



Health Policy Brief

Connections between income and health

More than a century of research has found strong connections between income and health.¹ As a group, people with higher incomes live longer and experience better mental and physical health outcomes. Understanding how income influences health can inform policies, programs and resource allocation to improve both the health and economic well-being of Ohioans.

This brief provides an overview of the relationship between income and health, describes the various factors that impact income and health and outlines relevant policy implications.

The relationship between income and health

Health is influenced by a number of modifiable factors, including a person's social and economic environment, physical environment, health behaviors and clinical care.² Income plays a critical role across each of these factors, for example, by influencing whether a person has access to high-quality education, nutritious food, safe housing and health insurance coverage.³ In addition, toxic and persistent stress experienced by people living with low incomes can negatively impact health.⁴

Researchers have identified three primary ways in which income and health are connected:

1. Higher income contributes to better health
2. Better health supports higher income-earning potential
3. Other factors, including toxic stress, racism, education, housing and neighborhood conditions can influence both health and income

Income-related factors that influence health

The focus of this publication is the connection between income and health. Other factors closely related to income, including wealth⁵, income inequality⁶, debt⁷ and other indicators of economic self-sufficiency have also been shown to impact health. Below is a glossary of common income-related terms.

Assets: Anything that holds economic value (including cash, bank accounts, investments, property and other material items). Assets that can be quickly turned into cash are considered to be liquid. Non-liquid assets, such as a home or car, may take weeks or months to convert to cash.

Debt: Money owed by an individual or household to another entity or individual.

Economic self-sufficiency: The ability to meet basic needs such as housing, food, transportation and medical needs without subsidies or other assistance from government programs directed to people with low incomes.

Income: The total amount of money earned or received by an individual or household during a set time period. Income typically includes wages from employment and other sources such as interest and capital gains. Some methods for counting income also include payments from programs, including food assistance and social security.

Economic mobility: Ability for individuals and households to move up or down the economic ladder within a lifetime and across generations.

Income inequality: A measure of the gap between high and low incomes in a given area.

Wealth: The total value of an individual's or household's assets, minus debts and other liabilities.

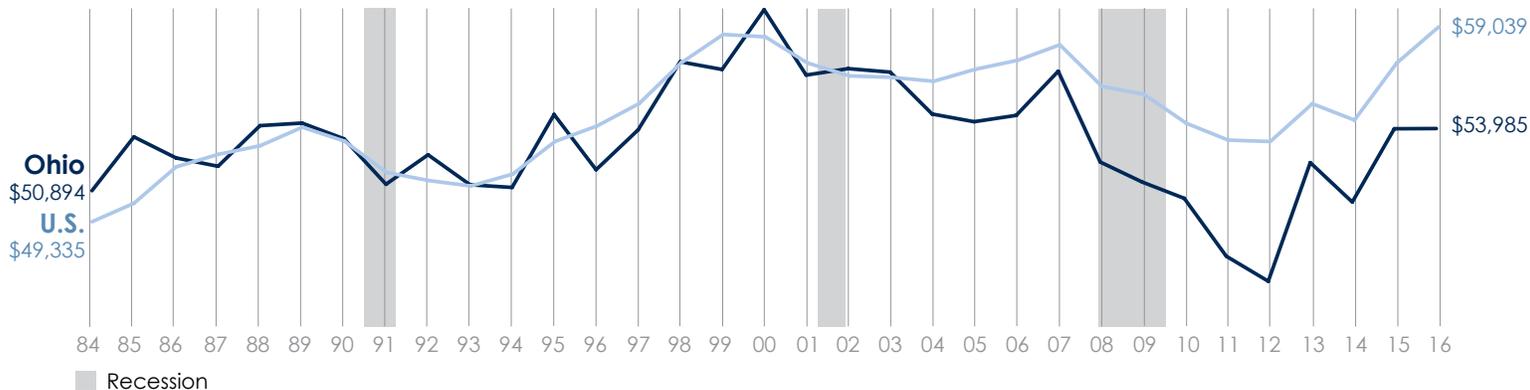
Figure 1. Ohio health indicators

	Ohio	Year of most recent data	Ohio's rank among 50 states and D.C.*
Overall health status. Percent of adults that report excellent, very good or good health	83.4%	2015	28
Life expectancy. Life expectancy at birth based on current mortality rates	77.8	2010	37
Adult depression. Percent of adults who have ever been told they have depression	19.6%	2015	30
Adult smoking. Percent of population age 18 and older that are current smokers	21.6%	2015	43
Uninsured adults. Percent of 18-64 year olds that are uninsured	11.6%	2014	13
Unable to see doctor due to cost. Percent of adults who went without care because of cost in the past year	10.7%	2015	13

*A ranking of 1 is the best and 51 is the worst

Source: 2017 Health Value Dashboard

Figure 2. Real median household income, Ohio and U.S. (1984-2016)



Source: U.S. Census Bureau data compiled by the Federal Reserve Bank of St. Louis

Health status and income in Ohio

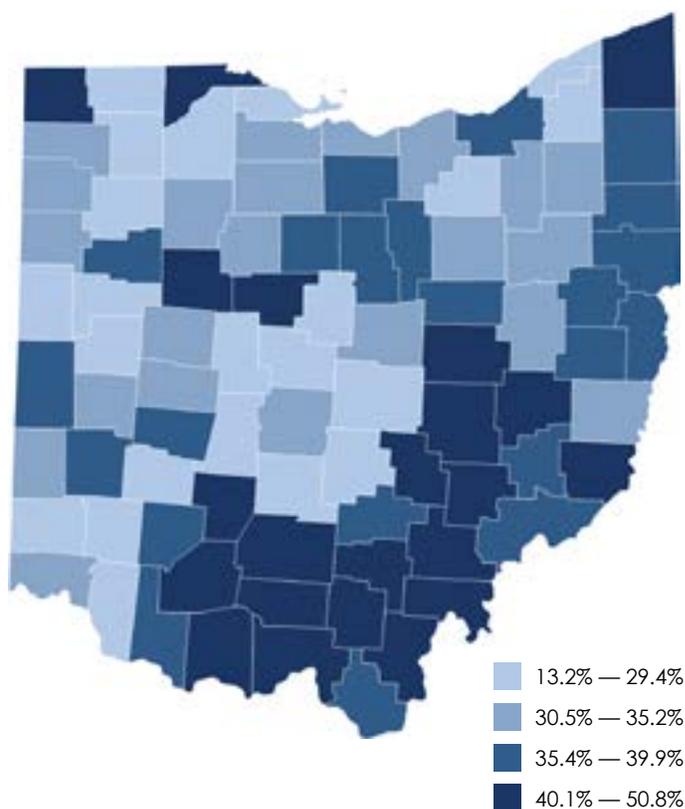
In the Health Policy Institute of Ohio's 2017 *Health Value Dashboard*, Ohio ranks 43 out of 50 states and the District of Columbia on population health outcomes. This means that Ohioans are living less healthy lives than people in most other states. Ohio ranks 29 on outcomes related to the social and economic environment, including unemployment, poverty, labor force participation and income inequality. Ohio's performance indicates that there is room to improve outcomes related to both health and income.

Figure 1 shows Ohio's performance on several key health-related measures and Ohio's rank relative to other states.

Long-term indicators of economic stability for low- and middle-income Ohioans show troubling trends. Ohio's unemployment rate is near the lowest rate of the past decade⁸, but median income for Ohioans has lagged behind the U.S. for the last 13 years (see figure 2).⁹

In 2015, nearly one-third of Ohioans had incomes below 200 percent of the federal poverty level (FPL) and almost two-thirds had incomes below 400 percent FPL.¹⁰ Households with incomes at or near poverty often struggle to cover household expenses, including rent, utilities and medical care, particularly when unexpected expenses occur such as a vehicle break down or medical emergency.¹¹ In Ohio, households with incomes below 200 percent FPL are heavily concentrated in the southern and eastern regions of the state (see figure 3).

Figure 3. Percent of households with incomes below 200 percent FPL, Ohio (2015)



Source: Ohio Development Services Agency

Measures of income

FPL is a measure of household income issued annually by the U.S. Department of Health and Human Services (HHS). The measure is used by the U.S. Census Bureau to estimate the number of people living in poverty. Other federal and state agencies set income eligibility limits for programs at a percentage of FPL.¹² FPL varies by household size, but not by geography with the exception of Alaska and Hawaii.

