DATA BRIEF:

Assessing Community Need Within the City of Pittsburgh

December 2015

In 2014, the Allegheny County Department of Human Services (DHS) published two reports about assessing need within suburban communities by using the Community Need Index, a DHS-developed tool designed to address the specific needs and circumstances of suburban residents.[1] The reports — and the Community Need Index upon which they were based — stimulated community discussion. Requests were made for similar data about City of Pittsburgh neighborhoods. This brief provides an overview of the methodology involved in developing the Pittsburgh Need Index as well as the results of applying the index to city neighborhoods.

[1] Suburban Poverty: Assessing Community Need Outside the Central City and Data Brief: Suburban Poverty: Assessing Community Need Outside the Central City — 2012 Update

MODEL DESCRIPTION

The Pittsburgh Need Index uses methodology similar to the Suburban Community Need Index, but is altered for urban tracts within the City of Pittsburgh. Insights were drawn from other research about community need — most notably a 2006 single-value index project by the U.S. Department of Housing and Urban Development[2] — as well as research and analysis from the University of Pittsburgh's University Center for Social and Urban Research (UCSUR) and the Local Initiatives Support Corporation's (LISC) inventory of "core indicators." The index variables and modifications from the original Suburban Community Need Index are outlined below:

[2] http://www.huduser.org/portal/publications/comm_index.pdf

Variables/Methodology

City Census tracts were ranked across each of the variables listed in **Table 1**, then averaged into a total ranking and divided into 10 approximately even tiers of need.

TABLE 1: **Pittsburgh Need Index Variables and Data Sources**

VARIABLE NUMBER	VARIABLE	DATA SOURCE
1	Percentage of Population Below 100% of the Poverty Line	2012 American Community Survey (ACS)
2	Percentage of Population Below 200% of the Poverty Line	2012 ACS
3	Percentage of Families with Children Headed by Single Parents	2012 ACS
4	Percentage of Males Age 16 through 64 Unemployed or Not In the Labor Force	2012 ACS
5	Per Capita Income (Total Tract Income / Total Tract Population)	2012 ACS
6	Percentage of Residential Units Vacant	2012 ACS
7	Percentage of Homeownership among Occupied Housing Units	2012 ACS
8	Weighted Median Residential Sales Price	2010–13 UCSUR, from Allegheny County Office of Property Assessments data
9	Percentage of Population 25+ with Bachelor's Degree or Higher	2012 ACS
10	Percentage of Population 18+ with High School Diploma or Higher	2012 ACS

KEY CHANGES FROM SUBURBAN COMMUNITY NEED INDEX

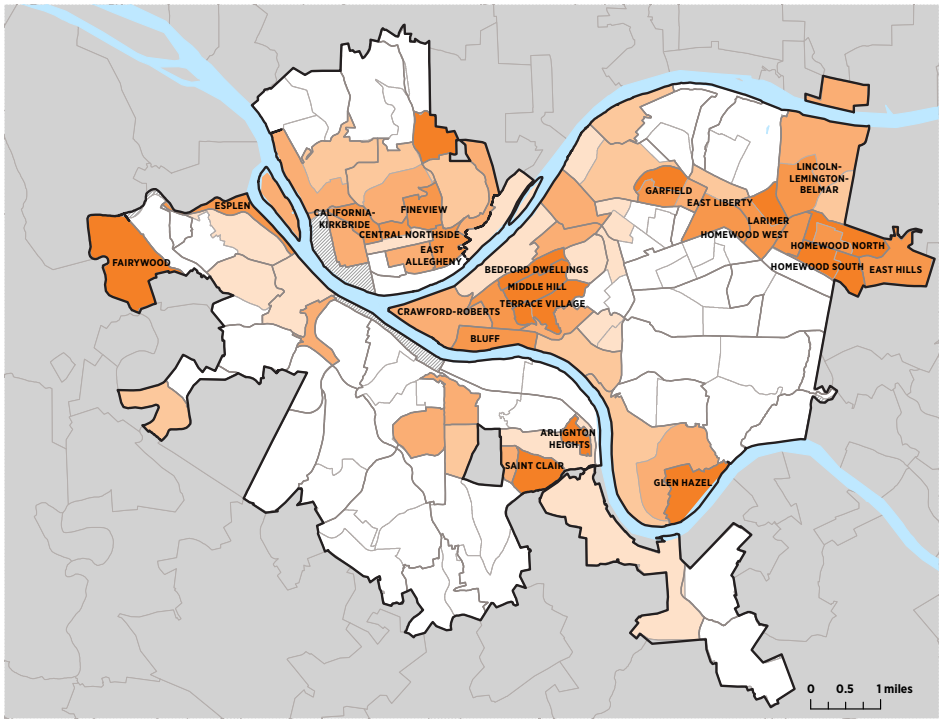
1. *Removal of the "No Vehicle" variable:* Removing the variable regarding personal vehicle access made intuitive sense since people in a more urban area are more likely to rely on public transportation or shared vehicles for some or all of their trips. The vehicle metric also did not seem to add to the city model in the exploratory factor analyses.
2. *Addition of two education variables and removal of "dropout" measure:* The Census variable used to capture youth ages 16 through 19 without a diploma or enrolled in school in the suburban poverty work suffered from very little variance (almost always being estimated at "zero") and from high error margins. For the city index, it was replaced with two more-robust education estimates that are targeted toward the broader education levels of the adult population. Increasing the education portion of the model also lessened its tendency to flag college-area neighborhoods and other areas with disproportionate populations of students and highly educated young adults as "higher need."
3. *Addition of "per capita income" variable:* This variable adds information to the model about an area's total resources and spending power, above and beyond understanding only the populations below the 100% and 200% poverty line levels.

