

2018 Social Determinants of Health Addendum

Prepared by the Warren County Health District
September 27, 2018



Warren County Health District

A report prepared to supplement the 2016 Warren County Community Health Assessment

Introduction

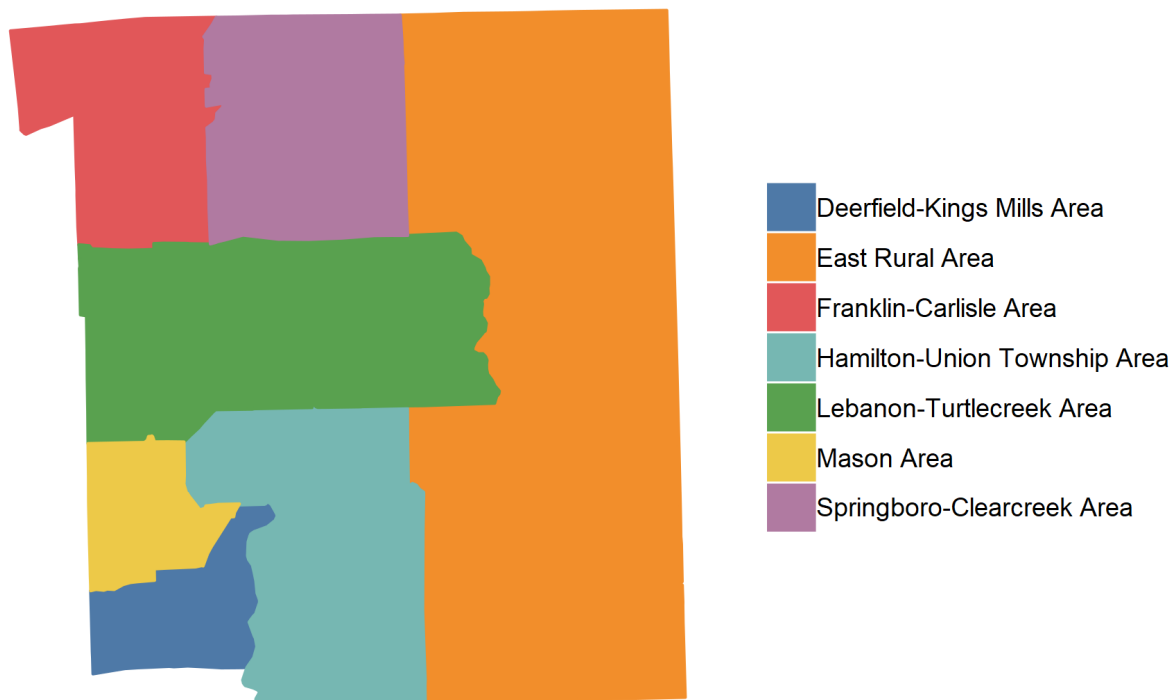
Social Determinants of Health are the conditions that affect quality of life, health, functioning, and risks in a community. Social Determinants of Health impact where people live, work, and play, even if people are not aware of their influence.¹

The annual update to the *Warren County Community Health Assessment 2016* utilizes data to describe how the environment in Warren County has changed over the last year and how areas of the county have changed in relation to one another. This report will describe the five categories of the social determinants of health as described in Healthy People 2020. These categories are Social and Community Context, Economic Stability, Health and Health Care, Education, and Neighborhood & Built Environment.

Intracounty Comparisons

The social determinants of health are evaluated at the intracounty level to draw comparisons between the differing areas of Warren County. Census Tract-level data is used for mapping to see how areas compare to one another. In order to generate tables that can be understood, census tracts have been combined into a series of geographical areas that are similar to one another. The result is seven different areas that are similar in culture and population size.

Geographical Areas in Warren County, OH



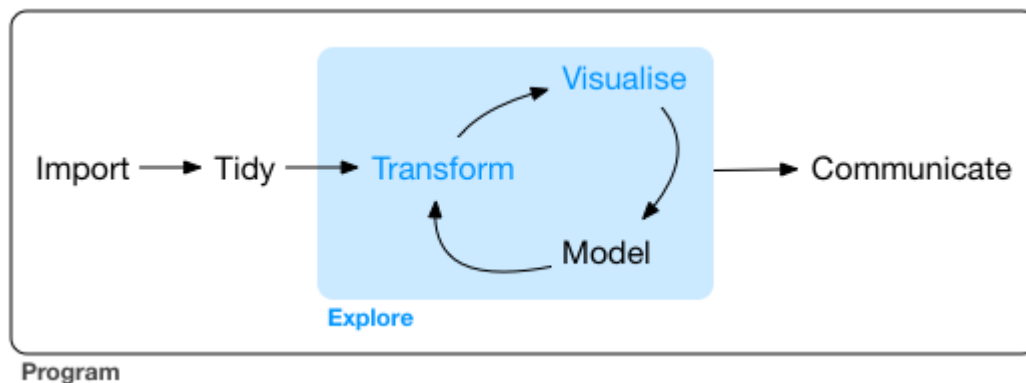
Methods

This report is generated using a series of datasets from various public and non-public datasets. These data have been accessed in the most raw version of data that is available or the data was retrieved from a web API. This ensures that analyses that are conducted are being done on the original data and are not calculations based on the calculations of others.

All of the code for the generation of these reports is developed using the R Statistical Programming Language² and the R Studio IDE³. The code used for the development of this report is available on [GitHub](#). A copy of this report will be maintained on the Warren County Health District [WEBSITE](#).

Data Analysis

The data that has been compiled is analyzed using multiple methodologies. Data is first assessed to identify what information can be found in the raw information. The data then goes through the following process⁴ :



Data is summarily analyzed at the inter-county and intra-county level to identify differences. These types of analysis allow an exploration of the county for sub-county data and identify areas that are more likely to have health disparities.

Data Sets

The following data sets have been used to develop this analysis:

- 2016 American Community Survey⁵
- 2016 Area Health Resources Files⁶
- 1960 - 2016 Uniform Crime Reporting Program Data⁷



Social and Community Context

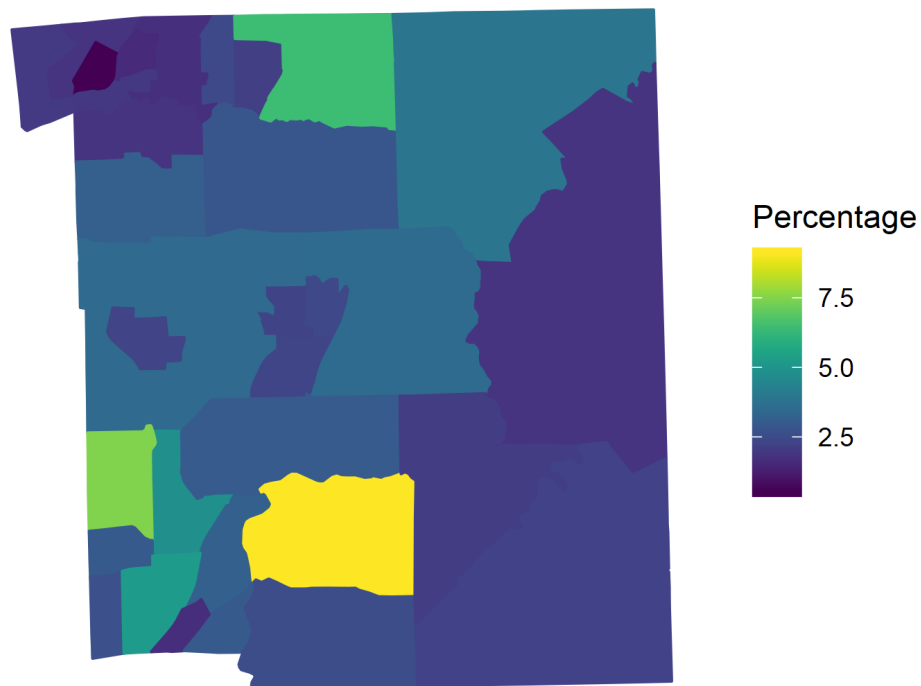
Social and community context includes the social settings in which people live and act. It includes social relationships and the social, religious, cultural, and occupational institutions with which they interact. An important aspect of an individual's social context is the sense of cohesion and interpersonal trust among community members and an individual's sense that they belong and are supported in their community. Social cohesion is strongly influenced by racial discrimination and inequality.¹

Population

Understanding the populations of the different areas of the county allows one to understand where populations are distributed throughout the county. These data provide context for the locations where the population resides in the county.

