

The Allegheny County Community Need Index: Update for 2024 with a Focus on the Connection between Race, Class and Community Need



May 2024



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<https://analytics.alleghenycounty.us/>

EXECUTIVE SUMMARY

The Allegheny County Department of Human Services' (DHS) Community Need Index (CNI) assesses areas of need in Allegheny County. The CNI assesses need at the census tract level, a relatively small unit of analysis that can reveal a diversity of local conditions that would otherwise be masked by examination at the larger municipality level. This report provides an update to DHS's previous mapping of community need.¹ It incorporates methodology changes made in the prior version and aims to identify areas of need within and across both urban and suburban municipalities in Allegheny County. This iteration includes additional indicators of internet access and fatal overdoses, as well as an indicator measuring homicides instead of shots fired/reported.

In addition to mapping and assessing level of community need and observing changes in need over time, this report also examines whether there are racial and ethnic disparities in levels of community need.

Decades of research show that neighborhoods matter in determining the long-term life outcomes of individuals, particularly for younger children. A review of the literature shows that community level measures such as poverty, lack of educational attainment, unemployment, single parenthood, no access to home or cellular internet, and exposure to measures of harm like gun violence and overdose are factors that play a key role in linking neighborhoods to outcomes.

This report updates the CNI using the 2022 American Community Survey Five-Year Estimates and 2018-2022 data from the Allegheny County Office of the Medical Examiner. Census tracts are sorted into five levels of need,² ranging from very low to extreme.

KEY FINDINGS

- In Allegheny County, we continue to find the highest levels of need in specific sections of the City of Pittsburgh (Hill District, South Hilltop, parts of the West End, Upper East End neighborhoods, Upper Northside) as well as census tracts outside the City of Pittsburgh (Mon Valley, sections of the Allegheny County River Valley, sections of Penn Hills, sections of Wilksburg, Stowe Township-McKees Rocks).
- There are vast discrepancies between the lowest need communities, which have an average poverty rate of 2%, and the highest need communities, where the average poverty rate is 38%.

¹ Cotter, N.; Mejia, N.; Chizeck, S; et al. (2021). The Allegheny County Community Need Index: Update for 2021 with a Focus on the Connection between Race and Community Need. Allegheny County Department of Human Services.

² <https://www.alleghenycountyanalytics.us/2021/05/13/allegheny-county-community-need-index/>

- With few exceptions, census tract-level community need is persistent over time.
- Only about one-third of Allegheny County's Black residents live in lower need communities. For every other racial and ethnic group in the County, the majority of residents live in lower need communities. Black communities in Allegheny County have disproportionately high levels of need, as do a number of racially mixed communities.
- Poverty status alone does not account for where various racial and ethnic groups tend to live by level of need; poor Black and Latino families are more likely than other poor families to live in higher need communities. Even Black families above the poverty line are many times more likely than their Asian, White and Latino peers above the poverty line to live in higher need communities.

BACKGROUND

Decades of research show that the neighborhoods where people grow up play a major role in determining long-term socioeconomic, educational and health outcomes, particularly for younger children.³ As the primary social services funder for Allegheny County, DHS seeks to understand which areas of the County have heightened levels of socioeconomic need and disproportionate exposure to measures of harm, as well as how community needs have changed in recent years. The geographic representation of community need can help inform many aspects of DHS's strategic planning and resource allocation decisions, such as decisions on where to locate Family Centers or new afterschool programs.

A mapping of needs also helps other local service providers and nonprofits understand where their services are or will be in demand. The geographic scale of Allegheny County's outlying suburbs can hide areas within those communities that are struggling economically and lead them to be overlooked in policy discussions of poverty and distress. A spatial analysis of community needs helps to reveal the perhaps lesser-known areas of the County that happen to have significant levels of socioeconomic instability.

Higher levels of community need are concentrated in a small percentage of tracts within Allegheny County. The County's Black communities and, to a lesser extent, racially mixed communities disproportionately experience higher levels of need. While each municipality in Allegheny County has its own unique history, this concentration of need tends to result from structural racism,⁴ structural classism⁵ and deindustrialization.

³ Sampson, R. (2012). *Great American City: Chicago and the Enduring Neighborhood Effect*. Chicago, IL: The University of Chicago Press; Sharkey, P. (2013). *Stuck in Place: Urban Neighborhoods and the End of Progress toward Racial Equality*. Chicago, IL: The University of Chicago Press; Chetty, R.; Hendren, N.; and Katz, L. (2015). "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment." The National Bureau of Economic Research; Chetty, R.; Friedman, J.; Hendren, N.; Jones, M.; and Porter, S. (2018). *The Opportunity Atlas: Mapping the childhood roots of social mobility*. (NBER Working Paper no. 25147). National Bureau of Economic Research.

⁴ The Aspen Institute Roundtable on Community Change defines Structural Racism as "A system in which public policies, institutional practices, cultural representations and other norms work in various, often reinforcing ways to perpetuate racial group inequity. It identifies dimensions of our history and culture that have allowed privileges associated with "whiteness" and disadvantages associated with "color" to endure and adapt over time. Structural racism is not something that a few people or institutions choose to practice. Instead it has been a feature of the social, economic and political systems in which we all exist."

⁵ Structural classism or class discrimination, as defined by Stanford University's Student Affairs is the institutional, cultural and individual set of practices and beliefs that assign differential value to people according to their socioeconomic class; and an economic system that creates excessive inequality and causes basic human needs to go unmet.

A close look at community need makes it clear that neighborhoods were segregated by design.⁶ More specifically, neighborhoods tend to look the way they do because of some combination of the following: decades of discriminatory housing, lending and land use policy;⁷ suburbanization and white flight from central cities following World War Two; urban renewal in and highway construction through our central cities; outmigration and the concentration of poverty resulting from the massive impact of deindustrialization and economic restructuring in our region's manufacturing centers;⁸ and additional instability resulting from policies that did not address public health issues through a public health lens, such as mass incarceration via the War on Drugs⁹ and through the demolition of public housing in the 1990s and 2000s, which tended to push poor public housing residents into other poor and distressed neighborhoods.¹⁰ The current affordable housing crisis also impacts where the poor — especially low-income Black renters — can and cannot live.¹¹

There is still ample evidence of racism in housing and lending markets,¹² and our history influences levels of need, investment and opportunity in Black and poor communities to this day. While higher-need communities face real challenges, they are also filled with rich cultural heritage, storied institutions and residents who care deeply about their neighborhood, realities which should not be forgotten in discussions of community need.

