

About the Community Opportunity Map indicators

Notes on indicator selection, data sources, and limitations

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. Data for the COM was compiled using the American Community Survey (ACS), 5-year estimates. (See below for further information about the ACS, the indicators displayed, and selected geographies.)

This resource is free to the public and designed to increase access to available information about communities, specifically drawing attention to **ecological 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 of the information necessary to make critical decisions that impact communities. Instead, the COM is designed as one tool of many 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 American Community Survey (ACS)

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 to obtain ACS information, which then 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

The indicators

The indicators displayed in the COM were carefully selected based on their association with *rates of child maltreatment* at different levels of geography and their *availability to the public*. Further, at least one or more of the indicators displayed in the COM are found in other national frameworks and indexes that assess community health and well-being, such as the Healthy Communities Index from the U.S. Department of Housing and Urban Development, County Health Rankings and Roadmaps from the Robert Wood Johnson Foundation, the Social Determinants of Health framework from the Office of Disease Prevention and Health Promotion

(U.S. Department of Health and Human Services), KIDS COUNT from the Annie E. Casey Foundation, the Social Vulnerability Index from the Agency for Toxic Substances & Disease Registry (Centers for Disease Control and Prevention), and the Child Opportunity Index from Brandeis University.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, the source of the information, and the research studies and other reference material which justifies the inclusion of each indicator in the COM.

Vacant housing

The association between vacant housing and child maltreatment is often conceptualized as related to inadequate social support/cohesion, physical separation between residents, and neighborhood disinvestment and deterioration. It is hypothesized that neighborhoods with higher rates of vacant housing have diminished social support networks, greater disorganization and decreased collective efficacy, which create the conditions for increased child maltreatment.³ Drawing upon the research literature, *vacant housing* in the COM was operationalized as the percentage of housing units in a geographic area that are unoccupied.⁴

Housing cost burden

The association between housing cost burden and child maltreatment is often conceptualized as related to economic stress and housing instability. It is hypothesized that residents in neighborhoods experiencing greater financial burdens in affording mortgages and rent prices have increased financial strain and economic and/or housing insecurity, which create the conditions for psychological distress and household dysfunction associated with child maltreatment.⁵ Drawing upon the research literature, *housing cost burden* in the COM 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.⁶

Resident turnover

The association between residential turnover and child maltreatment is often conceptualized as related to the loss of social support and neighborhood cohesion. It is hypothesized that neighborhoods with greater turnover (i.e., more residents moving in and out of a community) have decreased collective efficacy, informal social control, and community-modeled parenting norms, all of which can contribute to increased rates of child maltreatment.⁷ Drawing upon the research literature, *resident turnover* in the COM

was operationalized as the percentage of the population in a geographic area aged 1 year and over minus those living in the same house as 1 year prior.⁸

Single mother families

The association between household structure (e.g., single mother families) and child maltreatment is often conceptualized as related to increased difficulty with child supervision. It is hypothesized that neighborhoods with higher rates of single mother family households have concentrated disadvantage in terms of social and instrumental supports and resources, which contribute to parenting challenges (e.g., increased psychological stress, maternal depression) and increased child maltreatment.⁹ Drawing upon the research literature, *single mother families* in the COM 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.¹⁰

Child to adult ratio

The association between the child-to-adult ratio and child maltreatment is often conceptualized as related to the child care “burden,” or the difficulty in finding available neighbors, family members, or other community residents to help supervise children. It is hypothesized that neighborhoods with higher numbers of children relative to adults who could provide supervision increases the economic and/or psychological strain on households through a lack of informal resources to provide regular or emergency child care and supervision, a risk factor for child maltreatment, in particular child neglect.¹¹ Drawing upon the research literature, the *child to adult ratio* in the COM 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.¹²