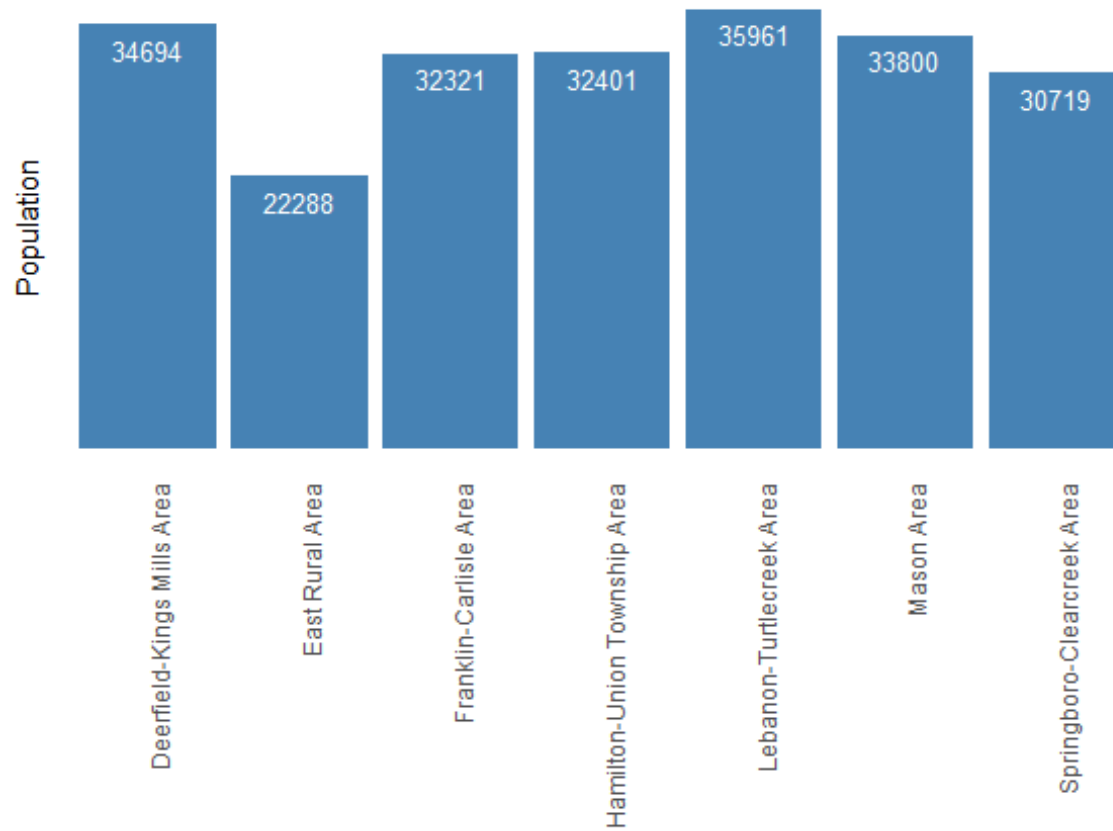
Map

Percentage of Population by Census Tract
Warren County, OH 2016



Source: 2016 American Community Survey, U.S. Census Bureau

Chart



Table

Table 1.1 Population in Warren County, OH in 2016 by County Area

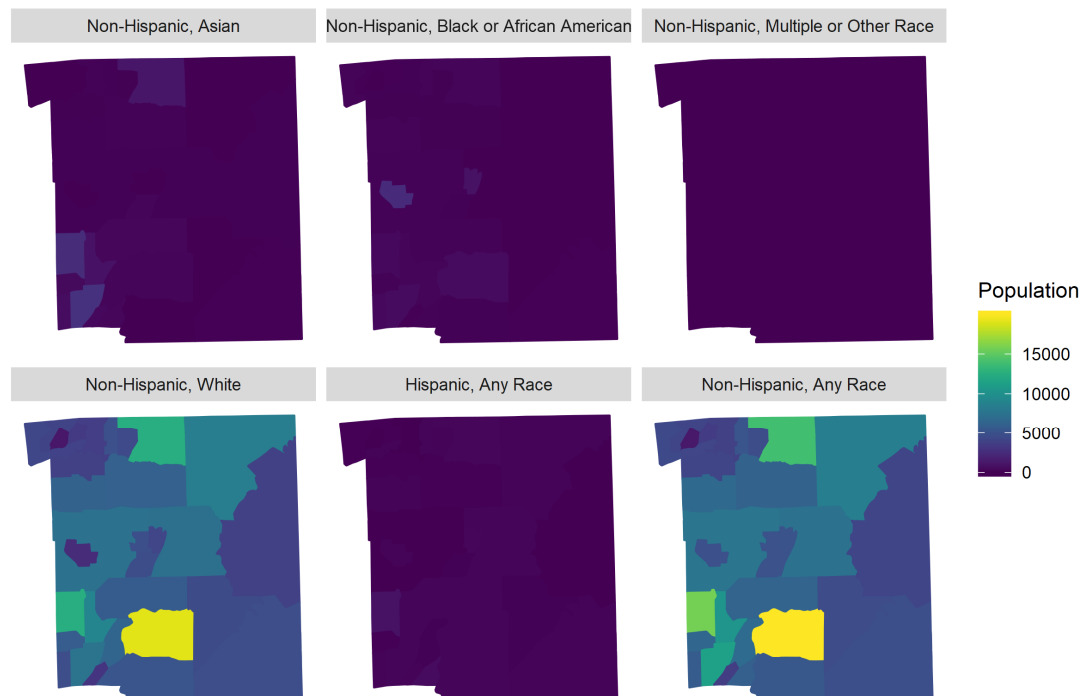
Area	Population	Percentage
Deerfield-Kings Mills Area	34694	15.6
East Rural Area	22288	10.0
Franklin-Carlisle Area	32321	14.5
Hamilton-Union Township Area	32401	14.6
Lebanon-Turtlecreek Area	35961	16.2
Mason Area	33800	15.2
Springboro-Clearcreek Area	30719	13.8

Race and Ethnicity

Some racial and ethnic minority populations experience health disparities and problems at disproportionately higher rates than majority populations. Understanding the geographical and proportional distribution of minority populations allows services and programs to be targeted in a manner that is culturally and linguistically appropriate.

