WHICH COMMUNITIES FACE THE GREATEST ECONOMIC AND HEALTH RISKS FROM COVID-19?

ANALYSES OF NEIGHBORHOOD-LEVEL VULNERABILITY ACROSS THE 500 LARGEST U.S. CITIES

Common Good Labs

AUTHORS

Rohit Acharya (rohit@commongoodlabs.com)

Rhett Morris (rhett@commongoodlabs.com)

ABOUT COMMON GOOD LABS

Common Good Labs is an organization dedicated to applying data science to improve people's lives and communities. Our work focuses primarily on:

- Reducing poverty,
- Improving education,
- Increasing economic growth,
- Expanding access to finance,
- Preserving the environment, and
- Enhancing access to healthcare.

Website: www.commongoodlabs.com

Twitter: @commongoodlabs

LOCAL COMMUNITIES FACE MULTIPLE RISKS FROM COVID-19.

During the COVID-19 pandemic, your fate may be linked to the neighborhood where you live. Communities located just a few miles apart often have very different levels of exposure to the hazards posed by the pandemic. These differences can be seen clearly in two factors:

- **Health vulnerability** due to the physical effects of the virus, and
- **Economic vulnerability** brought about by efforts to limit its spread.

INDIVIDUAL NEIGHBORHOODS HAVE VARYING LEVELS OF HEALTH VULNERABILITY DUE TO PRE-EXISTING CONDITIONS.

The Center for Disease Control and Prevention (CDC) has worked with the Robert Wood Johnson Foundation to create estimates of the prevalence of many diseases across the 500 largest cities in the United States.[1] This data includes information on the 27,210 individual census tracts within these cities. Census tracts are one of the smallest subdivisions used by the Census Bureau. Each includes an average of around 4,000 residents, making it roughly equivalent in size to a large neighborhood.[2] (For this reason, this report will use the terms "tract" and "neighborhood" interchangeably to avoid excess repetition.)

The tract-level estimates provided by the CDC include data on the local prevalence of six pre-existing conditions associated with high risk of severe illness among patients that contract COVID-19: asthma, chronic kidney disease, chronic obstructive pulmonary disease, coronary heart disease, diabetes, and obesity.[3]* This data indicates that American adults are sick. In the typical neighborhood, estimates indicate there are over 60 cases of these six conditions among every 100 adults.

However, analyses of the highest and lowest quartiles of communities reveal that significant variation exists among neighborhoods. In the top 25 percent of tracts, there are 90 cases of these six pre-existing conditions for every 100 adults, on average. By contrast, the 25 percent of tracts with the lowest rates of sickness have an average of around 50 of the six conditions for every 100 adults.

America's neighborhoods are divided by their health. **Residents of communities in the highest quartile have almost twice the number of these pre-existing conditions as those in the bottom quartile. This is consistent across the estimates for all six measured conditions.**

The dangers facing the residents of these neighborhoods will not disappear when their cities have "flattened the curve" to slow down transmission of the virus. Any additional spread of COVID-19 will continue to pose a much larger threat to less healthy neighborhoods than others with fewer pre-existing conditions associated with severe illness from the disease.

HEALTH VULNERABILITY TO THE COVID-19 PANDEMIC
PREVALENCE OF PRE-EXISTING CONDITIONS ASSOCIATED WITH HIGH RISK OF SEVERE ILLNESS FROM COVID-19 (AVERAGE CASES PER EVERY 100 ADULTS, ESTIMATED)
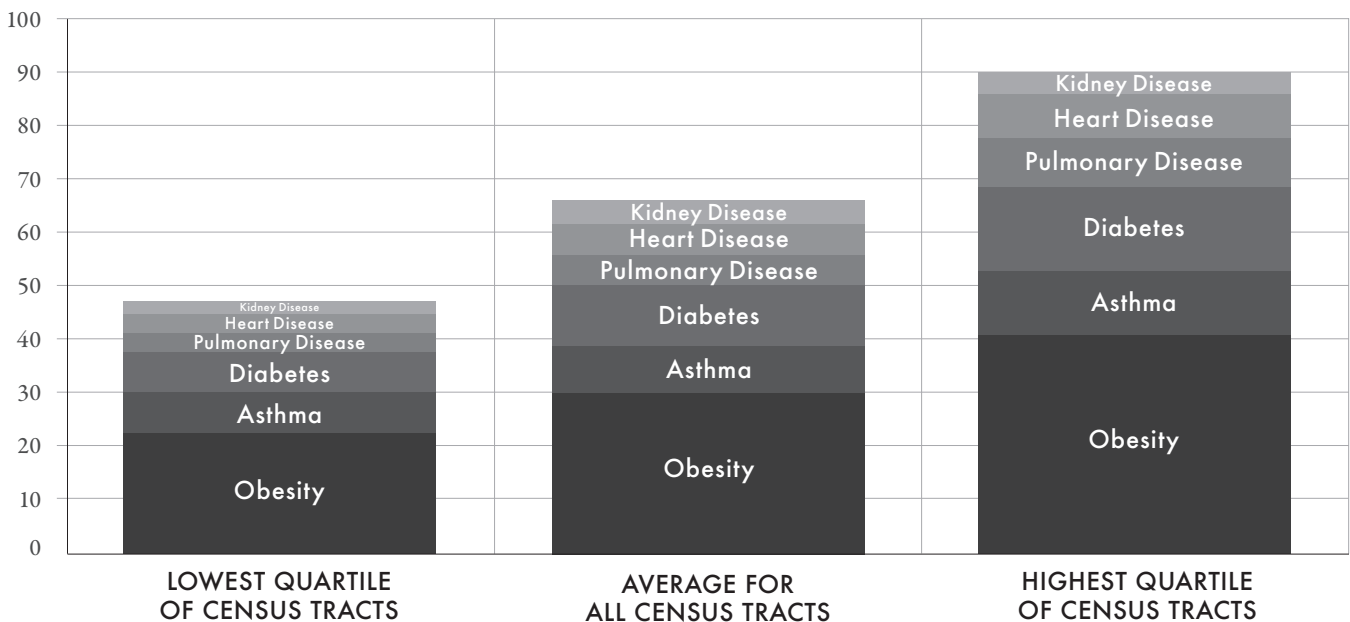
Note: Prevalence is calculated using the CDC's estimates for adult residents 18 years and older among the 26,962 Census tracts in the 500 largest U.S. cities with at least 500 residents and 250 civilian workers. Source: 500 Cities Project, CDC (2019 Release).

Common Good Labs

* The two additional factors related to severe illness from COVID-19 — liver disease and a compromised immune system — are not included in the tract-level produced by the CDC. These two factors are relatively uncommon and found in less than 3 percent of the general population.

THE ECONOMIC VULNERABILITY OF LOCAL NEIGHBORHOODS CAN BE SEEN IN THEIR EXPOSURE TO UNEMPLOYMENT.

The effects of the COVID-19 pandemic are not limited to illness. The rapid economic downturn that followed the spread of the virus has affected millions of Americans. The most immediate impact of this decline on local communities has been a dramatic increase in unemployment.

In the four weeks ending on April 11th, over 22 million Americans lost their jobs.[4] These job losses came primarily in industries that are most heavily affected by the behavioral changes of individual Americans as well as government orders to close the physical workplaces of non-essential companies.