Area Median Income (AMI) is a measure of household income developed by the U.S. Department of Housing and Urban Development (HUD) to determine eligibility for federal housing assistance.¹³ AMI varies by geography. Federal housing programs set income eligibility limits for programs at a percentage of AMI, typically 30 or 50 percent.

Household size	Income (annual)
1	\$12,060
2	\$16,240
3	\$20,420
4	\$24,600

Examples of AMI for selected Ohio counties (2017)

County	Summit	Guernsey	Lucas	Franklin	Richland	Montgomery
AMI	\$65,700	\$52,800	\$61,500	\$74,500	\$55,400	\$63,600

FPL and AMI measure household income against an established standard but do not necessarily reflect the ability of a household to meet basic needs. The following are examples of other methodologies to measure the adequacy of household incomes to meet basic needs and support economic mobility.

ALICE (Asset Limited, Income Constrained, Employed)

ALICE is a United Way project currently active in seventeen states, including Ohio, that quantifies the population that is working but not earning enough to cover basic household expenses. ALICE was developed by the United Way of Northern New Jersey and is coordinated by the state associations of United Ways. Each state forms a Research Advisory Committee to provide guidance for state reports. The Ohio ALICE report is scheduled to be released in October 2017 by the Ohio United Way.

The ALICE threshold, or the level of income a household needs to cover basic necessities, is set based on a **household survival budget** which includes housing, child care, food, transportation and health care. The threshold is adjusted for geography and household composition. The ALICE methodology uses an **income assessment** that includes earned income and support from public and non-profit assistance programs.

MIT Living Wage Calculator

This tool calculates the wage that is required to cover basic household expenses without public assistance in each county in the U.S. The wage calculator uses a budget that adjusts for household composition but does not allow for savings or common leisure time activities such as eating at restaurants or taking vacations. Compared to the ALICE threshold, the MIT Living Wage Calculator provides higher allowances on some expenses, including food, vehicles and health care.¹⁴

Examples of MIT Living Wage (hourly) for selected Ohio counties (2017)*

County	Summit	Guernsey	Lucas	Franklin	Richland	Montgomery
1 adult, 1 child	\$21.42	\$20.58	\$20.82	\$21.72	\$20.58	\$21.14
2 adults (1 working), 2 children	\$23.19	\$22.35	\$22.59	\$23.48	\$22.35	\$22.91
2 adults, 2 children	\$14.81	\$14.39	\$14.51	\$14.96	\$14.39	\$14.67

*These scenarios assume that working adults are full-time - 40 hours per week, 52 weeks per year – and non-working adults provide full-time childcare. Calculations account for federal and state taxes, but do not include the value of public or private benefits such as food assistance or employer contributions to health insurance premiums.

Differences in health by income level¹⁵

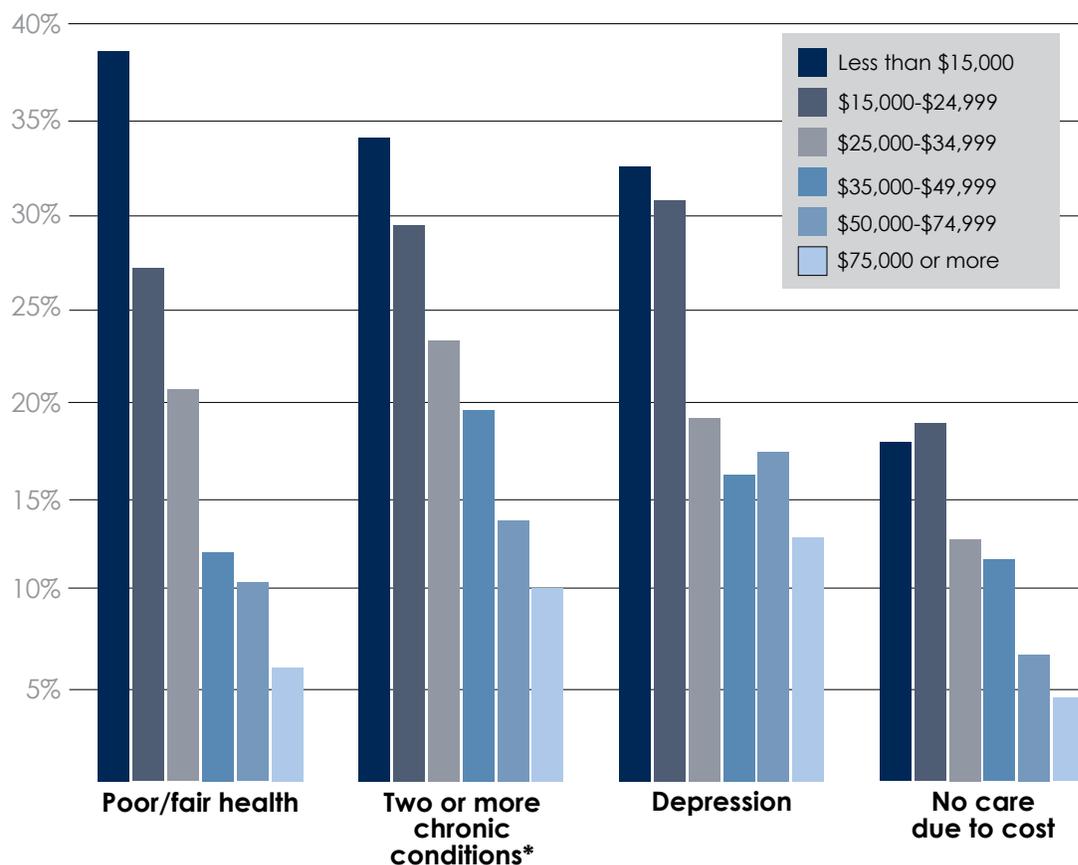
People with higher incomes tend to live longer and healthier lives than people with lower incomes. People with very low incomes tend to experience the worst health outcomes. However, even people with moderate or “middle class” incomes have poorer health outcomes than higher income individuals.¹⁶ A recent large-scale study of life expectancy in the U.S. found that “the richest American men live 15 years longer than the poorest men, and the richest American women live 10 years longer than the poorest women.”¹⁷

In Ohio, 38.7 percent of people living in households with incomes less than \$15,000 report “poor” or “fair” health, compared to 6 percent of Ohioans in households with incomes of \$75,000 or more (see figure 4).

Ohioans with low incomes are more likely to have chronic conditions. The prevalence of depression among Ohioans with low incomes is more than twice that of people with moderate or high incomes (see figure 4). Fourteen percent of Ohio adults in households with incomes less than \$15,000 have diabetes, compared to just eight percent with incomes of more than \$50,000.

Ohioans with low incomes also experience disparities accessing medical care. Twenty-eight percent of Ohio adults with low incomes did not have a usual source of care, compared to only 13 percent of Ohio adults with moderate or high incomes. The percent of Ohioans with annual incomes below \$15,000 who went without care due to cost was 17.9 percent, compared to 5.2 percent among Ohioans with incomes of \$75,000 or more, as seen in figure 4.

Figure 4. Health outcomes for Ohioans, by income (2015)



*Prevalence of two or more chronic diseases calculated by Ohio Department of Health using 2012 Behavioral Risk Factors Surveillance Survey data.

Source: Behavioral Risk Factors Surveillance Survey

Why does poverty persist amid low unemployment rates and rising incomes?

Unemployment in Ohio is near its lowest level in the past decade,¹⁸ and median household incomes¹⁹ and labor market participation have begun to increase in recent years.²⁰ Despite these positive economic indicators, poverty rates for families and individuals remain above pre-recession levels.²¹ One factor that contributes to this paradox is low-wage employment.

