

# Health Element

Clark County Comprehensive Growth Management Plan

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## *Growing Healthier*

Pathways from the built environment to health:

## Economic Opportunity



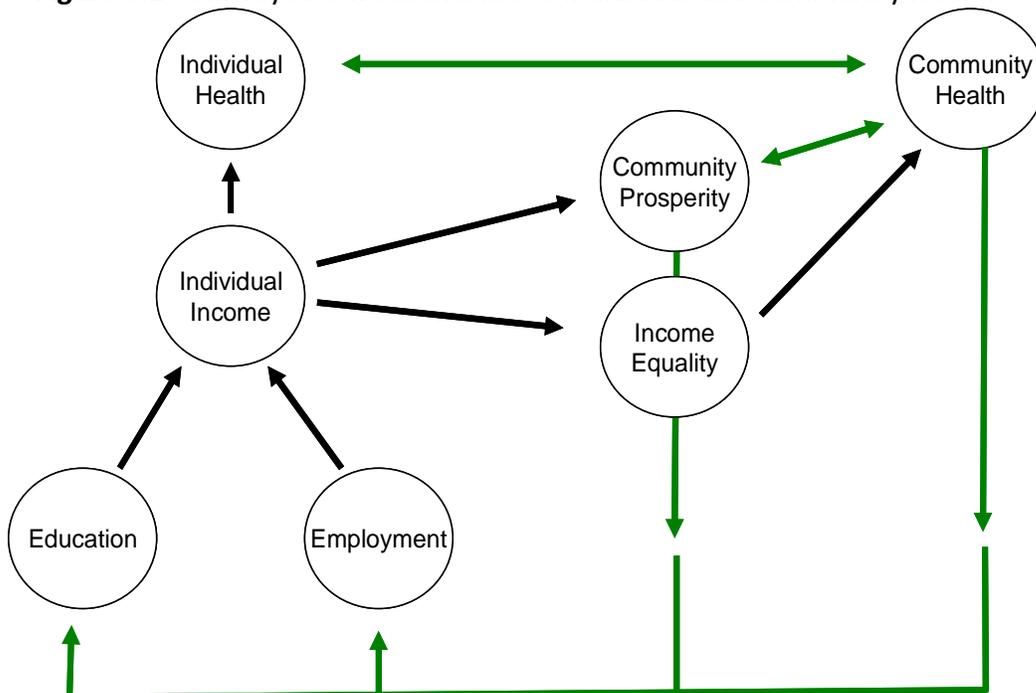
# Introduction

Economic opportunity is critical to both the health of individuals and to community-wide health. Individual **socioeconomic status (SES)** is among the most important predictors of overall health, and has been linked to many health outcomes.<sup>1,2</sup>

**Socioeconomic status (SES)** is a term used to refer to one's economic or social position relative to others.

Community health is also tied to economic opportunity, which is strongly impacted by the productivity of residents and by the level of equality experienced by community members.<sup>3</sup> One way of measuring SES is income, which is among the most powerful predictors of life expectancy (other measures of SES are discussed later). In order to achieve an income that enables a long, healthy life, economic opportunities must be available. The relationship between income and individual and community health is illustrated in Figure 5.1.

**Figure 5.1** Pathways between Income to Individual and Community Health



*Education and employment increase individual income, leading to improved individual health, community prosperity, and income equality. These all lead to greater community health, which feeds back into improved opportunity for education and employment.*

On an individual level, economic opportunity includes employment and education, which contribute directly to wealth and income. On a community-level, economic opportunity means long-term sustainable prosperity for residents at all income levels. For both individual and community-level health, educational attainment and median household income are the two socioeconomic status indicators commonly used in the US.<sup>4</sup>

## Economic Opportunity and Health

### Measures of Individual Economic Opportunity

**Higher incomes are associated with better health.** The connection between SES and health inequalities is well documented.<sup>5,6,7</sup> Beginning in the mid-twentieth century, researchers began to track large groups of people over time and record differences in health outcomes based on various measures of SES. The *Black Report*, a study of British civil servants in six socioeconomic classes, found that those in the lowest class had a mortality rate more than twice as high as those in the highest class.<sup>8</sup> Many other studies have replicated these findings, ultimately linking socioeconomic status to mortality, morbidity, and many chronic and communicable diseases.<sup>9</sup> Indeed, researchers have concluded that, “People further down on the social ladder usually run at least twice the risk of serious illness and premature death as those near the top.”<sup>10</sup> This year, the CDC released their first broad analysis of inequalities, *CDC Health Disparities and Inequalities Report – United States 2011*. A key finding from this analysis is that lower income people report fewer days per month in good health. This is one of many such research findings linking individual health outcomes to income. Table 5.1

**Table 5.1.** Health Risks and SES

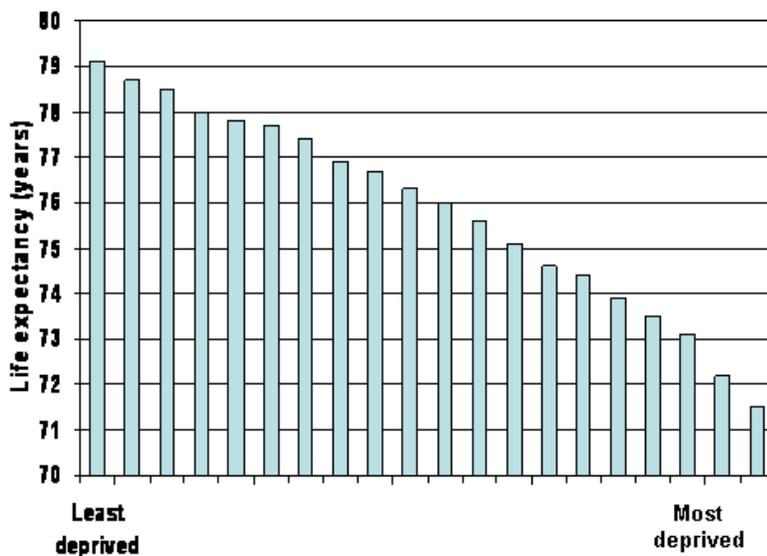
Health Outcomes and Risk Factors Associated with SES	
Outcomes	Risk Factors
All-cause mortality <sup>11</sup>	Obesity <sup>18</sup>
Preventable hospitalizations <sup>12</sup>	Physical activity <sup>19</sup>
Coronary Heart Disease <sup>13</sup>	Cigarette smoking <sup>20</sup>
Diabetes <sup>14</sup>	Hypertension <sup>21</sup>
Depression <sup>15</sup>	
Osteoarthritis <sup>16</sup>	
Cervical cancer <sup>17</sup>	

lists additional health outcomes that researchers have found to be mediated by SES. By all of these measures, high income is protective of health and low income is a risk factor for poor health.

Notably, research consistently finds that the association between health and SES does not just affect the poor; it runs all the way across the SES continuum.<sup>22,23</sup> In other words, low income groups have worse health outcomes than middle income groups, and middle income groups have worse health outcomes than upper income groups.

