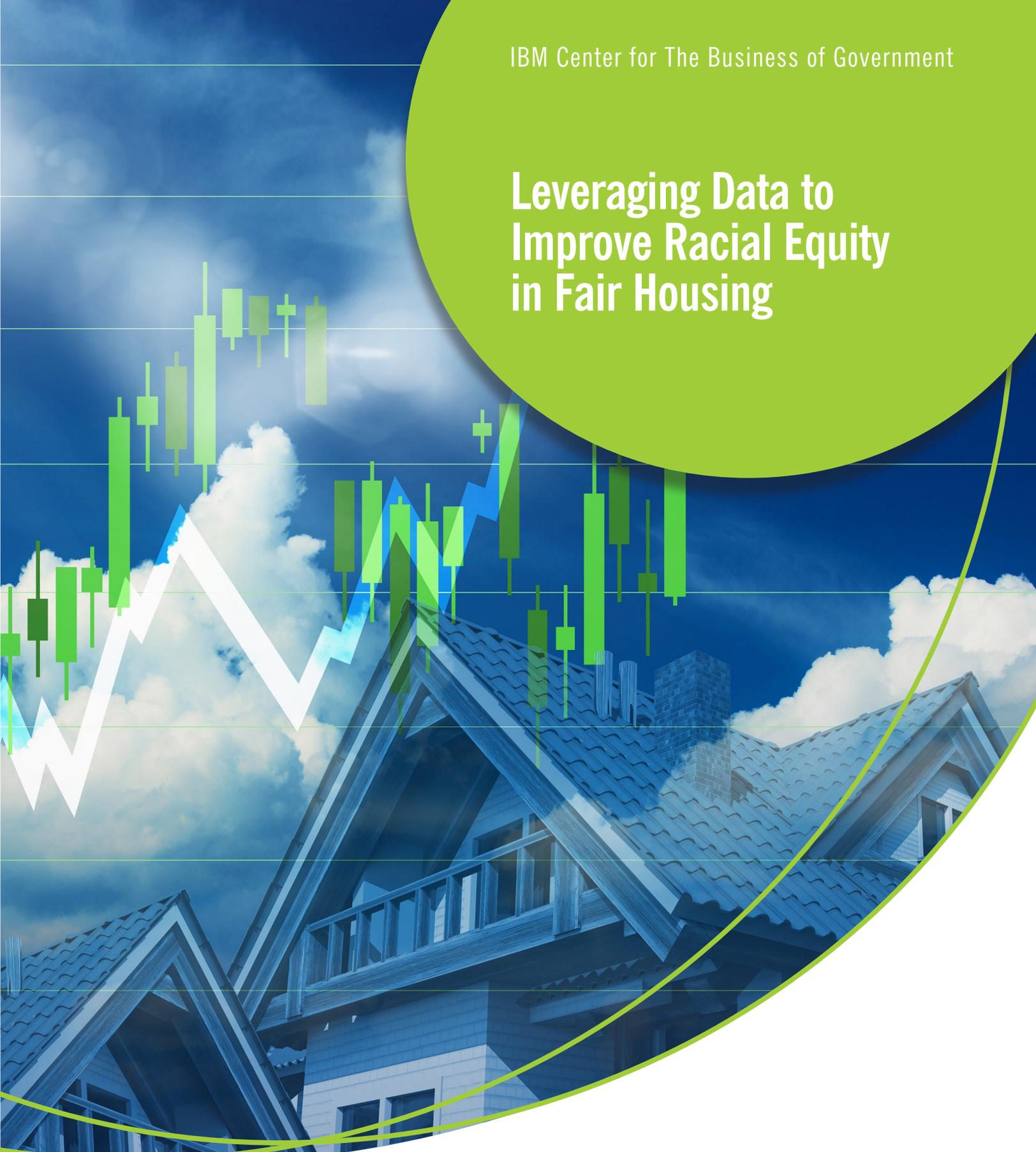


IBM Center for The Business of Government

Leveraging Data to Improve Racial Equity in Fair Housing



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Center for Open Data Enterprise



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Washington, D.C.



2022

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FOREWORD

On behalf of the IBM Center for The Business of Government and the Center for Open Data Enterprise (CODE), we are pleased to present this new report, *Leveraging Data to Improve Racial Equity in Fair Housing*, by Temilola Afolabi, Senior Research Associate at CODE.

Over the past 60 years, obstacles to homeownership have limited the ability of Black Americans and other communities of color to create wealth, and have had negative impacts on health and well-being. Residential segregation is related to inequalities in education, job opportunities, political power, access to credit, access to health care, and more. Steering, redlining, mortgage lending discrimination, and other historic policies have all played a role in creating this state of affairs.

Over time, federal efforts including the Fair Housing Act and Home Mortgage Disclosure Act have been designed to improve housing equity in the United States. While these laws have not been entirely effective, they have made new kinds of data available—data that can shed light on some of the historic drivers of housing inequity and help inform tailored solutions to their ongoing impact.

This report explores a number of current opportunities to strengthen longstanding data-driven tools to address housing equity. The report also shows how the effects of mortgage lending discrimination and other historic practices are still being felt today. At the same time, it outlines opportunities to apply data to increase equity in many areas related to the homeownership gap, including negative impacts on health and well-being, socioeconomic disparities, and housing insecurity.

This brief builds on the IBM Center's recent work addressing how public administration can promote equity, which is one of the Center's priority research areas. It is the second in a series of projects on Open Data for Racial Equity conducted in partnership with CODE. The first report in that series, *Using Data to Advance Racial Equity in Healthcare*, was published in August 2022.



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We hope that this report provides helpful perspectives for government leaders and their stakeholders in designing effective strategies and programs that promote more equitable access to fair housing for all Americans.

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INTRODUCTION

Housing is a cornerstone of wealth creation in the United States. Homeownership¹ provides the ability to build wealth by acting as a forced savings mechanism through home value appreciation.

Unfortunately, housing inequity has made it more difficult for people of color, especially Black Americans, to own their own homes—and the problem is only worsening as time progresses. In 1960, White Americans' homeownership rate was 26 percent higher than that of Black Americans. That number is now 29.4 percent, meaning the racial homeownership gap has increased in the [past 60 years](#).² Furthermore, redlining continues to affect financial opportunities and community services in Black and Brown communities—and the implications are not only financial, but significantly impact health and well-being. Redlining has long been perpetuated by both private businesses and government agencies and was originally designed to increase segregation in America's [housing stock](#).³

Data has the power to reveal and address the foundational aspects of these issues, as well as inform carefully tailored solutions. This special report provides an overview of the history of federal housing initiatives, and their impact on present-day housing issues and equities. The report also reviews existing data-driven programs to address different types of housing discrimination, and identifies opportunities through the use of alternative data sources.

