

By Kierra S. Barnett, Jason Reece, Brittany M. Mosley, Mikyung Baek, Ayaz Hyder, Kelly Kelleher, Shawnita Sealy-Jefferson, and Deena J. Chisolm

DOI: 10.1377/hlthaff.2023.01045

HEALTH AFFAIRS 43,
NO. 2 (2024): 181-189

This open access article is distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) license.

ANALYSIS

A History Of The Impacts Of Discriminatory Policies On Housing And Maternal And Infant Health In An Ohio Neighborhood

ABSTRACT Community-level disinvestment and de facto segregation rooted in decades of discriminatory race-based policies and racism have resulted in unacceptably large infant mortality rates in racial minority neighborhoods across the US. Most community development and housing work, implemented with the goal of addressing health and social inequities, is designed to tackle current challenges in the condition of neighborhoods without a race-conscious lens assessing structural racism and discrimination. Using one historically segregated neighborhood—Linden, in Columbus, Ohio—we detail how state and local policies have affected the neighborhood and shaped neighborhood-level demographics and resources during the past 100 years. We explore how structural racism— and discrimination-informed strategic community reinvestment could provide a solution and yield lasting change.

Kierra S. Barnett (kierra.barnett@nationwidechildrens.org), Nationwide Children's Hospital, Columbus, Ohio.

Jason Reece, Ohio State University, Columbus, Ohio.

Brittany M. Mosley, Nationwide Children's Hospital.

Mikyung Baek, Ohio State University.

Ayaz Hyder, Ohio State University.

Kelly Kelleher, Nationwide Children's Hospital.

Shawnita Sealy-Jefferson, Ohio State University.

Deena J. Chisolm, Nationwide Children's Hospital.

The probability that a child does not live to celebrate their first birthday—the infant mortality rate—is widely accepted as an indicator of the overall well-being of a population. Despite years of collective efforts from health systems, public health departments, and community partners, racial disparities in infant mortality rates have only widened during the past century.¹ Healthy People 2030 sets the target infant mortality rate at 5.0 deaths per 1,000 live births,² a goal that was achieved among White infants as early as 2012.³ In 2022, the national Black infant mortality rate was 10.86 per 1,000 live births, and it must fall by 54 percent during the next six years to reach the Healthy People 2030 target.⁴ Racial disparities in infant mortality rates are not the product of genetic differences but are driven by differences in social status.^{5,6} One fundamental cause of the differences in social status⁷ and ultimately health

outcomes is structural racism and discrimination, defined as a macro-level, socially structured action that is “unfair or unjustified and harms individuals and groups.”⁸ Structural racism influences health through physiologic responses to chronic stress and through barriers that limit access to the resources required for health (or the social determinants of health).⁹

One such health-promoting resource is high-quality housing in healthy neighborhoods. Scholars conceptualize stable and safe housing as a critical social determinant that affects health through at least four pathways: housing condition and habitability, housing stability, housing affordability, and neighborhood characteristics.^{10,11} Each pathway is influenced by structural racism and is associated with infant and maternal health outcomes.¹⁰ Structural racism and discrimination are deeply embedded in housing policies and practices, which have created and maintained the segregated opportunity land-

scape that drives place-based racial health disparities.¹²⁻¹⁴ A meta-analysis published in 2017 documented that living in segregated communities was associated with adverse birth outcomes, particularly for Black birthing people.¹⁵ Furthermore, residential segregation has been associated with social determinants such as crime rates, neighborhood deprivation, and poverty, which are each strongly linked to preterm birth.¹⁶

Although place-based community development aims to address neighborhood-level inequities, these efforts are often race-neutral, addressing the socioeconomic disparities within a neighborhood without closing racial disparities.¹⁷ Beginning to undo the effects of structural racism and discrimination on racial health disparities requires a reinvestment strategy with a race-conscious lens. Specifically, decision makers must understand how historical and contemporary policies have shaped the lived experiences of residents, identify avenues for targeted investment designed to create meaningful change, and make financial commitments to rectify the injustice.

The Targeted Investment and Meaningful Engagement Study, an ongoing mixed-methods study we are currently conducting, is intended to help explain why neighborhood deprivation imperils birth outcomes for Black infants, to help in tailoring future community investment strategies. As a first step, we conducted an extensive structural racism and discrimination policy inventory to illustrate how the history of structural racism and discrimination policies and practices specific to housing played a role in the unacceptably high infant mortality rate in the Linden neighborhood in Columbus, Ohio, compared with the rest of the county and the nation. This article describes the initial policy inventory we compiled and provides a timeline of structural racism and discrimination affecting housing and health in Linden. We conclude by discussing how reinvestment in communities that is rooted in addressing structural racism and discrimination can create sustainable improvements in health and overall well-being.

Conducting The Policy Inventory

The policy inventory was developed from literature and archived news reports identifying national and local policies specifically related to housing and neighborhood development during the past 100 years. Policies that had differential impacts based on race or segregated communities were identified as structural racism and discrimination policies. Policies with documented impacts in the Linden community were included in the final analysis.

