
Environmental Justice

Session 8: Housing



Reflection

Imagine a home that provides shelter, comfort, and fosters wellbeing (this can be a home you have experienced or not):

What are some ways this home may help provide the foundation for the lives of its inhabitants? Think about both social and physical needs.

Housing: Framing Questions

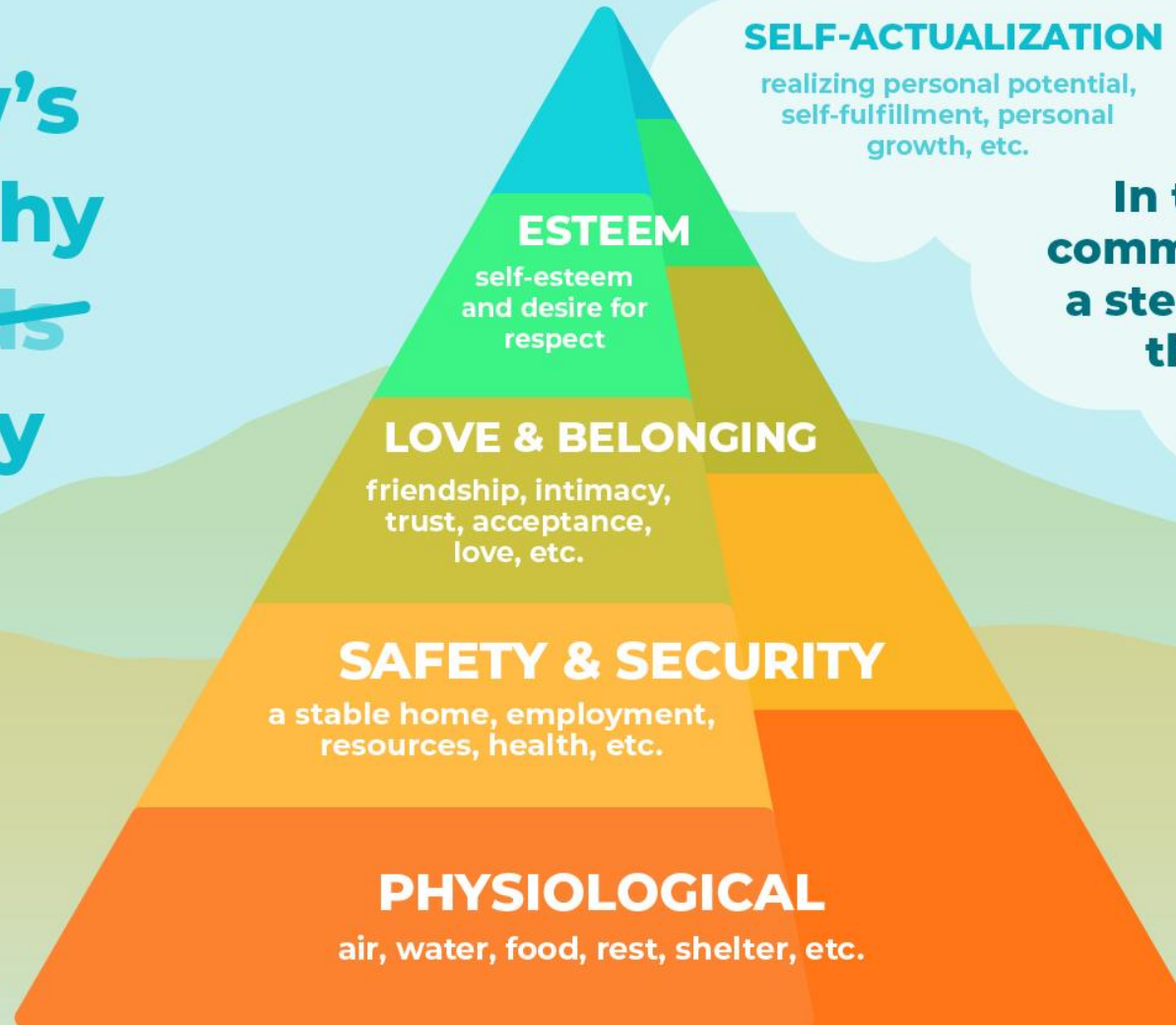
- Does an individual/family/community have housing?
- Is that housing stable?
- What is the quality of the housing?

Maslow's Hierarchy of Inequity

By [Sarah Moore](#) on March 27th, 2019



Maslow's Hierarchy of ~~Needs~~ Inequity



SELF-ACTUALIZATION

realizing personal potential,
self-fulfillment, personal
growth, etc.

**In the United States,
communities of color face
a steeper climb to fulfill
their basic needs.**

Housing Stability & Security

Housing Stability is consistent, reliable access to safe and affordable housing without the risk of sudden displacement or homelessness. People are able to stay in their homes without fear of eviction, forced moves, or major disruptions that could lead to housing loss.

Housing Security/Insecurity encompasses a broader set of factors. It includes housing stability and assurance that the home meets standards of **safety**, **affordability**, and **quality**.

In essence, housing stability focuses more on the consistency of having a home, while housing security encompasses the overall assurance and quality of one's living environment.

The Experience of Being Unhoused

- **Sheltered homelessness** refers to when an individual is experiencing being unhoused and is living in temporary or transitional housing. Temporary or transitional housing can include a shelter, hotel, motel, or other type of facility, such as a medical facility or rehabilitation
- According to HUD (Housing and Urban Development), ***“Unsheltered homelessness takes many forms in both urban, suburban, and rural settings. Unsheltered homelessness can be sleeping in vehicles, abandoned buildings, farms, and wilderness.”***

July 01, 2024 at 10:00 am CDT



What the Supreme Court decision on homelessness means for unhoused communities IMAGE DISTRIBUTED FOR NATIONAL HOMELESSNESS LAW CENTER – Homeless advocates take part in the "Housing Not Handcuffs" rally organized by the National Homelessness Law Center during Johnson v Grants Pass oral arguments at the Supreme Court on Monday, April 22, 2024 in Washington. (Kevin Wolf/AP Images for National Homelessness Law Center) (Kevin Wolf/AP)

NATIONAL

The Supreme Court says cities can punish people for sleeping in public places

UPDATED JUNE 28, 2024 · 11:15 AM ET ⓘ

HEARD ON MORNING EDITION



Jennifer Ludden



3-Minute Listen

+ PLAYLIST



2024 Supreme Court Ruling on Criminalization of Experiencing being Unhoused



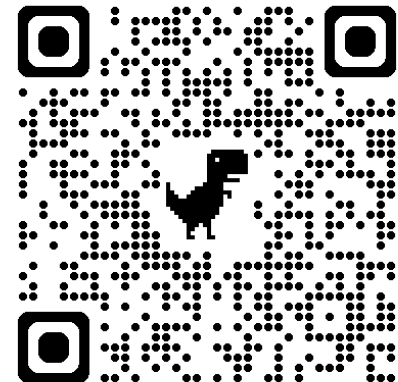
Criminalization of Being Unhoused in NYC