Map

Population Density by Race by Census Tract
Warren County, OH 2016



Source: 2016 American Community Survey, U.S. Census Bureau

Table

Table 1.2 Population by Race in Warren County, OH in 2016 by County Area

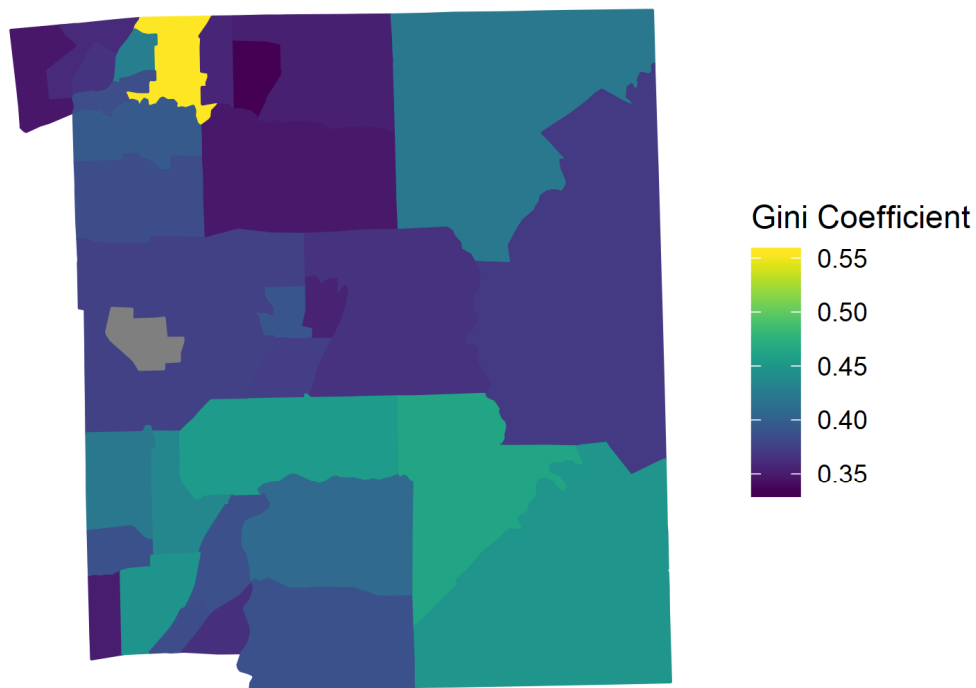
	Race	Count	Percentage
	Hispanic, Any Race	5630	2.57
	Non-Hispanic, American Indian & Alaskan Native	119	0.05
	Non-Hispanic, Asian	10607	4.84
	Non-Hispanic, Black or African American	7514	3.43
	Non-Hispanic, Multiple or Other Race	734	0.34
	Non-Hispanic, Native Hawaiian or Pacific Islander	43	0.02
	Non-Hispanic, White	194312	88.74

Gini Coefficient of Income Inequality

The Gini coefficient is a measure of statistical dispersion that can be used to represent the wealth distribution of a population. Most commonly this measurement is used to identify areas of inequality. A Gini coefficient of 1 is complete income inequality, where one person has all of the income and everyone else has none. A Gini coefficient of 0 is complete equality where everyone has the same income.

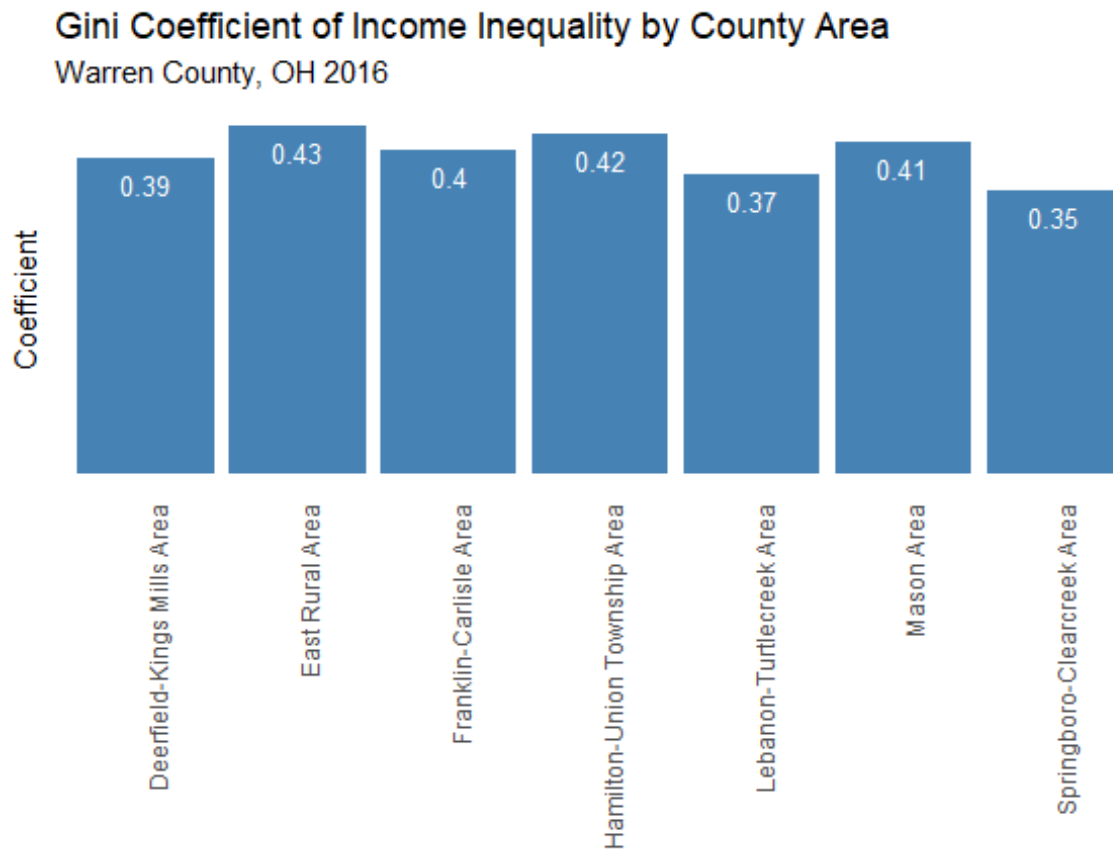
Map

Gini Coefficient of Income Inequality by Census Tract
Warren County, OH 2016



Source: 2016 American Community Survey, U.S. Census Bureau

Chart



Table

Table 1.3 Gini Coefficeint of Income Inequality by County Area Warren County, OH in 2016 by County Area

Area	Coefficient
Deerfield-Kings Mills Area	0.390
East Rural Area	0.430
Franklin-Carlisle Area	0.400
Hamilton-Union Township Area	0.420
Lebanon-Turtlecreek Area	0.370
Mason Area	0.410
Springboro-Clearcreek Area	0.350



Economic Stability

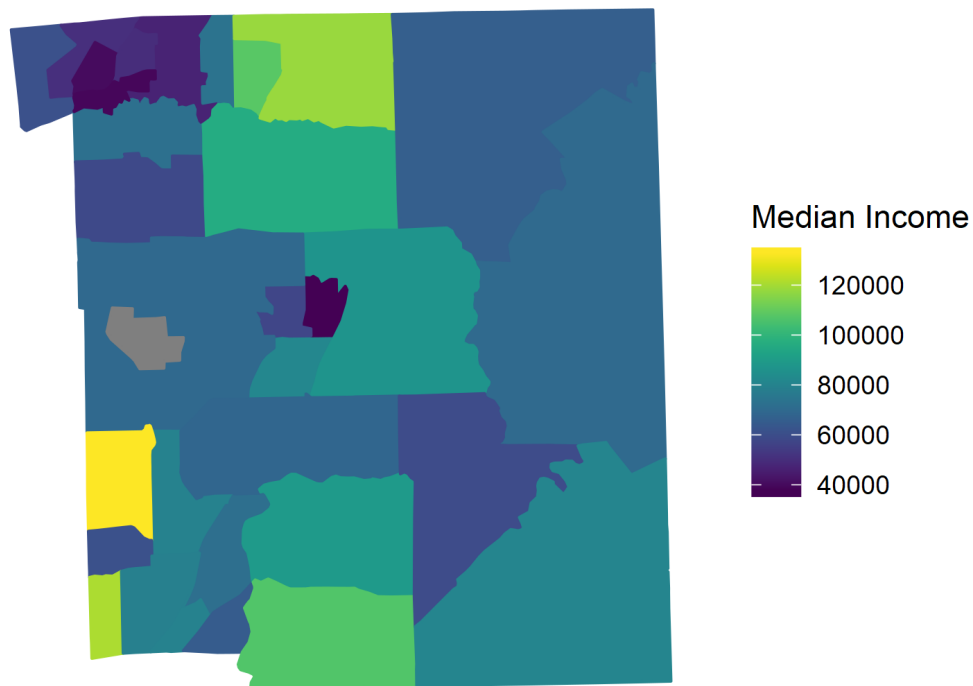
Economic stability is the state or condition of having adequate money, goods, and means of support. Economic stability includes measures such as poverty, employment status, food security and housing stability.¹

Median Income

Median income is the amount that divides the income distribution into equal amounts. Half of all incomes are below the median, and half are above the median. Median family income is the income of the householder and all other individuals older than 15 who are related to the householder. Median family income is usually higher than median household income because many households consist of only one person. Median family income is an indicator of the general socioeconomic status of a community.