METHODOLOGY

Data were pulled from the American Community Survey (ACS) five-year estimates and from the Allegheny County Office of the Medical Examiner. To quantify a tract's total level of need, for tracts with sufficient data, its values for each measure of community need were converted into z-scores.¹³ The z-scores were then averaged into a single score for the tract. A tract's total score represents how far the tract falls from the mean Allegheny County tract in its level of need. Tracts were systematically sorted into five levels of need (very low to extreme) using the Jenks Natural Breaks method.¹⁴

⁶ Trounstein, J. (2018). *Segregation by Design: Local Politics and Inequality in American Cities*. Cambridge: Cambridge University Press

⁷ Rothstein, R. (2018). *The Color of Law: A Forgotten History of How Our Government Segregated America*. NYC: Liveright Publishing Corp.; Rotenstein, D.S. (2024). *Built for White People: The Hidden Racist History of Some Pittsburgh Neighborhoods*. Pittsburgh, PA: Public Source.

⁸ Wilson, W. (2012). *The Truly Disadvantaged: The inner city, the underclass, and public policy*. Chicago: University of Chicago Press

⁹ Alexander, M. (2010). *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. N.p.: The New Press.

¹⁰ Oakley D., & Burchfield, K. (2009). Out Of The Projects, Still In The Hood: The Spatial Constraints On Public-Housing Residents' Relocation In Chicago. *Journal of Urban Affairs*.

¹¹ Desmond, M. (2016). *Evicted: Poverty and Profit in the American City*.

¹² Christensen, P. and Timmins, C. (2018, July). "Sorting or Steering: Experimental Evidence on the Economics Effects of Housing Discrimination." National Bureau of Economic Research; Exposing Housing Discrimination. n.d. Urban Institute. Retrieved from [here](#).

¹³ Z-score is a statistical measurement that describes a value's relationship to the mean of a group of values. Z-score is measured in terms of standard deviations from the mean. If a Z-score is 0, it indicates that the data point's score is identical to the mean score.

¹⁴ The Jenks Natural Breaks method creates systemically different data buckets within a data distribution by systematically sorting values within a given data distribution into different categories using natural breaks that occur in that distribution.

Measures from the previous CNI were retained, although some slight changes and additions were made. The average rate of shots fired/reported was replaced with the average homicide rate, given data duplication challenges and reporting consistency issues in gunshot reporting in the Allegheny County Emergency Services data. Given the significance of the opioid epidemic and its impact on so many elements of wellness, we included fatal overdoses. Another issue that became apparent during and following the pandemic was the need for access to home or cellular internet to remain connected and current in education and work and to take advantage of medical and other systems that have made remote access possible. See indicators of need that were included in the Community Need Index in **Table 1** below.

TABLE 1: Measures of need included in the latest version of the Community Need Index

MEASURE	SOURCE
Percentage of families living below the federal poverty line	2022 American Community Survey Five-Year Estimates. Table S1702
Percentage of males ages 20 through 64 who are unemployed or unattached to the labor force. Adjusted to 25 through 64 in tracts with significant college or graduate student enrollment. ¹⁵	2022 American Community Survey Five-Year Estimates. Table B23001
Percentage of individuals ages 25 and older without a bachelor's degree or more	2022 American Community Survey Five-Year Estimates. Table S1501
Percentage of households with related children under 18 and headed by a single parent	2022 American Community Survey Five-Year Estimates. Table B11004
Percentage of households without access to the internet at home or on a cellular device	2022 American Community Survey Five-Year Estimates. Table B28002
Average rate of homicides per 100,000 residents	2018 through 2022 via the Allegheny County Office of the Medical Examiner
Average rate of fatal overdoses per 100,000 residents, whether drug or alcohol induced and regardless of manner of death	2018 through 2022 via the Allegheny County Office of the Medical Examiner

Another caution to keep in mind is that ACS data are estimates that tend to have a sizeable margin of error at the census tract level due to smaller sample sizes. The CNI uses five-year estimates, which are far more stable than one-year estimates. Rapid change tends to be rare, but it is possible that census tracts have experienced changes since the 2022 ACS five-year estimates.