Low-wage employment

A closer look at job openings in Ohio reveals that the occupations with the highest number of annual job openings pay wages that are low enough to keep some working households at or near the poverty level. Figure 5 shows the 10 occupations with the largest numbers of projected annual job openings, the median wage paid and educational requirements.²²

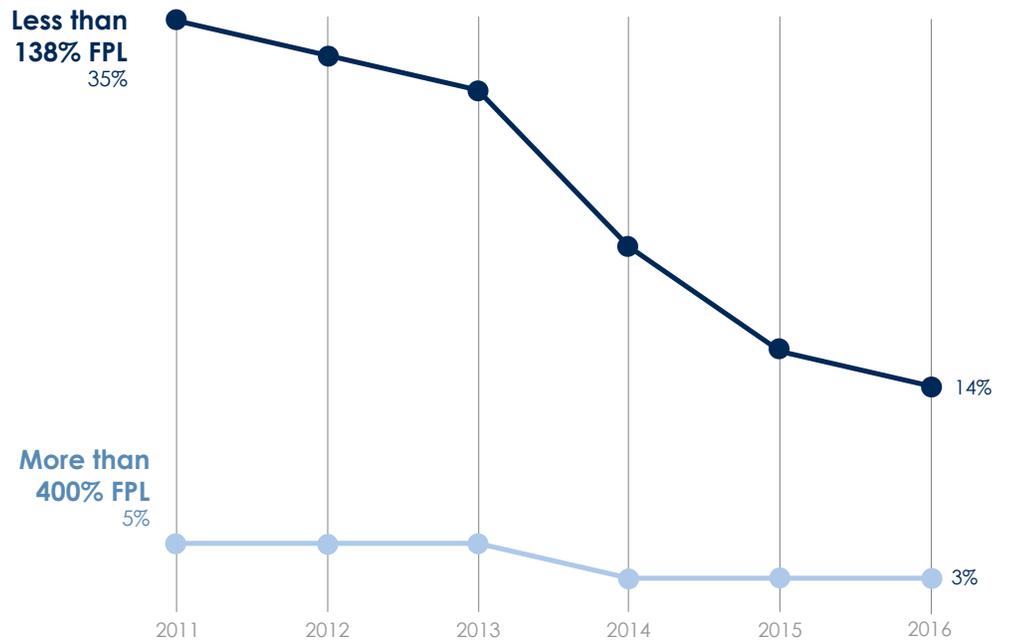
Figure 5. **Top 10 occupations with the largest number of projected job openings in Ohio (2014-2024)**

	Annual openings	Median wage	Typical education needed for entry
Combined food preparation and serving workers, including fast food	6,920	\$8.94	No formal educational credential
Retail salespersons	6,002	\$9.92	No formal educational credential
Cashiers	4,960	\$9.13	No formal educational credential
Registered nurses	4,833	\$29.46	Bachelor's degree
Home health aides	4,476	\$9.83	No formal educational credential
Waiters and waitresses	4,267	\$8.97	No formal educational credential
Laborers/freight/stock/material movers	3,613	\$11.72	No formal educational credential
Nursing assistants	2,711	\$11.61	Postsecondary non-degree award
Stock clerks and order fillers	2,616	\$11.25	No formal educational credential
Office clerks, general	2,495	\$13.75	High school diploma or equivalent

Source: Ohio Department of Job and Family Services, Bureau of Labor Market Information, December 2016.

Since implementation of the Affordable Care Act's Medicaid expansion in January of 2014, the uninsured rate has dropped significantly for Ohioans with incomes below 138 percent FPL. However, there is still a large disparity in coverage rates. In 2016, Ohioans with incomes below 138 percent FPL were almost five times more likely to be uninsured compared to Ohioans with incomes over 400 percent FPL (see figure 6).²³

Figure 6. Uninsured rate of Ohioans, ages 18-64 (2011-2016)



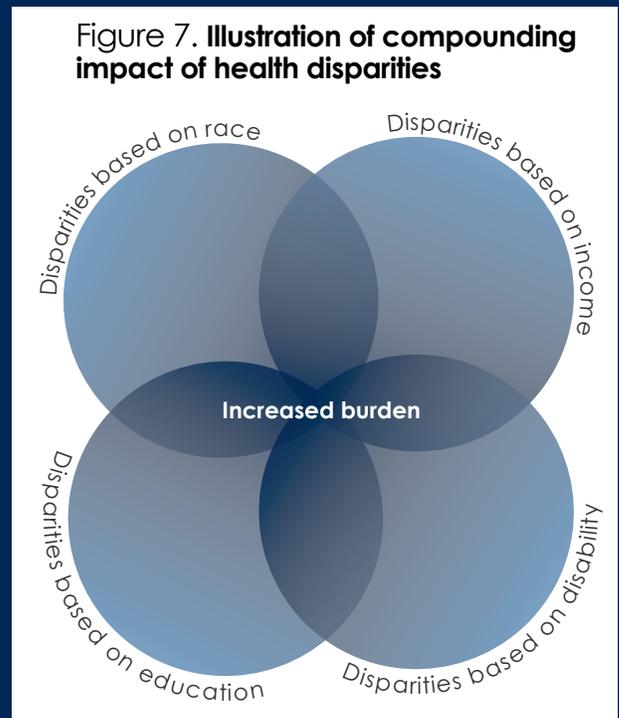
Source: U.S. Census Bureau, American Community Survey

The “double burden” of health disparities and inequities

Groups with low incomes and those with poorer health outcomes often overlap. For example, African-American or black Ohioans are more likely to live in poverty and are also more likely to experience poorer health outcomes than any other racial and ethnic group.²⁴ The same holds true for Ohioans with a disability and those with lower educational attainment.²⁵

When people are part of more than one group that experiences health disparities, the underlying causes of the disparities can place a “double burden”²⁶ on the health of the individual (see figure 7). For example, racial and ethnic minorities living with a disability report poor health at higher rates than white people living with a disability.²⁷ This also holds true for minorities who experience increased health risks associated with both low socio-economic status and race.²⁸ This compounding of health risk highlights the need to understand the relationship between income and health and reduce or eliminate health disparities and inequities.

Figure 7. Illustration of compounding impact of health disparities



How does income influence health?

Income influences health through various mechanisms, including stress, access to care and opportunities to make healthy choices.²⁹

Health behaviors

While individual health behaviors reflect personal choice, research shows that social and environmental factors have a strong influence on health behaviors.³⁰ For example, people with higher incomes can choose from a wider range of food options and purchase healthy foods even when they are more expensive. Neighborhood conditions³¹ and social networks,³² which include friends, family and neighbors, also influence health behaviors. In addition, people with low incomes “experience more chronic and uncontrollable life events and stressors than the general population.”³³ Exposure to persistent stress combined with a lack of resources or coping strategies can lead to unhealthy behaviors.³⁴

Nutrition

Research shows that unhealthy foods are inexpensive and easier to find compared to healthy foods in low-income neighborhoods. Affordability is the primary factor households with low incomes consider in making food choices.³⁵ Foods that are more nutritious are typically more expensive than foods that are filling, but not particularly healthy.³⁶ While it is possible to eat healthy foods on a limited budget, people with low incomes may face other barriers to eating a healthy diet. For example, people working multiple part-time jobs with irregular schedules have less time to prepare fresh and healthy foods. In addition, healthy foods, including fresh fruits and vegetables, are harder to find in low-income neighborhoods.³⁷ Finally, social networks often reinforce unhealthy eating.³⁸

Smoking

Ohio adults with incomes below \$15,000 per year are nearly three times more likely to smoke than Ohioans with incomes above \$50,000.³⁹ Research shows that tobacco products are more readily available in low-income neighborhoods,⁴⁰ and tobacco companies have a history of targeting advertisements to people with low incomes.⁴¹ To make tobacco products more affordable, the tobacco industry spends considerable amounts of money on coupons, promotions and

discounts.⁴² Persistent exposure to stress combined with the common perception that nicotine helps to regulate stress may explain some of the disparities in smoking rates by income.⁴³

Access to health care

Income influences access to health care through several factors, including access to affordable health insurance coverage and healthcare services.

Health insurance coverage

People with low incomes are more likely to be uninsured and have unmet healthcare needs (see figure 6).⁴⁴ Without the benefit of negotiated rates, people without insurance are often billed at higher rates for the healthcare services they receive. As a result, people who are uninsured may delay or forgo needed care, receive care at hospital emergency departments or risk severe financial hardship from medical debt.⁴⁵

Provider access

There are typically fewer healthcare facilities located in low-income neighborhoods.⁴⁶ This presents a particular challenge for people who do not have a vehicle and/or live in a neighborhood with poor access to public transit or a rural area with no transit services.