Map

Median Income in USD by Census Tract
Warren County, OH 2016

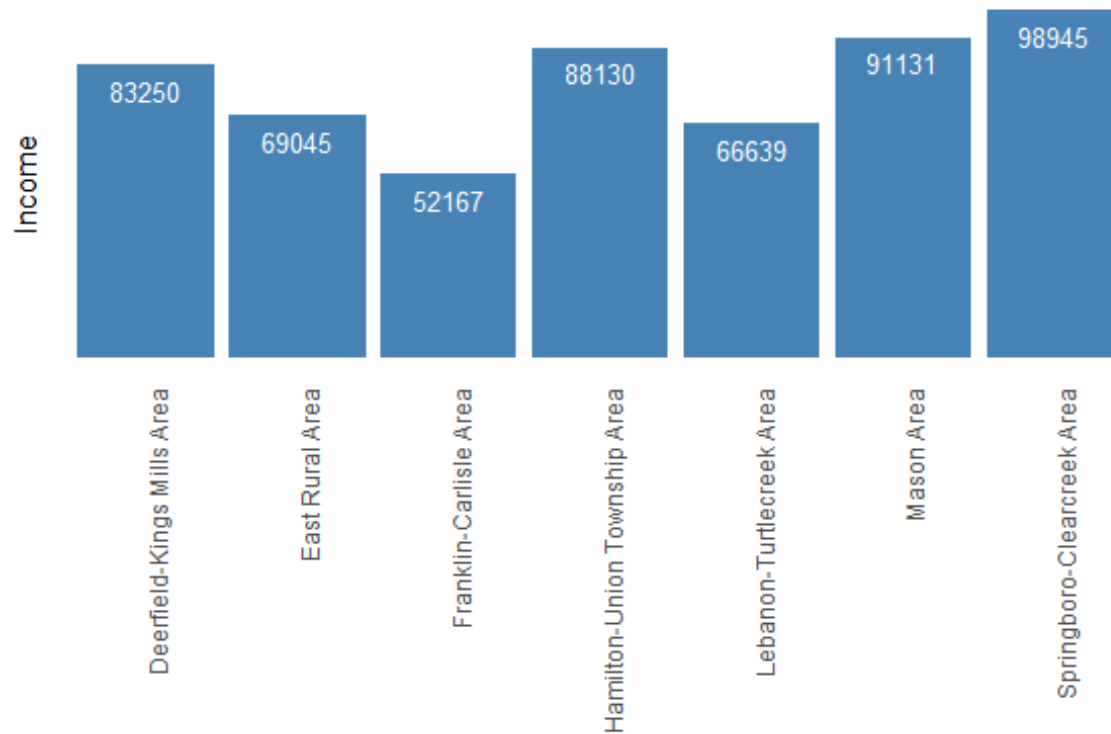


Source: 2016 American Community Survey, U.S. Census Bureau

Chart

Average Median Income by County Area

Warren County, OH 2016



Table

Table 2.1 Population in Warren County, OH in 2016 by County Area

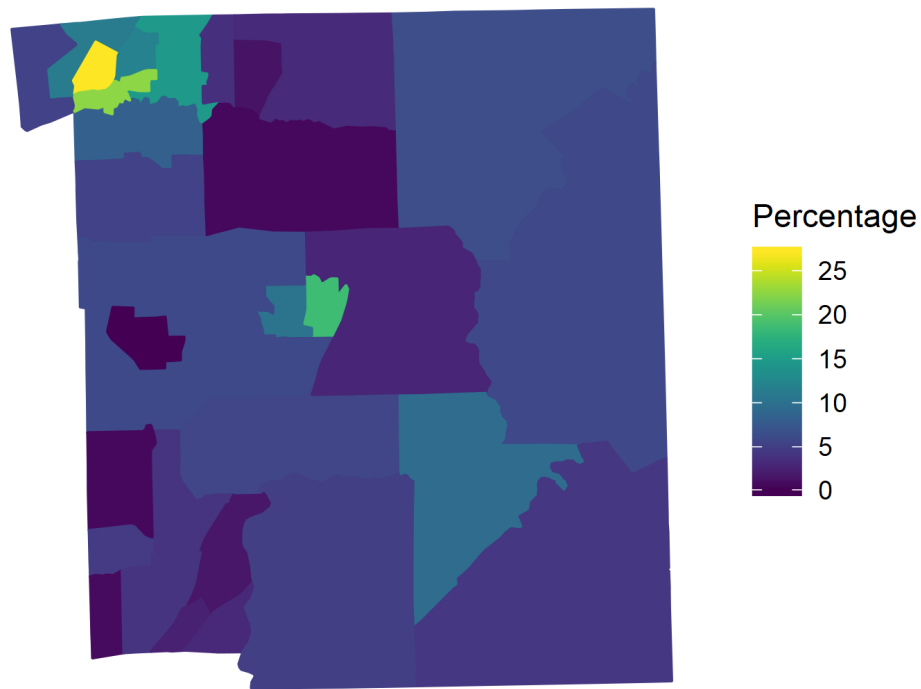
Area	Income
Deerfield-Kings Mills Area	83250
East Rural Area	69045
Franklin-Carlisle Area	52167
Hamilton-Union Township Area	88130
Lebanon-Turtlecreek Area	66639
Mason Area	91131
Springboro-Clearcreek Area	98945

Poverty

Poverty has a close association with health. Individuals with low incomes are more likely to have limitations with routine activities due to chronic illness, are more likely to be obese, and have elevated blood lead levels. The income to poverty ratio is the proportion of people and families whose incomes fall below a poverty threshold, adjusted for family size. If income is half of the threshold, the family is at 50% poverty. Poverty is one of the social determinants of health and interacts with health in a number of ways. A community's income to poverty ratio is one way to assess its overall level of health.