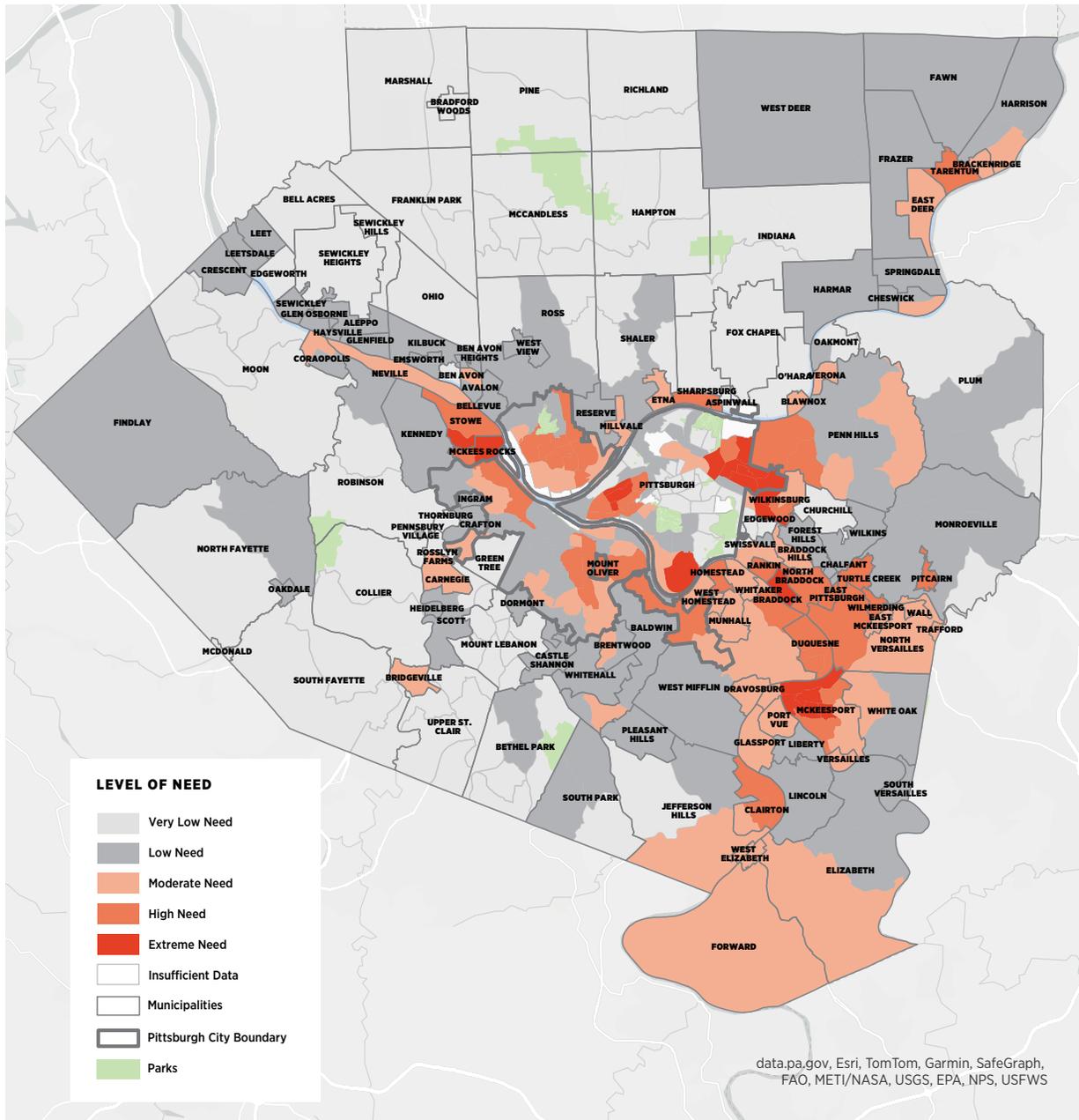
¹⁵ Significant student enrollment was defined as those tracts that were more than two standard deviations above the mean tract in Allegheny County regarding the percentage of the population enrolled in college or graduate school.

You can read more about our methodology and analysis of community need in **Appendix A**. Additional measures of access and wealth used in this analysis can be found in **Appendix B**.

FINDINGS

Levels of community need in Allegheny County, 2022 five-year estimates and totals

FIGURE 1: Community Need Index for Allegheny County Census Tracts, 2022 Five-Year Estimates and Totals



The majority (63% or n=239) of census tracts in Allegheny County have low or very low levels of need, 19% (n=73) have moderate levels of need and 18% (n=66) of tracts have high or extreme levels of need (**Table 2**).

TABLE 2: Census Tracts by Level of Need in Allegheny County, 2022 five-year estimates and totals

LEVEL OF NEED	NUMBER OF TRACTS	PERCENTAGE OF TOTAL TRACTS
Very Low Need	106	28%
Low Need	133	35%
Moderate Need	73	19%
High Need	46	12%
Extreme Need	20	6%

In Allegheny County, higher levels of need are concentrated in a small number of Pittsburgh neighborhoods and in a small number of cities, towns and boroughs located outside of the City of Pittsburgh. High and extreme need areas in Pittsburgh include neighborhoods in the South Hilltop; sections of the West End; the bulk of the Upper Northside; the Hill District; and upper East End neighborhoods such as East Hills, Homewood, Larimer and Lincoln-Lemington, in addition to eastern neighborhoods such as Hazelwood and Glen Hazel. Outside of Pittsburgh, high and extreme need clusters exist in former and current steel towns and cities in the Monongahela River Valley, sections of Wilksburg and Penn Hills, directly west of Pittsburgh in Stowe-Rox, and in Sharpsburg and Tarentum in the Allegheny River Valley.

The Bedford Dwellings neighborhood of Pittsburgh has the highest CNI score among all census tracts in Allegheny County. Forty-two percent of families live in poverty, 52% of adult males are unemployed or out of the labor force, 74% of households are headed by single parents, and 18% of residents do not have access to home or cellular internet. This neighborhood also is marked by frequent fatal violence and overdoses, with an average homicide rate of 159 per 100,000 residents and average fatal overdose rate of 245 per 100,000 residents. Moreover, 77% of households did not have access to a vehicle and the median income was \$12,740.

Table 3 provides a list of all tracts categorized as extreme need.

TABLE 3: Extreme Need Census Tracts in Allegheny County, 2022 five-year estimates and totals

CNI RANKING	CENSUS TRACT	MUNICIPALITY	CITY NEIGHBORHOOD(S)
1	509	Pittsburgh	Bedford Dwellings
2	5519	McKeesport	N/A
3	5521	McKeesport	N/A
4	1308	Pittsburgh	Homewood South
5	501	Pittsburgh	Middle Hill
6	1209	Pittsburgh	Larimer
7	5138	Braddock Borough	N/A
8	1307	Pittsburgh	Homewood North- Homewood West
9	5648	Wilkinsburg Borough	N/A
10	5619	Pittsburgh	Lincoln-Lemington-Belmar
11	5509	McKeesport	N/A
12	1302	Pittsburgh	Homewood North
13	1306	Pittsburgh	East Hills
14	5647	Wilkinsburg Borough	N/A
15	4644	McKees Rocks Borough	N/A
16	511	Pittsburgh	Terrace Village
17	5520	McKeesport	N/A
18	5623	Pittsburgh	Glen Hazel-Hazelwood
19	4626	Stowe Township	N/A
20	5523	McKeesport	N/A

The lowest and highest need tracts in Allegheny County have vast disparities in socioeconomic status and measures of harm, as shown in **Table 4**. Indicators of need increase as level of need increases. In very low need tracts, an average of 2% of families live in poverty. By contrast, an average of 38% of families in extreme need tracts live in poverty. The average percentage of adults without a bachelor's degree or more is more than double in extreme need tracts than that in very low need tracts. The percentage of average unemployed and unattached adult males in extreme need communities is nearly four times the average rate in very low need tracts. On average, 6% of households are headed by a single parent in very low need tracts versus 52% in extreme need tracts, and the rate without home or cellular internet is more than five times the average rate in extreme need communities versus very low need tracts. The average rate of fatal violence and fatal overdoses per 100,000 people in extreme need tracts is around 38 times and 10 times, respectively, the average rate in very low need tracts.