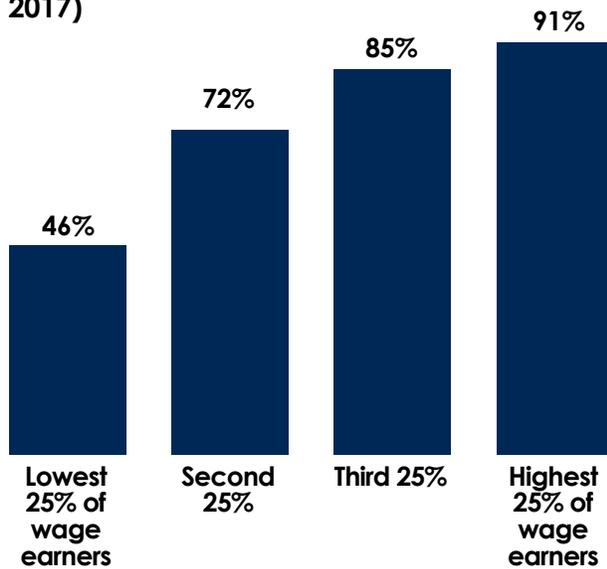
Stress and hazards in the workplace

Jobs that pay a living wage, offer flexibility to address life's challenges and give employees a sense of control over their work promote better mental and physical health.⁴⁷ Low-wage jobs are typically repetitive or task-oriented and place high demands on employees, but offer little control over working conditions.⁴⁸ For example, workers with low incomes are more likely to have jobs with irregular work schedules, which can be stressful because of scheduling conflicts that arise between work and other responsibilities, such as childcare.⁴⁹ In addition, low-wage workers are more likely to work in dangerous environments that can be harmful to health and less likely to have paid sick leave (see figure 8).⁵⁰

How does health influence income

Research on the connections between income and health largely focuses on how income influences health, but economists and other researchers have also explored the impact of health on income.⁵¹ The effects of health on

Figure 8. **Percent of workers with paid sick leave, by wage earning group, U.S. (March 2017)**



Source: "Employee Benefits in the United States — March 2017." U.S. Department of Labor, Bureau of Labor Statistics

income are more severe for people with low incomes because they typically have fewer resources, including health insurance coverage, savings and paid time off work to reduce the negative impact of poor health on income.

Absenteeism

Health-related absenteeism impacts income by reducing productivity and making it more difficult to pursue advancement opportunities such as education, training or job promotion. For children, health-related absenteeism can limit educational attainment and make it more difficult to acquire the skills and credentials that support higher income earning potential in adulthood.⁵²

For working-age adults, absenteeism can reduce income through reduced hours or job loss, particularly for workers that do not have paid sick leave.⁵³ For example, a recent study found that workers with two or three chronic conditions miss three more days of work per year on average than people with no chronic conditions and people with four or more chronic conditions miss nine more days on average.⁵⁴ In addition, the likelihood that an individual is employed decreases as the number of chronic conditions they have increases (see figure 9).

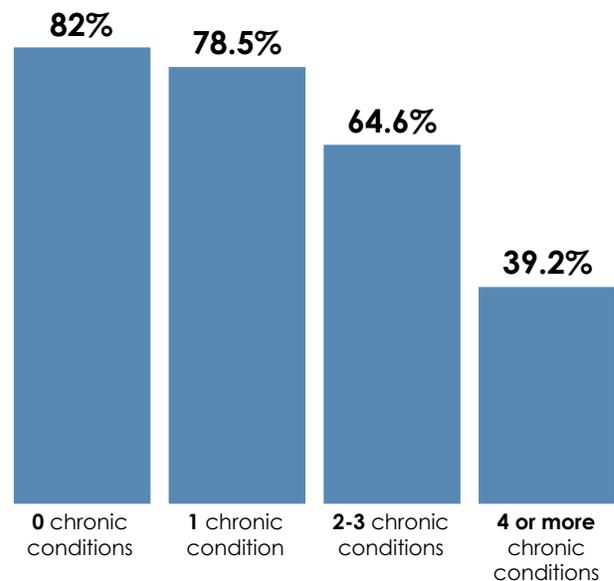
Poverty and poor health as an intergenerational cycle

Research highlights that income and health-related traits are passed from one generation to the next.⁵⁵ Examples from the U.S. include:

- About half of an individual's earning potential is inherited from parents⁵⁶
- Children of smokers are more likely to smoke than children of non-smokers⁵⁷
- Income level in early childhood is a determinant of health outcomes in adulthood⁵⁸
- Social networks, including support from friends, family and community members, can help address barriers to earning higher income such as transportation and employment⁵⁹

Understanding how income and health-related outcomes are shared between generations may help to identify policy options that will disrupt intergenerational cycles of poverty and poor health.

Figure 9. **Employment in the past 12 months by number of chronic conditions, adults ages 18-64, U.S. (2011)**



Source: National Health Interview Survey, 2011 as published by Ward, Brian W. "Multiple Chronic Conditions and Labor Force Outcomes: A population study of U.S. adults."

Disability

Temporary or permanent disabilities can impact income for working age adults through job loss or reduction of hours, changing work duties and/or limiting access to opportunities for advancement.⁶⁰

Some programs, including federal Social Security Disability Insurance (SSDI), pay benefits to disabled workers based on earnings history.⁶¹ Workers who earned low incomes before becoming disabled receive smaller payments. Vocational rehabilitation programs provide assistance aimed at increasing employment and incomes among people living with disabilities.⁶²

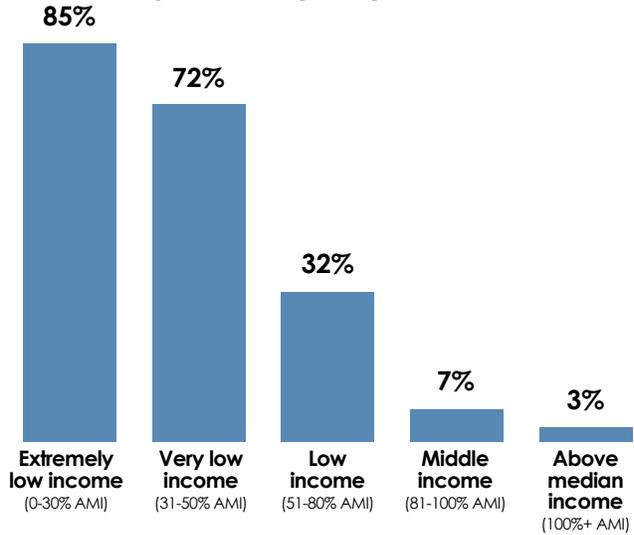
Factors that impact both income and health

There are many factors – often related to poverty – that can affect both income and health.

Racism

Institutional, structural and interpersonal racism can influence both health⁶³ and income.⁶⁴ For example, residential segregation is shown to increase risk of poor birth outcomes and infant mortality among minority groups.⁶⁵ Segregation also restricts access to educational and economic opportunities by concentrating racial and ethnic minorities in high-poverty neighborhoods.⁶⁶ Discrimination experienced

Figure 11. Housing cost burden for Ohio renters, by income (2015)