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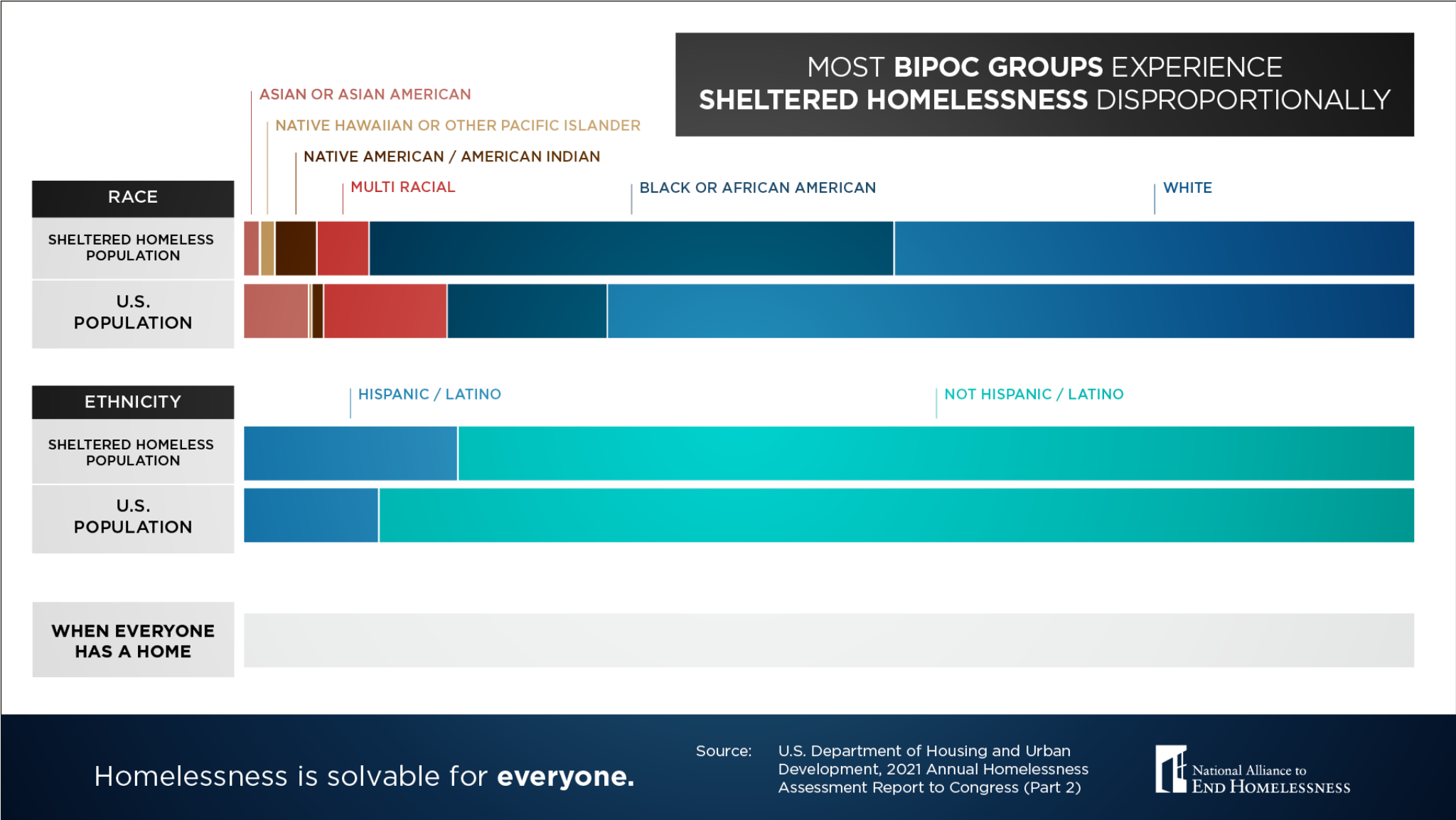
LETTER SENT TO NYC MAYOR ERIC ADAMS: DO NOT CRIMINALIZE HOMELESS NEW YORKERS FOR FINDING REFUGE IN THE SUBWAY

"The National Coalition for the Homeless is alarmed by the subway safety plan released by your administration on February 18, 2022...

After 40 years if we have learned one thing it is that use of law enforcement to deal with a social service/housing issues will fail and will only extend the stay on the streets for many caught up in these sweeps."



Disparities in Experiencing Being Unhoused



Disparities in Experiencing Being Unhoused

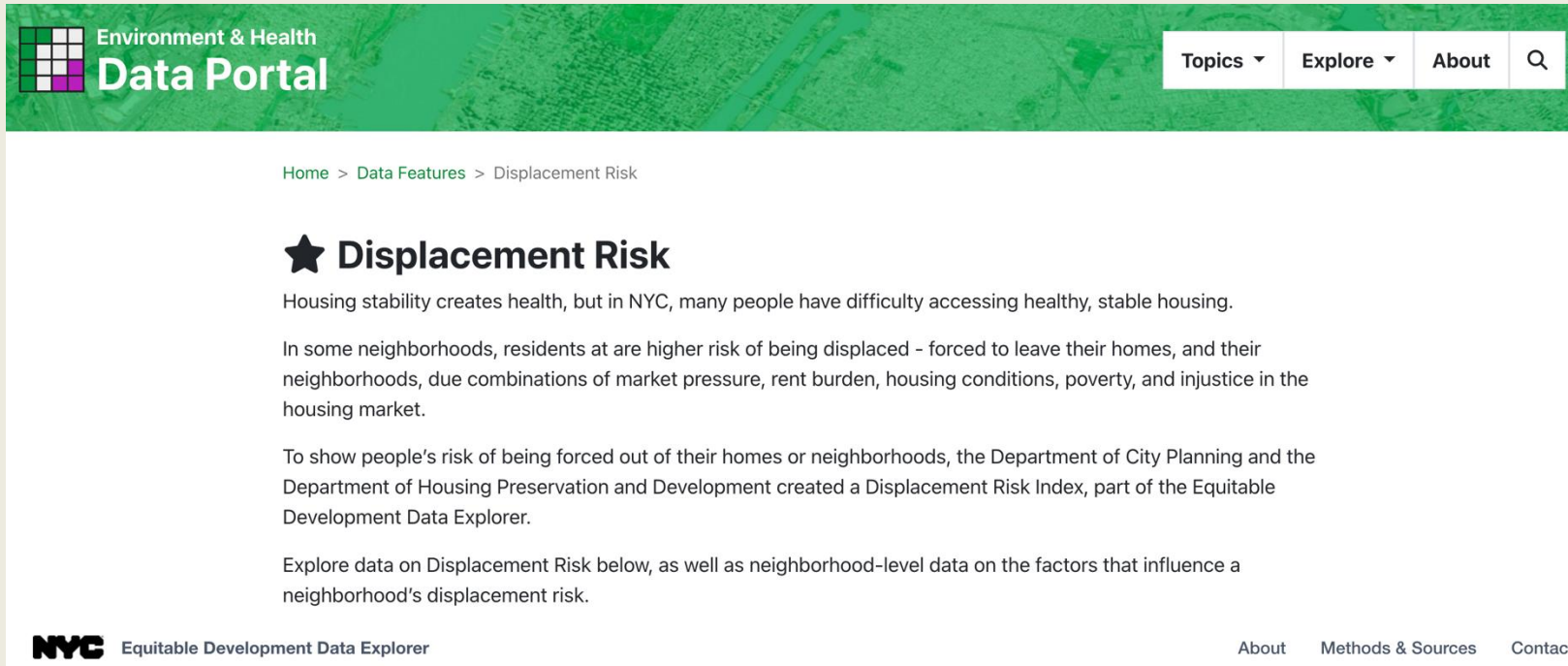
African Americans: Although they constitute approximately 12% of the U.S. population, African Americans represent about 37% of individuals experiencing sheltered homelessness.

Native Hawaiians and Pacific Islanders: This group makes up 0.3% of the U.S. population but accounts for 1.8% of the sheltered homeless population, indicating a six-fold disparity.

American Indians and Alaska Natives: Comprising 1.3% of the U.S. population, they represent 3.4% of the sheltered homeless population.

Hispanic or Latino Individuals: They make up 19% of the U.S. population but constitute 24% of the sheltered homeless population.

Displacement Risk in NYC

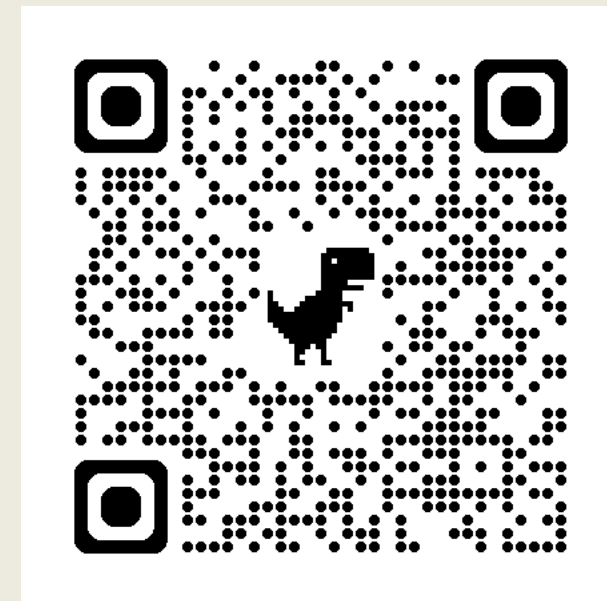


Let's explore the disparities in displacement risk in NYC.