Though current unemployment data is not available for individual neighborhoods, it is possible to examine the level of job loss risk that communities are exposed to using information published by the Census Bureau. Data released in late 2019 contains local estimates for the number of people who were working in 19 major industries within the 500 largest U.S. cities. Initial reports from the Department of Labor indicate that six of these major industries have experienced significant job losses due to the pandemic.[5] These sectors are:

- Hospitality and entertainment, which includes restaurants and hotels;
- Retail sales;
- Education;
- Construction;
- Workplace services, such as temporary staffing and janitorial services; and
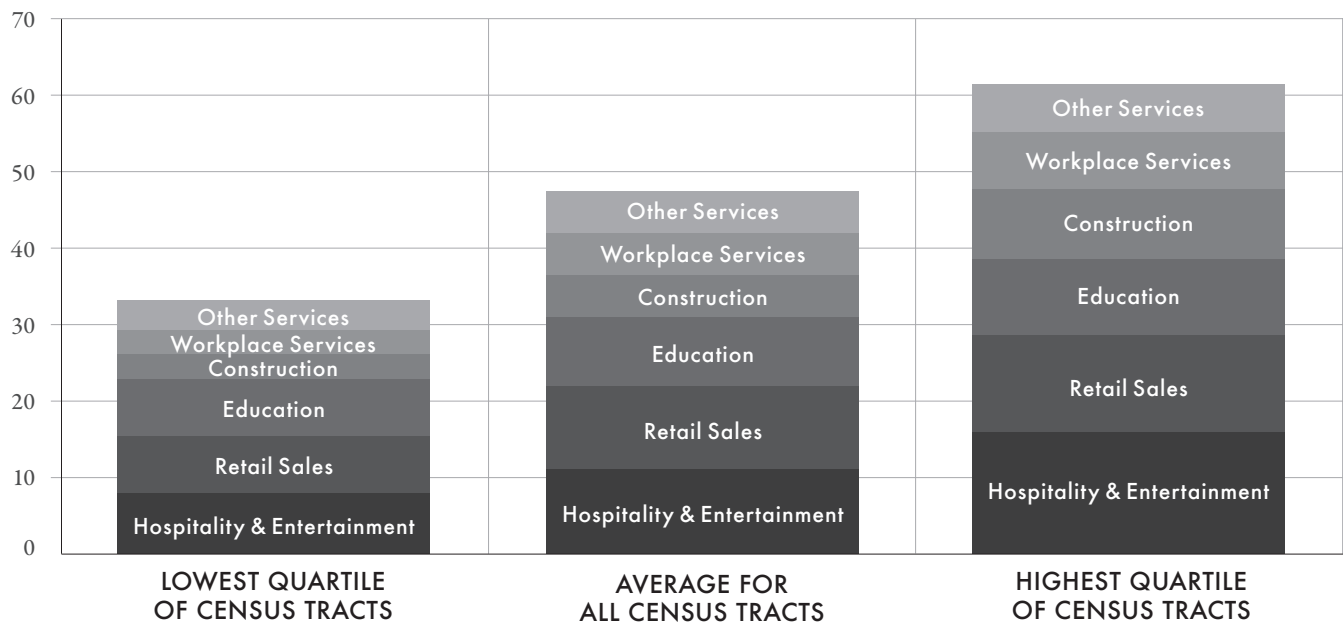- Other services, which include repair and personal care services.*

According to this Census data, the number of residents who worked in these six sectors before the pandemic differs a great deal across neighborhoods. In the 25 percent of census tracts that had the least exposure to these sectors, an average of 33 out of every 100 working adults were employed in these six industries before the pandemic.

Other communities include far more workers likely to be affected by unemployment. **In the 25 percent of tracts with the highest exposure, more than 60 out of every 100 working adults were employed in these high-job-loss industries, on average. The neighborhoods in this quartile also had particularly large numbers of residents working in hospitality and entertainment, which is the sector that has experienced the greatest employment losses to date.**

Though the federal government has temporarily strengthened the benefits of unemployment insurance and authorized stimulus payments, many communities suffering from high unemployment are likely to be in crisis. Even before the pandemic, four in ten American adults reported that they would have difficulty covering an unexpected $400 expense.[6] Data from 2019 also indicates that 53 percent of U.S. households lack an emergency savings account.[7]

The economic damage caused by the recent increase in unemployment harms some neighborhoods much more than others. Communities that had the greatest proportion of workers in the industries experiencing major job losses will continue to be highly vulnerable to a prolonged recession. Research also suggests that these neighborhoods are likely to need more time to recover after the economic crisis has ended.[8]

ECONOMIC VULNERABILITY TO THE COVID-19 PANDEMIC
PROPORTION OF WORKERS IN INDUSTRIES WITH HIGH UNEMPLOYMENT DUE TO COVID-19 (AVERAGE WORKERS PER EVERY 100 ADULTS IN THE LABOR FORCE, ESTIMATED)

LOWEST QUARTILE OF CENSUS TRACTS
- Other Services
- Workplace Services
- Construction
- Education
- Retail Sales
- Hospitality & Entertainment

AVERAGE FOR ALL CENSUS TRACTS
- Other Services
- Workplace Services
- Construction
- Education
- Retail Sales
- Hospitality & Entertainment

HIGHEST QUARTILE OF CENSUS TRACTS
- Other Services
- Workplace Services
- Construction
- Education
- Retail Sales
- Hospitality & Entertainment

Note: The proportion of workers is calculated using the Census Bureau's estimates for the civilian labor force among the 26,962 Census tracts in the 500 largest U.S. cities with at least 500 residents and 250 civilian workers. Source: American Community Survey 5-Year Estimates, U.S. Census Bureau (2019 Release).

Common Good Labs

* Job losses were calculated on a percentage basis using the Employment Situation Summary from April 3, 2020. The specific North American Industry Classification System groups identified as having the greatest COVID-19-related job losses were leisure and hospitality, retail trade, education services, construction, administrative and support and waste management services, and other services excluding public administration.

MANY COMMUNITIES ARE HIGHLY VULNERABLE TO MULTIPLE RISKS FROM THE PANDEMIC.

The COVID-19 pandemic has placed thousands of neighborhoods in danger of severe illness and unemployment. These two risks are often linked. As one goes up, the other tends to as well. This means that many communities are doubly unlucky.

Around 40 percent of the neighborhoods that are in the highest quartile for vulnerability to the health risks of the pandemic are also in the highest quartile for vulnerability to its economic risks. Local estimates indicate that these neighborhoods have an average of 90 cases of the six pre-existing conditions for every 100 adults and more than half of their working residents were employed in the six high-job-loss industries before the pandemic.

As the chart below illustrates, there is also significant overlap among the most fortunate communities. Almost half of the neighborhoods that are in the lowest quartile in terms of health risks are also in the lowest quartile for economic risk.

The most vulnerable and least vulnerable neighborhoods are not as rare as some might expect. Around 10 percent of census tracts in the 500 largest cities fall into each of these categories. Almost ten million residents live in the most vulnerable communities, while around 15 million people live in those that are the least vulnerable.