History Of Structural Racism And Discrimination Affecting Housing In Linden

Established as Linden Heights Village in 1908, the suburb, which spanned six square miles, was annexed into the city of Columbus, Ohio, in 1921.¹⁸ Despite a rich community history, decades of policies and practices triggered “White flight” and disinvestment, altering the community demographics. By 2020, the once predominantly White Linden neighborhood was 63 percent Black, out of a total of 19,076 residents.¹⁹ Today Linden has high vacancies of residential properties, low investment in housing and businesses, poor street and sidewalk infrastructure, and one of the highest infant mortality rates in Franklin County.¹⁸ Between 2018 and 2022, the Black infant mortality rate in Linden was 18.3 deaths per 1,000 live births, far exceeding the 7.5 deaths per 1,000 live births that is the overall rate in Franklin County.²⁰ Given the inequities in both housing and infant mortality rates, Linden is a prime community for reinvestment. We present here an overview of structural racism and discrimination policies and practices that have affected housing and, ultimately, maternal and child health outcomes in Linden that should be addressed in community reinvestment strategies. (See the interactive timeline that accompanies this article online.)²¹

1920S: RACIAL DEED RESTRICTIONS During the 1920s, 29 percent of all housing development in the city of Columbus occurred in Linden.¹⁸ Because earlier models of racial zoning were deemed unconstitutional by the United States Supreme Court, developers placed racial deed restrictions, known as racial covenants, on properties to segregate the community.²² Racial deed restrictions, which are defined as private agreements between buyers and sellers, written within deeds, that barred non-Whites from occupying or owning the property, proliferated throughout the nation in the 1920s and were deemed constitutional in 1926.²³ Of the twenty-three new subdivisions built in the Linden area in the 1920s, twenty had racial restrictions primarily barring residency by Black households.²⁴ These racial restrictions were legally enforced until they were deemed unconstitutional by the US Supreme Court in 1948.²⁵

1930S: COMMUNITY-LEVEL DISINVESTMENT VIA REDLINING As part of the New Deal housing programs, Columbus’s neighborhoods were assessed for investment risk by the federal Home Owners’ Loan Corporation (HOLC) in 1934.²⁶ Most of the area in Linden was redlined—receiving a C or D HOLC rating—and deemed risky for lending, particularly areas in proximity to the historically Black settlements bordering the

Beginning to undo the effects of structural racism and discrimination on racial health disparities requires a reinvestment strategy with a race-conscious lens.

south side of the neighborhood. A small portion of the core of the Linden neighborhood received a B rating, most likely because of racially restrictive covenants on properties, which were viewed as positive neighborhood attributes by HOLC assessors.²⁷ (For a map of the 1934 HOLC redlining ratings in Linden, see the interactive timeline that accompanies this article online.)²¹

As experienced in other urban areas, these neighborhood assessments influenced future patterns of lending discrimination, leading to eventual disinvestment in the neighborhood.²⁸ The impact of these redlining practices was intergenerational, as homeownership is a major mechanism for building generational wealth in the US.²⁹ Research also documents the lasting effects of this practice on health outcomes, finding an association between historical redlining and present-day poor housing and health outcomes, including preterm birth.^{13,30}

1950S–60S: BLOCKBUSTING AND HIGHWAY CONSTRUCTION Between 1950 and 1960, Linden's Black population grew from 990 to 5,326 residents, as almost half of its White population would leave the neighborhood by 1970.¹⁸ This was in part a result of "blockbusting" practices, in which realty companies convinced White homeowners that demographic change in the neighborhood would ruin property values, convincing them to sell their homes at a highly discounted price. The same companies then raised prices to upsell the properties to Black homeowners.³¹ To accommodate White commuters who moved further north of the city into the suburbs, Interstate 71 was constructed in the early 1960s, and its routing through Columbus enabled easier access to downtown jobs.¹⁸ In

Linden, the highway provided greater access for those with vehicles, but it also inflicted significant damage to the neighborhood. Much of the western edge of Linden was lost to highway construction, and the highway created a permanent barrier dividing the affluent neighborhoods and businesses just west of Linden from Linden residents.

