

2017

# Health Value Dashboard™



March 1, 2017

# Contents

<b>Executive summary</b>	<b>3</b>
<b>Overview</b>	<b>5</b>
<b>Where does Ohio rank?</b>	<b>6</b>
<b>Why does Ohio rank 46th on health value?</b>	<b>7</b>
<b>Where do other states rank?</b>	<b>8</b>
<b>What is the path to health value?</b>	<b>9</b>
<b>How to improve health value in Ohio</b>	<b>10</b>
<b>Ohio's greatest health value challenges</b>	<b>12</b>
<b>Ohio's greatest health value strengths</b>	<b>13</b>
<b>Domain profiles</b>	<b>14</b>
Population health	<b>15</b>
Healthcare spending	<b>16</b>
Access to care	<b>17</b>
Healthcare system	<b>18</b>
Public health and prevention	<b>19</b>
Social and economic environment	<b>20</b>
Physical environment	<b>21</b>
<b>Trends</b>	<b>22</b>
<b>Health equity profiles</b>	<b>30</b>

# Executive summary



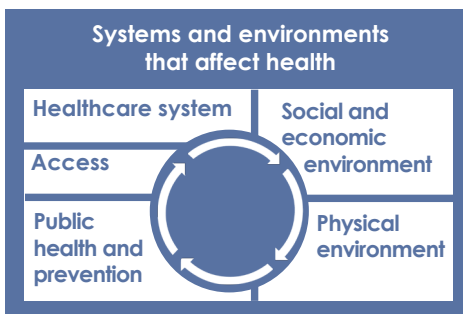
## What is the *Health Value Dashboard*?

The Health Policy Institute of Ohio *Health Value Dashboard* is a tool to track Ohio's progress towards health value — a composite measure of Ohio's performance on population health outcomes and healthcare spending. With 118 metrics, the *Dashboard* examines Ohio's performance relative to other states, tracks change over time and identifies Ohio's greatest health disparities and inequities.



## Where does Ohio rank?

Ohio ranks 46 out of 50 states and the District of Columbia (D.C.) on health value, landing in the bottom quartile. This means that Ohioans are living less healthy lives and spending more on health care than people in most other states.



## Why do we rank so poorly?

Ohio performs well on access to care, but poorly on population health. This indicates that access is necessary, but not sufficient, to improving overall health. In addition, Ohio performs poorly on the other factors that impact health value.

Policymakers and others can look to evidence on the cost-effectiveness of services and programs to guide spending decisions and ensure that dollars are being used wisely to improve performance across all drivers of health value.

## Key findings

### Challenges

There are several metrics on which Ohio ranked in the bottom quartile, including: adult smoking, drug overdose deaths, infant mortality, food insecurity and average monthly marketplace premiums. Notably, a state's adult smoking rate strongly correlates with health value rank. This means that states with a lower percentage of adults who smoke perform better on health value.

### Strengths

Like most other states, Ohio's performance is moving in the right direction, with more metrics that improved than worsened. Greatly improved metrics include: percent of adults reporting that they went without care because of cost, heart failure readmissions, youth all-tobacco use, youth marijuana use and the unemployment rate.



### Notable disparities and inequities

The *Dashboard* examines disparities across a set of 29 metrics by race and ethnicity, income level, education level and disability status. Some of Ohio's largest disparities and inequities include: children exposed to second-hand smoke, neighborhood safety, uninsured adults and adverse childhood experiences.

# Executive summary (cont.)

## How can we improve health value in Ohio?

The good news is we know what works to improve health behaviors and support healthy communities. Many evidence-informed strategies are already being implemented, but more can be done to ensure that the most effective policies and programs are deployed at the scale needed to measurably improve health value. The following sources provide guidance on how to do this:



### Ohio 2017-2019 state health improvement plan (SHIP)

Developed with input from a wide range of Ohio stakeholders, the **SHIP** is a strategic menu of priorities, outcome objectives and evidence-based strategies designed to address:

- Mental health and addiction
- Chronic disease
- Maternal and infant health

Taking a comprehensive approach, the plan highlights powerful underlying drivers of wellbeing, such as student success, housing affordability and tobacco prevention. The plan also includes strategies that are likely to reduce health disparities and provides guidance on adapting programs to reach priority populations.



### Evidence for what works to improve health value

The HPIO **Guide to Improving Health Value** resource page includes:

- State policy option fact sheets on tobacco use, food insecurity and Ohio's other top health challenges
- Additional resources for evidence-based policymaking, including cost-effectiveness research
- Tools for local community health improvement planners

## What approaches are most likely to yield positive outcomes?

States with better outcomes in the social and economic environment and public health and prevention domains have better population health outcomes. The following approaches are therefore likely to yield the biggest improvements.



### Improve Ohio's social and economic environment

Strategies that increase income, labor force participation and access to stable housing, such as:

- Earned income tax credits (including outreach to increase uptake, removing the cap, and/or making the credit refundable)
- Vocational training
- Low-income housing tax credits and state housing subsidies/vouchers



### Strengthen Ohio's commitment to public health and prevention

Strategies that promote healthy behaviors and support healthy community conditions, such as:

- Increasing cigarette and other tobacco product taxes
- Smoking cessation services
- Fruit and vegetable incentive programs
- Green space, parks and "complete streets" policies that promote physical activity



### Start early with children and families

Strategies that help children thrive, such as:

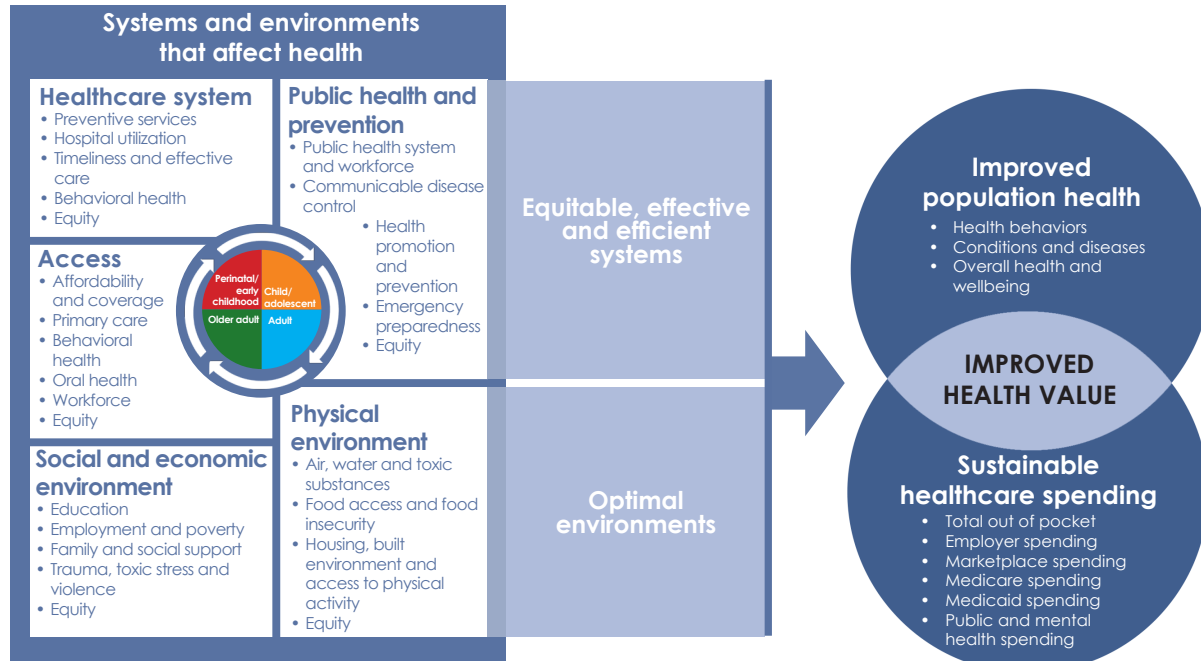
- Early childhood education and home visiting
- Services that promote healthy birth spacing, including access to comprehensive contraception options
- School-based programs to prevent drug/alcohol use and violence



# Overview

The 2017 Health Value Dashboard is based on the *Pathway to Health Value* conceptual framework developed by Ohio stakeholders who participated on HPIO's multi-sector Health Measurement Advisory Group (HMAG). The framework defines health value as the combination of improved population health outcomes and sustainable healthcare spending, and outlines the systems and environments that affect health. The 2017 *Health Value Dashboard* builds on the inaugural *Dashboard* released in December 2014.

## Pathway to improved health value: A conceptual framework



**World Health Organization definition of health:** Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

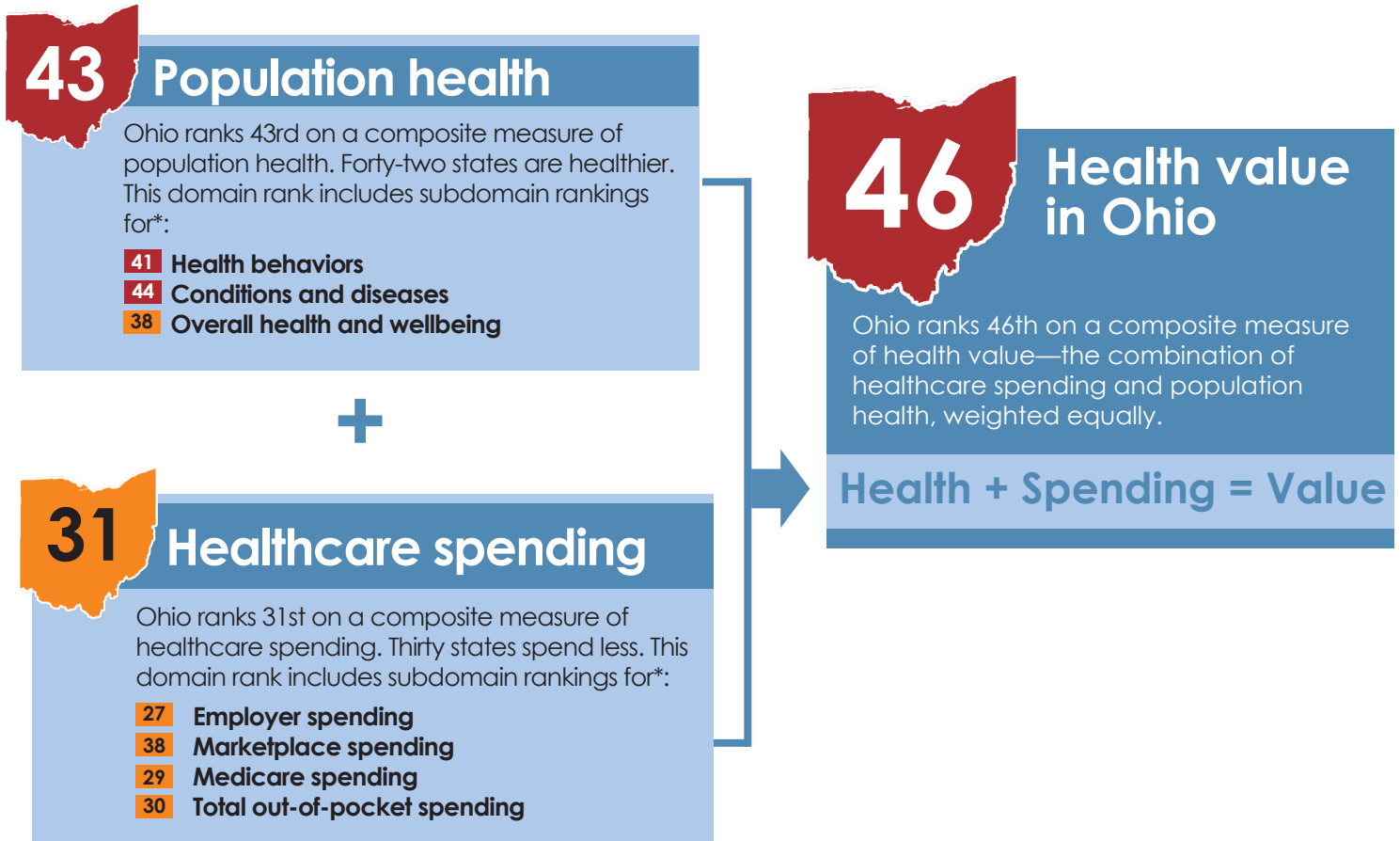
The 2017 *Dashboard* tracks Ohio's performance across the seven domains above through metrics selected in partnership with HMAG. Each domain includes a set of metrics divided into several "subdomains." In total, this *Dashboard* includes 118 metrics across 29 subdomains.

## What's new in the 2017 Health Value Dashboard?

- **Emphasizes change over time** and includes a trend section highlighting the extent to which Ohio's performance improved or worsened on specific metrics
- **Examines disparities and inequities** across a set of 29 metrics by race and ethnicity, education level, income level and disability status when data is available
- **Uses an improved ranking methodology** that takes a more nuanced look at data variation in state performance on individual metrics, resulting in fewer ties between states when calculating the subdomain and domain ranks
- **Highlights evidence-informed strategies** that can be strategically deployed to improve Ohio's health value performance
- **Includes additional and/or refined metrics**, for example, when previous metrics are no longer available or when better metrics are available

# Where does Ohio rank?

Ohioans are living less healthy lives and spending more on health care than people in most other states.



**Note:** Most recent-year data for population health and spending ranks are from 2014 to 2016. A ranking of 1 is the best and 51 is the worst. See process and methodology section for details.

\*The domain and subdomain ranks are the composite of individual metric ranks (e.g. average family premium per enrolled employee) within each domain or subdomain.

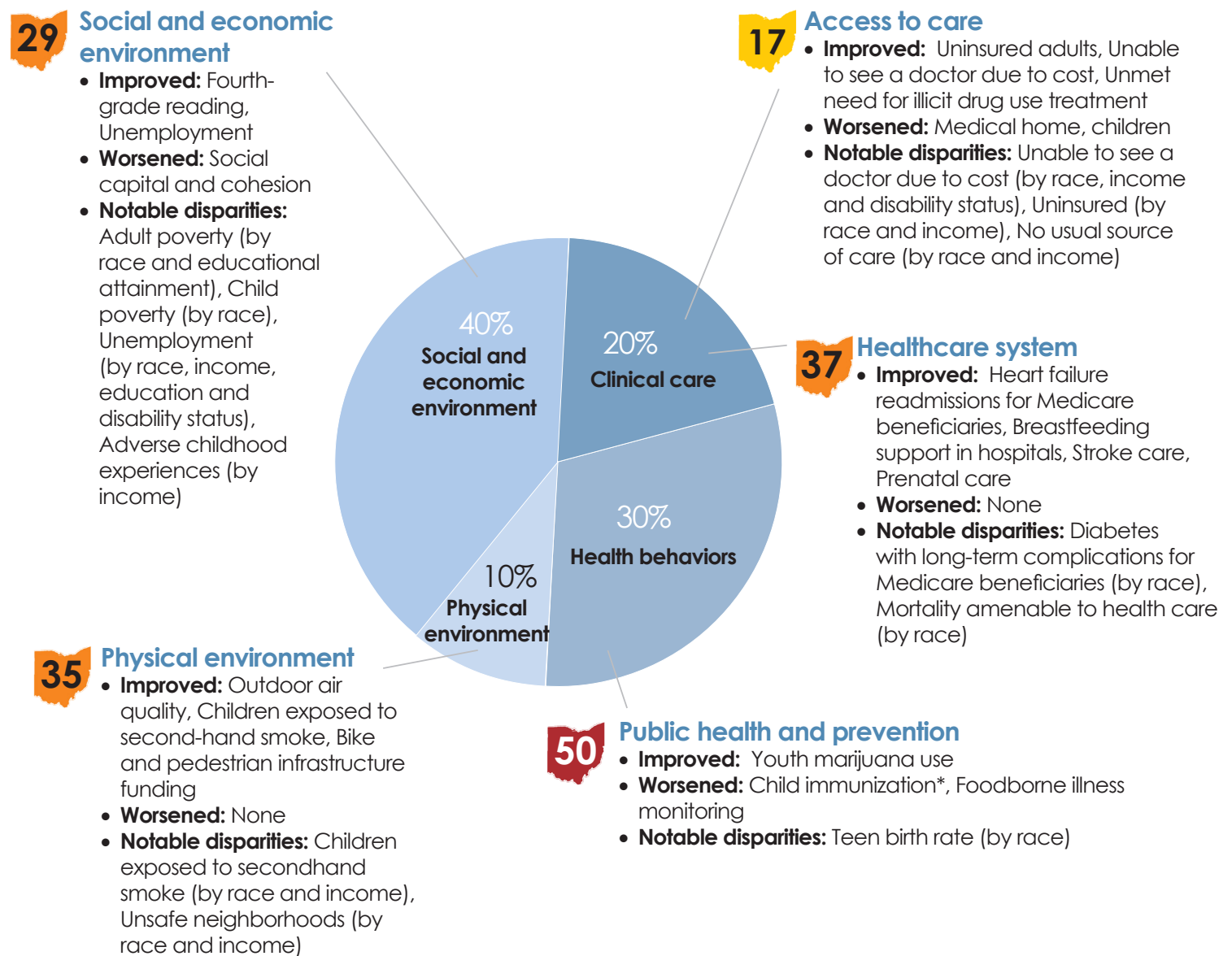
# Why does Ohio rank 46th on health value?

Ohio performs well on access to care, but poorly on population health. This indicates that access is necessary, but not sufficient, to improving overall health. In addition, Ohio performs poorly on the other factors that impact health value.

Policymakers and others can look to evidence on the cost-effectiveness of services and programs to guide spending decisions and ensure that dollars are being used wisely to improve performance across all drivers of health value.

## Factors that influence health<sup>1</sup>

Research estimates that of the modifiable factors that influence our overall health outcomes, 80 percent is attributed to non-clinical factors including our social, economic and physical environment, as well as our health behaviors, and only 20 percent is attributed to clinical care.



**Trend note:** Improved or worsened refers to a change that exceeds one-half standard deviation in the metric's value from baseline year to most recent year. Changes that do not meet this threshold are marked "no change."

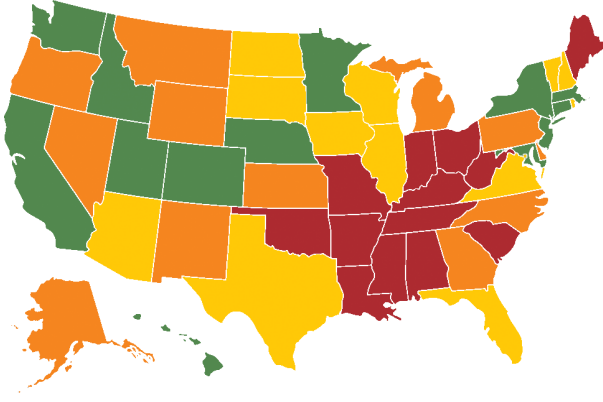
**Disparities note:** Disparities are based on disparity ratios calculated across a set of 29 metrics by race and ethnicity, education level, income level and disability status categories when data was available. Only metrics for which large disparities exist are included in this graphic. See methodology section for how disparity ratios and thresholds were calculated.

\* See data limitation in metric description in appendix

# Where do other states rank?

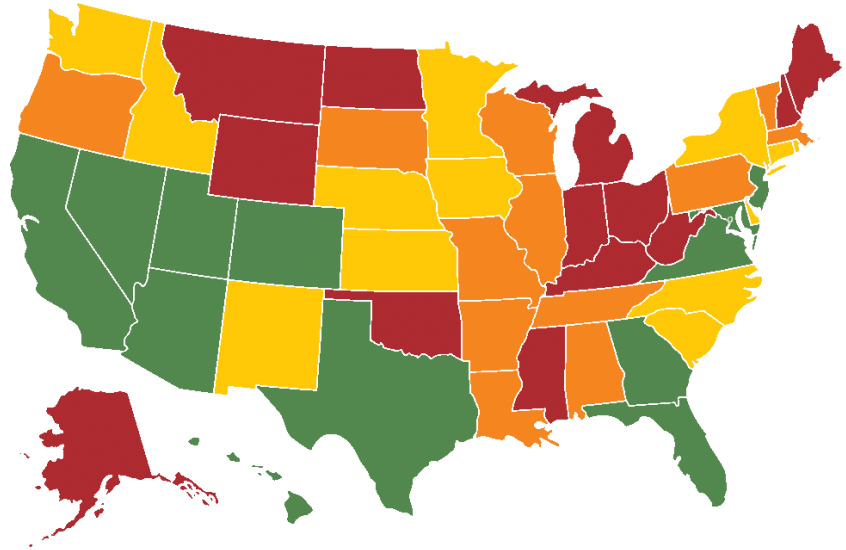
There is wide regional variation in health value rank.

## Population health rank



States along parts of the Appalachian region and some southern states tend to have the worst population health outcomes. However, the regional pattern among states with better population health outcomes is less pronounced.

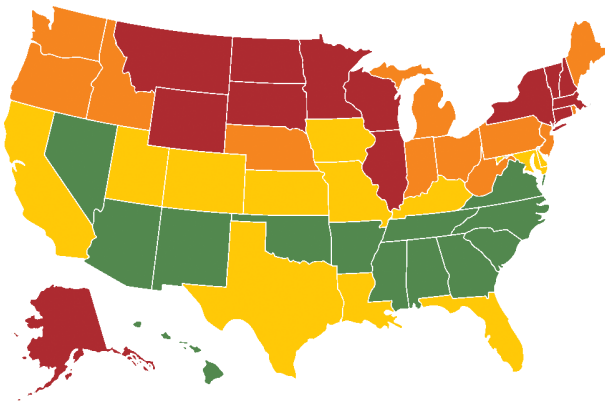
## Health value rank



There is wider regional variation in health value rank. States in the southwest tend to be in the top quartile, along with a few states in the south and on the east coast. Similarly, there are pockets of states across the U.S. in the bottom quartile on health value, including Ohio and its neighboring states.



## Healthcare spending rank



There is a clear regional pattern for healthcare spending rank. States in the north tend to have higher healthcare spending, while states in the south have lower healthcare spending.



**Note:** Most recent-year data for population health and spending ranks are from 2014 to 2016. A ranking of 1 is the best and 51 is the worst. See process and methodology section for details.

# What is the path to health value?

There are many paths to health value and it is possible for Ohio to improve.

## Good health, lower spending

The best position for a state to be in is to rank well for both population health and healthcare spending—indicating good health outcomes and lower healthcare spending relative to other states. The green box in the matrix below lists 11 states that were in the top two quartiles for population health (best health) and the top two quartiles for healthcare spending (lower spending).

Some of these states have large, diverse populations (California, Florida and Texas), while others are relatively small (DC, Hawaii and Utah). Some have higher rates of poverty than Ohio (Arizona and Florida), and others have a higher proportion of the population that is over age 65 (Iowa and Florida). This wide variation indicates that there are many paths to health value, and that it is possible for Ohio to improve.

## Worse health, higher spending

Ohio is among the 11 states that rank in the bottom two quartiles for population health (worse health) and bottom two quartiles for healthcare spending (higher spending) (red box).

		Population health			
		Best health (Top 2 quartiles)		Worst health (Bottom 2 quartiles)	
Healthcare spending	Lowest spending (Top 2 quartiles)	Arizona California Colorado District of Columbia Florida Hawaii Iowa	Maryland Texas Utah Virginia	Alabama Arkansas Delaware Georgia Kansas <b>Kentucky</b> Louisiana	Mississippi Missouri New Mexico Nevada North Carolina Oklahoma South Carolina Tennessee
	Highest spending (Bottom 2 quartiles)	Connecticut Idaho <b>Illinois</b> Massachusetts <b>Minnesota</b> Nebraska New Hampshire	New Jersey New York North Dakota Rhode Island South Dakota Vermont Washington <b>Wisconsin</b>	Alaska <b>Indiana</b> Maine <b>Michigan</b> Montana <b>Ohio</b> Oregon	<b>Pennsylvania</b> <b>West Virginia</b> Wyoming

**Note:** Midwestern (Department of Health and Human Services Region V) and neighboring states are **bolded**.

# How to improve health value in Ohio

Everyone has a role to play in improving population health and controlling healthcare spending. Working together, state and community leaders can:

- Build upon Ohio's strengths, including recent improvements to access to care
- Implement evidence-informed strategies to improve performance on Ohio's greatest challenges

## Where to find effective strategies

The good news is that we know what works to improve health behaviors and support healthy communities. Many evidence-informed strategies are already being implemented, but more can be done to ensure that the most effective policies and programs are deployed at the scale needed to measurably improve health value. The following sources provide guidance on how to do this:



### Ohio 2017-2019 state health improvement plan (SHIP)

Developed with input from a wide range of Ohio stakeholders, the SHIP is a strategic menu of priorities, outcome objectives and evidence-based strategies designed to address:

- Mental health and addiction
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Taking a comprehensive approach, the plan highlights powerful underlying drivers of wellbeing, such as student success, housing affordability and tobacco prevention. The plan also includes strategies that are likely to reduce health disparities and provides guidance on adapting programs to reach priority populations.



### Evidence for what works to improve health value

The HPIO [Guide to Improving Health Value](#) resource page includes:

- State policy option fact sheets on tobacco use, food insecurity and Ohio's other top health challenges
- Additional resources for evidence-based policymaking, including cost-effectiveness research
- Tools for local community health improvement planners

## Recommended sources

HPIO recommends the following credible sources of research evidence on what works to improve health value. For additional sources, see HPIO's [Guide to Improving Health Value](#) resource page.

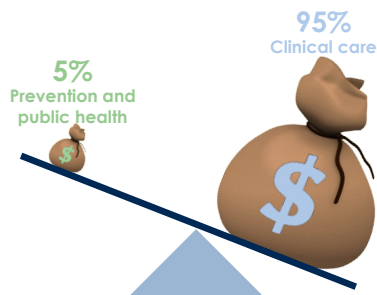
Website	Sponsoring organization and description
<a href="#">What Works for Health</a>	Evidence registry from University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation. Addresses a wide range of health issues, including the social, economic and physical environments. Indicates which strategies are likely to reduce disparities.
<a href="#">Washington State Institute for Public Policy (WSIPP)</a>	Literature reviews and benefit-cost analyses on education, behavioral health, public health and criminal justice programs. WSIPP was created by the Washington state legislature to conduct non-partisan research.
<a href="#">Hi-5: Health Impact in Five Years and 6/18: Accelerating Evidence into Action</a>	U.S. Centers for Disease Control and Prevention (CDC) recommendations for clinical and non-clinical interventions proven to improve health outcomes and control healthcare costs.
<a href="#">Community Health Advisor</a>	Interactive tool from the Health Partners Institute that estimates the impact of specific strategies on medical costs and health outcomes. Addresses smoking, physical activity and cardiovascular disease.

## Making the most of existing resources

Ohioans spend a lot on health care. Evidence on the cost-effectiveness of different services and programs should guide spending decisions to ensure that dollars are used wisely.

### Results First

The Pew-MacArthur **Results First** initiative provides state governments with tools to conduct cost-benefit analyses. The analysis model and technical assistance help state leaders identify which programs work and which do not, and to calculate potential returns on investment of funding alternative programs.



Ohio's health resources could be better allocated to prevent health problems before they become more costly. Most of our healthcare dollars are spent on expensive downstream care, such as emergency services and chronic-disease management, rather than on upstream activities like youth drug prevention and tobacco cessation services.<sup>2,3,4</sup> A more balanced approach would improve health value.

## Approaches most likely to yield positive outcomes

Knowing where to focus to improve health is challenging. However, the *Dashboard* and other research suggests potential high-impact areas. States with better outcomes in the social and economic environment and public health and prevention domains have better population health outcomes. In addition, early childhood experiences can have significant impacts on health later in life. For these reasons, the following approaches are likely to yield the biggest improvements to health outcomes.



### Improve Ohio's social and economic environment

Strategies that increase income, labor force participation and access to stable housing, such as:

- Earned income tax credit (including outreach to increase uptake, removing the cap, and/or making the credit refundable)
- Vocational training
- Low-income housing tax credits and state housing subsidies/vouchers



### Strengthen Ohio's commitment to public health and prevention

Strategies that promote healthy behaviors and support healthy community conditions, such as:

- Increasing cigarette and other tobacco product taxes
- Smoking cessation services
- Fruit and vegetable incentive programs
- Green space, parks and "complete streets" policies that promote physical activity



### Start early with children and families

Strategies that help children thrive, such as:

- Early childhood education and home visiting
- Services that promote healthy birth spacing, including access to comprehensive contraception options
- School-based programs to prevent drug/alcohol use and violence



# Ohio's greatest health value challenges

## Bottom quartile metrics

Domain	Metric	Ohio's rank	Trend
Population health	<b>Infant mortality.</b> Number of infant deaths per 1,000 live births (within 1 year) (rank-2014, trend-2015)	39	Moderately worsened
	<b>Cardiovascular disease mortality.</b> Number of deaths due to all cardiovascular diseases, including heart disease and strokes, per 100,000 population (age adjusted) (2015)	40	No change
	<b>Limited activity due to health problems.</b> Average number of days in the previous 30 days when a person reports limited activity due to physical or mental health difficulties (ages 18 and older) (2014)	41	No change
	<b>Adult smoking.</b> Percent of population age 18 and older that are current smokers (2015)	43	Moderately improved
	<b>Drug overdose deaths.</b> Number of deaths due to drug overdoses per 100,000 population (age-adjusted) (2015)	49	Greatly worsened
Healthcare spending	<b>Average monthly marketplace premiums, after advanced premium tax credit.</b> Average monthly premium for all enrollees in the federal marketplace after application of an advanced premium tax credit (2016)	38 (out of 38)	Greatly increased
	<b>Total Medicare spending (Parts A and B), per Medicare enrollee.</b> Price, age, sex and race-adjusted Medicare reimbursements per Medicare enrollee (Parts A and B) (2012)	46	No change
Healthcare system	<b>Hospital admissions for asthma per 100,000 population, ages 2-17.</b> Admissions for asthma per 100,000 population, ages 2-17 (2013)	31 (out of 41)	No change
	<b>Mortality amenable to healthcare.</b> Number of deaths before age 75 per 100,000 population that resulted from causes considered at least partially treatable or preventable with timely and appropriate medical care (2012-2013)	39	No change
	<b>Cancer early stage diagnosis, female breast cancer cases.</b> Percent of female breast cancer cases diagnosed at an early stage (2009-2013)	40 (out of 50)	No change
	<b>Diabetes with long-term complications.</b> Admissions for Medicare beneficiaries with a principal diagnosis of diabetes with long-term complications per 100,000 beneficiaries, ages 18 years and older (2014)	41	No change
	<b>Cancer early stage diagnosis, colon and rectal cancer cases.</b> Percent of colon and rectal cancer cases diagnosed at an early stage (2009-2013)	41 (out of 50)	No change
	<b>Avoidable emergency department visits for Medicare beneficiaries.</b> Potentially avoidable emergency department visits among Medicare beneficiaries, per 1,000 beneficiaries (2013)	45	No change
	<b>Cancer early stage diagnosis, all.</b> Percent of all cancer cases diagnosed at an early stage (2009-2013)	46 (out of 50)	No change
Public health and prevention	<b>State public health workforce.</b> Number of state public health agency staff FTEs per 100,000 population (2012)	44 (out of 49)	No change
	<b>Emergency preparedness funding.</b> Total per capita funding for state and local health departments' emergency preparedness (2016)	44	N/A
	<b>Child immunization.</b> Percent of children ages 19 to 35 months who received all recommended vaccines (2013)	48 (out of 50)	Greatly worsened
	<b>Foodborne illness monitoring.</b> Proportion of foodborne illness outbreaks for which an etiologic agent is confirmed (2015)	50	Moderately worsened
Physical environment	<b>Outdoor air quality.</b> Average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.5) (2012-2014)	45	Moderately improved
	<b>Food insecurity.</b> Percent of households with limited or uncertain access to adequate food (2013-2015)	45	No change
	<b>Children exposed to secondhand smoke.</b> Percent of children who live in a home where someone uses tobacco or smokes inside the home (2011/2012)	49	Greatly improved

## Other metrics that worsened

Domain	Metric	Ohio's rank	Trend
Population health	<b>Adult insufficient physical activity.</b> Percent of adults 18 years and older not meeting physical activity guidelines for muscle strength and aerobic activity (2015)	30	Moderately worsened
	<b>Poor oral health.</b> Percent of adults who have lost teeth due to decay, infection or disease (2014)	38	Moderately worsened
Healthcare spending	<b>Average family premium, per enrolled employee.</b> Average total family premium per enrolled employee for employer-sponsored health insurance (2015)	21	Moderately increased
	<b>Average single premium, per enrolled employee.</b> Average total single premium per enrolled employee for employer-sponsored health insurance (2015)	31	Moderately increased
Access to care	<b>Medical home, children.</b> Percent of children who have a personal doctor or nurse, have a usual source for sick and well care, receive family-centered care, have no problems getting needed referrals and receive effective care coordination when needed (2011/2012)	24	Greatly worsened
Social and economic environment	<b>Social capital and cohesion.</b> Composite measure that includes connections with neighbors, supportive neighborhoods, voter turnout and volunteerism (2015)	24 (out of 50)	Greatly worsened



# Ohio's greatest health value strengths

## Top quartile metrics

Domain	Metric	Ohio's rank	Trend
Access to care	<b>Underserved, primary care physicians.</b> Percent of need not met by current supply in designated primary care health professional shortage areas (2016)	11	No change
	<b>Uninsured adults.</b> Percent of 18-64 year olds that are uninsured (2014)	13	Moderately improved
	<b>Employer-sponsored health insurance coverage.</b> Percent of all workers who work at a company that offers health insurance to its employees (2015)	13	No change
	<b>Unable to see doctor due to cost.</b> Percent of adults who went without care because of cost in the past year (2015)	13	Greatly improved
Physical environment	<b>Fluoridated water.</b> Percent of the population served by a community water system with optimally fluoridated water (2014)	12	No change

## Other metrics that improved

Domain	Metric	Ohio's rank	Trend
Population health	<b>Youth all-tobacco use.</b> Percent of youth ages 12-17 who used cigarettes, smokeless tobacco, cigars or pipe tobacco during past 30 days (2013-2014)	37	Greatly improved
	<b>Life expectancy.</b> Life expectancy at birth based on current mortality rates (2010)	37	Moderately improved
	<b>Adult smoking.</b> Percent of population age 18 and older that are current smokers (2015)	43	Moderately improved
Access to care	<b>Unmet need for illicit drug use treatment.</b> Percent of individuals, ages 12 and older, needing but not receiving treatment for illicit drug use in the past year (2013-2014)	26	Moderately improved
Healthcare system	<b>Heart failure readmissions for Medicare beneficiaries.</b> Rate of Medicare beneficiaries discharged from the hospital with a principal diagnosis of heart failure who were readmitted for any cause within 30 days after the index admission date, per 100 index cases (2014)	17	Greatly improved
	<b>Breastfeeding support in hospitals.</b> Average Maternity Practice in Infant Nutrition and Care (mPINC) score among hospitals and birthing facilities to support breastfeeding (2013)	24	Moderately improved
	<b>Stroke care.</b> Percent of ischemic stroke patients who got medicine to break up a blood clot within 3 hours after symptoms started (2014-2015)	25 (out of 50)	Greatly improved
	<b>Prenatal care.</b> Percent of women who completed a pregnancy in the last 12 months and who received prenatal care in the first trimester (2014)	28 (out of 48)	Moderately improved
Public health and prevention	<b>Youth marijuana use.</b> Past-year initiation of marijuana use (used it for the first time), percent of youth ages 12-17 (2014)	18	Greatly improved
Social and economic environment	<b>Fourth-grade reading.</b> Percent of 4th graders proficient in reading by a national assessment (NAEP) (2015)	18	Moderately improved
	<b>Unemployment.</b> Annual average unemployment rate, ages 16 and older (2015)	21	Greatly improved
Physical environment	<b>Bike and pedestrian infrastructure.</b> Per capita federal transportation funding obligated to bike and/or pedestrian projects (2012-2014)	22 (out of 50)	Moderately improved
	<b>Outdoor air quality.</b> Average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.5) (2012-2014)	45	Moderately improved
	<b>Children exposed to second-hand smoke.</b> Percent of children who live in a home where someone uses tobacco or smokes inside the home (2011/2012)	49	Greatly improved



**Trend note:** Improved or worsened refers to a change that exceeds one-half standard deviation in the metric's value from baseline year to most recent year. Changes that do not meet this threshold are marked "no change."

# Domain profiles

This section provides data on 118 metrics across seven domain profiles and 29 subdomains:

- Population health
- Healthcare spending
- Access to care
- Healthcare system
- Public health and prevention
- Social and economic environment
- Physical environment

## Navigating the domain profiles

### Social and economic environment

Ohio's domain rank

Ohio rank: **29**

Ohio's subdomain rank

**31** Education

Ohio's rank on a metric

18

**Fourth-grade reading.** Percent of 4th graders proficient in reading by a national assessment (NAEP) (2015)

Most recent data

38%

Trend

Moderately improved

Most improved state(s)

DC; IN, TN, UT, WY (tied)

Metric description

Most recent data year

24

**Preschool enrollment.** Percent of 3 and 4 year-olds enrolled in preschool (2012-2014)

45%

No change

DC

Data from most recent year

32

**Some college.** Percent of adults ages 25-44 with some post-secondary education (2014)

63.4%

No change

None

Displays one of five levels of trend. "Improved" or "worsened" refers to a change that exceeds one-half standard deviation in the metric's value from the baseline year to the most recent year.

34

**High school graduation.** Percent of incoming 9th graders who graduate in 4 years from a public high school with a regular degree (2014-2015)

80.7%

No change

AL, GA, DC

#### 29 Employment and poverty

21

**Unemployment.** Annual average unemployment rate, ages 16 and older (2015)

4.9%

Greatly improved

MI, RI, IL

28

**Adult poverty.** Percent of persons age 18+ who live in households at or below the poverty threshold (2015)

12.9%

No change

VT, MT, GA

29

**Income inequality.** The ratio of median household income at the 80th percentile to that at the 20th percentile (2014)

4.8

N/A

N/A

30

**Labor force participation rate.** Annual average civilian labor force participation rate, ages 16 and older. The labor force participation rate is the percentage of the population that is either employed or unemployed (i.e., actively seeking work) (2015)

62.5%

No change

DE, MO, IN

33

**Child poverty.** Percent of persons under age 18 who live in households at or below the poverty threshold (2015)

21.3%

No change

SC, WA, MS

Three most improved states for the metric are listed. Number of states listed may vary depending on "ties." Only states with significant change are included.

#### 32 Family and social support

24

**Social capital and cohesion.** Composite measure that includes connections with neighbors, supportive neighborhoods, voter turnout and volunteerism (2015)

3.2

Greatly worsened

None

25

**Low-income working families with children.** The share of families that met three criteria: (1) the family income was less than twice the federal poverty level; (2) at least one parent worked 50 or more weeks during the previous year; (3) there was at least one "own child" under age 18 in the family (2014)

22%

No change

VT

37

**Adult incarceration.** Imprisonment rate of sentenced prisoners under the jurisdiction of state or federal correctional authorities, per 100,000 residents (2014)

444

No change

MS

26

#### Trauma, toxic stress and violence

20

**Violent crime.** Violent crime rate per 100,000 inhabitants (2013)

286.2

No change

DC

27

**Child abuse and neglect.** Rate of child maltreatment victims per 1,000 children in population (2014)

9.4

No change

DC, DE, IA

34

**Adverse childhood experiences.** Percent of children who have experienced two or more adverse experiences (2011/2012)

25.8%

N/A

N/A

■ Top quartile
 ■ Second quartile
 ■ Third quartile
 ■ Bottom quartile
 NR Not ranked  
 Of the 50 states and D.C.

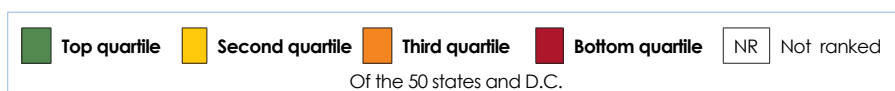
**Trend note:** Improved or worsened refers to a change that exceeds one-half standard deviation in the metric's value from baseline year to most recent year. Changes that do not meet this threshold are marked "no change."

"Out of" indicates number of states and D.C. for which data was available. This is only noted if the number is less than 51.

# Population health

Ohio rank: **43**

Ohio's rank	Metric	Most recent data	Trend	Most improved state(s)
<b>41</b>	<b>Health behaviors</b>			
30	<b>Adult insufficient physical activity.</b> Percent of adults 18 years and older not meeting physical activity guidelines for muscle strength and aerobic activity (2015)	80.3%	Moderately worsened	TN, NV; LA, SD (tie)
37	<b>Excessive drinking.</b> Percent of adults that report either binge drinking or heavy drinking (2015)	19.1%	No change	NY, CT, MO
37	<b>Youth all- tobacco use.</b> Percent of youth ages 12-17 who used cigarettes, smokeless tobacco, cigars or pipe tobacco during past 30 days (2013-2014)	9.4%	<b>Greatly improved</b>	MT, SC, MA
43	<b>Adult smoking.</b> Percent of population age 18 and older that are current smokers (2015)	21.6%	Moderately improved	AK, ID; IL, PA (tie)
<b>44</b>	<b>Conditions and diseases</b>			
20	<b>Suicide deaths.</b> Number of deaths due to suicide per 100,000 population (2013)	12.9	No change	HI
30	<b>Adult depression.</b> Percent of adults who have ever been told they have depression (2015)	19.6%	No change	DC, WA, MI
35	<b>Adult diabetes.</b> Percent of adults who have been told by a health professional that they have diabetes (2015)	11%	No change	NH
38	<b>Poor oral health.</b> Percent of adults who have lost teeth due to decay, infection or disease (2014)	13%	Moderately worsened	NV
40	<b>Cardiovascular disease mortality.</b> Number of deaths due to all cardiovascular diseases, including heart disease and strokes, per 100,000 population, age-adjusted (2015)	283.4	No change	None
39*	<b>Infant mortality.</b> Number of infant deaths per 1,000 live births, within 1 year (rank is for 2014*)	7.2*	Moderately worsened*	SD, RI, NM
49*	<b>Drug overdose deaths.</b> Number of deaths due to drug overdoses per 100,000 population, age-adjusted (2015)	24.3	<b>Greatly worsened</b>	None
NR	<b>Youth overweight and obesity.</b> Percent of children ages 12-17 who are overweight or obese (2015)	31.6%	N/A	N/A
<b>38</b>	<b>Overall health and wellbeing</b>			
28	<b>Overall health status.</b> Percent of adults that report excellent, very good or good health (2015)	83.4%	No change	TN, SC
37	<b>Premature death.</b> Years of potential life lost before age 75 (2014)	7,404.2	No change	None
37	<b>Life expectancy.</b> Life expectancy at birth based on current mortality rates (2010)	77.8	Moderately improved	DC, NV; LA, AZ (tie)
41	<b>Limited activity due to health problems.</b> Average number of days in the previous 30 days when a person reports limited activity due to physical or mental health difficulties, ages 18 and older (2014)	1.7	No change	ID, AR, WY



**Trend note:** Improved or worsened refers to a change that exceeds one-half standard deviation in the metric's value from baseline year to most recent year. Changes that do not meet this threshold are marked "no change."