People 65 and over

The association between the population aged 65 and over and child maltreatment is not dissimilar from that of the child-to-adult ratio. It is hypothesized that communities with fewer adults over the age of 65, a proximal measure of retired individuals, who could provide regular or emergency supervision for neighborhood children increases the economic and/or psychological strain on households through a lack of informal supervision resources, a risk factor for child neglect.¹³ Drawing upon the research literature, *people 65 and over* in the COM was operationalized as the percentage of the population over the age of 65 in a geographic area.¹⁴

Unemployment rate

The association between the unemployment rate and child maltreatment is often conceptualized as related to concentrated disadvantage, neighborhood instability, and a lack of available community resources. It is hypothesized that neighborhoods with higher rates of unemployment face economic hardship, straining households as caregivers

struggle to make ends meet, and increasing the likelihood of child maltreatment.¹⁵ Drawing upon the research literature, *unemployment rate* in the COM 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.¹⁶

Adults with HS diploma/GED

The association between the educational attainment of a population (e.g., adults with a high school diploma or GED) and child maltreatment is often conceptualized as related to available economic and human capital. It is hypothesized that neighborhoods with lower rates of educational attainment have decreased access to quality employment and wages, as well as diminished knowledge of normative parenting behavior which is often acquired via social support networks — all of which pose risk for increased rates of child maltreatment.¹⁷ Drawing upon the research literature, *adults with HS diploma/GED* in the COM 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).¹⁸

Poverty rate

The association between the poverty rate and child maltreatment is often conceptualized as related to economic distress and neighborhood deterioration. It is hypothesized that concentrated disadvantage in neighborhoods (e.g., higher poverty rates) may result in diminished social support networks, a lack of available resources, and greater neighborhood disorganization, which operate as risk factors for child maltreatment.¹⁹ Drawing upon the research literature, *poverty rate* in the COM 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.²⁰

The COM also includes a number of additional indicators, including:

- *Population*²¹
- *Foreign born*²²
- *Racial/ethnic heterogeneity*.²³

These demographic characteristics of neighborhoods are separated from the Healthy Community Indicators because they are not commonly associated with rates of child maltreatment, though they provide important context about communities and potentially impact strategic decision making. That being said, studies do exist that demonstrate a significant association between each of the additional demographic characteristics and rates of child maltreatment, though *how* so tends to differ depending on the analysis.

The level of geography

Estimates provided in the Community Opportunity Map 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.”²⁴ Block groups are statistical divisions of census tracts.²⁵ 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. These ZIP codes do not directly map on to 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.

For more information

For more information regarding the COM, the indicators selected, the ACS, and how the COM can be used, contact GeographicAnalysis@casey.org.