1. A Habitat for Humanity U.S. Research and Measurement Team, *How Does Homeownership Contribute to Wealth Building?*, <https://www.habitat.org/our-work/impact/research-series-how-does-homeownership-contribute-to-wealth-building>. Accessed 2 Sept. 2022.

2. Babb, Christina Hughes. "How Homeownership Has Changed Since the 1960s." *DS News*, 2 Feb. 2021, <https://dsnews.com/daily-dose/02-02-2021/how-housing-has-changed-since-the-1960s#:~:text=In%201960%2C%2064.4%25%20of%20white,difference%20of%2029.4%20percentage%20points>. Accessed 3 Sept. 2022.

3. Gross, Terry. "A 'Forgotten History' Of How The U.S. Government Segregated America." NPR, 3 May 2017, Accessed 3 Sept. 2022.

BACKGROUND

Housing adequacy and affordability issues are extremely complex, vary greatly by locality, and are often dependent on state and local policy decisions, economic conditions, availability of federal housing assistance, and historical and ongoing discriminatory housing practices.⁴

In the early 20th century, segregationist [housing policies](#)⁵ paved the way for the extreme racial disparities in housing and home ownership seen today. The effects of residential segregation have shaped inequality in [educational opportunity](#),⁶ [labor market](#)⁷ success, [political efficacy](#),⁸ access to [credit](#),⁹ and numerous other [aspects of life](#)¹⁰ in the U.S.

[Steering](#),¹¹ redlining, and [mortgage lending](#)¹² discrimination are all examples of discriminatory housing practices that impact people of color in the U.S. disproportionately. The act of ‘steering,’ in which a real estate agent uses words or actions to influence prospective consumers, has been shown to deny good housing to [disproportionately high](#)¹³ numbers of minority households in poverty, and contributes to the gap in intergenerational income mobility between Black and White households. Redlining, another common practice in which residents are denied financial services based on racial characteristics of a community, was designed to increase segregation in America’s [housing stock](#).¹⁴

Today, many opportunities exist to strengthen longstanding data-driven tools to fight housing discrimination. The [Fair Housing Act](#),¹⁵ administered by the Department of Housing and Urban Development (HUD), is a civil-rights era federal law that prohibits discrimination against people seeking housing assistance based on race, color, national origin, and other factors. The [Home Mortgage Disclosure Act](#)¹⁶ (HMDA), administered by the Consumer Financial Protection Bureau (CFPB), requires financial institutions to maintain, report, and publicly disclose loan-level information on mortgages. Together, the Fair Housing Act and HMDA can ensure that data is avail-

4. “Examples of Housing Discrimination.” U.S. Department of Housing and Urban Development, https://www.hud.gov/program_offices/fair_housing_equal_opp/examples_housing_discrimination. Accessed 3 Sept. 2022.

5. Dreier, Peter, et al. *Place Matters: Metropolitcs for the Twenty-First Century*. Accessed 3 Sept. 2022.

6. Reardon, Sean F., and Ann Owens. 60 Years After Brown: Trends and Consequences of School Segregation. *Annual Review of Sociology*, 16 June 2014.

7. Steil, Justin, et al. Desvinculado y Desigual: Is Segregation Harmful to Latinos? *The American Academy of Political and Social Science*, 9 June 2015, <https://journals.sagepub.com/doi/abs/10.1177/0002716215576092>.

8. Ananat, Elizabeth Oltmans & Washington, Ebonya, 2009. “Segregation and Black political efficacy,” *Journal of Public Economics*, Elsevier, vol. 93(5-6), pages 807-822, June.

9. Faber, Jacob William (2018), Segregation and the Geography of Creditworthiness: Racial Inequality in a Recovered Mortgage Market, *Housing Policy Debate*, 28:2, 215-247, DOI: 10.1080/10511482.2017.1341944

10. De la Roca, Jorge, Ingrid Gould Ellen, Katherine M. O’Regan, Race and neighborhoods in the 21st century: What does segregation mean today?, *Regional Science and Urban Economics*, Volume 47, 2014, Pages 138-151, ISSN 0166-0462

11. United States, Congress, Christensen, Peter, and Christopher Timmins. Sorting Or Steering: The Effects of Housing Discrimination On Neighborhood Choice, National Bureau Of Economic Research, July 2018. Accessed 3 Sept. 2022.

12. “Fair Lending.” U.S. Department of Housing and Urban Development, https://www.hud.gov/program_offices/fair_housing_equal_opp/fair_lending. Accessed 3 Sept. 2022.

13. United States, Congress, Christensen, Peter, and Christopher Timmins. Sorting Or Steering: The Effects of Housing Discrimination On Neighborhood Choice, National Bureau Of Economic Research, July 2018. Accessed 3 Sept. 2022.

14. Gross, Terry. “A ‘Forgotten History’ Of How The U.S. Government Segregated America.” NPR, 3 May 2017, Accessed 3 Sept. 2022.

15. “Housing Discrimination Under the Fair Housing Act.” U.S. Department of Housing and Urban Development. Accessed 3 Sept. 2022.

16. Home Mortgage Disclosure Act (HMDA), 1975. <https://www.consumerfinance.gov/data-research/hmda/>. Accessed 3 Sept. 2022.

able to expose and remedy housing discrimination. Current efforts are underway to reverse attempts to weaken these protections.

Public-private collaboration can support equitable housing by helping CFPB, HUD, and other federal agencies, as well as their community-based partners, determine and address data needs as they apply relevant laws and regulations. Historical and current housing data can be critical tools for advancing racial equity by mapping the status of housing equity, providing use cases for data analysis, and identifying challenges to be addressed.

Types of Housing Data

There are two major types of data to consider in regard to housing information, administrative and survey data. [Administrative housing data](#) is primarily created through the operation of federal, state or local government programs or oversight functions. [Survey data](#) is typically based on questions asked of a subset or sample of a population. Data from surveys are mostly used to generate estimates for a population of interest, while administrative sources, which are limited to the populations they serve, are often used by community-based organizations (CBOs) to improve access to fair housing. For this report's discussions of data and data sources that can be used to support fair housing, we drew extensively on the "[Urban Institute's "Using Data to Assess Fair Housing and Improve Access to Opportunity: A Guidebook for Community Organizations."](#)" A number of the sample indicators and data sources mentioned later in this paper are pulled directly from the Report.¹⁷

CBOs have been using secondary data as outlined in their advocacy and community engagement strategies by advocating for locally targeted programs, identifying socioeconomic disparities, and pushing government and private entities to be more accountable. Analyzing various types of demographic and SDOH data such as education, health, housing, income and crime, can help identify where racial disparities exist and their causes, particularly at the local level. Such analysis can then be used to develop [targeted interventions](#) at the local level.¹⁸

17. Hendey, Leah, and Mychal Cohen. Urban Institute, 2017, Using Data to Assess Fair Housing and Improve Access to Opportunity. Accessed 3 Sept. 2022.