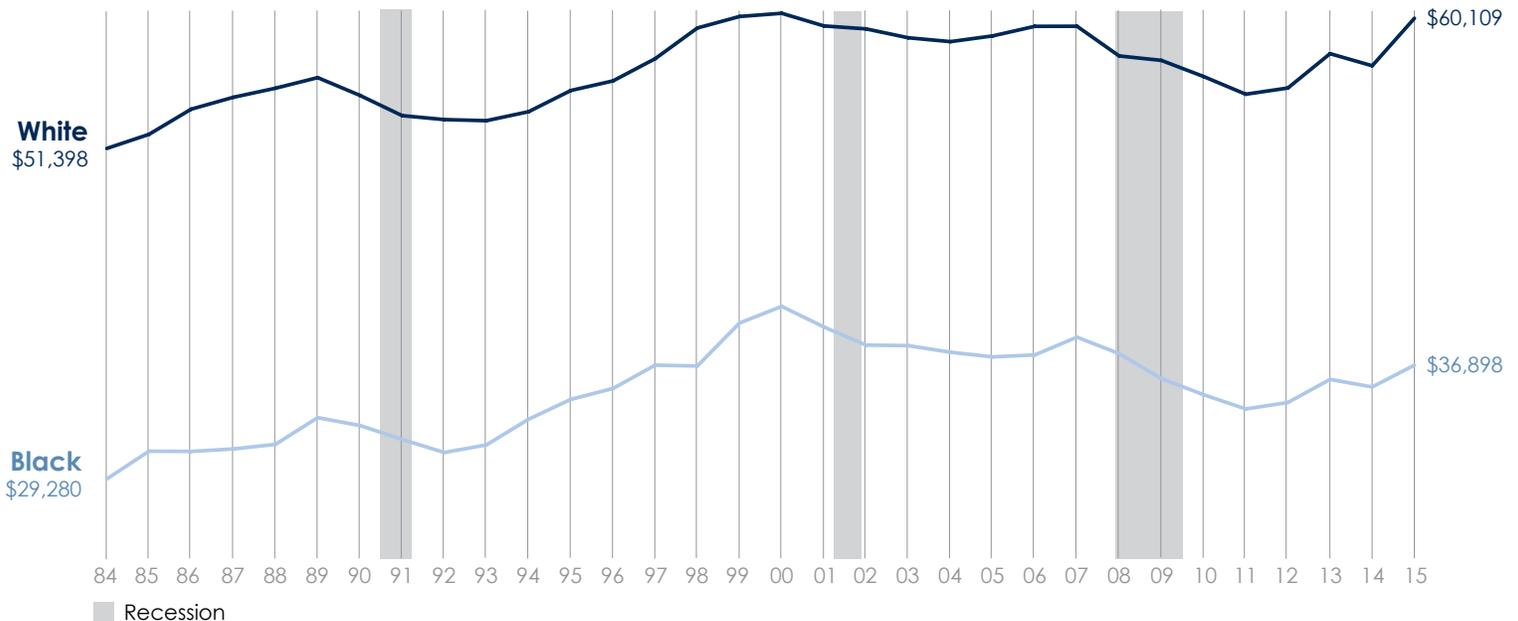


Source: The National Low Income Housing Coalition, 2017 State Housing Profile – Ohio

by minorities in the workplace, housing markets and everyday interactions with people exhibiting conscious and unconscious bias has also been shown to negatively impact a number of health-related outcomes.⁶⁷

Discrimination also contributes to persistent wage and employment disparities experienced by minority groups (see figure 10).⁶⁸ Studies have confirmed this by controlling for personal characteristics of workers such as educational

Figure 10. Real median income by race of head of household, U.S. (1984-2015)



Source: "Historical Income Tables: Households." U.S. Census Bureau

attainment.⁶⁹ A recent study found that black male college graduates experienced a 20 percent wage disadvantage relative to white college graduates in 2014, double the disadvantage between these groups in the 1980s.⁷⁰

Housing and neighborhood conditions

Housing and neighborhood conditions impact health through exposure to harmful conditions in the home as well as exposure to stressors such as crime. Neighborhood conditions impact health and income through numerous factors, including access to quality education and employment opportunities.

Housing

In Ohio, many renters are “cost-burdened” by rent and utilities, meaning that they spend more than 30 percent of their gross monthly income on these expenses (see figure 11).⁷¹ When a household is cost-burdened, the portion of income that is left after paying for housing may not be sufficient to cover other necessities. The trade-offs households make to cover this shortfall can be detrimental to overall health.⁷² For example, to maintain housing, a family with low income may choose to go without electricity during the summer which can worsen symptoms of some chronic conditions, make it harder to adhere to medical advice (such as

refrigerating medications) and increase exposure to air pollutants through open windows.

Substandard or poorly maintained housing can present health risks, including respiratory problems prompted by inadequate climate control, mold or pests and neurological damage or cancer from exposure to lead or other toxins.⁷³

Neighborhood conditions

Conditions in neighborhoods where people with low incomes can afford to live can be harmful to health. As the volume of substandard, vacant and abandoned buildings in a neighborhood increases, the risk of poor health outcomes for residents also increases.⁷⁴ In addition, living in neighborhoods with high crime, low-quality schools, few job opportunities and isolated social networks can also lead to mental and physical health problems.⁷⁵

Research shows that the place in which a person lives influences income and economic mobility.⁷⁶ High-poverty neighborhoods tend to offer fewer opportunities for residents to move up the economic ladder. The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University has developed **opportunity maps**⁷⁷ that illustrate how opportunities for advancement are concentrated in some areas and largely absent in others.

Workforce development: Ohio's Combined State Plan

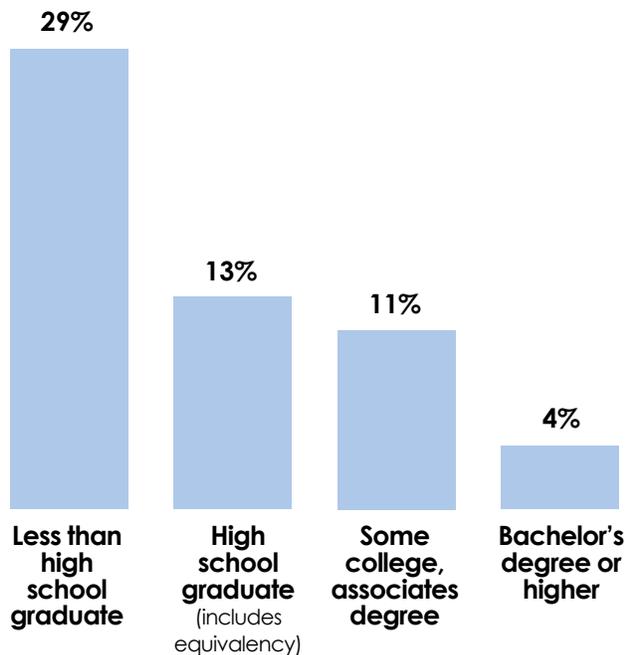
The federal government and states fund several programs to connect job seekers with the basic skills, training and supportive services they need to participate in the workforce. The federal Workforce Innovation and Opportunity Act (WIOA), signed into law in 2014, required states to submit a four-year workforce development strategy. **Ohio's Combined State Plan** coordinates services for job seekers provided through the funding sources and programs listed below⁷⁸:

- Title I of WIOA, which funds county OhioMeansJobs Centers and job training and job search assistance programs for adults, dislocated workers and low-income youth
- The Wagner-Peyser Act Program, which funds a variety of employment services to connect job seekers and employers
- Adult Basic and Literacy Education, which funds GED preparation, adult math, reading and literacy courses
- The Vocational Rehabilitation Program through Opportunities for Ohioans with Disabilities, which supports vocational rehabilitation programs for individuals with disabilities

Ohio has chosen three additional programs to include in the state's combined plan including:

- Carl D. Perkins Career and Technical Education, which provides funding for career technical training for secondary and post-secondary students
- Senior Community Service Employment Program, which is a community service and work-based job training program for older Ohioans
- Jobs for Veterans State Grants Programs, which helps veterans find jobs through employment services at local OhioMeansJobs Centers

Figure 12. **Percent of Ohioans ages 25 years and older with incomes below the poverty level, by educational attainment (2011-2015)**



Source: American Community Survey, 5-year estimates, 2011-2015

Historical drivers of racial segregation and discriminatory practices have isolated minority groups, particularly African Americans, into low opportunity areas.⁷⁹ For example, “redlining” restricted access to capital investment in some neighborhoods based on the racial make-up of residents.⁸⁰ Over time, lack of access to capital created conditions in neighborhoods where social problems associated with poverty, including lack of opportunity, persist.⁸¹

Education

Higher educational attainment is associated with higher income and better health. Jobs that pay

high wages and offer benefits usually require some type of degree or credential to qualify.⁸² In Ohio, recent data shows that 29 percent of people who did not graduate high school or an equivalency program have incomes below 100 percent FPL compared to 4 percent of people with a bachelor's degree or higher (see figure 12).⁸³

By 2020, 64 percent of jobs in Ohio will require some type of postsecondary education.⁸⁴ A 2017 report from The Lumina Foundation estimates that only 43.6 percent of Ohioans ages 25-64 have completed postsecondary education, including “high-value postsecondary certificates.”⁸⁵ The Ohio Department of Higher Education set a goal to increase this number to 65 percent by 2025.⁸⁶

In addition to improving health through increased income, education also influences health by equipping people with skills to navigate the healthcare system, communicate with providers and manage complex and/or chronic conditions.⁸⁷ See the HPIO policy brief [Connections between Education and Health](#) for additional information.

Toxic and persistent stress

Long-term exposure to stress can negatively affect health and potentially lead to unhealthy coping mechanisms, such as smoking and excessive drinking.⁸⁸ These behaviors are harmful to health, but they are also expensive and potentially harmful to future economic success.