\*2015 data is available for Ohio, but not for other states, and was used for the most-recent data and trend columns. 2014 data was used for the rank and most-improved states columns.

# Healthcare spending

Ohio rank: 31

Ohio's rank	Metric	Most recent data	Trend	Most improved state(s)
<b>30</b>	<b>Total out of pocket spending</b>			
30	<b>Out-of-pocket spending.</b> Percent of individuals who are in families where out-of-pocket spending on health care, including premiums, accounted for more than 10% of annual income (2014)	22.6%	No change	VT, OR, NV
<b>27</b>	<b>Employer spending</b>			
21	<b>Average family premium per enrolled employee.</b> Average total family premium per enrolled employee for employer-sponsored health insurance (2015)	\$16,900	Moderately increased	None
NR	<b>Percent of employer contribution</b>	78%	No change	N/A
NR	<b>Percent of employee contribution</b>	22%	No change	N/A
23	<b>Total spending per enrollee (age 18-64) with employer-sponsored health insurance.</b> Total spending per enrollee with employer-sponsored health insurance, ages 18-64 (2014)	\$4,333	No change	GA, MS
31	<b>Average single premium per enrolled employee.</b> Average total single premium per enrolled employee for employer-sponsored health insurance (2015)	\$5,939	Moderately increased	IN
NR	<b>Percent of employer contribution</b>	79.4%	Moderately decreased	N/A
NR	<b>Percent of employee contribution</b>	20.6%	Moderately increased	N/A
<b>38</b>	<b>Marketplace spending</b>			
38 (out of 38)	<b>Average monthly marketplace premiums, after advanced premium tax credit.</b> Average monthly premium for all enrollees in the federal marketplace or that use healthcare.gov, after application of an advanced premium tax credit (2016)	\$164	<b>Greatly increased</b>	None
<b>29</b>	<b>Medicare spending</b>			
19	<b>Average total cost, risk adjusted, for Medicare beneficiaries, without chronic conditions.</b> Annual averages for all costs for Medicare beneficiaries <b>without chronic conditions</b> (2014)	\$3,943	No change	None
29	Annual averages for all costs for Medicare beneficiaries <b>with one chronic condition</b>	\$5,939	No change	None
25	Annual averages for all costs for Medicare beneficiaries <b>with two chronic conditions</b>	\$6,863	No change	None
36	Annual averages for all costs for Medicare beneficiaries <b>with three or more chronic conditions</b>	\$13,985	No change	None
46	<b>Total Medicare spending (Parts A and B), per Medicare enrollee.</b> Price, age, sex and race-adjusted Medicare reimbursements per Medicare enrollee (Parts A and B) (2012)	\$10,365	No change	None
<b>NR</b>	<b>Medicaid spending</b>			
NR	<b>Medicaid spending per enrollee, all enrollees.</b> Average amount Medicaid spends per enrollee per year, all enrollees (FY 2013)	\$7,307	No change	N/A
NR	Average amount Medicaid spends per enrollee per year, <b>children</b>	\$2,483	No change	N/A
NR	Average amount Medicaid spends per enrollee per year, <b>adults</b>	\$4,010	No change	N/A
NR	Average amount Medicaid spends per enrollee per year, <b>disabled</b>	\$19,415	No change	N/A
NR	Average amount Medicaid spends per enrollee per year, <b>aged</b>	\$21,856	No change	N/A
<b>NR</b>	<b>Public and mental health spending</b>			
NR	<b>Local public health spending, per capita.</b> Median annual local health department expenditures, per capita (2013)	\$31	No change	N/A
NR	<b>State public health funding, per capita.</b> State public health budget funding during the fiscal year, per capita (2015)	\$14	No change	N/A
NR	<b>State mental health agency spending, per capita.</b> State mental health agency mental health services expenditures, per capita (2013)	\$100	No change	N/A

Top quartile
  Second quartile
  Third quartile
  Bottom quartile
 NR Not ranked

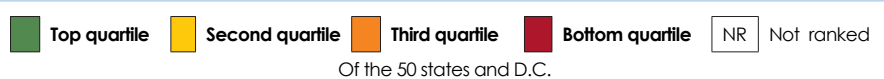
Of the 50 states and D.C.

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# Access to care

Ohio rank: 17

Ohio's rank	Metric	Most recent data	Trend	Most improved state(s)
<b>14</b>	<b>Coverage and affordability</b>			
13	<b>Uninsured adults.</b> Percent of 18-64 year olds that are uninsured (2014)	11.6%	Moderately improved	WV, KY, NV
13	<b>Employer-sponsored health insurance coverage.</b> Percent of all workers who work at a company that offers health insurance to its employees (2015)	85.4%	No change	ND, SD, WY
13	<b>Unable to see doctor due to cost.</b> Percent of adults who went without care because of cost in the past year (2015)	10.7%	<b>Greatly improved</b>	KY, AR, OR
21	<b>Uninsured children.</b> Percent of 0-17 year olds who are uninsured (2014)	4.8%	No change	NV; WY; AZ, CO (tied)
<b>16</b>	<b>Primary care access</b>			
15	<b>Routine checkup.</b> Percent of at-risk adults age 50 or older who did not visit a doctor for a routine checkup in the past two years (2014)	12%	No change	FL, ID, MI, MT, OR (tied)
16	<b>Without a usual source of care.</b> Percent of adults ages 18 and older who report they do not have at least one person they think of as their personal doctor or healthcare provider (2015)	18%	No change	AR, MD, CA
24	<b>Medical home, children.</b> Percent of children who have a personal doctor or nurse, have a usual source for sick and well care, receive family-centered care, have no problems getting needed referrals and receive effective care coordination when needed (2011/2012)	57%	<b>Greatly worsened</b>	WI
<b>29</b>	<b>Behavioral health</b>			
26	<b>Unmet need for illicit drug use treatment.</b> Percent of individuals, ages 12 and older, needing but not receiving treatment for illicit drug use in the past year (2013-2014)	2.4%	Moderately improved	MT; AR, MI, SC, TN (tied)
26 (out of 50)	<b>Youth with depression who did not receive mental health treatment.</b> Percent of youth with major depressive episode who did not receive any mental health treatment (2012-2013)	64%	No change	IA, WV, WA
NR	<b>Unmet need for mental health.</b> Percent of adults ages 18 and older with past year mental illness who reported perceived need for treatment/counseling was not received (2012-2014)	21.3%	N/A	N/A
<b>26</b>	<b>Oral health</b>			
23	<b>Received dental care in past year, children.</b> Percent of children who have seen a dentist at least once for preventive dental care in the past year (2011-2012)	78%	No change	WA, TX, LA
26	<b>Received dental care in past year, adults.</b> Percent of adults, ages 18 and older, who visited the dentist or dental clinic within the past 12 months (2014)	65.3%	No change	None
<b>24</b>	<b>Workforce</b>			
11	<b>Underserved, primary care physicians.</b> Percent of need not met by current supply of primary care physicians in designated primary care health professional shortage areas (2016)	31.8%	No change	MA
23 (out of 50)	<b>Underserved, psychiatrists.</b> Percent of need not met by current supply of psychiatrists in designated mental health care professional shortage areas (2016)	47.1%	No change	MI
30	<b>Underserved, dentists.</b> Percent of need not met by current supply of dentists in designated dental care health professional shortage areas (2016)	61.8%	No change	None

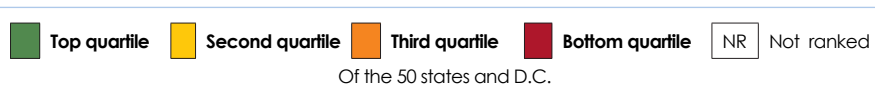


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# Healthcare system

Ohio rank: **37**

Ohio's rank	Metric	Most recent data	Trend	Most improved state(s)
<b>42</b>	<b>Preventive services</b>			
24	<b>Breastfeeding support in hospitals.</b> Average Maternity Practice in Infant Nutrition and Care (mPINC) score among hospitals and birthing facilities to support breastfeeding (2013)	76	Moderately improved	DE; NJ, OK, SC (tied)
28 (out of 48)	<b>Prenatal care.</b> Percent of women who completed a pregnancy in the last 12 months and who received prenatal care in the first trimester (2014)	73%	Moderately improved	NV, SD, OK
34	<b>Flu vaccination.</b> Percent of population ≥ 6 months old vaccinated for flu within the past year (2014)	46.1%	No change	KS, TX, CT
46 (out of 50)	<b>Cancer early stage diagnosis, all.</b> Percent of all cancer cases diagnosed at an early stage (2009-2013)	50.3%	No change	None
40 (out of 50)	Percent of <b>female breast cancer cases</b> diagnosed at an early stage	68.1%	No change	DC, WY, MS
41 (out of 50)	Percent of <b>colon and rectal cancer cases</b> diagnosed at an early stage	39%	No change	None
<b>NR</b>	<b>Behavioral health</b>			
NR	<b>Mental illness hospitalization follow-up.</b> Percent of Medicaid enrollees ages 6 and older who received follow-up after hospitalization for mental illness within 30 days of intake (2015)	63.5%	N/A	N/A
NR	<b>Substance use disorder treatment retention.</b> Percent of individuals ages 12 and older with an intake assessment who received one outpatient clinical service within a week and two additional outpatient clinical services within 30 days of intake (2015)	39.8%	N/A	N/A
<b>45</b>	<b>Hospital utilization</b>			
17	<b>Heart failure readmissions for Medicare beneficiaries.</b> Rate of Medicare beneficiaries discharged from the hospital with a principal diagnosis of heart failure who were readmitted for any cause within 30 days after the index admission date, per 100 index cases (2014)	20	<b>Greatly improved</b>	AK, HI, IA, NM, NC, OK (tied)
31 (out of 41)	<b>Hospital admissions for asthma per 100,000 population, ages 2-17.</b> Admissions for asthma per 100,000 population, ages 2-17 (2013)	124.8	No change	LA, MA, KY
41	<b>Diabetes with long-term complications.</b> Admissions for Medicare beneficiaries with a principal diagnosis of diabetes with long-term complications per 100,000 beneficiaries, ages 18 years and older (2014)	331	No change	WV, HI, DC
45	<b>Avoidable emergency department visits for Medicare beneficiaries.</b> Potentially avoidable emergency department visits among Medicare beneficiaries, per 1,000 beneficiaries (2013)	214	No change	MA, NH, SD
NR	<b>Overall hospital readmission rate.</b> All-cause, all-age, all-payer, all-hospital readmission rate (2014)	9.1	N/A	N/A
<b>21</b>	<b>Timeliness, effectiveness and quality of care</b>			
8	<b>Healthcare-associated infections.</b> Composite of standardized infection ratios across six healthcare-associated infections (2014)	0.16	N/A	N/A
18 (out of 42)	<b>Patient experience, Medicare managed care.</b> Percent of Medicare managed care patients who had a doctor's office or clinic visit in the last 12 months whose doctor sometimes or never explained things in a way they could understand (2014)	4.4%	No change	SC, MD, OK
21	<b>Patient experience, Medicare fee for service.</b> Percent of Medicare fee-for-service patients who had a doctor's office or clinic visit in the last 12 months whose doctor sometimes or never explained things in a way they could understand (2014)	4.2%	No change	NM, NV, CT
25	<b>Nursing home pressure sores.</b> Percent of long-stay, high-risk nursing home residents impaired in bed mobility or transfer, comatose or malnourished with pressure sores (2014)	6%	No change	AZ, NJ; multiple tied
25 (out of 50)	<b>Stroke care.</b> Percent of ischemic stroke patients who got medicine to break up a blood clot within 3 hours after symptoms started (10/1/2014 to 9/30/2015)	84%	<b>Greatly improved</b>	ME, DC, WY
39	<b>Mortality amenable to healthcare.</b> Number of deaths before age 75 per 100,000 population that resulted from causes considered at least partially treatable or preventable with timely and appropriate medical care (2012-2013)	94	No change	WY



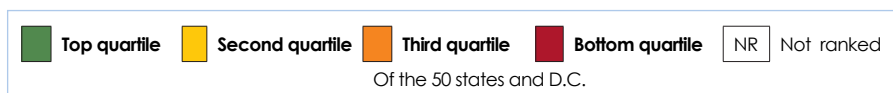
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# Public health and prevention

Ohio rank: **50**

Ohio's rank	Metric	Most recent data	Trend	Most improved state(s)
<b>37</b>	<b>Public health system and workforce</b>			
18	<b>Comprehensiveness of public health system.</b> Percent of population served by a comprehensive public health system (2014)	41.2%	N/A	N/A
30 (out of 45)	<b>Local public health workforce.</b> Median number of local health department FTEs per 100,000 population (2013)	36.6	No change	None
44 (out of 49)	<b>State public health workforce.</b> Number of state public health agency staff FTEs per 100,000 population (2012)	9.9	No change	NM
<b>51</b>	<b>Communicable disease control and environmental health</b>			
32	<b>Chlamydia.</b> Chlamydia rate per 100,000 population (2015)	460.2	No change	MS, SC, DC
48 (out of 50)	<b>Child immunization.</b> Percent of children ages 19 to 35 months who received all recommended vaccines (2013)	61.7%	<b>Greatly worsened</b>	WY, NY, UT
50	<b>Foodborne illness monitoring.</b> Proportion of foodborne illness outbreaks for which an etiologic agent is confirmed (2015)	85	Moderately worsened	GA, NY, PA
<b>37</b>	<b>Health promotion and prevention</b>			
18	<b>Youth marijuana use.</b> Past-year initiation of marijuana use (used it for the first time), percent of youth ages 12-17 (2014)	5.1%	<b>Greatly improved</b>	MT, RI, VT
28	<b>Teen birth rate.</b> Rate per 1,000 births to females 15-19 years of age (2015)	23.2	No change	NM, WV, OK
29	<b>Cigarette tax.</b> State cigarette excise tax rate (2015)	\$1.25	No change	None
31	<b>Sales of opioid pain relievers.</b> Kilograms of opioid pain relievers sold per 10,000 population, measured in morphine equivalents (2010)	7.9	N/A	N/A
33	<b>Falls among older adults.</b> Percent of adults age 65 and older who report having had a fall within the last 12 months (2014)	30.1%	N/A	N/A
33	<b>Tobacco prevention spending.</b> Tobacco prevention and control spending as a percent to the Centers for Disease Control and Prevention-recommended level (FY 2017)	11.8%	No change	ID
35	<b>Low birth weight.</b> Percent of live births where the infant weighed less than 2,500 grams (2014)	8.5%	No change	RI
37	<b>Seat belt use.</b> Percent of front seat occupants using a seat belt (2015)	83.9%	No change	DC, WV, MS
NR	<b>Safe sleep.</b> Percent of infants most often laid on his or her back to sleep (2011)	76%	N/A	N/A
<b>44</b>	<b>Emergency preparedness</b>			
44	<b>Emergency preparedness funding.</b> Total per capita funding for state and local health departments' emergency preparedness (2016)	\$1.41	N/A	N/A

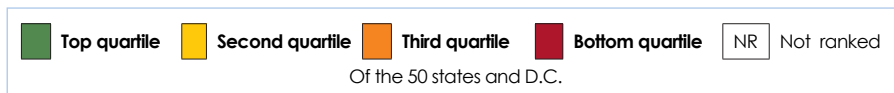


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# Social and economic environment

Ohio rank: **29**

Ohio's rank	Metric	Most recent data	Trend	Most improved state(s)
<b>31 Education</b>				
18	<b>Fourth-grade reading.</b> Percent of 4th graders proficient in reading by a national assessment (NAEP) (2015)	38%	Moderately improved	DC; IN, TN, UT, WY (tied)
24	<b>Preschool enrollment.</b> Percent of 3 and 4 year-olds enrolled in preschool (2012-2014)	45%	No change	DC
32	<b>Some college.</b> Percent of adults ages 25-44 with some post-secondary education (2014)	63.4%	No change	None
34	<b>High school graduation.</b> Percent of incoming 9th graders who graduate in 4 years from a public high school with a regular degree (2014-2015)	80.7%	No change	AL, GA, DC
<b>29 Employment and poverty</b>				
21	<b>Unemployment.</b> Annual average unemployment rate, ages 16 and older (2015)	4.9%	Greatly improved	MI, RI, IL
28	<b>Adult poverty.</b> Percent of persons age 18+ who live in households at or below the poverty threshold (2015)	12.9%	No change	VT, MT, GA
29	<b>Income inequality.</b> The ratio of median household income at the 80th percentile to that at the 20th percentile (2014)	4.8	N/A	N/A
30	<b>Labor force participation rate.</b> Annual average civilian labor force participation rate, ages 16 and older. The labor force participation rate is the percentage of the population that is either employed or unemployed (i.e., actively seeking work) (2015)	62.5%	No change	DE, MO, IN
33	<b>Child poverty.</b> Percent of persons under age 18 who live in households at or below the poverty threshold (2015)	21.3%	No change	SC, WA, MS
<b>32 Family and social support</b>				
24 (out of 50)	<b>Social capital and cohesion.</b> Composite measure that includes connections with neighbors, supportive neighborhoods, voter turnout and volunteerism (2015)	3.2	Greatly worsened	None
25	<b>Low-income working families with children.</b> The share of families that met three criteria: (1) the family income was less than twice the federal poverty level; (2) at least one parent worked 50 or more weeks during the previous year; (3) there was at least one "own child" under age 18 in the family (2014)	22%	No change	VT
37 (out of 50)	<b>Adult incarceration.</b> Imprisonment rate of sentenced prisoners under the jurisdiction of state or federal correctional authorities, per 100,000 residents (2014)	444	No change	MS
<b>26 Trauma, toxic stress and violence</b>				
20	<b>Violent crime.</b> Violent crime rate per 100,000 inhabitants (2013)	286.2	No change	DC
27	<b>Child abuse and neglect.</b> Rate of child maltreatment victims per 1,000 children in population (2014)	9.4	No change	DC, DE, IA
34	<b>Adverse childhood experiences.</b> Percent of children who have experienced two or more adverse experiences (2011/2012)	25.8%	N/A	N/A



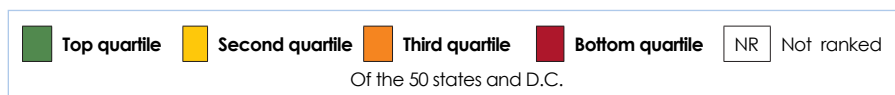
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# Physical environment

Ohio rank: **35**

Ohio's rank	Metric	Most recent data	Trend	Most improved state(s)
<b>39</b>	<b>Air, water and toxic substances</b>			
12	<b>Fluoridated water.</b> Percent of the population served by a community water system with optimally fluoridated water (2014)	92.7%	No change	WY, UT
20 (out of 50)	<b>Safe drinking water.</b> Percent of population exposed to water exceeding a violation limit during the past year (FY 2013-2014)	4.3%	No change	TN, VA
31	<b>Toxic pollutants.</b> Total pounds of toxic chemicals released into the environment per capita, including air, water, land on-site and deepwell injection (2014)	10.2	No change	None
45	<b>Outdoor air quality.</b> Average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.5) (2012-2014)	10.6	Moderately improved	CA, HI, MT
49	<b>Children exposed to second-hand smoke.</b> Percent of children who live in a home where someone uses tobacco or smokes inside the home (2011/2012)	10.3%	<b>Greatly improved</b>	OK; WI, OH, DE, PA (tied)
NR	<b>Lead poisoning.</b> Percent of young children with elevated blood lead levels (BLL > 5 ug/dL) (2014)	6	N/A	N/A
<b>38</b>	<b>Food access and food insecurity</b>			
24 (out of 50)	<b>Healthy food access.</b> Percent of low- income individuals living more than 10 miles from a grocery store in rural areas and more than 1 mile in non-rural areas (2011)	5.9%	N/A	N/A
45	<b>Food insecurity.</b> Percent of households with limited or uncertain access to adequate food (2013-2015)	16.1%	No change	HI; MD, TX, RI (tied)
<b>25</b>	<b>Housing, built environment and access to physical activity</b>			
15	<b>Severe housing problems.</b> Percent of households that have one or more of the following problems: 1) housing unit lacks complete kitchen facilities; 2) housing unit lacks complete plumbing facilities, 3) household is severely overcrowded, 4) monthly housing costs, including utilities, that exceed 50% of monthly income (2008-2012)	15.2%	No change	None
22 (out of 50)	<b>Bike and pedestrian infrastructure.</b> Per capita federal transportation funding obligated to bike and/or pedestrian projects (2012-2014)	\$2.63	Moderately improved	RI, KY, DE
24	<b>Access to exercise opportunities.</b> Percent of individuals in who live reasonably close to a location for physical activity, defined as parks or recreational facilities (2010 & 2014)	83.2%	No change	AZ, SC, FL
29	<b>Alternative commute modes.</b> Percent of trips to work via bicycle, walking or mass transit (combined) (2015)	4.5%	No change	None
29	<b>Neighborhood safety.</b> Percent of parents who report their children are living in a safe neighborhood (2011/2012)	88.3%	No change	DC, CA; LA, HI (tied)
NR	<b>Safe routes to school programs.</b> Percent of schools that have a completed school travel plan (2016)	51.2%	N/A	N/A
NR	<b>Residential segregation.</b> Black-white dissimilarity index (2010-2014)	See graphic in equity section		



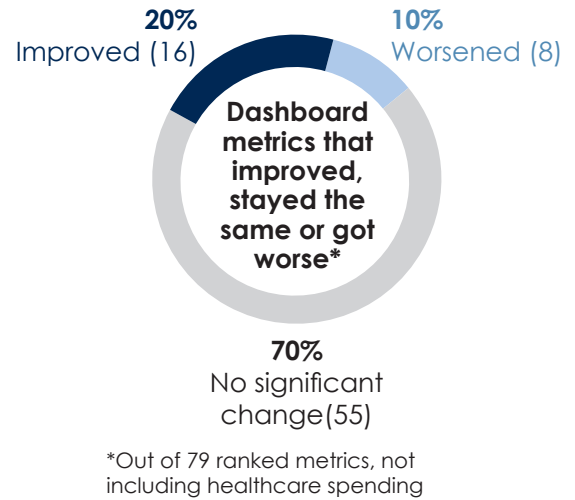
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# Trends

This section describes the extent to which Ohio's performance improved or worsened on specific metrics. Because *Dashboard* data are from many different sources, the years compared vary by metric. Most baseline data were from 2010-2013, while most recent-year data were from 2014-2016 (see appendix for specific years for each metric).

## Moving in the right direction overall

Ohio improved on many *Dashboard* metrics. Among the 79 metrics for which at least two years of data were available (not including healthcare spending), Ohio's performance improved for 20 percent of metrics and got worse for 10 percent. The remaining metrics had no significant change. This rate of improvement is about the same as the average percent of improved and worsened metrics across all states and DC.



## Improvements in several areas

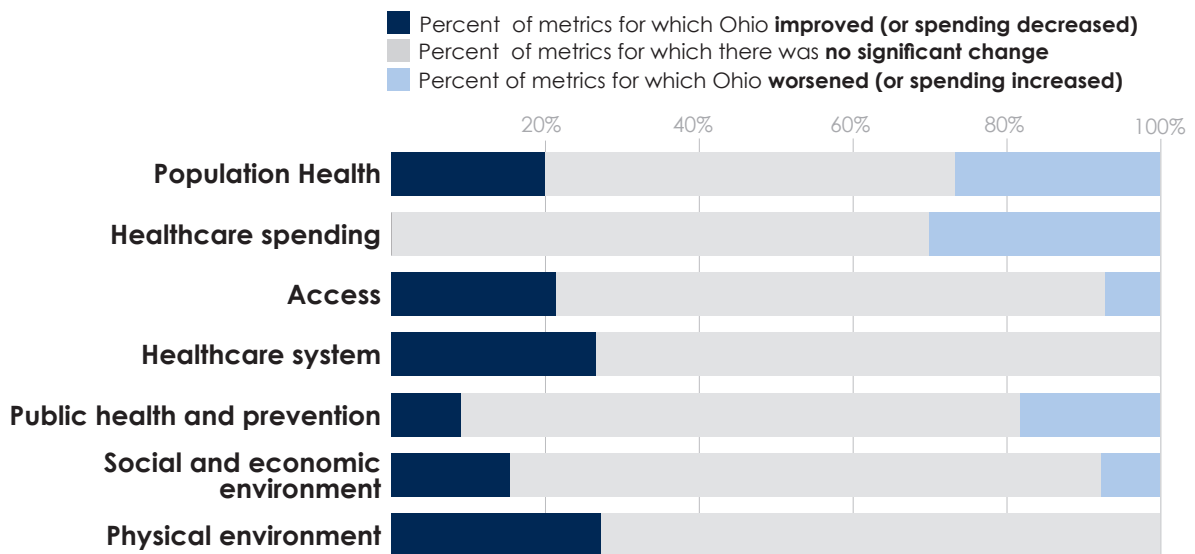
Ohio's performance improved on a greater number of metrics than it worsened for the following domains:

- Access to care
- Healthcare system
- Social and economic environment
- Physical environment

## Challenges in health outcomes and prevention

On balance, Ohio's performance worsened in the population health domain. Ohio was one of only eight states that had more population health metrics worsen than improve; most other states improved on this domain. The public health and prevention domain also had more metrics that worsened than improved for Ohio.

## In what areas (domains) is Ohio doing better vs. doing worse?\*



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\* Only includes metrics for which rank and trend were determined

## Healthcare spending relatively stable

Healthcare spending increased or stayed about the same for Ohio and most other states for all healthcare spending metrics in the *Dashboard*. Because healthcare spending has historically increased each year, states have focused on controlling *the growth* of healthcare spending to a more sustainable rate. No significant change in healthcare spending metrics is therefore a positive outcome.

Among the 10 spending metrics that were ranked and for which at least two years of data were available, Ohio's spending stayed about the same on seven metrics (70 percent) and increased on three metrics (30 percent). This is similar to the performance of other states.

## How was improvement measured?

Whenever possible, the *Dashboard* includes three years of data for each metric, allowing for a comparison over time. "Improved" or "worsened" refers to a change that exceeds one-half standard deviation in the metric's value from the baseline year to the most recent year. Changes that do not meet this threshold are considered to have no significant change.

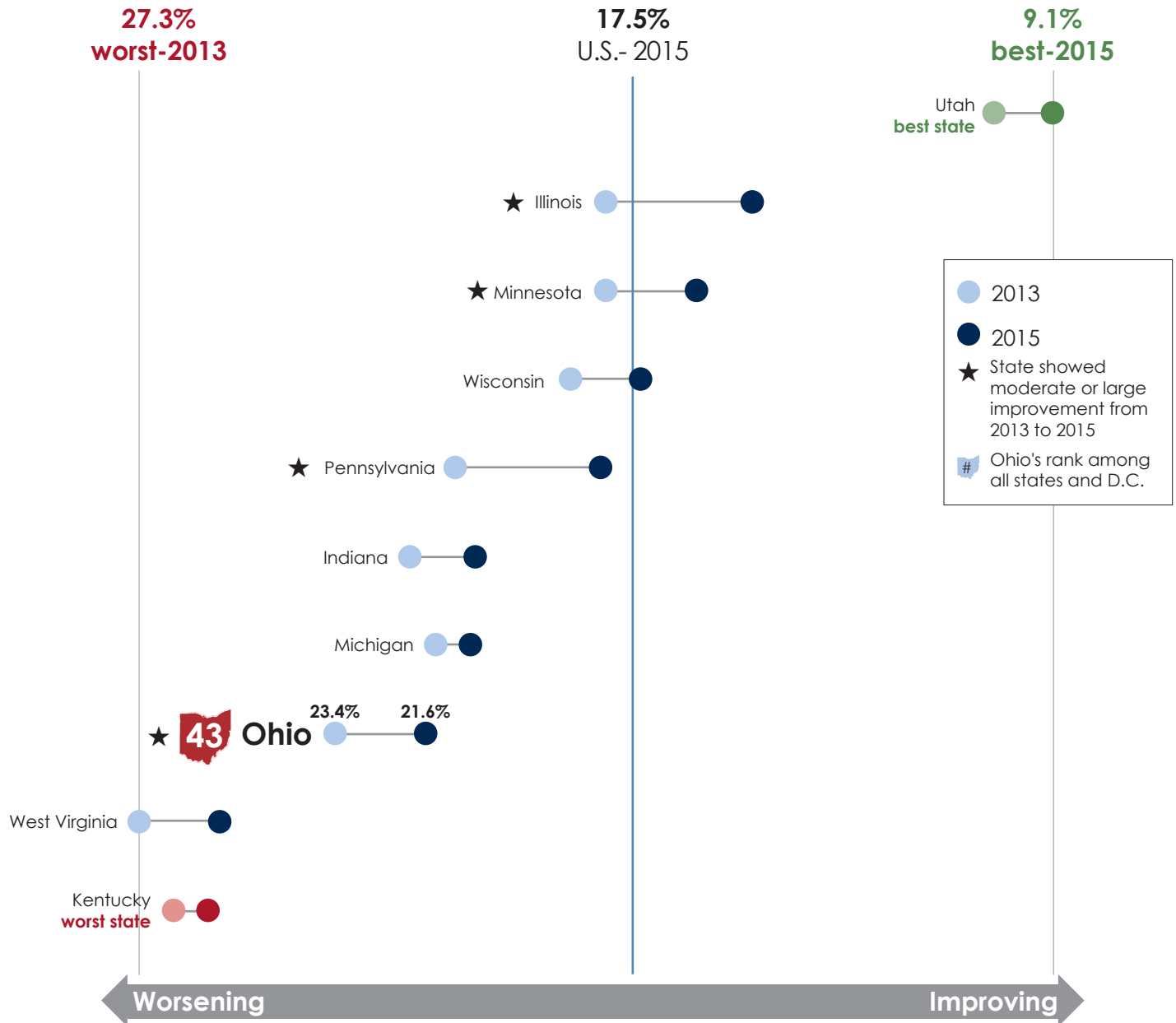
### In this section

This section includes a series of charts that provide additional detail about changes in performance on health value over time:

- **Trends for adult smoking, drug overdose deaths, cost as a barrier to care and fourth grade reading:** These topics were selected to provide examples of metrics for which Ohio significantly improved or bottom-quartile metrics in need of improvement. Midwest (Department of Health and Human Services Region V) and neighboring states are highlighted.
- **Changes in performance on *Dashboard* metrics:** Number of metrics that improved, stayed the same or worsened for all states and DC (not including healthcare spending)
- **Changes in performance on healthcare spending metrics:** Number of spending metrics that decreased, stayed the same or increased

# Adult smoking: Ohio improved, but still performs worse than most other states

Percent of population age 18 and older that are current smokers



Source: Behavioral Risk Factor Surveillance System

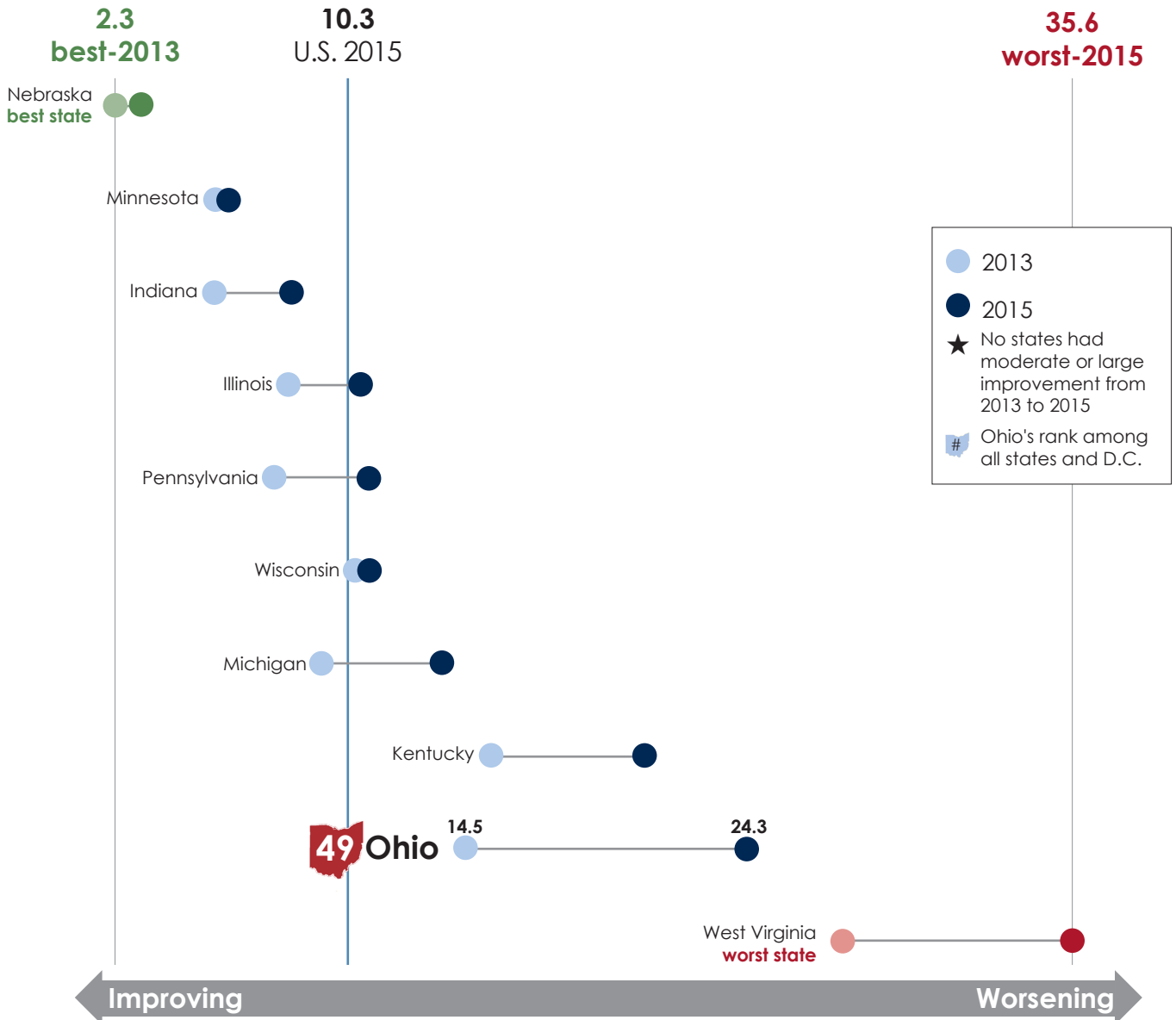
## Policy spotlight: Cigarette taxes

Research indicates that increasing the price of tobacco products is an effective way to reduce tobacco use.<sup>5</sup> Cigarette taxes increased between 2012 and 2015 in all the Midwestern states above that had significant reductions in adult smoking.

- Illinois and Pennsylvania allow certain municipalities to add their own tobacco taxes. In 2012, Illinois increased its cigarette tax by \$1.00,<sup>6</sup> and Chicago and Cook County each raised their cigarette taxes in 2013.<sup>7</sup> Pennsylvania's cigarette tax increased in 2009 and 2016<sup>8</sup> and Philadelphia's cigarette tax went up \$2.00 in 2014.<sup>9</sup>
- In 2013, Minnesota increased its cigarette tax \$1.60 and began annual adjustments pegged to inflation.<sup>10</sup>
- Ohio's cigarette tax increased \$0.35 per pack in 2015<sup>11</sup> and is lower than the rates in Utah, Illinois, Minnesota, Wisconsin, Pennsylvania and Michigan.

# Drug overdose deaths: Ohio's very high death rate climbed even higher in 2015

Number of deaths due to drug overdoses per 100,000 population, age-adjusted



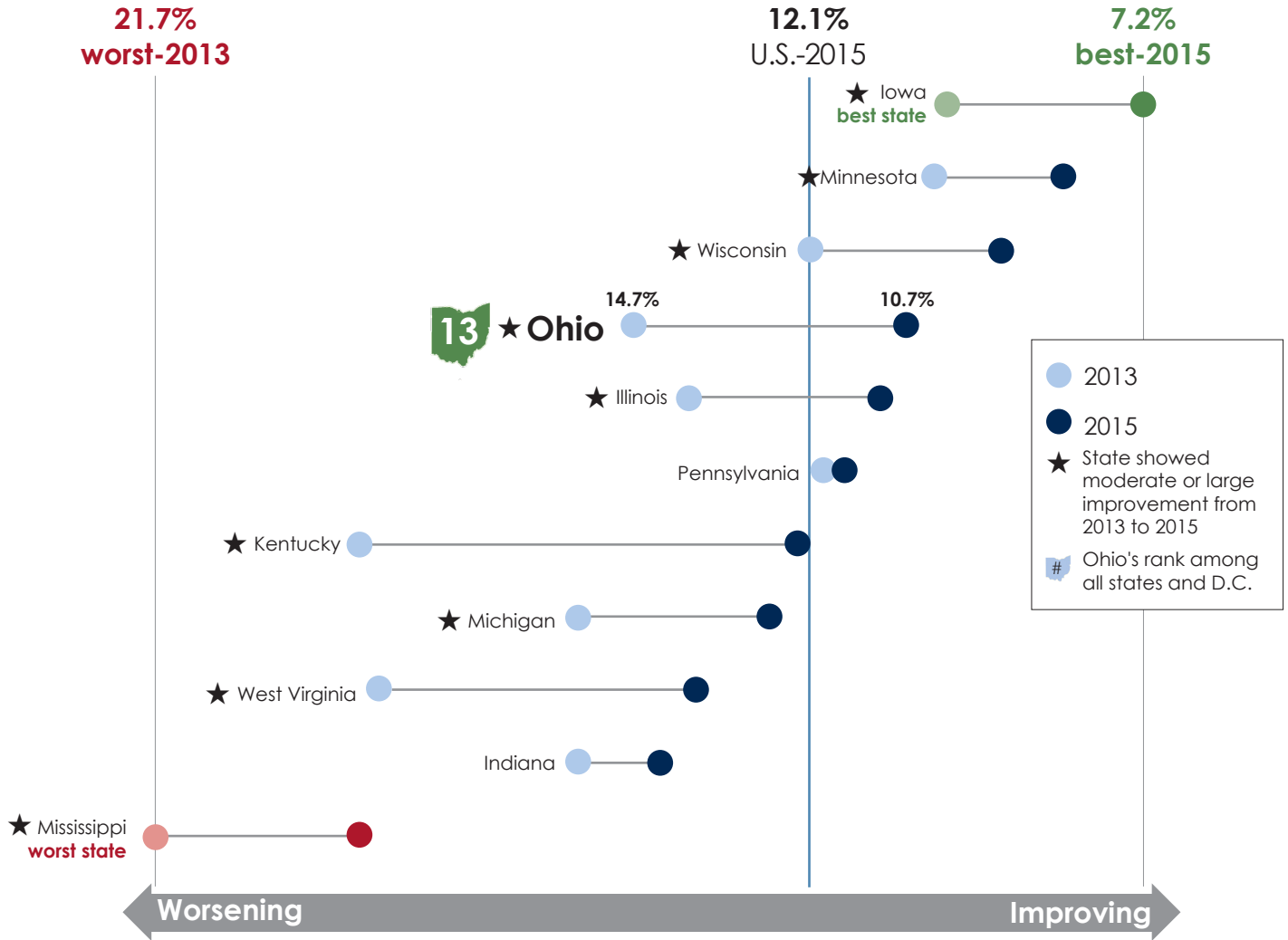
Source: Centers for Disease Control and Prevention, WONDER

## Policy spotlight: Opiate access, overdose reversal and addiction treatment

States are trying many strategies to decrease overdose deaths but are struggling to slow the opiate epidemic. From 2013 to 2015, no states significantly improved on the drug overdose death rate (per 100,000 population) and Ohio had the second-highest increase. Click [here](#) for a timeline of policy changes implemented in Ohio since 2011, including strategies to reduce access to opiates and increase access to Naloxone and addiction treatment.

# Cost as a barrier to access: Ohio stands out for improvement and rank

Percent of adults who went without care because of cost in the past year



Source: Behavioral Risk Factor Surveillance System

## Policy spotlight: Affordable Care Act (ACA)

The ACA contains several provisions first implemented in 2014 that were designed to increase access to care, including Medicaid expansion, insurance marketplaces and insurance reforms. Medicaid expansion varies by state; among Midwestern and neighboring states<sup>12</sup>:

- Minnesota, Ohio, Illinois, Kentucky, Michigan and West Virginia all expanded Medicaid eligibility for adults up to 138 percent of the federal poverty level (FPL) in 2014. All of these states experienced large or moderate improvements in the percent of adults who went without care because of cost.
- Pennsylvania and Indiana expanded Medicaid in 2015 and did not see a significant decrease on this metric between 2013 and 2015.
- Wisconsin expanded Medicaid eligibility prior to the ACA and continues to cover adults up to 100 percent FPL.