18. Ibid, p. 9



Historical Discriminatory Housing Practices and Present-Day Effects

Many issues and causes of housing crises today can be traced back to the housing practices implemented by the government early last Century.

This included many racist practices, such as [guaranteeing mortgages](#)¹⁹ to white but not Black Americans, building segregated [public housing](#),²⁰ and selective FHA financing of mass production builders who refused to sell homes to [Black residents](#).²¹ These policies heavily influenced the creation of [American ghettos](#),²² or highly segregated disenfranchised communities, the effects of which still exist today.

One significant example was the development of the Home Owners' Loan Corporation (HOLC). The HOLCs mandate was to carry out the provisions of the [Home Owners' Loan Act](#),²³ specifically, to “provide emergency relief with respect to home mortgage indebtedness, to refinance home mortgages, to extend relief to the owners occupied by them and who are unable to amortize their debt elsewhere.” The Act ultimately helped usher in the issue of redlining, which came about as a result of the HOLC mandate.

The HOLC appraised and mapped neighborhood-level real estate risk in the U.S.'s largest cities. After developing a four-letter grading scale (“hazardous,” “definitely declining,” “still desirable,” and “best”), appraisers assigned cities a grade. However, “A” [ratings](#)²⁴ were virtually all assigned to affluent White neighborhoods, while “D” ratings were reserved for [neighborhoods](#)²⁵

19. “Was the New Deal Racist?” The Living New Deal, 22 May 2019, <https://livingnewdeal.org/was-the-new-deal-racist-2/>. Accessed 3 Sept. 2022.

20. “Historian Says Don't ‘Sanitize’ How Our Government Created Ghettos.” NPR, 14 May 2015, <https://www.npr.org/2015/05/14/406699264/historian-says-dont-sanitize-how-our-government-created-the-ghettos>. Accessed 3 Sept. 2022.

21. Gotham, Kevin Fox. “Racialization and the State: The Housing Act of 1934 and the Creation of the Federal Housing Administration.” *Sociological Perspectives*, vol. 43, no. 2, 2000, pp. 291–317. *JSTOR*, <https://doi.org/10.2307/1389798>. Accessed 3 Sept. 2022.

22. “Historian Says Don't ‘Sanitize’ How Our Government Created Ghettos.” NPR, 14 May 2015, <https://www.npr.org/2015/05/14/406699264/historian-says-dont-sanitize-how-our-government-created-the-ghettos>. Accessed 3 Sept. 2022.

23. Home Owners' Loan Act. (1933) <https://livingnewdeal.org/glossary/home-owners-loan-act-1933/>.

24. Noelke C, Outrich M, Baek M, Reece J, Osypuk TL, McArdle N, et al. (2022) Connecting past to present: Examining different approaches to linking historical redlining to present day health inequities. *PLoS ONE* 17(5): e0267606. <https://doi.org/10.1371/journal.pone.0267606>.

25. Fishback, Price V., et al. National Bureau of Economic Research, 2020, The Holc Maps: How Race and Poverty Influenced Real Estate Professionals' Evaluation of Lending Risk In The 1930s, https://www.nber.org/system/files/working_papers/w28146/w28146.pdf. Accessed 3 Sept. 2022.

that had a greater share of Black, lower class, or immigrant residents. The grades were then shared with the [real estate sector](#),²⁶ and the FHA, which used them to draw their own [neighborhood maps](#)²⁷ that influenced the provision of mortgage insurance.



Opportunities to Apply Data

Local and demographic data can be leveraged to develop segregation indices. The [Urban Institute](#) discusses how such indices can be developed by averaging the demographics of hyperlocal areas to highlight segregation at larger geographic levels such as a city, county, or state. These indices are based on the average demographics of a small geographic area, like census tracts and blocks.²⁸ A dissimilarity index,²⁹ “a measure of the evenness with which two demographic groups are distributed across a geographic area,” is another tool to analyze segregation across geographic areas, along with an isolation index which involves measuring the demographics of a single identity group.³⁰

Open Data Sources for further analysis:

- Community Commons (<http://www.communitycommons.org/>)—provides demographic data.
- PolicyMap (<http://www.policymap.com/>)—provides demographic data.
- American Community Survey (<https://www.census.gov/programs-surveys/acs/data.html>)
- U.S. Census (<https://data.census.gov/>)
- Brown University (<https://s4.ad.brown.edu/Projects/Diversity/segregation2010/>)—provides dissimilarity indices, isolation indices, and measures of exposure for cities and metropolitan areas.
- [DiversityData.org](#)—provides dissimilarity, isolation, and exposure indices for full population and child population by metro area.
- National Equity Atlas (<https://nationalequityatlas.org/indicators>)—provides a diversity index for the nation, states, regions, and cities.

Sample Indicators:

- Total population
- Percentage of population that is Hispanic or Latino
- Percentage of population age 65 and over that is female
- Percentage of households headed by single parents with children

26. Noelke C, Outrich M, Baek M, Reece J, Osypuk TL, McArdle N, et al. (2022) Connecting past to present: Examining different approaches to linking historical redlining to present day health inequities. *PLoS ONE* 17(5): e0267606. <https://doi.org/10.1371/journal.pone.0267606>.

27. Aaronson, Daniel, Jacob Faber, Daniel Hartley, Bhashkar Mazumder, Patrick Sharkey, The long-run effects of the 1930s HOLC “redlining” maps on place-based measures of economic opportunity and socioeconomic success, *Regional Science and Urban Economics*, Volume 86, 2021, 103622, ISSN 0166-0462. <https://doi.org/10.1016/j.regsciur-beco.2020.103622>.

28. Bureau, US Census. “Glossary.” *Census.gov*, 11 Apr. 2022.

29. Bureau, US Census. “Housing Patterns: Appendix B: Measures of Residential Segregation.” *Census.gov*, 21 Nov. 2021.

30. Hendey, Leah, and Mychal Cohen. *Urban Institute*, 2017, *Using Data to Assess Fair Housing and Improve Access to Opportunity*, pg 23.



