than one family per residence	Cutts et al. 2011
Lack of neighborhood safety entails the presence of high crime, many abandoned buildings, the proximity of environmental hazards, and excessive noise and traffic, among others; low-quality neighborhoods include those with poor services, poor infrastructure, low access to amenities, and others	Cox et al. 2019
Unaffordability	
Self-reported difficulty in paying rent, mortgage, or utility bills in the past year.	Kushel et al. 2005
Missed or unpaid rent or mortgage payment	King 2016
A ratio of housing costs (including utilities) to household income that exceeds 30 percent	JCHS 2023
A household spending more than one-half of its income for gross rent (rent and utilities)	Alvarez and Steffen 2021
Behind on rent payments (for renters), or behind on payments (in the foreclosure process), or had been through a foreclosure in the past 3 years (for homeowners)	Burgard, Seefeldt, and Zelner 2012
Struggling to cover usual household expenses, such as food, rent or mortgage, car payments, medical expenses, or student loans	CBPP 2020
(Un)affordability is assessed using five different measurements: difficulty/inability to make payments on housing; housing cost burden; foreclosure; legal housing issues, and having rental assistance	Cox et al. 2019

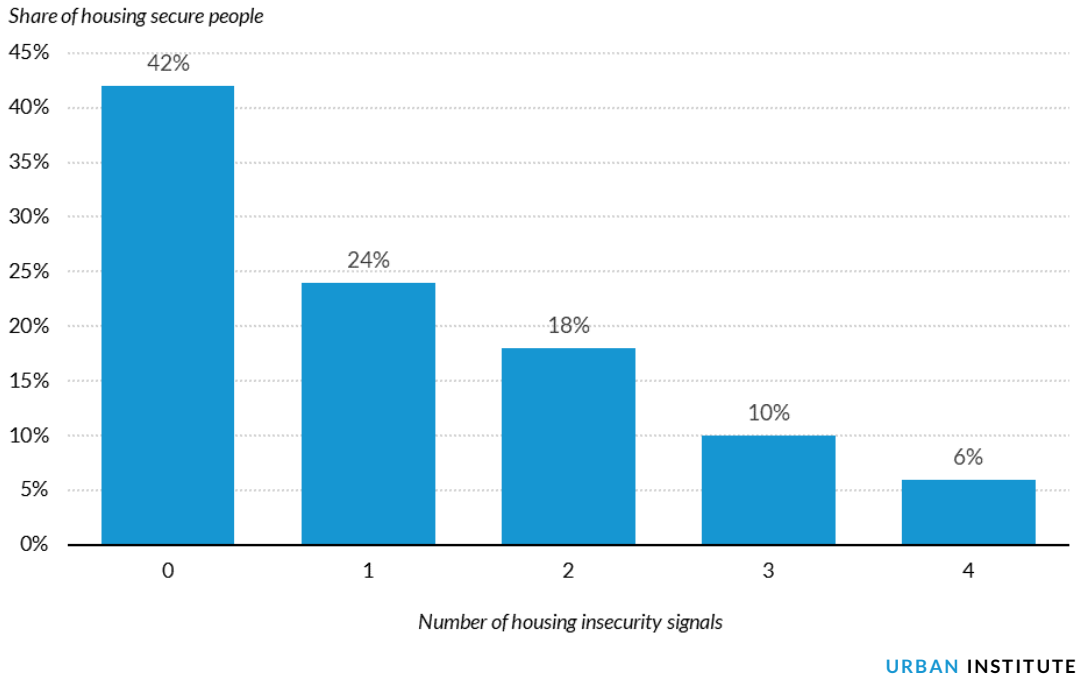
Definition	Sampling of source(s)
Frequent moves	
Two or more moves in the past year	Cutts et al. 2011
Any change in the composition of adults living in a household across residences	Desmond and Perkins 2016
At least three moves in the past three years	Burgard, Seefeldt, and Zelner 2012
More than two moves in the past six months	Rollins et al. 2012
At least one move during the past two years, with at least one type of precarious housing condition (e.g., unaffordability, overcrowding, doubled up) at both the beginning and end of that period	Kang 2019
Unwanted moves	
Forced moves initiated by landlords or city officials (e.g., building inspectors) and involve situations in which tenants have no choice other than to relocate (or think as much)	Desmond and Shollenberger 2015
Forced displacement, including because of formal or informal eviction, condemned buildings, or landlord foreclosure	Gromis and Desmond 2021
Couch surfing, doubling up, or involuntary temporary stay	
Frequent moves from one tenuous living situation to another	Petry et al. 2022
Living with family or friends to share housing costs	Leopold et al. 2016
Two or more adults or families residing in the same housing unit	Bush and Shinn 2017
Living with family or friends temporarily, or "couch surfing" and changing locations from night to night	Pergamit et al. 2013
Respondent had doubled up or moved in with others to save on costs in the past 12 months	Burgard, Seefeldt, and Zelner 2012
Housing situations where the individual has little to no control over their accommodations; housing situations that expire	Frederick et al. 2014
Households that screened positive for housing insecurity were asked whether they had moved in with friends or family because they had no other choice	Kushel et al. 2005
Predicted instability	
Worry or concern about not having stable housing that you own, rent, or stay in as part of a household in the next two months	Montgomery 2021
Likelihood of having to leave this house in next two months due to foreclosure	HUD 2022

Note: This table excludes definitions of literal homelessness.

As a corollary to the number of housing insecurity signals housing-insecure residents had by their inclusion mode (automatic inclusion or having five or more cumulative signals) (figure 3), we assessed the number of signals among housing-secure residents, who by design can only have up to four signals (figure A.1).

FIGURE A.1

Number of Housing Insecurity Signals among DC Residents Experiencing Housing Security



Source: Authors' analysis of 2023 DC housing insecurity survey data.
Notes: This figure shows the share of housing-secure people with different numbers of flags. The scale stops at four signals because beyond that, a resident would qualify as housing insecure.

When determining the cutoff between four versus five cumulative signals for households without any automatic inclusion flags, we ran T-tests of survey responses to compare the shares of residents in each category experiencing different insecurity conditions (table A.2). A large share of households with four cumulative signals had characteristics that advisory committees said they would not consider as housing insecure.

TABLE A.2

T-Tests of Characteristics for People with Four versus Five or More Cumulative Insecurity Indicators

	Four flags	Five or more flags	T-test p-value
Not confident at all to pay next rent/mortgage	12%	29%	***
Not too confident to pay next rent/mortgage	27%	43%	***
Very difficult to pay usual household expenses	41%	77%	***
Insufficient rental assistance	0%	16%	***
Forced move stress	54%	81%	***
Frequent or unwanted moves	58%	85%	***
Housing inadequacy	73%	81%	*

Source: Authors' analysis of 2023 DC housing insecurity survey data.
Notes: * p<.1, ***; p<.05.

Appendix B. Survey Cognitive Testing, Invitation, and Instrument

Cognitive Testing

TCP staff offered early feedback on our survey approach, topics, and plan. TCP staff connected the Urban Institute research team with multiple community groups and staff at programs in the Continuum of Care (CoC) to participate in cognitive testing. The first wave of cognitive testing was based on open-ended questions to two focus groups of frontline staff (N=4) who administer local homelessness prevention and eviction prevention services[27] and one-on-one interviews with people with lived experiences of housing insecurity and homelessness affiliated with working groups on homelessness prevention and advocacy (N=12). The goal of these sessions was to hear from providers and community members about the characteristics and living situations of people who experience housing insecurity to better inform survey questions and our understanding of housing insecurity in DC. Staff shared feedback on the demographic characteristics and living situations of those seeking services that promote housing stability and homelessness prevention. People with lived experiences shared their knowledge about the various situations faced by the people they represent in their working group, as well as their personal histories and experiences with housing insecurity before their first homelessness experience and in between their episodes of homelessness. Staff and people with lived experiences shared specific feedback on people temporarily staying with households because they had trouble finding a place of their own, couch surfing, or doubling up. We gathered even more specific feedback about youth couch surfing to improve our ability to identify those people in a sampled household. In addition, participants provided direct feedback on topics they thought were important to cover in our survey instrument, feedback on what we should have asked about, as well as other information we should know as we advanced toward the survey effort. We also gathered information on how to reach and communicate with people experiencing different forms of housing insecurity to help guide our survey dissemination plan most effectively.

From this first wave of cognitive testing, we drafted a survey instrument with an inclusive set of questions and answer options based on the literature and existing survey questions on the selected relevant topics. The research team collaborated heavily with TCP staff to revise the survey instrument. We then used our next wave of cognitive testing for review of the survey instrument topic ordering, phrasing of specific questions, and answer options. We conducted two focus groups of people with lived

experiences of housing insecurity or homelessness who were currently serving in advocacy-related roles for adults and young people experiencing homelessness. Focus group participants had the opportunity to review the survey instrument and were asked to provide targeted feedback on questions the research team felt the most uncertain about in their phrasing. We also conducted one-on-one interviews with people with lived experiences of housing insecurity (N=4) and personal contacts of the research team who were either renters or homeowners in DC (N=7). In these interviews, participants either reviewed the survey ahead of time and provided specific feedback or participated in a "speak aloud" process where they described their thought process while answering each question. These processes helped us identify areas that might create excess burden on respondents and determine if terms required clarity or answer options were incomplete.

Survey Invitation and Instrument

The following section offers the invitation letter as well as the English hard-copy version of our survey administered through postal mail. All pages are formatted as printed, and thus they begin on the next page. We phrased all content in the same way or a very similar way in the online survey platform and surveys conducted by phone. Note that the household roster on the paper version is limited to five other members of the household (aside from the respondent), whereas the online and phone versions were unlimited in the number of household members for which to record data. Additionally, because the paper survey and online password information were mailed to a registered residential address in DC, the paper and web survey instrument do not inquire about homelessness; however, the phone version does and uses it as another eligibility question, such that those experiencing homelessness are excluded from the survey.[28]

Outreach Letter

October XX, 2022

Current Resident
ADDRESS
WASHINGTON, DC, ZIP CODE

Dear Resident,

We are writing to invite you to take part in a survey about your housing experiences in Washington, DC. Supported by The Community Partnership for the Prevention of Homelessness, this study is being conducted by the Urban Institute, a non-profit research organization based in DC, in partnership with SSRS, a survey firm. We are trying to learn about the housing situations of people across DC to inform the types of housing services that may be needed, and we need your help!

Your answers to the survey are critical for the success of this study. Please find $1.25 as a thank you. This survey should take **no more than 15 minutes to complete**. Once you complete the survey, we will send you a $15 gift card by mail or email as additional thanks.

We ask that an adult with knowledge of the household complete the survey. To complete it, please go to the website below and enter your password or scan the QR code below with your smart phone.

Web address: www.DCHousingStabilitySurvey.org [QR CODE HERE]
Password: <<PASSCODE>>

You can also contact us at **888-508-0578** to **complete the survey by phone**. If we do not hear from you, we will mail you a paper copy of the survey with a pre-stamped return envelope.

Your survey answers will be kept confidential and will not be shared with anyone outside the study team. Participating in this survey is voluntary and will not affect your housing in any way.

If you have questions about the study, please contact: info@DCHousingStabilitySurvey.org or 800-633-1986 ext. 4325.

Thank you for your consideration. We hope you will participate today!

Sincerely,

Tom Fredericksen

Chief of Policy and Programs
The Community Partnership for the Prevention of Homelessness
801 Pennsylvania Avenue, SE, Suite 360, Washington, DC 20003

SSRS (www.ssrs.com), based outside Philadelphia, PA, is a full-service survey research firm and an industry leader in conducting research. The Community Partnership for the Prevention of Homelessness (TCP) is a local nonprofit that leads homelessness reduction and prevention efforts in DC. The Urban Institute is a nonprofit, nonpartisan research organization in Washington, DC.

Housing Stability Survey

DC HOUSING STABILITY SURVEY

Thank you for participating in the **DC Housing Stability Survey**. This study is being conducted by The Community Partnership and the Urban Institute to learn about housing issues in the District of Columbia. Your responses will help us better understand housing stability and instability and will be used to inform housing-related services in DC.