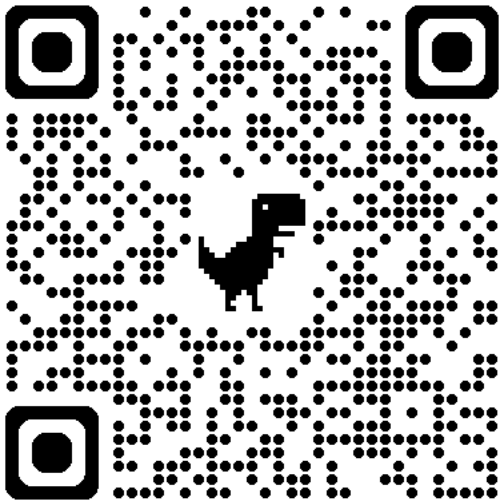
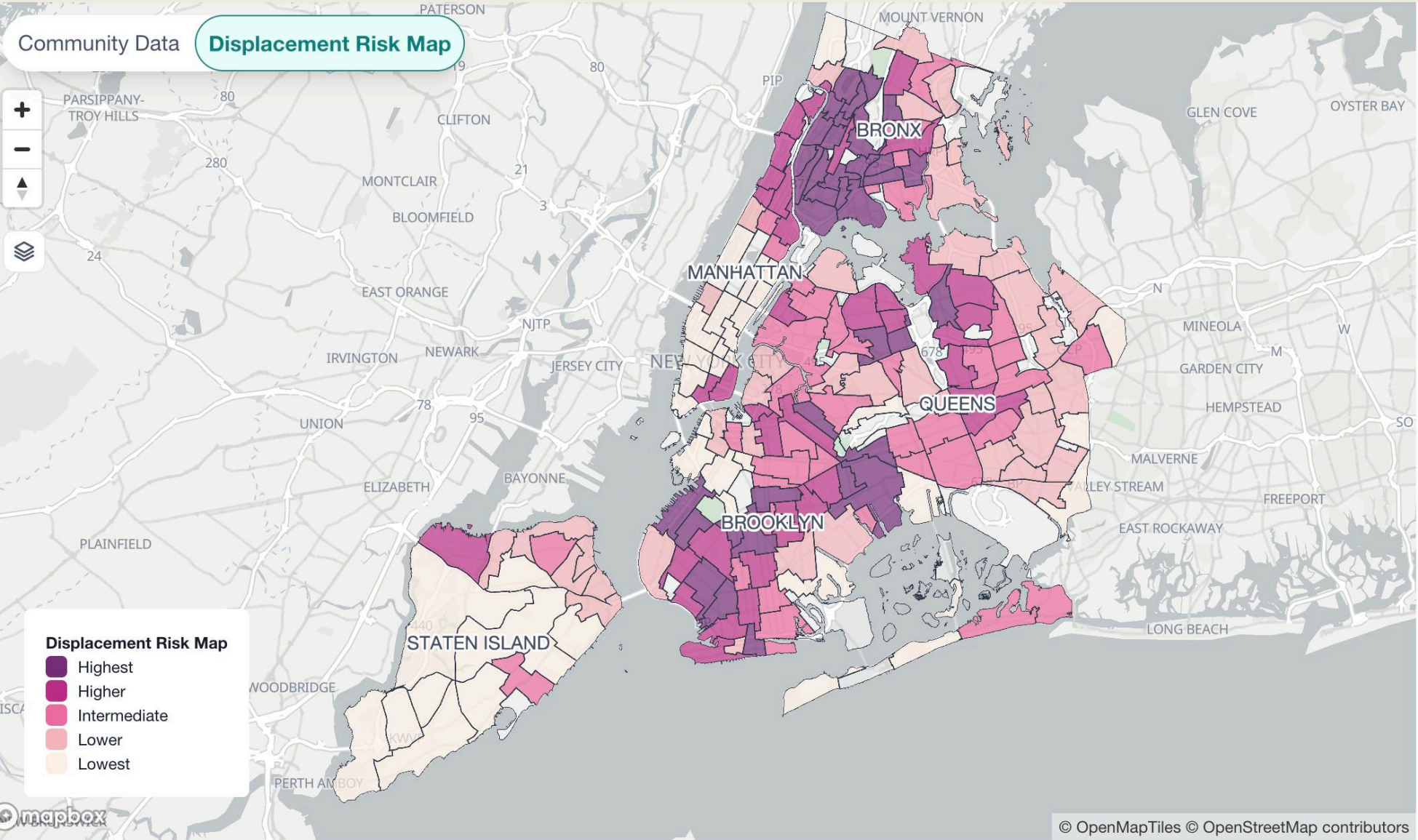
What neighborhoods are most at risk?

What is the demographics of those neighborhoods?

Compare and contrast a high displacement neighborhood vs a low displacement neighborhood



Displacement Risk in NYC



Housing

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Home » American Journal of Public Health (AJPH) » December 2011

Environmental Health Disparities in Housing

David E. Jacobs PhD

[\[+\] Author affiliations, information, and correspondence details](#)

Accepted: October 28, 2010 Published Online: November 28, 2011

“The United Nations Habitat Agenda used the term housing to encompass several attributes of the habitat that include physical infrastructure at the community and individual levels. The Habitat Agenda defined adequate housing and shelter broadly. It is more than merely a roof over one’s head....” – Jacobs 2011

Jacobs, AJPH 2011.

Housing



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Environmental Health Disparities in Housing

David E. Jacobs PhD

[\[+\] Author affiliations, information, and correspondence details](#)

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Jacobs, AJPH 2011.

What is adequate housing?

It is physical infrastructure at the community and individual levels, that provide:

1. adequate privacy
2. adequate space
3. physical accessibility
4. structural stability and durability
5. adequate lighting
6. heating
7. Ventilation
8. adequate basic infrastructure, such as:
9. water supply
10. sanitation
11. waste management facilities
12. suitable environmental quality & health-related factors
13. accessible location with regard to work and basic facilities

Housing Quality Disparities: Substandard Housing by Race/Ethnicity

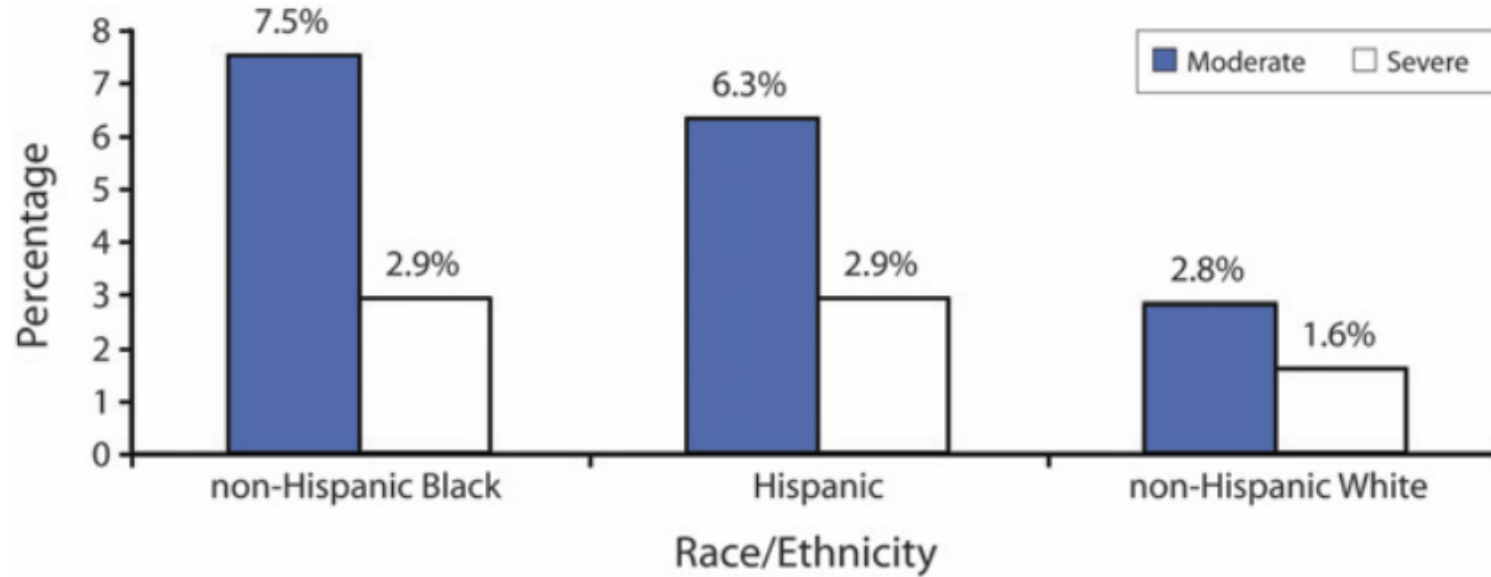


FIGURE 1—Prevalence of severe and moderate substandard housing by race and ethnicity: American Housing Survey, 2005.