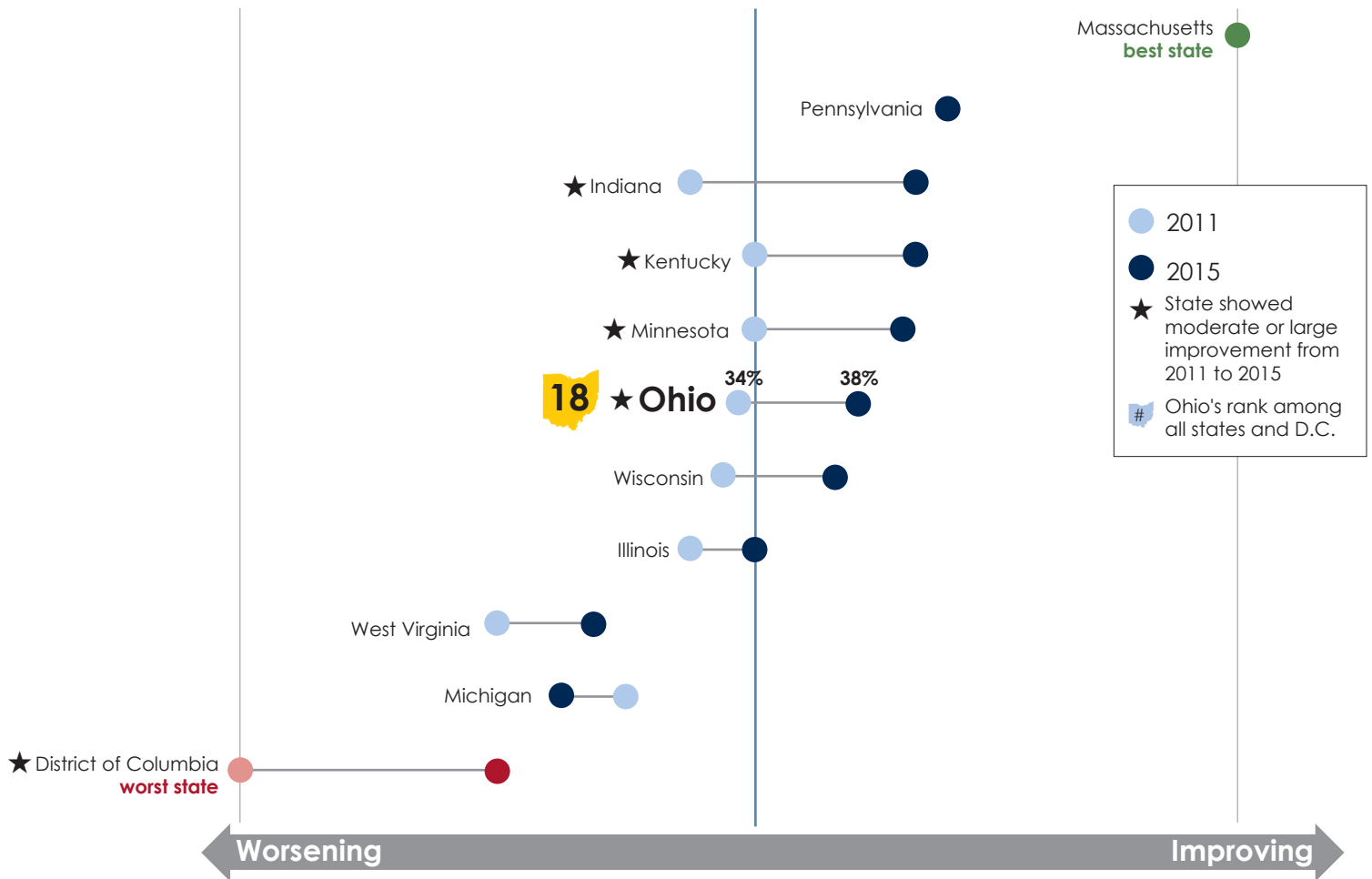
# Fourth grade reading: Ohio made modest gains amid wave of improvements across most states

Percent of 4th graders proficient in reading

19%  
worst-2011

35%  
U.S. 2015

50%  
best-2015



Source: U.S. Department of Education, National Assessment of Educational Progress, as compiled by Kids Count Data Center

## Policy spotlight: Third Grade Reading Guarantee and other reforms

Ohio has implemented several education reforms that may have affected changes in fourth grade reading proficiency through 2015, including:

- 2012: Ohio adopted a new accountability system with an A-F style school report card which is being phased in over several years.
- 2013-14: Ohio implemented the Third Grade Reading Guarantee and new learning standards (Common Core standards in English Language Arts and mathematics).<sup>13,14</sup>

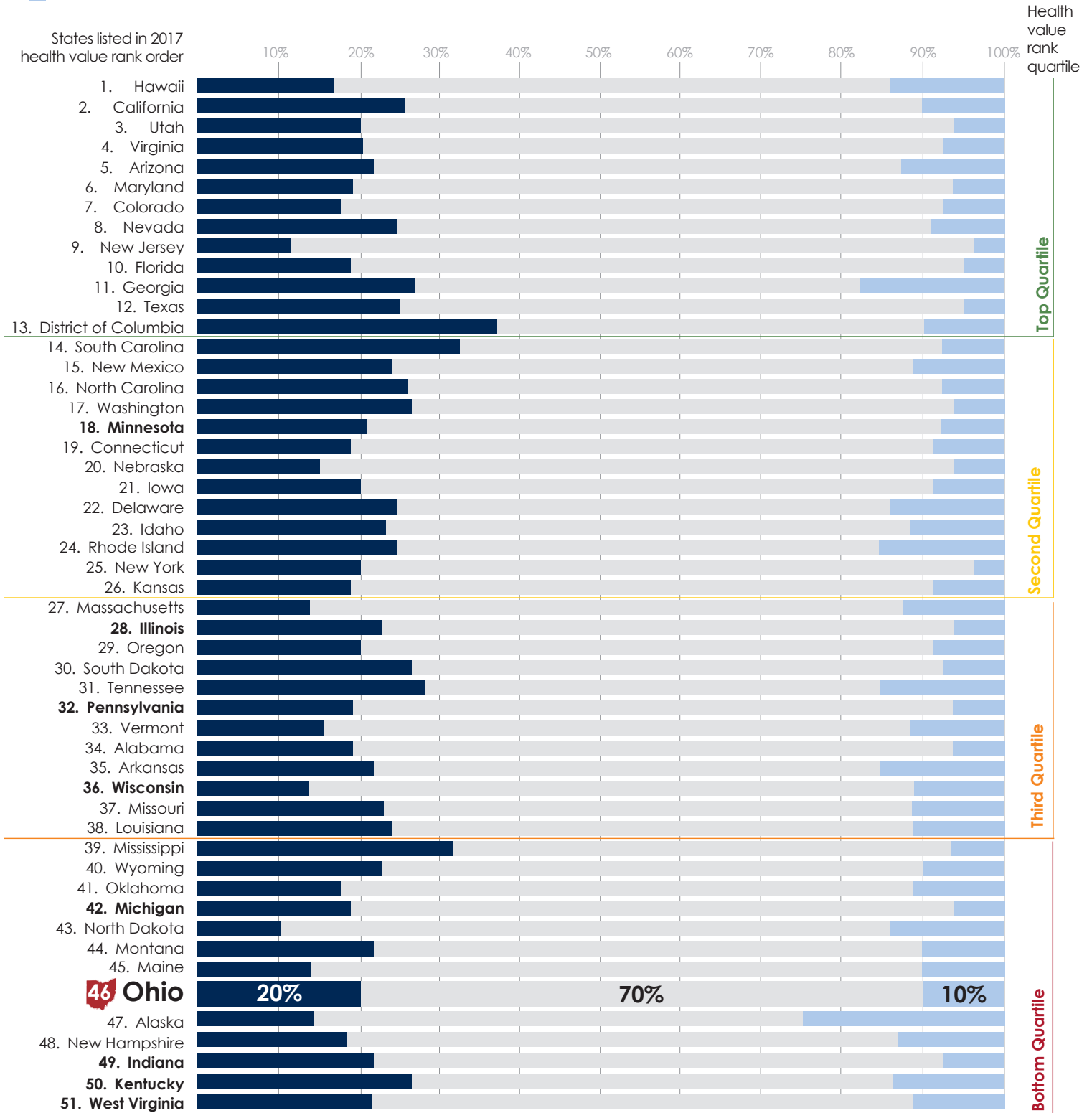
Indiana and Kentucky, two neighboring states with notable improvements, have adopted similar reforms:

- Kentucky began implementing Common Core standards in 2011-12.<sup>15</sup>
- Indiana has implemented K-3 reading reforms and A-F style school report cards.<sup>16</sup>

# More improvement than decline

Percent of *Dashboard* metrics that improved, stayed about the same or worsened from baseline to most-recent year\*

- Percent of metrics **improved**
- Percent of metrics for which there was **no significant change**
- Percent of metrics **worsened**



**Note:** Most baseline data were from 2010 to 2013 and most recent-year data were from 2014 to 2016. See appendix for specific years for each metric.

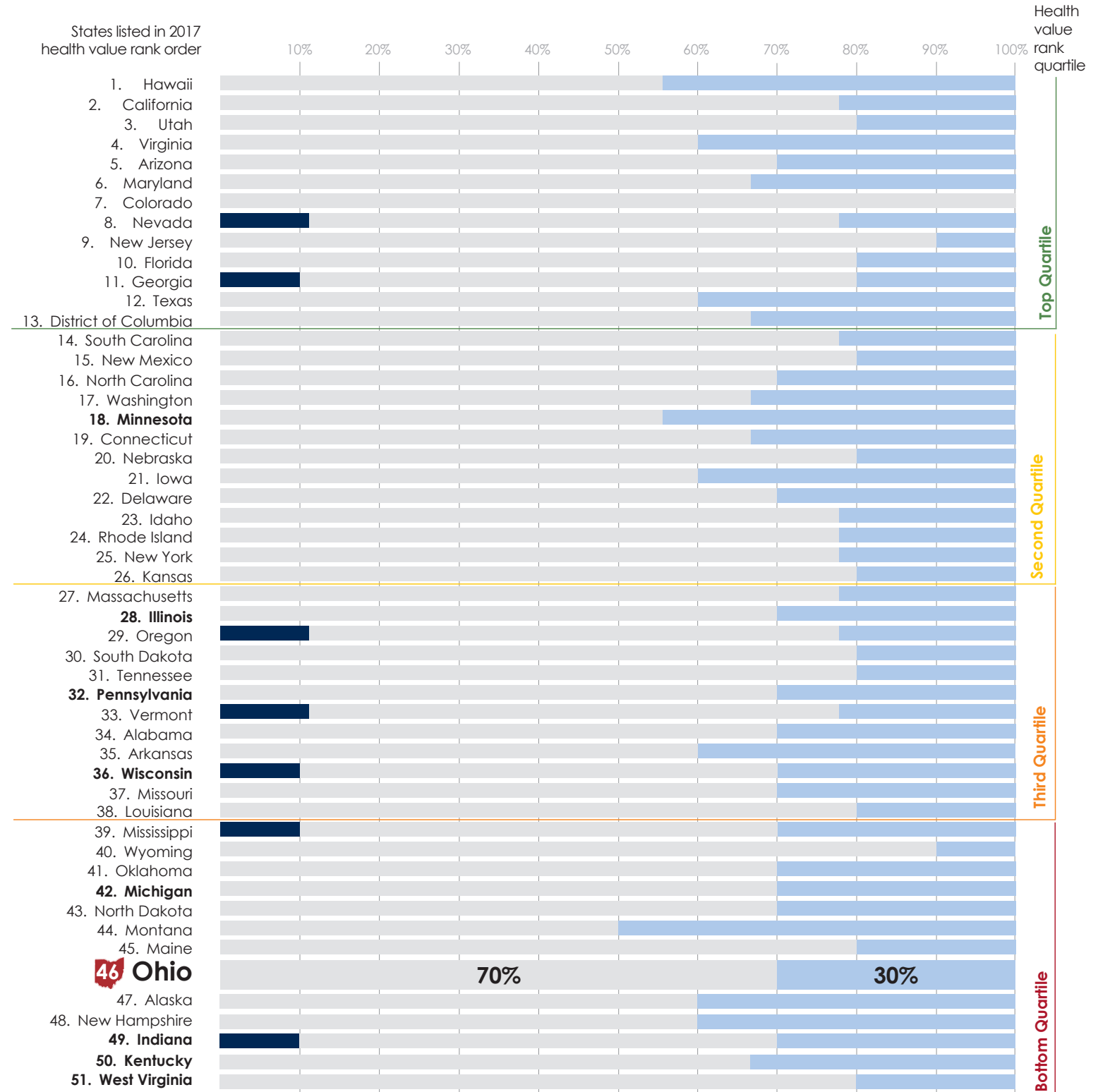
\* Not including healthcare spending



# Healthcare spending relatively stable

Percent of healthcare spending metrics that decreased, stayed about the same or increased from baseline to most-recent year

- Percent of metrics for which spending **decreased**
- Percent of metrics for which there was **no significant change**
- Percent of metrics for which spending **increased**



**Note:** Most baseline data were from 2012 to 2013 and most recent-year data were from 2014 to 2016. See appendix for specific years for each metric.

# Health equity profiles

This section examines health disparities and inequities across a set of 29 metrics by race and ethnicity, income level, education level and disability status through a series of equity profiles. Population groups and metrics examined were selected in partnership with the *Dashboard Health Measurement Advisory Group (HMAG) equity workgroup*. Disparity ratios are used in the equity profiles to compare groups with the worst outcomes to groups with the best outcomes to identify Ohio's greatest health disparities and inequities.

The equity profiles provide information on disparities and inequities across:

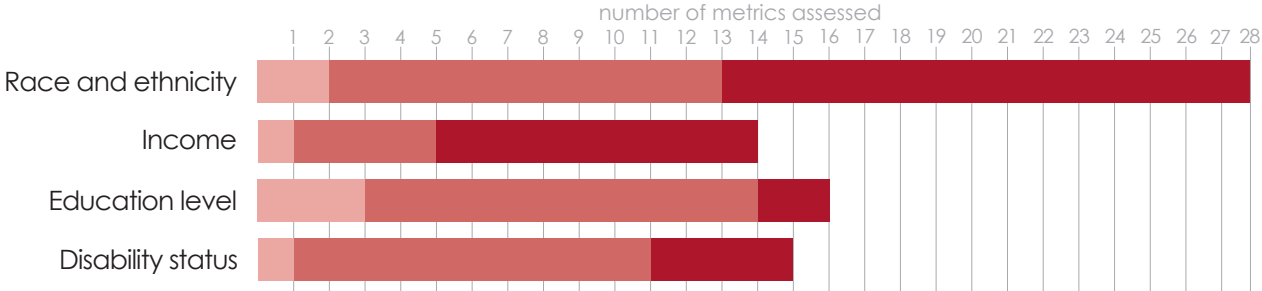
- Population health
- Access to care
- Healthcare system
- Public health and prevention
- Social and economic environment
- Physical environment



### Ohio's journey towards health equity

Achieving health equity requires a focus on eliminating health disparities and inequities across population groups. **Health disparities** are differences in health status among segments of the population such as by race or ethnicity, education, income or disability status. **Health inequities** are disparities that are a result of systemic, avoidable and unjust social and economic policies and practices that create barriers to opportunity.

### Data availability for population groups in the equity profiles



### Key

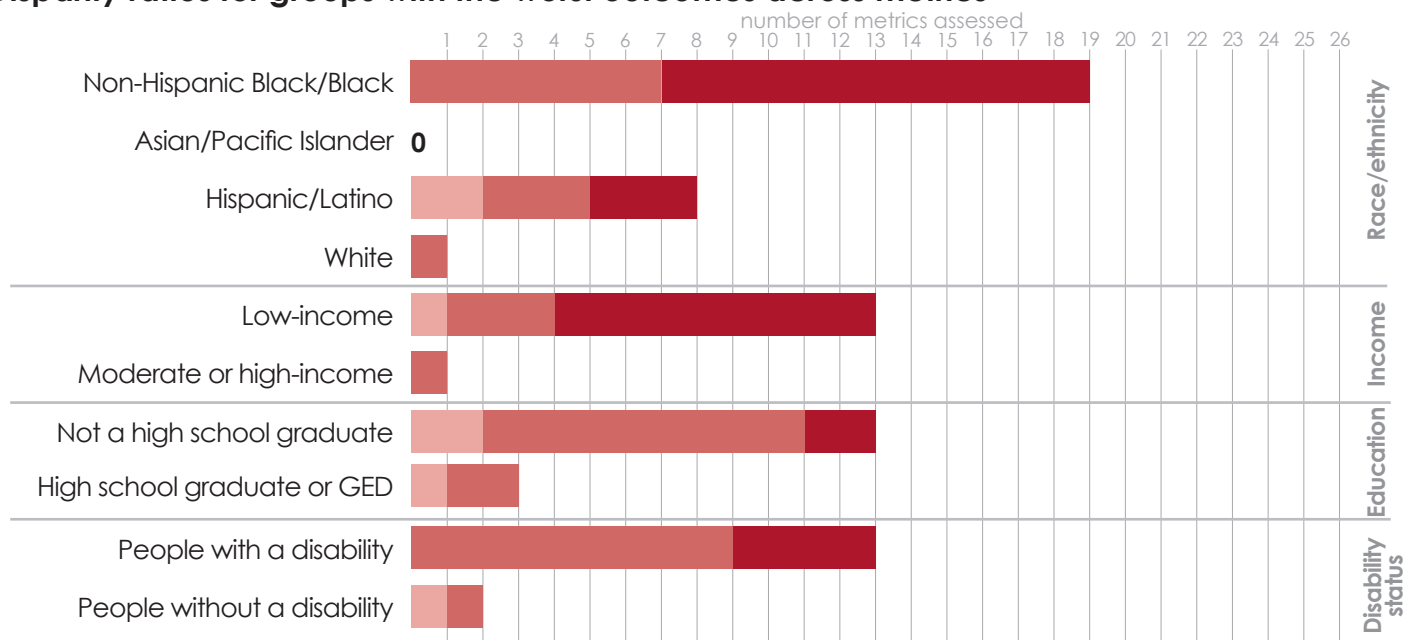
- Little to no disparity** Disparity ratio between group with the worst outcomes and group with the best outcomes is less than 1.10
- Medium disparity** Disparity ratio between group with the worst outcomes and group with the best outcomes is between 1.10 and 2
- Large disparity** Disparity ratio between group with the worst outcomes and group with the best outcomes is greater than 2

**Disparity ratio** is a measure of the magnitude of difference in outcomes between two population groups.

The HMAG equity workgroup considered the availability of data in the selection of population groups to examine in the equity profiles. However, even among these groups, data is not always consistently collected (e.g., data was available for more metrics by race and ethnicity as compared to groups by education level, income level or disability status). Data collection and monitoring across a wider set of population groups (including geography, age, gender and sexual orientation) is necessary to establish a foundation for achieving health equity.

There are many population groups in Ohio experiencing health disparities and inequities. However, Ohioans who are black or have a low income are more likely to experience larger disparities and inequities across metrics.

## Disparity ratios for groups with the worst outcomes across metrics



**Note:** There is great diversity within population groups that may not be reflected in available data. For example, aggregated statistics on the Asian/Pacific Islander population can mask health disparities and inequities particularly for subpopulations, such as Southeast Asians and new immigrant or refugee communities.

## Key

Little to no disparity	Disparity ratio between group with the worst outcomes and group with the best outcomes is less than 1.10
Medium disparity	Disparity ratio between group with the worst outcomes and group with the best outcomes is between 1.10 and 2
Large disparity	Disparity ratio between group with the worst outcomes and group with the best outcomes is greater than 2

The “estimated impact if disparity eliminated” calculation answers the question: How many individuals of a specific group would have had a better outcome if their prevalence/exposure rate were that of the group with the best outcome? For example, nearly 127,000 Ohio children would not be exposed to second-hand smoke if the disparity between low-income and moderate-to-high-income Ohioans was eliminated. If the racial and ethnic disparity was eliminated, more than 130,000 black children in Ohio would not be living in poverty.

## Top ten metrics with the largest disparities and inequities across equity profiles

Metric	Group with worst outcomes	Estimated impact if disparity eliminated
Children exposed to second-hand smoke	Low-income	126,776 Ohio children
Neighborhood safety	Low-income	—
Unemployment	Low-income	—
Uninsured adults	Low-income	—
Adverse childhood experiences	Low-income	207,722 Ohio children
Premature death	Black	—
Child poverty	Black	134,142 Ohio children
Diabetes with long-term complications	Black	—
Unable to see doctor due to cost	Low-income	—
Adult depression	People with a disability	440,990 Ohio adults

**Estimated impact:** This calculation estimates the impact on Ohioans if the group with the worst outcomes on a metric had the same level of performance as the group with the best outcomes.

# Population health

## Equity profile

Metric	Disparity Ratio	Group with worst outcomes	Group with best outcomes	Estimated impact if disparity eliminated
<b>Health behaviors</b>				
<b>Adult insufficient physical activity.</b> Percent of adults 18 years and older not meeting physical activity guidelines for muscle strength and aerobic activity (2015)				
By education level	1.01	High school graduate 84.3%	Not finished high school 83.8%	—
By race/ethnicity	1.05	Hispanic 83.2%	Black 79.3%	9,655 Ohio adults
By income	1.09	Less than \$15K 83.6%	More than \$50K 77%	—
By disability status	1.11	With a disability 87.1%	Without a disability 78.5%	122,608 Ohio adults
<b>Adult smoking.</b> Percent of population age 18 and older that are current smokers (2015)				
By race/ethnicity	1.43	Hispanic 29.2%	White 20.4%	21,663 Ohio adults
By disability status	1.49	With a disability 29.3%	Without a disability 19.6%	137,099 Ohio adults
By education level	1.76	Not finished high school 42.7%	High school graduate 24.2%	—
By income	2.97	Less than \$15K 38.6%	More than \$50K 13%	—
<b>Conditions and diseases</b>				
<b>Infant mortality.</b> Number of infant deaths per 1,000 live births (within 1 year)				
By education level (2013)	1.42	Not finished high school 12.1	High school graduate 8.5	—
By race/ethnicity (2015)	2.75	Black 15.1	White 5.5	—
<b>Cardiovascular disease mortality.</b> Number of deaths due to all cardiovascular diseases, including heart disease and strokes, per 100,000 population, age adjusted (2015)				
By race/ethnicity	2.49	Black 334.7	Asian 134.3	2,830 Ohioans
<b>Adult overweight and obesity.</b> Percent of population age 18 and older that are overweight or obese (2015)				
By education level	1.10	High school graduate 68.1%	Not finished high school 61.9%	—
By income	1.13	More than \$50K 68.1%	Less than \$15K 60.2%	—
By disability status	1.12	With a disability 72.4%	Without a disability 64.9%	107,548 Ohio adults
By race/ethnicity	1.19	Black 68.6%	Hispanic 57.5%	113,898 Ohio adults
<b>Youth overweight and obesity.</b> Percent of children ages 12-17 who are overweight or obese (2015)				
By race/ethnicity	1.58	Hispanic 46.7%	White 29.6%	—
By income	1.67	Less than 206% FPL 40.9%	More than 206% FPL 24.5%	58,005 Ohio children

### Key

Little to no disparity	Disparity ratio between group with the worst outcomes and group with the best outcomes is less than 1.10
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Large disparity	Disparity ratio between group with the worst outcomes and group with the best outcomes is greater than 2

**Estimated impact:** This calculation estimates the impact on Ohioans if the group with the worst outcomes on a metric had the same level of performance as the group with the best outcomes.

# Population health

## Equity profile (cont.)

Metric	Disparity Ratio	Group with worst outcomes	Group with best outcomes	Estimated impact if disparity eliminated
<b>Conditions and diseases (cont.)</b>				
<b>Adult diabetes.</b> Percent of adults who have been told by a health professional that they have diabetes (2015)				
By education level	1.05	Not finished high school 13.6%	High school graduate 12.9%	—
By race/ethnicity	1.68	Black 14.1%	Hispanic 8.4%	58,750 Ohio adults
By income	1.76	Less than \$15K 13.7%	More than \$50K 7.8%	—
By disability status	2.70	With a disability 21.9%	Without a disability 8.1%	195,661 Ohio adults
<b>Adult depression.</b> Percent of adults who have ever been told they have depression (2015)				
By education level	1.68	Not finished high school 30.3%	High school graduate 18.1%	—
By race/ethnicity	1.73	Hispanic 26.7%	Black 15.5%	27,544 Ohio adults
By income	2.25	Less than \$15K 32.6%	More than \$50K 14.5%	—
By disability status	3.36	With a disability 44.2%	Without a disability 13.2%	440,990 Ohio adults
<b>Drug overdose deaths.</b> Number of deaths due to drug overdoses per 100,000 population, age adjusted (2015)				
By race/ethnicity	1.73	White 26.7	Black 15.4	1,050 Ohioans
<b>Overall health and wellbeing</b>				
<b>Premature death.</b> Years of potential life lost before age 75 (2014)				
By race/ethnicity	4.52	Black 10,749	Asian 2,377.3	—
<b>Life expectancy.</b> Life expectancy at birth based on current mortality rates (2010)				
By race/ethnicity	1.18	Black 73.9	Asian 87	13.1 years

FPL: Federal poverty level

### Key

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**Estimated impact:** This calculation estimates the impact on Ohioans if the group with the worst outcomes on a metric had the same level of performance as the group with the best outcomes.

# Access to care

## Equity profile

Metric	Disparity Ratio	Group with worst outcomes	Group with best outcomes	Estimated impact if disparity eliminated
<b>Coverage and affordability</b>				
<b>Uninsured adults.</b> Percent of 18-64 year olds that are uninsured (2014)				
By disability status	1.07	Without a disability 11.7%	With a disability 11%	44,956 Ohio adults
By education level	1.55	Not finished high school 16.7%	High school graduate 10.8%	—
By race/ethnicity	2.45	Hispanic 25.2%	White 10.3%	33,641 Ohio adults
By income	6.5	Under 138% FPL 22.5%	More than 400% FPL 3.5%	—
<b>Unable to see doctor due to cost.</b> Percent of adults who went without care because of cost in the past year (2015)				
By education level	1.75	Not finished high school 18.8%	High school graduate 10.7%	—
By disability status	2.03	With a disability 17.7%	Without a disability 8.7%	127,339 Ohio adults
By race/ethnicity	2.38	Hispanic 22.5%	White 9.4%	32,001 Ohio adults
By income	3.44	Less than \$15K 17.9%	More than \$50K 5.2%	—
<b>Primary care access</b>				
<b>Without a usual source of care.</b> Percent of adults ages 18 and older who report they do not have at least one person they think of as their personal healthcare provider (2015)				
By disability status	1.34	Without a disability 19.1%	With a disability 14.2%	355,493 Ohio adults
By education level	1.42	Not finished high school 27.6%	High school graduate 19.5%	—
By income	2.16	Less than \$15K 28%	More than \$50K 13%	—
By race/ethnicity	2.4	Hispanic 37.9%	White 15.8%	54,083 Ohio adults

FPL: Federal poverty level

### Key

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# Healthcare system

## Equity profile

Metric	Disparity Ratio	Group with worst outcomes	Group with best outcomes	Estimated impact if disparity eliminated
<b>Preventive services</b>				
<b>Prenatal care.</b> Percent of women who completed a pregnancy in the last 12 months and did not receive prenatal care in the first trimester (2014)				
By education level	1.56	Not finished high school 49.7%	High school graduate 31.9%	—
By race/ethnicity	1.77	Black 40.7%	White 23%	—
<b>Hospital utilization</b>				
<b>Diabetes with long-term complications.</b> Admissions for Medicare beneficiaries with a principal diagnosis of diabetes with long-term complications per 100,000 beneficiaries, ages 18 years and older (2014)				
By race/ethnicity	4.02	Black 716	Asian 178	—
<b>Heart failure readmissions for Medicare beneficiaries.</b> Rate of Medicare beneficiaries discharged from the hospital with a principal diagnosis of heart failure who were readmitted for any cause within 30 days after the index admission date, per 100 index cases (2014)				
By race/ethnicity	1.02	Hispanic 20.1	Asian 19.7	—
<b>Timeliness, effectiveness and quality of care</b>				
<b>Mortality amenable to healthcare.</b> Number of deaths before age 75 per 100,000 population that resulted from causes considered at least partially treatable or preventable with timely and appropriate medical care (2012-2013)				
By race/ethnicity	2.78	Black 164	Hispanic 59	1,414 deaths

# Public health and prevention

## Equity profile

Metric	Disparity Ratio	Group with worst outcomes	Group with best outcomes	Estimated impact if disparity eliminated
<b>Health promotion and prevention</b>				
<b>Low birth weight.</b> Percent of live births where the infant weighed less than 2,500 grams (2014)				
By education level	1.38	Not finished high school 11.1%	High school graduate 8%	—
By race/ethnicity	1.83	Black 13.4%	White 7.3%	—
<b>Teen birth rate.</b> Rate per 1,000 births to females 15-19 years of age (2015)				
By race/ethnicity	2.13	Black 40.8	White 19.2	—

### Key

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# Social and economic environment

## Equity profile

Metric	Disparity Ratio	Group with worst outcomes	Group with best outcomes	Estimated impact if disparity eliminated
<b>Education</b>				
<b>Fourth-grade reading.</b> Percent of 4th graders who were not proficient in reading by a national assessment (NAEP) (2015)				
By income	1.6	Eligible for free/reduced lunch 77%	Not eligible for free/reduced lunch 48%	—
By race/ethnicity	2.0	Black 84%	Asian 42%	—
By disability status	1.6	With a disability 91%	Without a disability 57%	—
<b>High school graduation.</b> Percent of incoming 9th graders who did not graduate in 4 years from a public high school with a regular degree (2015)				
By race/ethnicity	2.88	Black 40.3%	Asian 14%	—
<b>Employment and poverty</b>				
<b>Child poverty.</b> Percent of persons under age 18 who live in households at or below the poverty threshold (2015)				
By disability status	1.79	With a disability 36.5%	Without a disability 20.5%	20,931 Ohio children
By race/ethnicity	4.21	Black 45.9%	Asian 10.9%	134,142 Ohio children
<b>Adult poverty.</b> Percent of persons age 18+ who live in households at or below the poverty threshold (2015)				
By disability status	1.98	With a disability 22%	Without a disability 11.1%	154,148 Ohio adults
By education level	2.05	Not finished high school 27.3%	High school graduate 13.3%	—
By race/ethnicity	2.55	Black 25.7%	White 10.1%	161,022 Ohio adults
<b>Unemployment.</b> Annual average unemployment rate, ages 16 and older (2015)				
By disability status	2.45	With a disability 13%	Without a disability 5.3%	—
By education level	2.6	Not finished high school 17.4%	High school graduate 6.7%	—
By race/ethnicity	2.81	Black 13%	White 4.6%	—
By income	8.79	Less than \$20K 32.6%	More than \$80K 3.7%	—
<b>Trauma, toxic stress and violence</b>				
<b>Adverse childhood experiences.</b> Percent of children who have experienced two or more adverse experiences (2011/2012)				
By race/ethnicity	1.57	Black 35.4%	White 22.6%	49,043 Ohio children
By disability status (special needs)	1.59	With a special need 36.1%	Without a special need 22.7%	—
By education level	1.66	Not finished high school 54.9%	High school graduate 33%	—
By income	5.36	Less than 100% FPL 42.9%	More than 400% FPL 8%	207,722 Ohio children

FPL: Federal poverty level

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# Physical environment

## Equity profile

Metric	Disparity Ratio	Group with worst outcomes	Group with best outcomes	Estimated impact if disparity eliminated
<b>Air, water and toxic substances</b>				
<b>Children exposed to second-hand smoke.</b> Percent of children who live in a home where someone uses tobacco or smokes inside the home (2011)				
By education level	1.09	Not finished high school 22.7%	High school graduate 20.9%	—
By disability status (special healthcare needs)	1.55	Children with special healthcare needs 14.3%	Children without special healthcare needs 9.2%	—
By race/ethnicity	4.91	Black 17.2%	Hispanic 3.5%	52,492 Ohio children
By income	24.67	Less than 100% FPL 22.2%	400% FPL or more 0.9%	126,776 Ohio children
<b>Housing, built environment and access to physical activity</b>				
<b>Neighborhood safety.</b> Percent of parents who report their children are living in an unsafe neighborhood (2011/2012)				
By education level	1.4	Not finished high school 25.9%	High school graduate 18.5%	—
By disability status (special healthcare needs)	1.43	Children with special healthcare needs 15.3%	Children without special healthcare needs 10.7%	—
By race/ethnicity	3.99	Black 29.5%	White 7.4%	—
By income	9.54	Less than 100% FPL 24.8%	400% FPL or more 2.6%	—

FPL: Federal poverty level

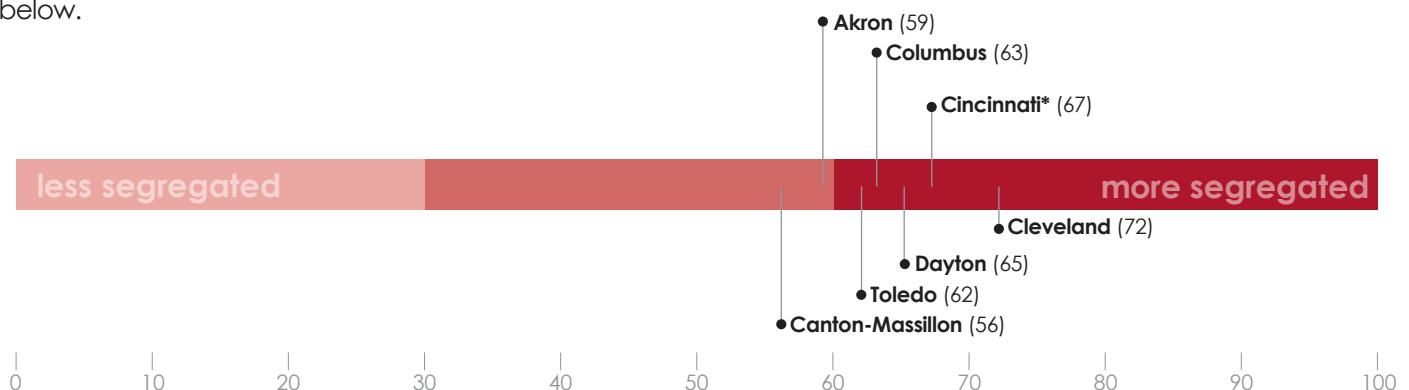
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### Residential segregation

The black/white dissimilarity index measures the extent to which black and white residents live separately from one another across census tracts. A high value on the index's 100-point scale indicates that the two groups tend to live in different tracts. A value of 60 or above is considered very high. It means that 60 percent or more of the members of one group would need to move to a different tract in order for the two groups to be equally distributed. Values of 40 to 50 are usually considered moderate levels of segregation, and values of 30 or below are considered to be fairly low. The 2010-2014 black/white dissimilarity indices for Ohio's seven largest metropolitan areas are shown below.



\*Cincinnati dissimilarity index is calculated from Ohio census tracts only.


**Source:** American Community Survey, 5-Year Census Tract Estimates. Calculations by the Kirwan Institute for the Study of Race and Ethnicity

## Notes

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# 2017 Health Value Dashboard™

## Appendix: Detailed metric information

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Population health</b>						
Health behaviors	Excessive drinking	Percent of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average.	2014	—	2015	Behavioral Risk Factor Surveillance System as compiled by America's Health Rankings
Health behaviors	Adult insufficient physical activity 	Percent of adults 18 years and older not meeting physical activity guidelines for muscle strength and aerobic activity	2011	2013	2015	Behavioral Risk Factor Surveillance System
Health behaviors	Youth all- tobacco use	Percent of youth ages 12-17 who used cigarettes, smokeless tobacco, cigars, or pipe tobacco during past 30 days	2011-2012	2012-2013	2013-2014	National Survey on Drug Use and Health
Health behaviors	Adult smoking 	Percent of population age 18 and older that are current smokers	2013	2014	2015	Behavioral Risk Factor Surveillance System
Conditions and diseases	Infant mortality 	Number of infant deaths per 1,000 live births (within 1 year). Note that the Population Health domain profile includes 2015 data for Ohio, which is not available for other states.	2012	2013	2014 rank; 2015 trend	Centers for Disease Control and Prevention, Vital Statistics, National Center for Health Statistics, National Vital Statistics Reports. Source for 2015 Ohio data: 2015 Ohio Infant Mortality Data: General Findings, Ohio Department of Health
Conditions and diseases	Cardiovascular disease mortality 	Number of deaths due to all cardiovascular diseases, including heart disease and strokes, per 100,000 population (age-adjusted)	2013	2014	2015	Centers for Disease Control and Prevention, Vital Statistics, WONDER
Conditions and diseases	Adult overweight and obesity* 	Percent of population age 18 and older that are overweight or obese	—	—	2015	Behavioral Risk Factor Surveillance System
Conditions and diseases	Youth overweight and obesity 	Percent of children ages 12-17 who are overweight or obese	2010	2012	2015	Ohio Medicaid Assessment Survey
Conditions and diseases	Adult diabetes 	Percent of adults who have been told by a health professional that they have diabetes	2013	2014	2015	Behavioral Risk Factor Surveillance System
Conditions and diseases	Adult depression 	Percent of adults who have ever been told they have depression	2013	2014	2015	Behavioral Risk Factor Surveillance System

 Metrics are also examined in the 2017 *Dashboard* health equity profiles.

\*This metric was only examined in the 2017 *Dashboard* health equity profiles.

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Population health (cont.)</b>						
Conditions and diseases	Suicide deaths	Number of deaths due to suicide per 100,000 population	2010	2012	2013	Centers for Disease Control and Prevention, Vital Statistics, National Vital Statistics System as compiled by Commonwealth State Scorecard
Conditions and diseases	Drug overdose deaths 	Number of deaths due to drug overdoses per 100,000 population (age-adjusted)	2013	2014	2015	Centers for Disease Control and Prevention Vital Statistics
Conditions and diseases	Poor oral health	Percent of adults who have lost teeth due to decay, infection, or disease	2006	2012	2014	Behavioral Risk Factor Surveillance System as compiled by Commonwealth State Scorecard
Overall health and wellbeing	Overall health status	Percent of adults that report excellent, very good or good health	2013	2014	2015	Behavioral Risk Factor Surveillance System
Overall health and wellbeing	Limited activity due to health problems	Average number of days in the previous 30 days when a person reports limited activity due to physical or mental health difficulties (ages 18 and older)	2012	2013	2014	Behavioral Risk Factor Surveillance System, analysis by State Health Access Data Assistance Center, as compiled by Robert Wood Johnson Foundation Data Hub
Overall health and wellbeing	Premature death 	Years of potential life lost before age 75 (YPLL-75) per 100,000 population	2012	2013	2014	Centers for Disease Control and Prevention, Web-based Injury Statistics Query and Reporting as compiled by Robert Wood Johnson Foundation DataHub
Overall health and wellbeing	Life expectancy 	Life expectancy at birth based on current mortality rates	2005	2008	2010	Centers for Disease Control and Prevention, Vital Statistics, analysis by Measure of America, as compiled by Robert Wood Johnson Foundation DataHub

 Metrics are also examined in the 2017 *Dashboard* health equity profiles.