Mortgage Lending Discrimination

Mortgage lending discrimination³¹ is a direct cause of redlining and the HOLC maps created from the practice. Lending discrimination occurs when lenders base credit decisions on factors other than the applicant's creditworthiness—for example, on a person's race, color, sex, religion, familial status, nationality, age, and/or receipt of public assistance or disability. Due to redlining, and resulting discrimination, it has been extremely difficult for many racial and ethnic minorities to qualify for mortgage loans. Potential buyers in areas designated *hazardous* and *definitely declining* found it nearly impossible to get a mortgage due to capital systematically being directed to White families living in the *still desirable* and *best* neighborhoods. Unable to obtain regular mortgages, people of color interested in home ownership were often forced to resort to exploitatively **high housing contracts**,³² which massively increased costs of housing and gave them little to no equity until payment was completely settled. Today, the following federal laws offer protection against lending discrimination:

- The **Equal Credit Opportunity Act**³³ (ECOA), administered by the Department of Justice, prohibits discrimination on the basis of race, color, religion, national origin, sex, marital status, age, receipt of public assistance, or good faith exercise of any rights under the Consumer Credit Protection Act. The ECOA also requires creditors to provide applicants, upon request, with the reasons underlying decisions to deny credit.
- The **Community Reinvestment Act**³⁴ (CRA) requires the Federal Reserve and other federal banking regulators to encourage financial institutions to help meet the credit needs of the communities in which they do business, including low- and moderate-income (LMI) neighborhoods. The Act is regulated by the Federal Reserve Board, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency,

31. Frankel, Lindsay. "What Is Lending Discrimination?" LendingTree, 15 Apr. 2022. Accessed 3 Sept. 2022.

32. Folger, Jean. "The History of Lending Discrimination." Investopedia, 14 Aug. 2022, <https://www.investopedia.com/the-history-of-lending-discrimination-5076948#toc-what-is-lending-discrimination>. Accessed 3 Sept. 2022.

33. United States, Congress, "Equal Credit Opportunity Act." The Equal Credit Opportunity Act (ECOA). <https://www.justice.gov/crt/equal-credit-opportunity-act-3>. Accessed 3 Sept. 2022.

34. United States, Congress, "The Community Reinvestment Act (CRA): United States Credit Legislation." *Federal Reserve*, 1977. https://www.federalreserve.gov/consumerscommunities/cra_about.htm. Accessed 3 Sept. 2022.

- The [Fair Housing Act](#)³⁵ (FHA) protects people from discrimination when they are renting or buying a home, getting a mortgage, seeking housing assistance, or engaging in other housing-related activities. The FHA prohibits discrimination in housing based on race, color, national origin, religion, sex, familial status, and disability.

To enforce an FHA requirement to “affirmatively further fair housing” (AFFH), HUD developed regulations to aid state and local agencies that receive federal housing funds in adhering to these requirements.³⁶ HUD also [provides data](#)³⁷ that these federal grantees can use to identify patterns of housing discrimination, the causes of discrimination, and its potential impact. The AFFH mandates local housing authorities to engage their communities in order to identify barriers and develop targeted solutions for fair housing, while providing tools such as data and other resources to aid in their equitable use of data.

Despite these legal protections, the impact of economic and racial segregation from redlining persists. Communities of color in particular face especially high rates of unemployment, mortgage default, and foreclosure, in large part due to historical housing discrimination practices.



Opportunities to Apply Data

As the [Urban Institute Guidebook](#)³⁸ explains, demographics and patterns of segregation in a community are common starting points when analyzing fair housing and access to housing opportunities. The FHA outlines specific demographic characteristics, including race, national origin, disability, religion, sex, and household type. When analyzing neighborhoods for fair housing and opportunity access, researchers may be interested in other characteristics including age and education level. The most widely used sources of demographic data are the [U.S. Census](#)³⁹ and American Community Survey⁴⁰ (ACS). Although the U.S. The Decennial Census is only conducted every 10 years, it has the most accurate population counts, particularly for small geographies, which are available at the census-block level for race, ethnicity, age, and gender.

35. Fair Housing Act (FHA). https://www.hud.gov/program_offices/fair_housing_equal_opp/fair_housing_act_overview. Accessed 3 Sept. 2022.

36. Rootid. “Affirmatively Furthering Fair Housing.” *NHLP*, 6 Aug. 2021, <https://www.nhlp.org/initiatives/fair-housing-housing-for-people-with-disabilities/affirmatively-furthering-fair-housing/#:~:text=The%20AFFH%20obligation%20requires%20federal,segregation%2C%20discrimination%2C%20and%20disinvestment>.

37. “HUD-EGIS Storefront.” U.S. Department of Housing and Urban Development, <https://hudgis-hud.opendata.arcgis.com/>. Accessed 3 Sept. 2022.

38. Hendey, Leah, and Mychal Cohen, Urban Institute, 2017. Using Data To Assess Fair Housing and Improve Access to Opportunity.

39. Bureau, U.S. Census. Explore Census Data. <https://data.census.gov/cedsci/>.

40. Bureau, US Census. “American Community Survey (ACS).” Census.gov, 11 Aug. 2022, <https://www.census.gov/programs-surveys/acs>.

The Urban Institute also notes that local lending outcomes and practices are critical factors when assessing fair housing and access to housing opportunities in a community. HMDA⁴¹ is the primary source for data and information on lending practices. This data allows for a deeper analysis into homeownership and lending access disparities by demographics like race, gender, and income. Indicators on loan denial rates and high-priced mortgages can be developed to determine whether there are patterns of discrimination in the distribution of high-cost loans as opposed to conventional financing.⁴²

Open Data Sources:

- Home Mortgage Disclosure Act (HMDA) (<https://ffiec.cfpb.gov/data-browser/>)—provides annual data on the disposition of home purchase and refinanced mortgage applications, including data by race, gender, and income.
- American Community Survey (<https://www.census.gov/programs-surveys/acs>)—provides data on mortgages by race.
- Zillow (<https://www.zillow.com/research/data/>)—provides data on rent and housing prices.
- State/Local Tax Assessors (i.e., <https://sdat.dat.maryland.gov/RealProperty/Pages/default.aspx>)—provides data on housing prices.

Sample Indicators:

- Homeownership rate (owner-occupied units/occupied units) by race and ethnicity
- Percentage of owner-occupied home purchase mortgages by race
- Home purchase mortgage denial rates by race (HMDA)
- Average dollar amount of home purchase mortgages (HMDA)

41. HMDA - Home Mortgage Disclosure Act, <https://ffiec.cfpb.gov/data-browser/>.

42. Hendey, Leah, and Mychal Cohen “Using Data to Assess Fair Housing and Improve Access to Opportunity.” Aug. 2017 https://www.urban.org/sites/default/files/publication/92446/using_data_to_assess_fair_housing_and_improve_access_to_opportunity_0.pdf.