HEALTH AND ECONOMIC VULNERABILITY TO THE COVID-19 PANDEMIC
PREVALENCE OF HIGH-RISK PRE-EXISTING CONDITIONS AND PROPORTION OF WORKERS IN INDUSTRIES WITH HIGH UNEMPLOYMENT (CENSUS TRACTS, ESTIMATED)
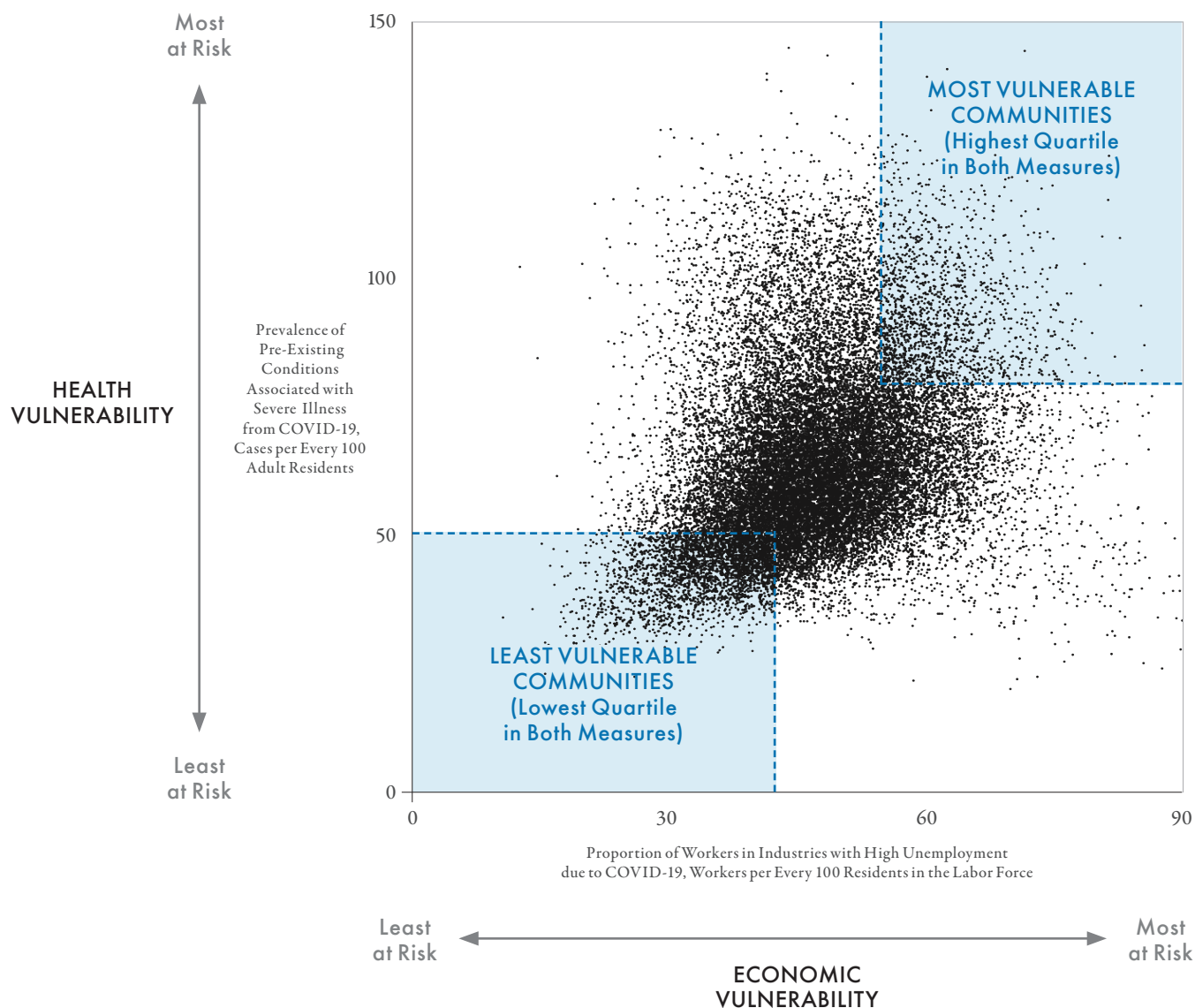
Note: This analysis includes the 26,962 census tracts in the 500 largest U.S. cities with at least 500 residents and 250 civilian workers. Health and economic vulnerability are calculated using the methodologies described in the charts on pages one and two. Sources: 500 Cities Project, CDC (2019 Release); American Community Survey 5-Year Estimates, U.S. Census Bureau (2019 Release).

Common Good Labs

LOCAL VULNERABILITY IS LINKED TO INEQUALITY IN U.S. NEIGHBORHOODS.

The risks of the COVID-19 pandemic are built on top of existing inequalities in American society. **The most vulnerable neighborhoods — those in the highest quartile of both health and economic risk — had greater than average rates of unemployment and poverty even before the virus began to spread.*** More than 34 percent of residents in these neighborhoods are poor, compared to an average of 18 percent of residents among all the census tracts found in the 500 largest U.S. cities.† More than one-third of these poor residents are under 18 years old.

The demographics of these tracts are also different from those found among all neighborhoods. The most vulnerable communities contain a larger percentage of children and significantly more Black and Hispanic residents, on average.

The least vulnerable tracts are also unique. They had much lower rates of poverty and unemployment before the pandemic. They are also much less likely than the most vulnerable neighborhoods to contain multigenerational households and workers employed at essential occupations that require continued travel to jobs outside the home. These factors may further reduce the risks these communities face by limiting local transmission of the virus.

The COVID-19 virus is likely to act as a stress test for American communities, exposing where underlying problems and areas of weakness are already in existence. The health and economic vulnerabilities created by the disease fall disproportionately on lower-income neighborhoods already challenged by poverty and unemployment.

CHARACTERISTICS OF COMMUNITIES WITH THE LEAST AND GREATEST PANDEMIC RISK

	Census Tracts within the 500 Largest U.S. Cities		
	ALL TRACTS	LEAST VULNERABLE	MOST VULNERABLE
Health Vulnerability: Pre-Existing Conditions Associated with Severe Illness			
Relative Prevalence	–	Lowest Quartile	Highest Quartile
Average Cases per 100 Adults	66	45	90
Economic Vulnerability: Workers in Industries with High Unemployment			
Relative Proportion	–	Lowest Quartile	Highest Quartile
Average Number per 100 Adults in Labor Force	48	34	61
Frequency			
Percentage of Tracts	100%	12%	9%
Total Resident Population	120,661,067	15,822,101	9,647,820
Additional Potential Risk Factors			
Residents Working in "Essential Occupations" Outside Home	14%	10%	15%
Multi-Generational Households	5%	2%	7%
Residents in Poverty / Residents in Near Poverty	18% / 5%	7% / 2%	34% / 9%
Unemployment Rate	7%	4%	11%
Residents over 25 Who Did Not Attend College	40%	16%	62%
Demographics			
By Age: Children	22%	20%	27%
Adults	78%	80%	73%
By Race and Ethnicity: White (Non-Hispanic)	44%	62%	21%
Hispanic	25%	12%	38%
Black	20%	5%	36%
Asian	8%	17%	2%
Average Number of Small Businesses	130	176	129

Note: The analyses above are based on the 26,962 census tracts in the 500 largest U.S. cities with at least 500 residents and 250 civilian workers. Health and economic vulnerability are calculated using the methodologies described in the charts on pages one and two. Analysis on additional risk factors and demographics is based on data from the 2014-2018 tract-level averages in the American Community Survey and information collected on the operation of local businesses by the U.S. Postal Service. Essential occupations are identified by comparing the occupation categories used by the Census Bureau to the lists of essential businesses and services included in state orders, such as NY Executive Order 202.6. Multi-generational households are those that include grandparents and grandchildren under 18 years old. Poverty is defined according to the second footnote at the bottom of this page. Near poverty is the percentage of residents with individual or family income between 100 percent and 125 percent of the federal poverty threshold. Sources: 500 Cities Project, CDC (2019 Release); American Community Survey 5-Year Estimates, U.S. Census Bureau (2019 Release); HUD Aggregated USPS Administrative Data (December 2019 Release).