4. *Expansion of housing variables to include homeownership and residential sales price:* The housing-related components of the model were expanded by including two commonly used housing metrics: 1) "homeownership percentage," a topic brought up frequently in the suburban poverty community forums and 2) a residential sales price indicator, which is used by organizations such as LISC based on the evidence that neighborhood attributes are capitalized into housing prices.

ANALYSIS: CHANGES IN NEED OVER TIME (2000 THROUGH 2012)

Need Index tiers were calculated for Census tracts in both 2000 and 2012, to allow for an expanded historical comparison. **Figure 1** displays 2000 rankings, and **Figure 2** displays 2012 rankings.

FIGURE 1: **Pittsburgh Need Index Ranking, City of Pittsburgh, 2000**

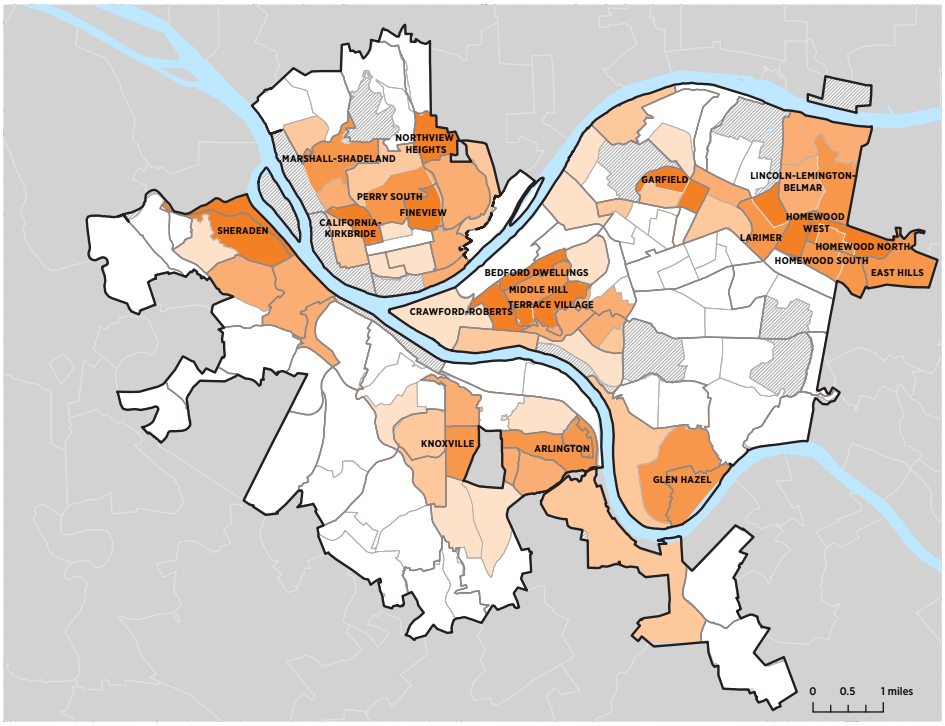


2000 PITTSBURGH NEED INDEX: CITY CENSUS TRACTS

- N/A — Low Population Tracts
- Lower Need (Tiers 1–5)
- Moderate Need (Tier 6)
- Moderate Need (Tier 7)
- High Need (Tier 8)
- Very High Need (Tier 9)
- Distressed (Tier 10)
- Pittsburgh Boundary
- Major Rivers
- Suburban Region
- Municipality/Neighborhood Boundaries