Home Ownership and Affordability

Consistent home ownership provides an ability to build wealth. However, [Black homeownership](#)⁴³ rates have continued to lag substantially in comparison to all other groups in the U.S. Although White, Asian, and Hispanic Americans all saw increases in homeownership rates between 2010 and 2020, Black Americans' rates [decreased by 1.2 percent](#).⁴⁴ These consistently low rates of homeownership stem from high mortgage denial rates, lower affordability, particularly due to rising home prices and interest rates during the pandemic, and difficulty building generational wealth. Black Americans in their 40s and 50s see especially low homeownership rates because they may have financed their homes with [subprime loans](#)⁴⁵ and lost them during the [subprime mortgage crisis](#),⁴⁶ or saw their parents lose their homes to foreclosure in comparatively large numbers.

For those who cannot own a home, renting is not necessarily a stable alternative. Data collected between [2012 and 2016](#)⁴⁷ reflect the fact that Black renters are disproportionately more likely to be evicted across the U.S., and that Black and Hispanic female renters are more likely to be evicted than males. The summer of 2020 alone saw [thousands of eviction filings in Florida and Georgia](#)⁴⁸ targeted primarily at minority and low-income neighborhoods.

Another issue is discriminative lending and home appraisals. Even when Black Americans do own their own homes, they are often negatively impacted by discriminative lending and home appraisals. When Black Americans sell their homes, or attempt to refinance, they often

43. Snowden, Brandi, and Nadia Evangelou. "Racial Disparities in Homeownership Rates." National Association of REALTORS, 3 Mar. 2022, <https://www.nar.realtor/blogs/economists-outlook/racial-disparities-in-homeownership-rates>. Accessed 3 Sept. 2022.

44. National Association of REALTORS® Research Group, 2022, Snapshot of Race and Home Buying in America, <https://cdn.nar.realtor/sites/default/files/documents/2022-snapshot-of-race-and-home-buying-in-the-us-04-26-2022.pdf>. Accessed 3 Sept. 2022.

45. Lerner, Michele. "One Home, a Lifetime of Impact." *The Washington Post*, WP Company, 23 July 2020, <https://www.washingtonpost.com/business/2020/07/23/black-homeownership-gap/>.

46. "Subprime Mortgage Crisis." *Wikipedia*, Wikimedia Foundation, 25 Aug. 2022, https://en.wikipedia.org/wiki/Subprime_mortgage_crisis.

47. Hepburn, Peter, Renee Louis, and Matthew Desmond. 2020. "Racial and Gender Disparities among Evicted Americans." *Sociological Science* 7: 649-662.

48. Kleiner, Sarah, and Joe Yerardi. "Communities of Color Poised to Lose Their Homes as Eviction Moratoriums Lift." *Center for Public Integrity*, 22 July 2022, <https://publicintegrity.org/inequality-poverty-opportunity/communities-of-color-homes-coronavirus-evictions-moratoriums-lift/>.

receive a **lower valuation**.⁴⁹ Similarly, researchers found that 9.4 percent of homes appraised in Latino areas were valued at less than the original cost of constructing the home, compared to **7.4 percent**⁵⁰ of homes in White neighborhoods. A recent **national spotlight**⁵¹ on the devaluing of Black and Brown properties has resulted in President Biden creating the Interagency Task Force on Property Appraisal and Valuation Equity, a move that aims to evaluate the causes of appraisal bias and execute an **action plan**⁵² to eliminate such causes.

Opportunities to Apply Data

Housing costs can be analyzed alongside income levels to measure housing affordability relative to a household's income. The **Urban Institute's Guidebook**⁵³ describes how housing affordability can be measured using indicators on costs of housing at household levels or on overall market trends. Local variations in affordability can be a significant cause of segregation, influencing some minorities' access to certain neighborhoods. The resulting housing segregation can lead to disparities in access to high-quality education and other forms of opportunity.

Cost burden is a common measure of affordability. A household is said to be cost-burdened⁵⁴ when it pays more than 30 percent of its income toward housing expenses, and severely **cost-burdened** when it pays at least 50 percent of its income. It is important to disaggregate cost burden data across demographic groups to assess fair housing and opportunity.

Open Data Sources:

- American Community Survey
- The Comprehensive Housing Affordability Strategy
- HUD Affirmatively Furthering Fair Housing—provides data on housing affordability at the census-tract level by race/ethnicity and national origin.

Sample Indicators:

- Median monthly housing costs
- Median monthly housing costs as a percentage of median income
- Percentage of renter households paying 30 percent or more of their income in rent
- Percentage of owner households paying more than 50 percent of their income in housing costs by race

49. "Racial and Ethnic Valuation Gaps In Home Purchase Appraisals." Freddie Mac, 20 Sept. 2021, <https://www.freddiemac.com/research/insight/20210920-home-appraisals>. Accessed 3 Sept. 2022.

50. Brooks, Christopher J. "There's a Big 'Appraisal Gap' between Black and White Homeowners." CBS News, 24 Sept. 2021.

51. Kamin, Debra. "Home Appraised With a Black Owner: \$472,000. With a White Owner: \$750,000." 18 Aug. 2022. <https://www.nytimes.com/2022/08/18/realestate/housing-discrimination-maryland.html>.

52. "Action Plan to Advance Property Appraisal and Valuation Equity." Interagency Taskforce on Property Appraisal and Valuation Equity, March 2022. <https://pave.hud.gov/sites/pave.hud.gov/files/documents/PAVEActionPlan.pdf>.

53. Hendey, Leah, and Mychal Cohen, "Using Data to Assess Fair Housing and Improve Access to Opportunity." Aug. 2017 https://www.urban.org/sites/default/files/publication/92446/using_data_to_assess_fair_housing_and_improve_access_to_opportunity_0.pdf.

54. McCabe, Brian. "What It Means for a Household to Be Cost-Burdened." GGWash, 19 May 2020, https://ggwash.org/view/77638/housing-cost-burdens-explained_2#:~:text=A%20household%20is%20said%20to,its%20income%20toward%20housing%20expenses. Accessed 3 Sept. 2022.



Housing and Negative Effects on Well-Being

Studies have shown statistically significant correlations between historical redlining and present-day adverse health and socioeconomic outcomes at the [census tract](#)⁵⁵ levels. These outcomes include declines in intergenerational economic mobility, poor mental and physical health, and lower life expectancy. Neighborhood HOLC ratings have been associated with present-day adverse outcomes, such as high rates of firearm assaults and [violent crimes](#),⁵⁶ preterm birth and other negative [birth outcomes](#),⁵⁷ and [health](#)⁵⁸ and [asthma-related](#)⁵⁹ emergency department visits.