Common Good Labs

* Demographic figures are based the tract-level averages in the American Community Survey 2014-2018 average data.
† Poor residents are those with personal or family income that is less than the poverty threshold set by the federal government. This threshold varies for individuals and families depending on the number of related people living together. The 2019 threshold for a family of two adults and two children is $25,926 of total income.

THE RISKS FACED BY CITIES ARE FOUND IN THE VULNERABILITIES OF THEIR NEIGHBORHOODS.

Cities are collections of neighborhoods. Leaders who wish to understand the vulnerabilities of their metropolitan areas should look first to the individual communities that make them up. The largest U.S. cities contain different combinations of local neighborhoods. Some, like Toledo and Detroit, have large numbers of census tracts with high levels of the pre-existing conditions associated with severe illness among people who contract COVID-19. Others, such as Denver and San Diego, contain very few local communities with high prevalence of these diseases.

This can also be seen in data on economic vulnerability. Cities like Las Vegas and Orlando are made up of neighborhoods that have relatively high numbers of people who were working in the industries

with high rates job loss related to the pandemic. San Francisco, Washington D.C., and similar metros have local communities with fewer people who had been working in these sectors.

Analyses of the average neighborhood-level vulnerability within cities reveal a trend similar to what is seen among individual tracts. As one type of risk goes up, the other often does as well. Cities like Boston and Seattle that have relatively low vulnerability to the economic risks of the pandemic also have relatively low vulnerability to health risk, while places like New Orleans and Miami are at greater risk of both. The exceptions to this are Detroit, Cleveland, and Toledo, which have the most extreme levels of the pre-existing conditions identified by the CDC. This data also shows that cities in the same state can have very different risk profiles. Glendale and Scottsdale in Arizona, and Raleigh and Winston-Salem in North Carolina are good examples of this diversity.

CITY-LEVEL VULNERABILITY TO THE COVID-19 PANDEMIC
PREVALENCE OF HIGH-RISK PRE-EXISTING CONDITIONS AND PROPORTION OF WORKERS IN INDUSTRIES WITH HIGH UNEMPLOYMENT (AVERAGE OF LOCAL CENSUS TRACTS, ESTIMATED)
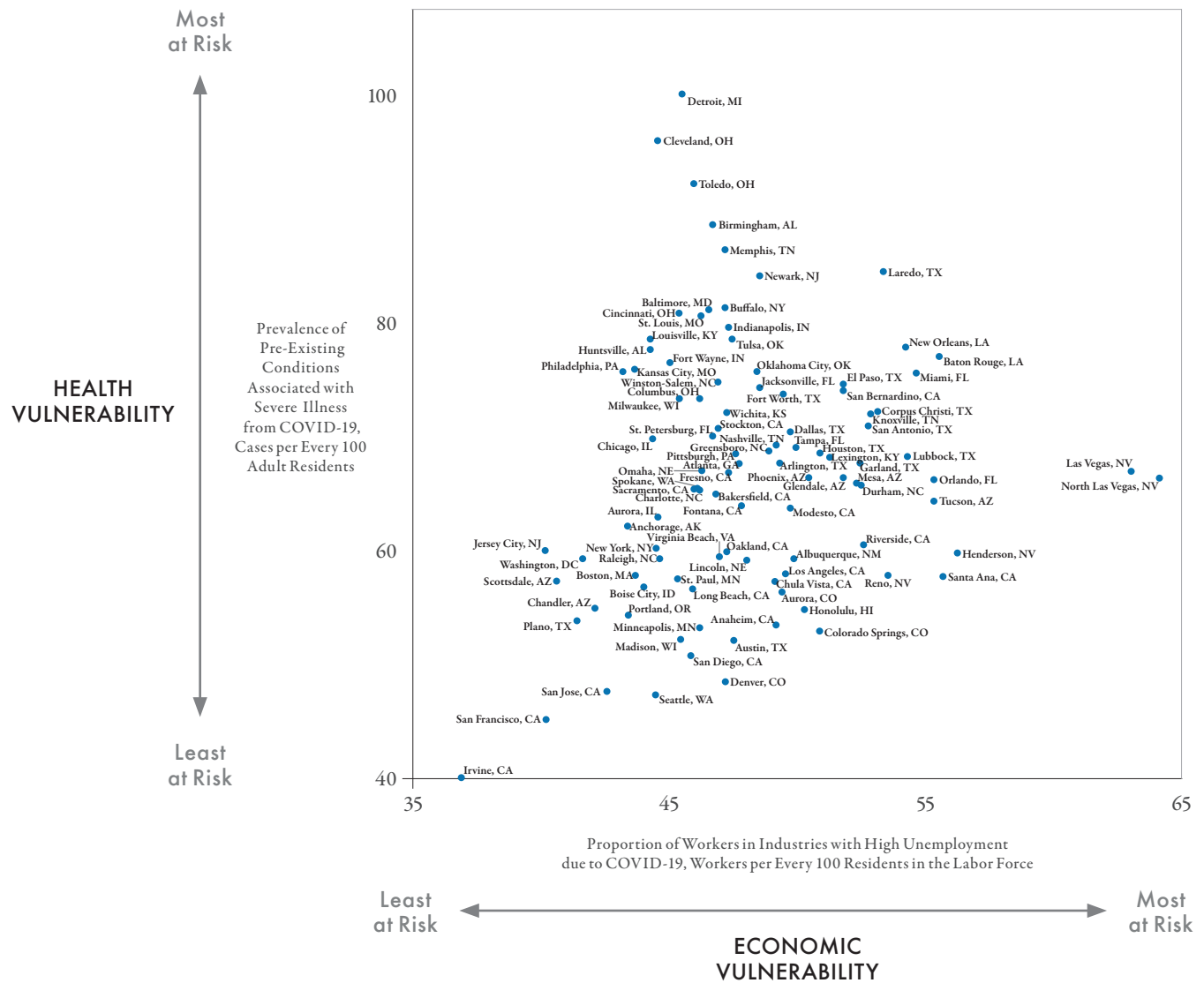
Note: This analysis includes all census tracts in the 100 largest U.S. cities with at least 500 residents and 250 civilian workers. Health and economic vulnerability are calculated using the methodologies described in the charts on pages one and two. Sources: 500 Cities Project, CDC (2019 Release); American Community Survey 5-Year Estimates, U.S. Census Bureau (2019 Release).

Common Good Labs

DATA ON LOCAL VULNERABILITIES CAN HELP IMPROVE DECISION MAKING.

Leaders have an opportunity to create more effective responses to the COVID-19 pandemic based on analyses of neighborhood vulnerabilities. Five initial suggestions for applying this research are shared below.

1. Decision makers should use data to understand the unique risks of neighborhoods in their cities. Analyses and visualizations of publicly available sources like the CDC and the Census Bureau can provide critical context to civic leaders. Understanding local vulnerabilities is especially important in times like these that require rapid decision making and managing new threats. The next pages of this report offer an example of the types of analyses that can help support decision making.

2. Leaders should be careful when making comparisons between different cities and neighborhoods. Practices or timelines that make sense in San Francisco where the risks from the virus are relatively low, may not be successful in places like Miami, where neighborhoods have greater health and economic vulnerabilities.

This is also true for local neighborhoods. Communities in the same city can have very different rates of pre-existing conditions like diabetes and heart disease that increase the risk of severe illness from COVID-19. They can also have different levels of exposure to sectors with the greatest jobs losses.

3. Decision makers should focus information sharing and collection efforts on the most vulnerable communities. This can include outreach to inform residents on how to apply for federal relief programs or initiatives to remind residents how to use practices that limit the spread of the disease. Perhaps most importantly, community testing and contact tracing programs should invest heavily in areas where the health consequences of the diseases are most likely to be severe for local residents.