During these decades, Linden continued to experience White flight. In 1950, 96 percent of Linden's 27,000 residents were White, and 75 percent of residents owned their homes. In 1960, Linden had a population of 35,543, 84 percent of whom were White. By 1970, White residents made up only 50 percent of Linden's population.¹⁸ Despite this shift, Linden remained economically healthy during this time. Unemployment rates stayed at 4 percent, and the residential vacancy rate increased only slightly, from 2.7 percent to 3.8 percent, between 1960 and 1970.¹⁸ Community development infrastructure also grew in Linden to address community and social service needs. In 1965, the historic St. Stephen's Community House, a settlement house that provided programs and services to the community, relocated to Linden to meet emerging community needs.³²

1970S: SCHOOL DESEGREGATION, WHITE FLIGHT, AND DEINDUSTRIALIZATION The 1970s presented a transition point for Linden, as the neighborhood experienced its first population decline since at least 1940. Although the Black population in Linden grew slightly (7 percent) between 1970 and 1980, the White population decreased by 43 percent.¹⁸ This decline was fueled by White flight from Linden as school desegregation efforts occurred and White homeowners sought to remain in predominantly White school districts.¹⁴

Between October 1970 and October 1971, the White student population at Linden-McKinley High School decreased by more than 50 percent, as the number of Black students increased by 18 percent.³³ In 1971, Black high school students in Linden protested to push for curriculum revisions that reflected Black history and culture. The protests led to a violent police response and temporary closure of Linden-McKinley High School.³⁴ Residents continued to advocate for the resources they needed, however, and successful civil rights litigation in 1979 resulted in a districtwide busing plan to desegregate schools.¹⁴ The busing program triggered another round of White flight from neighborhoods served by Columbus City schools.

Shifting economic conditions in the 1970s also affected Linden. Similar to many midwestern cities, Columbus experienced declining blue-collar employment as a result of deindustrializa-

tion and the movement of industry to undeveloped land in the suburbs.³⁵ The recession of the late 1970s contributed additional economic stress in Linden. Between 1970 and 1980, Linden's unemployment rates tripled, from 4 percent to 12 percent,¹⁸ and poverty rates almost doubled, from 13 percent¹⁸ to 23 percent.³⁶ The neighborhood also experienced its first large increase in vacant residential properties, jumping from 3.8 percent in 1970 to nearly 9 percent in 1980.¹⁸ By 1980, more than 60 percent of Linden's 26,000 residents were Black.¹⁸

1980S–90S: THE WAR ON DRUGS, MASS INCARCERATION, AND ADVOCACY Beginning in the 1970s and escalating through the 1990s, the federal “war on drugs,” and the accompanying mass incarceration, affected many urban neighborhoods as the crack cocaine epidemic devastated low-income communities throughout the US.³⁷ Racial bias and aggressive policing and sentencing led to explosive growth of the incarcerated population,³⁸ which affected Linden along with the rest of the US. Previous research has linked state-level imprisonment rates,³⁹ neighborhood-level prison admission rates,⁴⁰ and neighborhood-level crime rates^{41,42} to adverse birth outcomes and increased infant mortality rates. Between 1995 and 1997, the Black preterm birth rate in Linden was 18.7 percent, compared with 11.5 percent in Franklin County as a whole.²⁰ In addition, between 1999 and 2003, the Black infant mortality rate in Linden was 26.0 deaths per 1,000 live births, compared with 15.4 in Franklin County.²⁰

Despite the decades of various forms of disinvestment and structural racism and discrimination that Linden had experienced, the community remained strong. Linden residents continued to advocate to address injustice and community challenges and expand opportunity.⁴³ In 1994, the Greater Linden Development Corporation became the first community development corporation serving the Linden community. In addition to building affordable housing, the organization was instrumental in partnering with the city to transform long-vacant and dilapidated properties that were associated with high rates of criminal activity or violence into the epicenter of a major redevelopment project called Four Corners, creating new large-scale commercial space and a subsidized housing complex in 1998.⁴⁴ As the twentieth century closed, commercial reinvestment and Linden's relatively high homeownership rate were seen indications of future reinvestment and revitalization in the neighborhood.

2000S–10S: THE SUBPRIME LENDING CRISIS The subprime lending and foreclosure crisis of the 2000s, however, devastated Linden. Deregu-

This tale of the Linden neighborhood is not unique—many urban neighborhoods across the nation have faced similar challenges.

lation, growing capital investment stemming from globalization, securitization of the mortgage market, and the growth of subprime lending contributed to the global housing crisis.⁴⁵ Nationally, predatory and subprime loans were found to be highly targeted toward predominantly non-White, formerly redlined urban neighborhoods.^{46,47} Linden experienced one of the highest subprime lending rates and corresponding foreclosure rates in Franklin County. In 2006, more than 50 percent of all home loans made in Linden were subprime loans.⁴⁸ The subprime lending and foreclosure crisis quickly destabilized the neighborhood. Residential vacancy rates increased from 11.4 percent in 2000 to 22.1 percent in 2016.¹⁸ By 2013, the neighborhood had the highest number of vacant housing units (1,388) in the city.⁴⁴ Linden's relatively high homeownership rate plummeted as a result, declining from 56 percent in 2000 to 36 percent in 2016.¹⁸ With the neighborhood experiencing widespread destabilization, the Four Corners redevelopment project struggled to attract tenants, and, later, debt associated with the development caused the Greater Linden Development Corporation to close.⁴⁹

In the aftermath of the housing crisis and the Great Recession of 2007–09, Linden's challenges extended beyond housing to economic conditions and health. In inflation-adjusted dollars, median household income decreased from \$37,265 in 2000 to \$25,040 in 2016 (adjusted to 2018 dollars).¹⁸