Please have an adult (18 years or older) with knowledge of the household complete this survey; it should take about 15 minutes. Your responses to this survey are confidential and will not be linked to your name. **You can skip any questions you do not want to answer, and you can choose to stop the survey at any time. Your refusal to participate will not affect you in any negative way.**

Please read each question carefully. Using a **blue or black pen**, mark the box next to the appropriate response. To ensure you get the right questions, continue to the next question unless noted after arrow signs (⟶). Once you have completed the survey, please return it in the enclosed prepaid envelope.

- If you prefer to **complete the survey online**, please go to: **www.DCHousingStabilitySurvey.org** and enter the following passcode: **XXXXXX**
- If you prefer to **complete the survey by phone, please call: 888-508-0578.**

1. Are you 18 or older?

☐ Yes
☐ No ⟶ **Thank you for your time. At this time, you do not qualify for the survey. Please do not continue.**

2. Do you currently live within the District of Columbia?

☐ Yes
☐ No ⟶ **Thank you for your time. At this time, you do not qualify for the survey. Please do not continue.**

3. How long have you lived in DC? *If you have lived in DC more than once, please answer for the most recent time.*

☐ Less than 1 year
☐ 1 year to less than 3 years
☐ 3 years to less than 10 years
☐ 10 years or more

SECTION 1: CURRENT HOUSING SITUATION

As you complete this survey, please keep in mind that "housing unit" refers to the place you are currently living, including apartments, condos, or houses. The term "household" refers to anyone currently living in your housing unit.

4. Which of the following best describes where you are currently living? *If you or someone in your household bought your housing unit and are on a mortgage, please select owned.*

☐ In a place that is owned ⟶ **GO TO Q6**
☐ In a place that is rented
☐ Something else (*Please specify*: _____)⟶ **GO TO Q6**

5. Is your household paying lower rent because a federal or city program is paying part of the cost, such as through a voucher?

☐ Yes
☐ No

6. How many separate rooms are in your housing unit?
Please include bedrooms, kitchens, living rooms, and dining rooms but do not include bathrooms, porches, balconies, unfinished basements, halls, or foyers. Separate rooms must be separated by built-in archways or walls that extend out at least 6 inches and go from floor to ceiling. If this is an efficiency/studio apartment, put 1.

_____ (*Please enter number of rooms*)

7a. Are you currently experiencing any of the following issues with your housing unit?

	Yes	No
Plumbing or electrical issues	☐	☐
Air conditioning or heating issues	☐	☐
Lack of kitchen appliances	☐	☐
Mold or pests	☐	☐
Noise issues	☐	☐
Disability access issues	☐	☐
Structural issues	☐	☐
Any other issue	☐	☐

7b. Are you currently experiencing any of the following issues with your neighborhood?

	Yes	No
Noise issues	☐	☐
Disability access issues	☐	☐
Unsafe neighborhood	☐	☐
Lack of public transit access	☐	☐
Lack of public spaces	☐	☐
Poor access to schools	☐	☐
Poor access to grocery stores	☐	☐
Any other issue	☐	☐

8. How confident are you about your household's ability to pay your next rent or mortgage payment? Are you:

- ☐ Very confident
- ☐ Somewhat confident
- ☐ Not too confident
- ☐ Not at all confident
- ☐ Not applicable: our household does not pay rent or mortgage

SECTION 2: PERSONAL HOUSING HISTORY

9. In the past 3 months, how difficult, if at all, has it been for your household to pay for usual household expenses, such as food, rent or mortgage, car payments, medical expenses, student loans, and so on?

- ☐ Very difficult
- ☐ Somewhat difficult
- ☐ Not too difficult
- ☐ Not at all difficult

10. In the past 12 months, how many places have you lived including this one?

_____ (*Please enter number of places*)

If you have any questions about the study, please call Hope Wilson at 800-633-1986, Ext. 4325.

11. In the past 12 months, have you used any COVID-related emergency rental assistance programs such as STAYDC, ERA, or mortgage assistance, to help pay for any of your housing costs?

- ☐ Yes
- ☐ No → **GO TO Q13**
- ☐ Not sure → **GO TO Q13**

12. How likely is it that the assistance you received will allow you to remain in your housing unit for the next 3 months?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Somewhat unlikely
- ☐ Very unlikely

13. In the past 12 months, were you ever worried or stressed about being forced to move?

- ☐ Yes
- ☐ No

14. In the past 12 months, have you been forced to leave your housing or evicted?

- ☐ Yes
- ☐ No

SECTION 3: PERSONAL HOUSING SITUATION IN THE NEXT 3 MONTHS

15. In the next 3 months, do you expect to still be living in your same housing unit?

- ☐ Yes → **GO TO Q19**
- ☐ No
- ☐ Not sure

16. In the next 3 months, how likely are you to have a stable place to stay?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Somewhat unlikely
- ☐ Very unlikely

17. How likely is it that you or members of your household will have to leave your house or apartment within the next 3 months because of eviction or foreclosure?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Somewhat unlikely
- ☐ Very unlikely → **GO TO Q19**

18. For your current residence, have you received an eviction notice from a court or been given notice from or asked to leave by your current landlord?

- ☐ Yes
- ☐ No

If you have any questions about the study, please call Hope Wilson at 800-633-1986, Ext. 4325.

SECTION 4: ACCESS TO RESOURCES AND COMMUNITY

19. If you had to leave your home permanently, for any reason, do you have a safe place to go?

☐ Yes ☐ No

20. If you or your household are short on money to pay the rent or mortgage, do you have someone who can lend you money?

☐ Yes ☐ No

21. If you get sick, do you have someone who can help care for you?

☐ Yes ☐ No

22. How connected do you feel to your neighbors?

☐ Not at all connected
☐ A little connected
☐ Somewhat connected
☐ Connected
☐ Strongly connected

SECTION 5: CURRENT HOUSEHOLD MEMBERS

The next two sections are about you and the people in your household. None of this information will be reported to anyone with influence over your housing. This is confidential; your answers will only be reported in combination with everyone else's.

23. How many adults (ages 18 and older) are currently living in the household, including you, those who live with you permanently, and those temporarily living with you? *A temporary household member is someone who has moved into the household within the past 12 months (or if you have lived in DC less than a year, since you've moved to DC), and is still living there.*

_____ (*Please enter number of adults ages 18 and older*)

24. How many people ages 15 to 17 are currently living in the household, including those who live with you permanently, and those temporarily living with you?

_____ (*Please enter number of people ages 15 to 17*)

25. How many people under the age of 15 are currently living in the household, including those who live with you permanently, and those temporarily living with you?

_____ (*Please enter number of people under the age of 15*)

26. What is your age?

_____ (*Please enter your age*)

27. Do you identify as:

☐ Male
☐ Female
☐ Gender non-binary

If you have any questions about the study, please call Hope Wilson at 800-633-1986, Ext. 4325.

28. Do you identify as:

☐ Hispanic ☐ Non-Hispanic

29. Are you: *Select all that apply.*

☐ Black or African American
☐ White
☐ Asian
☐ American Indian or Alaska Native
☐ Another race (*Please specify*: _____)

30. Which of the following is the highest level of education you have completed?

☐ Less than high school or no high school
☐ High school graduate, GED, or equivalent
☐ Some college, but degree not received
☐ Associate degree or Vocational/technical certificate
☐ College graduate
☐ Graduate degree

31. Are you living in this household temporarily? *A temporary household member is someone who has moved into the household within the past 12 months (or if you have lived in DC less than a year, since you've moved to DC), and is still living there.*

☐ Yes ☐ No → **GO TO Q36**

32. Are you living in this household temporarily because you can't afford to stay anywhere else or due to another situation?

☐ Can't afford to stay anywhere else
☐ Another situation (*Please specify*: _____)

33. How often, if ever, do you contribute payment to the rent or mortgage?

☐ Regularly
☐ Sometimes
☐ Never
☐ Not applicable

34. For each of the following, please indicate if this was a reason you left your prior housing.

	Yes	No
You were asked to leave	☐	☐
It cost too much	☐	☐
Housing crowding	☐	☐
Conflict or violence	☐	☐
A household shock, such as divorce or a death of a loved one	☐	☐
Another situation	☐	☐

35. Where did you live right before you moved in? Did you move from: *Please select one response.*

☐ A place of your own
☐ A temporary situation with friends or relatives
☐ A permanent situation with friends or relatives
☐ A shelter or other unhoused situation
☐ A treatment program, hospital, or nursing home
☐ A jail or prison, including juvenile detention centers
☐ Foster care
☐ Some other situation

If you have any questions about the study, please call Hope Wilson at 800-633-1986, Ext. 4325.

- **The next questions ask for information about the other members of the household, if any. If you are the only member of your household, please skip to Section 6. Otherwise, please think of yourself as HH Member #1.**
- **Please answer the questions below for all other people living in your household, starting with HH Member #2. If there are more than 6 people who live in your household, please answer below for any 5 household members.**
- **Check the box that applies for the corresponding person for each question. If you aren't sure, please provide your best guess.**

	HH Member #2	HH Member #3	HH Member #4	HH Member #5	HH Member #6
36. What is this person's age? *If you aren't sure, please provide your best guess.*					
	_____	_____	_____	_____	_____
37. Does this person identify as:					
Male	☐	☐	☐	☐	☐
Female	☐	☐	☐	☐	☐
Gender non-binary	☐	☐	☐	☐	☐
38. Does this person identify as:					
Hispanic	☐	☐	☐	☐	☐
Non-Hispanic	☐	☐	☐	☐	☐
39. Is this person: *Select all that apply.*					
Black or African American	☐	☐	☐	☐	☐
White	☐	☐	☐	☐	☐
Asian	☐	☐	☐	☐	☐
American Indian or Alaska Native	☐	☐	☐	☐	☐
Another race (*Please specify for each HH member in the space below each checkbox*)	☐	☐	☐	☐	☐
40. Which of the following is the highest level of education this person has completed? *Please select one answer per household member.*					
Less than high school or no high school	☐	☐	☐	☐	☐
High school graduate, GED, or equivalent	☐	☐	☐	☐	☐
Some college, but degree not received	☐	☐	☐	☐	☐
Associate degree or Vocational/technical certificate	☐	☐	☐	☐	☐
College graduate	☐	☐	☐	☐	☐
Graduate degree	☐	☐	☐	☐	☐

If you have any questions about the study, please call Hope Wilson at 800-633-1986, Ext. 4325.

A temporary household member is someone who has moved into the household within the past 12 months (or if you have lived in DC less than a year, since you've moved to DC), and is still living there.

	HH Member #2	HH Member #3	HH Member #4	HH Member #5	HH Member #6
41. Is this person living in this household temporarily? ***Please select one answer per household member.***					
Yes	☐	☐	☐	☐	☐
No ⟶ **GO TO Q46**	☐	☐	☐	☐	☐
Please answer the next set of questions only for those people who are temporarily living in the household.					
42. Is this person primarily living with you because they can't afford to stay anywhere else or due to another situation? ***Please select one answer per household member.***					
Can't afford to stay anywhere else	☐	☐	☐	☐	☐
Another situation (*Please specify for each HH member in the space below each checkbox*)	☐	☐	☐	☐	☐
43. How often, if ever, does this person contribute payment to the rent or mortgage? ***Please select one answer per household member.***					
Regularly	☐	☐	☐	☐	☐
Sometimes	☐	☐	☐	☐	☐
Never	☐	☐	☐	☐	☐
Not applicable	☐	☐	☐	☐	☐

44. For each of the following, please indicate if this was a reason this person left their prior housing:

	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not sure
They were asked to leave	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It cost too much	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Housing crowding	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Conflict or violence	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
A household shock, such as a divorce or a death of a loved one	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Another situation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

45. Where did this person live right before they moved in with you? ***Please select one answer per household member.***					
A place of their own	☐	☐	☐	☐	☐
A temporary situation with friends or relatives	☐	☐	☐	☐	☐
A permanent situation with friends or relatives	☐	☐	☐	☐	☐
A shelter or other unhoused situation	☐	☐	☐	☐	☐
A treatment program, hospital, or nursing home	☐	☐	☐	☐	☐
A jail or prison, including juvenile detention centers	☐	☐	☐	☐	☐
Foster care	☐	☐	☐	☐	☐
Some other situation	☐	☐	☐	☐	☐

If you have any questions about the study, please call Hope Wilson at 800-633-1986, Ext. 4325.