TABLE 4: Average Measures of Need, by Level of Need, 2022 five-year estimates and totals

LEVEL OF NEED	FAMILY POVERTY RATE	MALE UNEMPLOYMENT UNATTACHMENT	25 AND UP WITHOUT BACHELOR'S OR MORE	SINGLE PARENT	HOMICIDE RATE PER 100,000 PEOPLE	FATAL OVERDOSE RATE PER 100,000 PEOPLE	PERCENT WITHOUT ACCESS TO INTERNET
Very Low Need	2%	12%	36%	6%	2	17	4%
Low Need	5%	16%	59%	12%	4	46	9%
Moderate Need	11%	24%	71%	21%	10	77	14%
High Need	21%	34%	78%	34%	33	116	16%
Extreme Need	38%	47%	87%	52%	75	178	22%

The highest and lowest need tracts in Allegheny County also differ on other economic measures, which can be seen in **Table 5**. The average median income in extreme need tracts is just \$27,418, compared with \$116,966 in very low need tracts. The expected average income for poor children who grow up in very low need tracts is nearly double what it would be if they grew up in an extreme need tract (as per Opportunity Atlas).¹⁶ The average median home value in extreme need tracts is just \$65,206, compared with \$354,513 in very low need tracts. On average, nearly all households in very low need tracts have access to a vehicle versus 57% in extreme need tracts. Put simply, very low need tracts tend to be wealthy tracts and extreme need tracts tend to have little wealth.

TABLE 5: Average Measures of Access and Wealth not Included in the CNI, by Level of Need, 2022 five-year estimates and totals

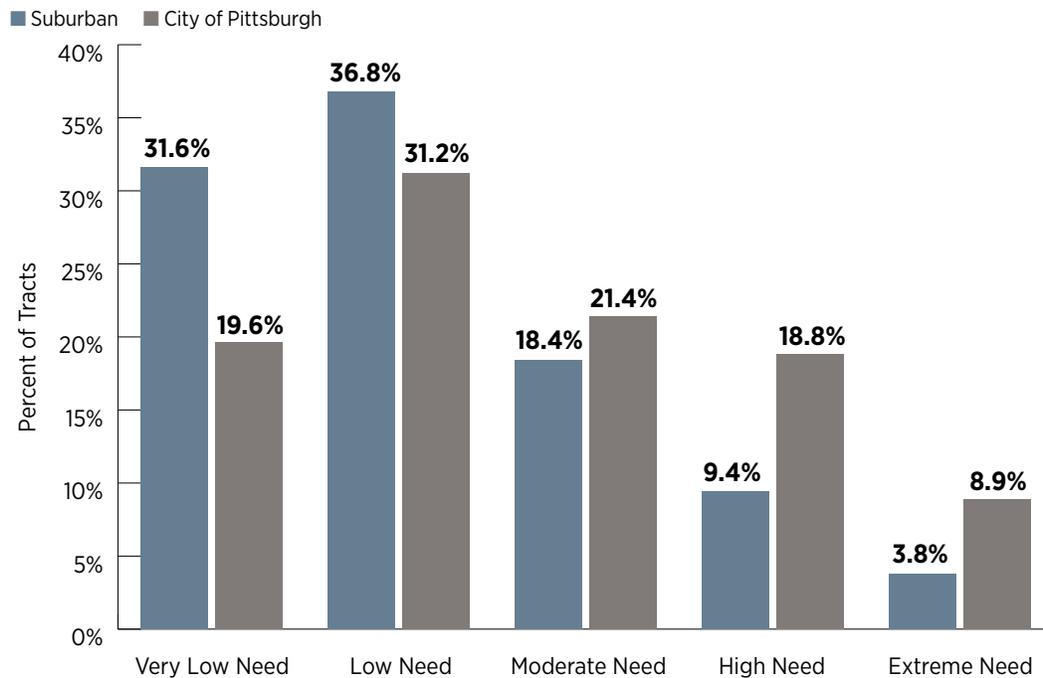
LEVEL OF NEED	MEDIAN INCOME	OPPORTUNITY ATLAS OUTCOME AVERAGE HOUSEHOLD INCOME RANK	MEDIAN HOME VALUE	MEDIAN GROSS RENT	PERCENT WITH ACCESS TO VEHICLE
Very Low Need	\$116,966	\$43,142	\$354,513	\$1,399	93%
Low Need	\$73,888	\$38,188	\$190,629	\$1,105	90%
Moderate Need	\$55,329	\$34,026	\$133,525	\$923	83%
High Need	\$40,600	\$27,055	\$95,607	\$909	74%
Extreme Need	\$27,418	\$23,768	\$65,206	\$793	57%

¹⁶ Using anonymous data following 20 million Americans from childhood to their mid-30s, the Opportunity Atlas maps outcomes back to the neighborhoods where people grew up. For children who grew up to parents with incomes around the 25th percentile of the income distribution, income rank in adulthood was averaged for said children across every tract in the U.S. For 90% or so of Allegheny County tracts that share the

same boundary as those used in the Atlas, we took an average of the average income rank per tract across all tracts for each level of need.

Figure 2 compares the distribution of need between census tracts in the City of Pittsburgh and census tracts in the other 129 municipalities within Allegheny County that are outside the City of Pittsburgh. The proportion of both extreme need and high need tracts in the City of Pittsburgh is around twice as large as the proportions in suburban tracts (i.e., tracts in Allegheny County that are outside the central city of Pittsburgh). And while community need constitutes a higher share of tracts in our central city, it is also concentrated in suburbs throughout the Monongahela River Valley, in sections of eastern suburbs like Penn Hills and Wilkinsburg, and in those tracts directly west of Pittsburgh in Stowe Township and McKees Rocks (Sto-Rox). Both within and outside the City of Pittsburgh, the share of moderately needy tracts is similar; this fact should not be overlooked in discussions of community need.

FIGURE 2: Comparison of Need Between City of Pittsburgh and Suburban Tracts in Allegheny County, 2022 five-year estimates and totals.