Linden also experienced an increase in the infant mortality rate in the 2000s that was not observed in the overall rates in Franklin County.¹⁹ As detailed above, mass incarceration affected Linden as part of a nationwide trend that began in the 1980s. By 2008, the incarceration rate of people from the Linden area was 265 percent higher than the state rate.¹⁸ Fortunately,

Community redevelopment initiatives have the potential to modify some of the neighborhood and housing characteristics that drive health disparities.

incarceration rates in Linden would substantially decline over the next decade. However, mass incarceration likely contributed to the community's infant mortality rates. In 2014, the newly formed Greater Columbus Infant Mortality Task Force found Linden to have the highest infant mortality rate in the county.⁵⁰ Clusters of census tracts in South Linden with the highest infant mortality rates were racially segregated and economically vulnerable, with a non-White population of 72 percent. In these census tracts, more than 70 percent of renters were housing cost burdened, and 43 percent of the population lived in poverty.⁵⁰ Given this, Linden became one of the city's focal points for interventions to decrease infant mortality rates, led by CelebrateOne, a collective-impact initiative launched in 2014 by the City of Columbus.^{51,52}

Race-Neutral Efforts To Revitalize Linden

Growing awareness of Franklin County's infant mortality crisis and ongoing economic fallout from the Great Recession stimulated several community initiatives intended to address the health, housing, and economic challenges facing Linden. In 2017, the City of Columbus Department of Neighborhoods launched the One Linden Plan, a two-year planning process to identify opportunities for neighborhood revitalization in Linden.¹⁸ This initiative produced unprecedented levels of community engagement, hosting thirty-five community working group meetings, six major community gatherings, and pop-up engagement activities with hundreds of

residents.¹⁸ Although the One Linden Plan was widely celebrated, future implementation of the plan's recommendations was more uncertain. Unlike other neighborhoods that had experienced redevelopment in Columbus, Linden did not have a large anchor institution (defined as a hospital, university, or large place-based organization that invests in its community)⁵³ to support the neighborhood. City leaders eventually looked to a successful community revitalization initiative led by Nationwide Children's Hospital on the city's South Side as a model for moving the plan and its housing goals forward.

As one of the largest children's hospitals in the country, Nationwide Children's Hospital, along with community partners, developed the Healthy Neighborhoods Healthy Families initiative in 2008. The initiative's affordable housing impact area, known as Healthy Homes, aims to repair and rehabilitate housing, increase homeownership, and create more affordable homes for residents in the community.⁵⁴ Healthy Neighborhoods Healthy Families uses a collaborative model, working with existing community assets and partners and incorporating community members' input to guide decision making. After more than a decade, the initiative's efforts in the city's South Side neighborhood resulted in a 76 percent decrease in vacancy rates.⁵⁴ The South Side also experienced greater decreases in emergency department visits and hospitalizations and smaller increases in lengths-of-stay compared with the comparison community that did not receive the Healthy Neighborhoods Healthy Families investment, although the changes were not statistically significant.⁵⁵ Study findings also suggest that the intervention may have had modest impacts on neighborhood crime rates.⁵⁶

Given these successes, in 2019 Healthy Homes announced expansion into Linden. Although the COVID-19 pandemic slowed the program's initial progress in Linden, as part of a large-scale community partnership, Nationwide Children's Hospital has committed to raising more than \$50 million to reinvest in housing and other community resources.⁵⁷ This investment is slated to occur over the course of the next ten years; it includes trusted assets and partners in the community that were engaged in this work predating this Healthy Neighborhoods Healthy Families expansion. The expected time between the investment into a community and improvement in health outcomes remains unknown. Although Healthy Neighborhoods Healthy Families investments have shown to have an impact at the community level, these efforts are race-neutral, and the impact of these efforts on reducing health disparities has yet to be seen.

Structural Racism— And Discrimination-Informed Strategic Community Development

This tale of the Linden neighborhood is not unique—many urban neighborhoods across the nation have faced similar challenges. The timeline described in this article demonstrates the policy-driven structural racism and discrimination that segregated and unjustly disadvantaged Linden residents. At the community level, these policies resulted in concentrated poverty, racial gaps in wealth accumulation, and degraded physical environments within the neighborhood. At the individual level, Linden residents are at increased risk for exposure to stress because of housing instability, affordability, and neighborhood environment.¹⁰ Previous research has documented the association between each of these impacts and infant and maternal health outcomes.⁵⁸ Community redevelopment initiatives have the potential to modify some of the neighborhood and housing characteristics that drive health disparities.