Chart 5.1 shows the findings of British researchers who demonstrated this effect using a composite measure of SES known as the deprivation index, which is calculated by the UK

**Chart 5.1.** SES and Health



Electoral wards in England & Wales ranked by deprivation score

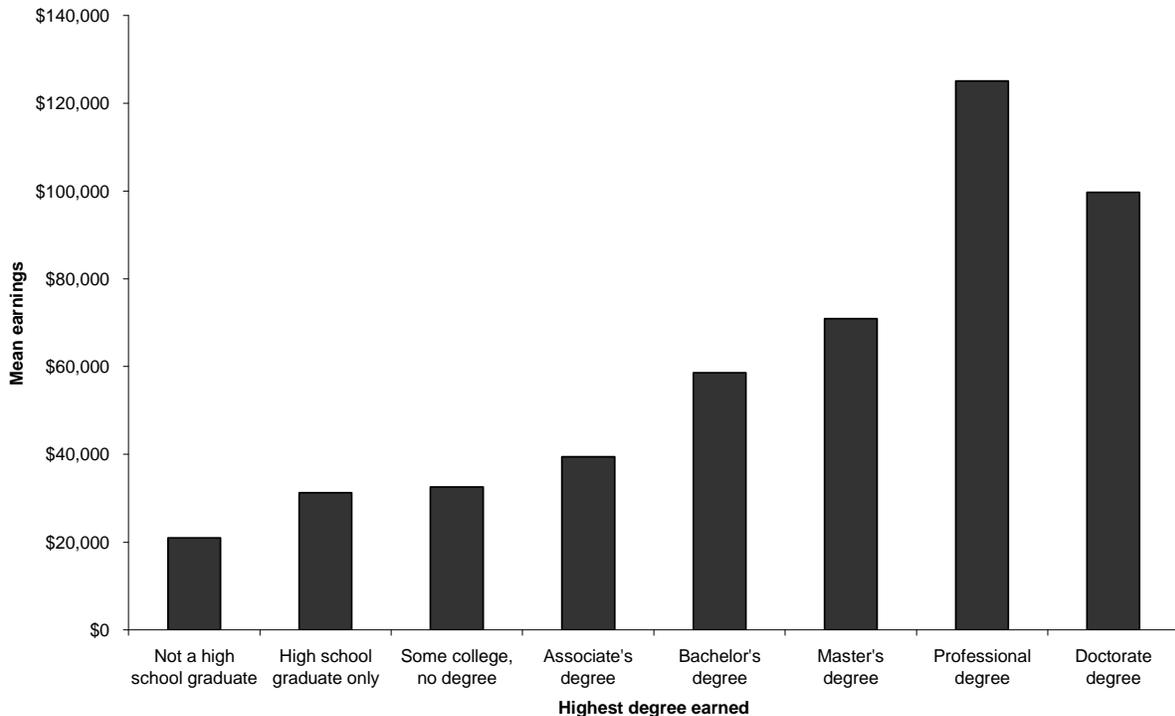
*SES is associated with health across the entire income spectrum.*

census.<sup>24</sup>

**Education results in higher incomes.** There is a well-documented association between education and income. Individuals with more education earn greater

incomes, and societies with higher education levels are more productive.<sup>25</sup> Chart 5.2 shows the association between income and education in the United States.<sup>26</sup>

**Chart 5.2** U.S. Mean Earnings by Educational Attainment, 2005-2009



*Income increases with educational attainment. Source: ACS 2005-2009*

People with low SES face greater barriers to attaining living-wage incomes and better health. The U.S. Department of Education reports that among those who complete high school, college enrollment rates are consistently 20 percentage points lower for low SES students compared to their high SES counterparts.<sup>27</sup> Table 5.2 shows differences in higher education enrollment by SES.

**Table 5.2.** Percentage of high school graduates immediately enrolled in college\*, 2009

SES	Percent
Low	54.8%
Middle	66.8%
High	84.2%

*\*Includes 2 and 4 year institutions.*

*Source: National Center for Education Statistics*

**Employment influences chronic stress and income.** Research shows that prolonged unemployment takes a severe toll on health, both in terms of resources available for self-care, but also in the form of stress. Similarly, occupations that have high demand and low control contribute to sustained high stress levels.<sup>28</sup> Stress triggers the release of the hormone cortisol. Cortisol is known as the “fight or flight” hormone, and helps the human body deal with stress. However, constant high levels of cortisol take a toll on the body and contribute to chronic illness.<sup>29</sup> Lower demands and higher control does not necessarily mean high-paying jobs. For example, in some cases a small business owner can have a high degree of control regardless of revenue. High demand jobs often involve inadequate time to accomplish tasks, excessive workloads, or both. Low control positions tend to have minimal decision making authority and little autonomy. Thriving economies that offer more jobs in occupations with lower demands and higher control are thought to be able to reduce the proportion of the population at risk due to consistently high cortisol levels.

### **Measures of Community Economic Opportunity**

**More equal incomes result in better health for everyone.** There is overwhelming evidence that income inequality is associated with poorer population health.<sup>30</sup> There is

a strong correlation between measures of income equality in US states and various measures of health. A 2011 CDC study examined this relationship using the **gini index of income inequality** as a measure of income inequality.<sup>31</sup> This measure results in a value

**The gini index of income inequality**, sometimes called an index of income inequality, is a number between 0 and 1, where 1 is total inequality and 0 is equal distribution of all income. *Lower gini coefficients indicate a more equal society.*

between 0 and 1, 0 being total equality and 1 being total inequality. The study found that the gini index for each US state corresponds to the average number of healthy days reported, with residents of states that have greater income equality reporting more healthy days on average. Epidemiologists Richard Wilkinson and Kate Pickett report this relationship across many studies and in many societies in their book, *The Spirit Level: Why Equality is Better for Everyone*. They present a vast body of research supporting the theory that it is not just income, but income equality that brings about the greatest health benefits.<sup>32</sup> More importantly, while income is a very strong predictor of individual health, social equality is a better predictor of community health.

**Human capital results in higher productivity and economic activity.** Research shows that areas with more educated work forces grow faster than those with less educated work forces, and that this growth contributes to economic prosperity for those communities. For example, US cities with more than 25% of the adult population holding a college degree grew an average of 45% from 1980 to 2000, whereas

**Human capital** is the value of the skills possessed by the workforce of a community.

those with less than 10% of the population holding a college degree grew only 25% during the same period.<sup>33</sup> The benefits of growth and increased productivity accrue to

the entire community, not just to those who hold a degree. Evidence suggests a “spill-over” effect of a highly skilled workforce, wherein a 1 percent increase in the college educated population results in a 1.9 percent increase in wages for workers without a high school diploma, a 1.6 percent increase for high school graduates, and a 0.4 percent increase for college graduates.<sup>34</sup>

### **Dense human capital attracts more human capital and stimulates economic activity.**

The Brookings Institution argues that four drivers of growth are innovation, human capital, infrastructure, and quality places, all of which are facilitated by higher density.<sup>35</sup> For example, productivity increases with density. History tells that this is the basis for the formation of a city, and empirical research shows that density explains about half of the variance in worker productivity between places.<sup>36</sup> The mechanism of this effect is that density of human capital yields innovation, which is a key driver of economic growth. Researchers have demonstrated this effect, showing that all else being equal, a city with twice the employment density will produce 20% more patents per capita.<sup>37</sup> To amass such a density of human capital, cities must have certain characteristics. A study tracking the migration patterns of educated young workers found that they are attracted to metropolitan areas with high populations, strong arts scenes, international populations, and high-tech jobs.<sup>38</sup> Creating quality places is a complex process, as notions of “quality” and “livability” can be difficult to define and can shift over time. The driving concept of place making is that in order to attract skilled workers and innovative firms, communities need amenities that create a sense of vibrancy and uniqueness, including distinctive neighborhoods and a healthy environment. To meet

this challenge, many cities have implemented smart growth strategies that create compact, walkable communities.