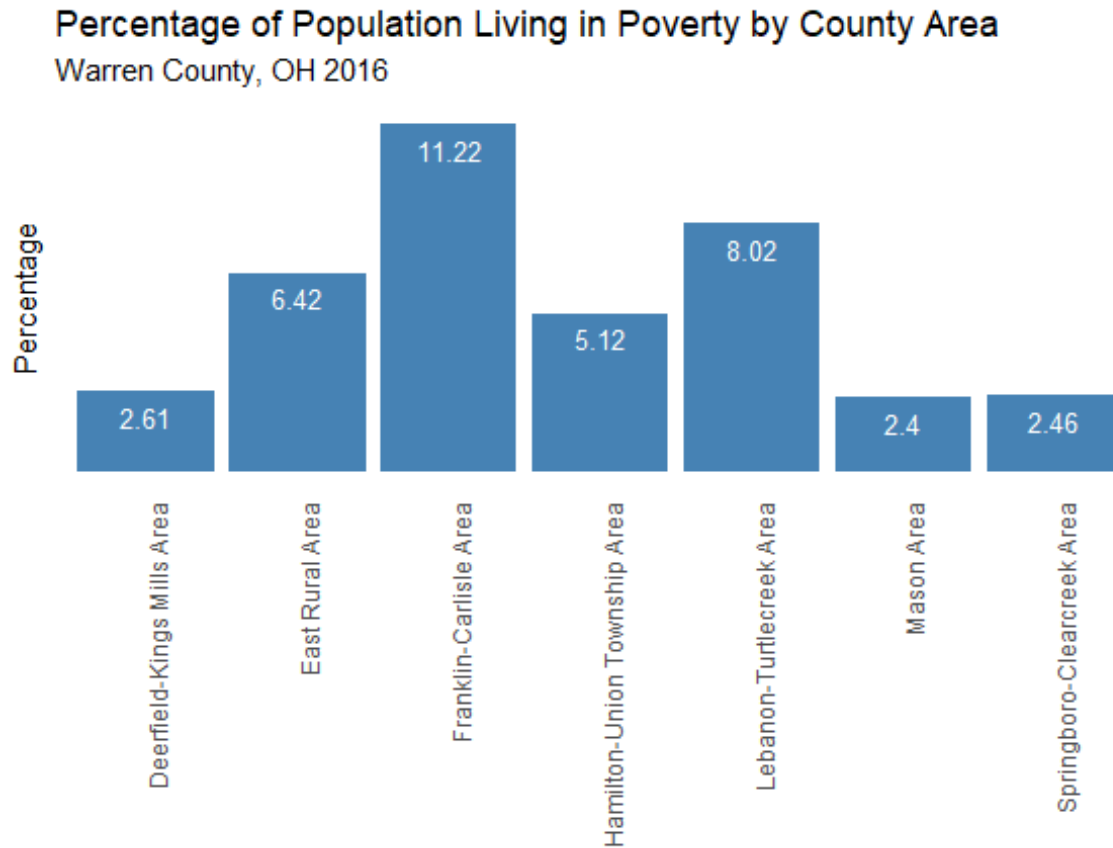
Map

Percentage of Population Living in Poverty by Census Tract
Warren County, OH 2016



Source: 2016 American Community Survey, U.S. Census Bureau

Chart



Table

**Table 2.2 Poverty by County Area in Warren County, OH in 2016
by County Area**

Area	Count	Population	Percentage
Deerfield-Kings Mills Area	903	34630	2.61
East Rural Area	1421	22140	6.42
Franklin-Carlisle Area	3605	32123	11.22
Hamilton-Union Township Area	1654	32299	5.12
Lebanon-Turtlecreek Area	2438	30412	8.02
Mason Area	809	33660	2.40
Springboro-Clearcreek Area	751	30468	2.46



Health and Healthcare

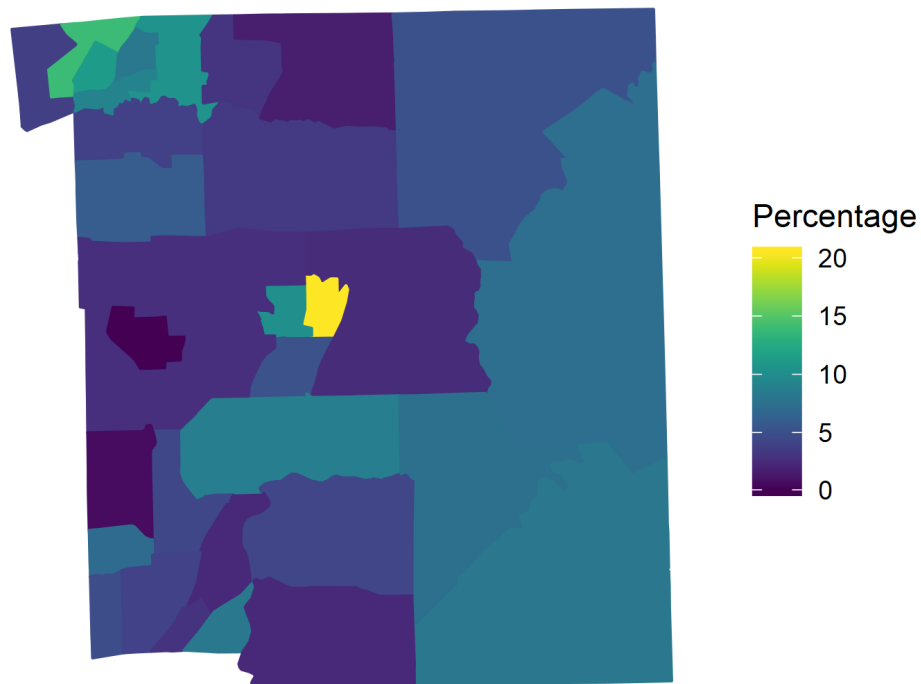
Most people need medical care at some time in their lives. Access to affordable, quality health care is important to physical, social, and mental health. Health insurance helps individuals and families access needed primary care, specialists, and emergency care, but does not ensure access on its own—it is also necessary for providers to offer affordable care, be available to treat patients, and be in relatively close proximity to patients.¹

Insurance

Access to health care coverage is impacted by medical insurance coverage. Lack of insurance can lead to not getting needed preventive care, or not seeking care in a timely manner. Healthy People 2020 objective AHS-1 calls for 100% health care coverage.

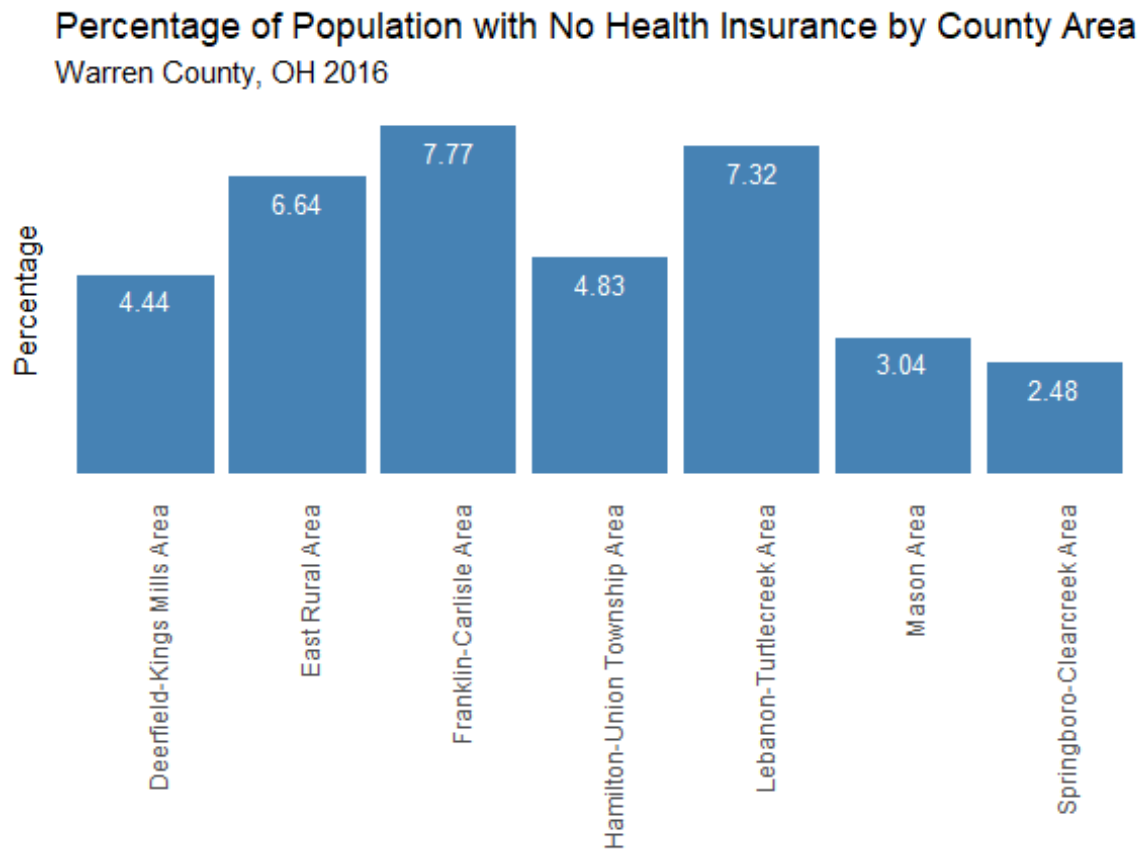
Map

Percentage of Individuals with No Insurance by Census Tract
Warren County, OH 2016