46. Do you have a prepaid cell phone? *Prepaid plans, also known as pay-as-you-go or no-contract phones, are plans where the user pays for a specific amount of data usage or minutes in advance.*

☐ Yes ☐ No

47. How many <u>other</u> adults, 18 or older, in your household have a prepaid cell phone?

_____ (*Please enter number of other adults with a prepaid cell phone*)

48. What is your current 5-digit zip-code?

_____

SECTION 6: CLOSING

Thank you for taking our survey! As a token of our appreciation, you will receive a no-fee $15 gift card. If you choose to receive your gift card in the mail, please allow extra time for delivery.

49. How do you prefer to receive your $15 gift card?

☐ Email
☐ Postal mail → **GO TO Q51**

50. Please provide us with your email address to receive your e-gift card. We will send you an email with instructions on how to claim it.

Email address: _____ → **GO TO Q52**

51. Please provide us with your full name and a mailing address where we can send you the gift card, and select which gift card you prefer.

Full name: _____
Mailing address: _____
City: _____
State: _____
Zip code: _____

Please select a gift card below.
☐ Amazon.com
☐ Target

52. The Community Partnership and Urban Institute might want to conduct a follow-up study. Responding yes to this question does not guarantee you will be contacted, and if you are, you will have the opportunity to decide whether or not you want to participate. Responding yes means your name and contact information will be associated with answers you provided, but they will not be shared beyond the survey team.
Are you interested in participating?

☐ Yes ☐ No

53. Thank you. Please provide your name, email address, and best phone number on which to reach you.

Name: _____
Email address: _____
Phone number: _____

This is the end of the survey. Thank you, we greatly appreciate your participation!
Please place the completed survey in the pre-stamped return envelope and mail it back.
If you have misplaced the return envelope, please call 1-800-633-1986, Ext. 4325 for a replacement.

If you have any questions about the study, please call Hope Wilson at 800-633-1986, Ext. 4325.

Appendix C. Survey Administration, Weighting, and Survey Demographics

I. SSRS Report on Administration and Weighting Methods

The following section presents a copy of the SSRS–authored methodology report: "2022 Survey of Housing Stability in Washington, D.C." as prepared for the Urban Institute by Robyn Rapoport, Elizabeth Sciupac, and Cameron McPhee.

Overview

The Urban Institute engaged SSRS to conduct the 2022 Survey of Housing Instability in Washington, DC, aimed at measuring housing stability in the District on behalf of The Community Partnership (TCP). The primary goal of this study was to establish an incidence of housing instability in DC, including an exploration of why residents may be in temporary housing. In addition to establishing an incidence of housing instability for DC residents overall, the survey goals included being able to speak to the housing experiences of residents by DC ward, race and ethnicity, age groups (including those ages 17 and under), and households with children compared with adult-only households. At a broad level, the goal is for the findings from this survey to help TCP and city and nonprofit leaders better understand the levels and patterns of housing stability and instability in the District of Columbia.

The Housing Stability survey used a hybrid sample design, including an address-based sample (ABS) combined with a prepaid cell sample, further detailed below. Interviews were completed online, via telephone, and via mail with hard-copy surveys. Overall, 1,807 DC residents completed the survey, with 1,223 completing it online, 102 via inbound telephone, 281 via mail, and 201 via prepaid cell. Data collection was conducted in English and Spanish from October 14, 2022, to February 10, 2023.

Details on the sampling, questionnaire design, data collection, data processing, and weighting are discussed below.

Sampling Methods

The target population for this survey was adults ages 18 or older living in Washington, DC. The foundation of the sample design is built on the integration of an ABS with a prepaid cell sample. While ABS designs offer effective strategies for reaching a probability sample of US adults, a key challenge of ABS-*only* designs is ensuring adequate representation of people with lower incomes, less literate and less educated populations, and populations of color that tend to be underrepresented in ABS studies. As a result, populations facing unique housing instability may be less likely to be reached. Knowing these populations are critical to Urban's mission, SSRS leveraged a multiframe approach that combines the scale and flexibility of ABS with a prepaid cell sample to target these underrepresented populations more effectively and ensures they are properly represented in the data.

ADDRESS-BASED SAMPLE

The ABS is drawn from the US Postal Service (USPS) Computerized Delivery Sequence File (CDSF). The CDSF is a computerized file that contains information on all delivery addresses serviced by USPS. In order to yield a representative responding sample, the CDSF address frame was divided into strata, defined by census block groups, comprising areas with higher concentrations of African Americans, Hispanics, and lower-income households, based on geographic information provided by the Census Bureau. This stratification allowed us to oversample block groups with higher proportions of underrepresented subgroups to help increase sample representativeness among populations that typically respond to mailed survey invitations at lower-than-average rates.

The sample frame was divided into four mutually exclusive strata: (1) addresses within block groups with the highest density of households in poverty, (2) addresses in block groups with the highest density of African American residents, (3) addresses in block groups with the highest density of Hispanic residents, and (4) all other addresses. Addresses meeting more than one of the above criteria were assigned to the higher-ranking strata. For example, an address in a block group identified as both high poverty and a high African American population would be placed in the high poverty stratum.

The allocation of the sampled addresses across stratum was optimized to balance the oversampling rates with the impact on the design effects. Below, table C.1 shows the planned sample design including the population distribution and the expected size and distribution of the released sample and expected number of completed surveys across ABS strata.

TABLE C.1

ABS Sample Design and Completed Interviews by Strata

	Distribution of DC housing units	Estimated response rate	Planned sample N	Sample distribution	Expected completed surveys
Strata					
High poverty	22%	7%	5,335	36%	373
High African American population	8%	7%	1,175	8%	82
High Hispanic population	21%	7%	4,045	27%	283
Residual	49%	13%	4,445	30%	581
Total	**100%**	**10%**	**15,000**	**100%**	**1,320**

Given the uncertainty around response rates, the team planned for an adaptive, multiwave design. Since the design was based on estimated incidence and completion rates by strata, the sample was released in two waves so we could monitor response rates by strata and redistribute the sample across strata, if necessary, in the second wave. In actuality, the first wave of the sample yielded a slightly higher response rate across all the design strata, leading to a slight reduction in the number of addresses sent invitations in the second wave. Additionally, the incidence of targeted subgroups by strata aligned well with expectations; therefore, the planned distribution of sample across strata was maintained in wave 2. Table C.2 below shows the mailed sample and number of completed responses by mailing wave.

TABLE C.2

ABS Sample and Completed Interviews by Strata and Wave

	Wave 1		Wave 2		Total		
	Sample	Completed interviews	Sample	Completed interviews	Sample	Completed interviews	Unweighted completion rate
Strata							
High poverty	1330	198	2849	221	4179	419	10%
High African American population	290	48	588	112	878	160	18%
High Hispanic population	1010	153	1826	223	2836	376	13%
Residual	1110	171	2237	480	3347	651	19%
Total	**3,740**	**570**	**7,500**	**1,036**	**11240**	**1606**	**14%**

PREPAID CELL SAMPLE

Prepaid cell sample was included in the design to help increase the representation of minority and low-income respondents in the sample. Prepaid cell numbers are associated with cell phones that are "pay as

you go" and do not require a contract. Extensive SSRS–based research has shown that people with prepaid cell phones are more likely to be used the Hispanic population, people with lower education and lower incomes, and other related groups that are often underrepresented in general population samples and are especially important in this research.[29] Including this sample helped increase the statistical power of these subgroups.

Questionnaire Design

QUESTIONNAIRE DESIGN AND PRETEST

Urban developed the survey instrument, completed cognitive interviews to inform the questionnaire development and shared those results with the SSRS team. In conjunction with the findings from those interviews, Urban designed the final draft questionnaire, and the SSRS team provided feedback regarding question wording, order, clarity, and other issues related to questionnaire quality. In addition to the standard questionnaire review SSRS provides, the team paid special attention to the necessary adaptations across mode. While the telephone version largely mirrored the web version, it was critical to construct a concise telephone introduction to keep potential respondents on the phone. In adjusting for the hard-copy version, the SSRS team focused on a design to (1) encourage cooperation by offering easy-to-read, easy-to-maneuver hard copy; and (2) reduce the potential for confusion and thereby produce the most accurate data.

Furthermore, SSRS iterated extensively with Urban on the benefits and challenges of including a household roster in the survey. Ultimately, because of the goals of being able to analyze levels of stability for more than just the survey respondent, and given our interest in people under age 18 who may be experiencing housing instability in DC, the teams determined that it was necessary to include a household roster. Specific attention was given to the household roster design to lessen respondent burden as much as possible in both the web and hard-copy survey, as both the programming of a roster in the web version and the formatting of a roster in the hard copy can present unique challenges, The Urban team sought Institutional Review Board (IRB) approval for the survey instrument and carried out additional cognitive testing on the final version of the questionnaire.

PROGRAMMING

Once the questionnaire was finalized, the survey was programmed into SSRS's Confirmit platform for both phone and online administration.

The web program was optimized for online administration via smartphone or other mobile handheld devices and was checked on multiple devices, including desktop computers and handheld mobile devices, as well as different web browsers, in order to ensure consistent and optimized visualization across devices and web browsers. In addition, the SSRS team also conducted extensive checking of the phone program and the hard-copy instrument to ensure that skip patterns followed the design of the questionnaire.

For the ABS sample, SSRS generated unique survey passwords that were assigned and provided by mail to potential respondents. Respondents directly accessed the web survey using their unique passwords. This also gave respondents the ability to return to their survey later if they chose to suspend their interview.

Contact Plan and Data Collection

The housing stability survey was fielded from October 14, 2022, to February 10, 2023, using an adaptive design that consisted of releasing two waves of ABS sample, as noted above. The mailing protocol for both waves consisted of an invitation letter and follow-up reminders (a postcard and a letter with a paper survey) to all households included in the sample. Urban crafted the invitation letter, reminder postcard, and final reminder letter in consultation with SSRS to make each contact as appealing as possible. The letters and postcard included Spanish translations, and potential respondents in the high Hispanic stratum received copies of the paper survey in English and in Spanish.

The initial invitation letter was sent to each household in a #11 envelope. The invitation included a one-page letter inviting a member of the household to participate in an important research study, along with a link (URL), an individual passcode to log on to the study, a QR code for easy scannable entry into the survey, and a toll-free number for respondents to call in to complete the survey with a trained interviewer. To increase the cooperation rate, a $1.25 cash pre-incentive was visible through the invitation letter envelope window. Additionally, the invitation letter offered $15 to respondents upon completion of the survey. Respondents were given the option to choose how they received the $15 payment (via email or postal mail). Those who chose email received an electronic gift code; those who chose postal mail received a $15 physical gift card.[30]

The reminder postcard included the same information provided on the invitation letter (i.e., the survey link, passcode, QR code, and toll-free number for respondents to call in to complete the survey) and was folded and sealed.

Finally, a reminder letter was sent to each household that had not responded to the initial invitation letter or reminder postcard. These final reminders were sent in a 6x9 envelope and contained the following materials:

- Personalized cover letter explaining the nature of the survey
- One eight-page questionnaire booklet in English or two eight-page questionnaire booklets (one English and one Spanish) for ABS records in the high Hispanic stratum (approximately 27 percent of the ABS sample)
- Postage-paid business reply envelope (BRE)

The SSRS team closely monitored the delivery of each mailing and noticed lower than usual finalization rates for the wave 1 invitation letter concentrated in several ZIP codes, indicating that some potential respondents may not have received their invitation. (Notably, response rates did not seem to be affected by the finalization rates.) The SSRS team theorized that the low finalization rates may be connected to the visible incentive; therefore, we adjusted the mailing protocol for the wave 2 invitation letter to account for possible theft during the mailing process (DeBell et al. 2020). Invitation letters in wave 2 were sent across six days to reduce the likelihood of hundreds of letters with visible cash arriving at a destination post office at the same time. The survey administration schedule is presented in table C.3.

