About the Community Opportunity Map Indicators

Overview

The Community Opportunity Map (COM), developed by Community Attributes Inc. and customized for Casey Family Programs, is an interactive mapping platform that displays publicly available community data in user-specified geographic areas across the United States. Most demographic data for the COM was compiled using the American Community Survey (ACS), 5-year estimates; other data sources include National Low Income Housing Coalition (NLIHC), Johns Hopkins University, the US Department of Agriculture, the Bureau of Labor Statistics, and the National Center for Education Statistics. See below for further information about the data sources, indicators, and geographies.

The COM is free to the public and designed to increase access to available information about communities, specifically drawing attention to **environmental and community indicators commonly associated with child maltreatment**. The information displayed in the COM does not represent an exhaustive list of community characteristics associated with child maltreatment, nor does the COM encompass all the information necessary to make critical decisions that impact communities. Instead, the COM is designed as a tool that can be utilized to inform decision-making, strategic intervention, calls to action, and stakeholder engagement to promote community health and well-being.

Questions regarding the COM, the indicators selected, the ACS, and how the COM can be used should be directed to GeographicAnalysis@casey.org. Questions regarding how the statistics are generated or technical issues using the COM should be directed to help@communityattributes.com.

About the Data Sources

The ACS is a nationally representative survey, conducted on an annual basis by the U.S. Census Bureau, measuring economic, social, housing, and demographic characteristics. The Census Bureau contacts more than 3.5 million households in the United States every year. Data collected helps communities, policymakers, and other stakeholders make data-informed decisions about resource allocation, service delivery, emergency planning, city planning, and other vital functions. For more information, see the ACS Information Guide.[1]

Additional housing data is provided by the National Low Income Housing Coalition (NLIHC), which releases annual reports on the accessibility and availability of affordable housing. The COM uses data from their *Out of Reach* reports, which provide data on the gap between low income renters' wages and how many hours they would need to work to afford the cost of rental housing in communities across the US. For more information, see https://reports.nlihc.org/oor.

The US Department of Agriculture maintains a national database on food access and other measures at the census tract level. The database informs policy makers and other stakeholders on various aspects of food security around the country. For more information, see https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data.aspx.

The National Center for Education Statistics (NCES) hosts the Common Core of Data (CCD) to provide statistics on primary, intermediate, and secondary public schools across the nation, including the number of students eligible for free or reduced price lunch. For more information, see https://nces.ed.gov/ccd/ccddata.asp.

The Johns Hopkins Coronavirus Resource Center maintains a set of data related to infections and deaths related to SARS-Cov-2 and COVID-19. For more information, please find Johns Hopkins data at https://coronavirus.jhu.edu/us-map .The status of the infection within each county drawn from Esri's COVID-19 Trends for U.S. Counties dataset. For more information, see https://www.arcgis.com/home/item.html?id=a16bb8b137ba4d8bbe645301b80e5740.

The Bureau of Labor Services' (BLS) Local Area Unemployment Statistics (LAUS) provide monthly employment statistics at the county level. For more information, see https://www.bls.gov/lau/#tables. Community Attributes Inc. created a methodology to allocate employment.

The BLS' Current Population Survey includes a 2017 Contingent Worker Supplement that surveyed employed workers to provide metro-level statistics on the prevalence of "gig" employment. For more information, see https://www.census.gov/data/datasets/time-series/demo/cps/cps-supp_cps-repwgt/cps-contingent.html.

The Indicators

The indicators displayed in the COM were carefully selected based on their association with *rates of child maltreatment* and their *availability to the public.* At least one or more of the indicators displayed in the COM are found in other national frameworks and indices that assess community health and well-being.[2]

Broadly speaking, community characteristics have an impact on child abuse and neglect rates in communities, separate from the influence of individual family characteristics. Ecological factors can pose risks to families (or act as benefits and protective factors) through such mechanisms as social support, economic distress, residential stability, lack of formal and informal community resources, and community norms related to parenting. The following section provides information on how each indicator in the COM is calculated—all data comes from the ACS, unless otherwise indicated.