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Healthcare spending</b>						
Total out-of-pocket spending	Out-of-pocket spending	Percent of individuals who are in families where out-of-pocket spending on health care, including premiums, accounted for more than 10% of annual income	2012	2013	2014	State Health Access Data Assistance Center analysis of the Annual Social and Economic Supplement to the Current Population Survey as compiled by the Robert Wood Johnson Foundation DataHub
Employer spending	Average single premium, per enrolled employee	Average total single premium for any-provider plans per enrolled employee at private-sector establishments that offer health insurance (includes self-insured employers)	2013	2014	2015	Agency for Healthcare Research & Quality Medical Expenditure Panel Survey
Employer spending	Average single premium, per enrolled employee, percent of employer contribution	Average total single premium for any-provider plans per enrolled employee at private-sector establishments that offer health insurance (includes self-insured employers), percent of employer contribution	2013	2014	2015	Agency for Healthcare Research & Quality Medical Expenditure Panel Survey
Employer spending	Average single premium, per enrolled employee, percent of employee contribution	Average total single premium for any-provider plans per enrolled employee at private-sector establishments that offer health insurance (includes self-insured employers), percent of employee contribution	2013	2014	2015	Agency for Healthcare Research & Quality Medical Expenditure Panel Survey
Employer spending	Average family premium per enrolled employee	Average total family premium for any-provider plans per enrolled employee at private-sector establishments that offer health insurance (includes self-insured employers)	2013	2014	2015	Agency for Healthcare Research & Quality Medical Expenditure Panel Survey
Employer spending	Average family premium per enrolled employee, percent of employer contribution	Average total family premium for any-provider plans per enrolled employee at private-sector establishments that offer health insurance (includes self-insured employers), percent of employer contribution	2013	2014	2015	Agency for Healthcare Research & Quality Medical Expenditure Panel Survey
Employer spending	Average family premium per enrolled employee, percent of employee contribution	Average total family premium for any-provider plans per enrolled employee at private-sector establishments that offer health insurance (includes self-insured employers), percent of employee contribution	2013	2014	2015	Agency for Healthcare Research & Quality Medical Expenditure Panel Survey

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Healthcare spending (cont.)</b>						
Employer spending	Total spending per enrollee with employer-sponsored health insurance	Total spending per enrollee with employer-sponsored health insurance, ages 18-64. Total per enrollee spending estimates from a sophisticated regression model include reimbursed costs for health care services from all sources of payment including the health plan, enrollee, and any third-party payers incurred in 2013 and in 2014. Outpatient prescription drug charges are excluded. Enrollees with capitated plans and their associated claims are also excluded. Estimates for each HRR were adjusted for enrollees' age and sex, the interaction of age and sex, partial year enrollment and regional wage difference. Analysis conducted by M. Chernew, Harvard Medical School Department of Health Care Policy, of the Truven MarketScan Database.	2013	—	2014	Commonwealth Fund Scorecard on Local Health System Performance
Marketplace spending	Average monthly marketplace premiums, after advanced premium tax credit	Average monthly premium for all enrollees in the federal marketplace or for states that use healthcare.gov, after application of an advanced premium tax credit	2014	2015	2016	Department of Health and Human Services, Assistant Secretary for Planning and Evaluation, Final enrollment reports
Medicare spending	Total Medicare spending (Parts A and B), per Medicare enrollee	Price, age, sex and race-adjusted Medicare reimbursements per Medicare enrollee (Parts A and B), age 65-99	2010	2011	2012	Dartmouth Atlas of Health Care
Medicare spending	Average total cost, risk adjusted, for Medicare beneficiaries, without chronic conditions	Annual averages of all costs for Medicare beneficiaries without chronic conditions	2012	2013	2014	Centers for Medicare and Medicaid Services, Mapping Medicare Disparities Tool
Medicare spending	Average total cost, risk adjusted, for Medicare beneficiaries, one chronic condition	Annual averages of all costs for Medicare beneficiaries with claim(s) indicating beneficiary is receiving service or treatment for one chronic condition	2012	2013	2014	Centers for Medicare and Medicaid Services, Mapping Medicare Disparities Tool
Medicare spending	Average total cost, risk adjusted, for Medicare beneficiaries, two chronic conditions	Annual averages of all costs for Medicare beneficiaries with claim(s) indicating beneficiary is receiving service or treatment for two chronic conditions	2012	2013	2014	Centers for Medicare and Medicaid Services, Mapping Medicare Disparities Tool
Medicare spending	Average total cost, risk adjusted, for Medicare beneficiaries, three or more chronic conditions	Annual averages of all costs for Medicare beneficiaries with claim(s) indicating beneficiary is receiving service or treatment for three or more chronic condition	2012	2013	2014	Centers for Medicare and Medicaid Services, Mapping Medicare Disparities Tool


Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Healthcare spending (cont.)</b>						
Medicaid spending	Medicaid spending per enrollee, all enrollees	Average amount Medicaid spends per enrollee per year (includes all enrollees not just full benefit), all enrollees	FY 2011	FY 2012	FY 2013	Medicaid and CHIP Payment and Access Commission, MACSTATS
Medicaid spending	Medicaid spending per enrollee, child	Average amount Medicaid spends per enrollee per year (includes all enrollees not just full benefit), children	FY 2011	FY 2012	FY 2013	Medicaid and CHIP Payment and Access Commission, MACSTATS
Medicaid spending	Medicaid spending per enrollee, adult	Average amount Medicaid spends per enrollee per year (includes all enrollees not just full benefit), adults	FY 2011	FY 2012	FY 2013	Medicaid and CHIP Payment and Access Commission, MACSTATS
Medicaid spending	Medicaid spending per enrollee, disabled	Average amount Medicaid spends per enrollee per year (includes all enrollees not just full benefit), disabled	FY 2011	FY 2012	FY 2013	Medicaid and CHIP Payment and Access Commission, MACSTATS page
Medicaid spending	Medicaid spending per enrollee, aged	Average amount Medicaid spends per enrollee per year (includes all enrollees not just full benefit), aged	FY 2011	FY 2012	FY 2013	Medicaid and CHIP Payment and Access Commission, MACSTATS
Public and mental health spending	Local public health spending, per capita	Per capita median of total annual expenditures for local health departments	2010	—	2013	National Association of County and City Health Officials
Public and mental health spending	State public health funding, per capita	State public health budget funding per capita during the fiscal year. Dollar amounts represent state funding only.	2013	2014	2015	<i>Shortchanging America's Health 2005-2010</i> , <i>Investing in America's Health 2011-2016</i> , Trust for America's Health, as compiled by the Robert Wood Johnson Foundation DataHub
Public and mental health spending	State mental health agency spending, per capita	State mental health agency per capita mental health services expenditures. Expenditures reflect spending in the state fiscal year.	2011	2012	2013	National Association of State Mental Health Program Directors Research Institute, Inc data, as compiled by Kaiser Family Foundation State Health Facts

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Access to care</b>						
Coverage and affordability	Uninsured adults =	Percent of 18-64 year olds that are uninsured in the state.	2012	2013	2014	U.S. Census Bureau, American Community Survey
Coverage and affordability	Uninsured children	Percent of 0-17 year olds that are uninsured in the state.	2012	2013	2014	U.S. Census Bureau, American Community Survey
Coverage and affordability	Employer-sponsored health insurance coverage	Percent of all workers who work at a company that offers health insurance to its employees. Data represents 2 year estimates.	2013	2014	2015	Agency for Healthcare Research & Quality Medical Expenditure Panel Survey data as compiled by the Robert Wood Johnson Foundation DataHub
Coverage and affordability	Unable to see doctor due to cost =	Percent of adults who went without care because of cost in the past year.	2013	2014	2015	Behavioral Risk Factor Surveillance System
Primary care access	Without a usual source of care =	Percent of adults ages 18 and older who report they do not have at least one person they think of as their personal healthcare provider.	2013	2014	2015	Behavioral Risk Factor Surveillance System
Primary care access	Routine checkup	Percent of adults age 50 or older, in fair or poor health, or ever told they have diabetes or pre-diabetes, acute myocardial infarction, heart disease, stroke, or asthma who did not visit a doctor for a routine checkup in the past two years	2012	2013	2014	Behavioral Risk Factor Surveillance System as compiled by Commonwealth Fund Scorecard on State Health System Performance
Primary care access	Medical home, children	Percent of children who have a personal doctor or nurse, have a usual source for sick and well care, receive family-centered care, have no problems getting needed referrals and receive effective care coordination when needed.	2007	—	2011-2012	National Survey of Children's Health as compiled by Commonwealth Fund Scorecard on State Health System Performance
Behavioral health	Unmet need for mental health treatment	Percent of adults ages 18 and older with past year mental illness who reported perceived need for treatment/counseling was not received.	2009-2011	—	2012-2014	Ohio Department of Mental Health and Addiction Services
Behavioral health	Unmet need for illicit drug use treatment	Percent of individuals, ages 12 and older needing but not receiving treatment for illicit drug use in the past year. Refers to respondents needing treatment for illicit drugs, but not receiving treatment for an illicit drug problem at a special facility (i.e. drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).	2011-2012	2012-2013	2013-2014	Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health





Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Access to care (cont.)</b>						
Behavioral health	Youth with depression who did not receive mental health treatment	Percent of youth with major depressive episode who did not receive any mental health treatment.	2010-2011	—	2012-2013	Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, as compiled by Mental Health America
Oral health	Received dental care in past year, adults	Percent of adults, ages 18 and older, who reported having visited the dentist or dental clinic within the past year for any reason. Percentages are weighted to reflect population characteristics.	2012	—	2014	Behavioral Risk Factor Surveillance System
Oral health	Received dental care in past year, children	Percent of children, under age 18, who have seen a dentist at least once for preventive dental care, such as check-ups and dental cleanings, in the past year.	2007	—	2011-2012	National Survey of Children's Health as compiled by the Kids Count data center (all states and OH). <b>Note:</b> Ohio Medicaid Assessment Survey Child Dashboard provides more recent data for Ohio
Workforce	Underserved, primary care physicians	Percent of need not met by current supply of primary care physicians in designated primary care health professional shortage areas.	04/2014	—	09/2016	Health Resources Services Administration
Workforce	Underserved, dentists	Percent of need not met by current supply of dentists in designated dental care health professional shortage areas.	04/2014	—	09/2016	Health Resources Services Administration
Workforce	Underserved, psychiatrists	Percent of need not met by current supply of psychiatrists in designated mental health care professional shortage areas.	04/2014	—	09/2016	Health Resources Services Administration

⊞ Metrics are also examined in the 2017 *Dashboard* health equity profiles.

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Healthcare system</b>						
Behavioral health	Mental illness hospitalization follow-up	The percentage of discharges for continuous and non-continuously enrolled Medicaid members 6 years of age and older who were hospitalized for treatment of selected mental health disorders and who had an outpatient visit, an intensive outpatient encounter or partial hospitalization with a mental health practitioner within 30 days of discharge. The numerator was the number of discharges for psychiatric patients and the denominator was the number of discharges for psychiatric patients to an outpatient provider meeting measure specifications.	2013	2014	2015	Ohio Department of Mental Health and Addiction Services
Behavioral health	Substance use disorder treatment retention	The percent of clients ages 12 or older with an intake assessment who received one outpatient index service within 7 days and 2 additional outpatient index services within 30 days of intake. The numerator was all persons who have at least one clinical service within 7 days of assessment and 2 more clinical services within 30 days of assessment and the denominator was all persons receiving an alcohol or other drug assessment at intake.	2013	2014	2015	Ohio Department of Mental Health and Addiction Services
Hospital utilization	Diabetes with long-term complications 	Admissions for Medicare beneficiaries with a principal diagnosis of diabetes with long-term complications per 100,000 beneficiaries, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions.	2012	2013	2014	Centers for Medicare and Medicaid Services, Mapping Medicare Disparities tool
Hospital utilization	Overall hospital readmission rate	This data was provided from the Ohio Hospital Association all-payer database to create all-cause, all-age, all-payer, all-hospital readmission rates. Subsequent admissions to other hospitals during the 30 days post discharge from an index admission within the collaborative are tracked using a deterministic model matching patient on date of birth, gender and zip code of residence.	2012	2013	2014	Ohio Hospital Association

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Healthcare system (cont.)</b>						
Hospital utilization	Heart failure readmissions for Medicare beneficiaries =	Rate of Medicare beneficiaries discharged from the hospital with a principal diagnosis of heart failure who were readmitted for any cause within 30 days after the index admission date. This metric is hospital-specific, risk-standardized, all-cause, and per 100 index cases.	2012	2013	2014	Centers for Medicare and Medicaid Services, Mapping Medicare Disparities Tool
Hospital utilization	Avoidable emergency department visits for Medicare beneficiaries	Potentially avoidable emergency department visits among Medicare beneficiaries, per 1,000 beneficiaries.	2011	2012	2013	J. Zheng, Harvard University, analysis of 2012 and 2013 Medicare Enrollment and Claims Data, as compiled by Commonwealth Fund Scorecard on State Health System Performance
Hospital utilization	Hospital admissions for asthma per 100,000 population, ages 2-17	Admissions for asthma per 100,000 population, ages 2-17	2011	2012	2013	Agency for Healthcare Research and Quality, State Snapshots
Preventive services	Breastfeeding support in hospitals	Average Maternity Practice in Infant Nutrition and Care (mPINC) score among hospitals and birthing facilities to support breastfeeding. The score is the average across 7 categories of supports that hospitals and birth centers can provide for breastfeeding. Scores range from 0 to 100. 100 is the highest, best possible score.	2009	2011	2013	Centers for Disease Control and Prevention, National Survey of Maternity Practices in Infant Nutrition and Care, mPINC
Preventive services	Cancer early stage diagnosis, all	Percent of all cancer cases diagnosed at an early stage.	2007-2011	2008-2012	2009-2013	North American Association of Central Cancer Registries, 2009-2013 Cancer Incidence in North America monograph
Preventive services	Cancer early stage diagnosis, female breast cancer cases	Percent of female breast cancer cases diagnosed at an early stage. The denominator is total female cases in Ohio and the numerator is early stage female cases.	2007-2011	2008-2012	2009-2013	North American Association of Central Cancer Registries, 2009-2013 Cancer Incidence in North America monograph
Preventive services	Cancer early stage diagnosis, colon and rectal cancer cases	Percent of colon and rectal cancer cases diagnosed at an early stage.	2007-2011	2008-2012	2009-2013	North American Association of Central Cancer Registries, 2009-2013 Cancer Incidence in North America monograph
Preventive services	Flu vaccination	Percent of population ≥ 6 months old vaccinated for flu within the past year.	2012	2013	2014	Centers for Disease Control and Prevention, National Immunization Survey and Behavioral Risk Factor Surveillance System, FluVaxView interactive trend report

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Healthcare system (cont.)</b>						
Preventive services	*Prenatal care 	Percent of women who completed a pregnancy in the last 12 months and who received prenatal care in the first trimester.	2012	2013	2014	Centers for Disease Control and Prevention, Vital Statistics, WONDER
Timeliness, effectiveness and quality of care	Healthcare-associated infections	Composite of standardized infection ratios across six healthcare-associated infections. The six healthcare-associated infections are: (1) central line-associated bloodstream infections, CLABSI (2) catheter-associated urinary tract infections, CAUTI (3) surgical site infections, Colon Surgery, SSI (4) surgical site infections, abdominal hysterectomy surgery, SSI (5) hospital-onset clostridium difficile infections (6) hospital-onset MRSA bloodstream infections. The SIR for a state is adjusted to account for factors that might cause infection rates to be higher or lower, such as hospital size, teaching status, the type of patients a hospital serves, and surgery and patient characteristics.	—	—	2014	Centers for Disease Control and Prevention, Healthcare Associated Infections Progress Report
Timeliness, effectiveness and quality of care	Stroke care	Percent of ischemic stroke patients who got medicine to break up a blood clot within 3 hours after symptoms started.	4/1/2013 to 3/31/2014	—	10/1/2014 to 9/30/2015	Centers for Medicare and Medicaid Services, Hospital Compare
Timeliness, effectiveness and quality of care	Nursing home pressure sores	Percent of long-stay, high-risk nursing home residents impaired in bed mobility or transfer, comatose, or malnourished with pressure sores.	07/2012 - 03/2013	2013	2014	Centers for Medicare and Medicaid Services, Nursing Home Compare as compiled by the Commonwealth Fund Scorecard on State Health System Performance
Timeliness, effectiveness and quality of care	Patient experience, Medicare fee-for-service	Percent of Medicare fee-for-service patients who had a doctor's office or clinic visit in the last 12 months whose doctor sometimes or never explained things in a way they could understand.	2011	2013	2014	Agency for Healthcare Research and Quality, Center for Quality Improvement and Patient Safety, National Consumer Assessment of Healthcare Providers and Systems Benchmarking Database
Timeliness, effectiveness and quality of care	Patient experience, Medicare managed care	Percent of Medicare managed care patients who had a doctor's office or clinic visit in the last 12 months whose doctor sometimes or never explained things in a way they could understand.	2011	2013	2014	Agency for Healthcare Research and Quality, Center for Quality Improvement and Patient Safety, National Consumer Assessment of Healthcare Providers and Systems Benchmarking Database

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Healthcare system (cont.)</b>						
Timeliness, effectiveness and quality of care	Mortality amenable to healthcare 	Number of deaths before age 75 per 100,000 population that resulted from causes considered at least partially treatable or preventable with timely and appropriate medical care.	2009-2010	2010-2011	2012-2013	Commonwealth Fund Scorecard on State Health System Performance



 Metrics are also examined in the 2017 *Dashboard* health equity profiles.

\*Metric examined in 2017 *Dashboard* equity profiles was:

- Percent of women who completed a pregnancy in the last 12 months and who **did not** receive prenatal care in the first trimester






Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Public health and prevention</b>						
Public health system and workforce	Comprehensiveness of public health system	Percent of population served by a comprehensive public health system, defined as those communities in which a broad array of the recommended public health activities are available in the community, AND in which a relatively broad range of organizations contribute to implementing these activities, AND/OR in which the local public health agency contributes relatively large share of the effort to implement these activities. Data were provided directly from the Systems for Action National Program Office. Ohio data is based upon a sample of 42 local health departments that completed the 2014 survey.	—	—	2014	Systems for Action National Program Office, National Longitudinal Survey of Public Health
Public health system and workforce	Local public health workforce	Median number of local health department FTEs per 100,000 population.	2010	—	2013	National Association of County and City Health Officials
Public health system and workforce	State public health workforce	Number of state public health agency staff FTEs per 100,000 population. Data normalized per 100,000 population. ASTHO data were used to obtain the numerator and the American Community Survey 1-year population estimates for 2011 and 2012 were used for the denominator.	2007	2011	2012	Association of State and Territorial Health Officials
Communicable disease control and environmental health	Chlamydia	Chlamydia rate per 100,000 population.	2013	2014	2015	Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, as compiled by America's Health Rankings
Health Promotion and Prevention	Youth marijuana use	Past-year initiation of marijuana use (used it for the first time), percent of youth ages 12-17	2012	2013	2014	National Survey on Drug Use and Health


Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Public health and prevention (cont.)</b>						
Communicable disease control and environmental health	Foodborne illness monitoring	Proportion of foodborne illness outbreaks reported to Centers for Disease Control and Prevention for which an etiologic agent is confirmed. This metric is included in the National Health Security Preparedness Index. Multiple confirmed/suspected in one food was counted as a single report. So long as it contained at least one confirmed, it was reported as confirmed. Does not include multistate outbreaks.	2013	2014	2015	Centers for Disease Control and Prevention, Foodborne Online Outbreak Database
Communicable disease control and environmental health	Child immunization	Percent of children ages 19 to 35 months who received all recommended vaccines (DTaP, poliovirus, measles, Hib, HepB, varicella, PCV). Data limitation: The primary source for this data is the National Immunization Survey (NIS). The NIS surveys a random sample of households and then, with parent permission, administers a questionnaire to the eligible child's vaccination provider to determine whether a child received the vaccinations recommended by the Advisory Committee on Immunization Practices. The NIS is the best-available source of state-level information about child immunization coverage. However, NIS sample sizes are relatively small and the confidence intervals are relatively large. Results should be interpreted with caution.	2011	2012	2013	National Immunization Survey as compiled by Robert Wood Johnson Foundation DataHub
Emergency preparedness	Emergency preparedness funding	Total per capita funding for state and local health departments' emergency preparedness (Public Health Emergency Preparedness). Data normalized to per capita.	—	—	2016	Centers for Disease Control and Prevention, Office of Public Health Preparedness and Response, and US Census population estimates
Health promotion and prevention	Cigarette tax	State cigarette excise tax rate. Note that Ohio's cigarette tax increased \$0.35 in July 2015 to \$1.60 (after this state data was compiled)	2013	2014	2015	Centers for Disease Control and Prevention, State Tobacco Activities Tracking and Evaluation System, as compiled by Robert Wood Johnson Foundation DataHub
Health promotion and prevention	Tobacco prevention spending	Tobacco prevention and control spending as a percent to the Centers for Disease Control and Prevention-recommended level.	FY 2014	—	FY 2017	American Lung Association, The State of Tobacco Control

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Public health and prevention (cont.)</b>						
Health promotion and prevention	Seat belt use	Percent of front seat occupants using a seat belt.	2013	2014	2015	National Highway Traffic Safety Administration
Health promotion and prevention	Sales of opioid pain relievers	Kilograms of opioid pain relievers sold per 10,000 population, measured in morphine equivalents.	—	—	2010	Drug Enforcement Agency, as compiled by Trust for America's Health
Health promotion and prevention	Falls among older adults	Percent of adults age 65 and older who report having had a fall within the last 12 months.	—	—	2014	Behavioral Risk Factor Surveillance System, as compiled by America's Health Rankings Senior Report
Health promotion and prevention	Safe sleep	Percent of infants most often laid on his or her back to sleep.	2009	—	2011	Centers for Disease Control and Prevention, Pregnancy Risk Assessment Monitoring System
Health promotion and prevention	Low birth weight 	Percent of live births where the infant weighed less than 2,500 grams.	2012	2013	2014	Centers for Disease Control and Prevention, Vital Statistics, National Vital Statistics System, WONDER
Health promotion and prevention	Teen birth rate 	Rate per 1,000 births to females 15-19 years of age	2013	2014	2015	Centers for Disease Control and Prevention, Vital Statistics, National Vital Statistics Reports

 Metrics are also examined in the 2017 *Dashboard* health equity profiles.



Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Social and economic environment</b>						
Education	Preschool enrollment	Percent of 3 and 4 year-olds enrolled in preschool. Kids Count Data Center (secondary source) displays the percent of children NOT enrolled in preschool. Because the metric is the percent of children that ARE enrolled, values were subtracted from 100%.	2010-2012	2011-2013	2012-2014	U.S. Census Bureau, American Community Survey, as compiled by Kids Count Data Center
Education	*Fourth-grade reading 	Percent of fourth graders proficient in reading by a national assessment (NAEP)	2011	2013	2015	U.S. Department of Education, National Assessment of Educational Progress, as compiled by Kids Count Data Center
Education	*High school graduation 	Percent of incoming 9th graders who graduate in 4 years from a public high school with a regular degree (using the Adjusted Cohort Graduation Rate)	2012-2013	2013-2014	2014-2015	Institute of Education Sciences, National Center for Education Statistics
Education	Some college	Percent of adults ages 25-44 with some post-secondary education	2012	2013	2014	U.S. Census Bureau, American Community Survey, as compiled by County Health Rankings 2016 edition
Employment and Poverty	Income inequality	The ratio of median household income at the 80th percentile to that at the 20th percentile.	—	—	2014	U.S. Census Bureau, American Community Survey, as compiled by America's Health Rankings 2015 edition
Employment and poverty	Unemployment 	Annual average unemployment rate, ages 16 and older	2013	2014	2015	Bureau of Labor Statistics
Employment and poverty	Labor force participation rate	The labor force participation rate represents the percentage of the non-institutionalized population ages 16 and older that is either employed (full- or part-time) or unemployed (i.e., actively seeking work and able to work). People who are not in the labor force do not have jobs and are not actively looking for work, including, for example, students, retirees, and individuals with family responsibilities that keep them from working (e.g. stay-at-home parents and other familial caregivers).	2013	2014	2015	Bureau of Labor Statistics
Employment and poverty	Child poverty 	Percent of persons under age 18 who live in households at or below the poverty threshold ( $\leq 100\%$ FPG)	2013	2014	2015	U.S. Census Bureau, American Community Survey, poverty status in the past 12 months
Employment and poverty	Adult poverty 	Percent of persons age 18+ who live in households at or below the poverty threshold ( $\leq 100\%$ FPG)	2013	2014	2015	U.S. Census Bureau, American Community Survey, poverty status in the past 12 months



Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Social and economic environment (cont.)</b>						
Family and social support	Low-income working families with children	The share of families that met three criteria: (1) the family income was less than twice the federal poverty level; (2) at least one parent worked 50 or more weeks during the previous year; (3) there was at least one "own child" under age 18 in the family.	2012	2013	2014	U.S. Census Bureau American Community Survey, as compiled by Kids Count Data Center
Family and social support	Adult incarceration	Imprisonment rate of sentenced prisoners under the jurisdiction of state or federal correctional authorities, per 100,000 residents.	2012	2013	2014	U.S. Bureau of Justice Statistics
Family and social support	Social capital and cohesion	Composite measure that includes connections with neighbors, supportive neighborhoods, voter turnout, and volunteerism	2013	2014	2015	National Health Security Preparedness Index
Trauma, toxic stress and violence	Child abuse and neglect	Rate of child maltreatment victims per 1,000 children in population	2012	2013	2014	Administration for Children and Families
Trauma, toxic stress and violence	Adverse childhood experiences 	Percent of children who have experienced two or more adverse experiences, such as death of a parent, parent served time in jail, witness to domestic violence, or lived with someone with a drug or alcohol problem	—	—	2011-2012	National Survey of Children's Health
Trauma, toxic stress and violence	Violent crime	Violent crime rate per 100,000 inhabitants (murders, rapes, robberies, and aggravated assaults)	2011	2012	2013	National Incident-Based Reporting System/Uniform Crime Reporting, Federal Bureau of Investigation as compiled by America's Health Rankings 2015 edition

 Metrics are also examined in the 2017 *Dashboard* health equity profiles.

\* Metrics examined in 2017 *Dashboard* equity profiles were:

- Percent of fourth graders **not** proficient in reading by a national assessment
- Percent of incoming ninth graders who **did not** graduate in four years from a public high school with a regular degree

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Physical environment</b>						
Air, water and toxic substances	Outdoor air quality	Average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.5)	2010 - 2012	2011-2013	2012 - 2014	U.S. Environmental Protection Agency, as compiled by America's Health Rankings 2015 edition
Air, water and toxic substances	Children exposed to second-hand smoke =	Percent of children who live in a home where someone uses tobacco and smokes inside the home	2007	—	2011-2012	National Survey of Children's Health
Air, water and toxic substances	Safe drinking water	Percent of population exposed to water exceeding a violation limit during the past year	FY 2012-2013	—	FY 2013-2014	US EPA Safe Drinking Water Information System, as compiled by County Health Rankings
Air, water and toxic substances	Fluoridated water	Percent of the population served by a community water system with optimally fluoridated water	2010	2012	2014	Centers for Disease Control and Prevention, Water Fluoridation Reporting System
Air, water and toxic substances	Toxic pollutants	Total pounds of toxic chemicals released into the environment per capita (total on-site disposal or other releases for all industries and all chemicals). The Toxic Release Inventory (TRI) includes information about releases of toxic chemicals from facilities (including air, water, land on-site, and deepwell injection) but does not reveal whether or to what degree the public is exposed to these chemicals. For this dashboard, the total pounds of chemicals released in each state from the TRI database were applied to the total population size of each state to calculate a per capita amount. The numerator is from EPA, reported total on-site disposal or other releases. Denominator from American Community Survey 2011/2012 1-year population estimates.	2012	2013	2014	U.S. Environmental Protection Agency, Toxic Release Inventory; and American Community Survey
Air, water and toxic substances	Lead poisoning	Percent of young children with elevated blood lead levels (BLL > 5 ug/dL)	2012	2013	2014	Ohio Department of Health, Lead Test Results (Venous), 2010-2014, as compiled by the Kirwan Institute.
Food access and food insecurity	Healthy food access	Percent of population with limited access to healthy food, defined as the percent of low-income individuals (<200% FPG) living more than 10 miles from a grocery store in rural areas and more than 1 mile in non-rural areas	—	—	2011	U.S. Department of Agriculture, Food Environment Atlas, as compiled by County Health Rankings 2016 edition
Food access and food insecurity	Food insecurity	Percent of households that are food insecure	2011-2013	2012-2014	2013-2015	U.S. Census Bureau, Current Population Survey

Subdomain	Metric	Metric Description	Base year	Mid-year	Most recent year	Source
<b>Physical environment (cont.)</b>						
Housing, built environment and access to physical activity	Severe housing problems	Percent of households that have one or more of the following problems: 1) housing unit lacks complete kitchen facilities; 2) housing unit lacks complete plumbing facilities, 3) household is severely overcrowded, 4) monthly housing costs, including utilities, that exceed 50% of monthly income	2006-2010	2007-2011	2008-2012	U.S. Department of Housing and Urban Development, as compiled by County Health Rankings 2016 edition
Housing, built environment and access to physical activity	Access to exercise opportunities	Percent of individuals in who live reasonably close to a location for physical activity, defined as parks or recreational facilities	2010 & 2012	2010 & 2013	2010 & 2014	Business Analyst, Delorme map data, ESRI, & U.S. Census Tigerline Files, as compiled by County Health Rankings 2016 edition
Housing, built environment and access to physical activity	Alternative commute modes	Percent of trips to work via bicycle, walking, or mass transit (combined)	2013	2014	2015	U.S. Census Bureau, American Community Survey
Housing, built environment and access to physical activity	Neighborhood safety 	Percent of parents who report their children are living in a safe neighborhood	2003	2007	2011-2012	National Survey of Children's Health
Housing, built environment and access to physical activity	Safe Routes to School programs	Percent of K-8 public district schools with a completed school travel plan as of September 2014 (cumulative total). The number of schools with a completed school travel plan (numerator) was reported directly from the Ohio Department of Transportation and divided by the number of K-8 regular public school (1,560) from the Common Core Data Institute of Education Sciences.	—	—	2016	Ohio Department of Transportation (numerator) and Common Core Data Institute of Education Sciences (denominator)
Housing, built environment and access to physical activity	Bike and pedestrian infrastructure	Per capita federal transportation funding obligated to bike and/or pedestrian projects (Average annual spending per capita on bike/ped projects, FY 2006-08, 2009-11, 2012-14)	2006-2008	2009-2011	2012-14	Alliance for Biking and Walking 2016 Benchmarking Report
Housing, built environment and access to physical activity	Residential segregation 	Black-White dissimilarity index for Ohio's biggest metro areas (Columbus, Cleveland, Cincinnati, Toledo, Akron, Dayton)	—	—	2010-2014	U.S. Census Bureau, American Community Survey, as compiled by the Kirwan Institute

 Metrics are also examined in the 2017 *Dashboard* health equity profiles.

# Acknowledgments

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# Health Sector Trend Report

June 2018

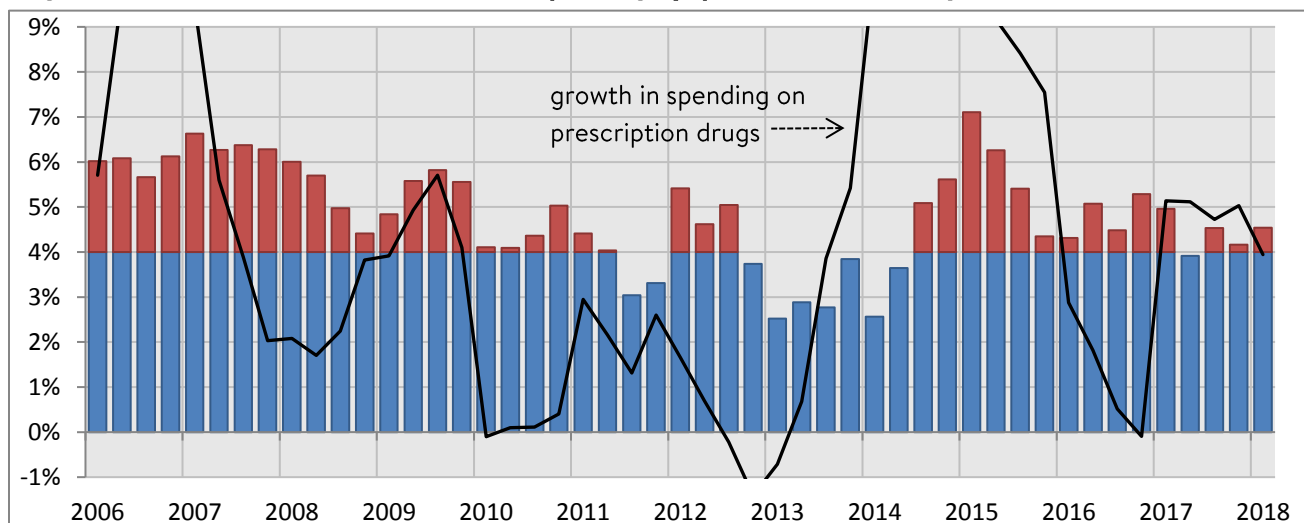
This quarterly report examines current trends in U.S. health care spending, prices, utilization, and employment. The report builds on Altarum’s monthly [Health Sector Economic Indicators<sup>SM</sup> \(HSEI\)](#), and incorporates just-released data from the U.S. Census Bureau’s [Quarterly Services Survey \(QSS\)](#), as reflected in the Bureau of Economic Analysis spending data that are a primary source for our HSEI spending estimates. Current quarter trends are highlighted first, followed by a look at trends in a broader historical context from 2006 through the most recent quarter.

## Summary of Current Quarter Trends: Q1 2018

1. **The rate of growth in U.S. health spending increased to 4.8% in Q1 2018, compared to 4.6% growth in 2017 and 4.3% growth in 2016.**

- ▲ HSEI estimates show year-over-year national health spending growth at 4.8% for Q1 2018.
- ▲ Spending on health care services, which represent more than 70% of health spending, grew by 4.5% in Q1 2018, close to the 2017 annual rate of 4.4%.
- ▲ Prescription drug spending, a much smaller but more volatile component of health spending, grew by 3.9% in Q1 2018, down from 5.0% in 2017 (see the black line on Figure S-1). As discussed in our [March 2018 Trend Report](#), the 2017 and 2018 growth rates do not reflect drug manufacturer rebates, and it seems likely that the 2017 growth rate will be revised downward when CMS releases their official estimates in December.<sup>1</sup>
- ▲ These spending growth rates reflect price and utilization growth, which are examined separately in much of the discussion that follows.

**Figure S-1: Growth in health care services spending by quarter, 2006 through Q1 2018**



Source: Altarum Center for Value in Health Care. Growth above 4% is highlighted in red.

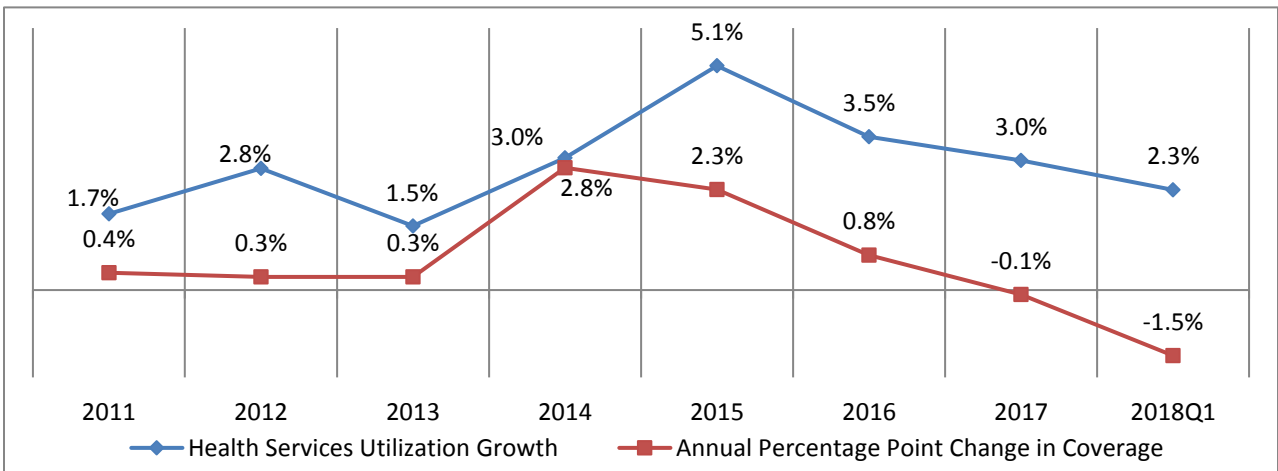
*Support for this report was provided by a grant from the Robert Wood Johnson Foundation.*

<sup>1</sup> The CMS figures are adjusted for rebates. Another reason to expect a lower growth rate is [IQVIA data](#) showing that sales of prescription drugs to retail pharmacies by wholesalers actually declined in 2017.

## 2. Growth in health care utilization declined to 2.3% in Q1 2018, while health insurance coverage fell.

- ▲ Based on the patterns of growth in insurance coverage and health services utilization (Figure S-2), expanded coverage in 2014 and 2015 drove higher growth in health services utilization, but the impact occurred with a lag and was spread over time. While the largest gain in coverage was in 2014, utilization growth peaked in 2015.
- ▲ The growth in health care coverage tapered off from 2014 through 2017, and some of the gains have begun to reverse, with coverage dropping by 1.5% in Q1 2018.
- ▲ Utilization growth continues to slow, and we anticipate further declines. The Q1 2018 growth rate of 2.3% is well below the 2015 peak of 5.1%, but is still higher than the average 2.0% growth seen in the years leading up to expanded coverage, suggesting that some lagged effects of coverage expansion remain.
- ▲ With the decline in coverage seen in Q1 2018, we anticipate that the growth in health services utilization will continue to decline in 2018, potentially falling below 2%.

**Figure S-2: Growth in health services utilization and change in health insurance coverage**

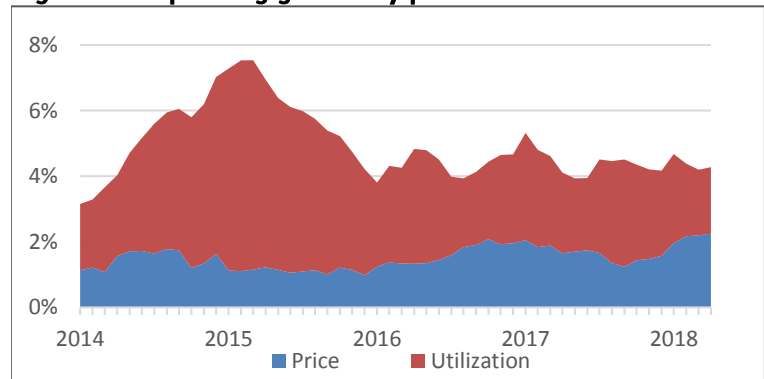


Source: Altarum Center for Value in Health Care. Utilization is measured implicitly from HSEI spending and prices. Change in coverage from CPS ASEC, NHIS for 2017, and Commonwealth Fund ACA Tracking Survey for Q1 2018.

## 3. Health care price growth has been accelerating since Q4 2017, and climbed above 2% in Q1 2018.

- ▲ The April 2018 Health Care Price Index reading of 2.3% annual growth is the highest since January 2012.
- ▲ While health care utilization growth was the primary driver of spending growth in the period of coverage expansion, price growth now accounts for about half of spending growth (Figure S-3).

**Figure S-3: Spending growth by price and utilization**



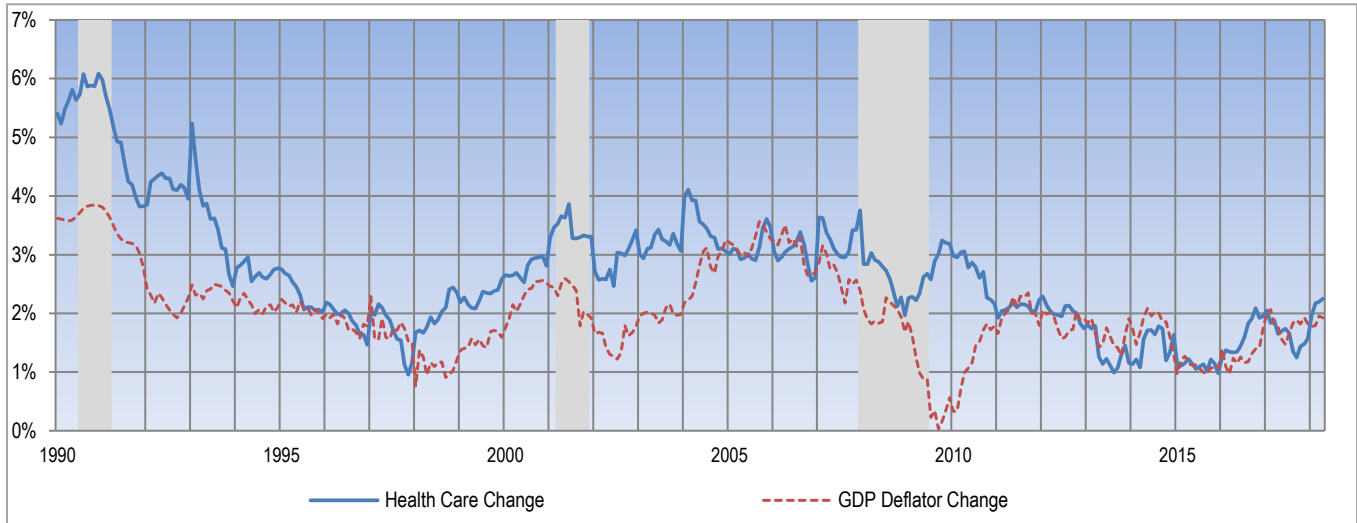
Source: Altarum HSEI Price Brief underlying data



4. *In addition to an acceleration in price growth, Q1 2018 also shows a return to health care price growth above economy-wide inflation (Figure S-4).*

- ▲ A return to health care price growth outpacing overall inflation, and the potential for a return to the health care price growth of 3-4% seen before the Great Recession are both cause for concern in efforts to contain health care spending growth.

**Figure S-4: Twelve-Month Growth Rates in the Health Care Price Index & GDP Deflator**

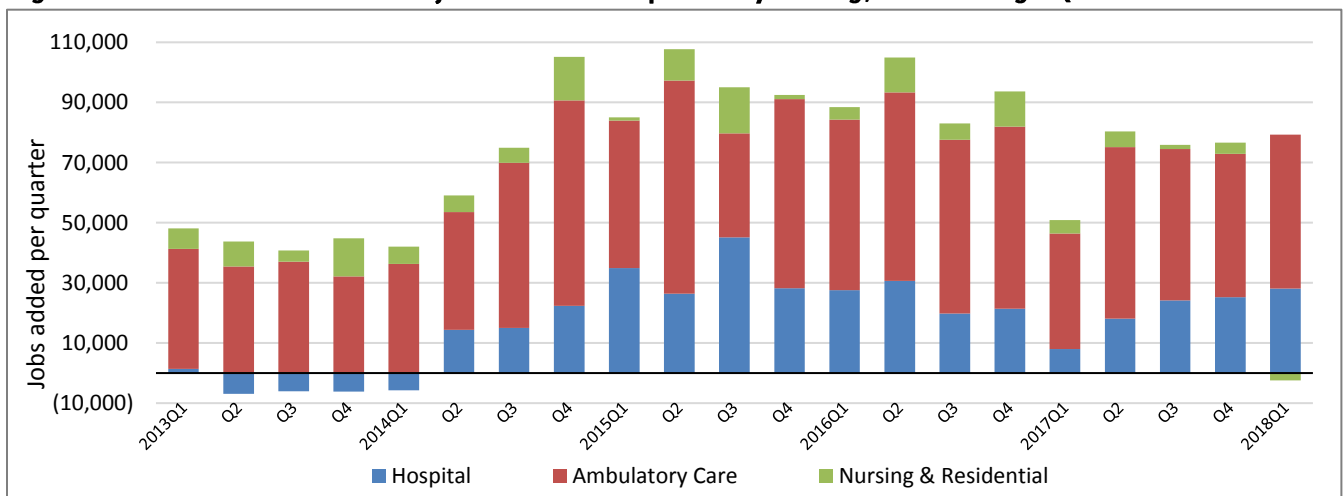


Source: Altarum Health Sector Economic Indicators

5. *The number of health care jobs added by quarter has moderated since the acceleration in hiring in 2015 and 2016, but has remained remarkably steady through Q1 2018.*

- ▲ In each of the past four quarters, the health sector added about 77,000 new jobs, down from the average of 94,000 jobs added per quarter in 2015 and 2016, but still showed solid growth (Figure S-5).
- ▲ On a year-over-year basis, health job growth dropped below 1% in early 2014, peaked at 2.7% in mid- to late 2015, and has stabilized around 2.0% in 2017 and early 2018 (data not shown).