Race-neutral approaches to place-based community development are common, however, and they often result in disparate outcomes among Black and other minority communities compared with White communities.⁵⁹ A recent report from the Urban Institute outlines five guiding principles for “place-conscious” strategies in community investment—an approach that combines people- and place-based strategies.⁶⁰ Although not explicitly stated, these principles also apply to strategies that are racism-conscious and align with the racism-conscious health policy framework outlined by Shekinah Fashaw-Walters and Cydney McGuire.⁶¹ The first principle is confronting racism, which requires systemic efforts to address place-based disparities and improve the opportunity landscape within communities. The second principle is that strategies must empower community members who have been affected by neighborhood disinvestment and distress to help design solutions. This will require sustained engagement with community members over time. The third principle is that efforts should work both “horizontally and vertically.”⁶⁰ This means that strategies must integrate efforts that address policies and practices within the community (horizontal strategies) with efforts that address policies and resources at the local, state, and federal levels (vertical strategies), recognizing that community development is influenced at multiple levels. This principle calls for interdisciplinary efforts, partnering with organizations from various sectors to achieve equity within communities. The fourth principle is the need to plan for residential mobility, recognizing that even if positive

Conducting redevelopment for rectification must be intentional.

changes are happening within a neighborhood, there will always be an influx of residents moving in and out. The goal of the investment should be to help people who want to remain in the neighborhood stay to reap the benefits of the changes while also supporting those who may desire to relocate to another neighborhood. Finally, the fifth principle is to commit to accountability and continuous learning. This means that as community development is occurring, decision makers must be willing to assess outcome data and make adjustments as needed to achieve our intended goals, even when that means significantly changing investment strategies midway through the process.

Community development initiatives must incorporate a structural racism framework that emphasizes the “racialized institutional, political, and cultural forces” that can counteract or undermine improvement efforts.¹⁷ In the absence of a structural racism framework and an explicit focus on the impact of race, there is a risk of continuing the damage to residents through further loss of community assets and cohesion, and ultimately displacement. Conducting redevelopment for rectification must be intentional. A 2023 report commissioned by the Robert Wood Johnson Foundation⁶² examined the impact of structural racism in the community development sector and how explicitly antiracist approaches can be used to achieve health equity. Acknowledging that the impacts of structural racism and discrimination can vary from one neighborhood to the next, the report asserts that unlike other sectors, community development is well situated to create antiracist approaches that allow for “on-the-ground context + nuance.”⁶² The antiracist, or racism-conscious, approach requires an understanding of the historical and contemporary context regarding structural racism within communities, a willingness to increase targeted investments into communities that have been most affected by racist policies, and a boldness to develop and test new approaches and programs to address community specific needs. This work requires having empowered and informed proponents at the deci-

sion-making table from the beginning. However, research is needed to determine how best to make this work.

Future Research: The Targeted Investment And Meaningful Engagement Study

The 2023 report commissioned by the Robert Wood Johnson Foundation proposed that anti-racist community development can be improved by research on the topic that increases residents' engagement throughout the research process; places a better emphasis on data that goes beyond metrics specific to properties, but also captures residents' experiences and priorities; and increases race-explicit knowledge.⁶² As part of the National Institutes of Health's structural racism and discrimination research program, the Targeted Investment and Meaningful Engagement Study is evaluating this need within community development research. The policy inventory presented here is the first step in a process to address structural racism within the Healthy Neighborhoods Healthy Families development plans for Linden. Future qualitative data from interviews with Black birthing people in Linden will be interpreted with the policy inventory through a community-engaged system dynamics group model-building process. The final product will be shared with decision makers in Healthy Neighborhoods Healthy Families and, we hope, integrated into the investment planning process, creating a structural racism- and discrimination-informed strategic community

development plan. An implementation science-driven qualitative process evaluation will assess how structural racism and discrimination history information is perceived, valued, and applied by those with the power to shape the investment in Linden. To the authors' knowledge, the Targeted Investment and Meaningful Engagement Study is the first study to assess how structural racism and discrimination-informed strategic community development can improve health outcomes, and specifically infant and maternal health outcomes.

Conclusion

The Linden neighborhood of Columbus, Ohio, is one of many neighborhoods in the US that have endured the impact of segregation from a lack of race-conscious interventions needed to dismantle historically racist policies and practices. Although the history and lived experiences of residents are different in every neighborhood, the model of structural racism- and discrimination-informed community reinvestment we are developing can be tailored to incorporate those differences. This model allows researchers, anchor institutions, and community partners to move beyond interventions and investments that fail to account for race-based factors (such as structural racism and discrimination) and confront systems-level policies that perpetuate a long history of unjust practices surrounding housing that led, and continues to lead, to adverse birth and health outcomes. ■

The authors acknowledge grant support for this work from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health (Grant No. 5R01HD109000-02). The authors thank Naomi Diniz Farinazzo for her assistance

with data collection. This is an open access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) license, which permits others to distribute this work provided the original work is properly cited, not

altered, and not used for commercial purposes. See <https://creativecommons.org/licenses/by-nc-nd/4.0/>. To access the authors' disclosures, click on the Details tab of the article online.