Child and Family

Children under 5 in poverty was operationalized as the percentage of the population of children under the age of 5 years in a geographic area for whom poverty status is determined whose household income in the past 12 months is below the poverty level.[3]

Children without health insurance was operationalized as the percentage of the population of children under the age of 19 years in a geographic area with no health insurance coverage.[4]

Child to adult ratio was operationalized as the ratio of the number of children under the age of 14 years to the number of adults aged 21 to 64 years in a geographic area.[5]

Single mother families was operationalized as the percentage of family households who indicated a female householder, with no husband present, and living with their own children under 18 years of age.[6]

People 65 and over was operationalized as the percentage of the population over the age of 65 in a geographic area.[7]

Education

4-year HS graduation rate was operationalized as 100 minus the percentage of adults aged 16-19 years in a geographic area who are not in school or who do not have a high school diploma, general educational development (GED) diploma or alternative credential.[8]

Age 25+ without a GED was operationalized as the percentage of adults aged 25 and over in a geographic area who do not have a regular high school diploma, general educational development (GED) diploma or alternative credential.[9]

Age 25+ with HS diploma/GED was operationalized as the percentage of adults aged 25 and over in a geographic area who have a regular high school diploma, general educational development (GED) diploma or alternative credential (or higher educational attainment).[9]

Age 25+ with a bachelor's degree or more was operationalized as the percentage of adults aged 25 and over in a geographic area who have a bachelor's degree or more.[9]

Economy

Unemployment rate was operationalized as the percentage of the population aged 16 years and over in a geographic area who are in the civilian labor force and unemployed.[10]

Poverty rate was operationalized as the percentage of the population in a geographic area for whom poverty status is determined whose household income in the past 12 months is below the poverty level.[11]

Alternative work rate was operationalized as the estimated proportion of workers in a metro area who are employed in non-traditional work arrangements, including independent contractors, on-call workers, temporary help agency workers, and workers provided by contract firms.[12]

Households under 200% poverty was operationalized as the percentage of the population in a geographic area for whom poverty status is determined whose household income in the past 12 months is 200% of the poverty line or less.[13]

Median household income was operationalized as the household income value in a geographic area where half of household incomes in the past 12 months are higher and half of household incomes in the past 12 months are lower (i.e., the middle value).[14]

Housing

Work hours/week to rent a two-bedroom home at minimum wage was operationalized as the average number of hours residents in a county/metro area would need to work at minimum wage to afford a two-bedroom rental home at fair market rent.[15] This data comes from the NLIHC and is only available for a county/metro area.

Housing cost burden was operationalized as the percentage of owners and renters in a geographic area living in occupied housing units paying 30 percent or more of their household income toward their mortgage or rent, where selected monthly costs as a percentage of household income could be computed.[16]

Resident turnover was operationalized as the percentage of the population in a geographic area aged 1 year who moved in the last year.[17]

Vacant housing was operationalized as the percentage of housing units in a geographic area that are unoccupied.[18]

Accessibility

Access to healthy food was operationalized as whether residents within a given census tract live within a half mile of a grocery store or farmers market in urban areas, or 10 miles in rural areas. Data is from the US Department of Agriculture.[19]

Accessing SNAP benefits was operationalized as the number of people in a geographic area receiving SNAP (Supplemental Nutrition Assistance Program) benefits.[20]

Computer and internet access was operationalized as the number of households in a geographic area that have a computer and internet subscription in the home.[21]

Reduced and free lunch eligibility was operationalized as the percentage of students eligible for Free or Reduced lunch, reported by individual schools. Data is from the National Center for Education Statistics.[22]

Commute mode was operationalized as the number of people in a geographic area to commute by driving alone, transit, walking, carpool, or bicycle.[23]

COVID-19

Confirmed cases was operationalized as the total number of people who took a COVID-19 test and were positive in the selected area for the duration of the pandemic. Data is from the Johns Hopkins Center of Systems Science and Engineering.[24]

Confirmed deaths was operationalized as the total number of people who tested positive for COVID-19 and later died from the disease. Data is from the Johns Hopkins Center of Systems Science and Engineering.[25]

Cases/100k residents was operationalized as the proportion of confirmed cases relative to population size in a given area. It is calculated by (confirmed cases / population) x 100,000. Data is from the Johns Hopkins Center of Systems Science and Engineering.[26]