In one [academic study](#),⁶⁰ researchers found that men residing in areas that had been redlined in the past had substantially elevated risk of late stage [lung cancer diagnosis](#),⁶¹ even after adjusting for present-day neighborhood conditions.

55. Noelke C, Outrich M, Baek M, Reece J, Osypuk TL, McArdle N, et al. (2022) Connecting past to present: Examining different approaches to linking historical redlining to present day health inequities. *PLoS ONE* 17(5): e0267606. <https://doi.org/10.1371/journal.pone.0267606>.

56. Jacoby, Sara F., et al. "The Enduring Impact of Historical and Structural Racism on Urban Violence in Philadelphia." *Social Science & Medicine*, Pergamon, 19 May 2017, <https://www.sciencedirect.com/science/article/abs/pii/S0277953617303398?via%3Dihub>.

57. Krieger, Nancy, et al., "Structural Racism, Historical Redlining, and Risk of Preterm Birth in New York City, 2013–2017", *American Journal of Public Health* 110, no. 7 (July 1, 2020): pp. 1046-1053.

58. McClure, Elizabeth, et al. "The Legacy of Redlining in the Effect of Foreclosures on Detroit Residents' Self-Rated Health." *Health & Place*, Pergamon, 15 Nov. 2018, <https://www.sciencedirect.com/science/article/abs/pii/S135382921830618X?via%3Dihub>.

59. Nardone, Anthony, et al. Associations between Historical Residential Redlining and Current Age-Adjusted Rates of Emergency Department Visits Due to Asthma across Eight Cities in California: an Ecological Study. *The Lancet*, 1 Jan. 2020, [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(19\)30241-4/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(19)30241-4/fulltext).

60. Krieger, Nancy, et al., Emily Wright, Jarvis T Chen, Pamela D Waterman, Eric R Huntley, Mariana Arcaya, Cancer Stage at Diagnosis, Historical Redlining, and Current Neighborhood Characteristics: Breast, Cervical, Lung, and Colorectal Cancers, Massachusetts, 2001–2015, *American Journal of Epidemiology*, Volume 189, Issue 10, October 2020, Pages 1065–1075, <https://doi.org/10.1093/aje/kwaa045>.

61. Krieger, Nancy, et al., Emily Wright, Jarvis T Chen, Pamela D Waterman, Eric R Huntley, Mariana Arcaya, Cancer Stage at Diagnosis, Historical Redlining, and Current Neighborhood Characteristics: Breast, Cervical, Lung, and Colorectal Cancers, Massachusetts, 2001–2015, *American Journal of Epidemiology*, Volume 189, Issue 10, October 2020, Pages 1065–1075, <https://doi.org/10.1093/aje/kwaa045>.



Environmental Health and Inadequate Housing

Historical redlining is also associated with present-day [air pollution disparities](#)⁶² and other environmental justice issues in metropolitan cities. For instance, Black and Latino communities have been disproportionately exposed to [oil drilling and pollution](#),⁶³ exposing local residents to air, water, and noise [pollution](#),⁶⁴ and other sources of stress that can increase risk of many diseases, like cardiovascular disease, impaired lung function, and impaired fetal growth.

Populations in inadequate housing are more likely to suffer from environmental diseases and injuries. Unfortunately, disparities in the quality of housing have remained largely unchanged. Approximately 2.6 million (7.5 percent) non-Hispanic Blacks and 5.9 million Whites (2.8 percent) live in substandard housing. [Housing adequacy](#)⁶⁵ is strongly linked to health through its effect on access to clean water, ability to store food and medications, and prepare healthy meals. Significant variations in [body mass index](#)⁶⁶ by neighborhood and ethnicity have been seen as well. Furthermore, exposure to low social cohesion and [deteriorated housing conditions](#)⁶⁷ significantly correlates with increased odds of asthma.

62. Environ. Sci. Technol. Lett. 2022, 9, 4, 345–350 Publication Date: March 9, 2022 <https://doi.org/10.1021/acs.estlett.1c01012>.

63. Gonzalez, D.J.X., A. Nardone, A.V. Nguyen *et al.* Historic redlining and the siting of oil and gas wells in the United States. *J Expo Sci Environ Epidemiol* (2022). <https://doi.org/10.1038/s41370-022-00434-9>.

64. Gonzalez, D.J.X., A. Nardone, A.V. Nguyen *et al.* Historic redlining and the siting of oil and gas wells in the United States. *J Expo Sci Environ Epidemiol* (2022). <https://doi.org/10.1038/s41370-022-00434-9>.

65. “Quality of Housing.” Quality of Housing - Healthy People 2030, <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/quality-housing>.

66. Phuong Do, D., Tamara Dubowitz, Chloe E. Bird, Nicole Lurie, José J. Escarce, Brian K. Finch, Neighborhood context and ethnicity differences in body mass index: A multilevel analysis using the NHANES III survey (1988–1994), *Economics & Human Biology*, Volume 5, Issue 2, 2007, Pages 179-203, ISSN 1570-677X, <https://doi.org/10.1016/j.ehb.2007.03.006>.

67. Rosenbaum, Emily. *PubMed*, 2008, Racial/Ethnic Differences in Asthma Prevalence: The Role of Housing and Neighborhood Environments, https://journals.sagepub.com/doi/abs/10.1177/002214650804900202?casa_token=3Yno2CGbclcAAAAA:xNAJoKiu5vQ Nz4A2A7Zn5wuih8YEIsSYlqa6OX3a0cjUKxVdsGYld_IEEfA_4tYqDc5u410tspm. Accessed 3 Sept. 2022.



Opportunities to Apply Data

The Centers for Disease Control and Prevention has developed an [initiative](#)⁶⁸ that works to improve public health by “linking public health surveillance with community design decisions; improving community design decisions through tools such as [Health Impact Assessments](#);⁶⁹ educating decision makers on the health impact of community design; building partnerships with community design decision makers and their influencers; conducting research to identify the links between health and community design; and translating research into best practices.” CDC has also developed a [Childhood Lead Poisoning Prevention Program](#)⁷⁰ (CLPPP) to reduce blood lead levels in children and eliminate differences in average risk based on race/ethnicity and social class. The CLPPP currently funds state and local programs to support lead poison prevention activities, and leverage local data from HUD and EPA so that interventions are targeted to communities.

Open Data sources:

- Interdepartmental Health Equity Collaborative and HHS Office of Minority Health (<https://www.minorityhealth.hhs.gov/omh>)—provides various databases with data on socioeconomic factors, social determinants of health, and health equity.
- PLACES: Local Data for Better Health (<https://www.cdc.gov/places>)—provides small area estimates for chronic disease risk factors, health outcomes, health status, and clinical preventive service use for counties, places, census tracts, and ZIP Code Tabulation Areas across the U.S.