4. Additional resources should be allocated to support communities that have greater vulnerabilities to the risks of the pandemic. Programs to provide economic assistance, such as small business support or initiatives for job seekers, will be most needed in neighborhoods likely to have high levels of unemployment. Similarly, efforts to increase health-related resources will also be most beneficial in areas with the greatest risks related to the virus. Cities that do not provide increased support to neighborhoods with greater levels of need are likely to increase existing inequalities.

5. Leaders should begin planning for the long-term recovery of local communities that are likely to be hardest hit by the economic and health consequences of COVID-19. Research indicates that it may take many years for the most vulnerable neighborhoods to recover from the effects of this pandemic. Cities that can manage the day-to-day challenges of the pandemic and also prepare to repair the damage it will leave behind are likely to be best positioned in the future.

CASE STUDY: PITTSBURGH, PENNSYLVANIA

HEALTH VULNERABILITY TO COVID-19 AMONG THE LARGEST U.S. CITIES
PREVALENCE OF PRE-EXISTING CONDITIONS ASSOCIATED WITH HIGH RISK OF SEVERE ILLNESS FROM COVID-19
(AVERAGE CONDITIONS PER EVERY 100 ADULTS, ESTIMATED)
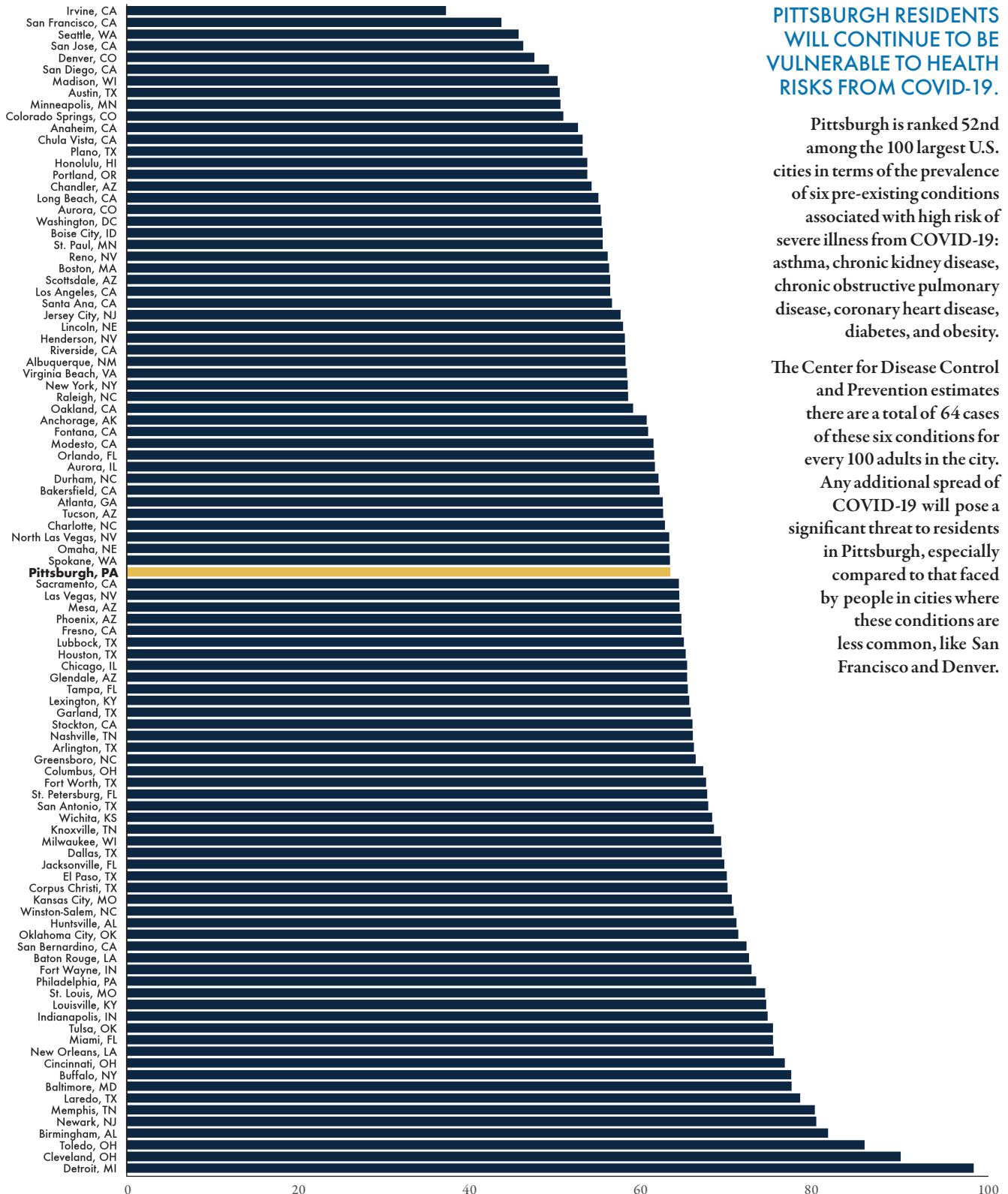
PITTSBURGH RESIDENTS WILL CONTINUE TO BE VULNERABLE TO HEALTH RISKS FROM COVID-19.

Pittsburgh is ranked 52nd among the 100 largest U.S. cities in terms of the prevalence of six pre-existing conditions associated with high risk of severe illness from COVID-19: asthma, chronic kidney disease, chronic obstructive pulmonary disease, coronary heart disease, diabetes, and obesity.

The Center for Disease Control and Prevention estimates there are a total of 64 cases of these six conditions for every 100 adults in the city. Any additional spread of COVID-19 will pose a significant threat to residents in Pittsburgh, especially compared to that faced by people in cities where these conditions are less common, like San Francisco and Denver.

Note: The average cases per 100 adults represents the sum of the prevalence of six pre-existing conditions associated with high risk of severe illness among patients that contract COVID-19: asthma, chronic kidney disease, chronic obstructive pulmonary disease, coronary heart disease, diabetes, and obesity. Two additional factors related to severe illness from COVID-19 — liver disease and a pimpromised immune system — are not included in local estimates provided by the Center for Disease Control and Prevention (CDC). However, these two factors are found in less than 3 percent of the general population. Source: 500 Cities Project, CDC (2019 Release).

Common Good Labs

HEALTH VULNERABILITY TO COVID-19 IN PENNSYLVANIA

PREVALENCE OF PRE-EXISTING CONDITIONS ASSOCIATED WITH HIGH RISK OF SEVERE ILLNESS FROM COVID-19
(AVERAGE CONDITIONS PER EVERY 100 ADULTS, ESTIMATED)

	TOTAL	OBESITY	DIABETES	ASTHMA	COPD	HEART DISEASE	KIDNEY DISEASE
Reading, PA	**88**	42	15	11	9	8	4
Allentown, PA	**81**	39	13	11	8	7	4
Scranton, PA	**77**	35	11	11	9	8	4
Erie, PA	**77**	36	11	11	9	7	3
Philadelphia, PA	**74**	33	13	12	7	7	3
Bethlehem, PA	**70**	33	10	10	7	7	3
Pittsburgh, PA	**64**	30	10	10	6	6	3
Average among 500 Largest U.S. Cities	**63**	30	10	10	6	5	3

Note: "COPD" stands for "chronic obstructive pulmonary disease." Prevalence for each condition is calculated using the CDC's estimates for adult residents 18 years and older. Source: 500 Cities Project, CDC (2019 Release).

PITTSBURGH IS LESS AT RISK THAN OTHER LARGE CITIES IN PENNSYLVANIA.