TABLE C.3
Survey Administration Schedule

		Form of contact	Date
Wave 1	1	Invitation letter	10/13/2022
	2	Postcard	10/18/2022
	3	Reminder letter and paper survey	10/27/2022
Wave 2	1	Invitation letter	12/14/2022 to 12/20/2022
	2	Postcard	12/22/2022
	3	Reminder letter and paper survey	1/6/2023

Data Processing and Integration

SSRS implemented several quality assurance procedures in data file preparation and processing. Before launching data collection, SSRS completed extensive testing of the web survey to ensure it was working

as anticipated. The team also checked data following the pretests and throughout the field period to confirm that skip patterns were correctly followed.

The returned paper questionnaires were scanned, cleaned, and edited according to programming and skip instructions and then combined with the web and phone data. All data (collected online, via phone, and through the paper surveys) were thoroughly cleaned with a computer validation program written by the data processing programmers. This program establishes editing parameters to locate any errors including data that do not follow skip patterns, out-of-range values, and errors in data field locations. The program confirmed that the data were consistent with the definitions of codes and ranges and matched the appropriate bases of all questions.

As a standard practice, quality checks were incorporated into the survey. Quality control checks for this study included a review of "speeders" and the internal response rate (the number of questions answered divided by the number of questions asked). After all quality control measures, three cases were removed, and nine duplicates were removed.

ADDITIONAL DATA REVIEWS

Reviewing the Household Roster

In addition to the standard quality control procedures described above, the SSRS team also developed and implemented a separate protocol for reviewing the roster sections in each survey that included both a programmatic and physical review of the data. It was possible for respondents to have entered conflicting data across all interview modes regarding the number of people in their household. As such, all surveys that had conflicting household roster data were reviewed by the project staff and adjudicated in order to ensure the best quality data. Overall, 142 cases had contradictions between the number of adults and children in the household (Q20–Q22) and the actual responses in the roster, leading to household members having populated responses for questions they should not have been asked. Then, the data-processing programmers created three new sets of variables calculating the sum of household members mentioned in the roster, a comparison between the roster responses and the responses in Q20–Q22, and the final determination of household size. With these variables, the SSRS team was able to use the final determination of household size to clean the roster.

After cleaning the roster and determining final household size, the SSRS team created two data files: the standard data file showing the household data and a person-level file which breaks out all members of a household and gives them a unique ID, household identifier, and responses to household level questions.

Reviewing Temporary Stayers

Once finalized, SSRS provided both the household-level and person-level data files to the Urban Institute team so they could determine their working definition of true temporary stayers within the broader context of the data. Urban identified 58 cases where the respondent had indicated that they were temporary stayers but had other people in their household who were not temporary stayers. Urban created variables to indicate whether a respondent or their household member(s) are truly temporary based on their responses to the survey. Using these variables, 35 cases were found to be true temporary stayers in households with residents that are not temporary stayers. In these cases, the non–temporary stayers' responses to household level questions (Q5, Q7–Q13) were reverted to "999 = Refused" in the person-level data file, due to the assumption that a temporary stayer cannot reliably report on the whole household for these questions.

Weighting

We weighted the survey data to represent the residential adult and household populations of Washington, DC, by applying a base weight and balancing the demographic profile of the sample to target population parameters.

The sample consists of an address-based sample (ABS) and a prepaid phone sample (PPD). The ABS was divided into four strata defined by census block group (high poverty, high African American, high Hispanic, and residual). The weights sum to the number of adults/households in the final data.

HOUSEHOLD-LEVEL DESIGN WEIGHT

The base weighting process corrected for disproportionate probabilities of selection at the household level. The base weight was calculated differently depending on which sampling frame the respondent was contacted through. Because the two samples were drawn from separate, overlapping frames, the base weights for each sample were calculated separately and then combined with a compositing adjustment.

Address-Based Sample

For the ABS portion, the household base weight began with a stratification weight that adjusted for differing sampling fractions across design strata (high poverty, high African American, high Hispanic, and residual).

Strata Adjustment

The sampling weight for all sampled addresses *i* is $ABS\_SAMPWT_{i,h} = N_h/n_h$ where N_h is the size of the sample frame in stratum h and n_h is the number of addresses mailed from the sample in stratum h.

Eligibility- and Nonresponse-Adjusted Weight

The household-level design weights were then adjusted for household eligibility and nonresponse. Eligibility and nonresponse adjustments were conducted together. A conditional inference tree was run to determine nonresponse adjustment cells, but nonresponse did not significantly differ between any levels of the predictors—which included design strata, dwelling type, delivery type, census low-response score, median income in census block group, and share of the nonwhite population within the census block group—so the ABS nonresponse adjustment was computed overall. The adjustment factor was calculated as follows:

$$ABS\_NR\_ADJ = \frac{\sum_{sample-ineligible} ABS\_SAMPWT}{\sum_{c,complete} ABS\_SAMPWT}$$

That is, the sum of the design weights among all sampled cases (excluding ineligible addresses) divided by the sum of the sampling weights among all cases with a completed survey. Ineligible addresses are undeliverable codes that are classified as ineligible under American Association for Public Opinion Research (AAPOR) standard definitions.

The nonresponse-adjusted weight is defined for completes only and incorporates the nonresponse adjustment factor.

$$ABS\_WT1 = \begin{Bmatrix} ABS\_SAMPWT \times ABS\_NR\_ADJ, if\ complete \\ 0, \qquad\qquad otherwise \end{Bmatrix}$$

Prepaid Cell Phone Sample

The prepaid cell phone sample weights followed a similar structure as the ABS weights.

Strata Adjustment

The sampling weight for all prepaid sample *i* is expressed as $PPD\_SAMPWT_i = N/n$, where N is the size of the sample frame i and n is the amount of prepaid cell phone sample drawn.

Eligibility- and Nonresponse-Adjusted Weight

Prepaid design weights were then adjusted for eligibility and nonresponse. Eligibility and nonresponse adjustments were conducted together. To implement the eligibility/nonresponse adjustment, a conditional inference tree was run to determine nonresponse adjustment cells, and, based on the

results, the sample was divided into two cells based on household tenure (Own or Unknown vs. Rent), which was the only meaningful predictor of response of those variables included in the model. Additional predictors included in the conditional inference tree were education level, dwelling type, and ethnicity. The predictor variables were appended to the sample file by the sample provider, though not populated for every case. "Missing" was treated as a separate level of each predictor.

Within each cell *c*, the nonresponse adjustment factor was calculated as:

$$PPD\_NR\_ADJ_c = \frac{\sum_{c,sample-ineligible} PPD\_SAMPWT}{\sum_{c,complete} PPD\_SAMPWT}$$

That is, the sum of the design weights among all sampled cases within the cell (*excluding ineligible phone numbers*), divided by the sum of the sampling weights among all cases with a completed survey within the cell. Ineligible phone numbers include those belonging to a minor.

The nonresponse-adjusted weight is defined for completes only and incorporates the nonresponse adjustment factor.

$$PPD\_WT1 = \begin{Bmatrix} PPD\_SAMPWT \times PPD\_NR\_ADJ_c, if\ complete \\ 0, \qquad\qquad otherwise \end{Bmatrix}$$

Combined ABS and Prepaid Cell Sample Weights

Because the two samples were drawn from separate, overlapping frames, they must be combined with a compositing adjustment. Not every ABS household contains an individual with a prepaid cell phone, so the compositing adjustment was limited to ABS where one or more prepaid cell phones is present and the entirety of the prepaid cell sample. For the remainder of the ABS, the adjustment was 1.

The overlapping frame adjustment, $OFAF_i$ was computed as:

$$OFAF_i = \begin{Bmatrix} 1/PPD_i, & i \in PPD \cup ABS(PPD) \\ 1, & i \in ABS(\sim PPD) \end{Bmatrix}$$

where PPD_i is the number of adults in the household who have a prepaid cell phone. $PPD_i$was capped at 3 to contain the variance of the weights. Cases from the prepaid sample that reported having zero prepaid cell phones in the house had their value of PPD imputed. This affected approximately half of prepaid cases.

The final ABS weight, ABS_WT2_i, was computed as:

$$ABS\_WT2_i = OFAF_i \times ABS\_WT1_i$$

The final prepaid cell sample base weight was computed as:

$$PPD\_WT2_i = OFAF_i \times PPD\_WT1_i$$

Therefore, the final composite household-level base weight, $HHBW_i$, is:

$$HHBW_i = \begin{cases} ABS\_SAMPWT_i \times ABS\_NR\_ADJ_c \times OFAF_i, i \in ABS \\ PPD\_SAMPWT_i \times PPD\_NR\_ADJ_c \times OFAF_i, i \in PPD \end{cases}$$

A final adjustment was made so that cases in households with a prepaid cell phone are in their proper proportion relative to the ABS frame size in DC. This adjustment made it so that the sum of the final composite household-level base weights of households with a prepaid cell phone, regardless of which frame they were sampled from, equals the estimated sum of the weights of households in the ABS frame containing one or more prepaid cell phones.

$$FHHBW_i = \begin{cases} HHBW_i, & i \in ABS(\sim PPD) \\ (HHBW_i) \times \left(\sum_{i \in ABS(PPD)} ABS\_WT2_i / \sum_{i \in PPD \cup ABS(PPD)} HHBW_i\right), & i \in PPD \cup ABS(PPD) \end{cases}$$

RAKING

The data were then weighted to balance the demographic profile of the sample to the target population parameters. Three weights were created: a household-level weight, a person-level weight for household members ages 15 or older, and a respondent-level weight.

Missing data in the raking variables were imputed using hot decking. Hot deck imputation replaces the missing values of a respondent randomly with another similar respondent without missing data. Hot decking was done using the hotdeck function from the R package VIM.[31]

Raking was done using Iterative Proportional Fitting[32], a procedure in which the data are repeatedly weighted to the parameters until the difference between the weighted data and the population benchmarks is near zero. Table C.4 shows the data sources used for calibration targets.

TABLE C.4

Calibration Variable Sources

Source	Dimensions
2021 American Community Survey	Sex Age Education Race/ethnicity Number of people in household ages 15 or older Number of adults in household Presence of children younger than 15 in household Home tenure
2021 American Community Survey five-year estimates and Washington, DC, ZIP code map	Density
District of Columbia 2022 ward boundaries	Ward

Sources: Steven Ruggles, Sarah Flood, Ronald Goeken, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 12.0 [dataset]. Minneapolis, MN: IPUMS, 2022. https://doi.org/10.18128/D010.V12.0; https://www.city-data.com/zipmaps/Washington-District-of-Columbia.html. DC ward boundaries are for 2022 and can be found at https://opdatahub.dc.gov/documents/DCGIS::district-of-columbia-ward-boundaries-2022/about.

Household-Level Calibration

The data were post-stratified to household population parameters obtained from the American Community Survey (ACS). The following characteristics were used for this calibration:

- Number of people ages 15 and older in the household (capped at three or more)
- Presence of children ages 14 and younger in the household
- Highest educational attainment in the household (less than high school, high school graduate, some college/associate's degree, bachelor's degree or higher)
- Household tenure (own/rent)
- DC ward
- Population density in ZIP code

The calibrated household-level weight is expressed as:

$$HHCW_i = FHHBW_i \times HHA_i$$

where HHA_i is the calibration adjustment generated by the post-stratification procedure.

Person-Level Calibration (All Persons Ages 15 or Older)

Because demographic information was collected about all members of the surveyed households ages 15 or older, the household-level file was converted mechanically into a person-level file such that each record represents a single person in the household, each with unique demographic information.

Each record's person-level base weight was the $HHCW_i$ defined above, such that $ABW_i = HHCW_i$.