**Figure S-5: Number of health care jobs added each quarter by setting, 2013 through Q1 2018**

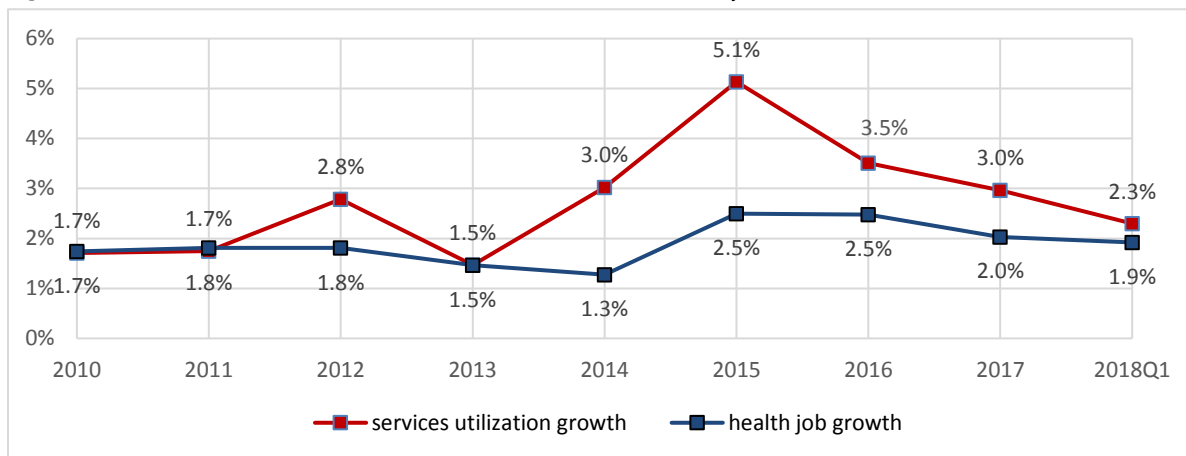


Source: Altarum Health Sector Economic Indicators underlying data

6. *The acceleration in health care utilization during expanded coverage was stronger than the acceleration in health care job growth, but growth rates appear to be coming back into alignment.*

- ▲ Health care jobs grew at a slower pace than health care utilization during coverage expansion, growing at half the pace (2.5% versus 5.1%) during the peak year of 2015 (Figure S-6).
- ▲ Faster utilization growth suggests an increase in productivity (more services utilization per job) that appears to be leveling off as both utilization growth and job growth converge around 2%.

**Figure S-6: Growth in health services utilization and health jobs**



7. *Observations*

A decade after the start of the Great Recession and four years after the start of ACA coverage expansion, we are watching to see where health spending growth will stabilize before the next major disruption. In a full employment economy, will cost control pressures remain or will spending growth drift back to the 6-8% rates seen in the 2000s? Will rising economy-wide inflation or health care price growth be the driver? Our estimates provide an early window into answering these questions. Health spending growth remains below 5% through the first quarter of 2018, with services growth at 4.5% and drug spending growth down to 3.9%. Coverage declines are still modest. This is good news, at least in the short run. In the long run, [our work](#) and that of others have shown that we need to target health spending growth at or below the historically low rates of around 4% seen just prior to coverage expansion to stabilize the health share of the economy and [prevent health spending from crowding out our remaining discretionary spending](#) as more of the population ages into Medicare and retirement.

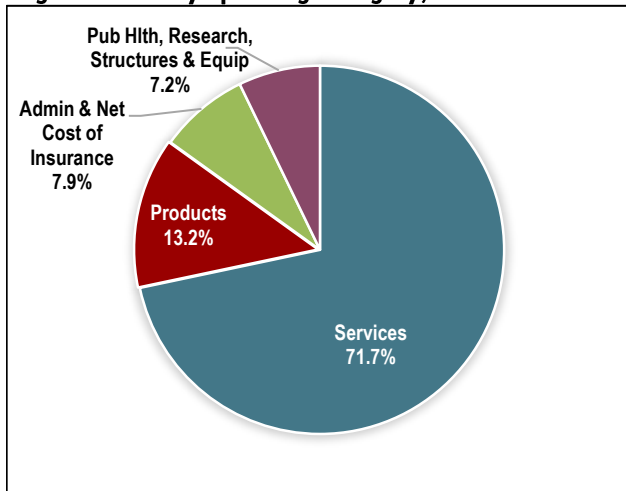
This report was authored by Ani Turner, [ani.turner@altarum.org](mailto:ani.turner@altarum.org), with assistance from Charles Roehrig, Corwin Rhyan, Paul Hughes-Cromwick, and George Miller. All are with Altarum’s Center for Value in Health Care. The estimates of health spending, prices, and labor in this report are derived from Altarum’s monthly [Health Sector Economic Indicators<sup>SM</sup> \(HSEI\)](#) data. HSEI spending estimates are constructed to be consistent with national health expenditures as defined in the National Health Expenditure Accounts (NHEA) maintained by the Centers for Medicare & Medicaid Services (CMS). HSEI spending and price data through 2016 are benchmarked to the most recent official annual estimates by CMS; HSEI data for 2017 and 2018 represent our best estimates of monthly NHE and monthly price growth, using methods described in the HSEI releases. HSEI labor estimates are based on Bureau of Labor Statistics Current Employment Survey data. All growth rates are year-over-year unless otherwise indicated.

## Trends in a Broader Historical Context: 2006 through Q1 2018

### I. Distribution of National Health Expenditures

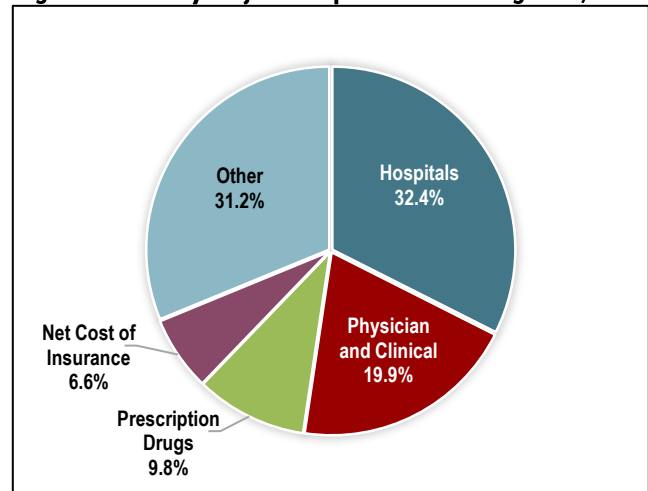
To gain an understanding of trends and growth in health spending, it is useful to have a picture of the major components of national health expenditures (NHE) and their relative proportions. We present this information as background by using National Health Expenditure Account (NHEA) data from the Centers for Medicare & Medicaid Services (CMS) Office of the Actuary for 2016. Figure 1 breaks down NHE into the major spending categories. Health care products (goods) and services accounted for about 85% of NHE in 2016, with services alone accounting for 71.7%. Administration and net costs of insurance made up 7.9% of NHE.<sup>2</sup> Public health, medical research, and investments in structures and equipment made up the remaining 7.2%.

**Figure 1: NHE by Spending Category, 2016**



Source: CMS Office of the Actuary

**Figure 2: NHE by Major Components of Categories, 2016**



Source: CMS Office of the Actuary

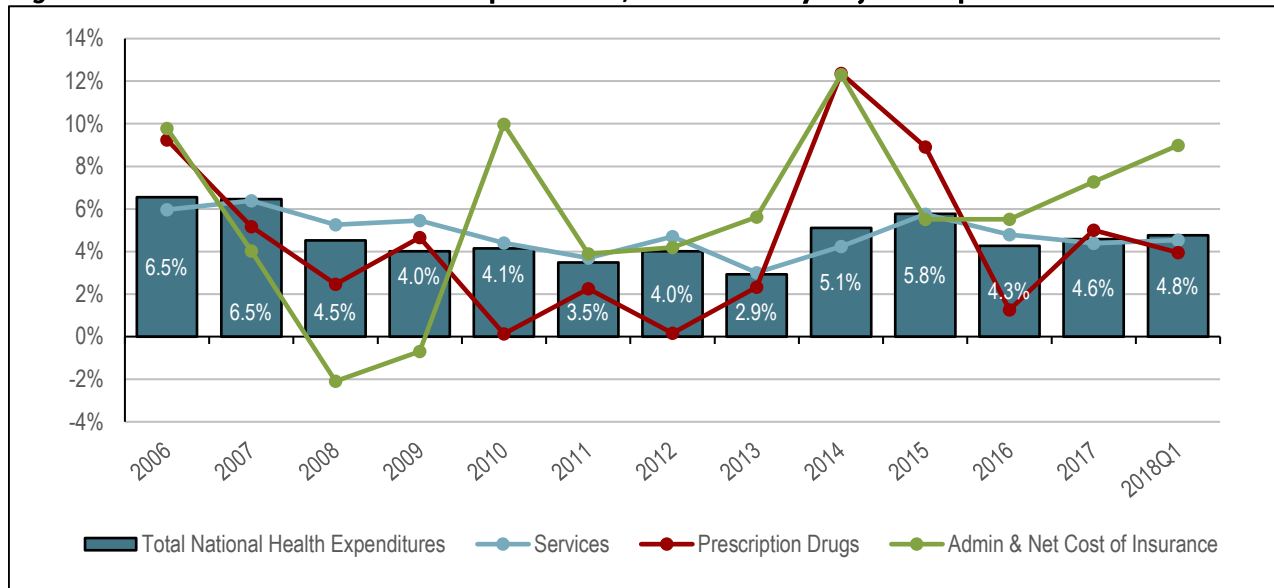
Figure 2 presents another way to divide NHE, identifying the largest components of the major spending categories. The largest components of health care services are hospitals and physicians, which together account for more than half (52.3%) of NHE. Health care products are dominated by prescription drugs (9.8% out of 13.2%), and the net cost of insurance accounts for most of the administrative and net costs of insurance category (6.6% out of 7.9%). Taken together, these 4 components—hospitals, physician and clinical services, prescription drugs, and the net cost of insurance—make up more than two-thirds of NHE (68.8%).

<sup>2</sup> Per CMS, “Government administration and the net cost of health insurance includes the administrative cost of running various government health care programs, and the difference between premiums earned by insurers and the claims or losses incurred for which insurers become liable.”

## II. Growth in NHE with Selected Components

The bars in Figure 3 show the annual growth rates in NHE from 2006 through Q1 2018. During 2006 and 2007, the years immediately preceding the recession, the growth rate exceeded 6%. In 2009, the last year of the recession, the rate dropped to 4% and remained close to 4% through 2012. The annual growth rate dipped further in 2013 to the all-time low of 2.9%.<sup>3</sup> Growth then accelerated to 5.1% in 2014 and 5.8% in 2015. Quarterly data for 2015 (not shown) reveal that growth peaked in Q1 at 7.1% and declined steadily to a rate of 4.5% in Q4. This downward trend bottomed out at 4.3% in 2016, rising to 4.6% in 2017 and 4.8% by Q1 2018, although 2017 and 2018 growth rates do not yet account for changes in prescription drug rebates and may, as we anticipate, be revised lower.

**Figure 3: Growth in National Health Expenditures, Overall and by Major Components**



Source: Altarum Center for Value in Health Care

Figure 3 also displays the growth rates over this period for health care services, prescription drugs, and the cost of insurance, which together account for about 89% of NHE. While health care services constitute the largest component by far, and drive most of the movement in overall health expenditure growth, the volatility of spending on prescription drugs and the cost of insurance gives these two smaller components a disproportionate impact on NHE growth rates.

The increases in NHE during 2014 and 2015 were partially a result of expanded coverage under the Patient Protection and Affordable Care Act (ACA). The growth rate for services was 5.8% in 2015, well above the 2010-2012 average of 4.3%. Improved access to both public and private health insurance increased utilization over this period and drove up overall spending. Expanded coverage also had impacts on prescription drug spending and the cost of insurance. After a large spike in prescription drug spending in 2014 resulting, in part, from the introduction of the costly hepatitis C specialty drugs, growth remained high in 2015 due to lingering impacts of expanded coverage. The jump in growth

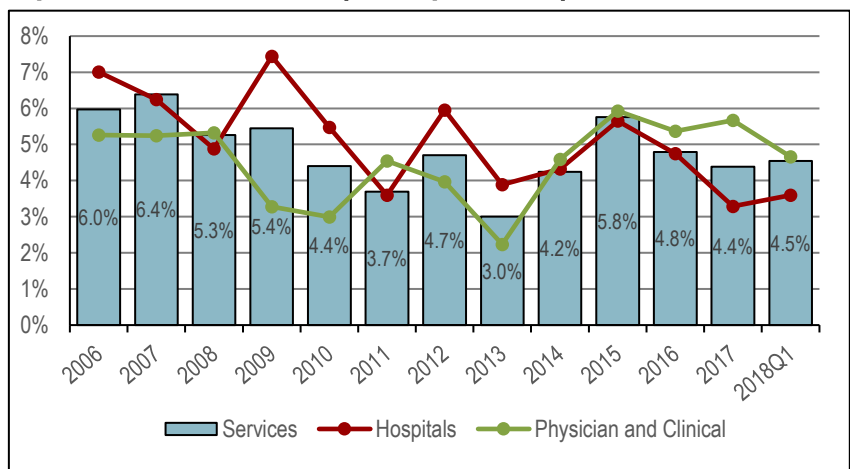
<sup>3</sup> Price inflation for the U.S. economy, as measured by the gross domestic product deflator, averaged 3.1% for 2005–2007 and 1.5% for 2009–2013, a drop of 1.6 percentage points. Thus, nearly 60% of the roughly 2.7-percentage-point decline in the health spending growth rate pre- and post-recession can be attributed to lower overall price inflation. See Charles Roehrig's [Health Affairs blog](#) for a detailed breakdown of the post-recession spending slowdown. The recession began in December 2007 and ended in June 2009.

rates in administration and the net cost of insurance in 2014 is due partly to expanded coverage and partly to higher enrollment of Medicaid beneficiaries into managed care. In fee-for-service Medicaid, the cost of insurance is limited to government administrative costs. When beneficiaries transition to managed care, the net cost of insurance jumps as Medicaid Health Maintenance Organizations (HMOs) collect more in premiums than they pay out in benefits while government administrative costs are largely unaffected.

The slowdown in health spending growth after 2015 is indicative of the [slowing expanded coverage from the ACA](#). Spending growth for health care services slowed from 5.8% to 4.8% between 2015 and 2016. In 2017, it dropped to 4.4%, close to its rate for 2010 through 2012. Growth in prescription drug spending slowed to 1.3% in 2016 but jumped to 5.0% in 2017. The 2016 figure is adjusted for rebates, but the 2017 and Q1 2018 figures are not, and a downward revision to at least 2017 growth is likely once rebates are considered.<sup>4</sup>

Figure 4 compares the growth rate in health care services spending to the growth rates of its two largest components: hospitals and physicians. During the years shown prior to coverage expansion (2006-2013), the average growth rate in hospital spending (5.6%) was substantially higher than the average growth rate for physician spending (4.1%). However, since coverage expansion began in 2014, physician spending has averaged 5.3% growth compared to 4.4% for hospitals. Thus, expansion appears to have affected physician spending more than hospital spending. As discussed in the next section, price growth during the coverage expansion period has been quite modest, suggesting that the growth seen in services spending has mostly been the result of utilization growth.

**Figure 4: Health Services Spending and Component Growth**



Source: Altarum Center for Value in Health Care

### III. The Role of Health Care Prices in Spending Growth

Total spending on health care can be represented by the familiar economic formula of  $P \times Q$ , where  $P$  represents the price paid for the product or service and  $Q$  represents the quantity purchased.<sup>5</sup> The percentage growth in  $P \times Q$  is well-approximated by the percentage growth in  $P$  plus the percentage growth in  $Q$ .<sup>6</sup> This means that the difference

<sup>4</sup> One piece of evidence pointing to a likely downward revision to the prescription drug growth rate for 2017 is [IQVIA data](#) showing that sales of prescription drugs to retail pharmacies by wholesalers actually declined in 2017.

<sup>5</sup> It is well known that in health care, the price charged often bears little resemblance to the price actually paid, thanks to negotiated contracts that supersede list prices (charges). To address this problem, the Bureau of Labor Statistics (BLS) price indexes that Altarum uses are based on “transaction” prices (the agreed-upon payment) rather than charges. For prescription drugs, these transaction prices do not reflect rebates, which are a separate payment directly from the manufacturer.

<sup>6</sup> To be precise, the growth in  $P \times Q$  is equal to the growth in  $P$  plus the growth in  $Q$  plus the product of the growth rates. When growth rates are small, the product is negligible and the approximation is quite accurate.

between the growth rates in spending and prices is an indicator of the growth rate in the quantity of care consumed or, using the more familiar term, health care utilization.

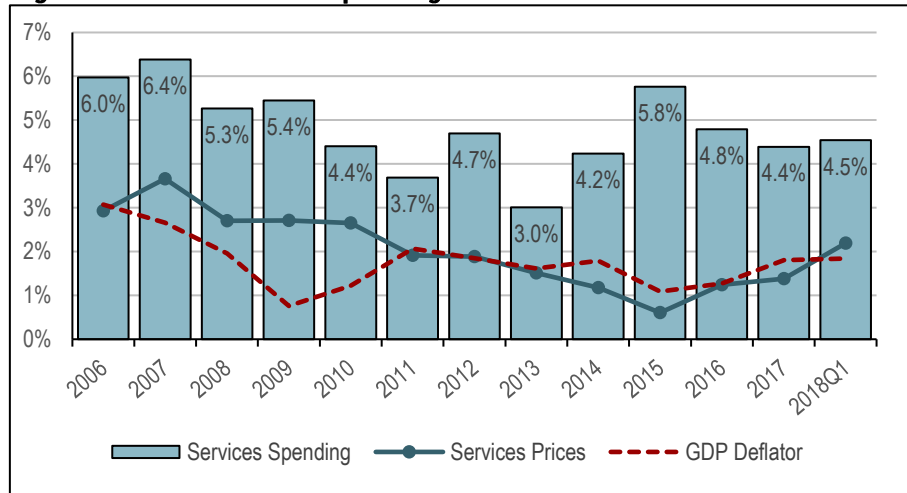
Figure 5 plots the growth rate in spending on health care services along with the growth in prices for those services.<sup>7</sup> For the pre-recession years of 2006 and 2007, the growth rate for spending on services averaged 6.2%, with 3.3% attributable to prices and 2.9% to utilization.

Post-recession, from 2009 to 2013, growth in spending on services averaged 4.2%, with prices and utilization each accounting for 2.1%. Spending growth peaked at 5.8% in 2015 with prices contributing only 0.6%. Thus, utilization growth accelerated to 5.1% in 2015. This is the expected impact of expanded coverage as the newly insured use more care. For 2016 and 2017, spending growth averaged 4.6% with prices contributing 1.3%. Thus, utilization growth fell back to 3.3% as coverage expansion leveled off. In Q1 2018, utilization growth fell further to 2.3% while price growth rose to 2.2% to play a nearly equal role in spending growth.

The growth in prices for health care services is determined primarily by prices for hospital and physician services, each plotted in Figure 6. Comparing pre-recession 2006–2007 with post-recession (and pre-expanded coverage) 2009–2014, average annual hospital price growth dropped from 3.9% to 2.3%; for physician services, there was a decline from 2.5% to 1.3%. From 2015 through 2017, hospital prices grew slowly. Physician prices actually decreased throughout 2015,

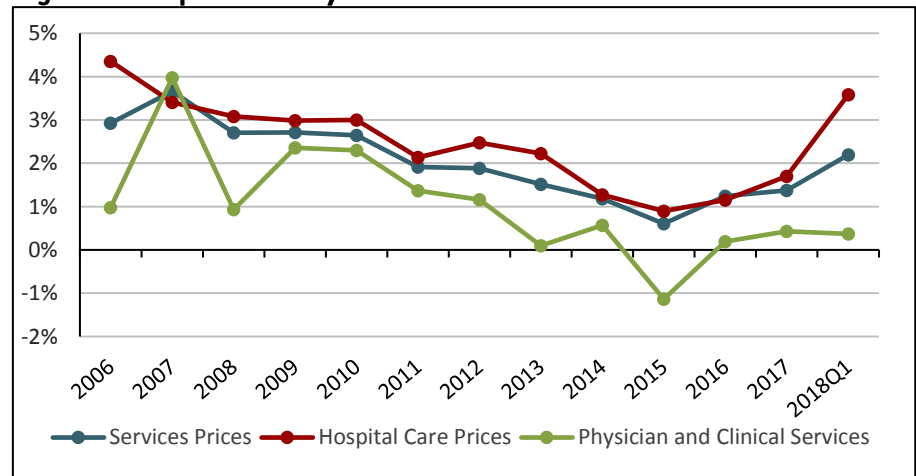
returning to 0.2% average growth in 2016. This swing accounts for some of the change in physician and clinical spending observed in Figure 4. The negative physician price growth observed in 2015, followed by the return to positive growth in 2016 reflects the 2015 discontinuation of enhanced primary care payments for Medicaid providers

**Figure 5: Health Services Spending and Price Growth**



Source: Altarum Center for Value in Health Care

**Figure 6: Hospital and Physician Price Growth**



Source: Altarum Center for Value in Health Care

<sup>7</sup> Price growth is based on a health services price index constructed from the health care price index data obtained from CMS. Deflating by this measure gives an implicit measure of utilization.



under the ACA. In Q1 2018, physician price growth remains low, but hospital price growth appears to be accelerating, particularly under Medicare, for reasons that are not yet fully understood.

Figure 7 plots rates of growth in spending and prices for prescription drugs. Medicare Part D prescription drug coverage began in 2006; thus, the high rate of growth in prescription drug spending in that year is an outlier. After 2006, the rate of growth in drug

spending ranged from about 5% to nearly 0%, but was well-controlled in a historic context until 2014, when the rate jumped to 12.4%, driven primarily by new specialty drugs. This high rate of spending growth trended down in 2015, dropped precipitously to 1.3% in 2016, and rebounded to 5% in 2017. The rebound in spending growth in 2017 may be revised downward once rebates are incorporated and appears to be moderating in 2018 at 3.9% growth in Q1.

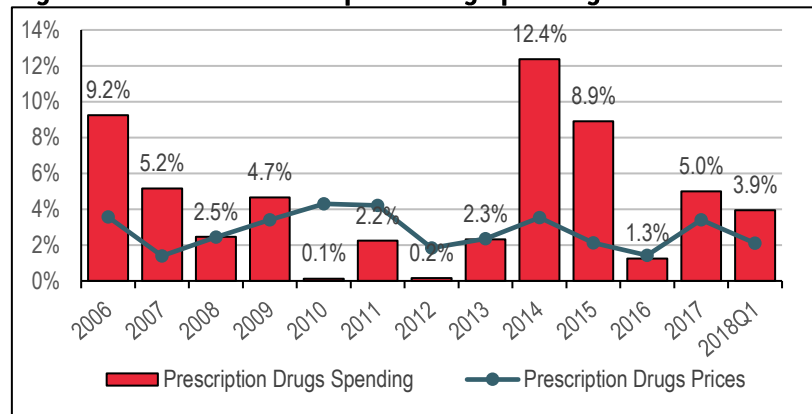
The pattern of growth in drug prices has been less volatile than drug spending, suggesting that the rapid spending growth in 2006, 2014, and 2015 was driven by utilization. This is, of course, what would be expected from the expanded coverage that occurred in each of these years. Price growth through 2016 is based upon the BLS prescription drug CPI with CMS adjustments for rebates and patent cliffs. No adjustments have been applied to the 2017 or 2018 growth rates and, as with spending growth, a downward adjustment for at least 2017 seems likely once rebates have been incorporated into the official spending data.

#### IV. Health Care Services Jobs and Productivity

The health care services industry is a major employer, accounting for more than 15 million jobs, about 10.8% of all U.S. jobs (an all-time high).<sup>8</sup> Interestingly, the distribution of jobs across types of services is quite different from the distribution of spending on types of services (Figure 8). For example, while hospitals account for 45% of health services spending, their share of health services jobs is only 32%. Similarly, physicians account for 28% of spending but only 16% of jobs. The remaining services, including nursing homes, home health, dentists, and other ambulatory services, account for more than half of all jobs but only 27% of spending.

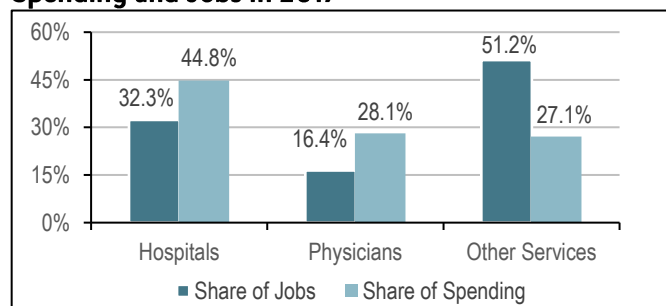
There are various reasons for these large differences in the distribution of jobs and of spending. In the case of physician services, a key factor is that the job totals do not include unincorporated self-employed individuals, and many physicians fit into this category. More broadly, there are differences in the mix of occupations and salaries, and

**Figure 7: Growth in Prescription Drug Spending and Prices**



Source: Altarum Center for Value in Health Care

**Figure 8: Comparison of Distribution of Health Services Spending and Jobs in 2017**

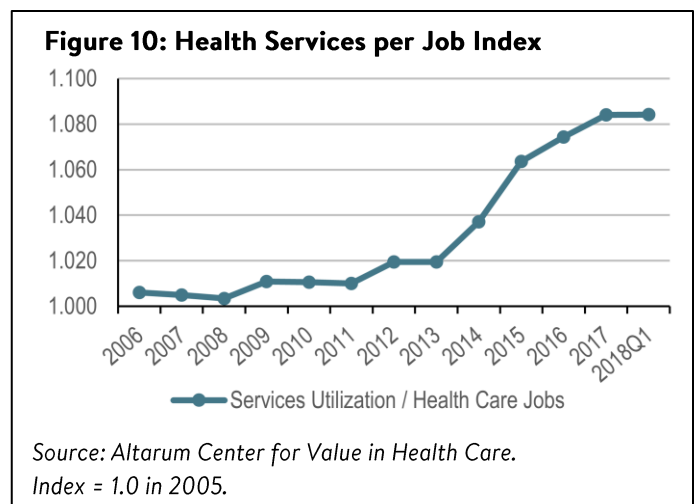
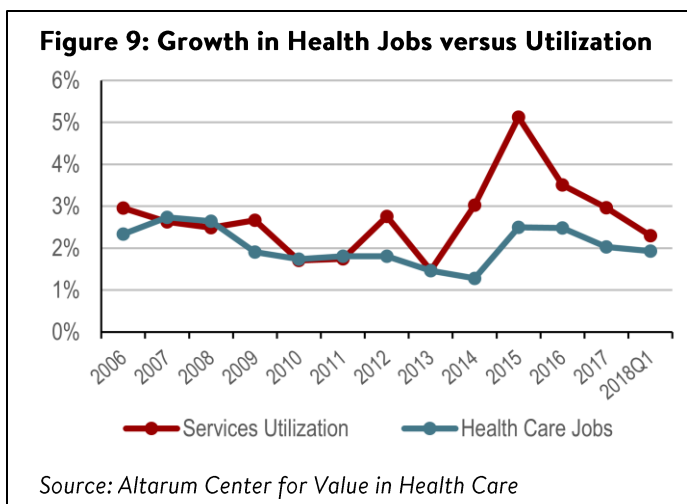


Source: Altarum Center for Value in Health Care

<sup>8</sup> Labor data used in this report come from the BLS Current Employment Statistics monthly survey.

in the amount of nonlabor costs, associated with different categories of services.<sup>9</sup> For example, the nonlabor share of hospital costs is about 48%, but for nursing homes, it is 38%.<sup>10</sup>

If the method of producing health care services remained constant over time, the rate of growth in health services jobs would equal the growth in the utilization of such services. As noted earlier, the rate of growth in services utilization can be approximated by subtracting the rate of growth in prices from the rate of growth in spending.<sup>11</sup> Figure 9 compares growth rates for jobs and utilization from 2006 through Q1 2018. The growth rates are similar through 2013, apart from a small bump in utilization growth in 2012. In 2014, utilization growth jumped well above job growth, with the gap peaking in 2015 and then declining in 2016, 2017, and early 2018. The difference between the utilization and job growth is a rough measure of productivity, in the sense that it represents the percentage change in services produced per job. By this measure, productivity has increased since 2005, with services per job up by 8.4% as of Q1 2018 (Figure 10). (Utilization growth in 2014 and 2015 may be somewhat overstated due to [reductions in uncompensated care](#), which causes spending to rise faster than  $P \times Q$ .) When observed over a longer time horizon, this rough productivity measure was relatively flat in the 1990s, grew slowly prior to the 2008 recession and then moderated until the spike in 2014 and 2015, as shown in Figure 10. Health services per job appear to be leveling off as both grow at a rate of about 2% year over year.



<sup>9</sup> “Nonlabor costs” refers to costs not associated with employment.

<sup>10</sup> Turner, A., & Hughes-Cromwick, P. (2013, February). Connecting U.S. health expenditures with the health sector workforce. *Business Economics*, 48(1), 42–57.

<sup>11</sup> More precisely, the formula is spending growth minus price growth, divided by the sum of 1 and the price growth.





# PROJECTIONS OF THE PRESCRIPTION DRUG SHARE OF NATIONAL HEALTH EXPENDITURES INCLUDING NON-RETAIL

Charles Roehrig

May 2018



SOLUTIONS THAT MATTER. HEALTH CARE THAT WORKS.

# Table of Contents

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BACKGROUND	1
FINDINGS	2
DISCUSSION	3
APPENDIX: DATA AND METHODS	7

## Acknowledgments

This study was funded by the Pharmaceutical Research and Manufacturers of America. The author thanks Michael Kleinrock, Saamil Pandya, and Peter Arno for helpful discussions.



# Background

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Each year the Centers for Medicare & Medicaid Services (CMS) releases a ten year projection of national health expenditures (NHE) that includes the prescription drug component. In these data, prescription drug spending refers to what was paid at retail for the drugs, net of manufacturer rebates. There is also substantial “non-retail” spending on prescription drugs that is included in the CMS data, but not separately identifiable. This consists of prescription drugs that are administered as a part of a physician visit, or during a hospital or nursing home stay. The cost of these drugs is built into the charge for the visit or stay and shows up in the CMS data as spending on physician, hospital, and nursing home services.

The most recent CMS projection was released in February 2018 and covers 2017 through 2026. This data brief augments the CMS projection with an estimate of non-retail prescription drug spending to form a projection of total (retail plus non-retail) spending as a share of NHE. This represents the fourth time we have added a non-retail component to the CMS projection.<sup>1</sup> The primary data source for the non-retail estimates is the annual IQVIA (formerly IMS) report on Medicines Use and Spending in the U.S. The IQVIA report provides annual data on the dollar value of wholesaler revenues from sales of prescription drugs to retail outlets and to non-retail institutions (hospitals, physician offices, etc.).

Our approach to estimating the non-retail component has been modified to incorporate newly available data from IQVIA on rebates and other off-invoice discounts for both retail and non-retail segments as well as some clarification on what is included in the CMS spending figures. Details are provide in the appendix.

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<sup>1</sup> Previous projections were published in October 2014, August 2015, and May 2017, and can be found [here](#).

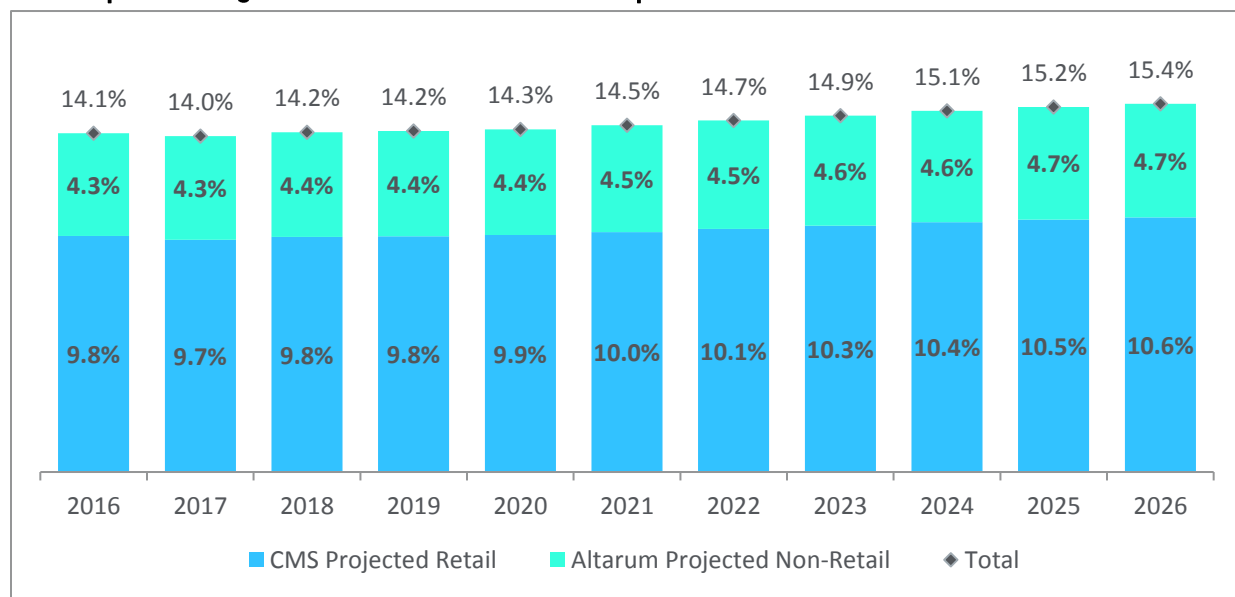


# Findings

Exhibit 1 presents the ten year projection with 2016 added to provide the most recent official CMS health account data point. As shown, CMS projects retail spending on prescription drugs growing from 9.8% of NHE in 2016 to 10.6% in 2026. We estimate that non-retail spending on prescription drugs accounted for 4.3% of NHE in 2016, growing to 4.7% in 2026. This results in total spending on prescription drugs as a share of NHE growing from 14.1% to 15.4% between 2016 and 2026. Results are quite similar to last year's projection which showed the prescription drug share of NHE growing from 14.4% in 2016 to 15.3% in 2025.

## EXHIBIT 1

### Prescription Drug Share of National Health Expenditures – 2016 to 2026



**Source:** Retail share is from February 2018 CMS Office of the Actuary NHE projection (2016 is CMS historical). Non-retail share is Altarum estimate.

In dollar terms, total spending on prescription drugs is projected to increase from \$471 billion in 2016 to \$875 billion in 2026 (Exhibit 2). The retail component grows from \$329 billion to \$605 billion while the non-retail component grows from \$143 billion to \$270 billion. During this time, national health expenditure are projected to grow from \$3.3 trillion to \$5.7 trillion.



## EXHIBIT 2

### Prescription Drug Spending and National Health Expenditures 2016 – 2026 (\$billions)

Year	Retail	Non-Retail	NHE
2016	329	143	3,337
2017	338	151	3,489
2018	360	161	3,675
2019	380	170	3,868
2020	404	180	4,091
2021	432	193	4,322
2022	463	206	4,562
2023	495	221	4,818
2024	530	236	5,091
2025	565	252	5,370
2026	605	270	5,696

**Source:** Retail and NHE are from February 2018 CMS Office of the Actuary NHE projection (2016 are CMS historical). Non-retail is Altarum estimate.

In the national health accounts, non-retail prescription drug spending is included in health care services spending. In 2017, we estimate non-retail prescription drug spending was \$151 billion and was distributed across health care services categories in the percentages shown below:

- ▲ Hospitals: 27.5%
- ▲ Physician and Clinical Services: 57.1%
- ▲ Nursing Homes: 12.4%
- ▲ Home Health: 3.0%

## Discussion

---

As noted above, projections of national health spending and its retail component are taken directly from the February 2018 CMS release. In the CMS data, about 85% of national health expenditures are for health care goods and services with the remaining 15% including items such as the costs of administering public and private insurance, and spending on public health, medical research, structures, and equipment. Retail spending on prescription drugs represents what was paid at retail minus an estimate of manufacturer rebates. The non-retail component represents our estimate of what hospitals, physician offices/clinics, and nursing homes were paid for prescription drugs administered during a patient stay or visit, minus any associated manufacturer rebates.



Our estimate of the non-retail component in 2016 is \$143 billion. This is \$36 billion more than the IQVIA non-retail net spending figure of \$107 billion for 2016 (Exhibit A-1). The IQVIA figure represents what institutions paid for the prescription drugs administered during patient stays and visits, net of rebates. The \$36 billion dollar figure represents the mark-up by hospitals, physicians/clinics, and nursing homes (i.e., the difference between what they were reimbursed for these prescription drugs by patients and their insurers and the acquisition cost of the drugs – see the Appendix for details).

## **RESOLVING DIFFERENCES BETWEEN CMS AND IQVIA DATA FOR RETAIL PRESCRIPTION DRUG SPENDING**

It is useful to examine the relationship between the CMS estimate of retail prescription drug spending and the IQVIA retail invoice and retail net figures. CMS prescription drug spending is essentially retail pharmacy revenues from the sale of prescription drugs minus manufacturer rebates. IQVIA retail invoice spending represents what retail pharmacies paid for their supply of prescription drugs. The difference between retail pharmacy revenues and what they paid for their supply of prescription drugs is known as gross margin. This suggests the following relationship:

$$\text{CMS Rx} = \text{IQVIA retail invoice} + \text{retail pharmacy gross margin} - \text{rebates}$$

Gross margins for retail pharmacies have been estimated to be about 22% of their total sales.<sup>2</sup> Using data for 2016, which is the most current year for which official CMS data are available, we find:

CMS prescription drug spending = \$329 billion

IQVIA retail invoice = \$320 billion

Estimated retail pharmacy gross margin = \$90 billion<sup>3</sup>

Retail sales prior to rebates = retail invoice + gross margin = 320 + 90 = \$410 billion

CMS does not publish its estimate of rebates but an approximation can be obtained from the above:

$$\begin{aligned} \text{CMS rebate approximation} &= \text{IQVIA retail invoice} + \text{retail pharmacy gross margin} - \text{CMS Rx} \\ &= 320 + 90 - 329 = \$81 \text{ billion} \end{aligned}$$

---

<sup>2</sup> Sood, N., Shih, T., Van Nuys, K., & Goldman, D. (2017). “The flow of money through the pharmaceutical distribution system,” University of Southern California Schaeffer Center. [http://healthpolicy.usc.edu/Flow\\_of\\_Money\\_Through\\_the\\_Pharmaceutical\\_Distribution\\_System.aspx](http://healthpolicy.usc.edu/Flow_of_Money_Through_the_Pharmaceutical_Distribution_System.aspx). Accessed June 2017.

<sup>3</sup> Since gross margin is about 22% of retail sales, we have retail sales = IQVIA retail invoice / (1 - .22) = 320 / .78 = \$410 billion. Gross margin = retail sales - IQVIA retail invoice = 410 - 320 = \$90 billion.



This figure is quite close to the \$89 billion in rebates estimated in a [recent study](#).<sup>4</sup> In summary, at a conceptual level, CMS prescription drug spending is equal to the IQVIA retail invoice spending, adjusted upward to account for retail pharmacy gross margins, and adjusted downward to account for rebates. These two adjustments are roughly offsetting so that the CMS spending figure of \$329 billion is quite close to the IQVIA retail invoice spending figure of \$320 billion.

Consider next the IQVIA retail net spending estimate of \$216 billion for 2016, which is defined as retail invoice spending minus rebates, coupons, and other off-invoice discounts. Subtracting this from the retail invoice spending figure of \$320 billion results in an estimate of \$104 billion in rebates, coupons, and other off-invoice discounts. IQVIA does not specify the individual components, but coupons have been estimated at about \$10 billion<sup>5</sup> which would leave \$94 billion for rebates and other off-invoice discounts. This is quite close to the \$89 billion rebate estimate referenced above. The CMS prescription drug spending figure of \$329 can be largely built up from the IQVIA retail net spending figure of \$216 by adding \$90 billion in retail pharmacy net margin and \$10 billion in coupons (the CMS figure is not adjusted for coupons), resulting in \$316 billion. The remaining \$13 billion could be attributable to many factors including other off-invoice discounts as well as differences between what CMS and IQVIA have estimated for rebates.

---

<sup>4</sup> Roehrig C, “The Impact of Prescription Drug Rebates on Health Plans and Consumers”, Altarum, April 2018.

<sup>5</sup> A personal communication from Michael Kleinrock at IQVIA in April 2018 provided an estimate of \$8 to \$10 billion for coupons.