Source(s): 2000 Community Need Index percentiles are calculated using select variables from the 2000 Decennial datasets from the U.S. Census Bureau, according to methodology developed by ACDHS-DARE. The Pittsburgh Need Index maps relative need among Census tracts, sorting them into approximately even-sized tiers. Due to availability, Median Housing Value is used in place of Median Housing Sales Price variable used in more-recent Pittsburgh Need Index maps. Map current as of 1-20-2015; created by ACDHS-DARE office-kcj.

FIGURE 2: **Pittsburgh Need Index Ranking, City of Pittsburgh, 2012**



2012 PITTSBURGH NEED INDEX: CITY CENSUS TRACTS

- N/A — Low Population Tracts
- Lower Need (Tiers 1–5)
- Moderate Need (Tier 6)
- Moderate Need (Tier 7)
- High Need (Tier 8)
- Very High Need (Tier 9)
- Distressed (Tier 10)
- Pittsburgh Boundary
- Major Rivers
- Suburban Region
- Municipality/Neighborhood Boundaries

Source(s): 2012 Community Need Index percentiles are calculated using select variables from the 2012 5-year American Community Survey data from the U.S. Census Bureau, according to methodology developed by ACDHS-DARE. The Pittsburgh Need Index maps relative need among Census tracts, sorting them into approximately evenly-sized tiers. Map current as of 11-19-14; created by ACDHS DARE office-kcj.

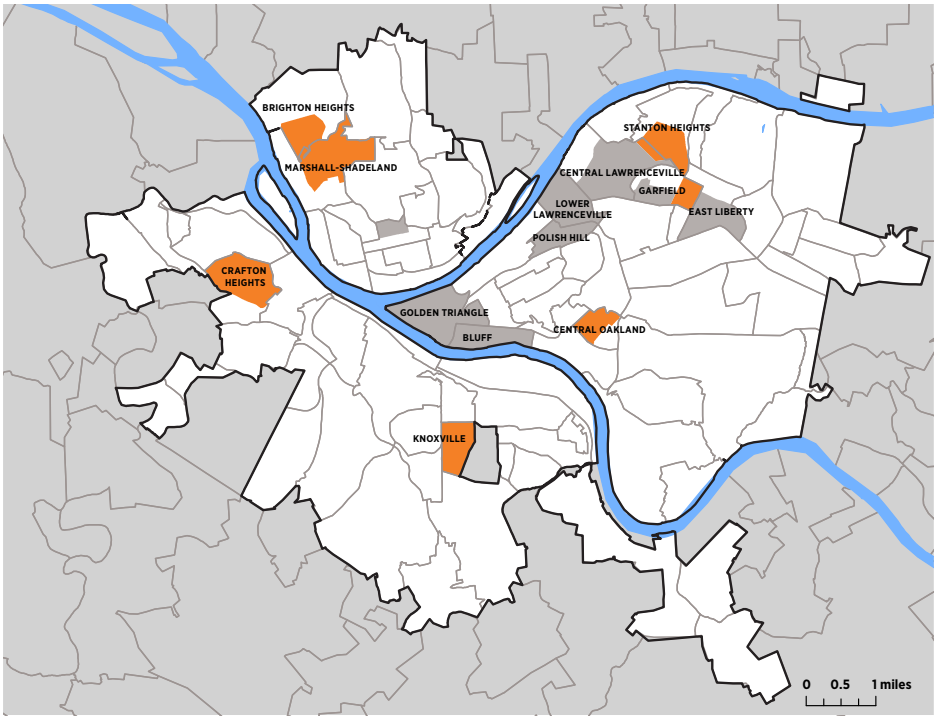
All tracts were then examined to determine if they met the criteria for two categories of "changing need" as defined in the reports on suburban poverty[3]:

1. Emerging Need — a tract has worsened by at least two tiers and ranked in the top half of the city's need distribution (Tiers 6 through 10)
2. Stabilizing — a tract ranked in one of the top four tiers (Tiers 7 through 10) in 2000 and improved by at least two tiers by 2012

[3] The suburban poverty report also highlighted a category called "Deepening Need," which identified areas worsening by one tier and entering the highest-need categories. However, given changing Census tract boundaries, a one-tier shift is less likely to be reliable and therefore was not included in this analysis.