All-Person Calibration

With the person-level base weight applied, the data were then weighted, via raking, to population parameters obtained from the ACS for people ages 15 and older. The following characteristics were used for this calibration:

- Age (15–17, 18–24, 25–34, 35–44, 45–55, 54–64, 65+)
- Educational attainment (less than high school, high school graduate, some college/ associate's, bachelor's degree or higher)
- Gender (male, female)
- Race/ethnicity (white non-Hispanic, Black non-Hispanic, Hispanic, Asian non-Hispanic, other non-Hispanic)
- Number of adults in the household (capped at three or more)
- Presence of children under age 15 in the household
- DC ward
- Density

The calibrated person-level weight is expressed as:

$$ACW_i = ABW_i \times AA_i$$

where AA_i is the calibration adjustment generated by the post-stratification procedure. The final person-level weight was trimmed at the 2nd and 98th percentiles to control excess variance.

All-Household Weight

In order to utilize the person-level calibration information in the household weights, the all-person file was then converted back to a final household-level file, where each record represents one household that responded to the survey. This was done by collapsing the all-person file back to the household level by household ID. The final household level weight for each record was computed as:

$$HHW_i = {\sum_h ACW_i}/{n\ persons_h}$$

where h is the household indicator and $n\ persons_{h,}$ is the number of people ages 15 or older in the household. ACW_i is the untrimmed calibrated person-level weight. Finally, HHW was normalized to sum to the number of households in the data and left untrimmed, as the act of averaging within household already limits variance.

Respondent-Level Calibration

Because certain questions measure the survey respondents' attitudes only, an additional respondent-only weight was needed for analysis. As respondents could only be 18 or older, this weight's purpose is to make the respondents representative of the adult (ages 18 and older) population of DC. The respondent-level base weight was the untrimmed, calibrated, person-level weight for respondents, and zero otherwise.

$$RBW_i = \begin{cases} ACW_i, i \in Respondent \\ 0, \quad i \notin Respondent \end{cases}$$

The respondent-level data was then weighted, via raking, to population parameters obtained from the ACS for adults ages 18 or older. The characteristics used for this calibration were the same as what was used for the person-level calibration. The final respondent-level weight is therefore:

$$RCW_i = RBW_i \times RA_i$$

where RA_i is the calibration adjustment generated by the post-stratification procedure. The final person-level weight was trimmed at the 2nd and 98th percentiles to control excess variance.

WEIGHTED DISTRIBUTIONS

The tables below compare unweighted and weighted sample distributions with target population benchmarks.

TABLE C.5

Household Demographics

	Parameter	Unweighted	Weighted (HHW)
Number of people >= age 15 in household			
1	51.1%	47.7%	51.4%
2	37.5%	37.6%	37.4%
3 or more	11.4%	14.7%	11.3%
Presence of children < age 15 in household			
No	83.4%	82.4%	83.6%
Yes	16.6%	17.6%	16.4%
Highest education in household			
Less than high school	4.3%	4.0%	4.1%
Graduated high school	11.5%	15.1%	11.6%
Some college	14.8%	15.7%	14.8%
College+	69.3%	65.2%	69.5%
Household tenure			
Own	41.7%	37.8%	39.9%
Rent	58.3%	62.2%	60.1%
Ward			
1	12.6%	12.9%	13.3%
2	13.5%	13.8%	13.8%
3	13.0%	10.6%	12.8%
4	10.9%	9.7%	10.9%
5	12.0%	11.8%	12.6%
6	16.4%	13.9%	16.0%
7	10.4%	13.4%	9.8%
8	11.2%	13.8%	10.9%
Density			
1 (lowest)	27.2%	24.7%	24.4%
2	21.4%	23.4%	23.9%
3	25.3%	25.5%	25.2%
4 (highest)	26.2%	26.5%	26.4%

Note: HHW indicates household-level weight

TABLE C.6

Demographics of Housing-Insecure Population Ages 15 and Older

	Parameter	Unweighted	Weighted (ACW with 2 percent trim)
Age			
15–17	2.9%	3.4%	2.9%
18–24	8.1%	10.1%	8.1%
25–34	27.6%	27.9%	27.8%
35–44	20.6%	19.5%	20.6%
45–54	12.9%	11.1%	12.8%
55–64	11.9%	13.2%	11.8%
65+	15.9%	14.7%	15.9%
Gender			
Male	47.0%	45.4%	46.8%
Female	53.0%	54.6%	53.2%
Education[a]			
Less than high school	10.0%	9.0%	9.7%
Graduated high school	13.8%	17.7%	13.8%
Some college	15.9%	15.9%	15.8%
College+	60.3%	57.4%	60.6%
Race/ethnicity			
White, non-Hispanic	39.0%	38.4%	39.3%
Black, non-Hispanic	41.3%	42.2%	41.0%
Hispanic	10.3%	9.8%	10.3%
Asian, non-Hispanic	4.3%	5.0%	4.3%
Other, non-Hispanic	5.1%	4.5%	5.1%
Number of adults in household			
1	32.9%	28.8%	32.7%
2	47.1%	45.4%	47.2%
3 or more	20.0%	25.8%	20.1%
Presence of children < age 15 in household			
No	78.4%	76.9%	78.4%
Yes	21.6%	23.1%	21.6%
Ward			
1	12.8%	12.4%	12.8%
2	12.6%	11.9%	12.6%
3	12.3%	10.2%	12.3%
4	12.4%	11.5%	12.4%
5	13.0%	11.9%	12.8%

6	15.0%	12.7%	15.0%
7	11.3%	15.1%	11.3%
8	10.7%	14.2%	10.7%
Density			
1 (lowest)	25.0%	25.5%	25.0%
2	24.3%	24.1%	24.1%
3	26.2%	26.2%	26.3%
4 (highest)	24.6%	24.2%	24.6%

Notes: ACW indicates calibrated person-level weight. Demographics focus on those age 15 and older because in the survey respondents report out demographic characteristics only of those age 15 or older in the household.

[a] People ages 15 to 17 are included in the less than high school education category.

TABLE C.7

Respondent Demographics for Housing-Insecure Adults 18 and Older

	Parameter	Unweighted	Weighted (RCW with 2 percent trim)
Age			
18–24	8.3%	6.3%	7.6%
25–34	28.4%	27.5%	28.8%
35–44	21.2%	20.1%	21.4%
45–54	13.3%	11.7%	13.0%
55–64	12.3%	16.0%	12.5%
65+	16.4%	18.4%	16.7%
Gender			
Male	46.9%	39.4%	46.2%
Female	53.1%	60.6%	53.8%
Education			
Less than high school	7.3%	4.8%	6.7%
Graduated high school	14.2%	16.3%	13.7%
Some college	16.4%	16.5%	16.3%
College+	62.1%	62.4%	63.3%
Race/ethnicity			
White, non-Hispanic	39.6%	40.1%	40.4%
Black, non-Hispanic	40.8%	41.8%	40.7%
Hispanic	10.1%	8.0%	9.4%
Asian, non-Hispanic	4.5%	5.5%	4.6%
Other, non-Hispanic	5.1%	4.5%	5.0%
Number of adults in household			
1	33.0%	49.1%	33.7%
2	47.3%	38.6%	48.0%

3 or more	19.7%	12.3%	18.3%
Presence of children < age 15 in household			
No	79.1%	82.4%	79.7%
Yes	20.9%	17.6%	20.3%
Ward			
1	12.9%	12.9%	12.8%
2	12.8%	13.8%	13.0%
3	12.3%	10.6%	12.5%
4	12.3%	9.7%	11.9%
5	13.0%	11.8%	12.9%
6	15.1%	13.9%	15.4%
7	11.1%	13.4%	11.0%
8	10.4%	13.8%	10.6%
Density			
1 (lowest)	27.7%	24.7%	27.4%
2	20.6%	23.4%	20.7%
3	26.2%	25.5%	26.3%
4 (highest)	25.5%	26.5%	25.6%

Note: RCW indicates respondent-level calibrated weight. Respondents were required to be at least 18 and were deemed ineligible to complete the survey otherwise.

EFFECTS OF SAMPLE DESIGN ON STATISTICAL INFERENCE

Post-data collection statistical adjustments require analysis procedures that reflect departures from simple random sampling. SSRS calculates the effects of these design features so that an appropriate adjustment can be incorporated into tests of statistical significance when using these data. The so-called "design effect" or *deff* represents the loss in statistical efficiency that results from a disproportionate sample design and systematic non-response. The design effects for the household, person 15+, and respondent samples are 1.32, 1.33, and 1.46 respectively. The design effect for the person 15+ weights will be higher if households are treated as primary sampling units or "clusters".

SSRS calculates the composite design effect for a sample of size n, with each case having a weight, w, as:[33]

$$deff = \frac{n \sum w^2}{(\sum w)^2}$$

The survey's margin of error is the largest 95 percent confidence interval for any estimated proportion based on the total sample (the one around 50 percent). The margins of error for the household, people

ages 15 and older, and respondent samples are ± 2.6, 2.0, and 2.8 percentage points, respectively. This means that for 95 of every 100 samples drawn using the same methodology, estimated proportions based on the appropriate sample will be no more than 2.6, 2.0, and 2.8 percentage points away from their true values in the population. Margins of error for subgroups will be larger. It is important to remember that sampling fluctuations are only one possible source of error in a survey estimate. Other sources, such as respondent selection bias, questionnaire wording, and reporting inaccuracy, may contribute additional errors of greater or lesser magnitude.

Response Rate

The ABS and telephone response rates for this study were calculated using AAPOR's RR3.

TABLE C.8
ABS Response Rate

	ABS
Total records	11,240
Ineligibles	81
Returned mail	1,587
Valid sample	7,966
Completes	1,606
Response rate	28%

TABLE C.9
Prepaid Cell Response Rate

Disposition	Prepaid cell
Eligible, interview (category 1)	
Complete	201
Eligible, noninterview (category 2)	
Refusal and breakoff	16
Break off	14
Deleted interview	0
Unknown eligibility, noninterview (category 3)	
No answer or busy	7313
Answering machine, don't know if household	2527
Call blocking	98
Housing unit, unknown if eligible respondent	1436

No screener completed	96
Not eligible (Category 4)	
Fax/data line	2
Non-working number	893
Business, government office, other organizations	70
No eligible respondent	272
Total phone numbers used	12938
Response rate 3	4.1%

SSRS Profile

SSRS is a full-service survey and market research firm managed by a core of dedicated professionals with advanced degrees in the social sciences. SSRS designs and implements research solutions for complex strategic, tactical, public opinion, and policy issues in the United States and in more than 40 countries worldwide.

The SSRS team specializes in creative problem-solving and informed analysis to meet its clients' research goals. SSRS provides the complete set of analytical, administrative and management capabilities needed for successful project execution. We partner with clients interested in conducting high-quality research. In the industry, SSRS is renowned for its sophisticated sample designs and its experience with all facets of data collection, including those involving multimodal formats. SSRS also has extensive statistical and analytical capabilities for extracting important insights from the survey data and suggesting strategies based on those insights.

II. Survey Demographics

Below, we include both the weighted and unweighted counts of survey respondent demographics at the person level, along with housing instability status. Included are racial/ethnic identity, age category, gender identity, ward group, and housing insecurity status. Racial/ethnic identity responses are not mutually exclusive, and "do not know" and "refused" responses for Hispanic identity are not included in table C.II.1, because these options were not available for the other categories.