## WHY WE HAVE NOT ADJUSTED CMS DATA FOR COUPONS

One might expect that CMS would reduce their estimate of prescription drug spending by the amount of manufacturer coupons used by consumers to offset their out-of-pocket costs. This would be consistent with the practice of deducting manufacturer rebates paid to insurers. CMS does not deduct coupons because they do not have the source data needed to estimate the amount.<sup>6</sup> If we accept \$10 billion as a reasonable approximation, and deduct it, the CMS spending figure drops from \$329 to \$319 billion.

However, there is another factor that has not yet been addressed, which is that CMS excludes retail prescription drug spending at outlets owned by hospitals, physicians, and nursing homes. Such spending is counted as hospital, physician, and nursing home spending in CMS accounting. While there is some uncertainty, IQVIA retail invoice spending seems likely to correctly allocate most of this spending to retail. This means that to be comparable to IQVIA, the CMS retail spending estimate should be adjusted upward to account for sales at these institution-owned retail pharmacies. CMS does not publish the amount of this spending, but a study of 2007 data put the figure at about 4.3% of retail spending.<sup>7</sup>

Applying this percentage to the estimated \$410 in retail sales for 2016 yields about \$18 billion. In past estimates, we have assumed that IQVIA correctly allocates about half of this spending. In order to make CMS consistent with the IQVIA allocation, it would need to be adjusted upward by about \$9 billion. Thus the combination of adjusting for coupons (down \$10 billion) and retail sales by institution-owned retail pharmacies (up \$9 billion) are essentially offsetting; therefore, until better information are available we make no explicit adjustment for either.

While the computations above show rough consistency between CMS and IQVIA data, CMS spending is a bit higher than would be predicted from IQVIA data combined with independent estimates of retail pharmacy gross margins and rebates. As shown earlier, IQVIA retail invoice data combined with 22% gross margins for retail pharmacies imply \$410 billion in spending at retail in 2016. Subtracting rebates of \$89 billion (see footnote 4) leaves spending of \$321 billion, compared to the CMS figure of \$329 billion. Now suppose that the IQVIA retail invoice data spending fully includes institutional-owned retail outlets, which are excluded from the CMS figure. Institution-owned retail sales were estimated to be \$18 billion in 2016. Adding this amount would bring CMS spending to \$347 billion compared to \$321 billion implied by the IQVIA data—a small difference in percentage terms (8%), but large enough to warrant further investigation.

---

<sup>6</sup> Email communication with CMS on May 3, 2018.

<sup>7</sup> Reconciling Medical Expenditure Estimates from the MEPS and NHEA, 2007, Bernard et. al, Medicare & Medicaid Research Review 2012: Volume 2, Number 4.





## Appendix: Data and Methods

**Retail Shares of NHE.** For each year from 2016 through 2026 we used the February 2018 CMS projections of NHE and prescription drug spending.

**Non-Retail Shares of NHE.** We wish to estimate non-retail spending adjusted for rebates. Our primary data source for the non-retail estimate is the April 2018 edition of the annual IQVIA report on Medicine Use and Spending in the U.S. shown in Exhibit A-1. Invoice spending refers to what wholesalers were paid for drugs they sold to retailers (pharmacies) and non-retailers (hospitals, physicians, nursing homes). The net spending figures refer to invoice spending minus rebates, coupons, and other off-invoice discounts.

### EXHIBIT A-1

#### Retail and Non-Retail Invoice Spending: Full and Net (\$billion)

	2013	2014	2015	2016	2017
Retail Invoice	239	274	307	320	319
Retail Net	178	197	212	216	212
Non-Retail Invoice	94	106	120	127	134
Non-Retail Net	81	88	99	107	113

**Source:** Medicines Use and Spending in the U.S. 2017, IQVIA, April 2018

As a first step, we estimate non-retail spending prior to rebates. We then subtract an estimate of rebates. We define non-retail spending, prior to rebates, as what hospitals, physicians, and nursing homes receive in payment for prescription drugs administered as a part of their services. Put another way, non-retail spending equals non-retail invoice spending (what was paid to wholesalers) plus the mark-up applied by the hospital, physician, or nursing home.

As noted in the discussion under Findings, the retail mark-up has been estimated to be roughly 22% of total retail sales. In the absence of suitable data for estimating the overall non-retail mark-up, we assume it is the same as the retail markup. Thus, for 2016 and 2017, our estimate of non-retail spending (prior to rebates) is the IQVIA non-retail invoice spending divided by .78. For example, in 2016 we estimate non-retail spending, prior to rebates, to be  $127/.78 = \$163$  billion. Thus, the non-retail mark-up in 2016 is estimated at  $163 - 127 = \$36$  billion [ $\$127$  billion (IQVIA) +  $\$37$  billion (mark-up) =  $\$163$  billion].

Our estimate of non-retail rebates for 2016 and 2017 is the difference between the IQVIA non-



retail invoice and non-retail net figures.<sup>8</sup> For 2016, this is \$20 billion. Thus our estimate of non-retail spending after subtracting rebates is \$143 billion. For 2018 through 2026, we project non-retail spending, after rebates, to grow at the same rate as the CMS projection for retail spending net of rebates.<sup>9</sup>

**Percent distribution of non-retail prescription drug spending across national health account services categories.** In the national health accounts, non-retail prescription drug spending is included in health care services spending. To develop a rough estimate of how non-retail spending is allocated across service categories in the health accounts, we used the IQVIA invoice spending by channel data shown in Exhibit A-2 below. Non-retail sales to hospitals will be included in hospital spending in the national health accounts. Non-retail sales to clinics, the largest category, are included in the physician and clinical services component of health accounts (Non-retail sales to clinics that are owned and operated by hospitals are counted as sales to hospitals in the IQVIA data). Retail sales to long term care facilities will be included as nursing home revenues and sales to home health care will be included as home health care revenues. Sales to federal facilities, HMOs, and miscellaneous (this includes prisons) are likely split between hospitals and clinics. In 2017, when these categories are split between hospitals and clinics using the non-federal hospital and clinic proportions, the following shares result for non-retail prescription drug spending across the national health account categories:<sup>10</sup>

▲ Hospitals:	27.5%
▲ Physician and Clinical Services:	57.1%
▲ Nursing Homes:	12.4%
▲ Home Health:	3.0%

---

<sup>8</sup> We believe that most all of the \$20 billion dollar difference between invoice and net for non-retail is rebates as coupons are primarily used for retail purchases.

<sup>9</sup> For 2016 and 2017, IQVIA non-retail net spending growth averaged 6.8% and the average growth rate for CMS retail spending, net of rebates, for 2018 through 2026 is 6.7%.

<sup>10</sup> For federal facilities, HMOs, and miscellaneous, 33% of the share was allocated to hospitals and 67% to clinics based upon the relative shares of non-federal hospitals and clinics in 2017.



## EXHIBIT A-2

### Retail and Non-Retail Invoice Sales by Channel (\$billion)

	2013	2014	2015	2016	2017
Total Spending	333.0	380.2	426.7	446.5	452.6
Retail Channels	238.6	273.7	307.2	319.8	318.8
Chain Stores	110.5	122.4	131.3	137.6	134.1
Mail Service	65.5	82.5	98.7	104.7	109.0
Independent	36.8	42.2	48.3	49.6	49.5
Food Stores	25.8	26.6	28.9	27.8	26.1
Institutional Channels	94.5	106.4	119.5	126.8	133.8
Clinics	43.0	49.2	57.3	63.7	70.4
Non-Federal Hospitals	28.7	30.4	33.5	34.2	33.9
Long Term Care	14.1	16.3	16.7	16.5	16.6
Federal Facilities	3.1	3.9	4.9	5.2	5.8
Home Health Care	2.9	3.5	3.9	3.7	4.0
HMO	2.4	2.8	2.7	2.8	2.6
Miscellaneous	0.3	0.4	0.5	0.5	0.5

**Source:** Medicines Use and Spending in the U.S. 2017, IQVIA, April 2018



# From *the* Ground Up

*Unearthing Fairness for Ohio Kids*

**Ohio Early Childhood  
Race and Rural  
Equity Report**

2018



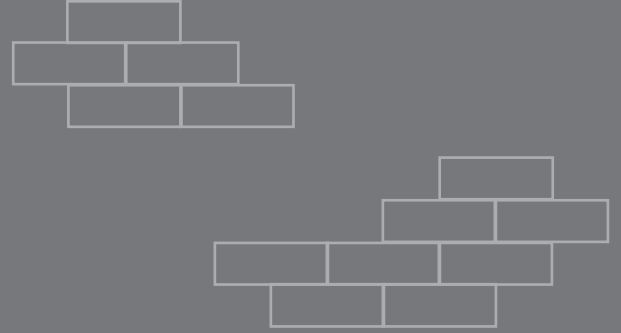
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**About Groundwork Ohio:**

*Groundwork Ohio is a nonprofit, nonpartisan advocacy organization committed to advancing quality, early childhood education in Ohio. Groundwork advances quality early childhood systems in Ohio by engaging, educating and mobilizing diverse stakeholders and strategic partners to promote data-driven and evidence-based early childhood policies.*



# Contents

## INTRODUCTION:

<b>Executive Snapshot.....</b>	<b>5</b>
<b>What is Equity? .....</b>	<b>6</b>
<b>Brain Science.....</b>	<b>8</b>
<b>What is Disaggregated Data? .....</b>	<b>10</b>
<b>Regional Approach .....</b>	<b>11</b>

## **1 SECTION 1: Breaking Ground for Success..... 12**

<i>Prenatal Care .....</i>	<i>14</i>
<i>Preterm Birth.....</i>	<i>15</i>
<i>Infant Mortality .....</i>	<i>21</i>
<i>Early Childhood Poverty.....</i>	<i>23</i>
<i>Access to Home Visiting.....</i>	<i>30</i>
<i>Access to Early Head Start.....</i>	<i>34</i>

## **2 SECTION 2: Laying the Foundation .....36**

<i>Incidence of Trauma .....</i>	<i>38</i>
<i>Early Intervention .....</i>	<i>40</i>
<i>Access to Publicly Funded Child Care .....</i>	<i>44</i>
<i>Access to Head Start.....</i>	<i>94</i>
<i>Access to Preschool.....</i>	<i>103</i>
<i>Access to Early Childhood Experiences.....</i>	<i>111</i>
<i>Kindergarten Readiness.....</i>	<i>113</i>

## **3 SECTION 3: Strong Foundation Walls.....130**

<i>Access to Healthcare Coverage .....</i>	<i>132</i>
<i>Oral Health .....</i>	<i>135</i>
<i>Incidence of Lead Poisoning .....</i>	<i>139</i>
<i>Incidence of Asthma.....</i>	<i>141</i>
<i>Early Childhood Obesity.....</i>	<i>143</i>
<i>Third Grade Reading Achievement .....</i>	<i>146</i>
<i>Early Childhood Suspension &amp; Expulsion.....</i>	<i>154</i>

## **4 SECTION 4: Taking an Evaluative View .....156**

<i>Special Education .....</i>	<i>158</i>
<i>Juvenile Justice.....</i>	<i>161</i>
<i>Eighth Grade Math Achievement.....</i>	<i>170</i>
<i>High School Graduation.....</i>	<i>174</i>
<i>Postsecondary Attainment.....</i>	<i>189</i>

## **5 SECTION 5: A CALL TO ACTION Drafting a New Blueprint for Success ..204**

<b>Sources.....</b>	<b>209</b>
<b>Contributors.....</b>	<b>218</b>

“ *Not everything that is  
faced can be changed,  
but nothing can be  
changed until it  
is faced.* ” – *James Baldwin*  
*American novelist & social critic*

ACHIEVING EQUITY FOR OHIO KIDS REQUIRES ALL  
OF US TO BEGIN TO TAKE RESPONSIBILITY FOR THE  
THINGS WE CAN CHANGE BY CHALLENGING OUR  
ASSUMPTIONS, INVESTIGATING THE EVIDENCE AND  
RECOGNIZING WHAT WE DO NOT YET KNOW.



# Executive Snapshot

In 2018, Groundwork Ohio made a steadfast commitment to understanding how effective Ohio's education and child health systems are at addressing the needs of our most at-risk children, specifically children of color and those who live in rural Appalachia. This was no small task as we analyzed data that spanned five state departments and utilized resources from an additional three, all with different data collection methodologies and computer tracking systems. Nonetheless, this comprehensive effort—the 2018 Ohio Early Childhood Race and Rural Equity Report—proved worthwhile as it illuminated the fact that:

1. Gaps between children in poverty and their higher income peers emerge much earlier than state and federal policy recognizes and persist long into adulthood.
2. Race and rural geography play a determinative role in these gaps.
3. The sheer volume of metrics in which these early gaps emerge should serve as a clarion call to policymakers that more must be done.

This report explores the undeniable and sobering truth that some children are much more likely to start behind, and thus will stay behind, than others. While these children include those living in poverty, the data illustrates that poverty alone does not tell the whole story. A child's race foretells a distinct and critical narrative that must be examined separately to fully understand the problem, as even those children of color who are not poor are too often not achieving at the rate of their white peers.

The report also finds that while some children share similar heartbreaking outcomes in both urban and rural parts of the state, Appalachian children experience unique barriers that must be understood. Failing to acknowledge these different experiences serves none of them.

All of the data charts and graphics in this report are important and yet they are impossible to digest all at once. But start somewhere. Regardless of which metric you choose to examine first, understand this: kids who have poor outcomes in one metric share the same profile of the kids who have poor outcomes in another – whether that measure is educational or health related. The data is extremely predictive in the earliest years of a child's life and forecasts how that same child will likely perform later.

In other words, after all of the data analysis, from birth to career readiness, where a child begins in Ohio determines where she ends up. It follows then, that if we intervene to change outcomes for kids at the beginning of their development, before the gaps emerge and when science tells us is most effective, we can lay the foundation for their lifelong success.

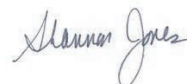
Given this, we propose an irrefutable solution—increase state investments in high-quality early childhood education for Ohio's most vulnerable children. At-risk children who have access to high-quality early childhood experiences within their first five years of life are significantly more likely to be Kindergarten ready, graduate high school, have higher earnings and better health and are less likely to be held back a grade, reliant on

public assistance or engage in criminal activity. These improved outcomes not only position our youngest Ohioans for lifelong success but also yield the greatest return for Ohio taxpayers. Nobel Laureate economist Dr. James Heckman quantifies the return on public investment in high quality early childhood programs to be upwards of 13%.

Early childhood education is powerful prevention policy for the state which pays huge dividends for taxpayers. We can either invest now in proven strategies or pay much more later in well-documented public expense. As we prioritize increased investments in early childhood education, we must also analyze outcomes through an equity lens and be relentless when it comes to closing gaps. We know we cannot make significant demographic-level gains unless we target sub-groups of our most at-risk children. We must hold ourselves accountable to delivering quality early childhood interventions that change the outcomes for the kids who need them the most.

We look forward to having you join us in drafting a new blueprint for success for all of Ohio's children as we renew our commitment to laying the strongest foundation for our most vulnerable while ensuring the state's future economic prosperity.

*Sincerely,*



**Shannon Jones**  
Groundwork Ohio Executive Director



# How are Brains Built?

**BRAINS ARE BUILT ON A  
FOUNDATION  
OF EARLY EXPERIENCES.**



**90% OF  
BRAIN  
DEVELOPMENT  
happens from  
birth to 5 years old.**



**In the first few years of life,  
more than 1 million new neural  
connections are formed every second.**

These neural connections, the brain's architecture, are formed through the interaction of baby and her environment and early, enriching experiences. These critical interactions with adults *lay the foundation* for all later learning, behavior, and health.

**WHILE GENES PROVIDE A BLUEPRINT FOR BRAIN  
ARCHITECTURE, NEURAL CONNECTIONS MUST BE  
REINFORCED BY REPEATED USE.**

# BRAINS ARE BUILT, NOT BORN.

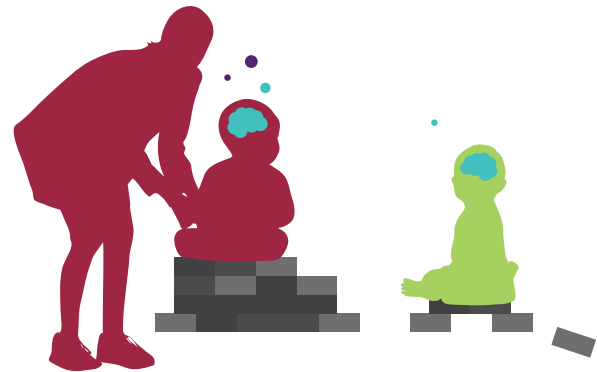
All children are born with the ability to reach their highest potential. But, connections that form early provide either a strong or weak foundation for the connections that form later.

Unfortunately, not all children have access to early enriching experiences.



**Without consistent and responsive caregiving, the brain architecture does not form as expected and will lead to disparities in learning and behavior.**

Gaps between advantaged and disadvantaged children begin emerging as early as 9 months of age.



**This is why, without intervention in the most critical early years of a child's brain development, we see gaps in disadvantaged children's health and educational achievement.**

**THE GAPS WIDEN AS CHILDREN GROW OLDER, LEAVING DISADVANTAGED CHILDREN UP TO 2 YEARS BEHIND THEIR HIGHER INCOME PEERS BY AGE 5.**

# What is Equity?

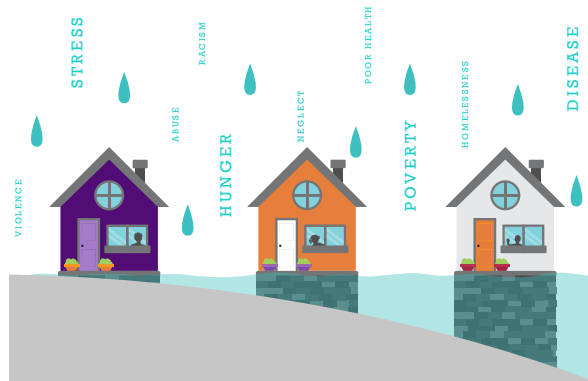
When a child faces challenges throughout their life, the strength of their foundation is what matters the most.

But, every child has unique assets and barriers to healthy development, and builds their foundation in different environments.



If, however, we gave every child what they need to succeed and built their foundation up in their earliest years, they would all be better prepared to withstand the storm.

**This is equity.**



**CHILDREN WHO  
START BEHIND, USUALLY  
STAY BEHIND.**

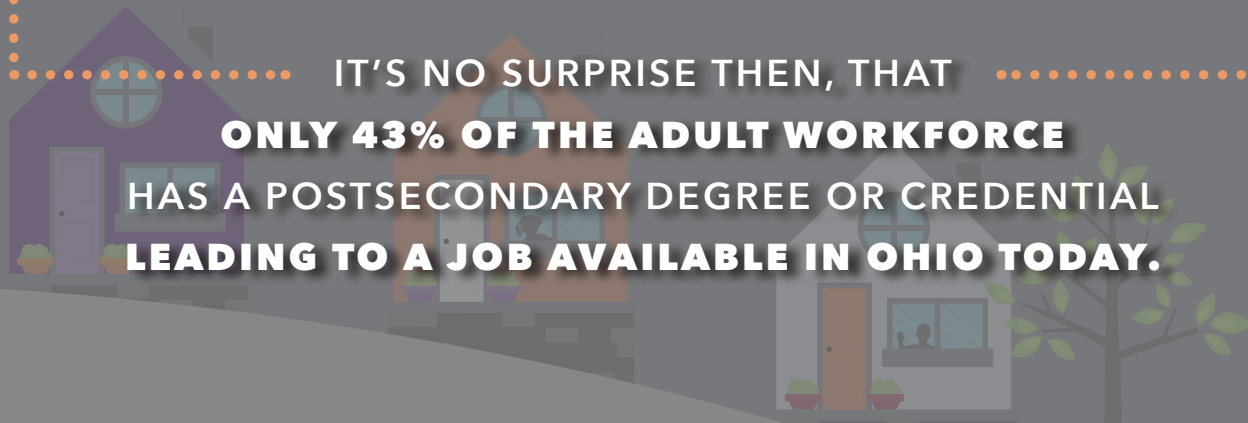
**FOR EXAMPLE:**

In Ohio, only 40% of kindergartners come to the classroom ready to learn.



IT'S NO SURPRISE THEN, THAT

**ONLY 43% OF THE ADULT WORKFORCE  
HAS A POSTSECONDARY DEGREE OR CREDENTIAL  
LEADING TO A JOB AVAILABLE IN OHIO TODAY.**

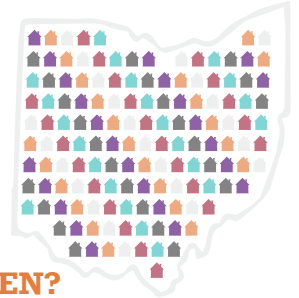


# SOME CHILDREN ARE MORE OFTEN LEFT BEHIND THAN OTHERS.

When a child's health & educational achievement gaps are predictable by race, class, geography or other social factors we call them inequities.

This report explores the following questions:

- WHO ARE THESE CHILDREN?
- WHAT DO THEY LOOK LIKE?
- WHERE DO THEY LIVE?



The mental and physical health, social skills and cognitive capacities laid in a child's earliest years are all critically important for success in school, the workplace and the larger community.



Achieving equitable outcomes for all children requires:

**INVESTING** IN THOSE WHO ARE MORE OFTEN LEFT BEHIND,  
& **GIVING** THEM WHAT THEY NEED TO  
**BUILD A STRONG FOUNDATION**  
**FOR LIFELONG SUCCESS.**

# Disaggregated Data

***Our first step is gathering and analyzing disaggregated data.***

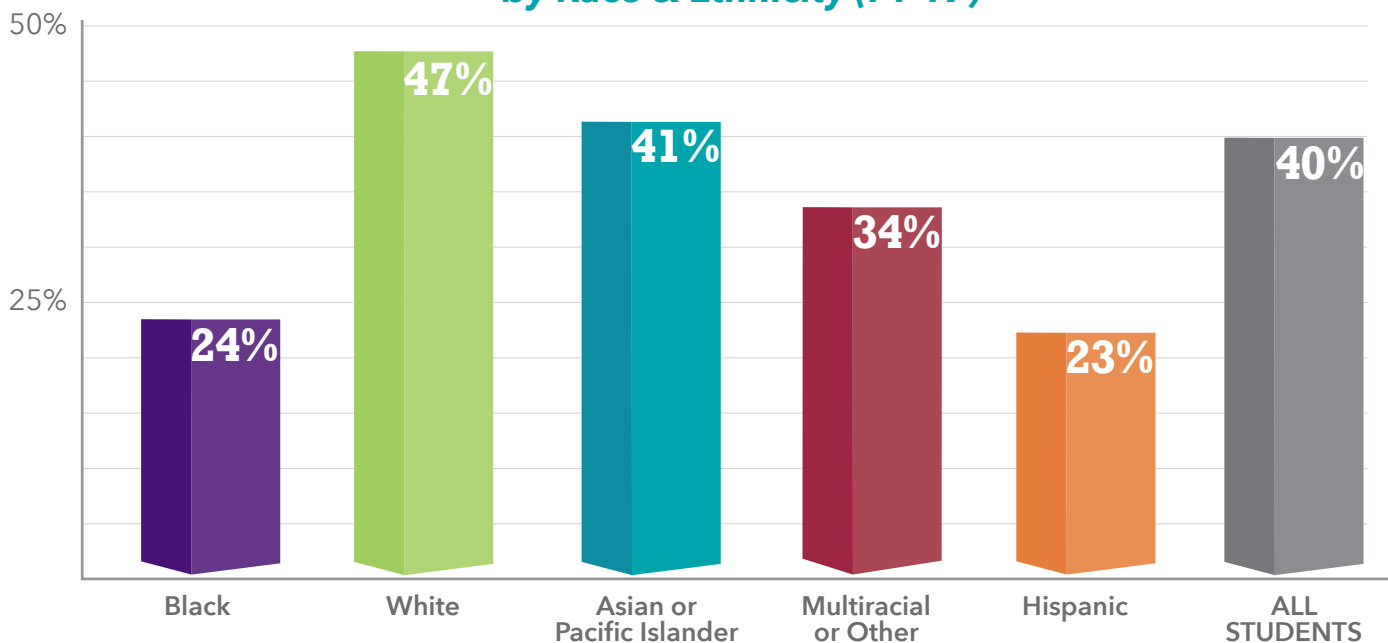
In order to advance equity for Ohio's children we have to know who Ohio children are and how systems are serving or failing to serve them. Usually, data is reported in the aggregate. For example, **only 40% of all Ohio kids arrive in Kindergarten ready to learn.**

Without disaggregating data by breaking it apart by race, geography and other demographic variables, we fail to understand the whole story.

## DISAGGREGATED DATA EXAMPLE

Kindergarten readiness data, disaggregated by race:

***% Students Demonstrating Readiness for Kindergarten,  
by Race & Ethnicity (FY 17)***

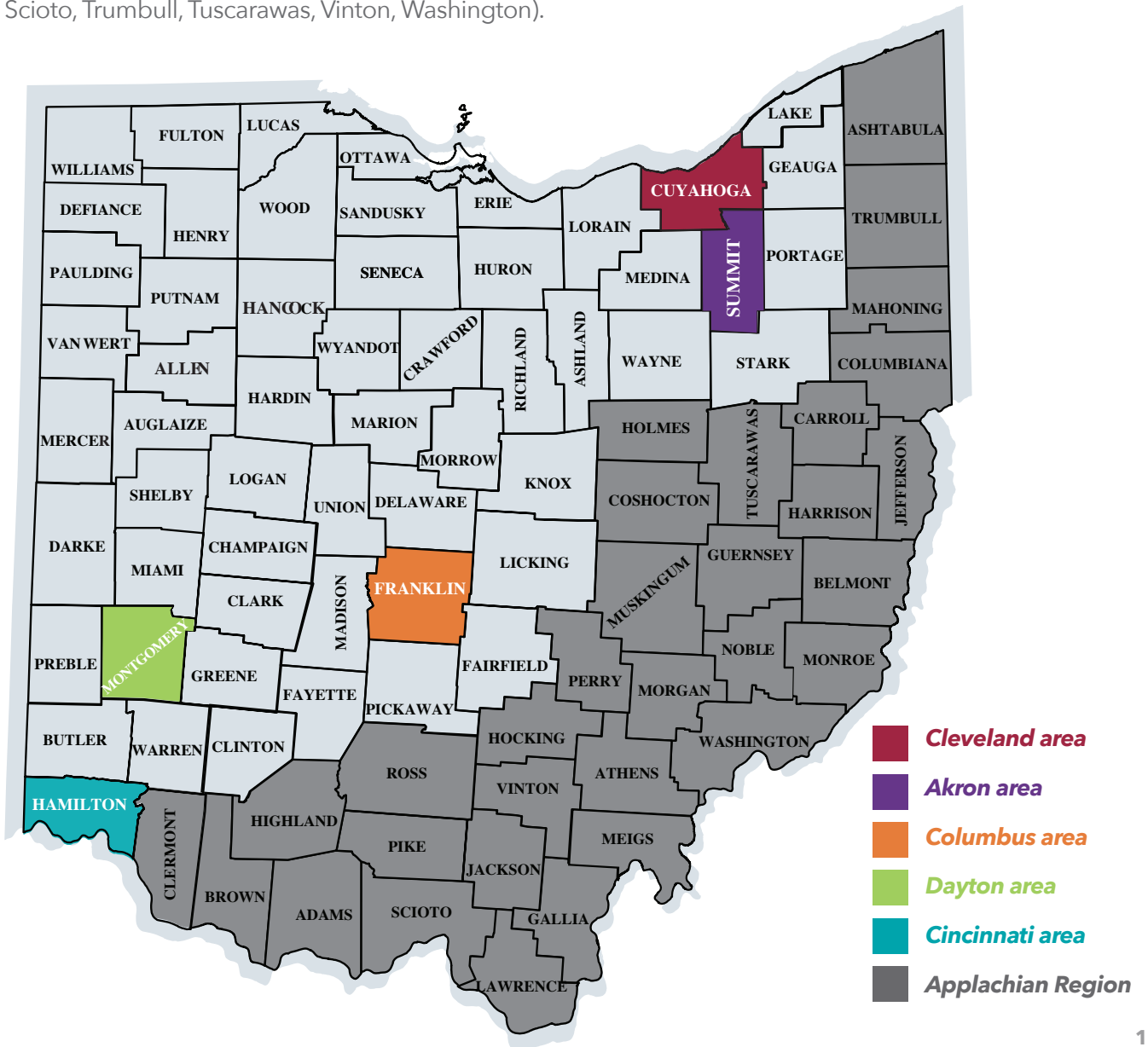


This more detailed data becomes a powerful tool in preparing more Ohio kids to be ready to learn. Understanding who is more often left behind and investigating the barriers for these children has the potential to influence how we provide the supports and resources necessary to help all children thrive and achieve equitable outcomes.

# Regional Approach

*This report provides data on early childhood outcomes & interventions in Ohio, spanning five state agencies serving children.*

When possible, we have disaggregated this data based upon economic status, race and ethnicity. Additionally, when feasible, we have analyzed data for a representative subset of communities across the state with varying demographics, geography and economies. These communities include Franklin County (Columbus), Montgomery County (Dayton), Hamilton County (Cincinnati), Cuyahoga County (Cleveland), Summit County (Akron) and the Ohio Appalachian Region comprised of 32 Counties (Adams, Ashtabula, Athens, Belmont, Brown, Carroll, Clermont, Columbiana, Coshocton, Gallia, Guernsey, Harrison, Highland, Hocking, Holmes, Jackson, Jefferson, Lawrence, Mahoning, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pike, Ross, Scioto, Trumbull, Tuscarawas, Vinton, Washington).





# Breaking Ground for Success

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- PRENATAL CARE
- PRETERM BIRTH
- INFANT MORTALITY
- EARLY CHILDHOOD POVERTY
- ACCESS TO STATE & FEDERALLY FUNDED HOME VISITING
- ACCESS TO EARLY HEAD START





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The groundwork for a child's healthy development is laid during the brain's rapid growth throughout pregnancy. To ensure babies are healthy, we have to support mothers with timely and frequent, high-quality prenatal care. In Ohio, many babies are born prematurely and too many do not make it to their first birthday. Poverty disproportionately impacts young children and families of color, making it even more difficult to overcome adversity and maintain healthy development. Empowering parents and caregivers to support their baby's development through health and educational interventions allows Ohio to ensure that babies are positioned to thrive during their first year and beyond. Ohio must do a better job of reaching our most at-risk babies and families early.





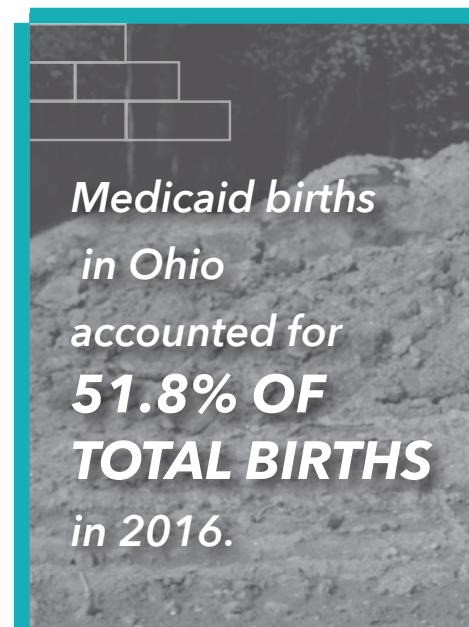
# Prenatal Care

**Experiences occurring before birth can have consequences for the physical and mental health of a child that persist across the lifespan.**

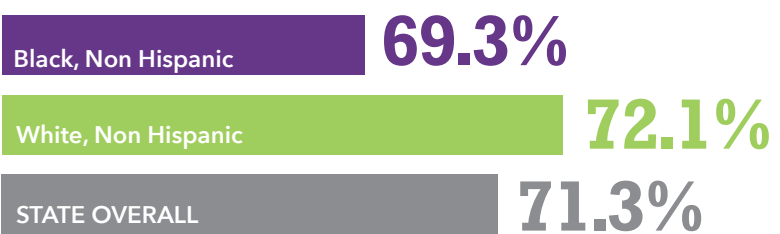
Having a healthy pregnancy is one of the best ways to promote a healthy birth and is critical for a child's development as his or her brain begins developing rapidly early in gestation. In order to influence a baby's development, pregnant women require timely, high-quality health care, as well as emotional support. Factors that influence prenatal brain development include maternal stress and anxiety, social and cultural stressors, poverty, nutrition and substance use.

In 2016, there were 69,683 births by Medicaid recipients and 64,978 births by non-Medicaid recipients in Ohio. Medicaid births thus accounted for 51.8% of total births in 2016. Pregnant women in families with income up to 200% of the federal poverty level are eligible for the Medicaid program Healthy Start (also called the State Children's Health Insurance Plan, SCHIP).

Of the pregnant women served by Medicaid, the following chart shows the difference in timeliness of prenatal care received by white and black mothers in the first quarter of 2017. "Timely" is defined as the percentage of deliveries that received a prenatal care visit in the first trimester or within 42 days of enrollment in the Medicaid program.



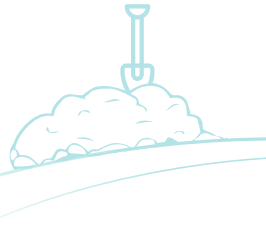
## 2017 (Q1) Statewide Percentage of Medicaid Mothers Receiving Timely Prenatal Care by Race



Data Source: Ohio Department of Medicaid Maternal and Infants Health Measures Report, Winter 2017

GIVEN THE FACTORS IMPACTING PRENATAL BRAIN DEVELOPMENT INCLUDE MATERNAL STRESS AND ANXIETY, SOCIAL AND CULTURAL STRESSORS, POVERTY, NUTRITION AND SUBSTANCE ABUSE...**WHAT OTHER METRICS WOULD BE HELPFUL IN EVALUATING DISPARITIES AMONG THE EXPERIENCES OF PREGNANT WOMEN?**

# Preterm Birth



**A “preterm birth” is defined as any birth occurring prior to 37 weeks gestational age.**

It is important for babies to be born full-term because the brain, lungs and liver need those final weeks of pregnancy to develop fully. Not only is premature birth the leading cause of death for infants, it results in increased risk of disability, breathing problems, difficulty feeding, cerebral palsy, developmental delays, vision and hearing problems. In the United States, 1 out of every 10 births was preterm in 2016.

**11.9% of all Ohio births are preterm.**

Preterm birth rates, however, for moms receiving Medicaid are 50–70% higher than the rates for more affluent (above 200% FPL) moms not on Medicaid.

**Tables 1 and 2 and Chart 1 provide a comparison of preterm birth rates for Medicaid and non-Medicaid patients in Ohio.**

*Data Source: Report on Pregnant Women, Infants and Children, Appendix D, Ohio Department of Medicaid, December 29, 2017.*

**Table 1**

*2016 Preterm Birth Rate for Medicaid Patients in Ohio & Selected Regions*

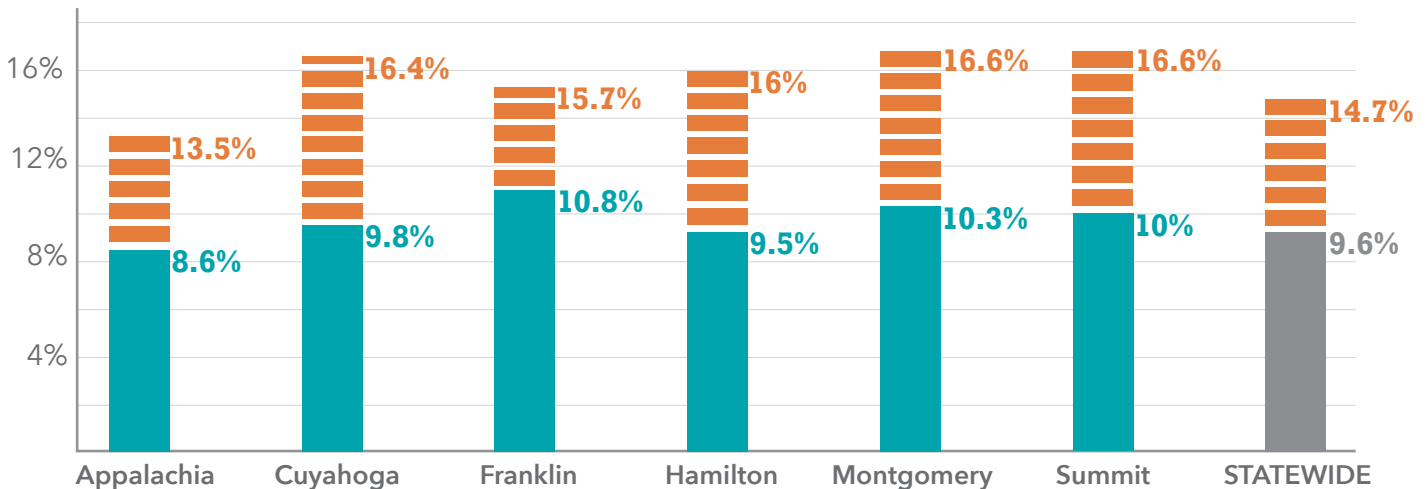
Region	Preterm Births	Total Births
Appalachian	1,565	11,623
Cuyahoga	1,374	8,361
Franklin	1,563	9,947
Hamilton	902	5,646
Montgomery	626	3,762
Summit	513	3,093
STATEWIDE	10,293	69,863

**Table 2**

*2016 Preterm Birth Rate for Non-Medicaid Patients in Ohio & Selected Regions*

Region	Preterm Births	Total Births
Appalachian	691	8,073
Cuyahoga	618	6,336
Franklin	968	8,948
Hamilton	475	4,977
Montgomery	294	2,864
Summit	287	2,903
STATEWIDE	6,204	64,978

**Chart 1** ■ Medicaid ■ Non-Medicaid





# Preterm Birth

**Tables 3-7 and Charts 2-8 analyze 2016 preterm birth rates in Ohio and the 6 selected regions by race and ethnicity.**

Birth rate data disaggregated by race and ethnicity was downloaded from the Ohio Department of Health Ohio Public Health Data Warehouse. Note that the race and ethnicity birth rate data reports are slightly different than the numbers reported by Medicaid, likely due to differing data collection methods.

**Table 3**

### 2016 Preterm Birth Rate **Black Persons in Ohio** & Selected Regions

Region	Preterm Births	Full-term Births	Total Births	% Preterm Births
Cuyahoga	915	4,792	5,707	16%
Franklin	755	5,113	5,868	12.9%
Hamilton	484	3,008	3,492	13.9%
Montgomery	256	1,488	1,744	14.7%
Summit	233	1,086	1,319	17.7%
Appalachian	66	613	679	9.7%
<b>STATE TOTAL</b>	<b>3,458</b>	<b>20,837</b>	<b>24,295</b>	<b>14.2%</b>

**Table 4**

### 2016 Preterm Birth Rate **White Persons in Ohio** & Selected Regions

Region	Preterm Births	Full-term Births	Total Births	% Preterm Births
Cuyahoga	725	7,176	7,901	9.2%
Franklin	1,056	9,661	10,717	9.9%
Hamilton	579	5,734	6,313	9.2%
Montgomery	440	3,936	4,376	10.1%
Summit	437	3,767	4,204	10.4%
Appalachian	1,764	16,108	17,872	9.1%
<b>STATE TOTAL</b>	<b>10,095</b>	<b>94,770</b>	<b>104,865</b>	<b>9.6%</b>

**Table 5**

### 2016 Preterm Birth Rate **Asian Persons in Ohio** & Selected Regions

Region	Preterm Births	Full-term Births	Total Births	% Preterm Births
Cuyahoga	49	573	622	7.9%
Franklin	109	206	315	34.6%*
Hamilton	47	376	423	11.1%
Montgomery	NA	194	NA	NA
Summit	32	362	394	8.1%
Appalachian	0	48	48	0.0%
<b>STATE TOTAL</b>	<b>237</b>	<b>2,843</b>	<b>3,080</b>	<b>7.7%</b>

\*The Franklin County preterm birth rate for Asians is so high as to be of questionable accuracy.