Source: 2016 American Community Survey, U.S. Census Bureau

Chart



Table

Table 3.1 Percentage of Uninsured by County Area in Warren County, OH in 2016 by County Area

Area	Count	Population	Percentage
Deerfield-Kings Mills Area	1537	34630	4.44
East Rural Area	1469	22140	6.64
Franklin-Carlisle Area	2496	32123	7.77
Hamilton-Union Township Area	1561	32299	4.83
Lebanon-Turtlecreek Area	2225	30412	7.32
Mason Area	1023	33660	3.04
Springboro-Clearcreek Area	756	30468	2.48



Neighborhood and Built Environment

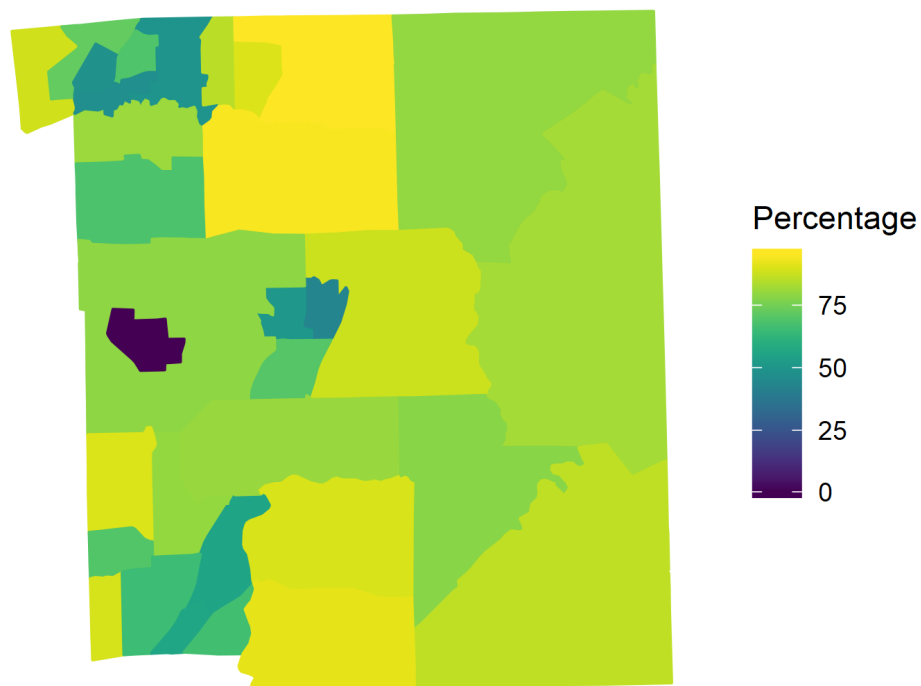
Neighborhood and built environments have health impacts for the people who live there. Aspects of neighborhood environments include walkability, land use mix and urbanity, retail, recreational areas, restaurants, fast food outlets, cultural and education institutions, and pollution, such as from traffic or waste sites. Healthy People 2020 classifies neighborhood and built environment factors into these four categories.¹

Owner-Occupied Housing

People who own their own home are more likely to be in a stable housing arrangement. Home ownership is associated with educational achievement, civic participation, greater levels of well-being, and less likelihood of being a victim of crime.

Map

Percentage of Owner-Occupied Housing Units by Census Tract
Warren County, OH 2016

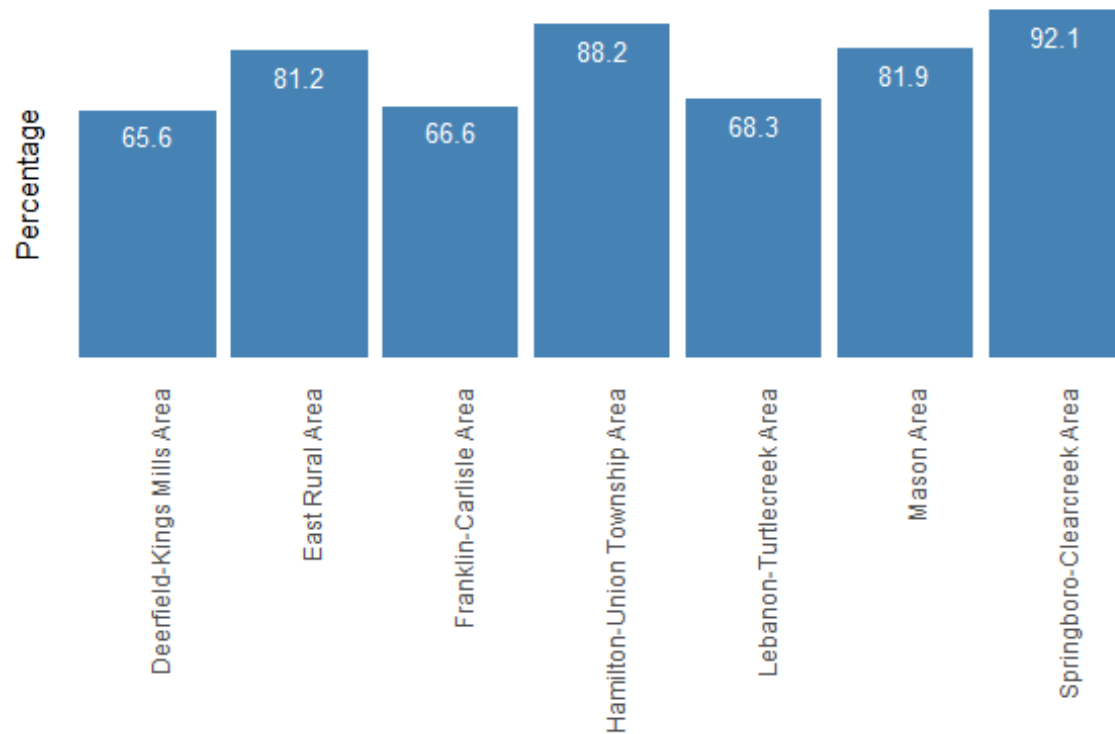


Source: 2016 American Community Survey, U.S. Census Bureau

Chart

Percentage of Owner-Occupied Housing Units by County Area

Warren County, OH 2016



Table

Table 4.1 Percentage of Owner-Occupied Housing Units in Warren County, OH in 2016 by County Area

Area	Owner-Occupied Houses	Total Houses	Percentage
Deerfield-Kings Mills Area	8755	13352	65.60
East Rural Area	6887	8481	81.20
Franklin-Carlisle Area	8390	12600	66.60
Hamilton-Union Township Area	9748	11052	88.20
Lebanon-Turtlecreek Area	7672	11229	68.30
Mason Area	10185	12439	81.90
Springboro-Clearcreek Area	9495	10313	92.10

New Houses

Newer housing stock indicates development in an area and a greater likelihood that the houses are made with safer materials and are less likely to contain harmful chemicals. Houses that are 15 years or older are more likely to need costly repairs.