**Smart growth** means using comprehensive planning to guide, design, develop, revitalize and build communities for all that:

- have a unique sense of community and place;
- preserve and enhance valuable natural and cultural resources;
- equitably distribute the costs and benefits of development;
- expand the range of transportation, employment and housing choices in a fiscally responsible manner;
- value long-range, regional considerations of sustainability over short term incremental geographically isolated actions; and
- promote public health and healthy communities

- *American Planning Association*

### Smart growth strategies increase

**economic opportunity.** In recent years, researchers have made great strides in quantifying the economic benefits of compact neighborhoods, multi-modal transportation networks, and other smart growth strategies. Some studies have used the online tool Walk Score to estimate the value of walkability, consistently finding higher property values in walkable areas. One study found that, all else being equal, homes in walkable

neighborhoods are valued \$4,000-\$34,000 more than homes in less walkable neighborhoods.<sup>39</sup> A similar study examining commercial real estate found that on a 100 point scale, a 10 point increase in walkability is associated with a premium of 1 to 9 percent.<sup>40</sup> This value is reflected in disparities observed during the recent housing downturn, as urban planning professor and real estate developer Christopher Leinberger reports, “walkable urban real estate experienced less than half the average decline in price since the housing peak.”<sup>41</sup> A review of studies on the economic impacts of smart growth strategies found that 25-year costs for roads can be reduced by 11.8

percent and costs for water and sewer can be reduced by 6 percent.<sup>42</sup> The same study found that regional economic performance is enhanced by development that results in dense labor markets and efficient transportation systems, as productivity increases with employment density. Areas that attract high-skilled jobs face pressure from workers to provide high-quality education opportunities for their children. These findings point to the conclusion that smart growth contributes to a more robust and productive local economy, which in turn provides opportunities for employment and education to residents.

**Denser development can yield savings in health care costs.** The high cost of obesity and related diseases represent an unproductive allocation of resources. Insofar as the built environment alters behavior by encouraging or discouraging physical activity, walkable urbanism can contribute to reducing health care expenditures on obesity. Although the costs of obesity are multiple and difficult to measure thoroughly, there are several studies that provide rigorous estimates. For example, in 2008, the direct cost of obesity nationwide was estimated at \$147 billion.<sup>43</sup> Finkelstein estimates that the annual per-capita cost to each US taxpayer directly attributable to obesity is about \$180, paid through Medicare and Medicaid benefits. Obesity accounts for 9.1% of annual medical spending in the US, rivaling the amount spent due to tobacco. Finkelstein concluded that, “Medicare and Medicaid spending would be spending 8.5 and 11.8 percent lower, respectively, in the absence of obesity.”<sup>44</sup> These resources could otherwise be invested in more productive ways, such as education, infrastructure, or consumer goods.

## Demographic trends point to increased need for healthy urban development.

Importantly, features of compact neighborhoods correspond with the market demands coming from two significant populations. Aging **baby boomers** and the millennial

generation have both shown strong tendencies toward

seeking out more urban settings. As a result,

demographic researchers estimate a nation-wide

surplus of 22 million large-lot suburban homes by

2025.<sup>45</sup> **Millennials** in particular show a preference for walkable urban places, with only

half stating that they are interested in the type of drivable suburban homes that most of

them were raised in, and 77% planning to live in the urban core.<sup>46</sup>

**Baby boomers** were born between about 1946 and 1964.

**Millennials** were born between about 1980 and 1995.

## Disparities

### Socioeconomic Status (SES)

**The basis for addressing economic opportunity is the strong connection between SES**

**and health.** There is evidence that educational opportunities (and therefore access to

high-wage jobs) are out of reach for lower income

groups. Conversely, a lack of educational opportunities

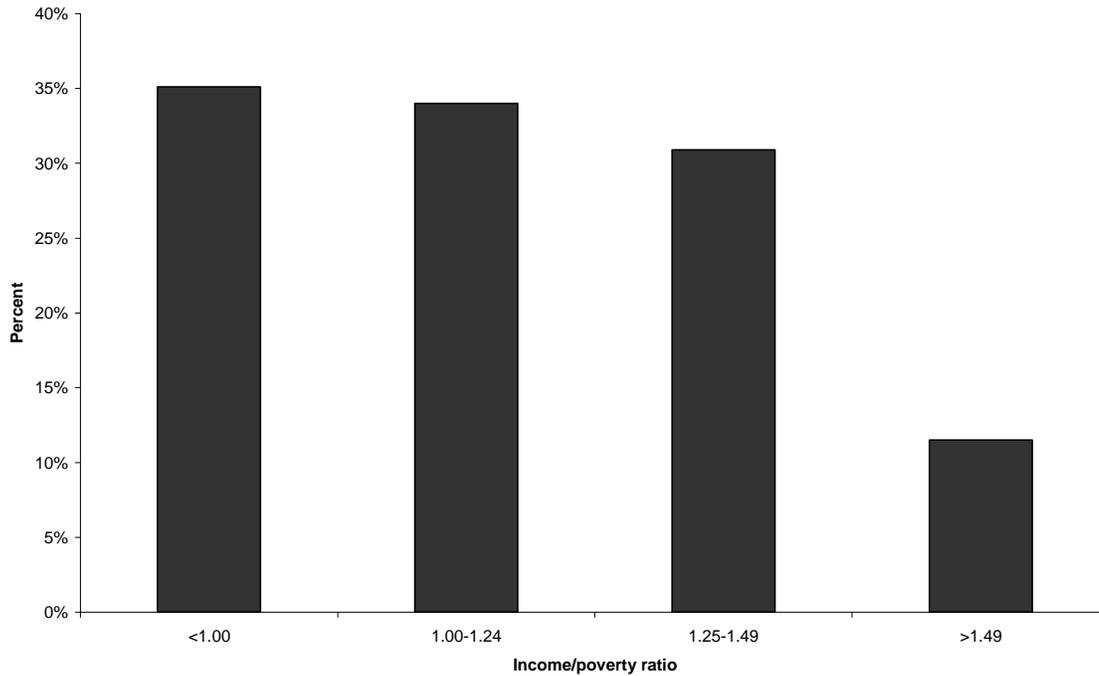
contributes to the causes of poverty. Chart 5.3 below

shows the connection between poverty and educational

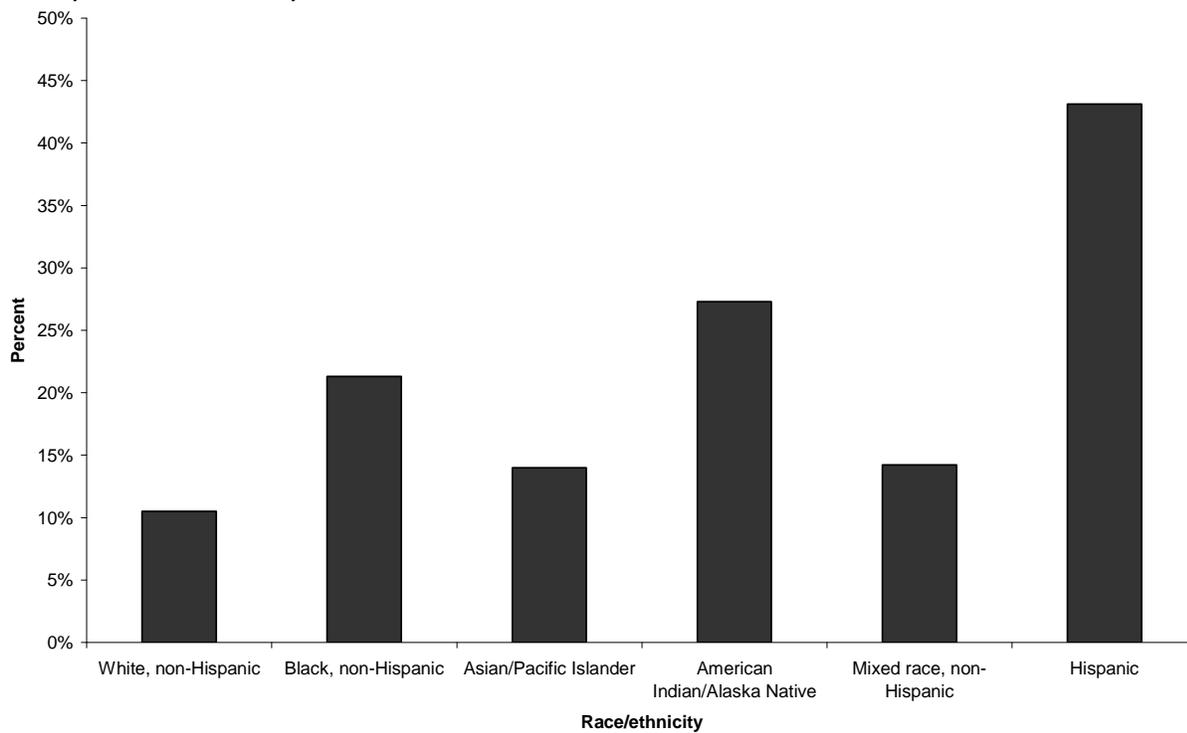
attainment.