Changes in level of need between 2017 five-year estimates and totals and 2022 five-year estimates and totals

Most communities in Allegheny County maintained their level of need between 2017 and 2022, although there are some exceptions. To examine how each census tract's level of need changed, we calculated each tract's CNI score using 2017 American Community Survey Five-Year Estimates and Allegheny County Office of the Medical Examiner data from 2013 through 2017; we were able to compare level of need for those tracts that retained the same boundaries over time.¹⁷ **Table 6** presents categories of change (or lack thereof) as defined. **Figure 3** presents a map of changes in need across tracts in Allegheny County.

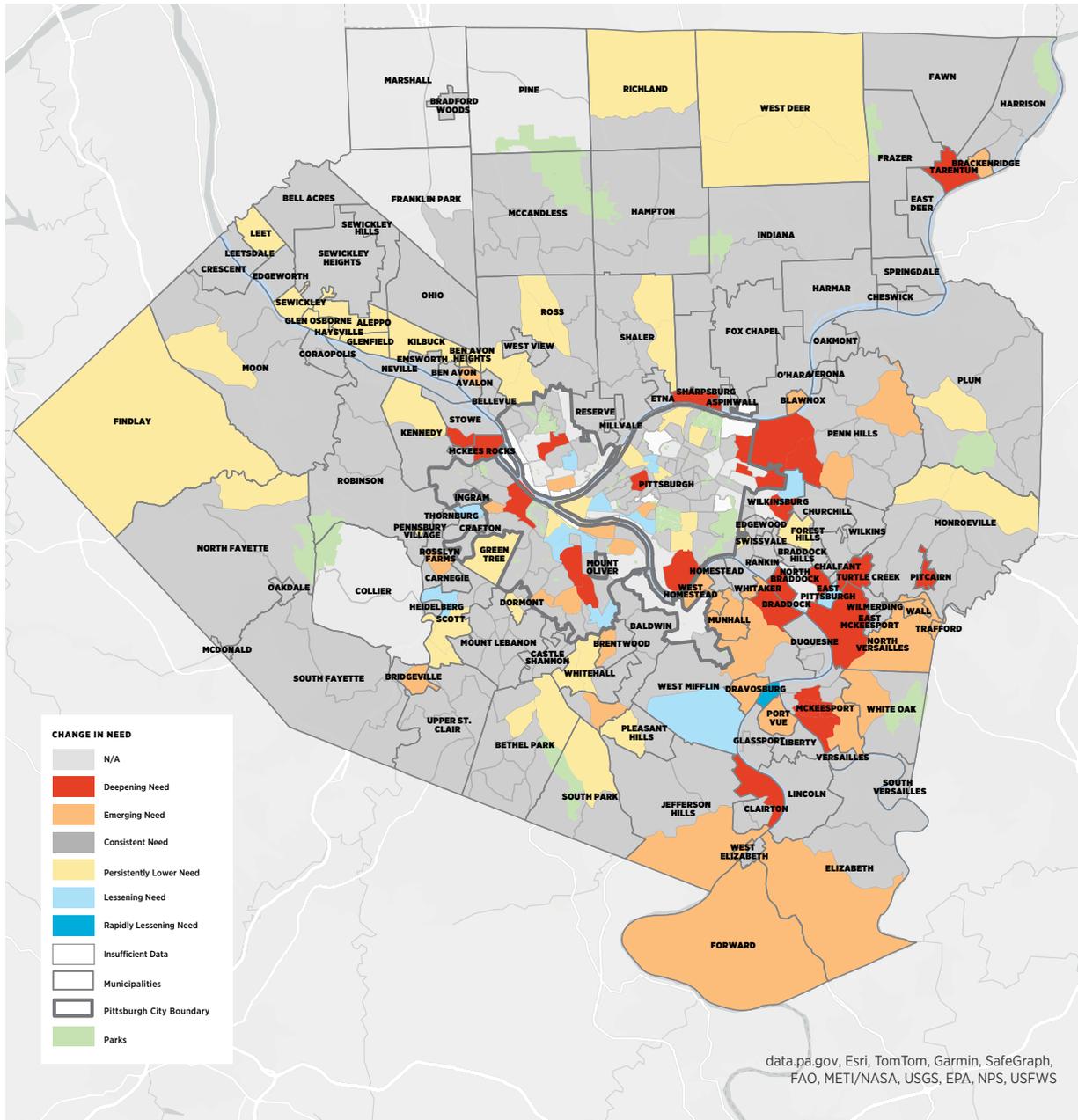
TABLE 6: Changes in Need Categories

CATEGORY OF CHANGE	Change in Need from 2013–2017 CNI to 2018–2022 CNI
Rapidly Emerging Need	At least 2 levels up from very low or low need
Emerging Need	1 level up from low need
Deepening Need	At least 1 level up from moderate or high need
Consistent Level of Need	Same level of need over each 5-year period
Persistently Lower Need	1 level down from low need or 1 level up from very low need
Lessening Need	1 level down from extreme, high or moderate need
Rapidly Lessening Need	At least 2 levels down from extreme, high or moderate need

17 Prior to each decennial census, existing census tract boundaries are assessed. Based on this assessment, some tract boundaries may split or fuse with other tracts to meet recommended population thresholds via the United States Census Bureau. Tract data from the 2020 Census Bureau onward uses the new tract boundaries while tract data prior

to 2020 use the old tract boundaries. Three hundred and seventy-eight tracts had sufficient data to produce a CNI score for the 2018–2022 CNI. Of those 378, 93% (n=351) retained their same boundaries when compared with CNI scores for tracts based on 2013–2017 census data.