TABLE C.II.1

Weighted and Unweighted Counts of Person-Level Racial/Ethnic Identification

Race/ethnic identification	Unweighted count	Weighted count
Black or African American	1,749	299,348
White	1,576	297,958
Asian	249	43,229
American Indian or Alaska Native	70	11,810
Hispanic	368	68,271
Total	3,747	661,845

TABLE C.II.2

Weighted and Unweighted Counts of Person-Level Age Category

Age category	Unweighted count	Weighted count
14 or younger	542	84,910
15 to 17	94	15,354
18 to 24	317	46,316
25 to 54	1,838	346,818
55 or older	874	157,253
Do not know	3	659
Refused	79	10,534
Total	3747	661,845

TABLE C.II.3

Weighted and Unweighted Counts of Person-Level Gender Identity

Gender identity	Unweighted count	Weighted count
Male	1,752	314,707
Female	1,995	347,138
Total	3,747	661,845

TABLE C.II.4

Weighted and Unweighted Counts of Person-Level Ward Response

Ward response	Unweighted count	Weighted count
Ward 1	430	80,059
Ward 2	406	77,654
Ward 3	357	78,062
Ward 4	430	81,267
Ward 5	472	90,690
Ward 6	465	96,475
Ward 7	611	80,091
Ward 8	576	77,548
Total	3,747	661,845

TABLE C.II.5

Weighted and Unweighted Counts of Person-Level Housing Insecurity Status

Housing insecurity status	Unweighted count	Weighted count
Housing secure	3,164	579,393
Housing insecure	583	82,452
Total	3,746	661,845

Appendix D. Additional Analyses and Findings

Additional Person-Level Findings

We calculated the types of households that people of different ages fell into, with household type defined as either an adult-only household (with no members ages 17 or younger) and households with children (with at least one person age 18 or older and at least one person age 17 or younger) (tables D.1 and D.2). Among people experiencing housing insecurity in DC, we looked to see at the differences in the housing types people live in by age categories, with a special focus on those transition-age youth age 18 to 24 and older adults age 55 and older. We find that of transition-age youth (ages 18 to 24) experiencing housing insecurity, 39 percent are in households with children, compared with 26 percent of people ages 55 and older.

TABLE D.1

Share of People in Age Categories and Household Types among Housing-Insecure People

Age group	People in adult-only households	95% confidence interval	People in households with children	95% confidence interval	All housing-insecure people	95% confidence interval
0 to 17	—	—	46%	(39%, 54%)	24%	(19%, 30%)
18 to 24	16%	(11%, 22%)	9%	(6%, 15%)	12%	(9%, 16%)
25 to 54	58%	(50%, 66%)	36%	(30%, 42%)	47%	(41%, 52%)
55+	25%	(19%, 33%)	8%	(5%, 13%)	16%	(12%, 21%)
Refused	1%	(0%, 3%)	1%	(0%, 2%)	1%	(0%, 2%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing instability survey data.

Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval. Children and youth ages 0 to 17 are necessarily accompanied by an adult because survey respondents need to be at least age 18.

TABLE D.2

Share of People in Household Types and Age Categories among Housing-Insecure People

Age group	People in adult-only households	95% confidence interval	People in households with children	95% confidence interval	All housing-insecure people
0 to 17	—	(—, —)	100%	(100%, 100%)	100%
18 to 24	61%	(44%, 76%)	39%	(24%, 56%	100%
25 to 54	60%	(51%, 68%)	40%	(32%, 49%)	100%
55+	74%	(61%, 84%)	26%	(16%, 39%)	100%
Refused	50%	(13%, 87%)	50%	(13%, 87%)	100%
Total	48%	(40%, 56%)	52%	(44%, 60%)	100%

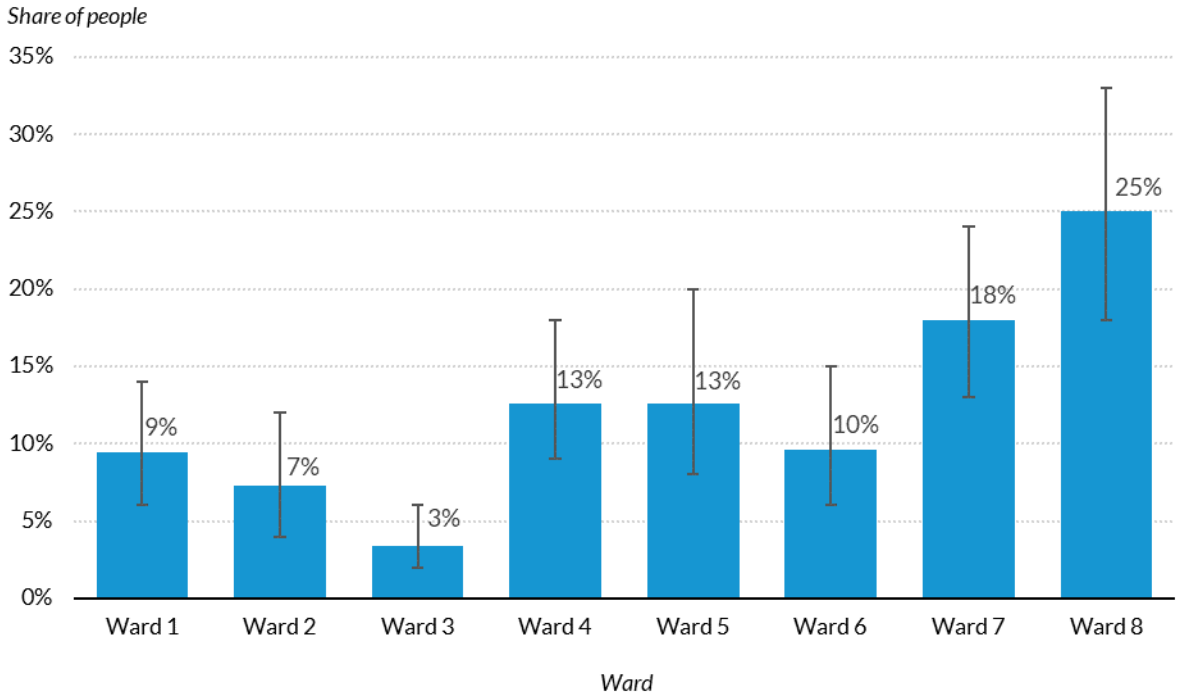
Source: Authors' analysis of 2023 DC housing instability survey data.

Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval. Children and youth ages 0 to 17 are necessarily accompanied by an adult because survey respondents need to be at least age 18.

The findings section in the main body of the report shows housing insecurity rates by ward groups, but we also calculated those rates for individual wards (figure D.1 and table D.3). Although we have larger margins of error, we can add additional nuance to the analyses by ward. We find that Ward 3 has the lowest share of people experiencing housing insecurity. Similarly, Ward 8 has significantly higher rates of people experiencing housing insecurity than all other wards except Wards 7 and 5. Indeed, residents in Ward 8 are twice as likely to be housing insecure relative to their share of the DC population; Ward 8 has 26 percent of all housing-insecure residents in DC despite being home to just 13 percent of the DC population (table D.3).

FIGURE D.1

Housing-Insecurity Incidence Rate for Residents by Ward



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Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This includes responses from prepaid cellphone users, though their ward was assigned by asking what ZIP code they were located in and assigning that ZIP code to a ward based on the ZIP code's centroid. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

TABLE D.3

Share of Total and Housing-Insecure Residents across Wards

DC ward	Share of housing-insecure people	Share of DC's total population
Ward 1	9%	12%
Ward 2	7%	12%
Ward 3	3%	12%
Ward 4	12%	12%
Ward 5	14%	14%
Ward 6	11%	14%
Ward 7	15%	11%
Ward 8	26%	13%
No ward reported	3%	1%
Total	**100%**	**100%**

Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This includes responses from prepaid cellphone users, though their ward was assigned by asking what ZIP code they were located in and assigning that ZIP code to a ward based on the ZIP code's centroid. There were 142 prepaid cell respondents (out of 543) who did not report their ZIP code.

TABLE D.4

Housing Insecurity Rates by Ward Group among People in Adult-Only Households

Ward group	Housing secure	95% confidence interval	Housing insecure	95% confidence interval	All people in adult-only households	95% confidence interval
Wards 1 through 6	84%	(82%, 86%)	65%	(57%, 73%)	82%	(80%, 84%)
Wards 7 and 8	16%	(14%, 18%)	35%	(27%, 43%)	18%	(16%, 20%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.5

Housing Insecurity Rates by Ward among Households of Adults

Ward group	Housing secure	95% confidence interval	Housing insecure	95% confidence interval	All people in adult-only households
Wards 1 through 6	93%	(91%, 94%)	7%	(6%, 9%)	100%
Wards 7 and 8	82%	(77%, 86%)	18%	(14%, 23%)	100%
Total	91%	(89%, 92%)	9%	(8%, 11%)	100%

Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.6

Housing Insecurity Rates by Ward Group among People in Households with Children

Ward group	Housing secure	95% confidence interval	Housing insecure	95% confidence interval	All people in households with children in DC	95% confidence interval
Wards 1 through 6	68%	(61%, 74%)	50%	(36%, 63%)	65%	(59%, 70%)
Wards 7 and 8	32%	(26%, 39%)	50%	(37%, 64%)	35%	(30%, 41%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.7

Housing Insecurity Rates by Ward Group among People in Households with Children

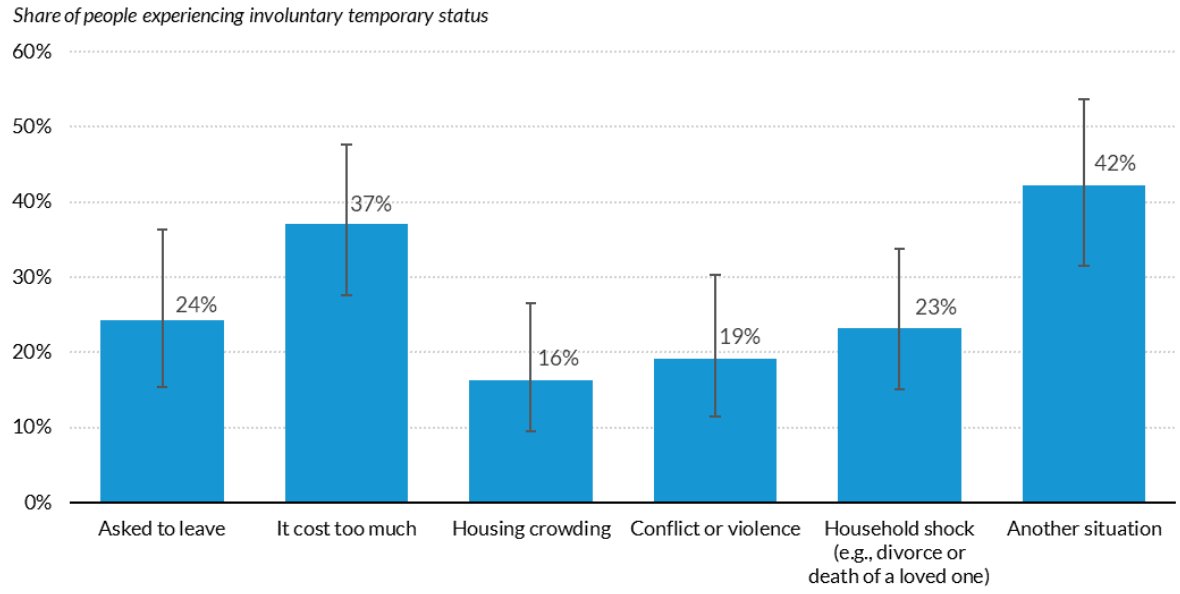
Ward group	Housing secure	95% confidence interval	Housing insecure	95% confidence interval	All people in households with children in DC
Wards 1 through 6	86%	(80%, 91%)	14%	(9%, 20%)	100%
Wards 7 and 8	74%	(66%, 82%)	26%	(18%, 34%)	100%
Total	82%	(77%, 86%)	18%	(14%, 23%)	100%

Source: Authors' analysis of 2023 DC housing instability survey data
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

People's reasons for why they are experiencing involuntary temporary status differ, and figure D.2 lists the share of people who were experiencing involuntary temporary status who reported different reasons for leaving their prior living situations.

FIGURE D.2

Reasons for Leaving Prior Living Situations among People Experiencing Involuntary Temporary Status



Source: Authors' analysis of 2023 DC housing instability survey data.
Notes: Estimates are generated at the person level and are weighted to reflect the population of people in DC. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

Household-Level Findings

At a household level, 15 percent of DC households are experiencing housing insecurity (with 95 percent confidence that the true value is between 13 and 17 percent).

Considering housing type, of those households experiencing insecurity, 41 percent were households with children and 59 percent were adult-only households (table D.9), even though only 21 percent of households in DC are households with children and 79 percent are adult-only households. Households facing housing insecurity are about two times more likely to be households with children compared with all households in DC (41 percent versus 21 percent).