**Income/poverty ratio** is income divided by the poverty threshold. For example, if the poverty threshold for a household of 4 is \$22,000, an income of \$33,000 would be an income/poverty ratio of 1.5.

**Chart 5.3** Percent of US Adults Who Did Not Complete High School by Income/Poverty Ratio



**Chart 5.4** Percent of US Adults Who Did Not Complete High School by Race & Ethnicity



## **Race and Ethnicity**

**Racial and ethnic minorities have lower levels of educational attainment and lower incomes than their white counterparts.** National data from the American Community Survey shows that higher percentages of minority populations do not complete high school, which in turn affects their lifetime earning potential (Chart 5.4). Even when minority students are able to attain high levels of education, research has shown that the protective effect of education and income may not be fully realized. After controlling for education and income, health outcomes are still affected independently by race.<sup>47</sup> This reflects the potential that other social conditions affect economic opportunities for racial and ethnic minorities, such as racism, social connections, or poverty.

## **Age**

**Childhood SES predicts SES and health status later in life.** Summarizing research on the subject, Bhatia and Katz wrote that “socioeconomic influences may be cumulative, have latent effects, or set an individual on a particular health trajectory.”<sup>48</sup> Adverse socioeconomic conditions in childhood predict health later in life independently of the effect of continuous social disadvantage.<sup>49, 50</sup>

# **Conditions Needed to Thrive**

To thrive, residents need access to high quality primary, secondary, and higher education and stable employment opportunities that offer living wages. Providing these

opportunities requires the community to attract highly-skilled workers, foster innovation, and create vibrant, attractive places to live, work, and play. A robust local economy is needed to sustain opportunities for education and employment.

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# Health Element

Clark County Comprehensive Growth Management Plan

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## *Growing Healthier*

### Current Conditions:

# Economic Opportunity

## Health Data

In 2010 Clark County Public Health issued the Community Assessment, Planning, and Evaluation Report documenting disparities in Clark County. Indicators from this report were analyzed based on socioeconomic status (SES) and demonstrate its effect on health in Clark County. Table 5.3 presents a variety of health outcome and risk behavior indicators documented in the 2010 Clark County Community Assessment, Planning, and Evaluation Report. For each indicator, low SES groups experience a negative disparity. By almost every measure of health assessed, low SES groups do not attain the same

**Table 5.3.** Disparities in Health Outcomes based on SES

Compared to high SES residents, low SES residents of Clark County fare worse by the following health outcome indicators:		
Health Care Indicators	Mental Health Indicators	Chronic Disease Indicators
Percent of adults with health care coverage	Percent of adults with poor emotional health	Percent of adults obese
Percent of adults with a personal doctor	Percent of adults binge drinking	Percent of youth overweight or obese
Percent of adults who could not afford to see a doctor	Percent of youth reporting depression	Percent of adults meeting fruit/vegetable consumption recommendations
Percent of mothers receiving prenatal care	Percent of youth using alcohol	Percent of youth meeting fruit & vegetable consumption recommendations
	Percent of youth using marijuana	Percent of youth consuming sweetened beverages at school
	Percent of youth using meth	Percent of adults reporting physical activity
		Percent of youth meeting physical activity recommendations

*Low SES residents fare worse by every measure of health except physical education and adult overweight/obesity. Note: adult overweight/obesity refers to the estimate of the percent of residents who are either overweight or obese (BMI≥30), whereas adult obesity refers only to the estimate of obese residents (BMI≥30). Source: CAPE, 2010*

levels of health and well-being as their wealthier counterparts. The only indicators for which no negative disparity was reported for low SES populations are the percent of adults overweight or obese, and the percent of youth attending daily physical education.

This pattern holds true for self-reported health in Clark County. Higher SES residents report better overall health, and are less likely to report “fair or poor” health. As reflected in Table 5.4, a much larger portion of residents with annual household incomes under \$50,000 reported fair or poor health. The reverse is also true: a greater portion of households earning \$50,000 or more report good or excellent health ( $p < .05$ ).

**Table 5.4.** Self-reported Health Status among Clark County Adults by SES, 2009

	Household income less than \$50,000	Household income \$50,000 or more
Percent reporting fair to poor health	23%	9%
Percent reporting good to excellent health	77%	92%

## **Indicators of Individual Economic Opportunity**

### **Poverty**

Indicators of individual economic opportunity illustrate the need for economic opportunities in Clark County. Measures such as income and poverty indicate the extent to which individuals are able to take advantage of existing opportunity. Associations between these measures and other variables help identify barriers to opportunity.

There are many ways of measuring SES, among them the **federal poverty thresholds**.

As of 2010, the federal poverty threshold was \$22,314 for a family of 4 and \$11,139 for a single person household.<sup>1</sup> In 2010, an estimated 43,000 Clark County residents

(12.6%) lived in households in poverty in 2009,

compared to a statewide rate of 13.4%.<sup>2</sup>

Furthermore, 16.2% of households have incomes

**Federal poverty thresholds** are determined by the census bureau based on family size, need, and income.

less than 200% of the federal poverty threshold.<sup>3</sup> This number is significant because it

represents the population living near poverty, which may or may not qualify for

assistance programs despite a likely need. Participation in Supplemental Nutrition

Assistance Programs (SNAP) is an indicator of need and the likelihood of household

budget trade-offs that affect health. About 9.5% of Clark County households (14,400)

received SNAP benefits in 2009, 59% of which included children under the age of 18.<sup>4</sup>

The spatial distribution of poverty in Clark County is uneven. As evident in map 5.1,

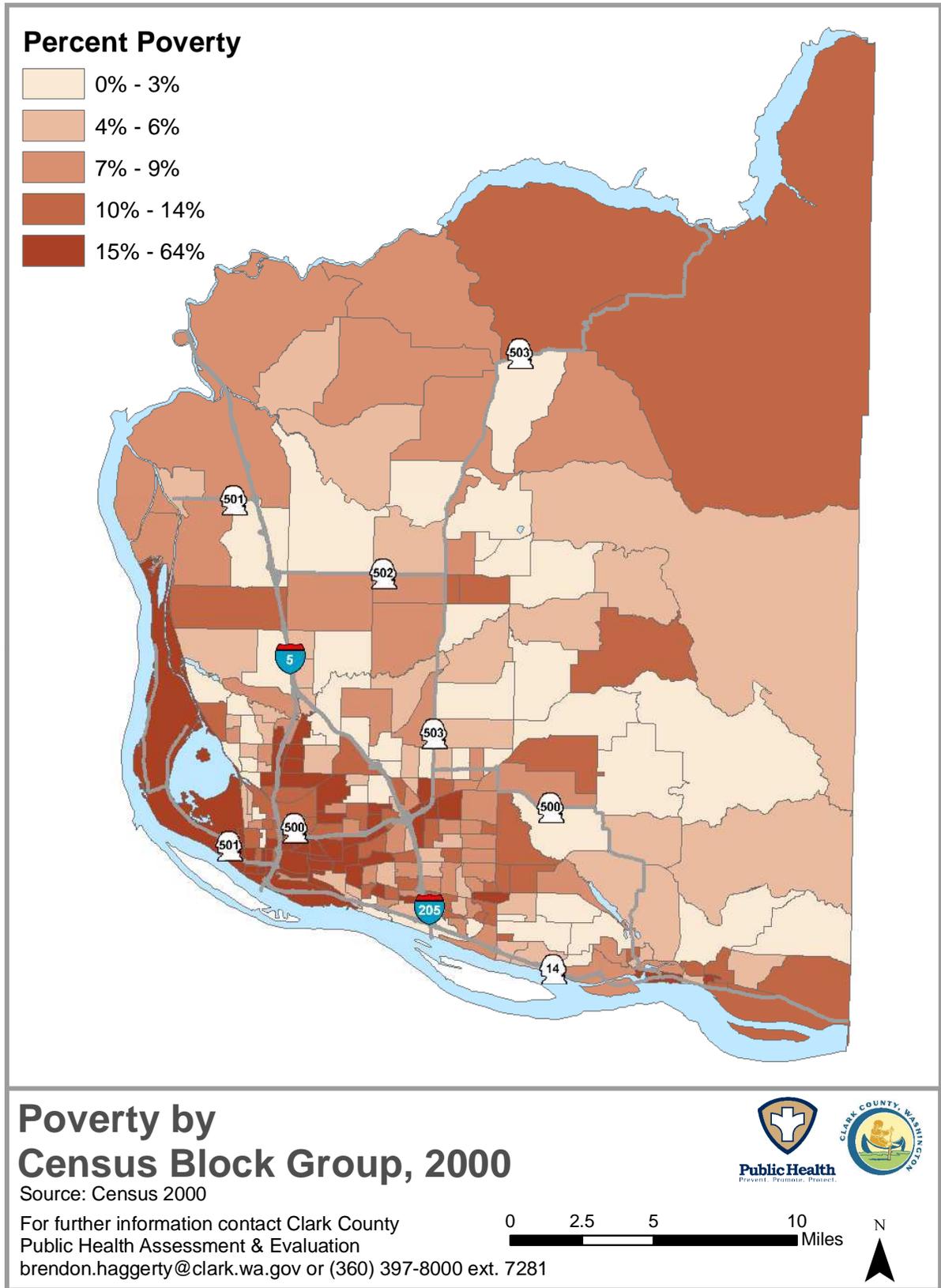
concentrations of poverty are present in central Vancouver and along the Fourth Plain