Pittsburgh is near the national average in terms of cases of the pre-existing conditions associated with high risk of severe illness from COVID-19. Most other cities in Pennsylvania have greater levels of risk.

COMPARATIVE RISK FOR EACH PRE-EXISTING CONDITION

PREVALENCE OF PRE-EXISTING CONDITIONS ASSOCIATED WITH HIGH RISK OF SEVERE ILLNESS FROM COVID-19
(PERCENTILE RANK AMONG THE 500 LARGEST U.S. CITIES)

PERCENTAGE OF CITIES WITH LOWER PREVALENCE THAN PITTSBURGH
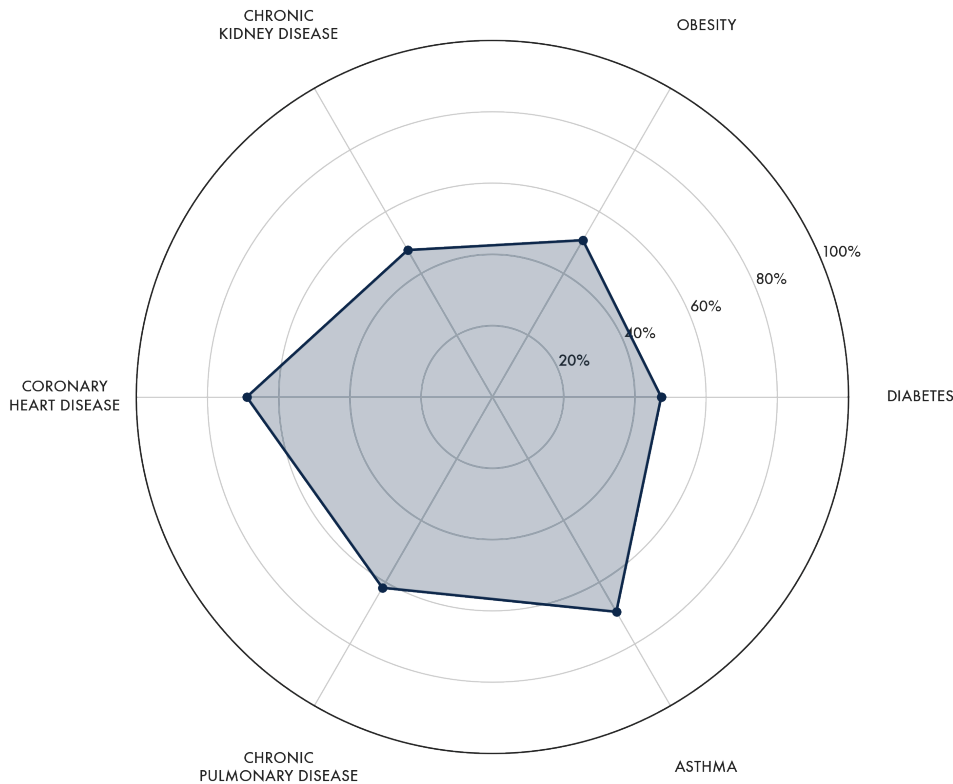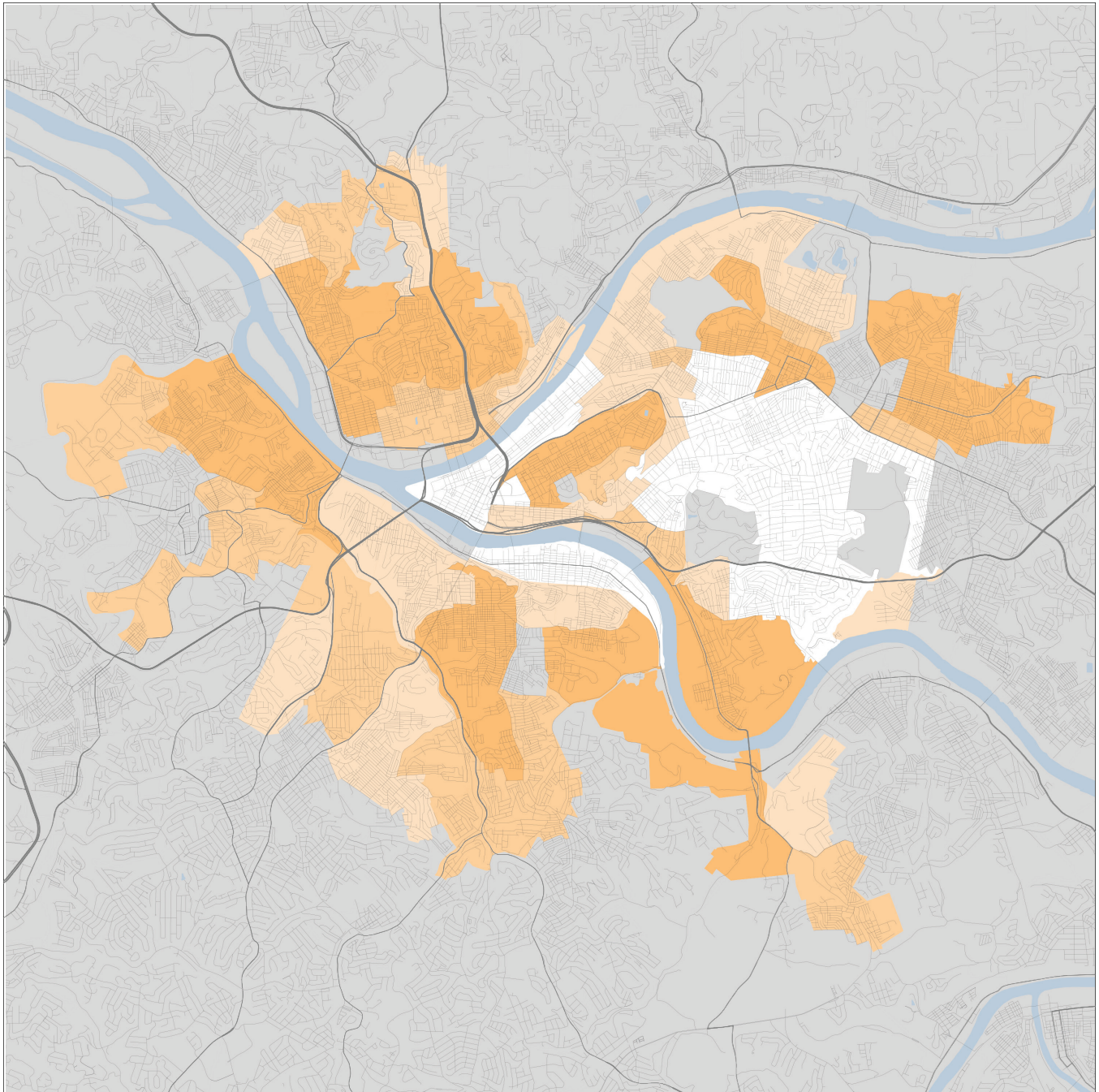

COMPARED TO OTHER U.S. CITIES, PITTSBURGH HAS LOW RATES OF OBESITY AND DIABETES.

Pittsburgh is between the 40th and 70th percentile in all six pre-existing conditions associated with high risk of severe illness from COVID-19. On a relative basis, it has the highest prevalence of three conditions: asthma, coronary heart disease, and chronic pulmonary disease.

Note: Prevalence is calculated using the CDC's estimates for adult residents 18 years and older. Source: 500 Cities Project, CDC (2019 Release).