FIGURE 3: Changes in level of need between 2017 five-year estimates and totals and 2022 five-year estimates and totals

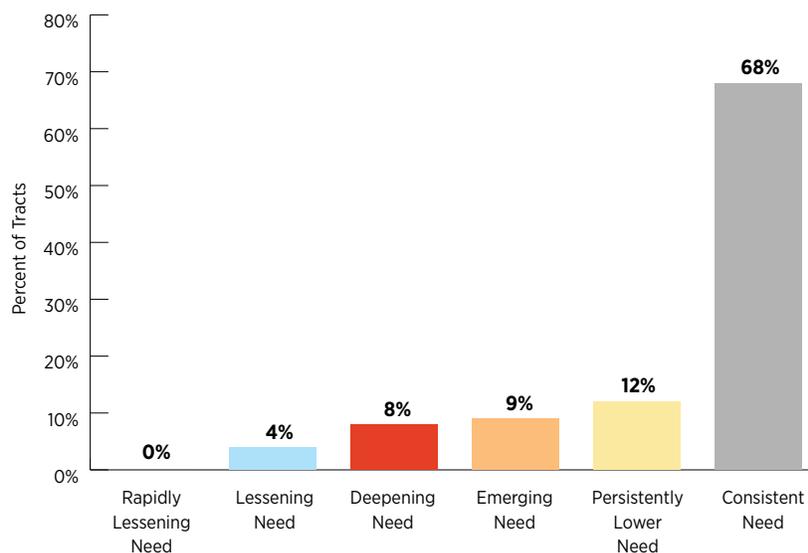


As seen in **Figure 4**, consistent level of need in our communities tends to be the rule, not the exception. Measure of need remained stable in around two-thirds of census tracts (n=238); another 12% of tracts maintained their lower need status (swapping from either low need to very low need, or vice versa). Thirty-five of the 36 tracts that retained their existing boundary maintained their high need or extreme need ranking. This finding holds with national research showing that most poorer communities tend to stay poor¹⁸ and is concerning given the causal connection between higher levels of need and adverse outcomes for the vulnerable children and families who live there.

Emerging need was seen in around 9% of tracts, in Pittsburgh neighborhoods such as Allegheny Center, Brookline, Central Oakland, Crafton Heights and Southside, and outside the City of Pittsburgh in tracts including Avalon, Baldwin, Blawnox, Brentwood, Bridgeville, Carnegie, Penn Hills and throughout the Monongahela River Valley. A number of already-needy tracts demonstrated increases in need in tracts throughout Pittsburgh, in Stowe-Rox and throughout the Monongahela River Valley, and in Sharpsburg and sections of Penn Hills.

Figure 4 also demonstrates that lessening and rapidly lessening needs were the least frequent change. Tracts with lessening need may still have relatively higher need compared to other tracts in the County. In Pittsburgh, tracts with lessening need are located in neighborhoods such as Allentown, Bloomfield, Carrick, Crawford-Roberts, Fineview, Mount Washington and South Oakland. Outside of the City, lessening need was seen in tracts in municipalities such as East Pittsburgh, Crafton, Scott Township and West Mifflin. One tract in Allegheny County saw rapidly lessening need, owing to a dramatic drop in fatal violence and an increase in access to the internet in a tract in McKeesport.

FIGURE 4: Changes in Levels of Community Need, 2017 Five-Year Estimates vs. 2022 Five-Year Estimates



18 Cortright, J. (2014), September 12. "Lost in Place." City Reports. Retrieved from [here](#).

Racial dimensions of community need

An examination of community need by racial and ethnic composition demonstrates the effects of structural racism and its impact on advantages, resources and opportunity. There is a strong positive relationship between a census tract's percentage of Black residents and its level of community need ($R = .81, p < .01$). In comparison, there is a moderately strong inverse relationship between a census tract's percentage of White residents and its level of community need ($R = - 0.75, p < 0.01$). In other words, with exceptions, tracts with a high proportion of Black residents tend to be higher in community need and tracts with a high proportion of White residents tend to be lower in community need. The percentage of Asian, Indigenous or Latino residents did not predict level of need in Allegheny County tracts.

Most tracts with a majority of Black residents (51%+) had a high or extreme level of need, with just a few tracts designated as moderately needy (California-Kirkbride-Manchester, Garfield, Swissvale and Wilkinsburg). Only one tract in the County (Stanton Heights) had a majority of Black residents and a low level of need. No majority Black tracts were classified as having very low need.

Only 12 tracts in the County had both a low percentage of Black residents (at or below 25%) and a high level of need; tracts in Pittsburgh's Carrick, East Allegheny and Hays neighborhoods (in addition to tracts located near universities in the Bluff and Terrace Village-West Oakland) and tracts outside of Pittsburgh (Clairton, McKeesport, Pitcairn, Tarentum, Sharpsburg, Stowe and West Mifflin). Several other tracts with high need (neighborhoods in Pittsburgh's South Hilltop, Spring Hill-City View and Elliott-West End and outside Pittsburgh in McKees Rocks and throughout the Monongahela River Valley in municipalities such as North Braddock, North Versailles, Turtle Creek and Wilmerding) are racially mixed but have a majority of White residents (51%+).

Black people in Allegheny County are heavily concentrated in high and extreme need communities (48% or $n=75,437$) and least concentrated in low or very low need communities (30% or $n=46,580$), although given the overall size of Allegheny County's White population, nearly as many White people reside in high or extreme need communities ($n=71,436$). Only Black residents have a population that is not mostly located in low or very low need tracts. See **Tables 7 and 8** for details.

TABLE 7: Tract Level of Need by Race and Ethnicity, for Hispanic or Latino, White, Black and Native Individuals, 2020 Decennial Census

LEVEL OF NEED	TOTAL POPULATION IN ALLEGHENY COUNTY (N= 1,245,310)	ALL HISPANIC OR LATINO (N= 29,272)	MEXICAN (N=9,419)	PUERTO RICAN (N=6,308)	CUBAN (N=913)	OTHER HISPANIC OR LATINO (N=12,632)	NON-HISPANIC OR LATINO WHITE (N=958,410)	NON-HISPANIC OR LATINO BLACK (N=156,588)	AMERICAN INDIAN OR ALASKAN NATIVE (N=819)
Very Low or Low Need	70%	66%	68%	55%	67%	71%	77%	30%	58%
Moderate Need	16%	14%	18%	17%	16%	10%	15%	21%	18%
High or Extreme Need	13%	19%	14%	27%	18%	19%	8%	48%	22%

TABLE 8: Tract Level of Need by Race and Ethnicity, for Asian Individuals, 2020 Decennial Census