Adverse childhood experiences (ACEs), such as abuse or neglect, have significant impacts on adult health and economic success. Children exposed to four or more ACEs are twice as likely to have certain chronic conditions and to be unemployed as adults.⁸⁹

Policy implications

Given the connections between income and health, policymakers can:

- Prioritize evidence-informed policies with both income and health benefits, including expanding the state Earned Income Tax Credit, lifting the existing cap on the credit, making it refundable and expanding the credit to non-custodial parents
- Commission **health impact assessments** through legislation and/or during the process of considering policy options that impact income:
 - Consider the potential impact of income policies on health, such as implementing work requirements for Medicaid, changing the state minimum wage or implementing local living wage ordinances and fair contracting practices
 - Consider the potential impact of policies related to health insurance coverage on health and income, such as increasing cost-sharing for Medicaid or developing accounts to help people with low incomes afford private insurance premiums and cost-sharing
- Implement policies that reduce barriers to employment, such as reduced occupational licensing requirements⁹⁰ and fair-chance hiring policies⁹¹ such as the Ohio Fair Hiring Act, signed into state law in 2015
- Implement evidence-based strategies, such as matched dollar incentivizes for saving tax refunds, to support wealth accumulation among Ohioans with low and moderate incomes⁹²
- Strengthen consumer protections for people with low incomes, such as tightening restrictions on interest rates charged by payday lenders

Income support tax credits and programs

The federal government and states provide income support to low-, moderate-, and high-income households through programs and tax credits that provide cash, tax relief or in-kind support to eligible households. This government support helps households pay for necessities or increase disposable income.

Tax credits and deductions

Tax credits reduce the amount of taxes households are required to pay. Refundable tax credits provide additional income for households that do not owe any income tax. Eligibility for refundable tax credits is typically limited to households with low incomes. An example of a refundable tax credit is the federal Earned Income Tax Credit (EITC). Ohio allows tax filers with low incomes to claim a portion of the federal EITC on their state return. In tax year 2016 the Ohio EITC was non-refundable and capped for filers with incomes above \$20,000.

Other tax credits, including the Child Tax Credit (CTC) are non-refundable and available to filers with moderate and high incomes. Tax deductions, including the deduction for mortgage interest and property taxes are also available to moderate and higher income filers.

Most tax credits and deductions are designed to promote economic activity, such as work

and home ownership and there is evidence that they are effective. For example, recent research found that the EITC and CTC reduce poverty and encourage work among recipients.⁹³ Research also shows that increases in the EITC may be related to improvements in health outcomes, including reduced pre-term birth and low birth weight.⁹⁴

Programs

Government programs for households with very low incomes, including the Special Supplemental Nutrition Program for Women, Infants and Children (WIC), Medicaid, Temporary Assistance for Needy Families (TANF) and Supplemental Security Income (SSI), provide cash or in-kind support to households with qualifying incomes. For example, WIC provides vouchers to purchase healthy foods for pregnant women and young children with incomes below 185 percent FPL.

The structure of some programs for people with very low incomes can be a barrier to achieving economic self-sufficiency. Most social safety net programs reduce benefits for recipients as earned income increases. This can create an economic disincentive to accepting a small raise or working more hours because the increase in earned income is at least partially offset by a decrease in benefits.⁹⁵ This is referred to as a “benefit cliff.”

- Monitor implementation of **Ohio's Combined Plan** – Ohio's plan to implement four federal workforce development programs – to ensure that the state is accomplishing the objectives of the plan as stated below⁹⁶:
 - Help more Ohioans compete for quality jobs that pay a family-sustaining wage and lead to career advancement
 - Remove barriers to education and employment for individuals
 - Help Ohio employers find the talent they need to succeed and grow
 - Provide effective and efficient job training aligned to in-demand occupations and employer needs resulting in workplace-valued credentials
- Prioritize additional state investment in workforce development programs that deliver desired outcomes, including training for jobs that pay livable wages and have good scheduling and sick time practices⁹⁷
- Increase opportunities for Ohioans to obtain quality postsecondary credentials⁹⁸, including college access programs for students with low incomes⁹⁹
- Adopt evidence-based local policies that encourage mixed-income housing development such as inclusionary zoning¹⁰⁰, which requires developers to build affordable housing units alongside more expensive units

Conclusion

Income is a major factor that determines where people live, who they associate with, the type of work they do and the resources they have to cope with stress and negative life events. The cumulative effects of income on health contribute to significant disparities in health and health-related outcomes between people with

Notes

1. Deaton, Angus. "On Death and Money: History, Facts and Explanations." *JAMA*, 315, no. 16 (2016): 1703-1705.
2. Booske, Bridget et al. *Different perspectives for assigning weights to determinants of health*. County Health Rankings, February 2010.
3. Marmot, Michael. "The influence of income on health: Views from an epidemiologist!" *Health Affairs* 21, no. 2 (2002): 31-46.; see also Kawachi, Ichiro, Nancy E. Adler and William H. Dow. "Money, schooling, and health: Mechanisms and causal evidence." *Annals of the New York Academies of Sciences*, 1186 (2010): 56-68. doi: 10.1111/j.1749-6632.2009.05340.x
4. *Issue Brief #3 – Exploring the Social Determinants of Health: Stress and Health*, Robert Wood Johnson Foundation, 2011.
5. Data from the Local Area Unemployment Statistics. "Databases, Tables and Calculators by Subject." United States Department of Labor, Bureau of Labor Statistics. Accessed July 18, 2017. https://data.bls.gov/timeseries/LASST3900000000000003?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true
6. Data from the U.S. Bureau of the Census, Real Median Household Income in the United States [MEHOINUSA672N], as compiled by FRED, Federal Reserve Bank of St. Louis. Accessed September 12, 2017. <https://fred.stlouisfed.org/series/MEHOINUSA672N>
7. HPIO analysis of data from the American Community Survey, Table C27016. "American FactFinder." United States Census Bureau. Accessed June 29, 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
8. ALICE® *Asset Limited, Income Constrained, Employed – Michigan: Study of financial hardship*. United Ways of Michigan, 2017.
9. FPL guidelines were originally calculated in 1963 by the Social Security Administration. In 1963 the average family spent 30 percent of household income on food. Therefore, FPL was established as three times the cost of food using the United States Department of Agriculture's economy and low-cost food plans – the cheapest food plans that would provide sufficient nutritional value. FPL is now updated using the change in the Consumer Price Index for All Urban Consumers for the previous calendar year.
10. Data from the "Fiscal Year (FY) 2017 Income Limits (IL) documentation." Office of Policy Development and Research (PD&R), U.S. Department of Housing and Urban Development. Accessed July 18, 2017. <https://www.huduser.gov/portal/datasets/il.html>
11. ALICE® *Asset Limited, Income Constrained, Employed – Michigan: Study of financial hardship*. United Ways of Michigan, 2017.
12. Purnell, Jason Q. and Anjum Hajat. *The Health and Wealth Connection: Opportunities for investment across the life course*. Asset Funders Network, 2017.
13. Pickett, Kate E. and Richard G. Wilkinson. "Income inequality and health: A causal review." *Social Science and Medicine*, 128 (2015): 316-326. doi: 10.1016/j.socscimed.2014.12.031

Who develops income policies?

Several agencies develop policies and administer programs that impact the incomes of Ohioans. Some examples include the Ohio Development Services Agency, Ohio Department of Commerce, Governor's Office of Workforce Transformation, Ohio Department of Job and Family Services and Ohio Department of Taxation.

Legislative standing committees that may consider income-related law changes in the Ohio General Assembly include:

House

- Finance
- Ways and means
- Economic development, commerce and labor
- Education and career readiness
- Community and family advancement
- Financial institutions, housing and urban development
- Higher education and workforce development

Senate

- Finance
- Education
- Insurance and financial institutions
- Transportation, commerce and workforce
- Ways and means

low incomes and those with higher incomes. Implementing policies designed to help Ohioans with low incomes achieve economic self-sufficiency may help to improve the overall health and well-being of Ohioans.

Notes cont.