**Table 6**

### 2016 Preterm Birth Rate **Persons of Unknown or Other Race in Ohio** & Selected Regions

Region	Preterm Births	Full-term Births	Total Births	% Preterm Births
Cuyahoga	10	90	100	10.0%
Franklin	10	98	108	9.3%
Hamilton	1	37	38	2.6%
Montgomery	5	108	113	4.4%
Summit	NA	NA	NA	NA
Appalachian	0	0	0	NA
<b>STATE TOTAL</b>	<b>31</b>	<b>373</b>	<b>404</b>	<b>7.7%</b>

**Table 7**

### 2016 Preterm Birth Rate **Hispanic Persons in Ohio** & Selected Regions

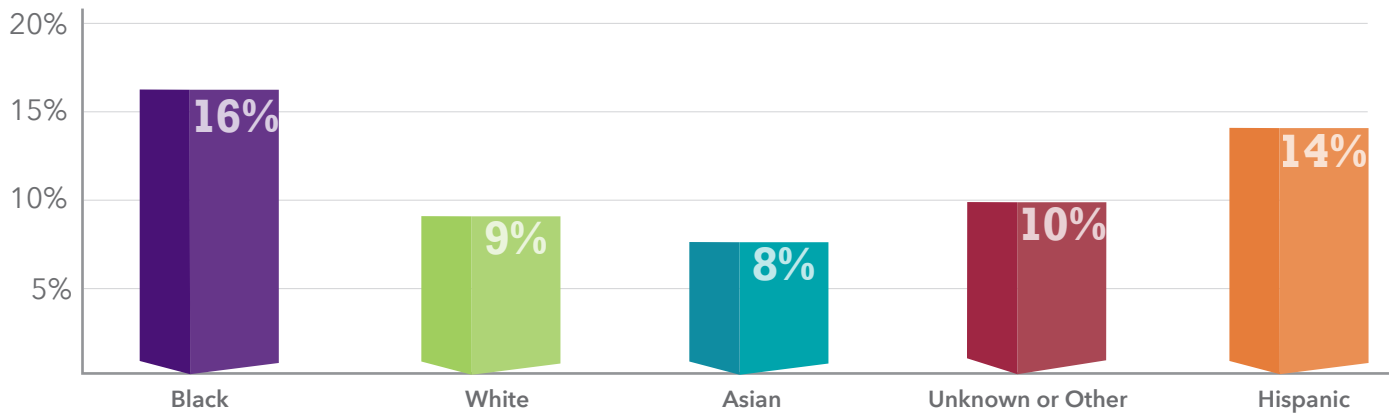
Region	Preterm Births	Full-term Births	Total Births	% Preterm Births
Cuyahoga	147	871	1,018	14.4%
Franklin	150	1,359	1,509	9.9%
Hamilton	62	583	645	9.6%
Montgomery	1	230	231	0.4%
Summit	3	138	141	2.1%
Appalachian	11	337	348	3.2%
<b>STATE TOTAL</b>	<b>523</b>	<b>5,627</b>	<b>6,150</b>	<b>8.5%</b>

# Preterm Birth



2016 Preterm Birth Rates by Race & Ethnicity in Selected Regions

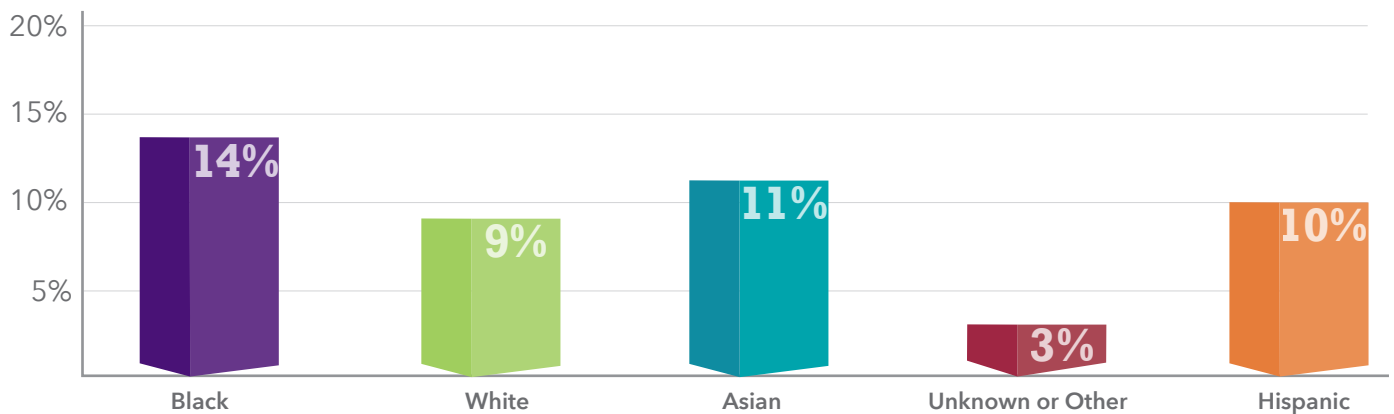
## Cuyahoga County



## Franklin County



## Hamilton County

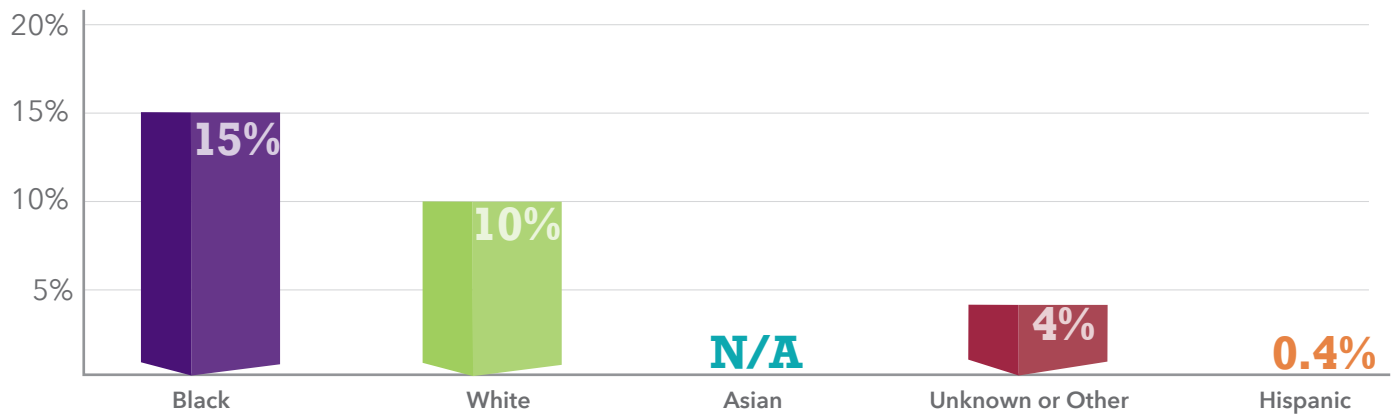




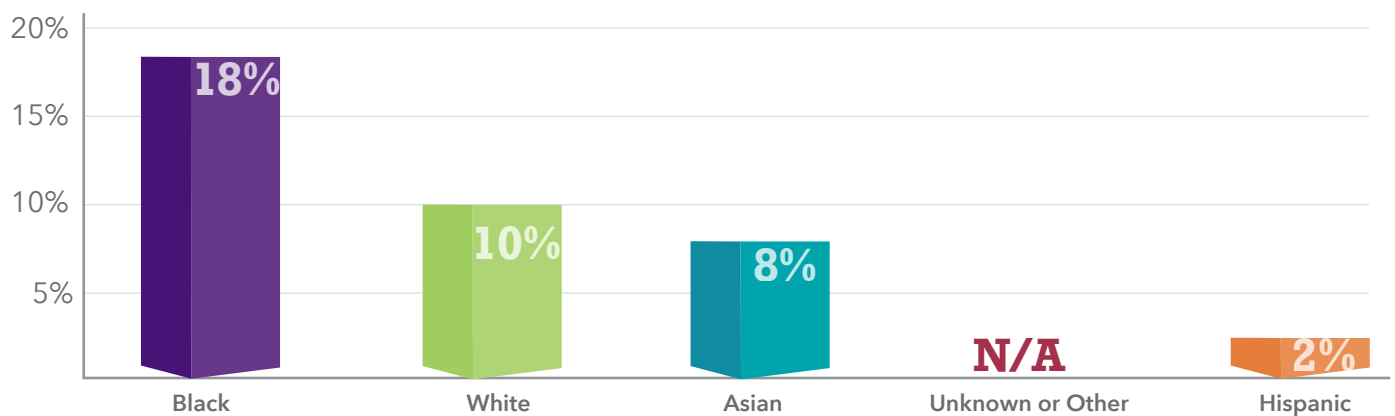
# Preterm Birth

## 2016 Preterm Birth Rates by Race & Ethnicity in Selected Regions

### Montgomery County



### Summit County

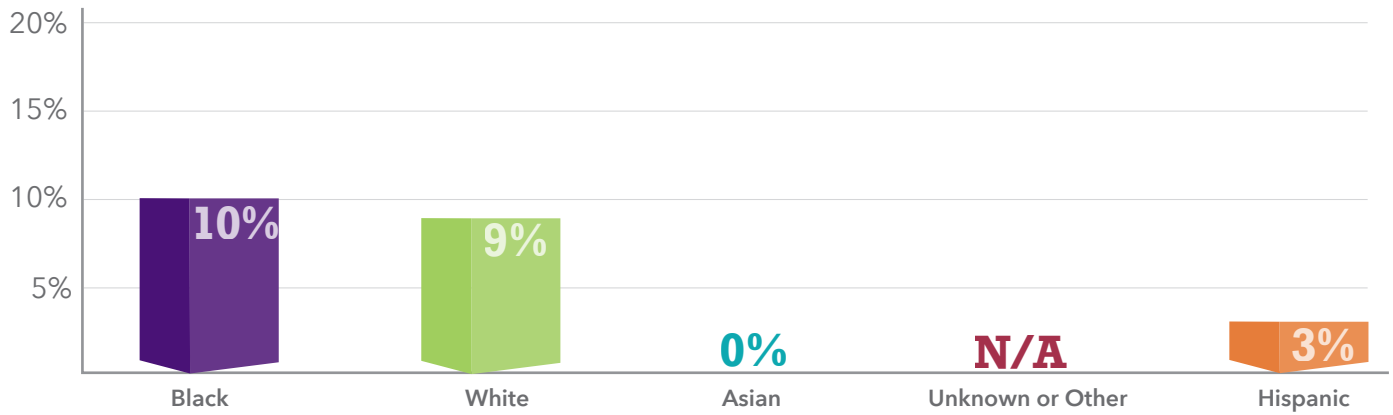


# Preterm Birth

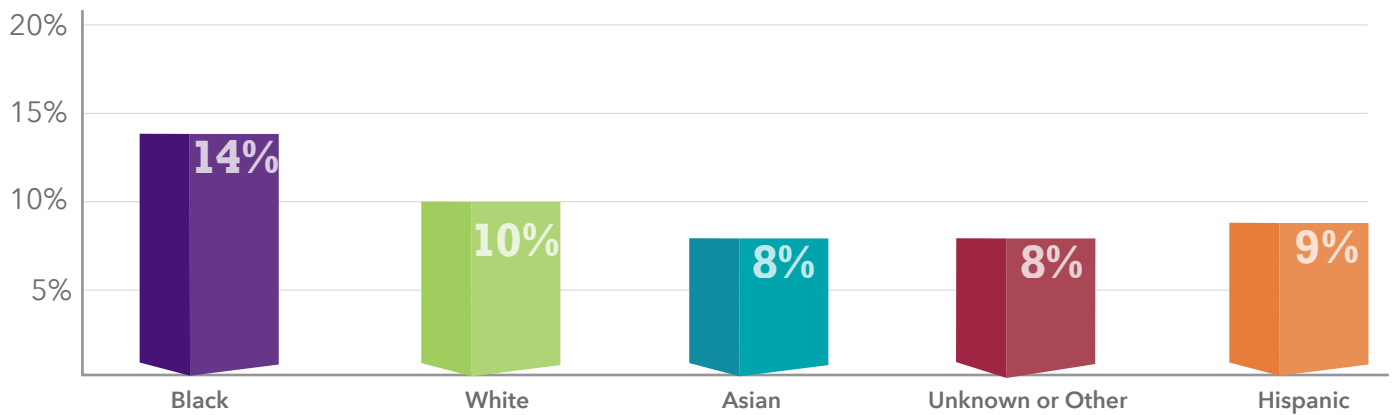


## 2016 Preterm Birth Rates by Race & Ethnicity in Selected Regions

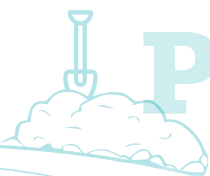
### Appalachian Region



### STATE OF OHIO







# Preterm Birth

**1 IN EVERY 7**

*African Americans babies are born premature.*

**1 IN EVERY 10**

*White babies are born premature.*

**1 IN EVERY 12**

*Hispanic babies are born premature.*

**1 IN EVERY 13**

*Asian babies are born premature.*

**1 IN EVERY 13**

*Children of unknown or unreported race are born premature.*

## Reflections

WHILE DISPARITIES IN ACCESS TO PRENATAL CARE ARE LESS APPARENT AMONG PREGNANT MOMS OF SIMILAR SOCIOECONOMIC STATUS IN THE PREVIOUS MEASURE OF "PRENATAL CARE", THERE IS A CLEAR DISPARITY IN BIRTH OUTCOMES BASED UPON RACE.

**TO DECREASE THE INCIDENCE OF PRETERM BIRTH AND CLOSE THE RACIAL DISPARITY, HOW DOES THE QUALITY AND FREQUENCY OF PRENATAL CARE NEED TO CHANGE?**

IN ADDITION TO BEING AFRICAN AMERICAN OR LOW INCOME, OTHER FACTORS ASSOCIATED WITH PRETERM BIRTH INCLUDE BEHAVIOR FACTORS SUCH AS STRESS AND TOBACCO SUBSTANCE USE.

**WHAT OTHER SUPPORTS MAY BE HELPFUL TO MOMS WITH INCREASED RISK OF PRETERM BIRTH TO DRIVE HEALTHY OUTCOMES FOR THEIR BABIES?**

# Infant Mortality



**Infant mortality is defined as the death of a live-born baby before their first birthday.**

An infant mortality rate is the number of babies who died during the first year of life per 1,000 live births. In 2016, 1,024 Ohio infants died before their first birthday out of the 138,200 births. Ohio ranks 41st out of 50 states for infant mortality with rate of 7.4 for every 1,000 live births.

*Why are Ohio's black babies dying at nearly 3X the rate of white babies?*

## Overview of Ohio infant mortality rates:

**Table 1**

2016 STATEWIDE Infant Mortality Rate by Race

Race	Estimated Births	Infant Deaths	Infant Mortality Rate (per 1,000 live births)
Black	24,275	369	15.2
White	105,200	610	5.8
Asian	4,750	18	3.8
Unknown	3,975	25	6.3
American Indian	<10	2	unknown
<b>ALL RACES</b>	<b>138,200</b>	<b>1,024</b>	<b>7.4</b>

**Table 2**

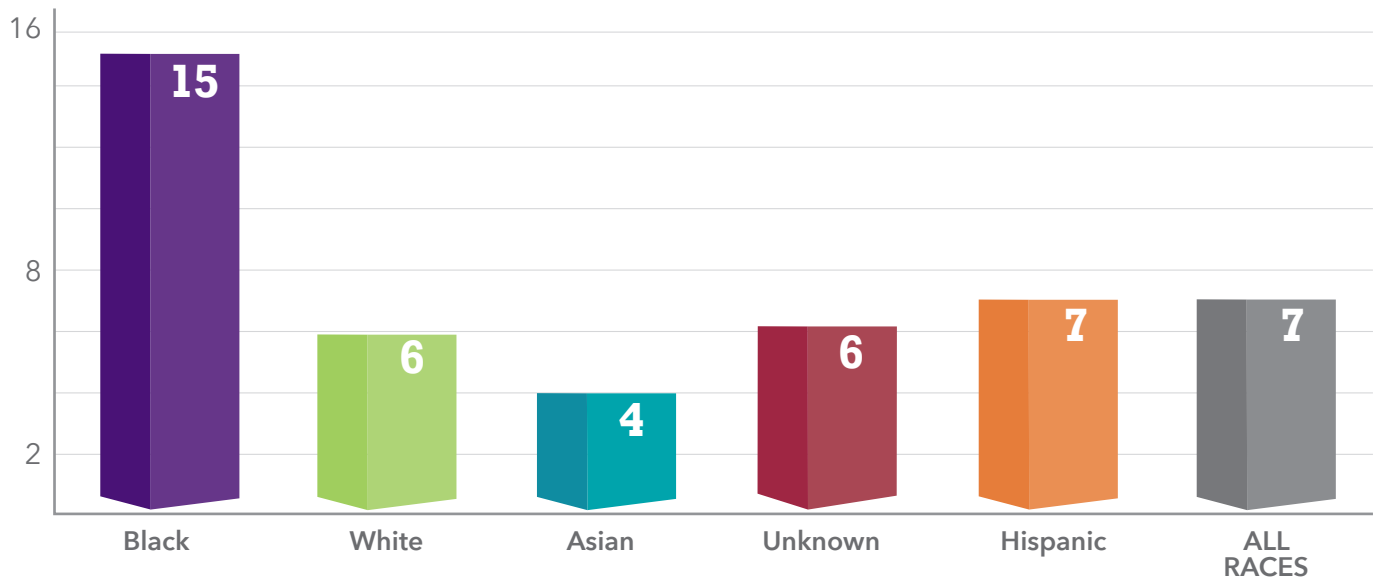
2016 STATEWIDE Infant Mortality Rate by Ethnicity

Ethnicity	Estimated Births	Infant Deaths	Infant Mortality Rate (per 1,000 live births)
Hispanic	7,400	54	7.3
Non-Hispanic	131,000	970	7.4
<b>TOTAL</b>	<b>138,400</b>	<b>1,024</b>	<b>7.4</b>

Note: The birth estimates vary when disaggregating them by race and ethnicity due to gaps in the data that identify these demographics.

**Chart 1**

**Combined Data: 2016 STATEWIDE Infant Mortality Rate by Race & Ethnicity**  
(per 1,000 births)





# Infant Mortality

Table 3 and Chart 2 provide similar infant mortality rate data for the six geographic regions selected for this study.

The results shown for the 5 counties and the Appalachian region mirror that of the state as a whole. The infant mortality rate for white babies is significantly lower than that for black babies in every region. Due to very small numbers in many counties, infant mortality data for other race and ethnicity groups were not available for county-level analysis.

**Table 3**

■ White ■ Black

*2016 Infant Mortality Rates by Region and Race*

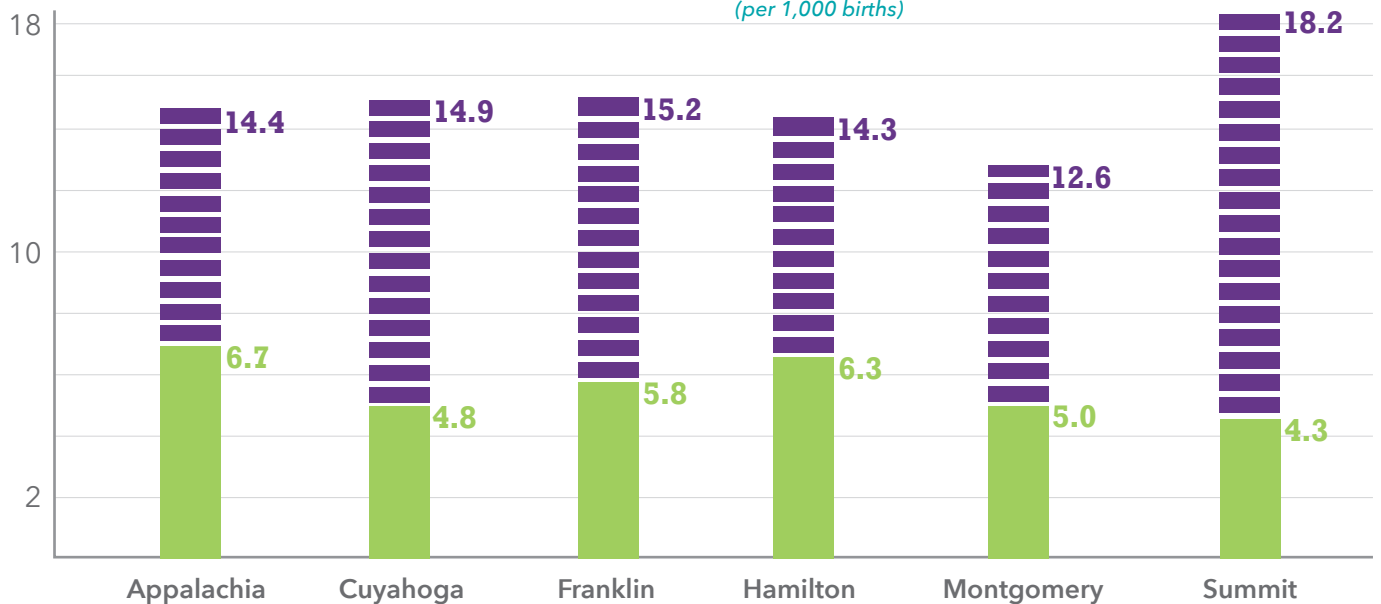
Region	Total Live Births	White Infant Deaths	White Mortality Rate (per 1k)	Total Live Births	Black Infant Deaths	Black Mortality Rate (per 1k)
Cuyahoga	7,917	38	4.8	5,705	85	14.9
Franklin*	10,690	62	5.8	5,855	89	15.2
Hamilton	6,349	40	6.3	3,497	50	14.3
Montgomery	4,400	22	5.0	1,746	22	12.6
Summit	4,186	18	4.3	1,319	24	18.2
Appalachia***	18,575	125	6.7	1,041	15	14.4*

\* The black infant mortality rate for Appalachia should be viewed with caution as it is based on a small number of infant deaths.

**Chart 2**

*2016 Infant Mortality Rates by Region and Race*  
(per 1,000 births)

■ White ■ Black



**IS MEDICAL CARE SUFFICIENT TO CLOSE THE INFANT MORTALITY GAP?  
WHAT FACTORS BEYOND MEDICAL CARE AFFECT THE HEALTH OF  
INFANTS AND THEIR FAMILIES? HOW DO HOUSING, TRANSPORTATION,  
EDUCATION, EMPLOYMENT AND OTHER SOCIAL DETERMINANTS  
IMPACT INFANT HEALTH?**

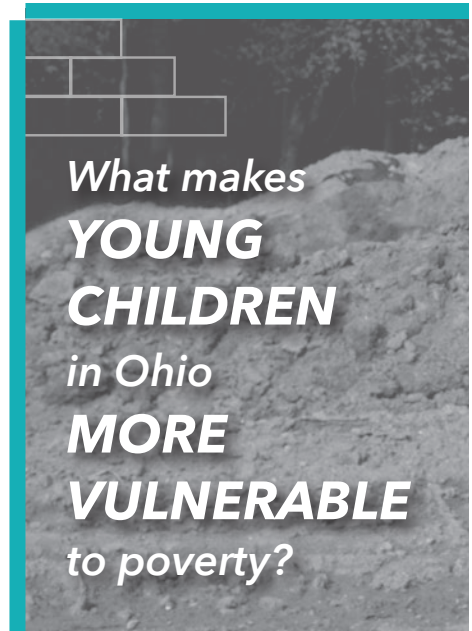
# Early Childhood Poverty

## What does living at 100% of the federal poverty level (FPL) mean?

For a family of three, it means making an annual gross income of \$20,160.



**1 in 5**  
OHIO CHILDREN  
LIVE IN POVERTY.



**Children under 6 are the most vulnerable to poverty with 26.4% of 0-5 year olds living at or below 100% FPL.**

## 2016 Federal Poverty Guidelines:

<u>Family Size</u>	<u>Gross Annual Income</u>	<u>Gross Monthly Income</u>	<u>Approx Hourly Wage</u>
1	\$11,880	\$990	\$5.71
2	\$16,020	\$1,335	\$7.70
3	\$20,160	\$1,680	\$9.69
4	\$24,300	\$2,025	\$11.68
5	\$28,440	\$2,370	\$13.67
6	\$32,580	\$2,715	\$15.66
7	\$36,730	\$3,061	\$17.66
8	\$40,890	\$3,408	\$19.66
<b>OVER 8, add per person</b>	<b>\$4,160</b>	<b>\$347</b>	<b>\$2.00</b>

Data source: U.S. Census 2016 American Community Survey B-17020



# Early Childhood Poverty

For Ohio as a whole, as well as for all the selected regions, white and Asian children have significantly lower instances of poverty than do black, Hispanic and other minority children.

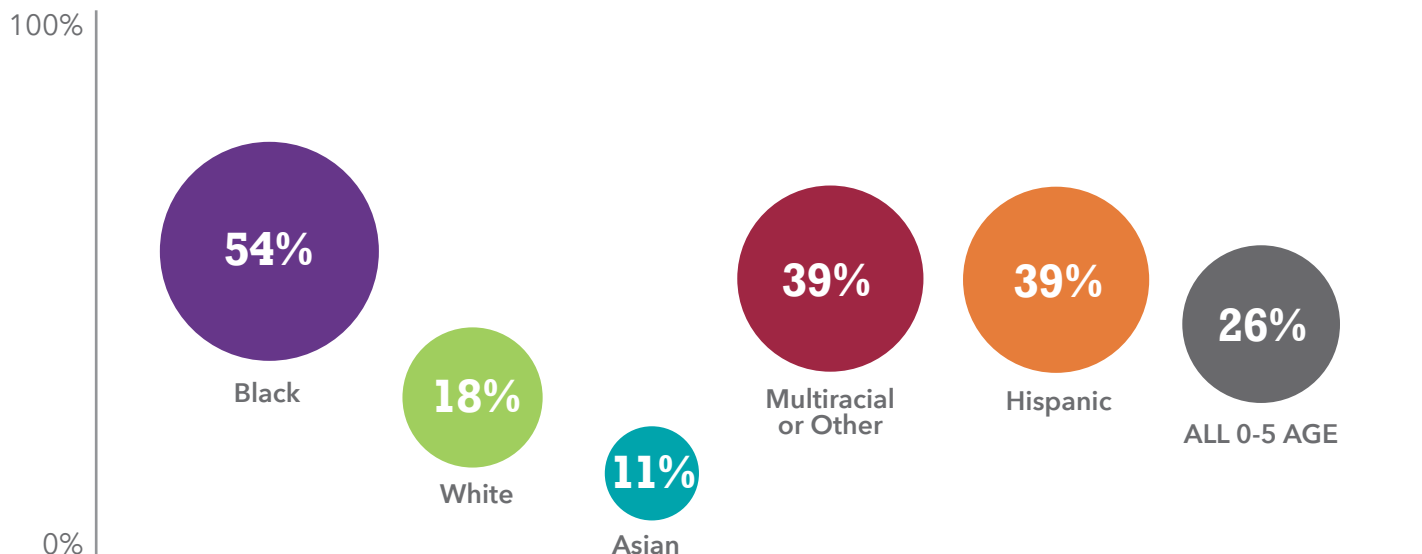
## STATE OF OHIO

### 2016 Childhood Poverty by Race & Ethnicity

Race & Ethnicity	0-5 Age Below Poverty	0-5 Age Above Poverty	TOTAL 0-5 Age Children	% 0-5 Total Population	% 0-5 Below Poverty
Black	67,871	57,959	125,830	14.9%	53.9%
White	105,470	474,545	580,015	68.7%	18.2%
Asian	1,790	13,963	15,753	1.9%	11.4%
Multiracial/Other	27,197	43,373	70,570	8.3%	38.5%
Hispanic	20,404	31,908	52,312	6.2%	39.0%
All 0-5 Age	222,732	621,748	844,480	100%	26.4%

## STATE OF OHIO

### 2016 % EARLY Childhood Poverty by Race & Ethnicity 0-5 Year Olds BELOW Poverty Level:



# Early Childhood Poverty

Poverty rates for the Appalachian Region of Ohio are higher than statewide poverty rates even for white children who fare better than their racial and ethnic minority peers. What factors contribute to these higher poverty rates, especially among children?

There are far less children of color in the Appalachian Region compared to the entire state, however, these children are still more likely to experience poverty than their white peers. Why may this be?

## Appalachian Region

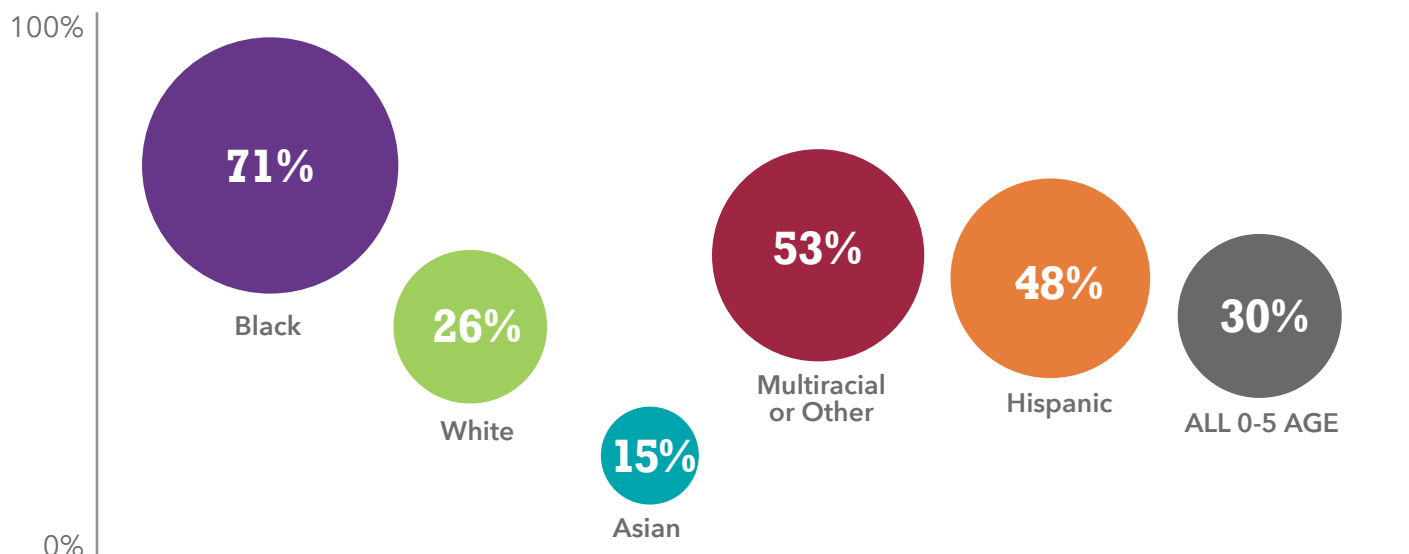
### 2016 Childhood Poverty by Race & Ethnicity

Race & Ethnicity	0-5 Age Below Poverty	0-5 Age Above Poverty	TOTAL 0-5 Age Children	% 0-5 Total Population	% 0-5 Below Poverty
Black	4,473	1,814	6,287	4.7%	71.1%
White	30,334	85,646	115,980	86.3%	26.2%
Asian	93	531	624	.5%	14.9%
Multiracial/Other	3,789	3,434	7,223	5.4%	52.5%
Hispanic	2,011	2,184	4,195	3.1%	47.9%
All 0-5 Age	40,700	93,609	134,309	100%	30.3%

*Note: There are a total of 6,287 black children under the age of 6 living in Ohio's Appalachian Region spanning 32 counties. 48% of black children 0-5 years old living in the Appalachian Region reside in Mahoning County and 22.6% reside in the neighboring Trumbull County. The remaining 29% of black children under 6 reside among the 30 other Appalachian counties.*

## Appalachian Region

### 2016 % EARLY Childhood Poverty by Race & Ethnicity 0-5 Year Olds BELOW Poverty Level:





# Early Childhood Poverty

## 2016 Childhood Poverty by Race & Ethnicity

### Cuyahoga County

Race & Ethnicity	0-5 Age Below Poverty	0-5 Age Above Poverty	TOTAL 0-5 Age Children	% 0-5 Total Population	% 0-5 Below Poverty
Black	16,574	15,049	31,623	35.2%	52.4%
White	4,974	35,500	40,474	45%	12.3%
Asian	225	1,865	2,090	2.3%	10.8%
Multiracial/Other	2,961	5,550	8,511	9.5%	34.8%
Hispanic	2,980	4,236	7,216	8.0%	41.3%
All 0-5 Age	27,714	62,200	89,914	100%	30.8%

### Franklin County

Race & Ethnicity	0-5 Age Below Poverty	0-5 Age Above Poverty	TOTAL 0-5 Age Children	% 0-5 Total Population	% 0-5 Below Poverty
Black	14,778	14,010	28,788	26.8%	51.3%
White	7,048	45,856	52,904	49.2%	13.3%
Asian	531	4,120	4,651	4.3%	11.4%
Multiracial/Other	3,539	7,740	11,279	10.5%	31.4%
Hispanic	3,806	6,127	9,933	9.2%	38.3%
All 0-5 Age	29,702	77,853	107,555	100%	27.6%

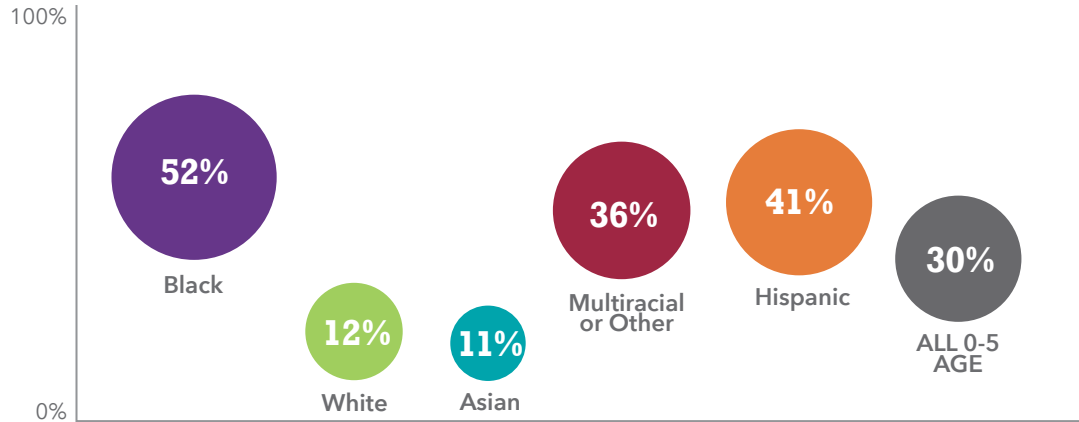
### Hamilton County

Race & Ethnicity	0-5 Age Below Poverty	0-5 Age Above Poverty	TOTAL 0-5 Age Children	% 0-5 Total Population	% 0-5 Below Poverty
Black	10,795	9,108	19,903	30.8%	54.2%
White	4,789	28,466	33,255	51.4%	14.4%
Asian	134	1,338	1,472	2.3%	9.1%
Multiracial/Other	1,974	4,059	6,033	9.3%	32.7%
Hispanic	1,548	2,503	4,051	6.3%	38.2%
All 0-5 Age	19,240	45,474	64,714	100%	29.7%

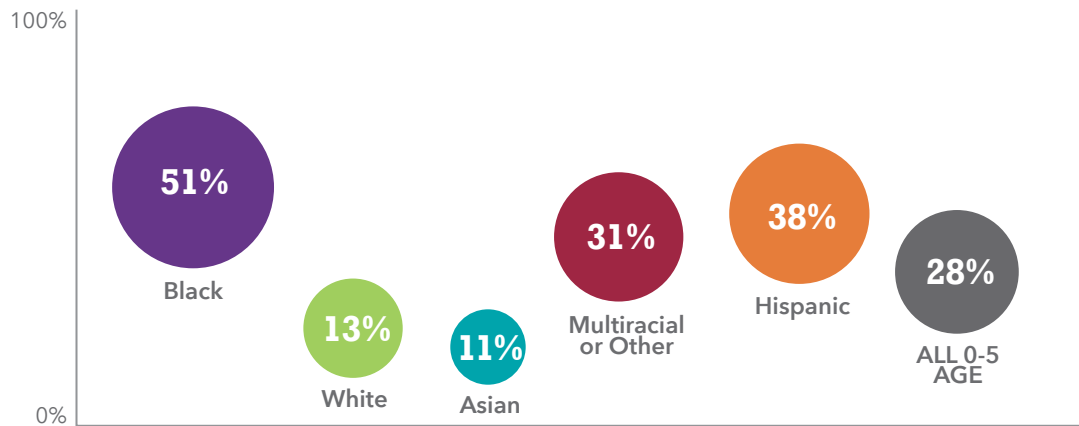
# Early Childhood Poverty

**2016 % EARLY Childhood Poverty by Race & Ethnicity**  
 0-5 Year Olds BELOW Poverty Level:

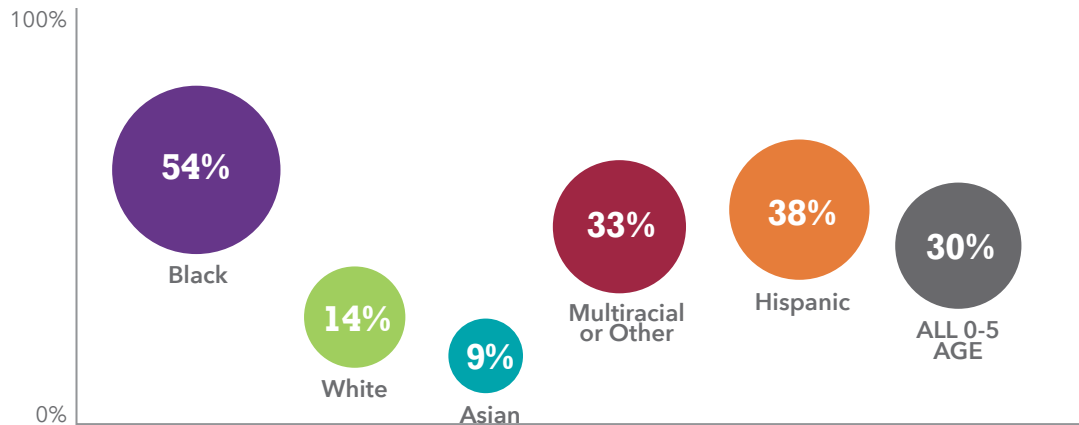
## Cuyahoga County



## Franklin County



## Hamilton County





# Early Childhood Poverty

## 2016 Childhood Poverty by Race & Ethnicity

### Montgomery County

Race & Ethnicity	0-5 Age Below Poverty	0-5 Age Above Poverty	TOTAL 0-5 Age Children	% 0-5 Total Population	% 0-5 Below Poverty
Black	5,513	3,399	8,912	22.6%	61.9%
White	4,852	19,003	23,855	60.4%	20.3%
Asian	122	392	514	1.3%	23.7%
Multiracial/Other	1,913	2,402	4,315	10.9%	44.3%
Hispanic	890	1,011	1,901	4.8%	46.8%
All 0-5 Age	13,290	26,207	39,497	100%	33.6%

### Summit County

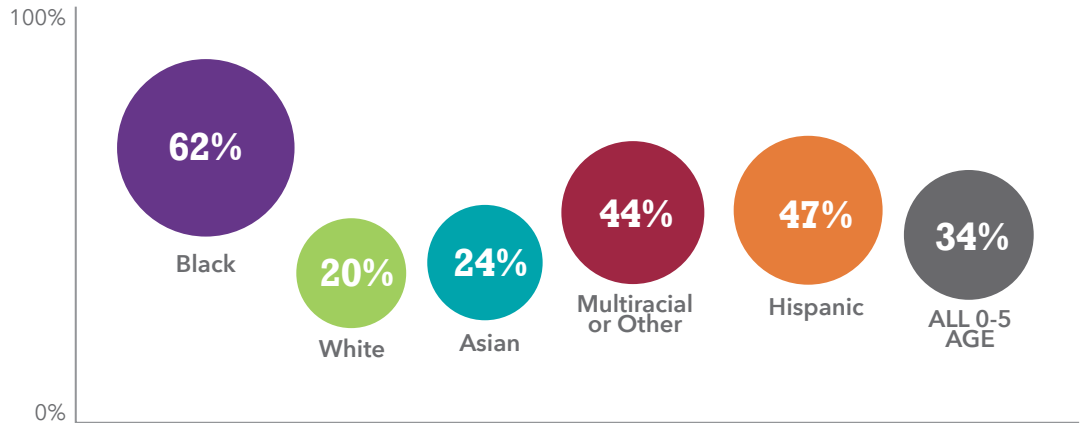
Race & Ethnicity	0-5 Age Below Poverty	0-5 Age Above Poverty	TOTAL 0-5 Age Children	% 0-5 Total Population	% 0-5 Below Poverty
Black	3,467	3,401	6,868	18.7%	50.5%
White	3,201	21,175	24,376	66.4%	13.1%
Asian	189	973	1,162	3.2%	16.3%
Multiracial/Other	981	2,146	3,127	8.5%	31.4%
Hispanic	391	803	1,194	3.3%	32.7%
All 0-5 Age	8,229	28,498	36,727	100%	22.4%



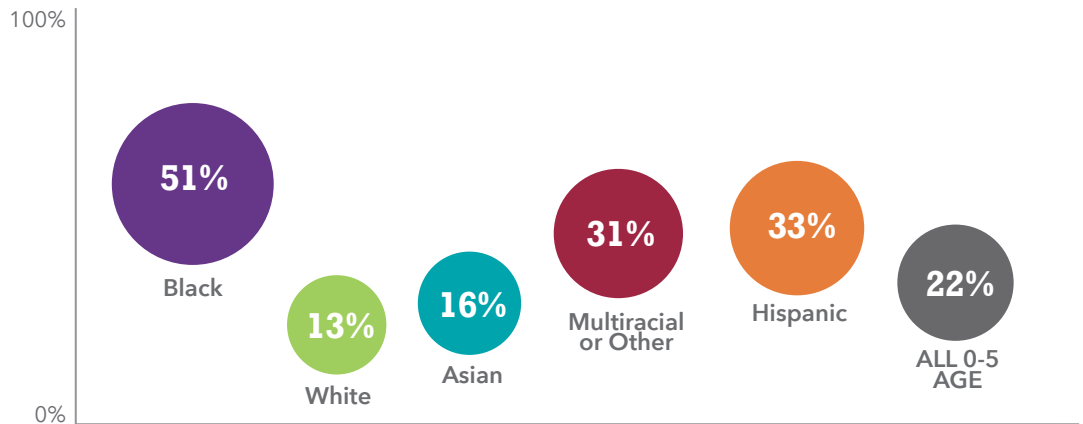
# Early Childhood Poverty

**2016 % EARLY Childhood Poverty by Race & Ethnicity**  
 0-5 Year Olds BELOW Poverty Level:

## Montgomery County



## Summit County



Data source: U.S. Census 2016 American Community Survey B-17020



# Access to State & Federally Funded Home Visiting

**Ohio's voluntary, evidence-based home visiting programs include the state-funded Help Me Grow program and the federally-funded Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program.**

For eligible families who elect to participate in a home visiting program, providers regularly visit the homes of vulnerable families (typically once per month) starting while the mother is still pregnant and continuing through the first few years of the child's life. A total of 106,222 home visits were completed in 2017 for families served by both Help Me Grow and MIECHV.