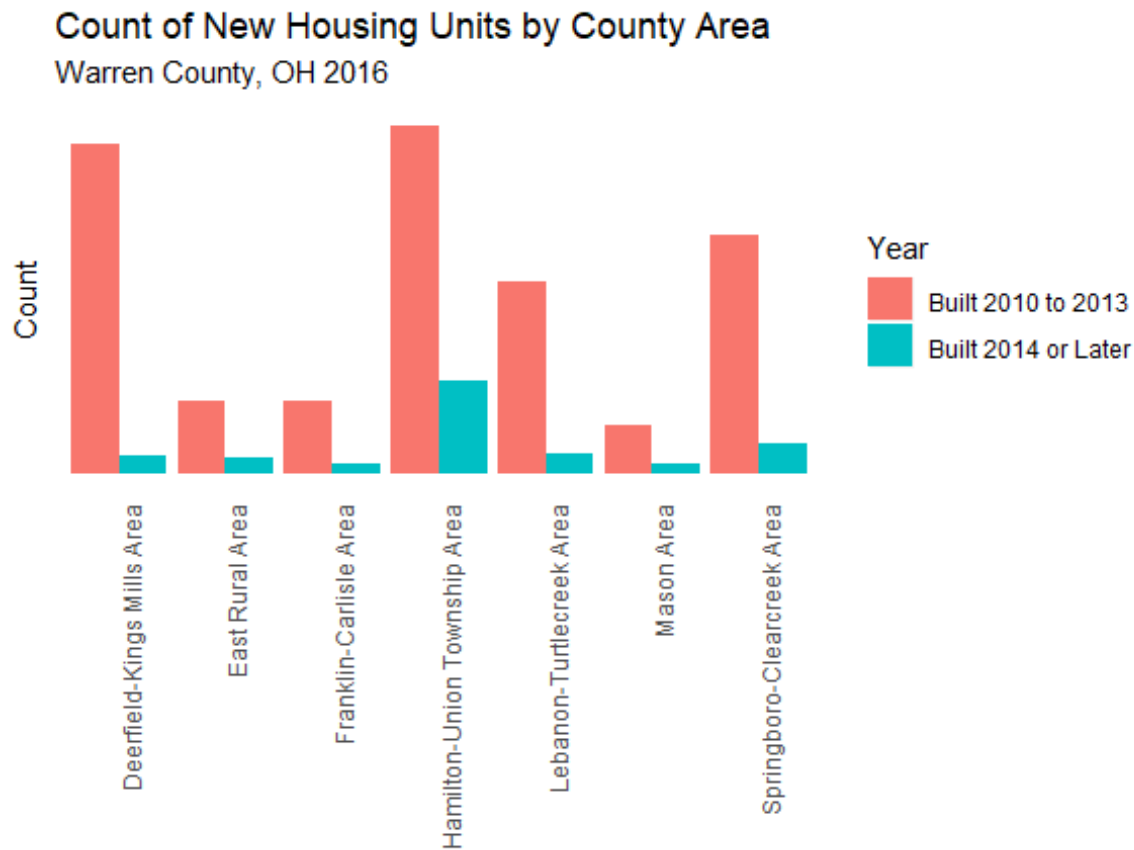
Map

Number of New Housing Units by Census Tract
Warren County, OH 2016



Source: 2016 American Community Survey, U.S. Census Bureau

Chart



Table

Table 4.2 Age of Housing Units in Warren County, OH in 2016 by County Area

Area	Built 2014 or Later	Built 2010 to 2013	Built 2000 to 2009	Built Before 2000
Deerfield-Kings Mills Area	41	728	3156	9992
East Rural Area	36	161	1799	6979
Franklin-Carlisle Area	22	161	1959	11412
Hamilton-Union Township Area	207	766	5417	5176
Lebanon-Turtlecreek Area	44	423	2712	8987
Mason Area	24	109	4204	8430
Springboro-Clearcreek Area	66	527	3134	7075

Crime

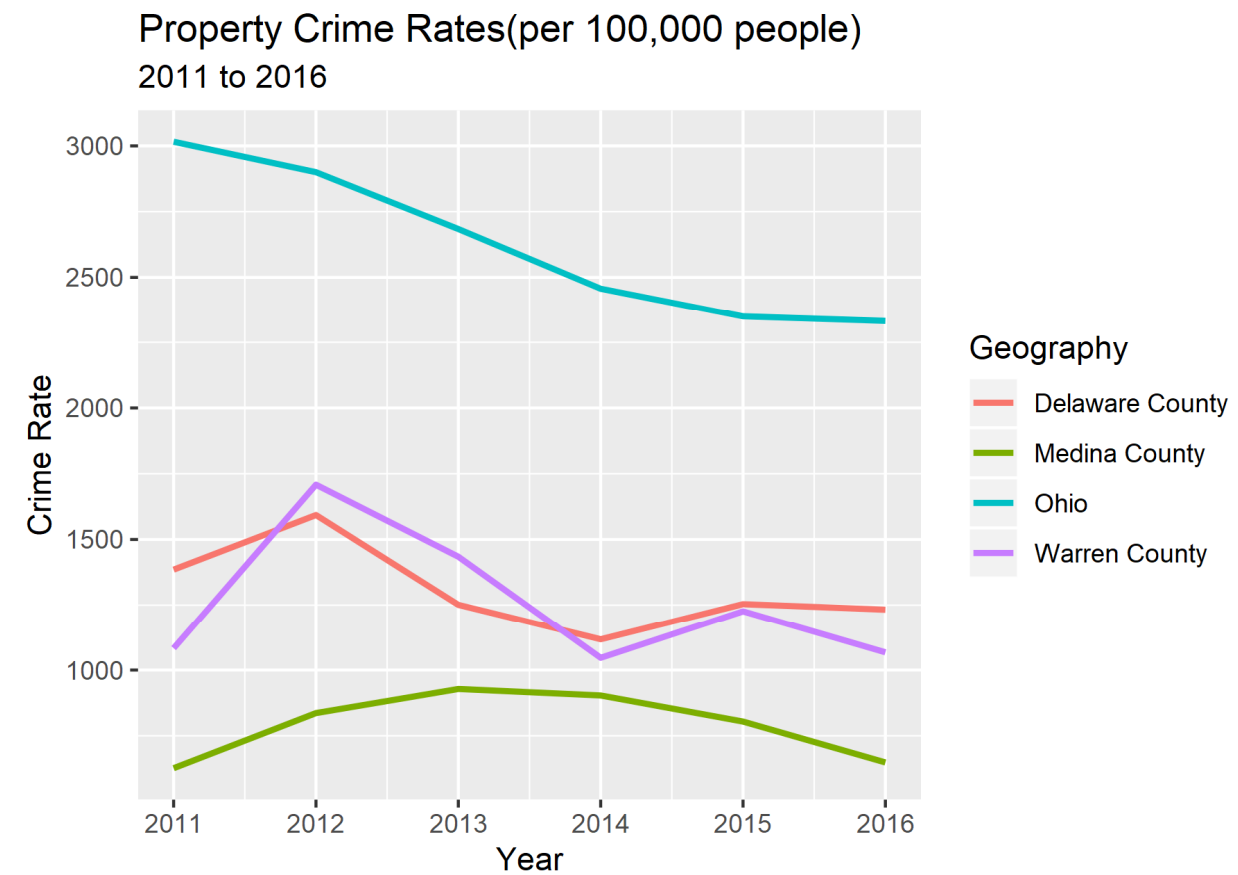
Crime and violence are aspects of the neighborhood and built environments that impact overall health. A sense of security and well-being is an important social determinant of health.