14. Richardson, Thomas, Peter Elliot and Ronald Roberts. "The relationship between personal unsecured debt and mental and physical health: A systematic review and meta-analysis." *Clinical Psychology Review*, 33 (2013): 1148-1162. doi: 10.1016/j.cpr.2013.08.009
15. Unless otherwise noted, all statistics cited in this section come from 2015 data from the Behavioral Risk Factor Surveillance System. Estimates are for the populations of Ohioans 18 years of age and older.
16. Woolf, Steven H. et al. *How are Income and Wealth Linked to Health and Longevity*. Urban Institute and the Center on Society and Health at the Virginia Commonwealth University, 2015.; see also Braveman, Paula A. et al. "Socioeconomic Disparities in Health in the United States: What the pattern tells us." *American Journal of Public Health*, 100, no. S1 (2010): S186-S195.
17. Chetty et al. *The Association Between Income and Life Expectancy in the United States, 2001-2014: Executive Summary*. The Equality of Opportunity Project, April 2016. <http://jamanetwork.com/journals/jama/fullarticle/2513561?guestAccessKey=4023ce75-d0fb-44de-bb6c-8a10a30a6173>
18. Data from Local Area Unemployment Statistics. "Databases, Tables & Calculators by Subject." United States Department of Labor, Bureau of Labor Statistics. Accessed July 26, 2017. https://data.bls.gov/timeseries/LASST390000000000003?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true
19. Data from the U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, as compiled by America's Health Rankings. "America's Health Rankings – Median Household Income." Accessed July 26, 2017. <http://www.americashealthrankings.org/explore/2016-annual-report/measure/MedianIncome/state/OH>
20. Data from Local Area Unemployment Statistics. "Databases, Tables & Calculators by Subject." United States Department of Labor, Bureau of Labor Statistics. Accessed July 26, 2017. https://data.bls.gov/timeseries/LASST390000000000003?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true
21. Larrick, Don. *The Ohio Poverty Report*. Columbus, OH: Office of Research, Ohio Development Services Agency, 2017.
22. Data from various sources, as compiled by Ohio Department of Job and Family Services, Ohio Labor Market Information. "Ohio Job Outlook." Ohio Department of Job and Family Services. Accessed September 12, 2017. <http://ohiolmi.com/proj/OhioJobOutlook.htm>
23. HPIO analysis of data from the American Community Survey, Table C27016. "American Factfinder." United States Census Bureau. Accessed June 29, 2017. https://factfinder.census.gov/bkmk/table/1.0/en/ACS/15_1YR/C27016/0400000US39
24. Health Policy Institute of Ohio. *2017 Health Value Dashboard*. March 2017.
25. Ibid.
26. Blick, Rachel et al. *The Double Burden: Health disparities among people of color living with disabilities*. Ohio Disability and Health Program, 2015.
27. Ibid.
28. Williams, David R. and Michelle Sternthal. "Understanding Racial/ethnic Disparities in Health: Sociological Contributions." *Journal of Health and Social Behavior*, 51, no. 1 (supplement), (2010): S15-S27. doi: 10.1177/0022146510383838
29. Woolf, Steven H. et al. *How are Income and Wealth Linked to Health and Longevity*. Urban Institute and the Center on Society and Health at the Virginia Commonwealth University, 2015.; see also *Issue Brief #4 – Exploring the social determinants of health: Income, Wealth and Health*, Robert Wood Johnson Foundation, 2011.; and *Issue Brief #3 – Exploring the Social Determinants of Health: Stress and Health*, Robert Wood Johnson Foundation, 2011.
30. Barkley, Geoffrey S. "Factors Influencing Health Behaviors in the National Health and Nutritional Examination Survey, III (NHANES III)." *Social Work in Health Care*, 46, no. 4 (2008): 57-79. doi: 10.1300/J010v46n04_04
31. Ellen, Ingrid Gould, Tod Mijanovich and Keri-Nicole Dillman. "Neighborhood Effects on Health: Exploring the links and assessing the evidence." *Journal of Urban Affairs*, 23, no.3-4 (2001): 391-408.
32. Glanz, Karen, Barbara K. Rimer and K. Viswanath. *Health Behavior: Theory, Research and Practice*. Jossey Bass, 2015.
33. Santiago, Catherine DeCarlo, Martha E Wadsworth and Jessica Stump. "Socioeconomic status, neighborhood disadvantage, and poverty-related stress: Prospective effects of psychological syndromes among diverse low-income families." *Journal of Economic Psychology*, 32 (2011): 218-230. doi: 10.1016/j.joep.2009.10.008
34. *Issue Brief #3 – Exploring the Social Determinants of Health: Stress and Health*, Robert Wood Johnson Foundation, 2011.
35. Ibid.
36. Darmon, Nicole and Adam Drewnowski. "Does social class predict diet quality?" *The American Journal of Clinical Nutrition*, 87, no. 5 (2008):1107-1117.
37. Treuhaff, Sarah and Allison Karpyn. *The Grocery Gap: Who has access to healthy food and why it matters*. PolicyLink and The Food Trust, 2010.
38. Ellen, Ingrid Gould, Tod Mijanovich and Keri-Nicole Dillman. "Neighborhood Effects on Health: Exploring the links and assessing the evidence." *Journal of Urban Affairs*, 23, no.3-4 (2001): 391-408.
39. Health Policy Institute of Ohio. *2017 Health Value Dashboard*. March 2017.
40. Yu, D. et al. "Tobacco outlet density and demographics: Analysing the relationships with a spatial regression approach." *Public Health*, 124 (2010): 412-416. doi: 10.1016/j.puhe.2010.03.024
41. *The Health Consequences of Smoking-50 years of Progress: A report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, 2014.
42. Brown-Johnson, Cati G. et al. "Tobacco industry marketing to low socioeconomic status women in the USA." *Tobacco Control*, 23, no. e2 (2014): e139-e146.
43. *Issue Brief #3 – Exploring the Social Determinants of Health: Stress and Health*, Robert Wood Johnson Foundation, 2011.
44. Data from the Ohio Medicaid Assessment Survey. "Adult Dashboard." The Ohio Colleges of Medicine Government Resource Center. Accessed July 18, 2017. <http://grcapps.osu.edu/dashboards/OMAS/adult/>
45. "Key Facts about the Uninsured Population." Henry J. Kaiser Family Foundation. October 2015. <http://kff.org/uninsured/fact-sheet/key-facts-about-theuninsured-population/>
46. Ellen, Ingrid Gould, Tod Mijanovich and Keri-Nicole Dillman. "Neighborhood Effects on Health: Exploring the links and assessing the evidence." *Journal of Urban Affairs*, 23, no.3-4 (2001): 391-408.
47. Marmot, Michael. "The influence of income on health: Views from an epidemiologist" *Health Affairs* 21, no. 2 (2002): 31-46.; see also Mutambudzi, Miriam et al. "Effects of Psychosocial Characteristics of Work on Pregnancy Outcomes: A critical review." *Women & Health*, 51, no. 3, (2011): 279-297. doi: 10.1080/03630242.2011.560242
48. Ibid.
49. *EPI Briefing Paper #394: Irregular Work Scheduling and Its Consequences*. Washington, D.C.: Economic Policy Institute, 2015. <http://www.epi.org/files/pdf/82524.pdf>
50. Kaplan, George A. *The Poor Pay More – Poverty's high cost to health*. Robert Wood Johnson Foundation, 2009.
51. For examples see Glied, Shery and Don Oellerich. "Two-generation Programs and Health." *The Future of Children*, 24, no.1 (2014): 79-97.; see also Wightman, Patrick and Sheldon Danziger. "Multi-generational income disadvantages and the educational attainment of young adults." *Research in Social Stratification and Mobility*, 35 (2014): 53-69. doi: 10.1016/j.rssm.2013.09.004
52. Wightman, Patrick and Sheldon Danziger. "Multi-generational income disadvantages and the educational attainment of young adults." *Research in Social Stratification and Mobility*, 35 (2014): 53-69. doi: 10.1016/j.rssm.2013.09.004
53. Mays, Darren et al. "Parental Smoking Exposure and Adolescent Smoking Trajectories." *Pediatrics*, 133, no. 6 (2014): 983-991. doi: 10.1542/peds.2013-3003
54. Case, Anne, Darren Lubotsky and Christina Paxson. "Economic status and health in childhood: The origins of the gradient." *The American Economic Review*, 92, no. 5 (2002): 1308-1334.
55. Haines, Valerie A., John J. Beggs, and Jeanne S. Hulbert. "Neighborhood Disadvantage, Network Social Capital, and Depressive Symptoms." *Journal of Health and Social Behavior*, 52, no. 1 (2011): 58-73. doi: 10.1177/0022146510394951
56. Smith, James P. "Healthy Bodies and Thick Wallets: The Dual Relation Between Health and Economic Status." *Journal of Economic Perspectives*, 13, no. 2.
57. Ibid.
58. Hill, Heather D. "Paid Sick Leave and Job Stability." *Work and Occupations*, 40, no. 2 (2013). doi: 10.1177/0730888413480893
59. Ward, Brian W. "Multiple Chronic Conditions and Labor Force Outcomes: A Population Study of U.S. Adults." *American Journal of Industrial Medicine*, 58, no. 9 (2015): 943-954. doi: 10.1002/cjim.22439
60. Fremstad, Shawn. *Half in Ten: Why taking disability into account is essential to reducing income poverty and expanding economic inclusion*. Washington, D.C.: Center for Economic Policy and Research, 2009.
61. *Disability Planner: You're Approved*. Social Security Administration. Accessed July 13, 2017. <https://www.ssa.gov/planners/disability/dapproval.html>
62. Walls, Richard T. and Denetta L. Dowler. "Disability and Income." *Rehabilitation Counseling Bulletin*, 58, no. 3 (2015): 146-153. doi: 10.1177/0034355214530788
63. Fiscella, Kevin et al. "Inequality in Quality: Addressing socioeconomic, racial, and ethnic disparities in health care." *JAMA*, 283, no. 19 (2000): 2579-2584. doi: 10.1001/jama.283.19.2579
64. Alexis, Marcus. "The Economics of Racism." *The Review of Black Political Economy*, 26, no. 3 (1999): 51-75.
65. Dole, Nancy et al., "Psychosocial Factors and Preterm Birth Among African American and White Women in Central North Carolina." *American Journal of Public Health* 94, no. 8 (2004): 1358-1365.