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 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 See Coulton, C. J., Korbin, J. E., Su, M., & Chow, J. (1995). Community level factors and child maltreatment rates. *Child Development*, 66, 1262-1276; Coulton, C. J., Korbin, J. E., & Su, M. (1999). Neighborhoods and child maltreatment: A multi-level study. *Child Abuse & Neglect*, 23(11), 1019-1040; Deccio, G., Horner, W. C., & Wilson, D. (1994). High-risk neighborhoods and high-risk families: Replication research related to the human ecology of child maltreatment. *Journal of Social Service Research*, 18, 123-137; Ernst, J. S. (2001). Community-level factors and child maltreatment in a suburban county. *Social Work Research*, 25(3), 133-142; Freisthler, B., Needell, B., & Gruenewald, P. J. (2005). Is the physical availability of alcohol and illicit drugs related to neighborhood rates of child maltreatment? *Child Abuse & Neglect*, 29, 1049-1060; Klein, S., & Merritt, D. H. (2014). Neighborhood racial & ethnic diversity as a predictor of child welfare system involvement. *Children and Youth Services Review*, 42, 95-105; Korbin, J. E., Coulton, C. J., Chard, S., Platt-Houston, C., & Su, M. (1998). Impoverishment and child maltreatment in African American and European American neighborhoods. *Development and Psychopathology*, 10, 215-233; Lery, B. (2009). Neighborhood structure and foster care entry risk: The role of spatial scale in defining neighborhoods. *Children and Youth Services Review*, 31, 331-337; Molnar, B. E., Goerge, R. M., Gilsanz, P., Hill, A., Subramanian, S. V., Holton, J. K., ... & Beardslee, W. R. (2016). Neighborhood-level social processes and substantiated cases of child maltreatment. *Child Abuse & Neglect*, 51, 41-53; Morton, C. M., Simmel, C., & Peterson, N. A. (2014). Neighborhood alcohol outlet density and rates of child abuse and neglect: Moderating effects of access to substance abuse services. *Child Abuse & Neglect*, 38, 952-961; Thurston, H., Freisthler, B., Bell, J., Tancredi, D., Romano, P. S., Miyamoto, S., & Joseph, J. G. (2017). Environmental and individual attributes associated with child maltreatment resulting in hospitalization or death. *Child Abuse & Neglect*, 67, 119-136; Warren, E. J., Drazen, Y. N., & Curtis, M. A. (2017). Public housing agency preferences for the homeless as a policy lever: Examining county-level housing subsidy receipt and maltreatment rates. *Children and Youth Services Review*, 78, 81-88; and Zuravin, S. J. (1989). The ecology of child abuse and neglect: Review of the literature and presentation of data. *Violence and Victims*, 4(2), 101-120.
- ⁴ U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B25002: Occupancy status*. Available at <https://factfinder.census.gov>.
- ⁵ Ernst, J. S. (2000). Mapping child maltreatment: Looking at neighborhoods in a suburban county. *Child Welfare*, 79, 555-572.
- ⁶ 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 months*. Available at <https://factfinder.census.gov>.
- ⁷ See Coulton et al. (1995); Coulton et al. (1999); Ernst (2000); Ernst (2001); Freisthler, B., Bruce, E., & Needell, B. (2007). Understanding the geospatial relationship of neighborhood characteristics and rates of maltreatment for black, Hispanic, and white children. *Social Work*, 52(1), 7-16; Freisthler, B., & Maguire-Jack, K. (2015). Understanding the interplay between neighborhood structural factors, social processes, and alcohol outlets on child physical abuse. *Child Maltreatment*, 20(4), 268-277; Lery, B. (2009); Maguire-Jack, K., & Font, S. A. (2017). Community and individual risk factors for physical child abuse and child neglect: Variations by poverty status. *Child Maltreatment*, 22(3), 215-226; and Zuravin (1989).