Jacobs, AJPH 2011. (Note, the paper did not include an exact definition of substandard housing)

Housing Quality Disparities

POLICY BRIEF July 2023

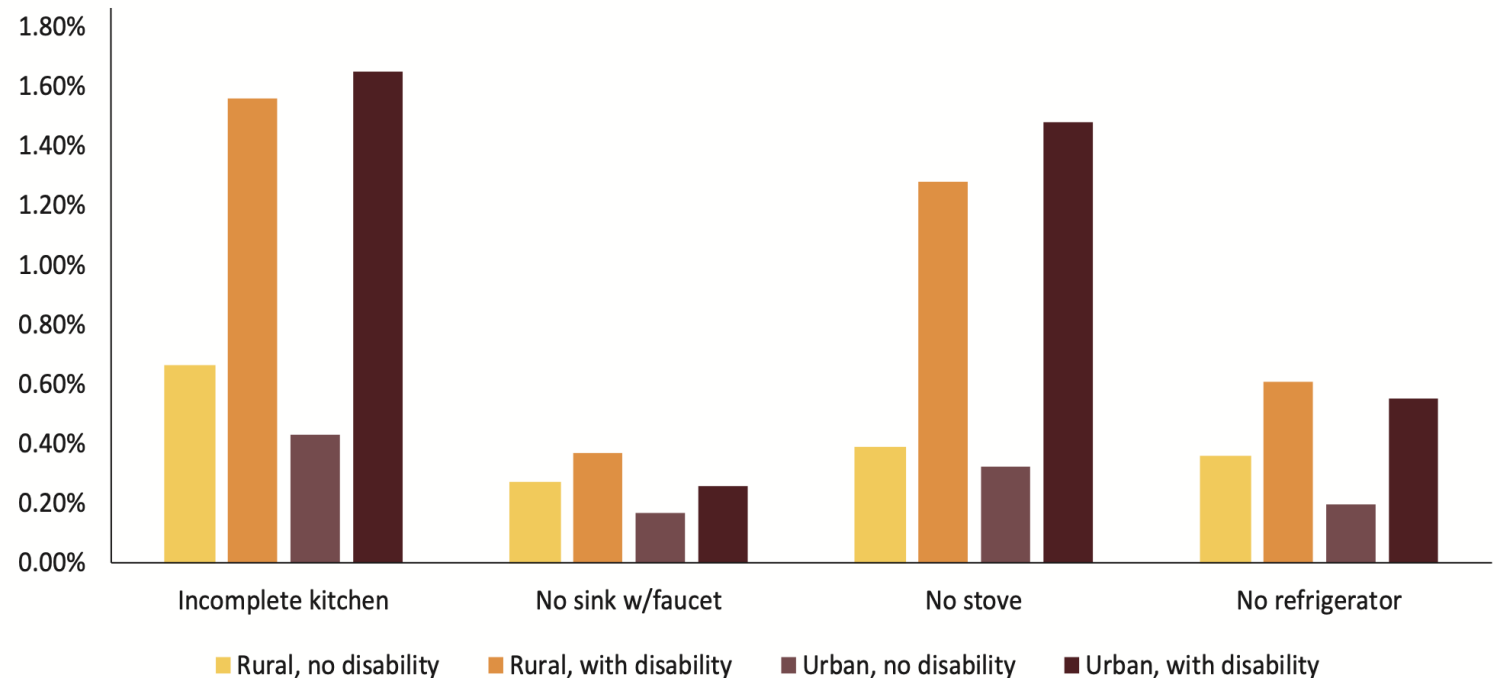


Housing Quality by Disability, Race, Ethnicity, and Rural-Urban Location: Findings from the American Community Survey

- *“Within location type, we identified differences in housing quality by disability, race, and ethnicity.”* - Swendener et al. (2023)
- Data from 2015-2019

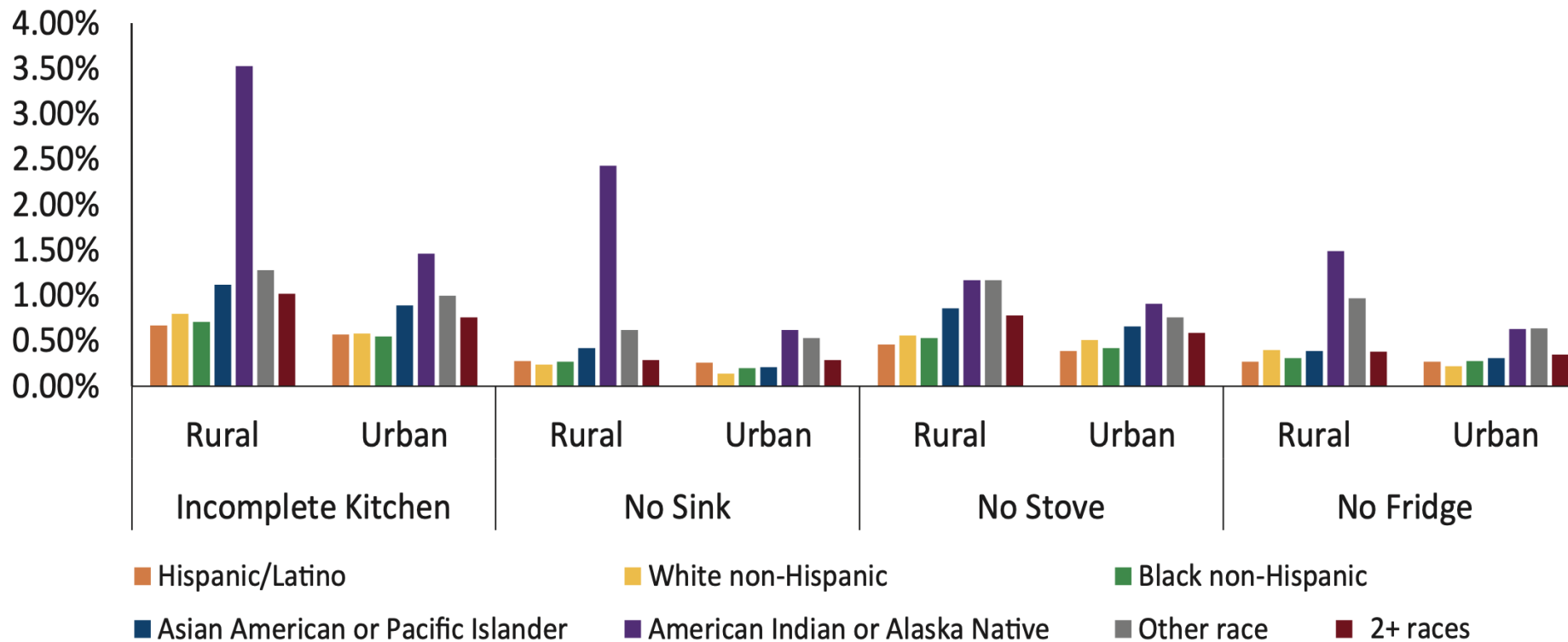
Swendener et al. (2023)