TABLE D.8

Housing Insecurity Rate for Households by Household Type

	Housing Secure		Housing Insecure		Total DC Households
	Share	95% confidence interval	Share	95% confidence interval	Share
Adult-only households	89%	(87%, 91%)	11%	(9%, 13%)	100%
Households with children	72%	(66%, 77%)	28%	(23%, 34%)	100%
Total	85%	(83%, 87%)	15%	(13%, 17%)	100%

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.9

Share of Household Type for Households by Housing Insecurity Status

	Housing Secure		Housing Insecure		Total DC Households	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Adult-only households	82%	(80%, 85%)	59%	(52%, 66%)	79%	(77%, 81%)
Households with children	18%	(15%, 20%)	41%	(34%, 48%)	21%	(19%, 23%)
Total	100%		100%		100%	

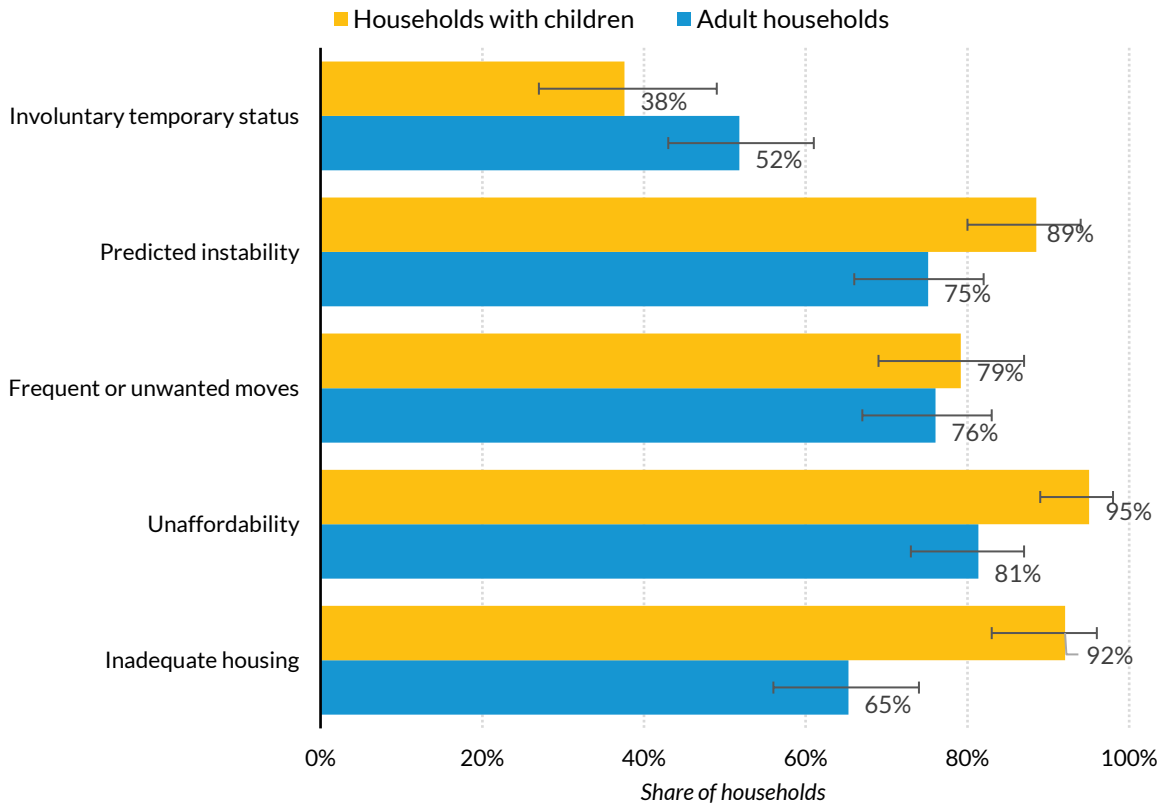
Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

When considering the type of housing insecurity experienced by household type, housing-insecure households with children are more likely to experience inadequate housing and unaffordability than are households of only adults (figure D.3).

FIGURE D.3

Housing Insecurity Types among Housing-Insecure Households in DC by Household Type



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Source: Authors' analysis of 2023 DC Housing Instability Survey.
Notes: Estimates are weighted at the household level to the population of households in DC. Whiskers indicate the range of values within which we have 95 percent confidence that the true value lives.

Considering geographic location, 28 percent of households in Wards 7 and 8 were housing insecure compared with just 9 percent of households in Wards 1 through 6 (table D.10). Indeed, 35 percent of all housing insecure households live in Wards 7 and 8, despite these wards representing just 15 percent of the total city population (table D.11).

TABLE D.10

Housing Insecurity Rate for Households by Ward Group

	Housing Secure		Housing Insecure		Total DC Households
	Share	95% confidence interval	Share	95% confidence interval	Share
Wards 7 and 8	72%	(66%, 78%)	28%	(22%, 34%)	100%
Wards 1 through 6	91%	(89%, 93%)	9%	(7%, 11%)	100%
Total	88%	(86%, 90%)	12%	(10%, 14%)	100%

Source: Authors' analysis of 2023 DC housing insecurity survey.
Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.11

Share of Households in DC Ward Groups by Housing Insecurity Status

	Housing Secure		Housing Insecure		Total DC Households	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Wards 7 and 8	13%	(11%, 15%)	35%	(28%, 43%)	15%	(14%, 17%)
Wards 1 through 6	87%	(85%, 89%)	65%	(57%, 72%)	85%	(83%, 86%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.
Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

Renter households in DC are disproportionately housing insecure. Of the housing-insecure population, 16 percent are living in a place that is owned and 83 percent are living in a place that is rented (relative to a total population that is 38 percent owned and 62 percent rented) (tables D.12 and D.13). Indeed, 21 percent of renters are housing insecure, relative to just 6 percent of people who live in a place that is owned.

TABLE D.12

Housing Insecurity Rate for Households by Housing Tenure

	Housing Secure		Housing Insecure		Total DC Households
	Share	95% confidence interval	Share	95% confidence interval	Share
Place that is owned	94%	(91%, 96%)	6%	(4%, 9%)	100%
Place that is rented	79%	(76%, 82%)	21%	(18%, 24%)	100%
Other	42%	(6%, 90%)	58%	(10%, 94%)	100%
Total	85%	(83%, 87%)	15%	(13%, 17%)	100%

Source: Authors' analysis of 2023 DC housing insecurity survey.
Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.13

Share of Households with Different Housing Tenure by Housing Insecurity Status

	Housing Secure		Housing Insecure		Total DC Households	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Place that is owned	42%	(39%, 45%)	16%	(11%, 22%)	38%	(36%, 41%)
Place that is rented	58%	(55%, 61%)	83%	(77%, 88%)	62%	(59%, 64%)
Other	0%	(0%, 1%)	1%	(0%, 4%)	0%	(0%, 1%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.
Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

Housing-insecure households had a higher probability of using housing or rent subsidies than households who were not housing insecure, and a higher share of households receiving housing subsidies were insecure than those who were not receiving subsidies. Among households experiencing insecurity, 46 percent were receiving housing subsidies and 54 were not (relative to 35 percent and 65 percent at a city level) (table D.15). However, 33 percent of renter households receiving subsidies were housing insecure relative to 15 percent of renter households who were not receiving subsidies (table D.14). In short, housing subsidies are more likely to be going to housing-insecure households, but subsidy recipients were still twice as likely to be housing insecure than were nonrecipient renter households.

TABLE D.14

Housing Insecurity Rate for Renter Households by Housing Subsidy Status

	Housing Secure		Housing Insecure		Total DC Households
	Share	95% confidence interval	Share	95% confidence interval	Share
Not a recipient of housing subsidies	85%	(81%, 88%)	15%	(12%, 19%)	100%
Subsidy recipient	67%	(61%, 73%)	33%	(27%, 39%)	100%
Total	79%	(75%, 81%)	21%	(19%, 25%)	100%

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.15

Share of Households in Ward Groups by Housing Insecurity Status

	Housing Secure		Housing Insecure		Total DC Households	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Not a recipient of housing subsidies	70%	(66%, 74%)	46%	(39%, 54%)	65%	(61%, 68%)
Subsidy recipient	30%	(26%, 34%)	54%	(46%, 61%)	35%	(32%, 39%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. Responses only include those from the address-based sample. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

When it comes to how long households have been in DC, it appears that those who have lived in the District for 10 or more years are disproportionately likely to experience housing insecurity (tables D.16 and D.17). Among households who have lived in the district for more than 10 years, 19 percent are housing insecure relative to 10 percent for those in DC between 3 and 10 years, 10 percent for those in DC for 1 to 3 years, and 15 percent for less than 1 year.

TABLE D.16

Housing Insecurity Rate for Households by Duration of Residency in DC

How long have you lived in DC?	Housing Secure		Housing Insecure		Total DC Households
	Share	95% confidence interval	Share	95% confidence interval	Share
Less than 1 year	85%	(77%, 91%)	15%	(9%, 23%)	100%
1 year to less than 3 years	90%	(84%, 94%)	10%	(6%, 16%)	100%
3 years to less than 10 years	90%	(86%, 93%)	10%	(7%, 14%)	100%
10 years or more	81%	(78%, 84%)	19%	(16%, 22%)	100%
Total	85%	(83%, 87%)	15%	(13%, 17%)	100%

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

TABLE D.17

Share of Households by Duration of Residency and Housing Insecurity Status

How long have you lived in DC?	Housing Secure		Housing Insecure		Total DC Households	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Less than 1 year	8%	(7%, 10%)	8%	(5%, 12%)	8%	(7%, 10%)
1 year to less than 3 years	13%	(11%, 15%)	8%	(5%, 13%)	12%	(10%, 14%)
3 years to less than 10 years	28%	(25%, 30%)	18%	(13%, 24%)	26%	(24%, 29%)
10 years or more	52%	(48%, 55%)	66%	(59%, 73%)	54%	(51%, 57%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

Not all instances of households hosting people experiencing involuntary temporary status involved housing insecurity (table D.18). Indeed, 4 percent of all households were hosting people experiencing involuntary temporary status but who did not qualify as housing insecure, though households hosting these people were 1.5 more likely to be either housing insecure themselves or to be hosting someone who was housing insecure (6 percent versus 4 percent).

TABLE D.18

Share of Total DC Households by Insecurity Status and Presence of Members with Temporary Status

	Housing Secure		Housing Insecure		Total DC Households	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Households with no temporary status members	81%	(78%, 83%)	9%	(8%, 11%)	90%	(89%, 92%)
Household with members who had temporary status	4%	(3%, 5%)	6%	(4%, 7%)	10%	(8%, 11%)
Total	85%	(83%, 87%)	15%	(13%, 17%)	100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval. Households can be made up of all permanent household members or a mix of permanent and temporary members. Technically, no household can entirely comprise temporary members. Temporary status only becomes involuntary temporary status if the respondent noted that they are temporarily living with a household because they "can't afford to stay anywhere else."

TABLE D.19

Share of Total DC Households by Insecurity Status and Presence of Members with Temporary Status

	Housing Secure		Housing Insecure		Total DC Households	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Households with no temporary status members	95%	(94%, 96%)	64%	(56%, 71%)	90%	(89%, 92%)
Household with members who had temporary status	5%	(4%, 6%)	36%	(29%, 44%)	10%	(8%, 11%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval. Households can be made up of all permanent household members or a mix of permanent and temporary members. Technically, no household can entirely comprise temporary members. Temporary status only becomes involuntary temporary status if the respondent noted that they are temporarily living with a household because they "can't afford to stay anywhere else."

Households with more children face different challenges than those with fewer children, and these pressures translate into different experiences with housing insecurity. Among housing-insecure households, a lower proportion had just one or two children relative to housing-secure households, and a higher share had four children or five or more children than housing secure households (3 and 5 percent versus 2 and 1 percent, respectively) (table D.19). Indeed, looking at the rate of housing insecurity within household size categories (one child, two children, etc.), households with more children had significantly higher rates of housing insecurity (table D.20).