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- ⁹ See Ernst (2000); Ernst (2001); Freisthler, B. (2004). A spatial analysis of social disorganization, alcohol access, and rates of child maltreatment in neighborhoods. *Children and Youth Services Review*, 26, 803-819; Freisthler et al. (2007); Freisthler & Maguire-Jack (2015); Freisthler, B., Midanik, L. T., & Gruenewald, P. J. (2004). Alcohol outlets and child physical abuse and neglect: Applying routine activities theory to the study of child maltreatment. *Journal of Studies on Alcohol*, 2, 586-592; Garbarino, J., & Crouter, A. (1978). Defining the community context for parent-child relations: The correlates of child maltreatment. *Child Development*, 49(3), 604-616; Klein, S. (2011). The availability of neighborhood early care and education resources and the maltreatment of young children. *Child Maltreatment*, 16(4), 300-311; Korbin et al. (1998); Lery, (2009); and Molnar, B. E., Buka, S. L., Brennan, R. T., Holton, J. K., & Earls, F. (2003). A multilevel study of neighborhoods and parent-to-child physical aggression: Results from the project on human development in Chicago neighborhoods. *Child Maltreatment*, 8, 84-97.
- ¹⁰ 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://factfinder.census.gov>.
- ¹¹ See Coulton et al. (1995); Coulton et al. (1999); Freisthler et al. (2005); Freisthler et al. (2007); Freisthler & Maguire-Jack (2015); Klein (2011); Klein & Merritt (2014); Lery, (2009); and Morton et al. (2014).
- ¹² U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B01001: Sex by age*. Available at <https://factfinder.census.gov>.
- ¹³ See Coulton et al. (1995); Coulton et al. (1999); Freisthler et al. (2007); Klein (2011); Klein & Merritt (2014); Lery, (2009); and Morton et al. (2014).
- ¹⁴ U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B01001: Sex by age*. Available at <https://factfinder.census.gov>.
- ¹⁵ See Barboza, G. E. (2016). The geography of child maltreatment: A spatiotemporal analysis using Bayesian hierarchical analysis with integrated nested Laplace approximation. *Journal of Interpersonal Violence*, 14(1), 1-31; Coulton et al. (1995); Coulton et al. (1999); Ernst (2001); Freisthler (2004); Freisthler et al. (2004); Freisthler et al. (2007); Freisthler & Maguire-Jack (2015); Gillham, B., Tanner, G., Cheyne, B., Freeman, I., Rooney, M., & Lambie, A. (1998). Unemployment rates, single parent density, and indices of child poverty: Their relationship to different categories of child abuse and neglect. *Child Abuse & Neglect*, 22(2), 79-90; Klein (2011); Korbin et al. (1998); Krishnan, V., & Morrison, K. B. (1995). An ecological model of child maltreatment in a Canadian province. *Child Abuse & Neglect*, 19(1), 101-113; Lery, (2009); Maguire-Jack, K., & Klein, S. (2015). Parenting and proximity to social services: Lessons from Los Angeles County in the community context of child neglect. *Child Abuse & Neglect*, 45, 35-45; and Molnar et al. (2003).
- ¹⁶ 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://factfinder.census.gov>.
- ¹⁷ See Barboza (2016); Barnhart, S., & Maguire-Jack, K. (2016). Single mothers in their communities: The mediating role of parenting stress and depression between social cohesion, social control and child maltreatment. *Children and Youth Services Review*, 70, 37-45; Drake, B., & Pandey, S. (1996).

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- ¹⁹ See Aron, S. B., McCrowell, J., Moon, A., Yamano, R., Roark, D. A., Simmons, M., ... & Drake, B. (2010). Analyzing the relationship between poverty and child maltreatment: Investigating the relative performance of four levels of geographic aggregation. *Social Work Research*, 34(3), 169-179; Barboza (2016); Barnhart & Maguire-Jack (2016); Coulton et al. (1995); Coulton et al. (1999); Drake & Pandey (1996); Ernst (2000); Ernst (2001); Farrell, C. A., Fleegler, E. W., Monuteaux, M. C., Wilson, C. R., Christian, C. W., & Lee, L. K. (2017). Community poverty and child abuse fatalities in the United States. *Pediatrics*, 139(5), 1-9; Freisthler (2004); Freisthler et al. (2004); Freisthler et al. (2005); Freisthler et al. (2007); Freisthler & Maguire-Jack (2015); Garbarino & Crouter (1978); Klein (2011); Klein & Merritt (2014); Korbin et al. (1998); Lery, (2009); Maguire-Jack & Font (2017); Maguire-Jack & Klein (2015); Maguire-Jack, K., Lanier, P., Johnson-Motoyama, M., Welch, H., & Dineen, M. (2015). Geographic variation in racial disparities in child maltreatment. *Child Abuse & Neglect*, 47, 1-13; Molnar et al. (2003); Molnar et al. (2016); Morton et al. (2014); Thurston et al. (2017); Warren et al. (2017); and Zuravin (1989).
- ²⁰ 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://factfinder.census.gov>.
- ²¹ U.S. Census Bureau, American Community Survey, (Annual) American Community Survey 5-Year Estimates. *Table B01001: Sex by age*. Available at <https://factfinder.census.gov>.
- ²² 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://factfinder.census.gov>.
- ²³ 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://factfinder.census.gov>.
- ²⁴ U.S. Census Bureau. (2012). *Geographic terms and concepts – Census tract*. Available from https://www.census.gov/geo/reference/gtc/gtc_ct.html.
- ²⁵ U.S. Census Bureau. (2012). *Geographic terms and concepts – Block group*. Available from https://www.census.gov/geo/reference/gtc/gtc_bg.html.