Figure 3. Incomplete Kitchen by Rural-Urban Location and Disability Status



Housing Quality Disparities

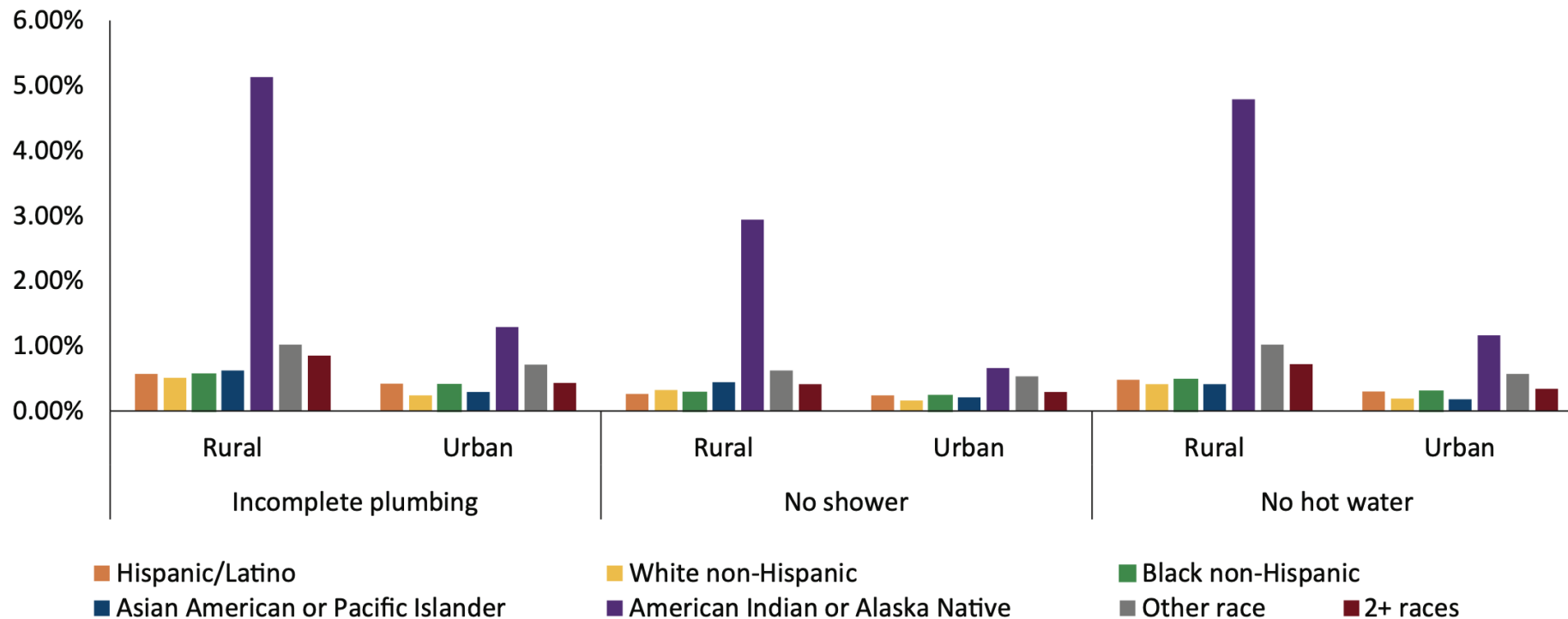
Figure 5. Incomplete Kitchen by Rural-Urban Location and Race/Ethnicity



- Rural American Indian or Alaska Native adults had the highest proportion with an incomplete kitchen (3.53%)
- Followed by rural Asian American or Pacific Islander, urban American Indian or Alaska Native, and rural Other race adults (all less than 1.46%)

Housing Quality Disparities

Figure 6. Incomplete Plumbing by Rural-Urban Location and Race/Ethnicity



- “American Indian or Alaska Native adults have the largest proportion of adults with incomplete plumbing facilities
- This results in over 33,000 rural American Indian or Alaska Native residents across the US without access to basic plumbing in their homes.”

Housing Quality Disparities

Swendener et al. (2023) provide some overall conclusions:

- They found higher proportions of adults with a disability have an incomplete kitchen or incomplete plumbing
- Many individuals with disabilities may have limited incomes, which may make it difficult to afford high-quality housing
- Rural residents across most racial and ethnic groups have higher proportions of incomplete plumbing and kitchen facilities compared to their urban counterparts
- There were pronounced disparities among rural American Indian or Alaska Native adults living in substandard housing
- The most common missing kitchen component was a stove/range (with the exception of American Indian or Alaska Native adults)
- Findings lack of several important aspects. The measure of toilets was removed from the ACS in 2016 over concern about public disapproval of asking about them

Conditions in the physical dwelling contribute to adverse health effects in at least 5 broad categories:⁶

1. Physical conditions such as heat, cold, energy efficiency, radon exposure, noise, inadequate light, ventilation, and fine particulates in the home;
2. Chemical conditions such as carbon monoxide, volatile organic chemicals, secondhand smoke, and lead;
3. Biological conditions, such as rodents, house dust mites, cockroaches and their associated allergens, and humidity and mold;
4. Building and equipment conditions, for example, accidents and unintentional injuries and access to sewer services (hygiene and sanitation issues); and
5. Social conditions, for example, architectural features related to mental health.

Housing & Health

Five Key categories:

1. Physical conditions
2. Chemical conditions
3. Biological conditions
4. Building and Equipment
5. Social conditions

Jacobs, AJPH 2011.

Biological Conditions

“Indoor mold and cockroach antigens have both been associated with worsened asthma and other adverse health effects” – Hood 2005



It came from within. Some of the worst home health hazards, such as the black mold crawling across the ceiling of an apartment (left) and the cockroach droppings blanketing the floor behind a refrigerator (below), arise inside homes that are poorly maintained or designed. Indoor mold and cockroach antigens have both been associated with worsened asthma and other adverse health effects.

ehp Environmental Health Perspectives

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Vol. 113, No. 5 | Environews

Dwelling Disparities: How Poor Housing Leads to Poor Health

Ernie Hood

Published: 1 May 2005 | <https://doi.org/10.1289/ehp.113-a310> | Cited by: 50

Open Access



Pests

- Pests are associated with housing structural problem and some neighborhood characteristics
- Neighborhood characteristics such as proximity to trash and/or an abandoned building are associated with a higher likelihood of pests

US Census, 2021



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How Many American Homes Have Pests?

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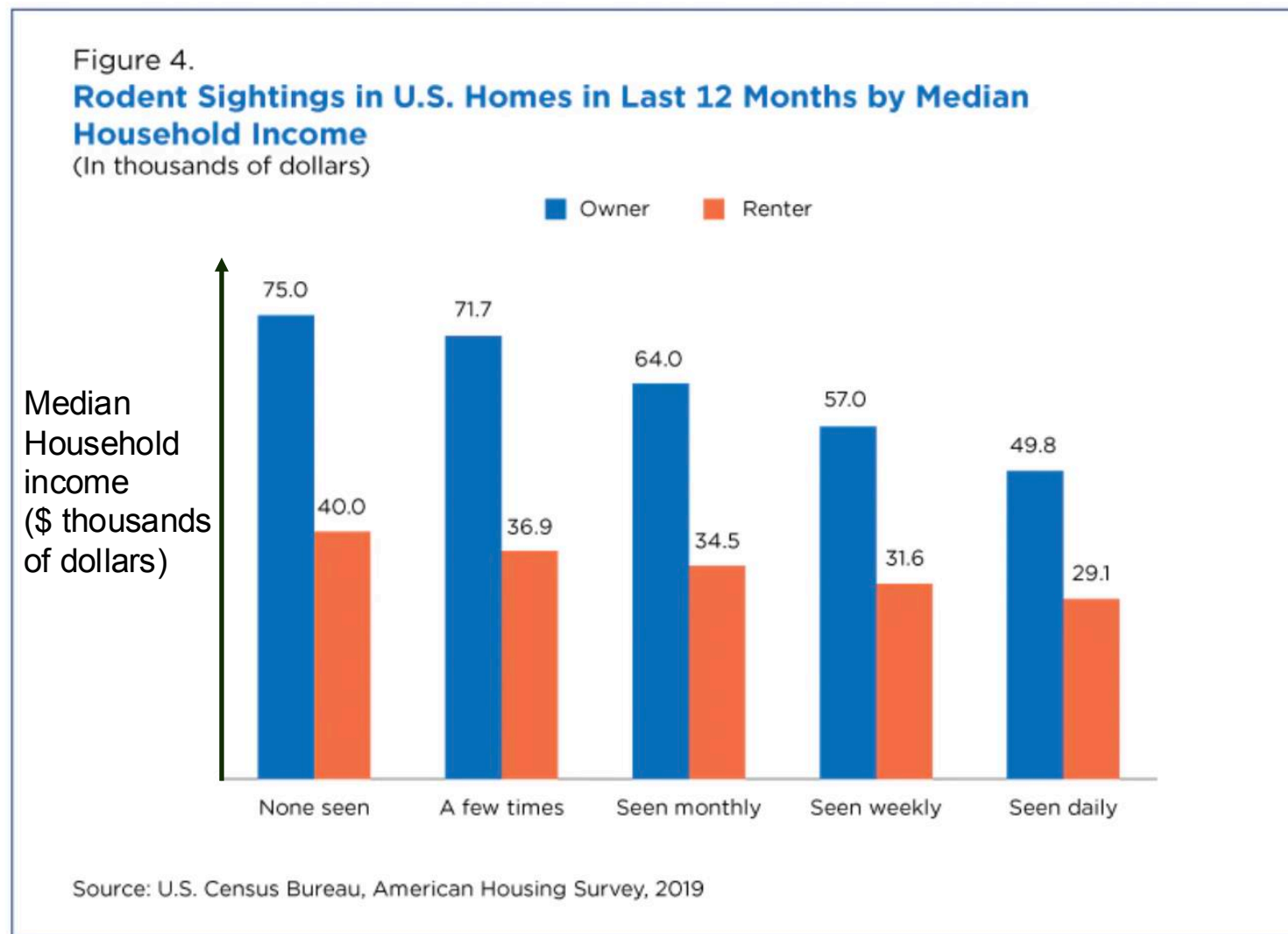
Residents of 14 Million Housing Units Reported Seeing Roaches, 14.8 Million Saw Rodents in Last 12 Months