Notes cont.

66. Williams, David R. "Race, Socioeconomic Status, and Health: The added Effects of Racism and Discrimination." *Annals New York Academy of Sciences*, 896 (1999): 173-188. Doi: 10.1111/j.1749-6632.1999.tb08114.x; see also Kneebone, Elizabeth and Natalie Holmes. *U.S. concentrated poverty in the wake of the Great Recession*. Washington, D.C.: The Brookings Institution, 2016.
67. Williams, David R. and Selina A. Mohammed. "Racism and Health I: Pathways and Scientific Evidence." *The American Behavioral Scientist*, 57, no. 8 (2013). doi: 10.1177/0002764213487340; see also Alhusen, Jeanne L. et al. "Racial Discrimination and Adverse Birth Outcomes: An Integrative Review." *Journal of Midwifery & Women's Health* 61, no. 6 (2016): 707-720. doi: 10.1037/0033-2909.131.5.662; Giurgescu, C. et al. "Racial Discrimination and the black-white gap in adverse birth outcomes: a review." *Journal of Midwifery and Women's Health* 56, no. 4 (2011): 362-370. doi: 10.1111/j.1542-2011.2011.00034.x.
68. Alexis, Marcus. "The Economics of Racism." *The Review of Black Political Economy*, 26, no. 3 (1999): 51-75.; see also Hassett, Kevin A. "Racial Recession." *American Enterprise Institute*, March 22, 2010. <http://www.aei.org/publication/racial-recession/>
69. Wilson, Valerie and William M. Rodgers III. *Black-white wage gaps expand with rising wage inequality*. Washington, D.C.: Economic Policy Institute, 2016.
70. Ibid.
71. *2017 State Housing Profile – Ohio*. Washington, D.C.: The National Low Income Housing Coalition, 2017.
72. Pollack, Craig Evan, Beth Ann Griffin and Julie Lynch. "Housing Affordability and Health Among Homeowners and Renters." *American Journal of Preventive Medicine* 39, no.6 (2010): 515-521. doi: 10.1016/j.amepre.2010.08.002
73. Leon, Erwin and Joseph Schilling. *Urban Blight and Public Health: Addressing the impact of substandard housing, abandoned buildings, and vacant lots*. Washington, D.C.: Urban Institute, 2017.
74. Ibid.
75. Kneebone, Elizabeth and Natalie Holmes. *U.S. concentrated poverty in the wake of the Great Recession*. Washington, D.C.: The Brookings Institution, 2016.; see also Ellen, Ingrid Gould, Tod Mijanovich and Keri-Nicole Dillman. "Neighborhood Effects on Health: Exploring the links and assessing the evidence." *Journal of Urban Affairs*, 23, no.3-4 (2001): 391-408.
76. Chetty, Raj and Nathaniel Hendren. "The Effects of Neighborhoods on Intergenerational Mobility II: County-level Estimates." *National Bureau of Economic Research*, Working Paper no. 23002, May 2017.
77. Reece, Jason et al. *Opportunity Mapping Issue Brief*. Columbus, OH: Kirwan Institute for the Study of Race and Ethnicity, 2013.
78. Norris, David. "Place, policy and the social determinants of health." HPIO forum *Linking health and wealth: How economic vitality can lead to healthier Ohio*, July 27, 2017.
79. Aaronson, Daniel, Daniel Hartley and Bhashkar Mazumder. "The Effects of the 1930s HOLC "Redlining" Maps." *Federal Reserve Bank of Chicago*, Working Paper 2017-12 (2017).
80. Ibid.
81. Carnevale, Anthony P., Nicole Smith and Jeff Strohl. *Help Wanted: Projections of jobs and education requirements through 2018*. Georgetown University Center on Education and the Workforce, June 2010.
82. Data from the American Community Survey – Table B17003. "American FactFinder". Accessed June 20, 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
83. *The Case for Ohio Attainment Goal 2025*. Columbus, OH: Ohio Department of Higher Education, 2016.
84. *A stronger Nation: Ohio*. Lumina Foundation, 2017.
85. *The Case for Ohio Attainment Goal 2025*. Columbus, OH: Ohio Department of Higher Education, 2016.
86. Health Policy Institute of Ohio. "Connections between education and health," January 2017.
87. "Latest News and Updates, Ohio to Submit Combined Workforce Plan in 2016." Governor's Office of Workforce Transformation. Accessed August 30, 2017. <http://workforce.ohio.gov/NewsandUpdates/tabid/109/ArticleID/27/Default.aspx>
88. Woolf, Steven H. et al. *How are Income and Wealth Linked to Health and Longevity*. Urban Institute and the Center on Society and Health at the Virginia Commonwealth University, 2015.
89. Ibid.
90. *The Tax Policy Center Briefing Book*. The Tax Policy Center, 2016.; see also Marr, Chuck et al. *EITC and Child Tax Credit Promote Work, Reduce Poverty, and Support Children's Development, Research Finds*. Washington, D.C.: Center on Budget and Policy Priorities, October 2015
91. Marr, Chuck et al. *EITC and Child Tax Credit Promote Work, Reduce Poverty, and Support Children's Development, Research Finds*. Washington, D.C.: Center on Budget and Policy Priorities, October 2015
92. *Outlining the Disincentives and Opportunity Costs for Working Mothers: Report for the Women's Fund of Greater Cincinnati Foundation on gaps in income support programs*. The Economics Center, August 2016.
93. Lawson, Greg R. "Occupational Licensing Requirements are an Obstacle to Economic Success." The Buckeye Institute, June 28, 2017. <https://www.buckeyeinstitute.org/research/detail/the-buckeye-institutes-greg-lawson-occupational-licensing-requirements-are-an-obstacle-to-economic-success>
94. Vallas, Rebecca and Sharon Dietrich. *One Strike and You're Out: How We Can Eliminate Barriers to Economic Security and Mobility for People with Criminal Records*. Washington, D.C.: Center for American Progress, December 2014.
95. "County Health Rankings and Roadmaps: What works for health." Robert Wood Johnson Foundation. Accessed August 29, 2017. <http://www.countyhealthrankings.org/roadmaps/what-works-for-health>
96. "Ohio's Combined State Plan: Better Coordination. Improved Delivery of Service. Superior Results." Governor's Office of Workforce Transformation. Accessed August 29, 2017. <http://workforce.ohio.gov/Initiatives/CombinedStatePlan.aspx>
97. Dresser, Laura, Hannah Halbert and Stephen Herzenberg. *High Road WIOA: Building Higher Job Quality into Workforce Development*. Multiple organizations, 2015. http://www.policymattersohio.org/wp-content/uploads/2015/12/High-Road-WIOA_EARN-Brief_Final_20151216.pdf
98. See *A Stronger Nation: Learning beyond high school builds American talent*. Lumina Foundation, 2016. <http://strongernation.luminafoundation.org/report/2017/#page/narrative> for additional details.
99. "County Health Rankings and Roadmaps: What works for health." Robert Wood Johnson Foundation. Accessed August 29, 2017. <http://www.countyhealthrankings.org/roadmaps/what-works-for-health>
100. Ibid.

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