Boulevard corridor. As of 2009, there are no census tracts with poverty rates over 40%,

the traditional measure of concentrated poverty. This represents a success for Clark

County, but social justice advocates note that poverty is not absent, just less visible.

Map 5.1. Poverty by Census Block Group, 2000



## Median Household Income

Median household income in Clark County was estimated at \$54,924.<sup>5</sup> In inflation-adjusted dollars, this is the lowest it has been since the census bureau began single-year estimates in 2002, down nearly \$6,000 from the highest estimate in 2007 (2010 dollars).

## Occupation Distribution

Table 5.5 identifies vast differences in earnings based on occupation type. In Clark County, the largest share of workers belongs to the category with the highest median earnings, “Management, professional, and related occupations.” This can be seen as a positive indicator of access to economic opportunity, although the share of workers in this category (34%) is slightly below the state share of about 37%. A notable difference between Clark County and the state is that Clark County has about 14% of its workforce occupied in “Production, transportation, and material moving occupations,” which is somewhat higher than the Washington state rate of about 11%.<sup>6</sup>

**Table 5.5.** Percent of Clark County Workers and Median Earnings by Occupation, 2005-2009

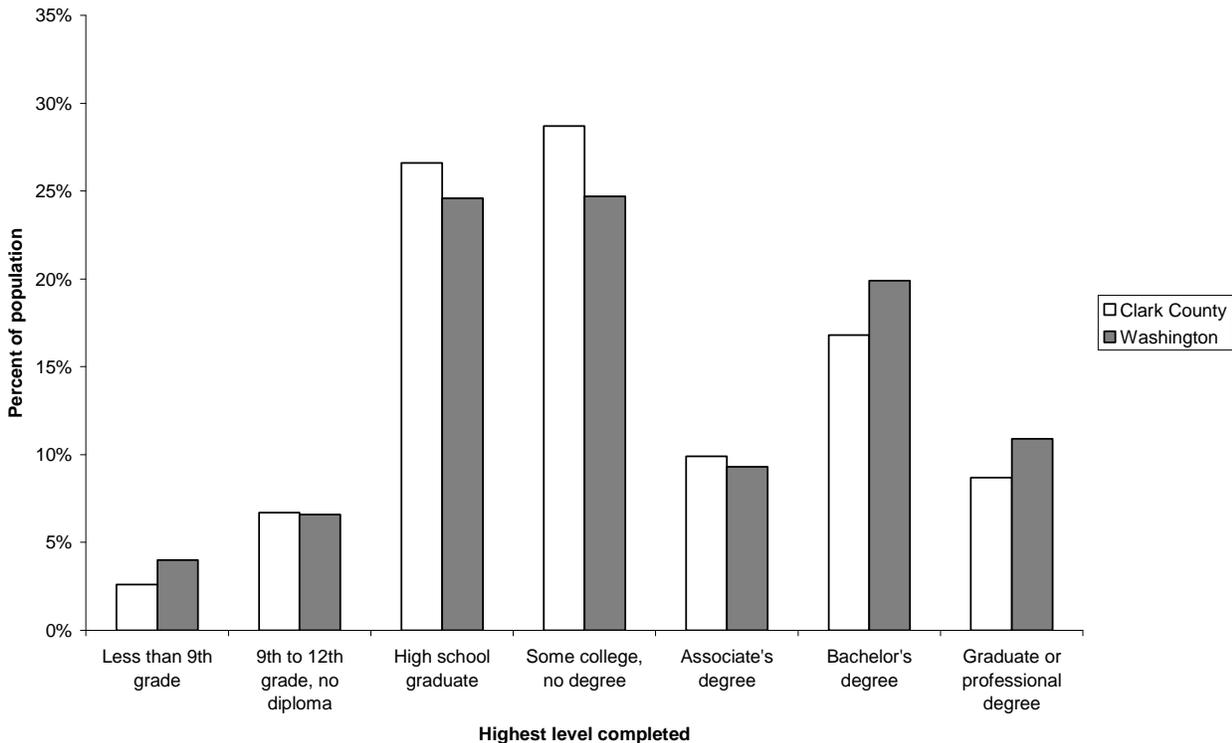
<b>Occupation</b>	<b>Percent of Workers</b>	<b>Median Earnings*</b>
Management, professional, and related occupations	34%	\$60,796
Sales and office occupations	26%	\$37,974
Service occupations	15%	\$27,920
Production, transportation, and material moving occupations	14%	\$41,105
Construction, extraction, maintenance, and repair occupations	10%	\$46,133
Farming, fishing, and forestry occupations	0.3%	\$33,563

\*For full-time workers

## Educational Attainment

The educational attainment of Clark County adults is lower than that of the state as a whole and lower than other counties in the region. Of all Clark County adults over age 25, about 26% have a bachelor's degree or higher, compared to 31% in Washington and 28% nation-wide. At the regional level, Clark County ranks below other counties in educational attainment, as shown in Table 5.6.<sup>7</sup> Generally speaking, Clark County has a large share of adults aged 25 years or more with a moderate level of educational attainment, such as high school graduates and those with some college (chart 5.5).

**Chart 5.5.** Educational Attainment in Clark County and Washington, 2009



**Table 5.6.** Educational Attainment by County, Adults Aged 25+

County	Percent with a BA or higher
Clark	26%
Clackamas	31%
Multnomah	37%
Washington	38%

## Indicators of Community Economic Opportunity

Indicators of community economic opportunity reflect the extent to which a community reinforces individual health and individual economic opportunity by creating, attracting, and retaining economic activity. In this case, indicators include measures of workforce skill, availability of jobs, and income equality.

### Skilled workforce

Highly skilled workforces are not only more productive, they also have a far-reaching impact in that they attract additional skilled workers. Educational attainment is a key indicator of workforce skill.

The foundation of a skilled workforce is completion of high school, which opens the door to educational opportunities that develop workforce skills.