MICHAEL SELLNER AND JORDAN WICHT

APRIL 21, 2021

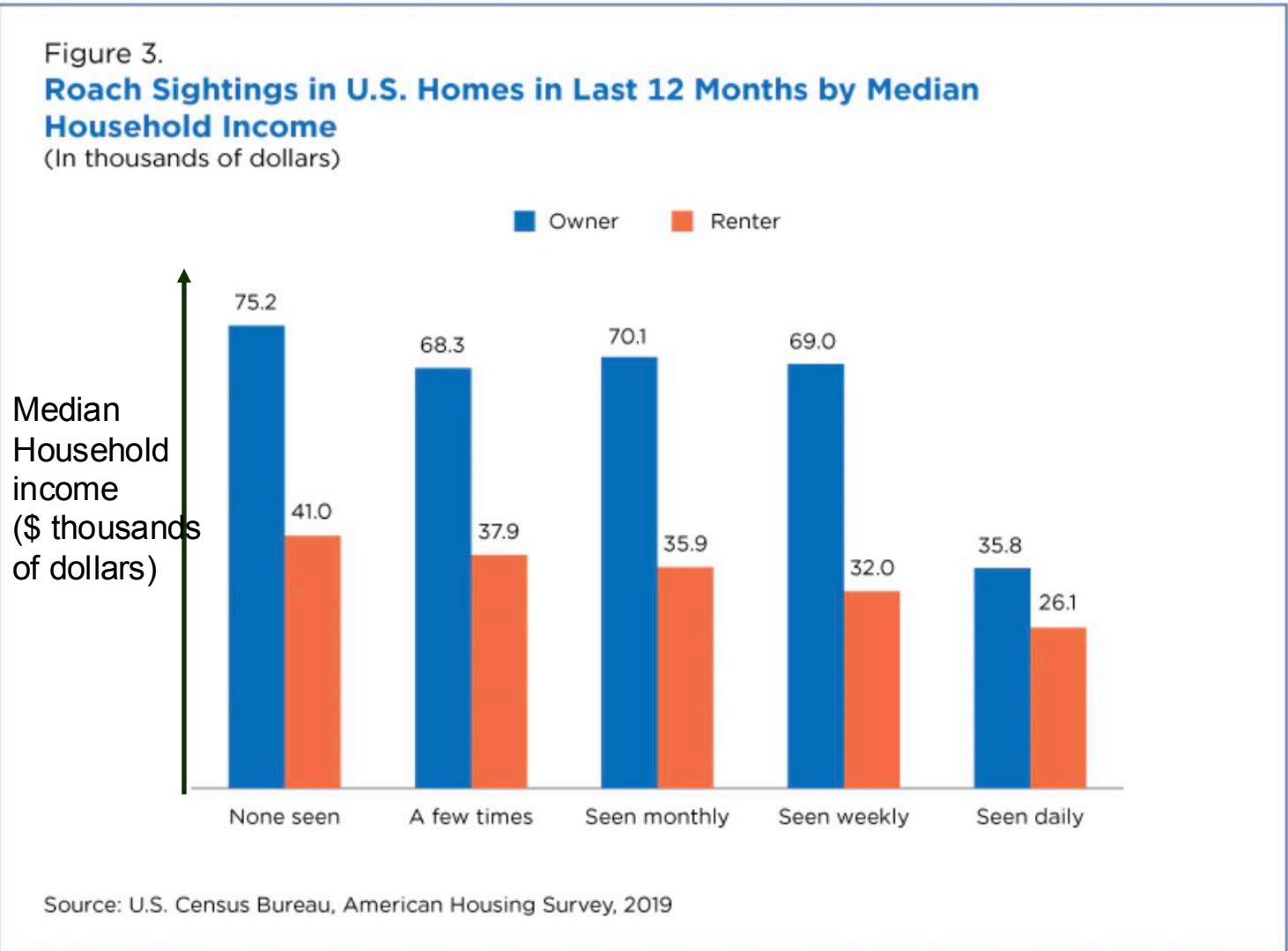
Pests

The frequency of seeing rodents and roaches in homes relates to income. Households that see pests daily have the lowest median household income.



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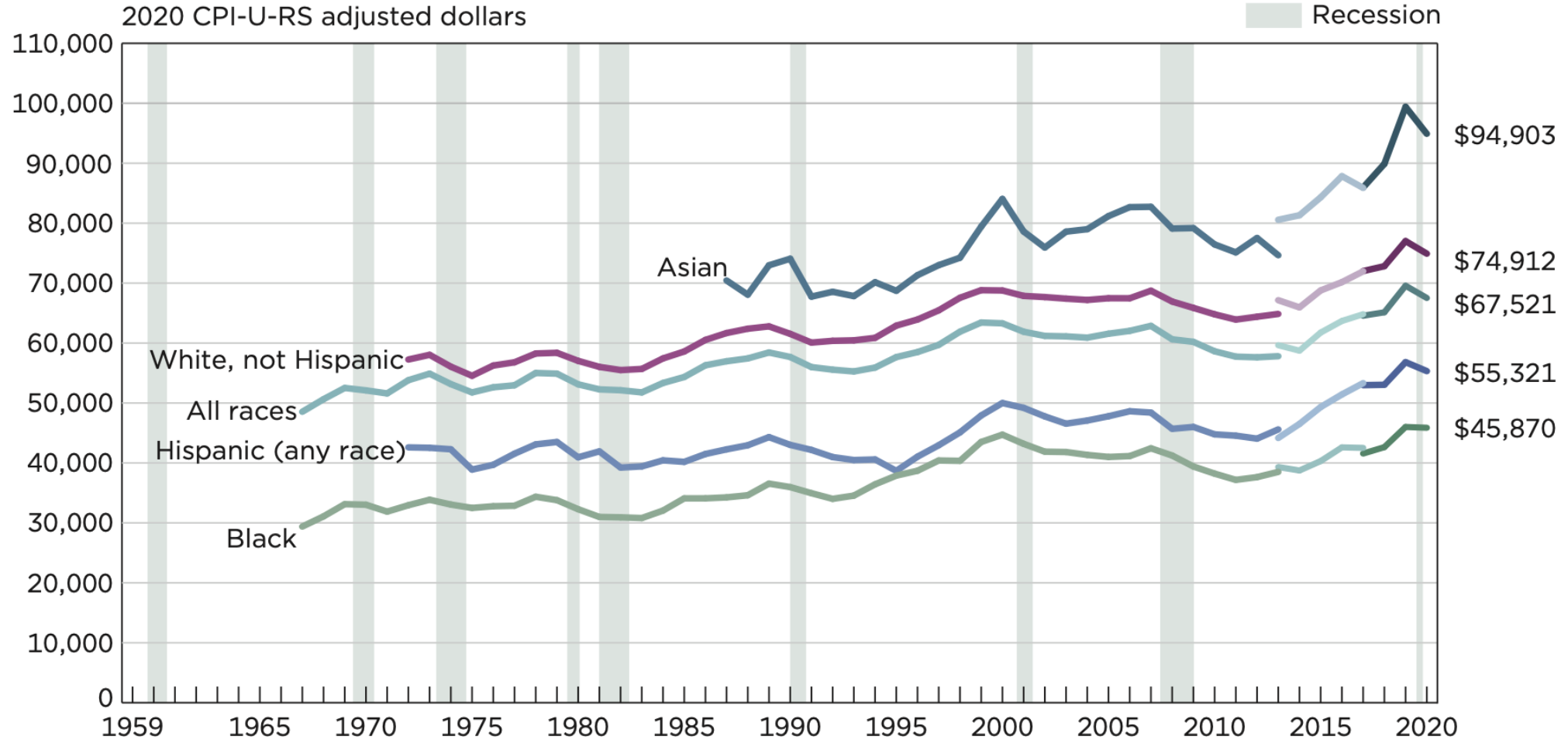


Race & Economics in the US

US Census

Real Median Household Income by Race and Hispanic Origin: 1967 to 2020

(Households as of March of the following year)



Notes: The data for 2017 and beyond reflect the implementation of an updated processing system. The data for 2013 and beyond reflect the implementation of the redesigned income questions. Refer to Table A-2 for historical race footnotes. The data points are placed at the midpoints of the respective years. Median household income data are not available prior to 1967. More information on the CPI-U-RS dollar adjustment and recessions are available in Appendix A. Information on confidentiality protection, sampling error, nonsampling error, and definitions is available at <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar21.pdf>.