NOTES

- 1 Singh GK, Yu SM. Infant mortality in the United States, 1915–2017: large social inequalities have persisted for over a century. *Int J MCH AIDS*. 2019;8(1):19–31.
- 2 Healthy People 2030. Reduce the rate of infant deaths—MICH-02 [Internet]. Washington (DC): Department of Health and Human Services, Office of Disease Prevention and Health Promotion; [cited 2024 Jan 16]. Available from: <https://health.gov/healthypeople/objectives-and-data/browse-objectives/infants/reduce-rate-infant-deaths-mich-02>
- 3 Murphy SL, Xu J, Kochanek KD, Curtin SC, Arias E. Deaths: final data for 2015 [Internet]. Hyattsville (MD): National Center for Health Statistics; 2017 Nov 27 [cited 2024 Jan 16]. (National Vital Statistics Reports, Vol. 66, No. 6). Available from: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_06.pdf
- 4 Ely DM, Driscoll AK. Infant mortality in the United States: provisional data from the 2022 period linked birth/infant death file [Internet]. Hyattsville (MD): National Center for Health Statistics; 2023 Nov [cited 2023 Dec 18]. (Vital Statistics Rapid Release Report No. 33). Available from: <https://www.cdc.gov/nchs/data/vsrr/vsrr033.pdf>
- 5 Braveman P, Dominguez TP, Burke W, Dolan SM, Stevenson DK, Jackson FM, et al. Explaining the Black-White disparity in preterm birth: a consensus statement from a multi-disciplinary scientific work group convened by the March of Dimes. *Frontiers in Reproductive Health* [serial on the Internet]. 2021 Sep 2 [cited 2023 Dec 18]. Available from: <https://www.frontiersin.org/articles/10.3389/frph.2021.684207/full>
- 6 David R, Collins J Jr. Disparities in infant mortality: what's genetics got to do with it? *Am J Public Health*.