Therefore, on-time high school

**Table 5.7.** Graduation rates by school district, 2009

District	On-time Graduation Rate	Total Enrollment
Vancouver	66.6%	22,655
Evergreen	75.8%	25,935
Washougal	76.4%	3,007
La Center	83.8%	1,581
Ridgefield	87.1%	2,174
Camas	88.7%	5,844
Battle Ground	93.3%	13,222
Hockinson	96.5%	2,004

*Table 5.6 shows the on-time graduation rate and total enrollment for school districts within Clark County. The largest school districts have lower graduation rates. Source: OSPI, 2010<sup>8</sup>*

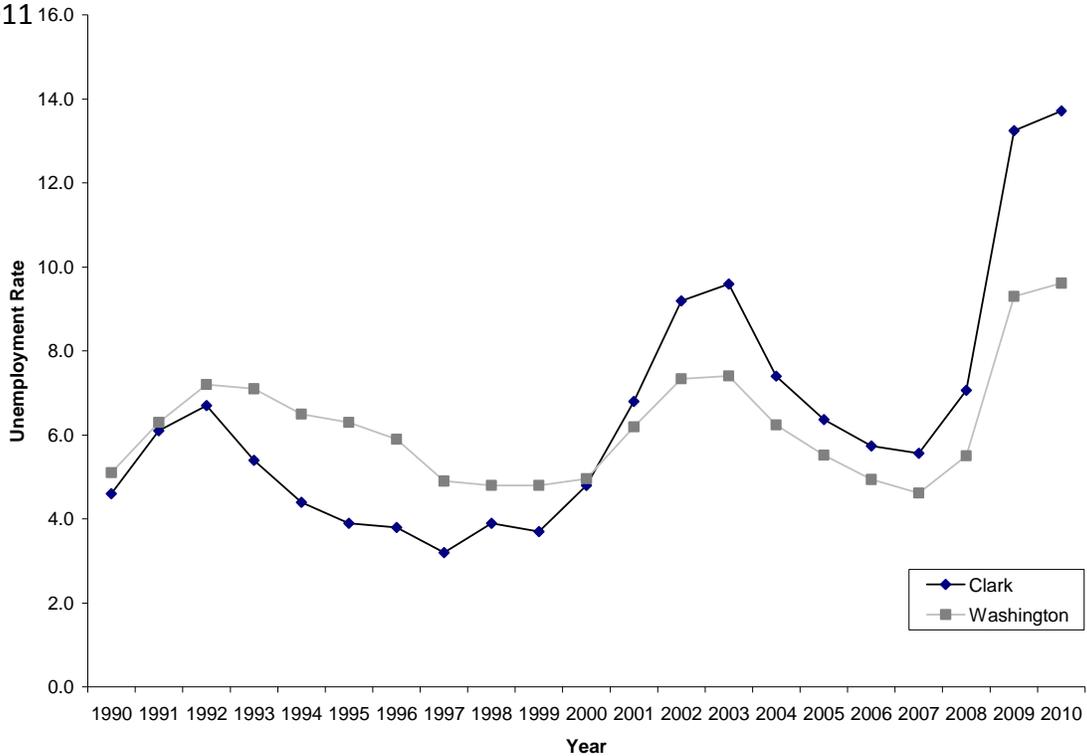
graduation rates are an important indicator of educational and economic opportunity.

Table 5.7 displays on-time high school graduation rates for Clark County school districts, reflecting a low of 66.6% in Vancouver to a high of 96.5% graduation in Hokinson. The overall county rate is 79.3%, compared to a statewide rate of 72.5%.<sup>9</sup>

### Employment

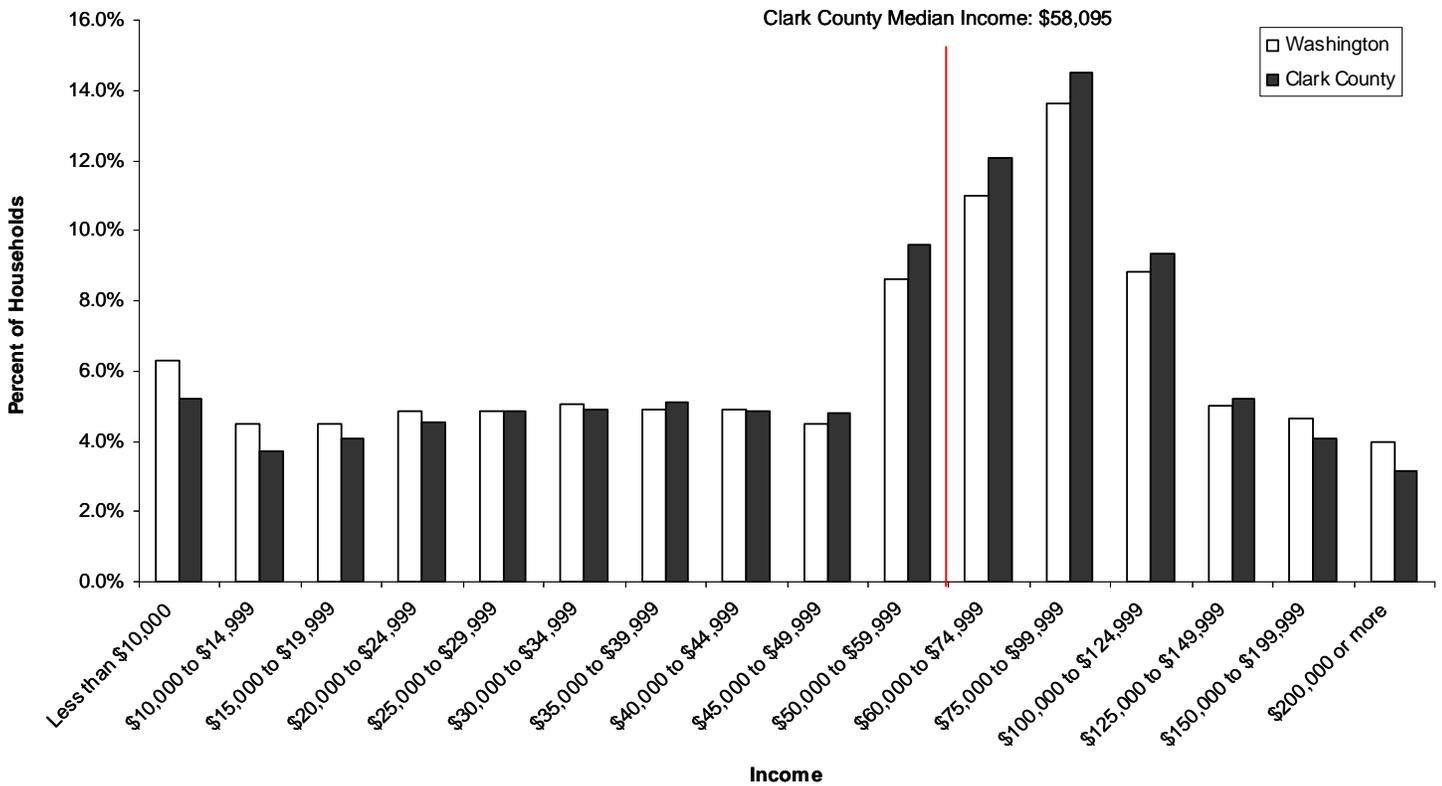
Availability of jobs and capacity for job creation is a basic indicator of economic opportunity, as reflected in the unemployment rate. The Clark County labor market has proven to be relatively volatile, especially in recent years. For the past decade the county has consistently had a higher unemployment rate than the state as a whole, and this difference is magnified during economic recessions (Chart 5.6).<sup>10</sup>

**Chart 5.6.** Average Annual Unemployment Rate in Clark County and Washington, 1990 - 2011



It is important to note the nature of employment in Clark County, as the regional context greatly impacts job availability and job creation. For example, tax advantages and support from government and non-profits may encourage entrepreneurs to start new small businesses in Portland rather than in Clark County.<sup>11</sup> Of approximately 190,000 workers living in Clark County, about 1/3 work outside of the state and about 3% work in another county within Washington. This results in about 60,000 commuters traveling to jobs in Oregon.<sup>12</sup> This is indicative both of the level of economic opportunity available within Clark County and of the potential health impacts from long commutes, which are associated with multiple negative health outcomes.<sup>13</sup>

