

HEALTHY COMMUNITIES DATA AND INDICATORS PROJECT

Short Title: Income Inequality

Full title: Distribution of household income relative to the number of households, expressed on a 0 to 1 scale (Gini Index)

1. **Healthy Community Framework:** Communities have health and social equity
2. **What is our aspirational goal:** Social equity
3. **Why is this important to health?**

Description of significance and health connection

Income is linked to acquiring resources for healthy living. Both household income and the distribution of income across a society independently contribute to the overall health status of a community. On average Western industrialized nations with large disparities in income distribution tend to have poorer health status than similarly advanced nations with a more equitable distribution of income. Approximately 119,200 (5%) of the 2.4 million U.S. deaths in 2000 are attributable to income inequality. The pathways by which income inequality act to increase adverse health outcomes are not known with certainty, but policies that provide for a strong safety net of health and social services have been identified as potential buffers.

Summary of evidence

Many cross sectional, ecological studies have compared western industrialized countries, including the United States, along a gradient of a health outcome and the corresponding gradient of income inequality using the Gini index, a measure of inequality of income and wealth. A Gini index of 1 represents maximum inequality or unequal distribution of income; a Gini index of 0 represents maximum equality when each household has the same income. Studies using this index often show a linear relationship between increasing income inequality and poorer health outcomes such as life expectancy, infant mortality, obesity, mental illness, homicide, etc. Several, large longitudinal studies that followed healthy participants at baseline were combined to estimate the number of U.S. deaths in 2000 attributable to income inequality.

Key References

- Commission on the Social Determinants of Health. Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health. Geneva: World Health Organization; 2008. http://www.who.int/social_determinants/thecommission/finalreport/en/index.html. Accessed on February 4, 2013.
- Wilkinson R, Pickett K. The Spirit Level: Why Equal Societies Almost Always Do Better. London, Pilgrim Press; 2009.
- Galea S, Tracy M, Hoggatt KJ, DiMaggio C, Karpati A. Estimated deaths attributable to social factors in the United States. *Am J Public Health* 2011;101(8):1456-1465.

4. What is the indicator?

Detailed definition: Cumulative percentage of household income relative to the cumulative percentage of the number of households expressed on a 0 to 1 scale called the Gini Index (0 = equal incomes for all households, 1 = all income is concentrated in 1 household)

Data Description:

- Data source: Gini Index Data from the American Community Survey: Table B19083. <http://factfinder2.census.gov>
- Years available: 2005-2007 (3-year), 2008-2010 (3-year), and 2006-2010 (5-year)
- Updated: at 3 and 5-year intervals
- Geographies available: Cities/towns, counties, regions (derived), state
- Stratification: race/ethnicity not available

Data for the Gini index, including margin of error, were downloaded from the American Community Survey (ACS). Three-year data were collected for cities, towns, and counties over 60,000 in population for the intervals 2005-2007 and 2008-2010. Five-year ACS data 2006-2010 were also collected for cities and towns with populations generally greater than 20,000. Standard errors, relative standard errors, and 95% upper and lower confidence intervals were calculated from margins of error. Regional estimates were based on county groupings associated with California metropolitan planning organizations as reported in the *2010 California Regional Progress Report* (http://www.dot.ca.gov/hq/tpp/offices/orip/Collaborative%20Planning/Files/CARegionalProgress_2-1-2011.pdf). Information on the median household income for places and counties (obtained from table DP03 of the ACS) and their grouping in deciles are included for those users interested in comparing the Gini index within the same income decile.