- 2007;97(7):1191-7.
- 7 Williams DR, Mohammed SA. Racism and health I: pathways and scientific evidence. *Am Behav Sci*. 2013;57(8):1152-73.
 - 8 Healthy People 2030. Discrimination [Internet]. Washington (DC): Department of Health and Human Services, Office of Disease Prevention and Health Promotion; [cited 2023 Dec 18]. Available from: <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/discrimination>
 - 9 Braveman PA, Arkin E, Proctor D, Kauh T, Holm N. Systemic and structural racism: definitions, examples, health damages, and approaches to dismantling. *Health Aff (Millwood)*. 2022;41(2):171-8.
 - 10 Reece J. More than shelter: housing for urban maternal and infant health. *Int J Environ Res Public Health*. 2021;18(7):3331.
 - 11 D'Alessandro D, Appolloni L. Housing and health: an overview. *Ann Ig*. 2020;32(5, Supple 1):17-26.
 - 12 Williams DR, Collins C. Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Rep*. 2001;116(5):404-16.
 - 13 Rothstein R. *The color of law: a forgotten history of how our government segregated America*. 1st ed. New York (NY): Liveright Publishing Corporation; 2017.
 - 14 Jacobs GS. *Getting around Brown: desegregation, development, and the Columbus Public Schools*. Columbus (OH): Ohio State University Press; 1998.
 - 15 Mehra R, Boyd LM, Ickovics JR. Racial residential segregation and adverse birth outcomes: a systematic review and meta-analysis. *Soc Sci Med*. 2017;191:237-50.
 - 16 Nyarko KA, Wehby GL. Residential segregation and the health of African-American infants: does the effect vary by prevalence? *Matern Child Health J*. 2012;16(7):1491-9.
 - 17 Aspen Institute Roundtable on Community Change. *Structural racism and community building* [Internet]. Washington (DC): Aspen Institute; 2004 Jun [cited 2023 Dec 18]. Available from: https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/rcc/aspen_structural_racism2.pdf
 - 18 City of Columbus. *One Linden: our community, our future* [Internet]. Columbus (OH): City of Columbus; 2018 Oct [cited 2024 Jan 16]. Available from: https://www.onecolumbus.org/_files/ugd/ce33bf_10407146e073436b9b5c3e11fad9ed8b.pdf
 - 19 Census Bureau. *Census 2020—preliminary data* [Internet]. Washington (DC): Census Bureau; [cited 2024 Jan 16]. Available via query from: <https://www.socialexplorer.com/tables/CENSUS2020/>
 - 20 Columbus Public Health Office of Epidemiology. *Ohio Department of Health Vital Statistics*; 2023. Unpublished analysis.
 - 21 Barnett KS, Reece J, Mosley BM, Baek M, Hyder A, Kelleher K, et al. Linden: an Ohio neighborhood's legacy of deprivation and imperiled birth outcomes for Black infants. *Health Affairs [serial on the Internet]*. 2024 Feb 5 [cited 2024 Feb 5]. (Interactive timeline). Available from: <https://healthaffairs.org/housing-and-health/interactive-timeline/housing-maternal-infant-health-Ohio>
 - 22 Silver C. The racial origins of zoning: southern cities from 1910-40. *Plan Perspect*. 1991;6(2):189-205.
 - 23 Jones-Correa M. The origins and diffusion of racial restrictive covenants. *Polit Sci Q*. 2000;115(4):541-68.
 - 24 Burgess P. Planning for the private interest: land use controls and residential patterns in Columbus, Ohio, 1900-1970. Columbus (OH): Ohio State University Press; 1994.
 - 25 McGraw BT, Nesbitt GB. *Aftermath of Shelley versus Kraemer* on residential restriction by race. *Land Econ*. 1953;29(3):280-7.
 - 26 Reece J. Confronting the legacy of "separate but equal": can the history of race, real estate, and discrimination engage and inform contemporary policy? *RSF*. 2021;7(1):110-33.
 - 27 Butler B, Outrich M, Roach J, James A. Generational impacts of 1930s housing discrimination and the imperative need for the Healthy Start Initiative to address structural racism. *J Health Dispar Res Pract*. 2020;13(3):63-99.
 - 28 Nelson RK, Winling L, Marciano R, Connolly N. *Mapping inequality: redlining in New Deal America* [Internet]. Richmond (VA): University of Richmond, Digital Scholarship Lab, American Panorama; [cited 2024 Jan 19]. Available from: <https://dsl.richmond.edu/panorama/redlining/map/OH/Columbus/areas#loc=14/40.0125/-82.9697&=polygons>
 - 29 Shapiro TM. Race, homeownership, and wealth. *Wash Univ J Law Policy*. 2006;20:53-74.
 - 30 Krieger N, Van Wye G, Huynh M, Waterman PD, Maduro G, Li W, et al. Structural racism, historical redlining, and risk of preterm birth in New York City, 2013-2017. *Am J Public Health*. 2020;110(7):1046-53.
 - 31 Hartley DA, Rose J. *Blockbusting and the challenges faced by Black families in building wealth through housing in the postwar United States*. Social Science Research Network [preprint on the Internet]. 2023 Jan 13 [last revised 2023 Aug 9; cited 2024 Jan 16]. (FRB of Chicago Working Paper No. 2023-02). Available for download from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4323934
 - 32 St. Stephen's Community House. *About St. Stephen's Community House* [Internet]. Columbus (OH): St. Stephen's Community House; c 2024 [cited 2024 Jan 16]. Available from: <https://saintstephen-sch.org/about/>
 - 33 Hambrick G. *Truancy at Linden studied*. *Columbus Dispatch*. 1972 Jan 13; 7A.
 - 34 Peters CC, director. *Linden-McKinley Shutdown* [Internet]. Columbus (OH): Ohio State University, College of Arts and Sciences; c 2022 [cited 2023 Dec 18]. (Documentary film). Available from: <https://shutdownfilm.org/>
 - 35 Jackson KT. *Crabgrass frontier: the suburbanization of the United States*. Oxford: Oxford University Press; 1987.
 - 36 Census Bureau. *Census 1980* [Internet]. Washington (DC): Census Bureau; [cited 2024 Jan 16]. Available via query from: <https://www.socialexplorer.com/tables/C1980/>
 - 37 Boyd G. *The drug war is the new Jim Crow*. *NACLA Report on the Americas [serial on the Internet]*. 2001; 35(1):18-22 [cited 2024 Jan 16]. Available from: <https://nacla.org/article/drug-war-new-jim-crow>
 - 38 Alexander M. *The war on drugs and the new Jim Crow*. *Race Poverty Environment*. 2010;17(1):75-7.
 - 39 Wildeman C. *Imprisonment and infant mortality*. *Soc Probl*. 2012; 59(2):228-57.
 - 40 Sealy-Jefferson S, Butler B, Price-Spratlen T, Dailey RK, Misra DP. *Neighborhood-level mass incarceration and future preterm birth risk among African American women*. *J Urban Health*. 2020; 97(2):271-8.
 - 41 Mayne SL, Pool LR, Grobman WA, Kershaw KN. *Associations of neighborhood crime with adverse pregnancy outcomes among women in Chicago: analysis of electronic health records from 2009 to 2013*. *J Epidemiol Community Health*. 2018; 72(3):230-6.
 - 42 Messer LC, Kaufman JS, Dole N, Savitz DA, Laraia BA. *Neighborhood crime, deprivation, and preterm birth*. *Ann Epidemiol*. 2006;16(6):455-62.
 - 43 Ferenchik M. *Clarence Lumpkin, "Mayor of Linden," was fighter for his community*. *Columbus Dispatch [serial on the Internet]*. 2019 Feb 1 [cited 2023 Dec 18]. Available from: <https://www.dispatch.com/story/news/politics/county/2019/02/01/clarence-lumpkin-mayor-linden-was/6128523007/>
 - 44 Ferenchik M. *Living in Linden: through promises and peril, Linden seeks a path to success*. *Columbus Dispatch [serial on the Internet]*.