LEVEL OF NEED	TOTAL POPULATION IN ALLEGHENY COUNTY (N=1,245,310)	ALL ASIAN (N=50,929)	ASIAN INDIAN (N=18,540)	ASIAN CHINESE (N=13,061)	ASIAN FILIPINO (N=1,942)	ASIAN JAPANESE (N=1,094)	ASIAN KOREAN (N=2,868)	ASIAN VIETNAMESE (N=2,164)	ASIAN OTHER (11,260)	NATIVE HAWAIIAN OR PI (N=163)
Very Low or Low Need	70%	85%	90%	88%	69%	95%	88%	78%	73%	99%
Moderate Need	16%	10%	7%	6%	16%	5%	7%	11%	19%	0%
High or Extreme Need	13%	5%	3%	5%	14%	1%	4%	9%	6%	1%

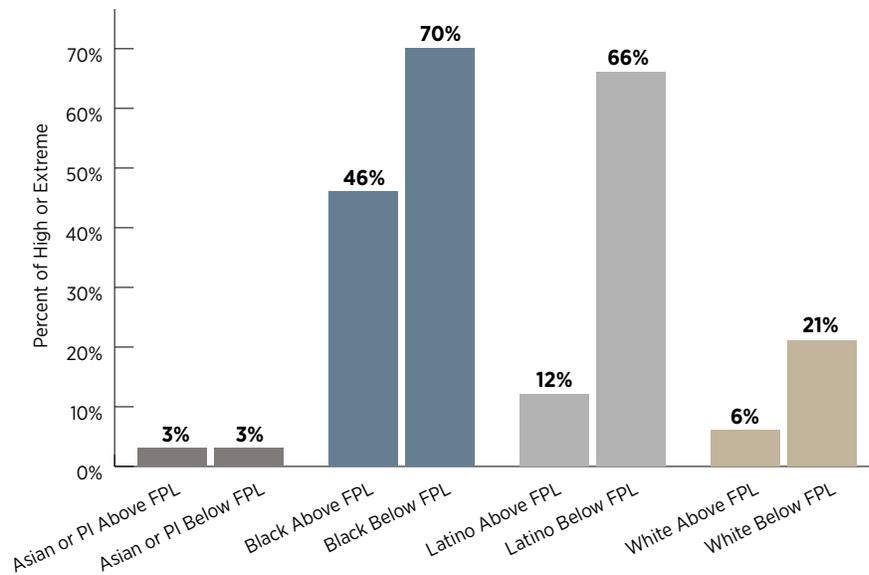
Racial differences are even more stark when examined at the intersection of race and poverty status. As seen in **Figure 5**, 70% (n=5,129) of Black families below the federal poverty line (FPL) and 66% (n=354) of Hispanic or Latino families¹⁹ below the FPL live in high or extreme need tracts, compared with 21% (n=2,152) of non-Hispanic or Latino White families and 3% (n=32) of Asian families. Forty-six percent (n=11,402) of Black families above the FPL reside in high or extreme need areas, compared with 12% (n=571) of Hispanic or Latino families, 6% (n=13,240) of non-Hispanic or Latino White families and 3% (n=305) of Asian families.

With the exception of Asian families, poor families of a particular racial or ethnic group are more likely than their non-poor peers to live in high or extreme need tracts. Black families, whether above or below the FPL, are much more likely to live in high or extreme need communities than their peers from other racial and ethnic groups; the only exception being among poor Hispanic or Latino families who are nearly as likely as their poor Black peers to live in higher need tracts.

19 In Census Table S1702, Latino or Hispanic families were not separated out by racial group, with the exception of White families. The White family measure only includes White families who do not identify as Hispanic or Latino. As such, the measure for

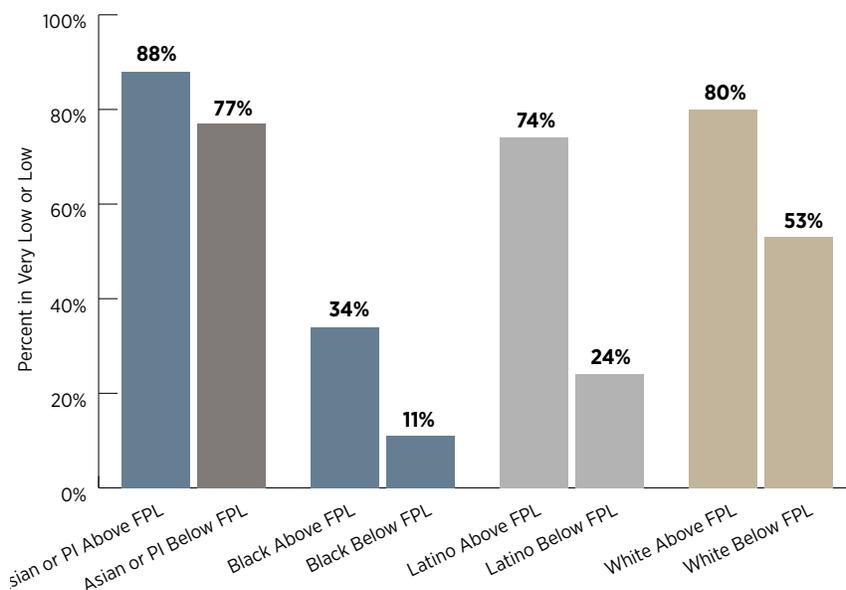
Hispanic or Latino families may include Latinos of any racial group and the measures for Black and Asian or Pacific Islander also may include Hispanic or Latino families.

FIGURE 5: Percent of Families Living in High or Extreme Need Tracts, by the Family’s Race and Poverty Level, 2022 five-year estimates and totals



On the opposite end of the spectrum, **Figure 6** shows that the majority (77% or n=722) of poor Asian families and the majority of poor non-Hispanic/non-Latino White families (53% or n=5,552) reside in low or very low need tracts, compared with only 11% (n=823) of Black families below the FPL and 24% (n=128) of poor Latinos below the FPL. The vast majority of non-poor Asian families (88% or n=9,087), non-poor non-Hispanic/non-Latino White families (80% or n=189,354) and non-poor Latino families (74% or n=3,454) live in low or very low need tracts, compared with 34% (n=8,463) of Black families above the FPL. **Figure 6** mirrors the same patterns discussed with the previous figure.

FIGURE 6: Percent of Families Living in Low or Very Low Need Tracts, by the Family’s Race and Poverty Level, 2022 five-year estimates and totals



DISCUSSION

The neighborhood we grow up in has a profound impact on our long-term outcomes; higher need neighborhoods in Allegheny County and throughout the U.S. have higher needs because of historical factors. Given this history, challenges connected to place require place-conscious solutions, not just traditional programming that assists those in need mindless of where they live.