Common Good Labs

NEIGHBORHOODS WITH THE GREATEST HEALTH VULNERABILITY

PREVALENCE OF PRE-EXISTING CONDITIONS ASSOCIATED WITH HIGH RISK OF SEVERE ILLNESS FROM COVID-19
(CENSUS TRACTS BY NATIONAL QUARTILE, ESTIMATED)

Prevalence of Pre-Existing Conditions Associated
with Severe Illness from COVID-19

Lowest
Quartile
in Nation

Highest
Quartile
in Nation

Note: The average cases per 100 adults represents the sum of the prevalence of six pre-existing conditions associated with high risk of severe illness among patients that contract COVID-19: asthma, chronic kidney disease, chronic obstructive pulmonary disease, coronary heart disease, diabetes, and obesity. Quartiles are calculated based on comparisons using national data on the 26,962 Census tracts in the 500 largest U.S. cities with at least 500 residents and 250 civilian workers. Source: 500 Cities Project, CDC (2019 Release).

Common Good Labs

NEIGHBORHOOD TRANSMISSION RISK AND HEALTH VULNERABILITY

PREVALENCE OF PRE-EXISTING CONDITIONS ASSOCIATED WITH HIGH RISK OF SEVERE ILLNESS FROM COVID-19
(CENSUS TRACTS BY NATIONAL QUARTILE, ESTIMATED)
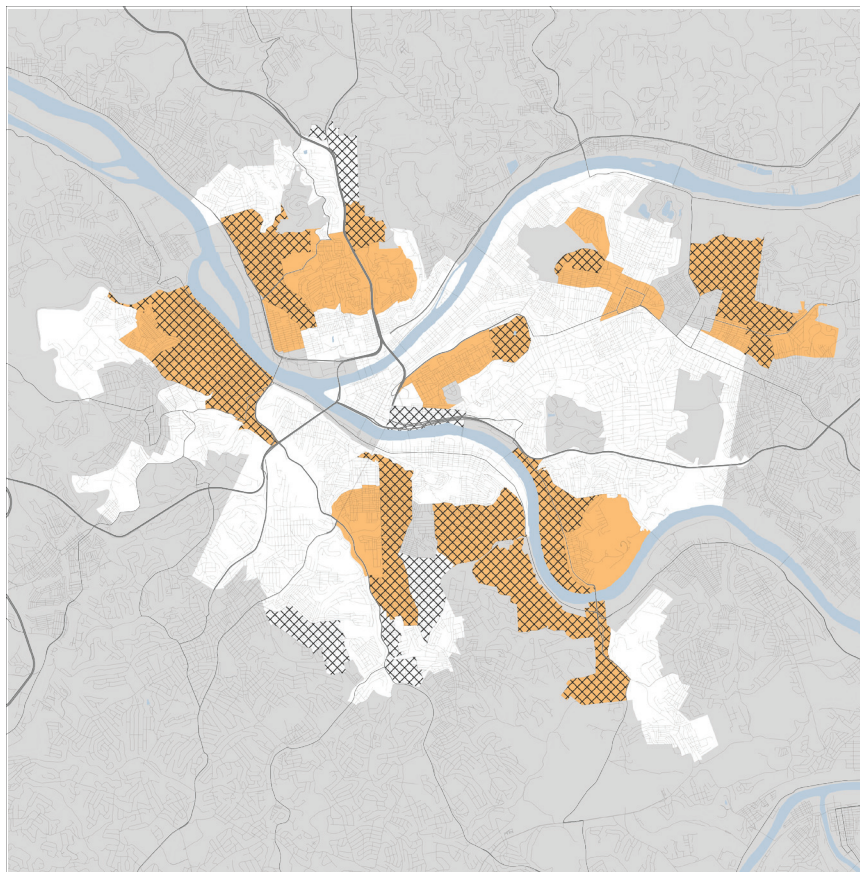
Highest National Quartile for Prevalence of Pre-Existing Conditions Associated with Severe Illness from COVID-19

Above Average Proportion of Households with Grandparents and Grandchildren Living Together and Above Average Proportion of Workers Unable to Work from Home

NEIGHBORHOODS WITH THE MOST PRE-EXISTING CONDITIONS OFTEN HAVE MORE MULTI-GENERATIONAL HOUSEHOLDS AND WORKERS WHO CANNOT WORK FROM HOME.

These neighborhoods would benefit from being prioritized in local testing and tracing efforts, since these factors are likely to increase the risk of transmission of COVID-19 and severe illness in the event it is contracted.

MULTI-GENERATIONAL HOUSEHOLDS
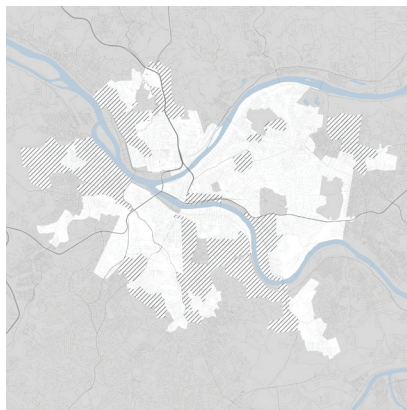
Above Average Proportion of Households with Grandparents and Grandchildren Living Together (Based on Comparison Data from the 500 Largest U.S. Cities)

WORKERS UNABLE TO WORK FROM HOME
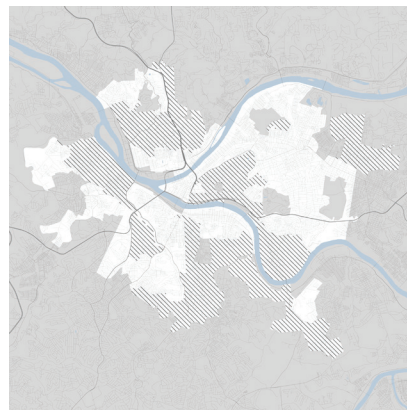
Above Average Proportion of Workers Unable to Work from Home (Based on Comparison Data from the 500 Largest U.S. Cities)

Note: The average cases per 100 adults represents the sum of the prevalence of six pre-existing conditions associated with high risk of severe illness among patients that contract COVID-19: asthma, chronic kidney disease, chronic obstructive pulmonary disease, coronary heart disease, diabetes, and obesity. Quartiles are calculated based on comparisons using national data on the 26,962 Census tracts in the 500 largest U.S. cities with at least 500 residents and 250 civilian workers. Household and worker data is drawn from estimates created by the U.S. Census. Workers are defined as those in the civilian labor force. Classification of occupations that are not able to be conducted at home based on data from the Bureau of Labor Statistics. Source: 500 Cities Project, CDC (2019 Release); American Community Survey 5-Year Estimates, U.S. Census Bureau (2019 Release); American Time Use Survey, Bureau of Labor Statistics (2019 Release).