Sample Indicators:

- Proportion of people whose water supply meets Safe Drinking Water Act regulations
- Amount of toxic pollutants released into environment
- Blood lead levels in children aged 1 to 5 years

68. “Healthy Places.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, <https://www.cdc.gov/healthyplaces/default.htm>.

69. “Healthy Places.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, <https://www.cdc.gov/healthyplaces/hia.htm>.

70. “About CDC’s Childhood Lead Poisoning Prevention Program.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 28 Apr. 2022, <https://www.cdc.gov/nceh/lead/about/program.htm>.



Poor Socioeconomic Outcomes

Poor [economic standing](#)⁷¹ is associated with limited health care access, low insurance rates, postponing needed care, and higher hospitalization rates, —issues exacerbated by low quality housing. Specifically, the low-income renters who qualify for public housing face multiple issues. In a large study conducted on nearly 30,000 residents with below poverty income levels, [researchers found](#)⁷² that public housing residents were more likely to report fair or poor overall health status, hypertension, asthma, diabetes, obesity, disability, loss of multiple teeth, and feelings of depression for more than 15 days. Public housing residents were slightly more likely than others to be without health insurance or report financial barriers to medical care. The low [SES residents](#)⁷³ also reported more smoking, physical inactivity, binge drinking, and marijuana use.

Public housing often does not provide its residents with safe, livable conditions that can help them improve their quality of life. [A 2020 study](#)⁷⁴ by the U.S. General Accountability Office found:

Rent burden was most common and most severe among lower-income households, with most of the poorest households paying over half of their income to rent. Affordability has declined because the supply of low-cost rental units hasn't kept up with demand. With more competition for affordable rentals, low income and rent-burdened households in 2017 were more likely to have to rent units with issues like water leaks, rodents, or heating problems An estimated 15 percent of rental units in 2017—more than five million—had substantial quality issues (such as cracked walls and the presence of rodents) or lacked essential components of a dwelling (such as heating equipment or hot and cold running water), according to GAO's analysis of American Housing Survey data.

71. Reid, Kristen W., et al. "Association between the Level of Housing Instability, Economic Standing and Health Care Access: A Meta-Regression." *Journal of Health Care for the Poor and Underserved*, vol. 19 no. 4, 2008, p. 1212-1228. Project MUSE, doi:10.1353/hpu.0.0068.

72. Bowen, Deborah, Quintiliani, Lisa. "Socioeconomic Influences on Affordable Housing Residents: Problem Definition and Possible Solutions." *Different Strategies of Housing Design*, edited by Ayşem Çakmaklı, IntechOpen, 2019. 10.5772/intechopen.86960.

73. Bowen, Deborah, Quintiliani, Lisa. "Socioeconomic Influences on Affordable Housing Residents: Problem Definition and Possible Solutions." *Different Strategies of Housing Design*, edited by Ayşem Çakmaklı, IntechOpen, 2019. 10.5772/intechopen.86960.

74. GAO, 2020, Rental Housing: As More Households Rent, the Poorest Face Affordability and Housing Quality Challenges. <https://www.gao.gov/products/gao-20-427>. Accessed 3 Sept. 2022.

In addition, low-income communities are more likely to have limited [internet access](#),⁷⁵ which can reduce job opportunities, health care access, and access to other essential services.



Opportunities to Apply Data

Effective interventions such as the government’s successful approach to radically curb [lead poisoning](#)⁷⁶ between 1976 and 2002,⁷⁷ can reduce environmental health disparities related to housing. [Interventions](#)⁷⁸ at the local, state, and federal level can help reduce these health and safety risks and promote health. For example, providing opportunities for people to walk and bike in their communities, by adding sidewalks and bike lanes, can increase safety and help improve health and quality of life. SES data and data on social vulnerability can help identify and target new interventions.

Open Data sources:

- Vulnerable Populations Footprint Tool (<https://www.communitycommons.org/chna/>)— creates maps and reports that identify geographic areas with high poverty rates and low education levels.
- U.S. Census Social Vulnerability Index (<https://svi.cdc.gov/>)—uses 15 U.S. census variables to help local officials identify communities that may need support before, during, or after disasters.
- National Environmental Public Health Tracking Network (<https://ephtracking.cdc.gov/>)—Maps, tables, and charts with data about environmental indicators.

Sample Indicators:

- Proportion of families that spend more than 30 percent of income on housing
- Median rent listed by number of bedrooms
- Median rent list price by property type
- Median sales price for single-family homes
- Percentage change in sales price (tax assessor or recorder of deeds)

75. Amin, Krutika, et al. “How Might Internet Connectivity Affect Health Care Access?” The Peterson Center on Healthcare and KFF, 14 Dec. 2020, https://www.healthsystemtracker.org/chart-collection/how-might-internet-connectivity-affect-health-care-access/#item-internetaccess_chart5. Accessed 3 Sept. 2022.

76. Jacobs, David E. “Environmental Health Disparities in Housing.” *American Journal of Public Health*, American Public Health Association, Dec. 2011, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222490/>.

77. Jacobs, David E. “Environmental Health Disparities in Housing.” *American Journal of Public Health*, American Public Health Association, Dec. 2011, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222490/>.

78. “Neighborhood and Built Environment.” *Neighborhood and Built Environment—Healthy People 2030*, <https://health.gov/healthy-people/objectives-and-data/browse-objectives/neighborhood-and-built-environment>.



As a recent report on [racial equity in health](#)⁷⁹ describes, a number of social and environmental factors—known collectively as the social determinants of health—have contributed to the higher rates of COVID hospitalization and death among Black and Latino Americans. Residents of segregated communities are subject to many factors that can contribute to poor health overall. They may live in neighborhoods that have high rates of pollution, are located in [food deserts](#),⁸⁰ and are far from medical facilities. These neighborhoods may also lack safe and reliable transportation, making it more difficult to stockpile supplies that would allow people living there to stay home and receive care if sick.

In addition, due to the structural and institutional effects of residential housing segregation, racial and ethnic minorities are more likely to live in [densely populated areas](#)⁸¹ that can make COVID easy to spread. Overcrowding is also more likely in tribal reservation homes and Alaska Native villages. Certain racial and ethnic minority groups are also overrepresented in jails, prisons, homeless shelters, and detention centers, where they are forced to live, work, eat, and recreate within crowded spaces.