Source: U.S. Census Bureau, Current Population Survey, 1968 to 2021 Annual Social and Economic Supplements (CPS ASEC).

Race & Poverty in the US

Percent of the population in poverty	under 18, percent	18 to 64, percent	65 and over, percent
ALL RACES			
2020	14.0	9.5	7.8
WHITE ALONE, NOT HISPANIC			
2020	9.9	8.2	6.8
BLACK ALONE OR IN COMBINATION			
2020	26.4	16.4	17.0
BLACK ALONE			
2020	27.7	16.7	17.2
ASIAN ALONE OR IN COMBINATION			
2020	8.0	7.3	11.3
ASIAN ALONE			
2020	8.4	7.3	11.5
HISPANIC (ANY RACE)			
2020	23.1	14.1	16.6
Source: U.S. Census Bureau, Current Population Survey, 1960 to 2021 Annual Social and Economic Supplements (CPS)			

Approx. one in four Black and Hispanic children in the US are experiencing poverty

Conditions in the physical dwelling contribute to adverse health effects in at least 5 broad categories:⁶

1. Physical conditions such as heat, cold, energy efficiency, radon exposure, noise, inadequate light, ventilation, and fine particulates in the home;
2. Chemical conditions such as carbon monoxide, volatile organic chemicals, secondhand smoke, and lead;
3. Biological conditions, such as rodents, house dust mites, cockroaches and their associated allergens, and humidity and mold;
4. Building and equipment conditions, for example, accidents and unintentional injuries and access to sewer services (hygiene and sanitation issues); and
5. Social conditions, for example, architectural features related to mental health.

Housing & Health

Five Key categories:

1. **Physical conditions (plumbing, kitchens, etc.)**
2. Chemical conditions
3. **Biological conditions (pests, mold, etc.)**
4. Building and Equipment
5. Social conditions

Jacobs, AJPH 2011.

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5. Social conditions, for example, architectural features related to mental health.

Housing & Health

Five Key categories:

1. **Physical conditions (plumbing, kitchens, etc.)**
2. **Chemical conditions (lead, toxicants, etc.)**
3. **Biological conditions (pests, mold, etc.)**
4. Building and Equipment
5. Social conditions

Lead Exposure

Housing is a major factor in lead exposure, especially in older homes that haven't removed lead paint

Lead can be found throughout a child's environment.



Homes built before 1978 (when lead-based paints were banned) probably contain lead-based paint.



When the paint peels and cracks, it makes lead dust. Children can be poisoned when they swallow or breathe in lead dust.



Lead can be found in some products such as toys and toy jewelry.



Lead is sometimes in candies imported from other countries or traditional home remedies.



Certain water pipes may contain lead.



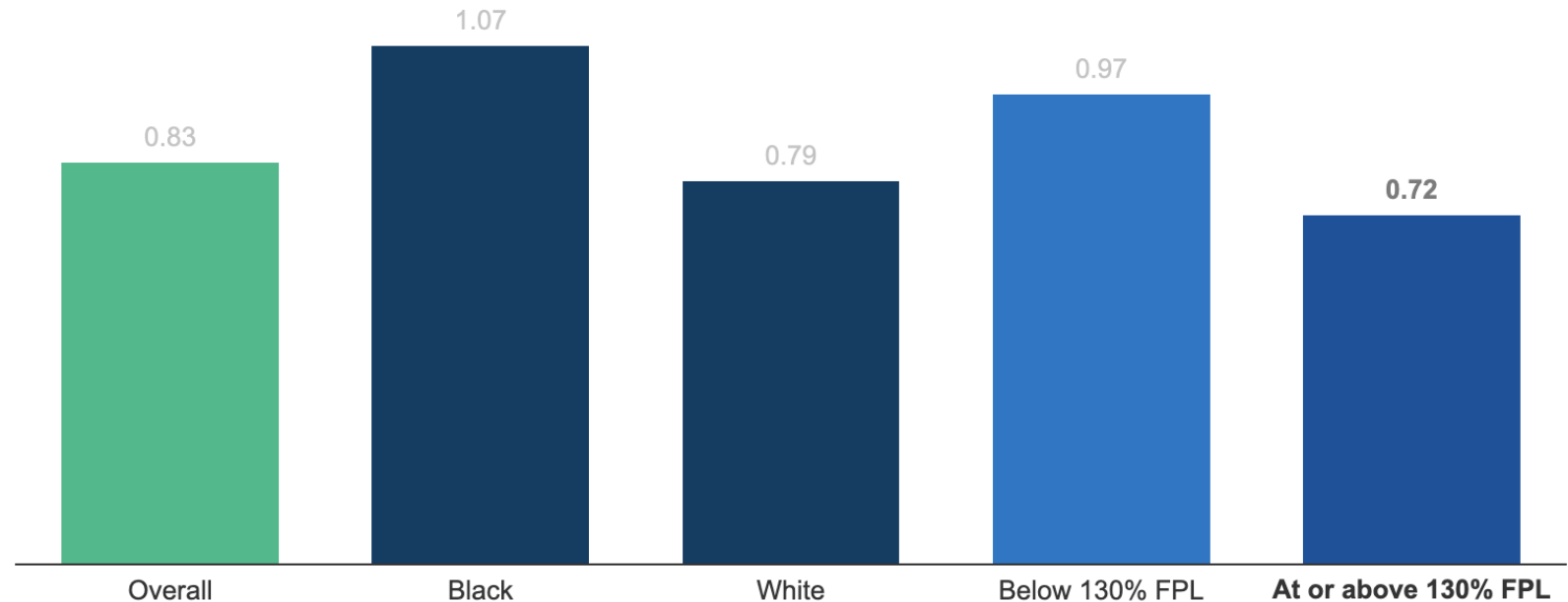
Certain jobs and hobbies involve working with lead-based products, like stain glass work, and may cause parents to bring lead into the home.

Disparities in Lead Exposure

- Lead is a neurotoxic heavy metal
- There is no safe level of lead exposure
- Even small amounts of lead can lead to harmful and irreversible effects to a child's developing brain
- National data from 2011-2016 show 1.35x higher blood lead levels in Black children (age 1-5yrs) compared to white children in the US

Black and Lower Income Children are at Increased Risk for Lead Exposure

Mean Blood Lead Levels in Children Ages 1 to 5, 2011-2016



NOTE: Data from the 2011-2016 National Health and Nutrition Examination Survey (NHANES). Data were only reported for non-Hispanic White, non-Hispanic Black, and Mexican American. The mean blood lead level for Mexican American children was 0.78 over the period. FPL refers to federal poverty level.

SOURCE: Ruckart PZ, Jones RL, Courtney JG, et al. Update of the Blood Lead Reference Value — United States, 2021. MMWR Morb Mortal Wkly Rep 2021;70:1509–1512. • PNG

HEALTH HARMS OF GAS STOVES



Gas stoves use natural gas, also known as methane, a potent greenhouse gas that produces harmful indoor air pollution when burned.