Common Good Labs

NEIGHBORHOOD POVERTY AND HEALTH VULNERABILITY
PREVALENCE OF PRE-EXISTING CONDITIONS ASSOCIATED WITH HIGH RISK OF SEVERE ILLNESS FROM COVID-19
(CENSUS TRACTS BY NATIONAL QUARTILE, ESTIMATED)
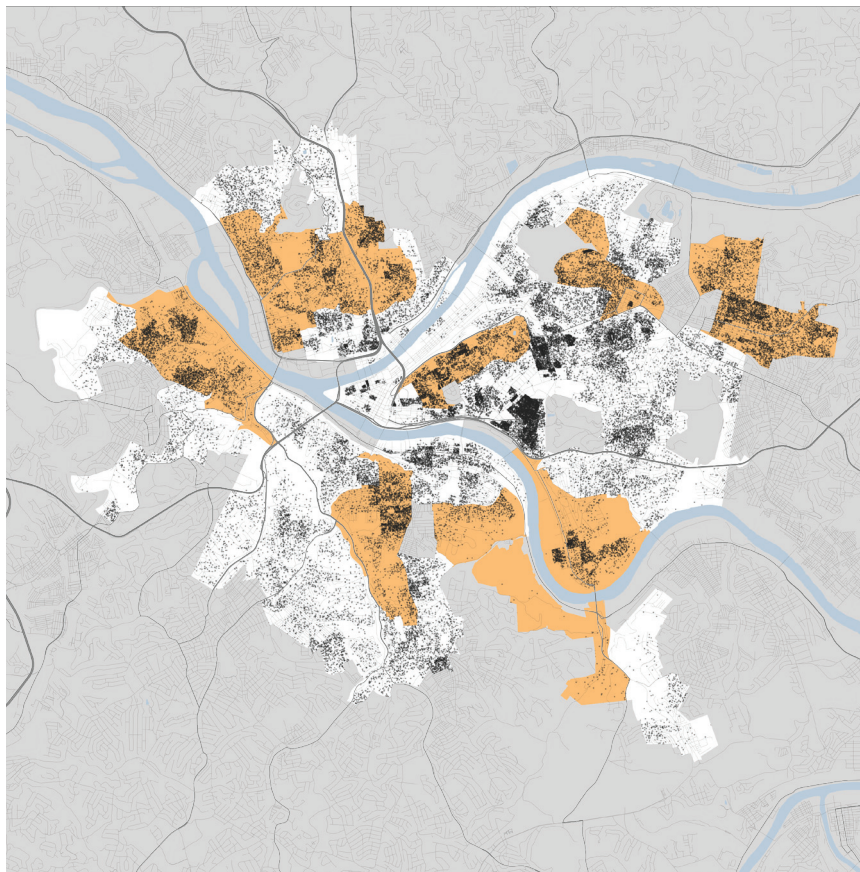
■ Highest National Quartile for Prevalence of Pre-Existing Conditions Associated with Severe Illness from COVID-19

● Each Dot Represents One Resident below the Poverty Threshold before COVID-19 Pandemic

## HIGH-POVERTY COMMUNITIES HAVE MORE PRE-EXISTING CONDITIONS THAN OTHER NEIGHBORHOODS.

About one-fourth of Pittsburghers live in high-poverty neighborhoods. These census tracts, where 30 percent or more of residents have incomes below the threshold for poverty, are more likely than others to have very high prevalence of the pre-existing conditions associated with high risk from COVID-19.

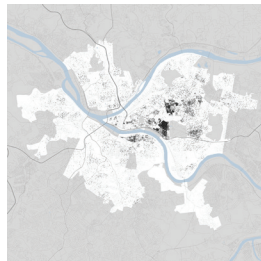# RESIDENTS IN POVERTY BEFORE COVID-19 PANDEMIC

Number of Residents below Poverty Threshold by Age and Race or Ethnicity, Average for 2014 to 2018

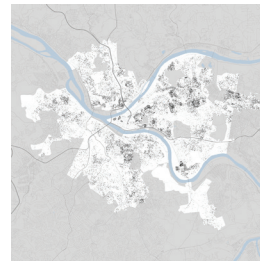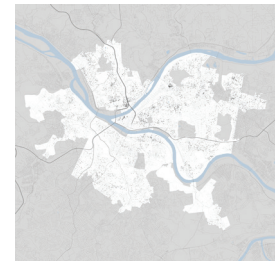● Each Dot Represents One Poor Resident
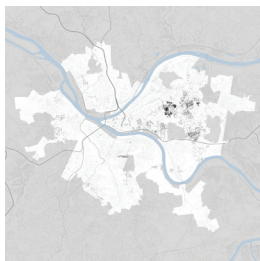
UNDER 18 YEARS OLD
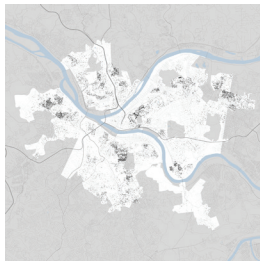
18 TO 24 YEARS OLD

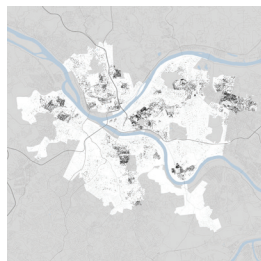### 25 TO 64 YEARS OLD

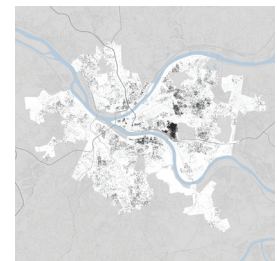### 65 YEARS OLD AND ABOVE

ASIAN

BLACK

HISPANIC

WHITE

Note: The average cases per 100 adults represents the sum of the prevalence of six pre-existing conditions associated with high risk of severe illness among patients that contract COVID-19: asthma, chronic kidney disease, chronic obstructive pulmonary disease, coronary heart disease, diabetes, and obesity. Quartiles are calculated based on comparisons using national data on the 26,962 Census tracts in the 500 largest U.S. cities with at least 500 residents and 250 civilian workers. Poverty data is drawn from estimates created by the U.S. Census. Source: 500 Cities Project, CDC (2019 Release); American Community Survey 5-Year Estimates, U.S. Census Bureau (2019 Release).

Common Good Labs

CITATIONS

1 The Center for Disease Control and Prevention. (2020, April 19). 500 Cities: Local Data for Better Health. Retrieved from The Center for Disease Control and Prevention website: https://www.cdc.gov/500cities/

2 The Census Bureau. (2020, April 19). Census Tracts. Retrieved from The Census Bureau website: https://www2.census.gov/geo/pdfs/education/CensusTracts.pdf

3 The Center for Disease Control and Prevention. (2020, April 19). Coronavirus Disease 2019 (COVID-19). Retrieved from The Center for Disease Control and Prevention website: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html
  The Center for Disease Control and Prevention. (2020, April 19). 500 Cities: Local Data for Better Health. Retrieved from The Center for Disease Control and Prevention website: https://www.cdc.gov/500cities/definitions/health-outcomes.htm

4 Schwartz, N. (2020, April 16). 'Nowhere to Hide' as Unemployment Permeates the Economy. New York Times. Retrieved from The New York Times website: https://www.nytimes.com/2020/04/16/business/economy/unemployment-numbers-coronavirus.html

5 The Bureau of Labor Statistics. (2020, April 19). Table B-1. Employees on nonfarm payrolls by industry sector and selected industry detail. Retrieved from https://www.bls.gov/news.release/empsit.t17.htm

6 The Federal Reserve. (2019). Report on the Economic Well-Being of U.S. Households in 2018 - May 2019, Dealing with Unexpected Expenses. [Report]. Washington, D.C. Retrieved from The Federal Reserve website: https://www.federalreserve.gov/publications/2019-economic-well-being-of-us-households-in-2018-dealing-with-unexpected-expenses.htm

7 Harvey, C. (2019). Unlocking the Potential of Emergency Savings Accounts. AARP: Washington, D.C. Retrieved from the AARP website: https://www.aarp.org/content/dam/aarp/ppi/2019/10/unlocking-potential-emergency-savings-accounts.doi.10.26419ppi.00084.001.pdf

8 Hershbein, B. and Stuart, B. (2019) Recessions and Local Labor Markets. Retrieved from the American Economic Association website: https://www.aeaweb.org/conference/2020/preliminary/paper/S4bYQrab

DATA SCIENCE FOR THE
COMMON GOOD.