COVID trend was operationalized by simplifying the stages of pandemic outbreaks, into two trends, Increasing and Decreasing, which are determined by overall case counts, the recovery period of the disease, counts of new cases per day and rate of change in new cases per day over the previous weeks, and other epidemiological metrics. Links to the full methodology can be found in the endnotes. Data is from the Esri Living Atlas.[27]

New unemployment claims is the unemployment rate calculated by dividing the number of a given county's employed workers by its labor force and subtracting the result from 1. Data is from the Bureau of Labor Statistics' Local Area Unemployment Statistics.[28]

Allocation of unemployment claims to census tract level was performed by Community Attributes Inc. economic analysts. Contact info@communityattributes.com for additional methodology information.

The COM also includes demographic characteristics of neighborhoods that provide important context about communities, including:

- *Population[29]*
- *Foreign born[30]*
- *Racial/ethnic heterogeneity[31]*

These demographic characteristics can be applied in the COM as data layers to provide context about communities. In addition to these demographic characteristics, additional data layers to help contextualize COM indicators include:

- *Education level[9]*
- *Limited English proficiency[32]*
- *People of color[20]*
- *Population density[18]*
- *Poverty rate[11]*
- *Unemployment rate[10]*

The Level of Geography

Estimates provided in the COM are extrapolated from the Census *tract* or *block group* level. Census tracts, which generally comprise between 1,200 and 8,000 people depending on the population density, are "relatively permanent statistical subdivisions of a county or equivalent entity. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of statistical data."[33] Block groups are statistical divisions of census tracts.[34] Because some estimates in the COM are aggregated from these smaller geographic units, slight differences may exist between COM estimates and larger census-designated places such as ZIP code tabulation areas or cities.

Further, the COM allows the user to obtain information on ZIP codes as defined by the U.S. Postal Service and by congressional district. These ZIP codes do not directly map onto the ZIP code tabulation areas used by the Census Bureau; instead, ZIP code estimates for the Community Opportunity Map are derived using information on the block groups and census tracts whose geographic center lies within the user-specified ZIP code. In other words, these ZIP code estimates are approximations and will include some information on individuals residing within or outside of a given postal ZIP code.

It is also important to note that small area estimates, by their nature, carry larger margins of error. Some of this margin of error is reduced by using *5-year* estimates from the ACS, but users should still use caution when interpreting community data from the COM. The COM provides a snapshot of information, but it is best used as a supplement to additional information available about communities, especially rich, qualitative information that cannot be captured by high-level area estimates.

Reference Notes

[1] U.S. Census Bureau. (2017, October). *American Community Survey information guide*. Washington, DC: U.S. Census Bureau, U.S. Department of Commerce, Economics and Statistics Administration. Available at https://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS_Information_Guide.pdf.

[2] For example, see: U.S. Department of Housing and Urban Development. (2015). *Healthy Communities Index (HCI): Core indicators*. Available at https://www.huduser.gov/healthycommunities/sites/default/files/public/HCI%20Indicators%202015.pdf; University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation. (2017). *County health rankings & roadmaps*. Available at http://www.countyhealthrankings.org/; U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2018). *Social determinants of health*. Available at https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health; Annie E. Casey Foundation. (2018). *KIDS COUNT data center*. Available at http://datacenter.kidscount.org/; Centers for Disease Control and Prevention, Agency for Toxic Substances & Disease Registry. (2013). *The social vulnerability index*. Available at https://svi.cdc.gov/; Institute for Child, Youth and Family Policy, The Heller School, Brandeis University. (2018). *Diversitydatakids.org: Data for a diverse and equitable future*. Available at http://www.diversitydatakids.org/.

[3] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B17001: Poverty status in the past 12 months by sex by age*. Available at https://data.census.gov.

[4] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. Table B27001: Health insurance coverage status by sex and age. Available at https://data.census.gov.

[5] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B01001: Sex by age*. Available at https://data.census.gov.

[6] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B11003: Family type by presence and age of own children under 18 years*. Available at https://data.census.gov.