People who are homeless or have unstable living situations also have a harder time maintaining social distancing, increasing their risk of contracting COVID-19. Black people in the U.S. make up 13 percent of the general population, but more than [40 percent](#)⁸² of the homeless population. Similarly, [American Indians/Alaska Natives](#),⁸³ Native Hawaiians and Pacific Islanders, and biracial people make up a disproportionate share of the homeless population as well.

79. Afolabi, Temilola, and Matt Rumsey. *Using Data to Advance Racial Equity in Healthcare*. Center for Open Data Enterprise, 2022, <https://www.opendataenterprise.org/>.

80. "Food Deserts." *Food Empowerment Project*, <https://foodispower.org/access-health/food-deserts/>.

81. How to Protect Yourself and Others. Centers for Disease Control and Prevention, https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html?CDC_AA_reVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fdaily-life-coping%2Fliving-in-close-quarters.html.

82. "Racial Inequalities in Homelessness, by the Numbers." *National Alliance to End Homelessness*, 16 Oct. 2020, <https://endhomelessness.org/resource/racial-inequalities-homelessness-numbers/>.

83. "Racial Inequalities in Homelessness, by the Numbers." *National Alliance to End Homelessness*, 16 Oct. 2020, <https://endhomelessness.org/resource/racial-inequalities-homelessness-numbers/>.

Internet access also affects individuals' ability to access important information regarding COVID-19, including testing facility locations, proximity to health care, updates on the state of the pandemic, and the ability to utilize telemedicine. Racial and ethnic minorities and people with low-incomes generally have lower rates of [internet access](#),⁸⁴ in turn making these groups more susceptible to the consequences of the pandemic.



Opportunities to Apply Data

A survey from the [Pew Research Center](#)⁸⁵ found that 3 percent of Americans have moved since the pandemic. Some 6 percent have a new person or people in their house in the [same time frame](#).⁸⁶ Government data on household density and stability would be highly valuable. More granular housing and neighborhood data may also exist in the private sector.

Developing local housing response plans to curb the pandemic's negative impacts on housing is also important. The National Community of Practice on Local Housing Policy's [Local Housing Solutions platform](#)⁸⁷ provides a framework for developing such plans and suggests actions like analyzing the potential threats to the jurisdiction's housing and rental markets, defining the objectives and outcomes that jurisdictions hope to achieve through a response plan, developing a comprehensive approach to meeting objectives using the resources available to local agencies, and establishing a way to track and monitor progress, as well as uncover shortfalls.

Open Data Sources:

- U.S. Census Bureau—provides data on Average number of people per household.
- Zillow Home Value Index (<https://www.zillow.com/research/data/>)—provides a seasonally adjusted measure of the typical home value and market changes across a given region and housing type.
- U.S. Department of Housing and Urban Development (<https://www.huduser.gov>) —provides data on small area fair market rental rates.

Sample Indicators:

- Homes with more than five residents
- Number of COVID-19 vaccination sites by census tract
- Number of vehicles per household

84. Center for Open Data Enterprise, 2020, *Using Social Determinants of Health Data to Fight COVID-19 and Support Recovery Efforts*, <https://healthdatasharing.org/wp-content/uploads/2020/12/COVID-SDOH-Summary-Report-Final.pdf>. Accessed 3 Sept. 2022.

85. Cohn, D'Vera. "About a Fifth of U.S. Adults Moved Due to COVID-19 or Know Someone Who Did." Pew Research Center, 6 July 2020, <https://www.pewresearch.org/fact-tank/2020/07/06/about-a-fifth-of-u-s-adults-moved-due-to-covid-19-or-know-someone-who-did/>. Accessed 3 Sept. 2022.

86. Cohn, D'Vera. "About a Fifth of U.S. Adults Moved Due to COVID-19 or Know Someone Who Did." Pew Research Center, 6 July 2020, <https://www.pewresearch.org/fact-tank/2020/07/06/about-a-fifth-of-u-s-adults-moved-due-to-covid-19-or-know-someone-who-did/>. Accessed 3 Sept. 2022.

87. "Covid 19 Response Plans." *Local Housing Solutions*, 15 Feb. 2022, <https://localhousingsolutions.org/housing-issues/covid-19/covid-19-response-plans/>.

CONCLUSION

Historical discriminatory housing practices and policies have systemically disenfranchised communities of color, resulting in lower homeownership rates, higher eviction rates, discriminative lending, and other poor outcomes. Policies like HUD's Fair Housing Act and Affirmatively Furthering Fair Housing regulation are federal attempts at ameliorating the consequences of past harmful actions, but high quality, accessible federal and local data will be needed to ensure the success of these policies and improve housing equity.

HOLC maps drawn in the 1930s have led to the development of American ghettos, and continue to affect neighborhood safety and wellbeing today. Using granular demographic data at the city and local level can help policymakers and local housing departments develop segregation measures by creating indices based on the demographics of small geographic areas.

Communities of color face exceptionally high rates of unemployment, mortgage default, and unfair mortgage lending. Data on lending practices and outcomes can help researchers and local housing departments identify disparities in access to conventional financing, especially when analyzed alongside local demographic data.

Black and other people of color have a much harder time owning homes consistently, and consequently building and maintaining wealth in the U.S. Eviction and foreclosure rates are also especially high among Black Americans due to affordability. By measuring and analyzing housing affordability, important factors like cost burden, accessibility to certain neighborhoods, and high-quality public resources can be ascertained to identify disparities and make proper changes.

Racial and ethnic minorities also face a higher proportion of negative environmental health and socioeconomic outcomes due to poor housing, issues that have been exacerbated during the COVID-19 pandemic. Black and Latino communities, which experience higher rates of pollution, are more likely to suffer from environmental related diseases and injuries, have lower quality housing, and have less access to healthy foods, among other adverse consequences. In addition, they are also more likely to be uninsured, experience poverty, and have limited or no internet access. Federal data sources like CDC's PLACES, which holds data on chronic disease risk factors and health status, and social vulnerability indices can be leveraged to create tailored local interventions to combat poor health, environmental, and SES outcomes.

High quality, granular, and easily accessible data are crucial to combatting the effects of historical and present-day housing issues for Black and Brown Americans. Recommendations for potential outcomes include:

- **Data-driven recommendations.** Actionable, data-driven recommendations to improve and apply federal housing data sources
- Public-private collaboration. Inventory of high-priority, high-impact datasets and metrics to be developed further through public-private collaboration
- Data standards. Action plans for federal guidance and public-private collaboration to create better standards and data-sharing protocols for housing data
- Case studies. Examples of data analyses for policymakers and researchers to uncover racial discrimination and poor housing stock faced by communities of color
- Creation of metrics and indicators. Proposed metrics to evaluate existing housing policies based on open data.
- Use cases. Collection of local use cases on housing reform to serve as models for housing policy nationwide

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