5. Limitations

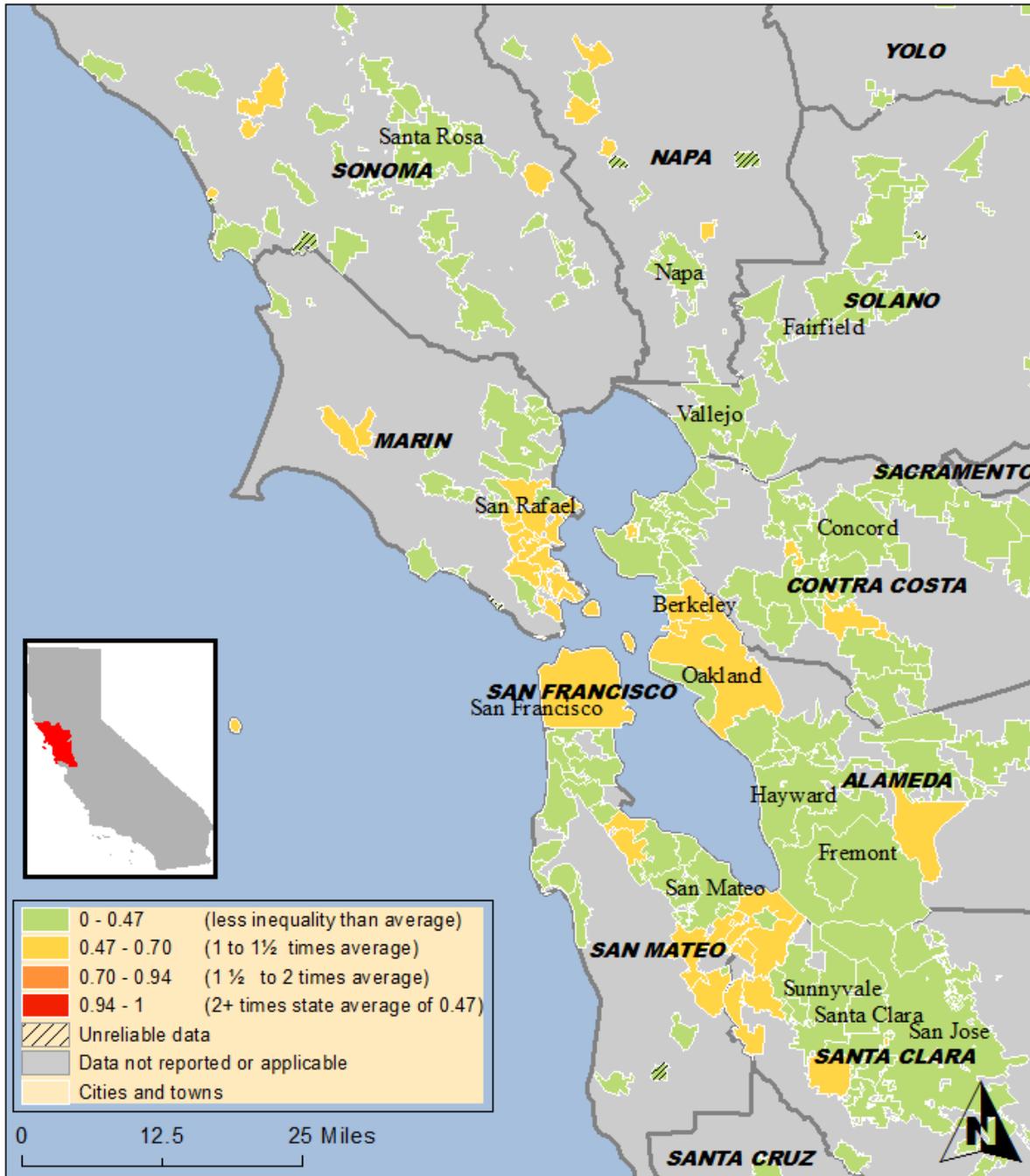
Calculations of the Gini coefficient from the American Community Survey at geographies below census place were not statistically reliable. There was no race/ethnicity information available for the Gini coefficient.

6. Projects using this indicator

University of Wisconsin Population Health Institute, Robert Wood Johnson Foundation, Community Catalyst. *County Health Rankings & Roadmaps: A Healthier Nation County by County*. Madison, WI: County Health Rankings & Roadmaps; 2012. <http://www.countyhealthrankings.org> Accessed on 7/2/12.

Examples of Maps, Figures, and Tables

Map 1: Distribution of Household Income Relative to the Number of Households, Expressed on a 0 to 1 Scale Called the Gini Index, Cities and Towns, Bay Area Region, 2006-2010