[7] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B01001: Sex by age*. Available at https://data.census.gov.

[8] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B14001: School enrollment by level of school for the population 3 years and over*. Available at https://data.census.gov.

[9] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B15003: Educational attainment for the population 25 years and over*. Available at https://data.census.gov.

[10] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B23025: Employment status for the population 16 years and over*. Available at https://data.census.gov.

[11] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B17021: Poverty status of individuals in the past 12 months by living arrangement*. Available at https://data.census.gov.

[12] U.S. Bureau of Labor Statistics, Current Population Survey, (2017) Contingent Worker Supplement. *Contingent Work FILE: PES1*. Available at https://www.census.gov/data/datasets/time-series/demo/cps/cps-supp_cps-repwgt/cps-contingent.html.

[13] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B17024: Age by ratio of income to poverty level in the past 12 months*. Available at https://data.census.gov.

[14] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B19013: Median household income in the past 12 months (in 2017 inflation-adjusted dollars)*. Available at https://data.census.gov.

[15] National Low Income Housing Coalition, Out of Reach: State Data. Available at https://reports.nlihc.org/oor.

[16] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B25093: Age of householder by selected monthly owner costs as a percentage of household income in the past 12 months* and *Table B25070: Gross rent as a percentage of household income in the past 12 month*s. Available at https://data.census.gov.

[17] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B07003: Geographical mobility in the past year by sex for current residence in the United States*. Available at https://data.census.gov.

[18] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B25002: Occupancy status*. Available at https://data.census.gov.

[19] U.S. Department of Agriculture, Food Access Research Atlas, (2015) Food Access Research Atlas Data Download 2015. LILATracts_halfAnd10. Available at https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data.aspx.

[20] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B19058: Public Assistant Income or Food Stamps/SNAP in the Past 12 Months for Households*. Available at https://data.census.gov.

[21] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B28003: Presence of a Computer and Type of Internet Subscription in Household*. Available at https://data.census.gov.

[22] National Center for Education Statistics, (2018-2019) Common Core of Data America's Public Schools. *Lunch Program Eligibility*. Available at https://nces.ed.gov/ccd/files.asp#Fiscal:2,LevelId:7,SchoolYearId:33,Page:1.

[23] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B08006: Sex of Workers by Means of Transportation to Work*. Available at https://data.census.gov.

[24] Johns Hopkins University, COVID-19 Data Repository by the Center of Systems Science and Engineering (CSSE), (Daily) ccsse_covid_19_daily_reports_us. *Table B25002: Confirmed*. Available at https://github.com/CSSEGISandData/COVID-19.

[25] Johns Hopkins University, COVID-19 Data Repository by the Center of Systems Science and Engineering (CSSE), (Daily) ccsse_covid_19_daily_reports_us. *Table B25002: Deaths*. Available at https://github.com/CSSEGISandData/COVID-19.

[26] Johns Hopkins University, COVID-19 Data Repository by the Center of Systems Science and Engineering (CSSE), (Daily) ccsse_covid_19_daily_reports_us. *Table B25002: Confirmed*. Available at https://github.com/CSSEGISandData/COVID-19.

[27] Esri Living Atlas, (Daily) COVID-19 Trends in Each County. Available at https://www.arcgis.com/home/item.html?id=a16bb8b137ba4d8bbe645301b80e5740.

[28] U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, (Monthly) County Data. Labor Force Data by County, not Seasonally Adjusted, Latest 14 Months. Available at http://bls.gov/lau/#tables

[29] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B01001: Sex by age*. Available at https://data.census.gov.

[30] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B05002: Place of birth by nativity and citizenship status*. Available at https://data.census.gov.

[31] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B03002: Hispanic or Latino origin by race*. Available at https://data.census.gov.

[32] U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B16002: Detailed household language by household limited English speaking status*. Available at https://data.census.gov.

[33] U.S. Census Bureau. (2012). *Geographic terms and concepts – Census tract*. Available from https://www.census.gov/geo/reference/gtc/gtc_ct.html.

[34] U.S. Census Bureau. (2012). *Geographic terms and concepts – Block group*. Available from https://www.census.gov/geo/reference/gtc/gtc_bg.html.