On one hand, place-conscious solutions should include strategies that better allow residents of higher need neighborhoods to move to lower need neighborhoods, whether those strategies include building affordable housing in lower need areas or allowing Housing Choice Voucher families to move to lower need areas via initiatives such as The Community Choice Demonstration.²⁰ On the other hand, place-conscious solutions should also include strategies that directly address the challenges that residents face in their neighborhoods, whether by addressing chronic disinvestment via the Choice Neighborhoods Program²¹ or reducing gun violence via initiatives such as Allegheny County's Community Violence Reduction Initiative.²²

These books are just a few that examine the role neighborhoods play in shaping outcomes and the discriminatory and de-industrial history that shaped vast differences in community need across neighborhoods. We recommend them as a way to better understand the context of the CNI:

- The Color of Law, A Forgotten History of How Our Government Segregated America by Richard Rothstein
- Segregated by Design: Local Politics and Inequality in American Cities by Jessica Trounstein, Rebecca Gibel, et al.
- The Truly Disadvantaged, The Inner City, the Underclass, and Public Policy by William Julius Wilson
- American Apartheid: Segregation and the Making of the Underclass by Douglas S. Massey and Nancy A. Denton
- Stuck in Place: Urban Neighborhoods and the End of Progress toward Racial Equality by Patrick Sharkey
- The Voucher Promise: "Section 8" and the Fate of an American Neighborhood by Eva Rosen
- Evicted: Poverty and Profit in the American City by Matthew Desmond, Dion Graham, et al.
- The Warmth of Other Suns: The Epic Story of America's Great Migration by Isabel Wilkerson, Robin Miles, et al.
- Race for Profit: How Banks and the Real Estate Industry Undermined Black Homeownership (Justice, Power, and Politics) by Keeanga-Yamahtta Taylor.

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20 https://www.hud.gov/program_offices/public_indian_housing/programs/hcv/communitychoicedemo

21 <https://www.hud.gov/cn>

22 <https://analytics.alleghenycounty.us/2023/01/25/community-violence-reduction-initiative/>

APPENDIX A

APPENDIX A: METHODOLOGY AND ANALYSIS OF COMMUNITY NEED

To quantify a tract's total level of need, its values for each of the CNI measures were converted into z-scores. The CNI z-scores were then averaged into a single score for the tract. A tract's total score represents how far the tract falls from the mean Allegheny County tract in its level of need. Tracts were systematically sorted into five levels of need, ranging from very low to extreme, using the Jenks Natural Breaks method in R via the GmAMisc package. This method of classifying the tracts differs from the method used in previous analyses. In the original version of the CNI, tracts were assigned a rank for each component measure, and then the ranks for each measure were summed to create a single rank for each tract. The tracts were then classified into 10 groups of equal size (deciles).

We chose to classify tracts in this report using z-scores instead of summed ranks in order to retain the underlying shape and spread of the measure values. This is helpful when categorizing tracts using the Jenks Natural Breaks method, because the Jenks method uses the unequal spacing between data points to identify optimal cutoff values for each category and ensures that different levels are, on average, systematically different from one another. As such, the Jenks method is less arbitrary than simply dividing a distribution into equally sized groupings. Summed ranks follow an approximately normal distribution regardless of how the underlying data are shaped. Therefore, applying the Jenks method to summed ranks would make the category groupings less reflective of the actual magnitude of the differences between tracts.

We chose to use five classifications of need to a) mirror the number of classes used in composite indexes such as the Brandeis University's Child Opportunity Index²³ and b) simplify the number of classifications used given that the sorting method in the new CNI is more purposeful.

As noted in the Methodology section, measures from the previous CNI were retained, although some slight changes and additions were added (i.e., homicide rate, fatal overdose rate and the percent of households with no home or cellular internet access). To better understand how those retained measures were initially chosen, please refer to the previous need index report.²⁴

While each measure of the CNI is at least weakly or moderately correlated with one another, given the tendency of measures of community need clustering together, no two measures are strongly correlated with one another ("strongly" is defined as having an R value of 0.8 or more). As discussed in the previous report, this guideline was followed to reduce any redundancies in the CNI. Said another way, each measure of the CNI adds some value to the overall score.

23 Five classes were chosen to emulate the number of classes used in indices such as the Kirwan Institute's Child Opportunity Index. The Jenks Natural Breaks method minimizes variance within classes and maximizes variance between classes. This method sorts similar tracts into the same class and is less

arbitrary than simply dividing a distribution into quintiles. For more information, see De Smith, M., Goodchild, M.; and Longley, P. (2018). *Geospatial analysis: A comprehensive guide to principles, techniques, and software tools*. 6th ed. Winchelsea Press.

24 Cotter, N.; Mejia, N.; Chizeck, S; et al. (2021). *The Allegheny County Community Need Index: Update for 2021 with a Focus on the Connection between Race and Community Need*. Allegheny County Department of Human Services.

APPENDIX A, CONTINUED**APPENDIX A, CONTINUED**

Incident location was chosen over the victim's residence when using homicide and fatal overdose data from the Allegheny County Office of the Medical Examiner, given the trauma caused by exposure to the incident. Nevertheless, homicide incident location over the observed period was strongly correlated with residence of the victim by tract. The same was true regarding the correlation between the incident location of fatal overdoses versus where the victim lived, by tract. As such, not much is lost by using incident tract location over residence tract of the victim.

APPENDIX B

APPENDIX B: ADDITIONAL MEASURES OF ACCESS AND WEALTH

MEASURE	SOURCE
Average adult income rank for children raised by parents at 25th percentile of U.S income distribution from 1978-1983	Opportunity Insights' Opportunity Atlas
Median gross rent	2022 American Community Survey Five-Year Estimates. Table B25064
Median home value	2022 American Community Survey Five-Year Estimates. Table B25077
Median income	2022 American Community Survey Five-Year Estimates. Table S1901
Percentage of households without a vehicle	2022 American Community Survey Five-Year Estimates. Table B25044
Percentage of population enrolled in college or graduate school	2022 American Community Survey Five-Year Estimates. Table S1401
Racial and Ethnic Population	2022 American Community Survey Five-Year Estimates. Table DP05