Nitrogen Dioxide (NO₂)

- Nitrogen dioxide can cause damage to the human respiratory tract and increase the likelihood and severity of asthma
- Gas stoves produce as much as 400% higher nitrogen dioxide concentrations in homes than electric stoves
- NO₂ is measured in parts per billion (ppb)

Carbon monoxide (CO)

- Exposure to high concentrations of carbon monoxide can be deadly
- Low levels of CO exposure can exacerbate cardiovascular illness among people with coronary heart disease and other vulnerable populations
- CO is measured in parts per million (ppm)



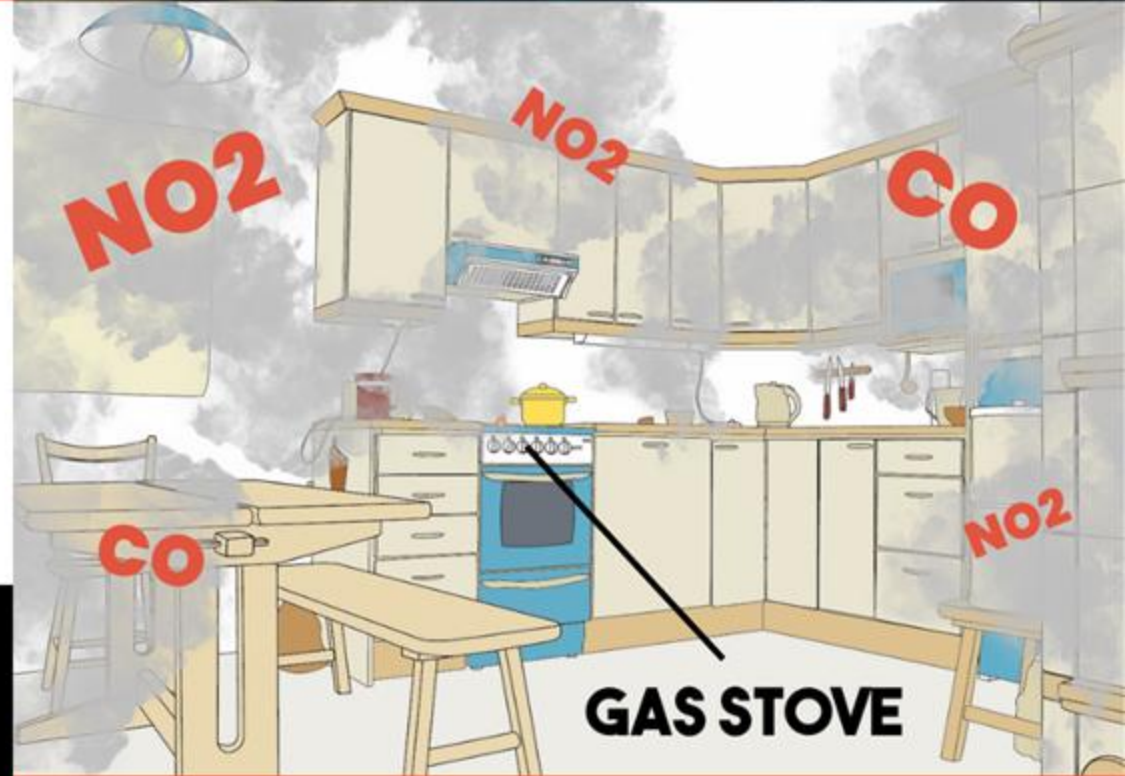
HEALTH HARMS OF GAS STOVES

Gas stoves have more health impacts in homes that are:

- older
- poorly ventilated
- dealing with mold, lead, pests, and other toxins
- inadequately heated which leads to people using ovens for heat



Low income people are more likely to live in housing with these conditions.



OVERVIEW

The Out of Gas, In with Justice pilot is the first study to focus on the effects of residential cooking electrification with tenants in-place in a public housing setting. The pilot confirms that **decarbonization**, the shift from fossil-fuel powered to zero-emission electric appliances, in our residential buildings is key to realizing a healthy home. Our pilot took place at 1471 Watson Avenue, a New York City Housing Authority (NYCHA) building in the Bronx.

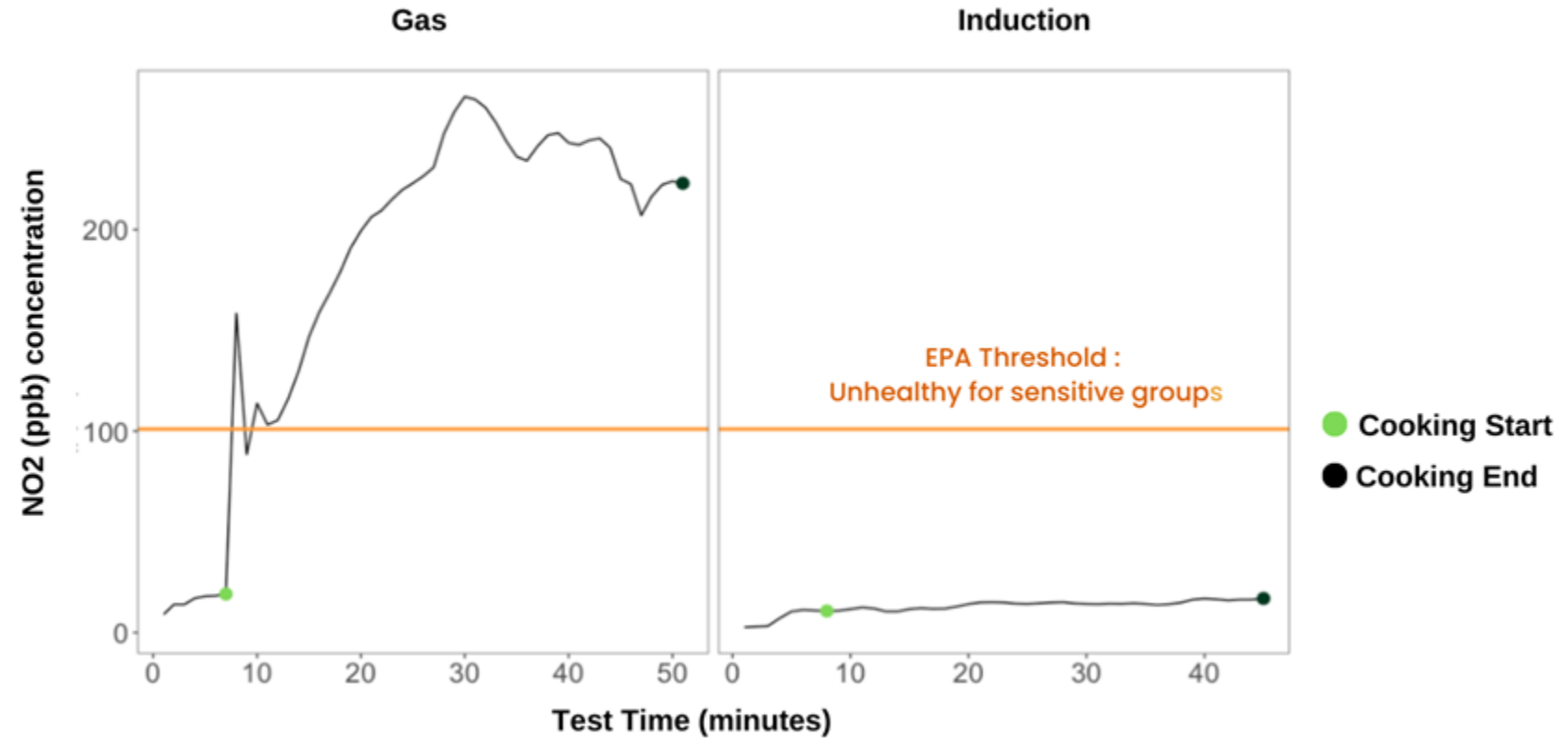


Results



- A standardized meal of spaghetti, tomato sauce, steamed broccoli, and chocolate chip cookies was prepared three times in each household
- NO₂ can reach unhealthy levels within minutes of starting to cook a typical meal on a gas stove

CONTROLLED COOKING TEST



**Results from one gas and one induction household Controlled Cook Test*

A Big Win 10,000 stoves

NYCHA program aims to replace gas stoves with induction stoves

BY ESTEFANIA HERNANDEZ | NEW YORK CITY
PUBLISHED 6:08 PM ET JUL. 24, 2023

SPECTRUM
NEWS NY
1

A program launching this fall aims to replace thousands of gas cooking stoves in NYCHA-owned buildings with new electric induction stoves.

Eventually, NYCHA will purchase at least 10,000 electric induction stoves and install them in additional apartments "with the goal of fully displacing gas cooking stoves in NYCHA-owned buildings," the release said.



**OUT OF GAS,
IN WITH JUSTICE**