Source: U.S. Census Bureau, 2006-2010 American Community Survey

Analysis by CDPH and UCSF

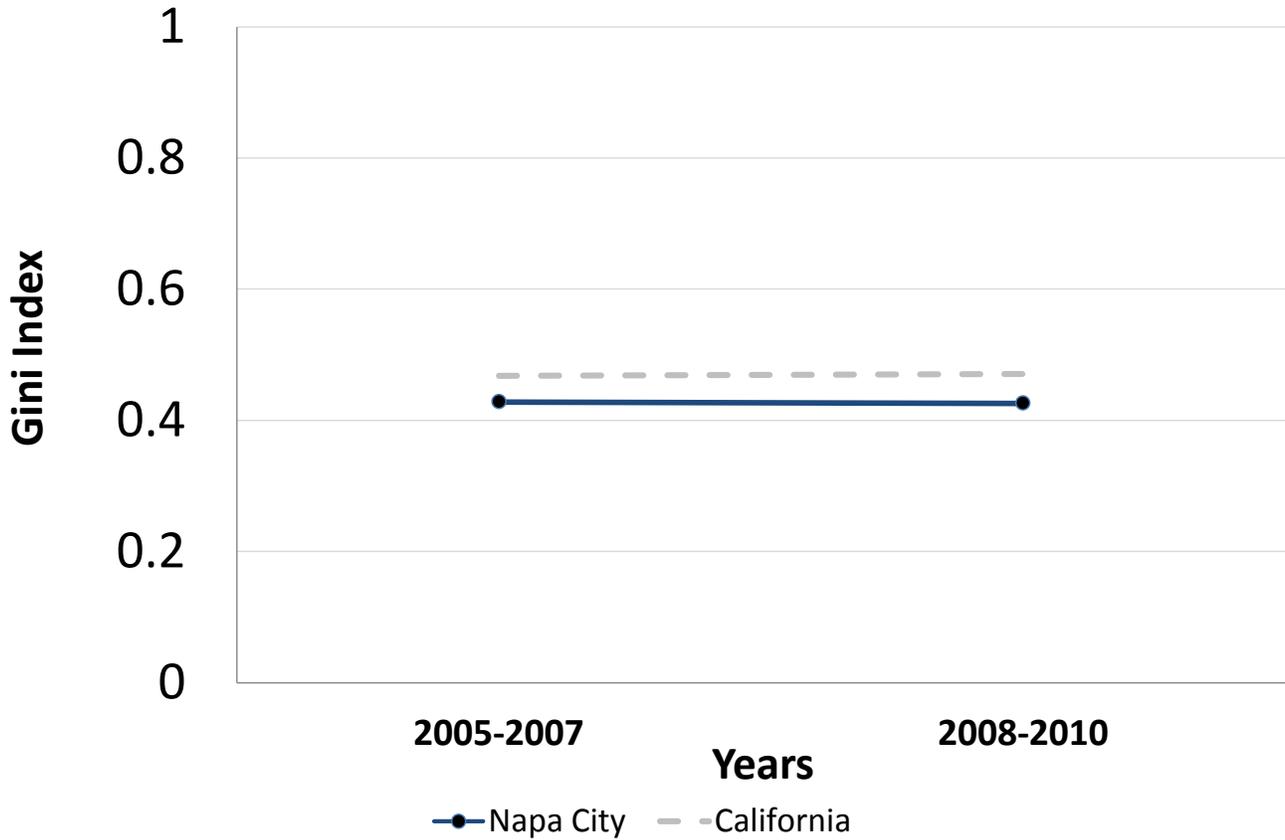
Table 1. Distribution of Household Income Relative to the Number of Households, Expressed on a 0 to 1 Scale (Gini Index) Stratified by Household Income Decile, by City/Town, San Mateo County, 2006-2010

City/Town	Median household income (Dollars)	Household income California decile ^a	Gini Index	Inequality
Montara	161,630	1	0.33	Lower
La Honda	147,188	1	0.37	
Foster	111,563	1	0.39	
Ladera	182,321	1	0.40	
El Granada	125,833	1	0.40	
Emerald Lake Hills	165,052	1	0.41	
Highlands-Baywood Park	149,844	1	0.41	
Moss Beach	102,365	1	0.41	
San Carlos	110,929	1	0.43	
Hillsborough	209,231	1	0.50	
Menlo Park	107,860	1	0.51	
Atherton	223,611	1	0.53	
West Menlo Park	121,094	1	0.54	
Portola Valley	167,227	1	0.56	
Woodside	186,359	1	0.56	Higher
Colma	83,750	2	0.31	Lower
Pacifica	90,472	2	0.39	
Belmont	99,913	2	0.42	
Brisbane	90,156	2	0.43	
San Mateo	83,850	2	0.44	
Half Moon Bay	92,875	2	0.45	Higher
Daly City	74,987	3	0.37	Lower
San Bruno	75,576	3	0.38	
South San Francisco	74,158	3	0.39	
Broadmoor	75,000	3	0.43	
Millbrae	80,763	3	0.43	
Redwood City	75,231	3	0.46	
Burlingame	81,849	3	0.48	Higher
North Fair Oaks	52,932	6	0.45	
East Palo Alto	48,734	7	0.44	
Loma Mar	NA	NA ^b	0.06 ^c	
Pescadero	NA	NA	0.38	
California			0.47	

Data Source: U.S. Census Bureau, American Community Survey (2006-2010)

^a Deciles were calculated using income from all cities in California; cities in San Mateo fall within the shown deciles. ^b NA = not available. ^c Not statistically reliable (Relative Standard Error > 30%)

Figure 1. Distribution of Household Income Relative to the Number of Households, Expressed on a 0 to 1 Scale (Gini Index), Napa City, 2005-2007 and 2008-2010



Data Source: U.S. Census Bureau, American Community Survey (2005-2007 and 2008-2010)