- [No date] [cited 2023 Dec 18]. Available from: <https://stories.usatodaynetwork.com/linden/promises-peril-linden-seeks-path-success/>
- 45 Powell JA, Reece J. The future of fair housing and fair credit: from crisis to opportunity, symposium: new strategies in fair housing. *Cleveland State Law Rev.* 2009;57(2):209–44.
 - 46 Fisher LE. Target marketing of subprime loans: racialized consumer fraud & reverse redlining. *J Law Policy.* 2009;18(1):1:121–55.
 - 47 Hernandez J. Redlining revisited: mortgage lending patterns in Sacramento 1930–2004. *Int J Urban Reg.* 2009;33(2):291–313.
 - 48 Nelson L. A look behind the numbers: FHA lending in Ohio [Internet]. Cleveland (OH): Federal Reserve Bank of Cleveland; [cited 2024 Jan 16]. (Community Development Reports, Volume 2, Issue 5). Available from: <https://www.clevelandfed.org/publications/cd-reports/2009/albtn-20091202-fha-lending-in-ohio>
 - 49 Ferenchik M, Rouan R. Development group disbands; what's next? Columbus Dispatch [serial on the Internet]. 2017 Mar 26 [cited 2023 Dec 18]. Available from: <https://www.dispatch.com/story/news/local/2017/03/26/development-group-disbands-what-next/21741149007/>
 - 50 Reece J, Norris D. Place & infant health: “hot spot” and asset mapping for infant and maternal health in Franklin County (lecture presentation) [Internet]. Columbus (OH): Ohio State University, Kirwan Institute for the Study of Race and Ethnicity; 2014 May 20 [cited 2023 Dec 18]. Available for download from: https://www.columbus.gov/Celebrate-One/2014_05_20_GCIM_Reece_Norris_Presentation/
 - 51 City of Columbus. CelebrateOne [Internet]. Columbus (OH): City of Columbus; c 2024 [cited 2024 Jan 16]. Available from: <https://www.columbus.gov/celebrate-one/About-CelebrateOne/>
 - 52 Greater Columbus Infant Mortality Task Force. Final report and implementation plan [Internet]. Columbus (OH): The Task Force; 2014 Jun [cited 2024 Jan 16]. Available for download from: <https://www.columbus.gov/Celebrate-One/IMTF-2014-Final-Report-FINAL/>
 - 53 Koh HK, Bantham A, Geller AC, Rukavina MA, Emmons KM, Yatsko P, et al. Anchor institutions: best practices to address social needs and social determinants of health. *Am J Public Health.* 2020;110(3):309–16.
 - 54 Kelleher K, Reece J, Sandel M. The Healthy Neighborhood, Healthy Families initiative. *Pediatrics.* 2018; 142(3):e20180261.
 - 55 Chisolm DJ, Jones C, Root ED, Dolce M, Kelleher KJ. A community development program and reduction in high-cost health care use. *Pediatrics.* 2020;146(2):e20194053.
 - 56 Kondo M, Esposti MD, Jay J, Morrison CN, Freisthler B, Jones C, et al. Changes in crime surrounding an urban home renovation and rebuild programme. *Urban Stud.* 2022;59(5):1011–30.
 - 57 Nationwide Children's Hospital [Internet]. Columbus (OH): Nationwide Children's Hospital; c 2024. Press release, New \$50 million fund to expand affordable housing in the Linden community; [cited 2024 Jan 16]. Available from: https://www.nationwidechildrens.org/newsroom/news-releases/2023/07/linden_home_fund
 - 58 Beck AF, Edwards EM, Horbar JD, Howell EA, McCormick MC, Pursley DM. The color of health: how racism, segregation, and inequality affect the health and well-being of preterm infants and their families. *Pediatr Res.* 2020;87(2):227–34.
 - 59 Federal Reserve Bank of San Francisco. Focusing on race in community development [Internet]. San Francisco (CA): FRBSF; 2018 Nov 26 [cited 2023 Dec 18]. Available from: <https://www.frbsf.org/our-district/about/sf-fed-blog/explicit-focus-race-community-development/>
 - 60 Turner MA, O'Brien M. Place-conscious strategies to restore opportunity and overcome injustice: five guiding principles illustrated by Building Healthy Communities [Internet]. Washington (DC): Urban Institute; 2021 Feb [cited 2024 Jan 16]. Available from: <https://www.urban.org/sites/default/files/publication/103696/place-conscious-strategies-to-restore-opportunity-and-overcome-injustice.pdf>
 - 61 Fashaw-Walters SA, McGuire CM. Proposing a racism-conscious approach to policy making and health care practices. *Health Aff (Millwood).* 2023;42(10):1351–8.
 - 62 ThirdSpace Action Lab. Toward an anti-racist paradigm in community development: core characteristics of the sector [Internet]. Princeton (NJ): Robert Wood Johnson Foundation; c 2023 [cited 2024 Jan 16]. Available from: <https://drive.google.com/file/d/IP3F2OdsigHisc6Nne0KgmEpCiE1MvfW/view>