TABLE D.20

Shares of Households with Different Numbers of Children (Ages 0 to 17) by Insecurity Status, among Households with Children

	Housing Secure		Housing Insecure		Total DC Households	
Number of children	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
1	49%	(41%, 56%)	37%	(27%, 49%)	46%	(39%, 52%)
2	36%	(29%, 44%)	38%	(27%, 50%)	36%	(31%, 43%)
3	12%	(8%, 18%)	16%	(10%, 26%)	13%	(10%, 18%)
4	2%	(1%, 5%)	3%	(1%, 9%)	2%	(1%, 5%)
5 or more	1%	(0%, 3%)	5%	(2%, 13%)	2%	(1%, 5%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval. Households can consist of all permanent household members or a mix of permanent and temporary members. Technically, no household can entirely comprise temporary members.

TABLE D.21

Shares of Households with Different Numbers of Children (Ages 0 to 17) by Insecurity Status, among Households with Children

	Housing Secure		Housing Insecure		Total DC Households with Children
Number of children	Share	95% confidence interval	Share	95% confidence interval	Share
1	77%	(68%, 84%)	23%	(16%, 32%)	100%
2	71%	(60%, 80%)	29%	(20%, 40%)	100%
3	66%	(50%, 79%)	34%	(21%, 50%)	100%
4	56%	(23%, 85%)	44%	(15%, 77%)	100%
5 or more	34%	(11%, 69%)	66%	(31%, 89%)	100%
Total	72%	(66%, 77%)	28%	(23%, 34%)	100%

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the household level to the population of households in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval. Households can be made up of all permanent household members or a mix of permanent and temporary members. No household can technically be made up of all temporary members.

Respondent-Level Findings

We added questions on perceptions of social network support to survey to compare responses with social support questions from TCP's PIT Plus survey (Interagency Council on Homelessness 2019). In

that survey of people experiencing homelessness, 62 percent said they have someone in their social network who can help if they are ill. In this survey, when asked, "If you get sick, do you have someone who can help care for you?", 36 percent of respondents experiencing housing insecurity said yes (table D.21). In contrast, among people who are housing secure, 79 percent said they had someone to help care for them if they get sick.

TABLE D.22

Share of Respondents Reporting Having Someone to Act as a Caretaker if Needed by Housing Insecurity Status

	Housing Secure		Housing Insecure		Total	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Yes	79%	(77%, 81%)	36%	(29%, 44%)	74%	(71%, 76%)
No	20%	(18%, 23%)	61%	(53%, 68%)	26%	(23%, 28%)
Refused/ don't know	0%	(0%, 1%)	3%	(1%, 8%)	1%	(0%, 1%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.
Notes: Estimates are weighted at the respondent level to the population of people age 18 or older in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

In response to a project led by the Urban Institute on boosting upward mobility from poverty (Turner et al. 2020), a question around the respondent's level of connectedness to their neighbors was added to the survey. An understudied but critical component of boosting people out of poverty sustainably involves a sense of belonging in community. We find that among people ages 18 or older experiencing housing insecurity, 45 percent express feeling not at all connected to their neighbors, more than double the share of people who are secure in their housing (22 percent) (table D.22). Among those experiencing housing insecurity, 12 percent express feeling connected or strongly connected to their neighbors, compared with 24 percent of people experiencing secure housing. People who are housing secure are two times more likely than people who are housing insecure to feel connected or strongly connected to their neighbors.

TABLE D.23

Level of Respondents' Reported Connectedness to Neighbors by Housing Insecurity Status

	Housing Secure		Housing Insecure		Total	
	Share	95% confidence interval	Share	95% confidence interval	Share	95% confidence interval
Not at all connected	22%	(19%, 24%)	45%	(37%, 53%)	25%	(22%, 27%)
A little connected	29%	(26%, 31%)	26%	(20%, 33%)	28%	(26%, 31%)
Somewhat connected	26%	(23%, 28%)	16%	(11%, 23%)	24%	(22%, 27%)
Connected	15%	(13%, 17%)	8%	(5%, 14%)	14%	(12%, 16%)
Strongly connected	9%	(7%, 11%)	4%	(2%, 8%)	8%	(7%, 10%)
Don't know	0%	—	1%	(0%, 8%)	0%	(0%, 1%)
Refused	0%	(0%, 1%)	0%	—	0%	(0%, 0%)
Total	100%		100%		100%	

Source: Authors' analysis of 2023 DC housing insecurity survey.

Notes: Estimates are weighted at the respondent level to the population of people age 18 or older in DC. This table provides in parentheses the lower bound and upper bound of the range of values within the 95 percent confidence interval.

Notes

[1] We have 95 percent confidence that the true value is between 69,808 and 95,095 people.

[2] We use "Black" to describe people of African descent because it represents current best practices from the literature for inclusivity, but we acknowledge that this term has limitations, as does "White."

[3] US Department of Housing and Urban Development, "Homeless Emergency Assistance and Rapid Transition to Housing: Defining 'Homeless'," *Federal Register*, December 5, 2011, https://www.federalregister.gov/documents/2011/12/05/2011-30942/homeless-emergency-assistance-and-rapid-transition-to-housing-defining-homeless.

[4] The McKinney-Vento Act first became law in 1987 and shaped the definition of homelessness.

[5] Among DC households experiencing housing insecurity, 59 percent are adult-only households, and 41 percent are households with children.

[6] We have 95 percent confidence that the true value is between 69,808 and 95,095 people.

[7] We use "Black" to describe people of African descent because it represents current best practices from the literature for inclusivity, but we acknowledge that this term has limitations, as does "White."

[8] Kathryn Reynolds and Elizabeth Burton, "An Estimated One in Five Renters Feels Pressured to Leave Their Home," *Urban Wire* (blog), Urban Institute, July 3, 2023, https://www.urban.org/urban-wire/estimated-one-five-renters-feels-pressured-leave-their-home.

[9] Juan Pablo Garnham, Carl Gershenson, and Matthew Desmond, "New Data Release Shows that 3.6 Million Eviction Cases were Filed in the United States in 2018," *The Eviction Lab* (blog), July 11, 2022, https://evictionlab.org/new-eviction-data-2022/.

[10] The index development of a measure of housing insecurity, though technically published in January 2022, was only recently released to the public on June 27, 2023. Therefore, we were not able to benefit from that publication in determining our own definition of housing insecurity in this report. Despite this, both approaches show several similarities, in that they are both multidimensional and some have higher weight than others in determining insecurity.

[11] September 26, 2021, is the date that landlords in DC were permitted to serve tenants notices in all types of eviction cases without restrictions, following the end of the COVID-19 eviction moratorium. Starting January 1, 2022, landlords in DC were able to file all types of eviction cases after any required notices had been served. See "What is the Status of the Eviction Moratorium for D.C. Renters?", DC Bar, September 17, 2021, https://www.dcbar.org/pro-bono/news/what-is-the-status-of-the-eviction-moratorium-for-.

[12] The newly released report proposing an index of housing insecurity (Murdoch et al. 2022) names the following dimensions of insecurity: lack of affordability, lack of stable occupancy, and lack of safety and decency.

[13] Prepaid cell phone numbers are associated with cell phones that are "pay as you go" and do not require a contract.

[14] Kyley McGeeney and Courtney Kennedy, "Cell Phone Activity Flags," Pew Research Center, October 24, 2016, http://www.pewresearch.org/2016/10/24/cellphone-activity-flags; David Dutwin, "Cellular Telephone Methodology: Present and Future" (webinar, AAPOR Webinar Series, 2014), http://www.aapor.org/AAPORKentico/Education-Resources/Online-Education/Webinar-Details.aspx?webinar=WEB0114; Jo Best, J. McKinstry, A. Hasanbasri, C. Loveridge, and H. Trieu, "Supplementing Address-Based Sample With Prepaid Cell Sample to Help Improve Sample Representativeness," Paper presented at the 2022 Annual American Association of Public Opinion Research Conference, Chicago, IL.

[15] Respondents could select their $15 post-incentive to be in the form of either an Amazon gift card or a Target gift card. They could also choose to receive the gift card either electronically by email or receive a physical gift card by postal mail.

[16] The six American Community Survey characteristics used in weights are: (1) number of persons ages 15 and older in the household (capped at three or more); (2) presence of children ages 14 and younger in the household; (3) highest educational attainment in the household (less than high school, high school graduate, some college/associate's degree, bachelor's degree or higher); (4) housing tenure (rent/own); (5) ward; (6) population density in ZIP code.

[17] The following eight characteristics from the American Community Survey are used for sample weights of people ages 15 or older: (1) age (15–17, 18–24, 25–34, 35–44, 45–55, 54–64, 65+); (2) educational attainment (LT High School, High School Grad, Some College/ Associates, Bachelor's degree or higher); (3) gender (male, female); (4) race/ethnicity (white, non-Hispanic, Black non-Hispanic, Hispanic, Asian non-Hispanic, other non-Hispanic); (5) number of adults in the household (capped at three or more); (6) presence of children under age 15 in the household; (7) ward; and (8) population density of ZIP code.

[18] The numbers representing the DC population compare accurately with the numbers related to people experiencing housing insecurity and are not designed to exactly match the American Community Survey distributions. See pages 52 to 66 of appendix C for more details.

[19] Additional research questions are answered in appendix D.

[20] People who are temporarily living with another household are categorized into a household type based on both temporary and permanent members within the household. In other words, the household type is not defined by other temporary members but by everyone in the household, permanent and temporary. We ran sensitivity analyses, defining the household type for those involuntarily living with a household temporarily by just the temporary members, and we found no households that were child-only households.

[21] By design, respondents must be at least 18 years of age. These respondents report out on the people in their household, thereby getting us information on people ages 17 and younger. When we share results about children and youth, they are necessarily accompanied by at least one adult age 18 or older.

[22] Christopher Rowland, "Seniors Are Flooding Homeless Shelters that Can't Care for Them," *Washington Post*, March 22, 2023. https://www.washingtonpost.com/business/2023/05/22/seniors-homeless-baby-boomers/.

[23] The Emergency Rental Assistance Priority (ERAP) Index, in combination with local communities' knowledge, helps local decisionmakers identify neighborhoods with the greatest need for rental assistance and target policies and resources to more equitably support households in remaining housed (Batko et al. 2023).

[24] Samantha Batko, Will Curran-Groome, Judah Axelrod, Brendan Chen, and Lynden Bond, July 2023, "Emergency Rental Assistance Priority Index: How to Use the Tool to Prevent Evictions and Homelessness (Factsheet)," Urban Institute, Washington, DC, https://www.urban.org/sites/default/files/2023-07/How%20to%20Use%20the%20Tool%20to%20Prevent%20Evictions%20and%20Homelessness.pdf.

[25] For racial and ethnic characteristics in DC by ward in 2023, see DC Health Matters, accessed September 5, 2023, https://www.dchealthmatters.org/demographicdata.

[26] OpenData DC, "ACS Demographic and Housing Tables for the District of Columbia," OpenData DC.gov, accessed September 25, 2023, https://opendata.dc.gov/datasets/DCGIS::acs-housing-characteristics-dc-ward/explore?location=38.893682%2C-77.014562%2C12.22&showTable=true.

[27] We made several attempts to reach staff who work with clients seeking mortgage payment assistance services but were unable to secure an interview.

[28] The question is, "Are you currently living in transitional housing, a shelter, or hotel?" If the response is yes, the respondent is thanked and the interview terminated. If the answer is no, the interviewer will continue.

[29] Kyley McGeeney and Courtney Kennedy, "Appending a Prepaid Phone Flag to the Cell Phone Sample," Pew Research Center, October 24, 2016, "Cell Phone Activity Flags," http://www.pewresearch.org/2016/10/24/cellphone-activity-flags; David Dutwin, "Cellular Telephone Methodology: Present and Future [Webinar]," AAPOR Webinar Series, 2014, http://www.aapor.org/AAPORKentico/Education-Resources/Online-Education/Webinar-Details.aspx?webinar=WEB0114.

[30] Respondents were given an option between an Amazon gift card and a Target gift card.

[31] Alexander Kowarik and Matthias Templ, "Imputation with the R Package VIM," *Journal of Statistical Software* 74 (7) (2016): 1–16.

[32] Josh Pasek. anesrake: ANES Raking Implementation: Version 0.80 [R package]. 2018. https://cran.r-project.org/web/packages/anesrake/index.html.

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