**Chart 5.7. Income Distribution in Washington and Clark County, 2005-2009**



## Income Equality

Societies with more equal income distribution tend to experience better health outcomes for all community members, especially those at the lower end of the income

### **Gini index of income inequality**

is a measure of how evenly income is spread throughout society. Values range from 0 to 1, with lower values indicating a more equal distribution of income.

spectrum. The distribution of income in Clark County is similar to that of Washington, but with slightly higher percentages of households in upper-middle income categories (Chart 5.7). This is indicative of a somewhat even distribution of

income compared to other jurisdictions and to the state. Income equality is often measured using a **Gini index of income inequality**, which is a value between 0 and 1 where 0 is perfect equality and 1 is total inequality. Table 5.8 displays the Gini coefficients for six geographies, with Clark County showing a lower value than the state or the country. This measure corroborates the finding that Clark County has a somewhat more equal distribution of income.

**Table 5.8.** Gini index of income inequality, 2007-2009

<b>Geography</b>	<b>Gini coefficient</b>
United States	0.468
Washington State	0.441
Clark County	0.413
Clackamas County	0.438
Multnomah County	0.462
Washington County	0.416

*With a lower Gini coefficient, income equality is greater in Clark County than the state as a whole, and is the most equal in the Portland-Vancouver metropolitan region. Source: 2007-2009 ACS*

In a ranking of all counties in Washington, Clark County has the ninth lowest Gini coefficient, confirming other data that show a relatively equal distribution of income. While the census bureau has only recently begun to calculate Gini

**The sprawl index** is used to demonstrate the association between sprawl and obesity. A score of 100 is equal to the mean of all US urbanized counties, with scores above 100 indicating less sprawl, and scores below 100 indicating more sprawl than average.

coefficients for local areas, national-level figures dating back to 1967 show that the United States as a whole is becoming increasingly unequal. Values have risen from a low of 0.386 in 1968 to the current level of 0.468.<sup>14</sup>

### Growth Patterns in Clark County

Clark County is dominated by an auto-oriented suburban development pattern. Health researchers calculated a sprawl index for all urbanized counties in the US, setting the

**Table 5.9.** Sprawl Index for Portland-Vancouver Area Counties

County	Sprawl Index Value
Clark	103.4
Multnomah	131.4
Washington	108.3
Clackamas	98.5

national average score at 100. They found that more sprawling development patterns are associated with higher county obesity rates. **The sprawl index** for Clark County is 103.4. While slightly less sprawling

than average, this value corresponds with a BMI of 26.09, or somewhat overweight.<sup>15</sup>

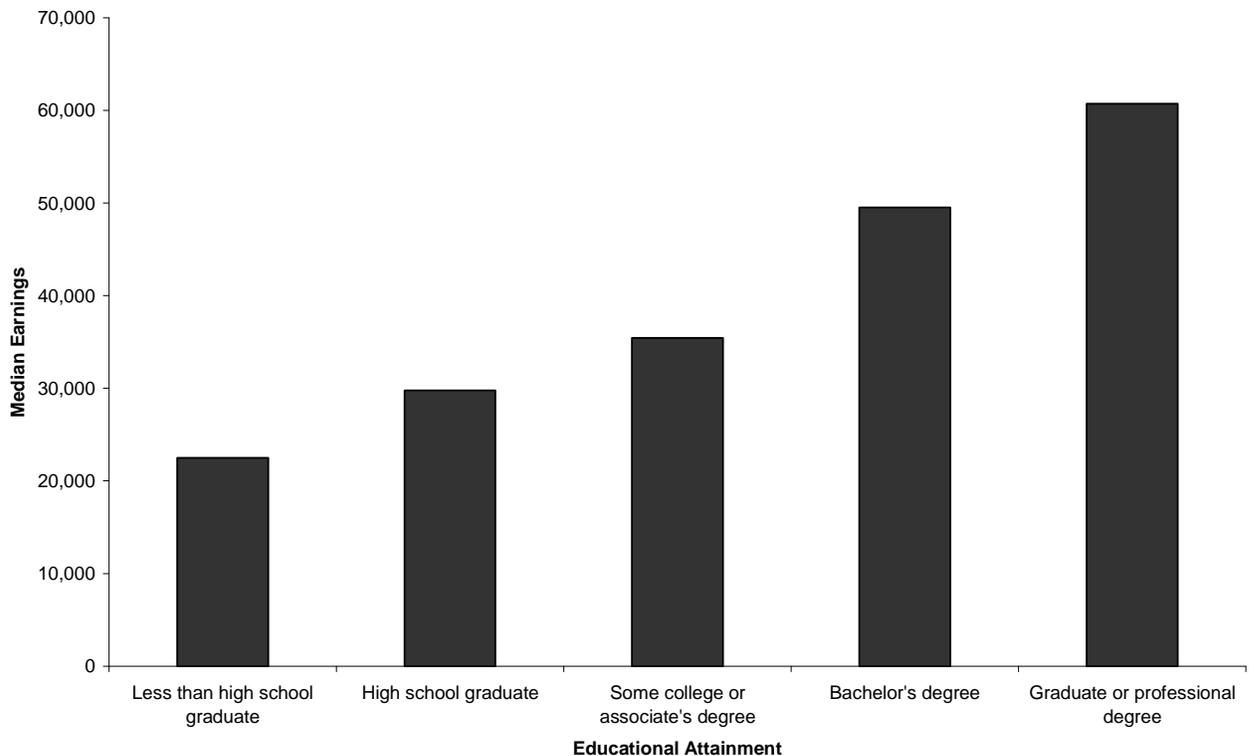
Table 5.9 displays the sprawl index scores for other counties in the metropolitan area, showing that Clark County is the second most sprawling county. However, in accordance with the Growth Management Act, efforts are in place to limit sprawl in Clark County, including a defined Urban Growth Area.

# Disparities

## Socioeconomic Status (SES)

As documented above, SES is the core health concern related to economic opportunity. Low SES populations have fewer resources to access educational opportunities and therefore face greater barriers to increased income. Chart 5.8 reflects the difference in income earned by Clark County workers based on their educational attainment. Low SES can result in a negative cycle wherein children from low SES households, because of lack of resources early in life, tend to achieve lower educational attainment and remain in low SES households. The opposite can be true for high SES households. The opportunity afforded by greater resources translates into greater educational

**Chart 5.8** Median Personal Earnings by Educational Attainment in Clark County, 2009



attainment and higher incomes later in life. In Clark County, 79% of all students graduate on time, but only 68% of low-income students accomplish the same.