Table 4.3 Crime in Warren County, OH in 2016

Geography	Population	# of Property Crimes	Property Crime Rate	# of Violent Crimes	Violent Crime Rate
Ohio	11631449	271175	2331.4	159763	1373.5
Warren County	227168	2425	1067.5	851	374.6
Medina County	183317	1189	648.6	517	282.0
Delaware County	175635	2165	1232.7	818	465.7

Property Crime

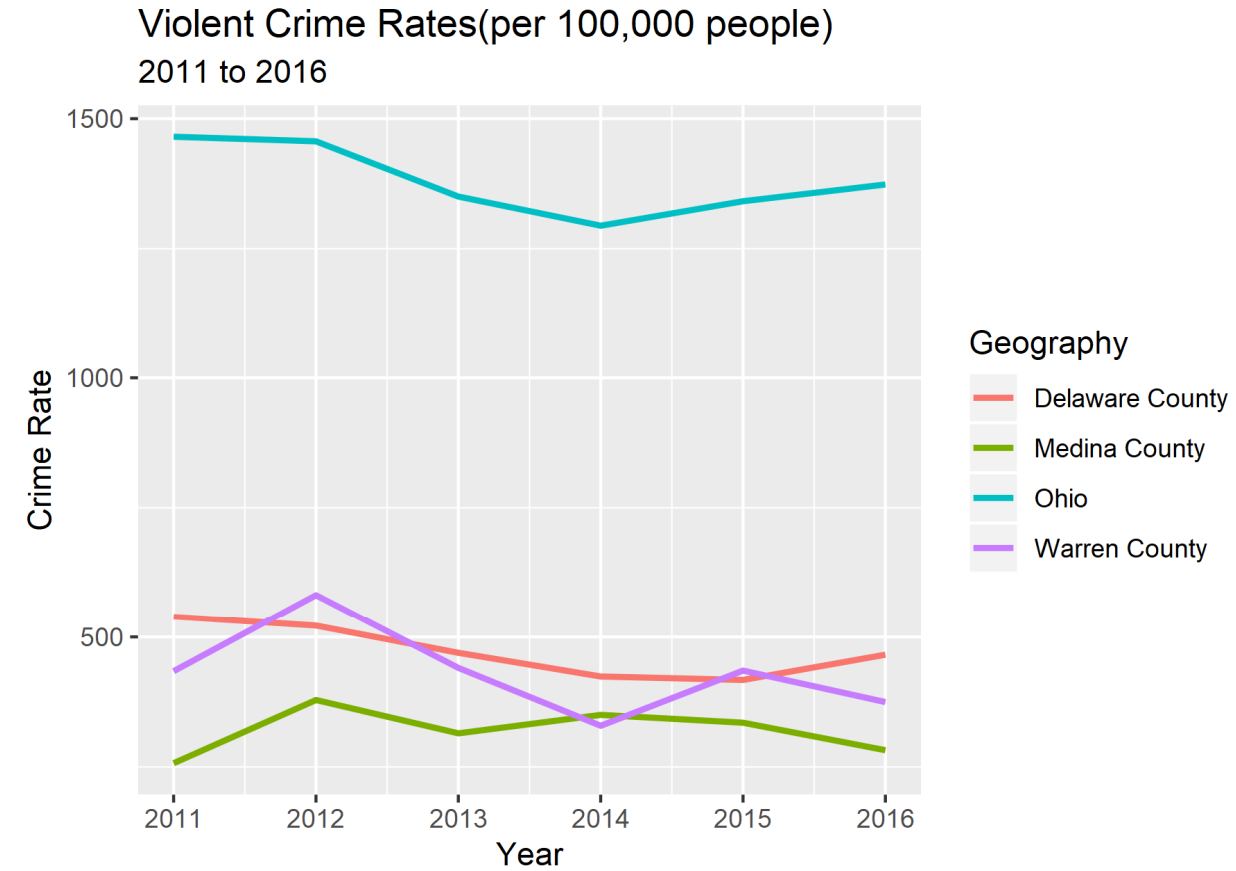
Property crime includes household burglary, motor vehicle and property theft.



Source: FBI Uniform Crime Reporting Program

Violent Crime

Violent crime involves force or the threat of force and includes murder, rape and sexual assault, robbery, aggravated assault, and assault.



Source: FBI Uniform Crime Reporting Program



Education

The amount of education a person has is often called “educational attainment” in academic literature. Just as education and educational attainment can effect health outcomes, a person’s health can affect the amount of education that he or she is able to attain. The CDC reports that “Health-related factors such as hunger, physical and emotional abuse, and chronic illness can lead to poor school performance”.^{1,8}

Educational Attainment

Higher educational attainment is associated with better health outcomes. Education impacts health literacy, knowledge, and behaviors, improves income and work conditions, and contributes to social support and a sense of control.

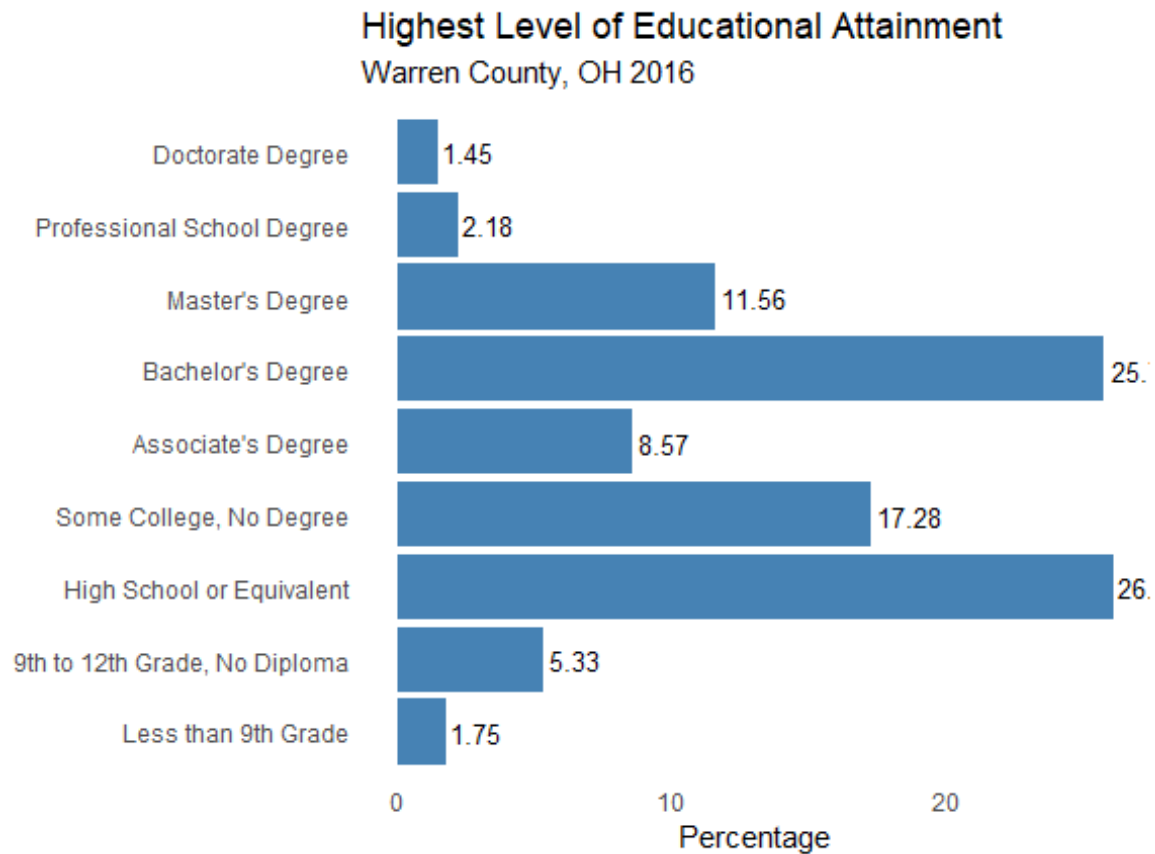
Map

Highest Level of Educational Attainment by Census Tract
Warren County, OH 2016



Source: 2016 American Community Survey, U.S. Census Bureau

Chart



Table

Table 5.1 Educational Attainment in Warren County, OH in 2016 by County Area

Education	Count	Percentage
Less than 9th Grade	2588	1.75
9th to 12th Grade, No Diploma	7877	5.33
High School or Equivalent	38588	26.10
Some College, No Degree	25555	17.28
Associate's Degree	12673	8.57
Bachelor's Degree	38132	25.79
Master's Degree	17098	11.56
Professional School Degree	3221	2.18
Doctorate Degree	2140	1.45

References

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2. R Core Team. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing; 2014. [HTTP://WWW.R-PROJECT.ORG/](http://www.R-project.org/).
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