Tracts that meet the criteria for one of these two categories are highlighted in **Figure 3** and listed in **Tables 2 and 3**.

Figure 3: Census Tracts with Changing Needs from 2000 to 2012, City of Pittsburgh



2000–12 PITTSBURGH NEED INDEX: TRACTS CHANGING OVER TIME

- Emerging Need Tracts
- Stabilizing Tracts
- Pittsburgh Boundary
- Major Rivers
- Suburban Region
- Municipality/Neighborhood Boundaries

Source(s): 2000 and 2012 Community Need Index percentiles are calculated using select variables from the 2000 Decennial and 2012 ACS Census datasets from the U.S. Census Bureau, according to methodology developed by ACDHS-DARE. The Pittsburgh Need Index maps relative need among Census tracts, sorting them into approximately even-sized tiers. Due to availability, 2000 Median Housing Value is used in place of Median Housing Sales Price variable used in 2012 Pittsburgh Need Index maps. "Emerging Need" tracts worsened by at least 2 City Need Index tiers from 2000 to 2012, and entered top 5 tiers. "Stabilizing" tracts began in top 4 tiers in 2000 and improved by at least 2 tiers by 2012. Map current as of 1-20-2015; created by ACDHS-DARE office-kcj.

TABLE 2: Emerging Need Census Tracts, City of Pittsburgh

CENSUS TRACT	NEIGHBORHOOD IN WHICH THE TRACT IS LOCATED	2000 TIER	2012 TIER	# TIERS CHANGE
2703	Brighton Heights	5	7	+2
405	Central Oakland	6	8	+2
2814	Crafton Heights	6	8	+2
1114	Garfield	8	10	+2
3001	Knoxville	7	9	+2
2715	Marshall-Shadeland	7	9	+2
1005	Stanton Heights	3	6	+3

TABLE 3: Stabilizing Census Tracts, City of Pittsburgh

CENSUS TRACT	NEIGHBORHOOD IN WHICH THE TRACT IS LOCATED	2000 TIER	2012 TIER	# TIERS CHANGE
103	Bluff	9	7	–2
902	Central Lawrenceville	7	3	–4
2503	Central Northside	9	6	–3
1115	East Liberty	9	7	–2
1017	Garfield	9	7	–2
201	Golden Triangle	8	6	–2
603	Lower Lawrenceville	8	6	–2
605	Polish Hill	8	5	–3

Some tracts that appear notable on the map in **Figure 1** are not reflected in **Figure 2** or **Tables 2 and 3**. There are two related reasons for this. Beginning in 2010, the Census Bureau altered its tract boundaries in ways that resulted in combining or splitting numerous 2000 tracts. At the same time, some of Pittsburgh's public housing communities were undergoing large-scale demolition and/or redevelopment. For example, beginning in 1999, most of the public housing units in Arlington Heights were demolished.[4] As a result, its two tiers reflected in the 2000 Census were merged into a single tier by the 2010 Census; the fact that it appears as a "Very High Need" tract (Tier 9) in **Figure 1** is a reflection not of emerging need but of the change in the tract boundaries. In comparison, most of the public housing units in the Pittsburgh's West End Fairywood neighborhood were demolished in the late 1990s, with the remaining 64 units left vacant since 2004. The Census tract in which it was located was categorized as "Distressed" (Tier 10) in 2000, but because it was combined with lowering-ranking Windgap (Tier 3) by the time of the 2010 Census, it appears as a "Lower Need" tract (Tier 5) in 2012.

[4] http://old.post-gazette.com/regionstate/199902269hud6.asp

Because of changes in the Census tract landscape, it is important to not over-interpret subtle shifts in an area's index tier between 2000 and 2012. Comparing maps from before and after this boundary change can still provide a general visual sense of the city distribution of need at these two time points, and comparisons of tracts that were present in both 2000 and 2012 that changed by more than a single tier may still offer insights about areas that improved or declined according to the model.

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