### **Race and Ethnicity**

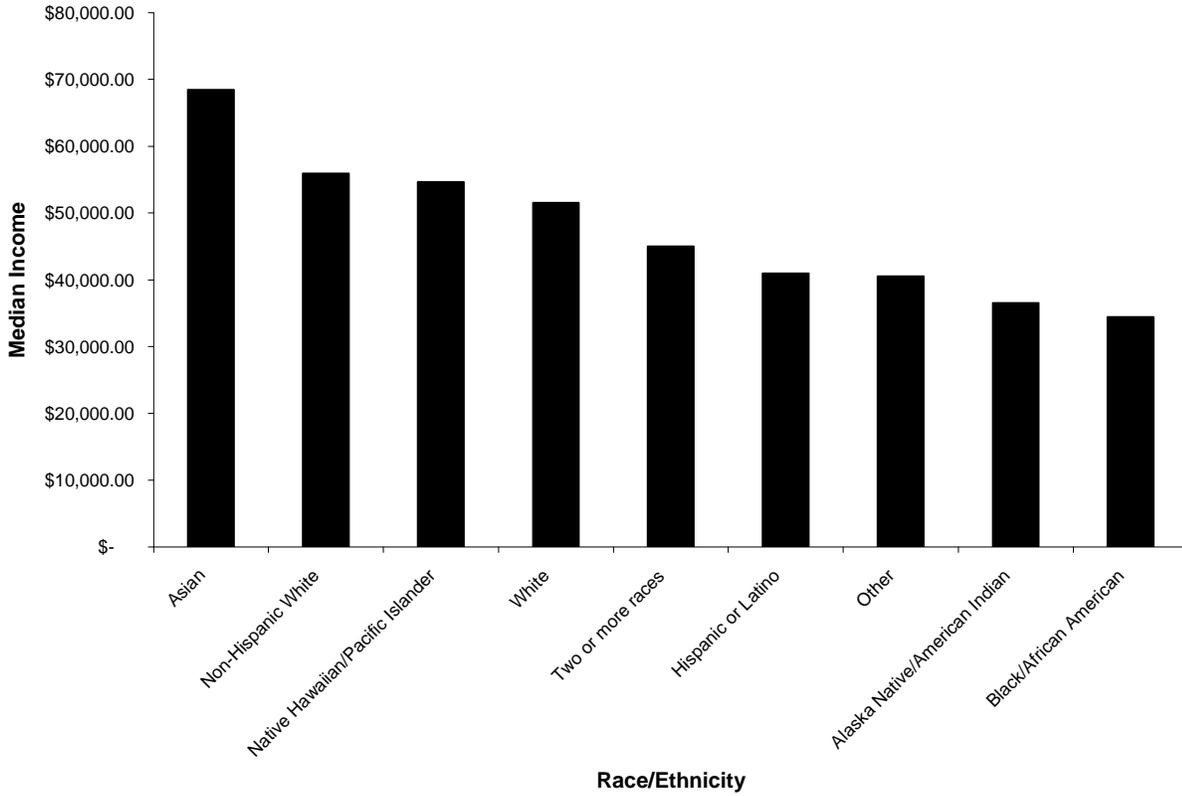
Income varies by race and ethnicity in Clark County. Chart 5.9 shows the difference in income by race, with Asian and Native Hawaiian/Other Pacific Islanders emerging as the top earners. Blacks, Hispanics, and American Indians/Alaska Natives have substantially lower median incomes.

### **Age**

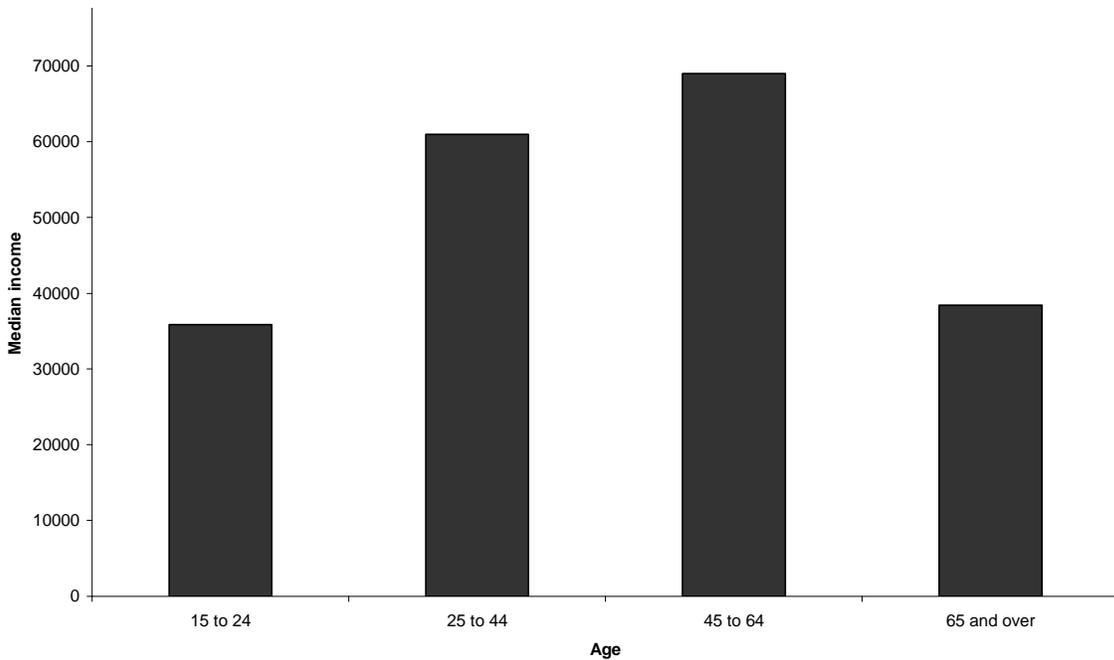
Poverty status varies by age. Whereas the countywide poverty rate in 2010 was 12.6%, among children under age 18 the rate is estimated at 17.8%. Between ages 18 and 65 the rate is 11.6%, and for ages 65 and older the rate diminishes to 6.4%.<sup>16</sup>

Chart 5.9 shows median household income by age of householder in Clark County. Consistent with other social determinants of health, the youngest and oldest members of society exhibit a disadvantage compared to the middle age groups. In this case, Clark County householders in middle age groups have substantially higher median incomes than householders age 15-24 or 65+. This is significant, as both the younger age group (Millennials) and older age group (Baby Boomers) are expected to grow in Clark County, mirroring national trends.

**Chart 5.9.** Median Income by Race and Ethnicity in Clark County, 2005-2009



**Chart 5.10.** Median Household Income by Age of Householder in Clark County, 2005-2009



## Geography

Employment opportunities have generally followed the growth patterns discussed above. Table 5.11 reflects somewhat longer average commute travel times for outlying

**Table 5.11.** Mean Travel Time to Work, 2005-2009

Place	Mean Travel Time to Work (min)
Battle Ground	29
Camas	24
Dollars Corner	28
La Center	29
Orchards	26
Ridgefield	30
Vancouver	22
Washougal	26

areas such as Battle Ground, Ridgefield, and La Center.<sup>17</sup> This is indicative of fewer

employment opportunities in these areas.

Census data show that about 1/3 of workers

travel outside of the state to work, and

almost 2/3 of workers do not work in the

place that they live.

## Summary

Table 5.12 below summarizes findings from research and current conditions.

**Table 5.12.** Summary of Research Findings and Current Conditions in Clark County

Findings	Current Conditions	Level of Concern
Higher incomes are associated with better health.	23% of residents from households earning less than \$50,000 report poor health, compared to just 9% of wealthier households.	High
Education results in higher incomes.	79% of Clark County students graduate from high school on time.	High
Employment influences chronic stress and income.	34% of the labor force works in management, professional, or related occupations.	Medium
More equal incomes result in better health for everyone.	Clark County has a more equal distribution of income than comparison jurisdictions.	Low
Human capital results in higher productivity and economic activity.	26% of adults age 25 or older hold a bachelor's degree or higher.	High

Dense human capital attracts more human capital and stimulates economic activity.	Clark County's educational attainment (% with a BA or higher) is lowest in the Portland-Vancouver metro region.	High
Smart growth strategies increase economic opportunity.	Clark County is slightly less sprawling than the average urbanized US county.	Medium
Denser development can yield savings in health care costs.	Clark County is dominated by drivable suburban development.	Low
Demographic trends point to increased need for healthy urban development.	Populations of Millennials and Baby Boomers are expected to grow.	High
The basis for addressing economic opportunity is the strong connection between SES and health.	Low SES populations don't achieve the same health status as wealthier residents by nearly every measure.	High
Racial and ethnic minorities have lower levels of educational attainment and lower incomes than their white counterparts.	Whites and Asians have higher median household incomes than Blacks, American Indians, and Latinos.	High
Childhood SES predicts SES and health status later in life.	The poverty rate is highest among children under 18 (18%).	High

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