During this critical period of physical, emotional, and cognitive development for young children, parents receive support and guidance on how to create a safe, stimulating environment that promotes growth and learning. Voluntary, evidence-based home visiting programs allow motivated parents to learn how to succeed in their new role and provide children a healthy start with their first and most important teachers—parents.

Ohio's voluntary home visiting program utilizes three evidence-based models:

1. Healthy Families America;
2. Nurse-Family Partnership and;
3. Parents as Teachers.

Although there is slight variation within each model, the primary goals of Ohio's evidence-based home visiting programs are to:

- Cultivate parents' ability to form strong, positive attachments with their children and to keep them safe.
- Promote children's healthy physical, cognitive, and social-emotional development by monitoring their progress, guiding parents in recognizing their children's and their own needs, and accessing appropriate services.
- Improve maternal and child health.

*In 2017,*  
**9,612 FAMILIES**  
*were served in*  
**HOME VISITING**  
**PROGRAMS.**

**7,381 by Help Me Grow funds**  
**2,231 by MIECHV funds**

***There is a \$5.70 return on investment for every public dollar invested in evidence-based home visiting programs. Returns are seen as a result of the following outcomes:***

#### **School Readiness:**

- Increases scores on 1st-3rd grade math and reading tests by 25%
- Decreases language problems by 68%

#### **Family Health:**

- Decreases instance of low-weight births by 48%
- Decreases number of major injuries before age 2 by 32.6%

#### **Family Self-Sufficiency**

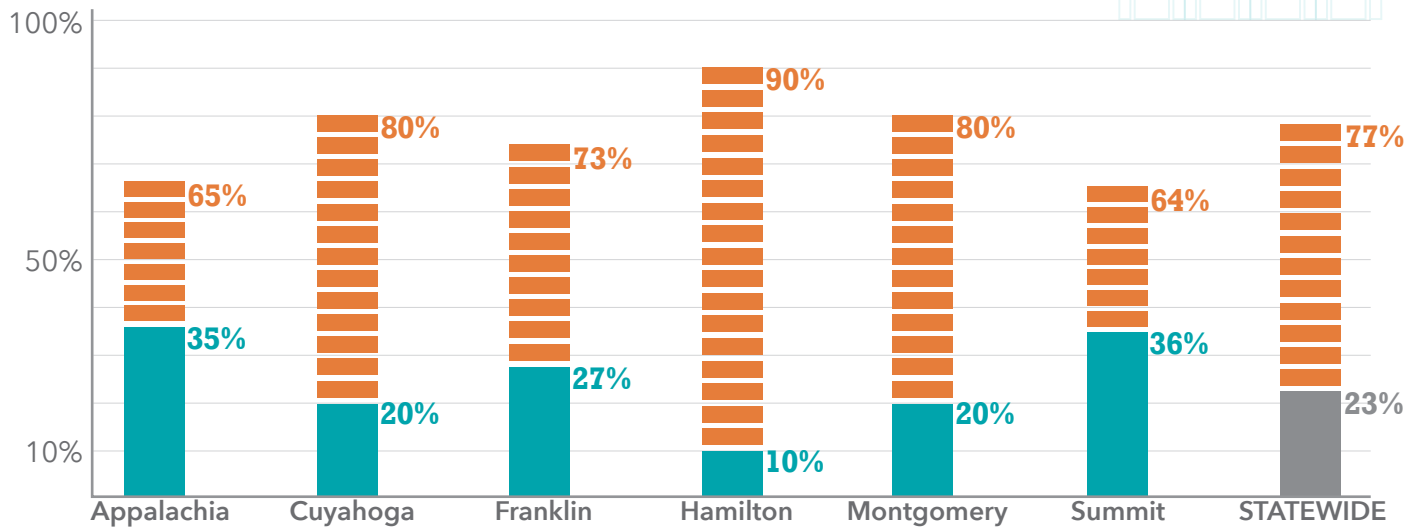
- Increases the likelihood of mothers to be enrolled in an education or training program by 5 times
- Decreases reliance on Temporary Assistance for Needy Families (TANF) payments by 5.6% for 12 years post-partum

# Access to State & Federally Funded Home Visiting



**Percentage of 2017 Ohio Home Visiting FAMILIES SERVED in Help Me Grow & MIECHV by Region**

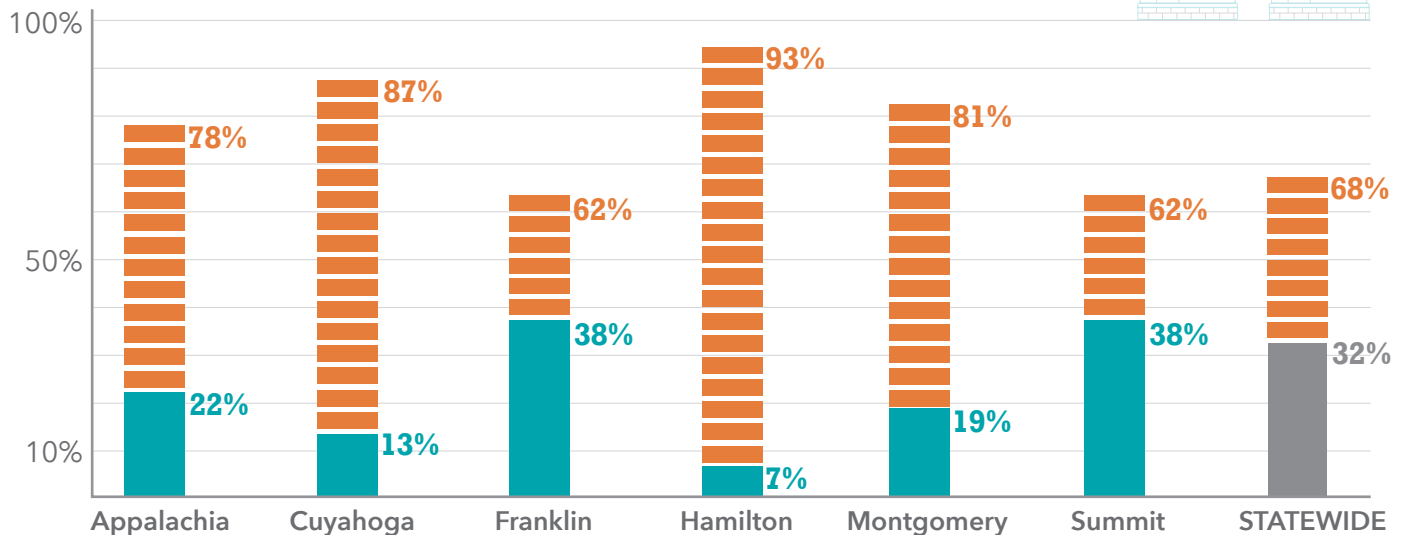
**Chart 1** ■ Help Me Grow ■ MIECHV



Note: While the majority of home visits are supported by Help Me Grow, MIECHV funding supports Ohio's home visiting infrastructure while also serving a certain percentage of families among 27 communities in Ohio. Data Source: Ohio Department of Health

**Percentage of 2017 Ohio HOME VISITS Provided by Help Me Grow & MIECHV by Region**

**Chart 2** ■ Help Me Grow ■ MIECHV

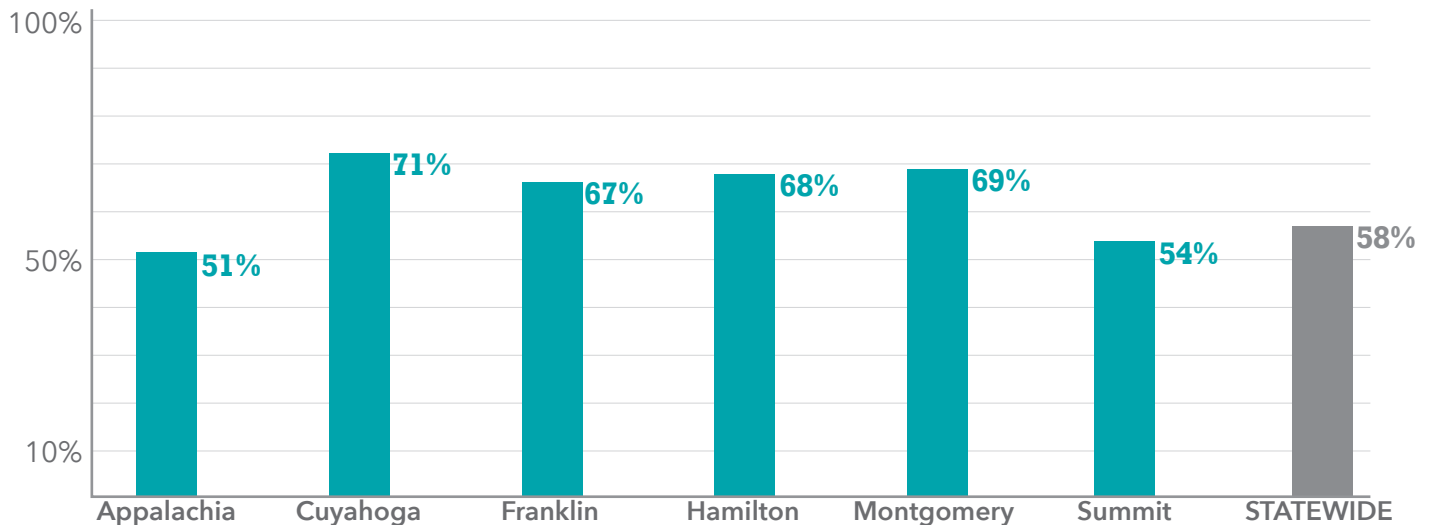


Data Source: Ohio Department of Health

# Access to State & Federally Funded Home Visiting

**FY17 Percentage of Ohio Families Receiving Home Visits that are Below 50% of the Federal Poverty Level by Region**

**Chart 3**



Data Source: Ohio Department of Health

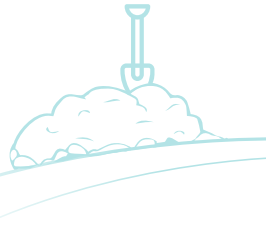
**96% of families served by home visiting programs are at or below 200% of the federal poverty level.**

**Reflections**

IN ORDER TO GAUGE WHETHER THE STATE IS REACHING THE MOST AT-RISK FAMILIES, WE CAN EVALUATE THE PERCENTAGE OF FAMILIES SERVED IN DIRE POVERTY, 50% FPL OR LESS.

**WHAT OTHER DATA WOULD BE HELPFUL IN EVALUATING WHETHER THE PROGRAM IS REACHING THE MOST AT-RISK CHILDREN AND FAMILIES?**

# Access to State & Federally Funded Home Visiting



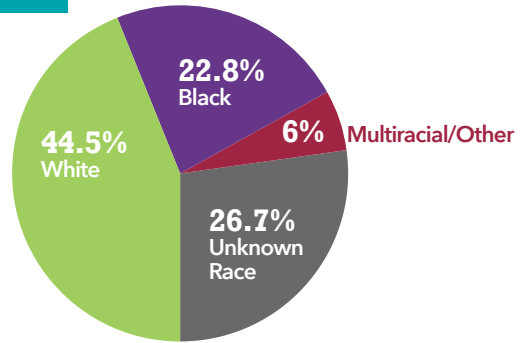
## FY17 Home Visits by Race/Ethnicity of Parents

\* Note that ethnicity was not reported by race so the 492 persons shown as Hispanic/Latino are included in the total of 9,612 persons shown in the breakdown by race.

**Table 1**

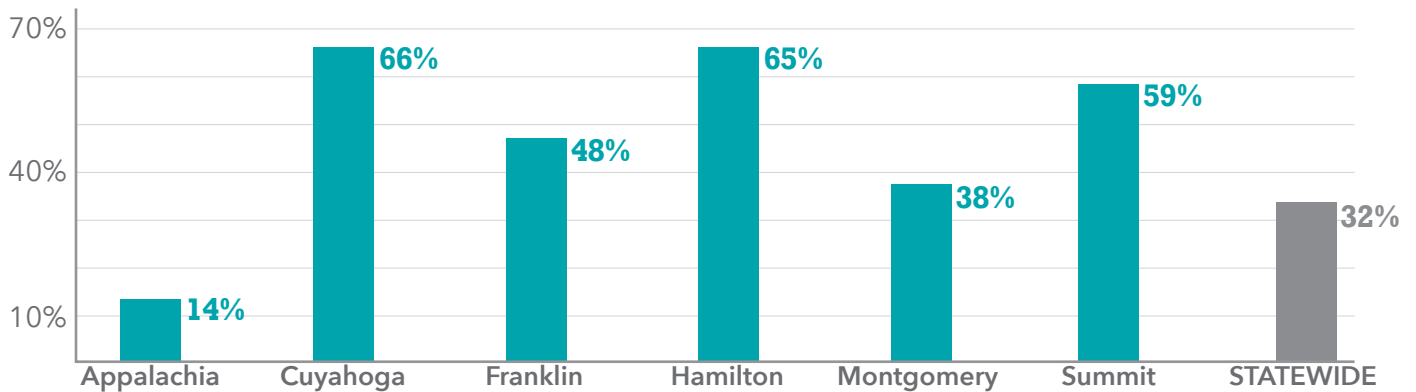
Race & Ethnicity	# of Households Visited	% of Households Visited
White	4275	44.5%
Black	2200	22.8%
Multiracial/Other	574	6.0%
Unknown Race	2563	26.7%
<b>TOTAL</b>	<b>9612</b>	<b>100%</b>
Hispanic	492*	5.1%

**Chart 4**



## FY17 Percentage of Ohio Families Receiving Home Visits THAT ARE RACIAL MINORITIES by Region

**Chart 5**



Data Source: Ohio Department of Health

### Reflections

RECALL WHAT WE KNOW ABOUT EARLY CHILDHOOD POVERTY IN OHIO: 43.9% OF BLACK CHILDREN 0-5 YEARS OLD AND 18.2% OF WHITE CHILDREN 0-5 YEARS OLD ARE LIVING AT OR BELOW 100% FPL. **CONSIDERING THAT POVERTY DISPROPORTIONATELY AFFECTS YOUNG BLACK CHILDREN, DO OUR FAMILIES SERVED BY HOME VISITING ACCURATELY REFLECT THOSE MORE LIKELY TO BE AT-RISK?**



Access to

# Early Head Start


**Early Head Start (EHS) programs provide intensive, comprehensive child development and family support services to low-income infants and toddlers under the age of 3 and pregnant women.**

EHS is designed to nurture healthy attachments between parent and child (or child and caregiver). Services encompass the full range of a family's needs from pregnancy through a child's third birthday. These services are designed to promote the development of children and to enable their parents to fulfill their roles as caregivers and teachers and to move toward self-sufficiency.

EHS programs promote the physical, cognitive, social, and emotional development of infants and toddlers through safe and developmentally enriching care. This prepares children for continued growth and development and lifelong success. Programs also assist families in meeting their own personal goals and achieving self-sufficiency across a wide variety of domains, such as housing stability, continued education, and financial security.

EHS programs provide options for home-based, center-based and family child care services. Home-based services are provided through weekly home visits to children and families in addition to bimonthly opportunities for group learning among parents and children. Education and child development services are delivered through center-based classroom settings located at an EHS center, school, child care center, or family child care setting.

Eligibility for EHS requires the family to be at or below 100% of the federal poverty level, however, EHS programs are allowed to serve a small percentage of children from families between 100% and 130% of FPL as well others who demonstrate need in other ways.

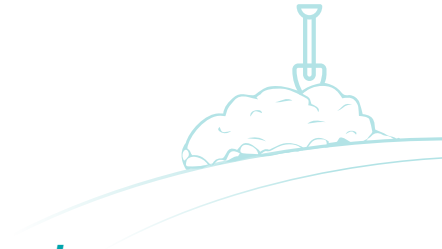


**EHS programs promote the physical, cognitive, social, and emotional development of *INFANTS* and *TODDLERS* through safe and developmentally enriching caregiving.**

**To measure access, the next page shows a comparison between eligible 0-2 year olds at or below 130% FPL compared to eligible 0-2 years enrolled in Early Head Start.**



# Access to Early Head Start



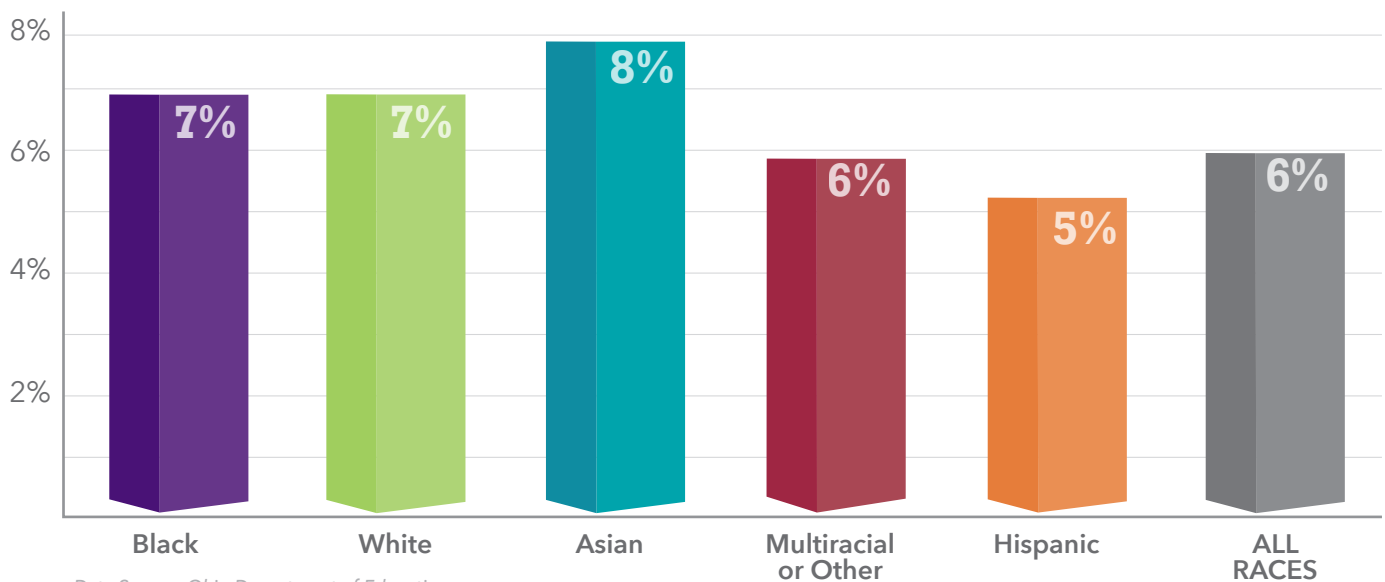
## FY17 Statewide Early Head Start Children Served by Race & Ethnicity

**Table 1**

Race & Ethnicity	# of Early Head Start Children (0-2)	Est. # of Eligible Children (0-2) at/below 130% FPL	% of Eligible Early Head Start Children (0-2) Being Served
Black	2,780	42,725	6.5%
White	4,476	68,822	6.5%
Asian	85	1,136	7.5%
Multiracial/Other	966	17,278	5.6%
Hispanic	663	12,934	5.1%
ALL CHILDREN	8,970	142,895	6.3%

## FY17 Statewide Percentage of ELIGIBLE 0-2 YEAR OLDS Served in Early Head Start by Race & Ethnicity

**Chart 1**



Data Source: Ohio Department of Education




# Laying *the* Foundation

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- INCIDENCE OF TRAUMA
- EARLY INTERVENTION
- ACCESS TO PUBLICLY FUNDED CHILDCARE
- ACCESS TO HEAD START
- ACCESS TO PRESCHOOL
- ACCESS TO EARLY CHILDHOOD EXPERIENCES
- KINDERGARTEN READINESS







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During a child's first five years, Ohio has a critical opportunity to lay a strong foundation for the state's most-at risk children by investing in enriching early experiences. Quality early childhood programs have the ability to close gaps between at-risk kids and their more advantaged peers by the time they enter Kindergarten. Identifying barriers to children's success and providing interventions must happen in the first five years of life to give all children the best shot at reaching their full potential. Children in Ohio are facing unimaginable levels of trauma and adversity before they even enter school. Ohio must do better to reach families and children through quality home visiting, child care and preschool programs. In order to improve kindergarten readiness and lifelong success for Ohio kids, the state needs to ensure early development is happening in high-quality learning environments.



# Incidence of Trauma

**Adverse Childhood Experiences (ACEs) are traumatic events that have the potential to cause long-lasting negative effects.**

During the earliest and most critical years of development, children are highly vulnerable to adversity. As the frequency and length of ACEs increase, so do the impacts on physical and mental health, academic achievement, and self-sufficiency. Ohio ranks 46th in the nation for kids having three or more ACEs, putting them at higher risk for long-lasting negative effects.

## What constitutes an ACE?

The Adverse Childhood Experiences Study conducted in 1995 outlined ten ACEs that predict negative outcomes later in life. Today, these have been adapted to create the ACE test—an eight question survey to determine the number of significant adversities a child has experienced. The commonly accepted questions on the ACE test ask whether a child has ever:

1. Lived with a parent or guardian who became divorced or separated
2. Lived with a parent or guardian who died
3. Lived with a parent or guardian who served time in jail or prison
4. Lived with anyone who was mentally ill or suicidal, or severely depressed for more than a couple of weeks
5. Lived with anyone who had a problem with alcohol or drugs
6. Witnessed a parent, guardian, or other adult in the household behaving violently toward another
7. Been the victim of violence or witnessed any violence in his or her neighborhood
8. Experienced economic hardship “somewhat often” or “very often” (i.e., the family found it hard to cover costs of food and housing)

**49% OF OHIO KIDS  
HAVE HAD AT LEAST ONE ACE.**



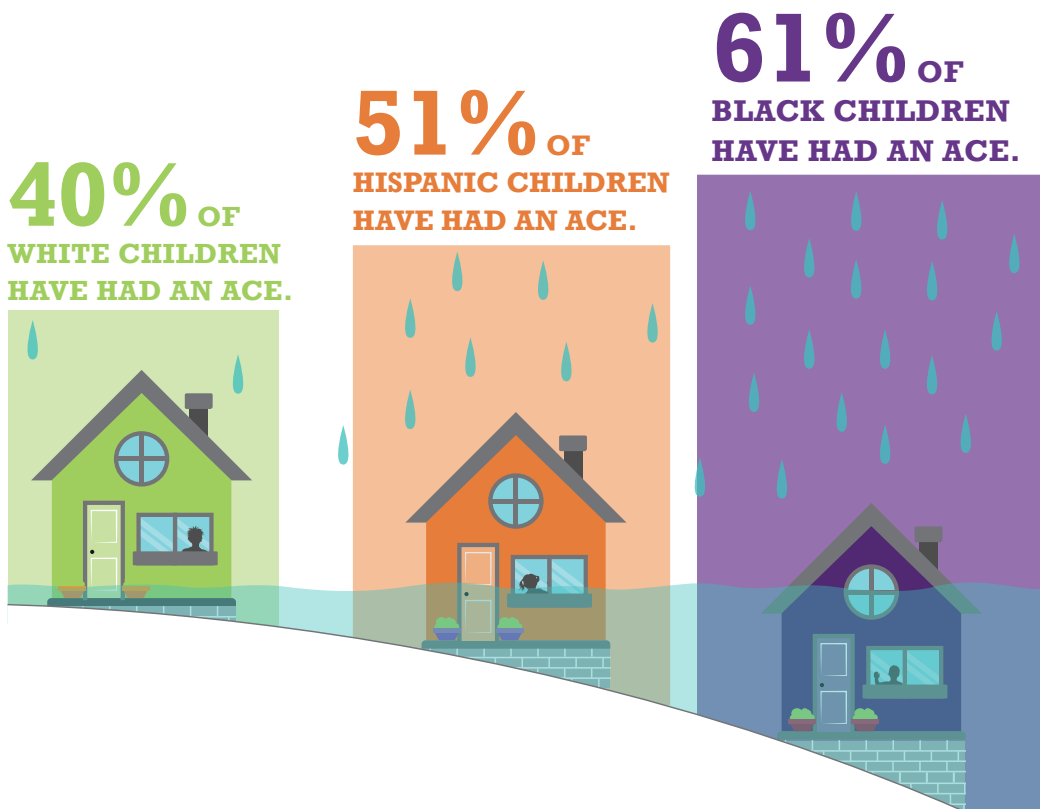
**1 in 7 Ohio kids has had THREE or MORE Adverse Childhood Experiences, putting them at much higher risk for long-term negative effects.**



# Incidence of Trauma

## Risk of Adverse Childhood Experiences in the United States by Race/Ethnicity

Almost half of all children in the United States have had at least one ACE, but black and Hispanic children are at much higher risk than their white peers.



## Reflections

### WHAT ARE THE LONG-TERM IMPACTS OF THIS KIND OF TRAUMA?

EXPERIENCES DURING THE FIRST SEVERAL YEARS OF LIFE SHAPE WHO A CHILD BECOMES. ADVERSE CHILDHOOD EXPERIENCES HAVE THE POTENTIAL TO IMPACT LONG-TERM MENTAL HEALTH, PHYSICAL HEALTH, AND BEHAVIOR—INCLUDING SMOKING, ALCOHOLISM, DRUG USE, MISSED WORK, DEPRESSION, SUICIDE ATTEMPTS, HEART DISEASE, DIABETES, SEVERE OBESITY, CANCER, AND STROKE. ON AVERAGE, PEOPLE WITH SIX OR MORE ADVERSE CHILDHOOD EXPERIENCES HAVE A LIFE EXPECTANCY OF 60 YEARS, WHICH IS SIGNIFICANTLY SHORTER THAN THE 80 YEAR LIFE EXPECTANCY FOR PEOPLE WITH NO ACEs.




# Early Intervention

**Ohio Early Intervention (EI) is a collaborative home and community-based system administered by the Ohio Department of Developmental Disabilities that provides coordinated, evidenced-based intervention services to parents of infants and toddlers with disabilities or developmental delays.**

EI serves infants and toddlers under age three who have a diagnosed physical or mental condition likely resulting in a delay in adaptive, cognitive, communication, physical, or social-emotional development. Early Intervention services are based on need and not income.

Families served by EI have a local team consisting of a service coordinator and service providers that work with the family in order to develop an Individualized Family Service Plan (IFSP). The team works through the family's IFSP to utilize supports and enhance the child's learning and development.



*All families, with the necessary supports and resources, can enhance their children's learning and development.*

**Table 1**

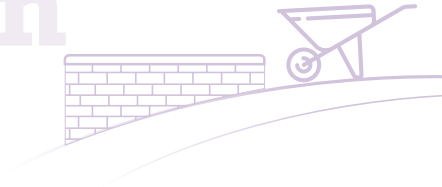
**Number of Early Intervention Children Served in FY17 by Region & Race/Ethnicity**

Region	White Children Served	Black Children Served	Hispanic Children Served	Asian Children Served	Multiracial or Others Served	All Children Served in FY17
Cuyahoga	1,232	782	248	89	82	2,436
Franklin	1,203	576	217	112	136	2,247
Hamilton	646	380	64	16	47	1,157
Montgomery	664	190	39	18	85	1,000
Summit	576	147	35	37	33	830
Appalachian	2,690	94	75	0	104	3,087
<b>STATE TOTAL</b>	<b>15,488</b>	<b>3,023</b>	<b>1,410</b>	<b>498</b>	<b>1,182</b>	<b>21,601</b>

\* Note: Some rows may not add up to the total number of children served because some data had to be estimated due to masking for privacy reasons when reported numbers were less than 5.

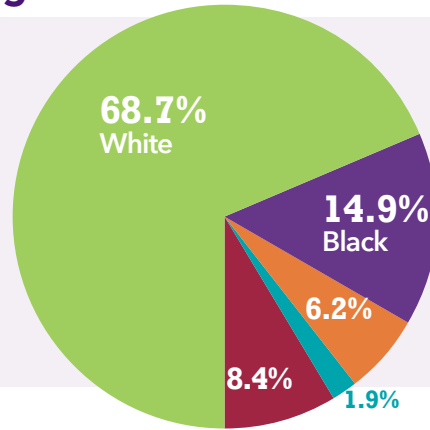


# Early Intervention



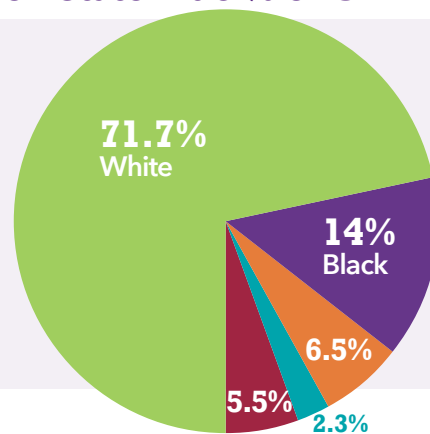
**Table 2** All Ohio Children Ages 0-5

Race & Ethnicity	Total # 0-5 Age
White	580,015
Black	125,830
Hispanic	52,312
Asian	15,753
Multirace/Other	70,570
ALL 0-5 AGE	844,480



**Table 3** FY17 Early Intervention Statewide % of CHILDREN SERVED

Race & Ethnicity	Total Children Served by EI
White	15,488
Black	3,023
Hispanic	1,410
Asian	498
Multirace/Other	1,182
ALL 0-5 AGE	21,601



## Reflections

RELATIVE TO THE EARLY CHILDHOOD POPULATION IN OHIO, EARLY INTERVENTION IS SERVING A RACIALLY PROPORTIONATE POPULATION. FOR EXAMPLE, 14.9% OF ALL OHIO CHILDREN 0-5 ARE BLACK AND 14% OF THE TOTAL POPULATION SERVED BY EI ARE BLACK.

**GIVEN WHAT WE KNOW ABOUT THE DISPARATE INCIDENCE OF PRETERM BIRTH AND ITS CONSEQUENCES, IS EI SERVING ALL THE CHILDREN WHO NEED SERVICES? IF NOT, HOW CAN WE BETTER SERVE THESE CHILDREN AND FAMILIES?**

**IF WE ARE SERVING ALL KIDS WHO NEED EI SERVICES, WHY DO WE CONTINUE TO SEE RACIAL DISPARITIES IN LATER OUTCOMES?**

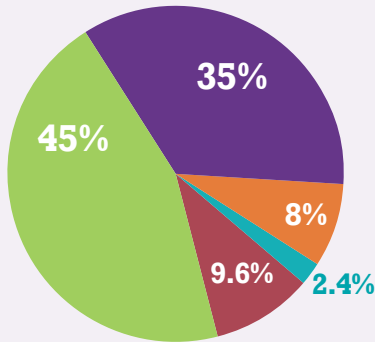
# Early Intervention

## REGIONAL ANALYSIS:

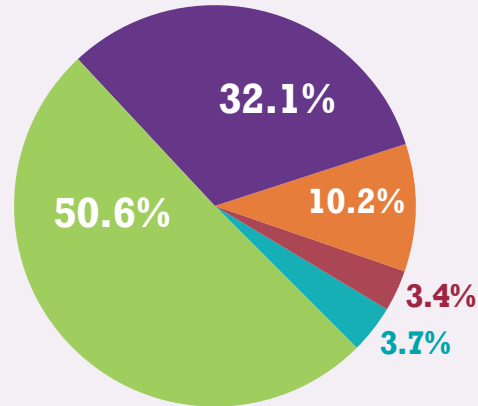
■ White    
 ■ Black    
 ■ Hispanic    
 ■ Asian    
 ■ Multirace/Other

### Cuyahoga County

#### Children Ages 0-5

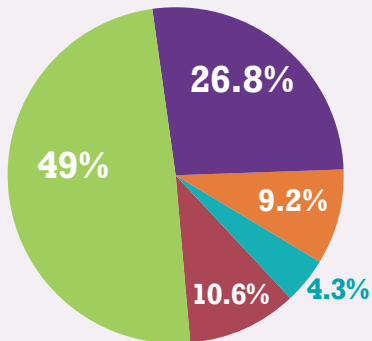


### FY17 Early Intervention % of CHILDREN SERVED

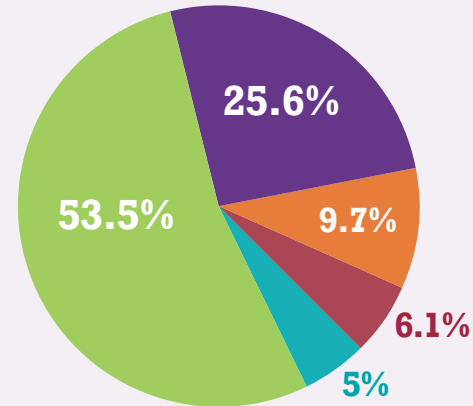


### Franklin County

#### Children Ages 0-5

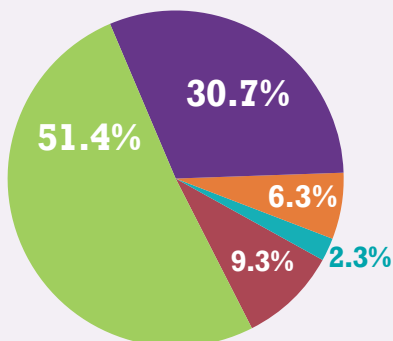


### FY17 Early Intervention % of CHILDREN SERVED

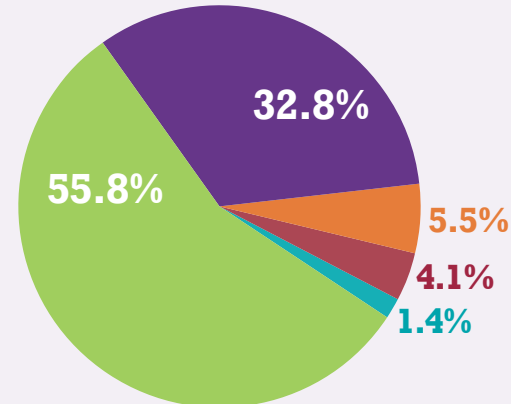


### Hamilton County

#### Children Ages 0-5



### FY17 Early Intervention % of CHILDREN SERVED



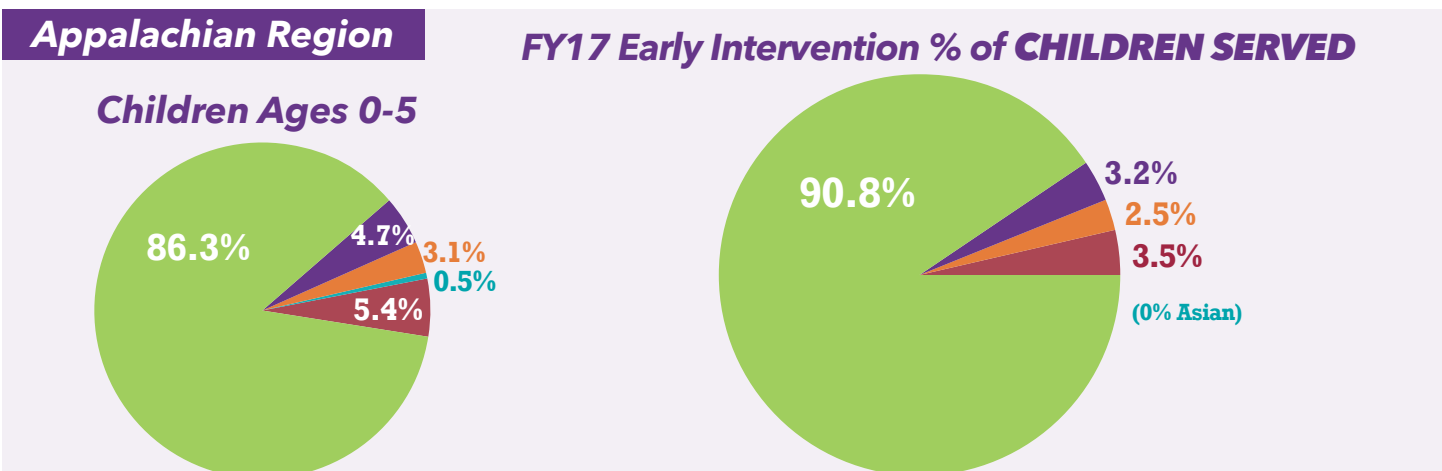
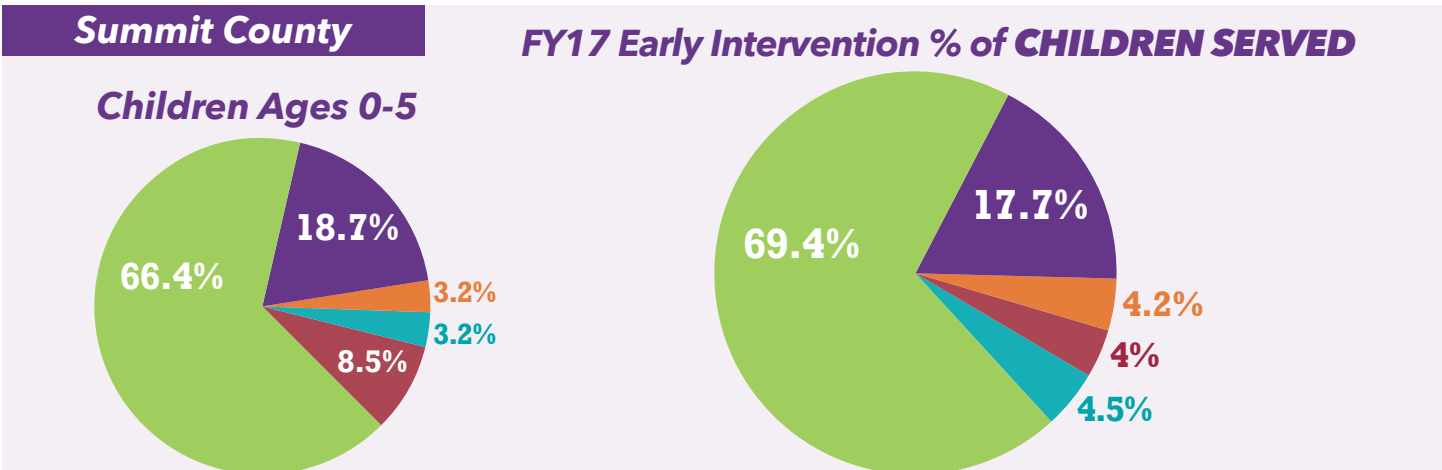
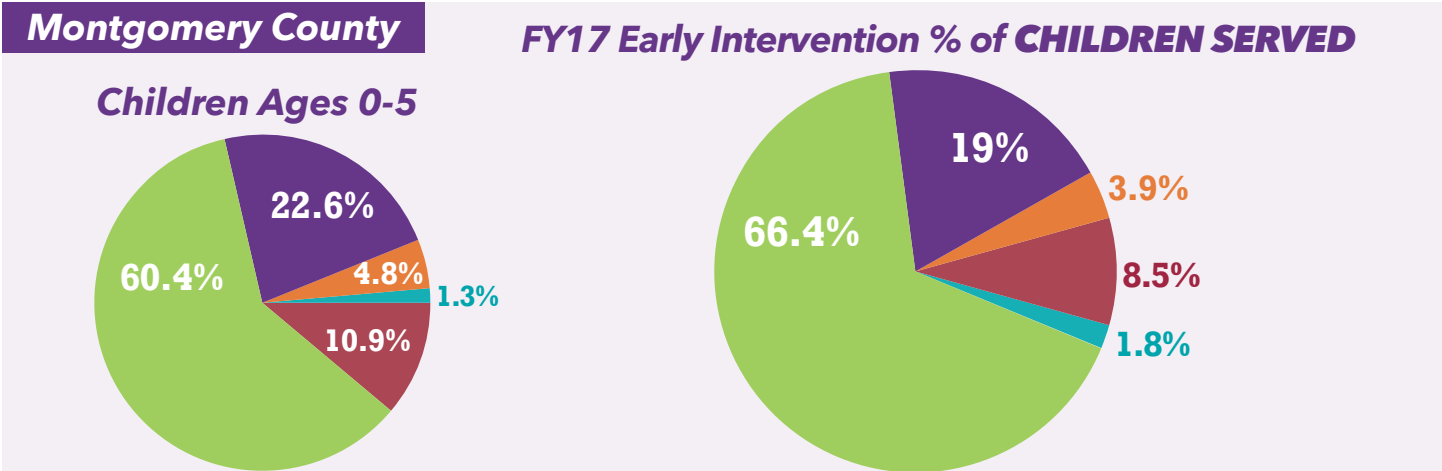


# Early Intervention



## REGIONAL ANALYSIS:

■ White   
 ■ Black   
 ■ Hispanic   
 ■ Asian   
 ■ Multirace/Other



Data source: U.S. Census 2016 American Community Survey B-17020

## Access to

# Publicly Funded Child Care

*The vast majority of Ohio kids who receive publicly funded early childhood experiences do so through child care programs.*

Ohio offers publicly funded child care (PFCC) to children of working parents living at or below 130% federal poverty level (FPL). The length of child care services is determined by the parents' qualifying work and/or school schedule, ranging from hourly care to over 60 hours per week, and parents' financial contribution is determined by income level. Child care for 0-4 year olds provides a critical opportunity to impact kids during the most important period of development, in addition to a necessary support for working families.

*Publicly funded child care serves **30.5%** of eligible 0-4 year olds in Ohio.*

While initial eligibility is 130% FPL families may continue to access PFCC until they are earning up to 300% FPL provided there is no break in eligibility under the Ohio Administrative Code. Only a small population of children, however, benefit from this second tier of eligibility due to the nature of low-income jobs, family circumstances and compliance with the rules. For example, between March 2017 and February of 2018, an average of 10,183 children between 130% and 200% FPL and an average of 1,525 children between 200 and 300% FPL accessed PFCC each month. This is approximately 9.2% and 1.4% percent of the total PFCC population respectively.

**Table 1**

### **2017 Statewide 0-4 YEAR OLD CHILDREN SERVED in PFCC by Race & Ethnicity (Compare to Eligible 0-4 Year Olds)**

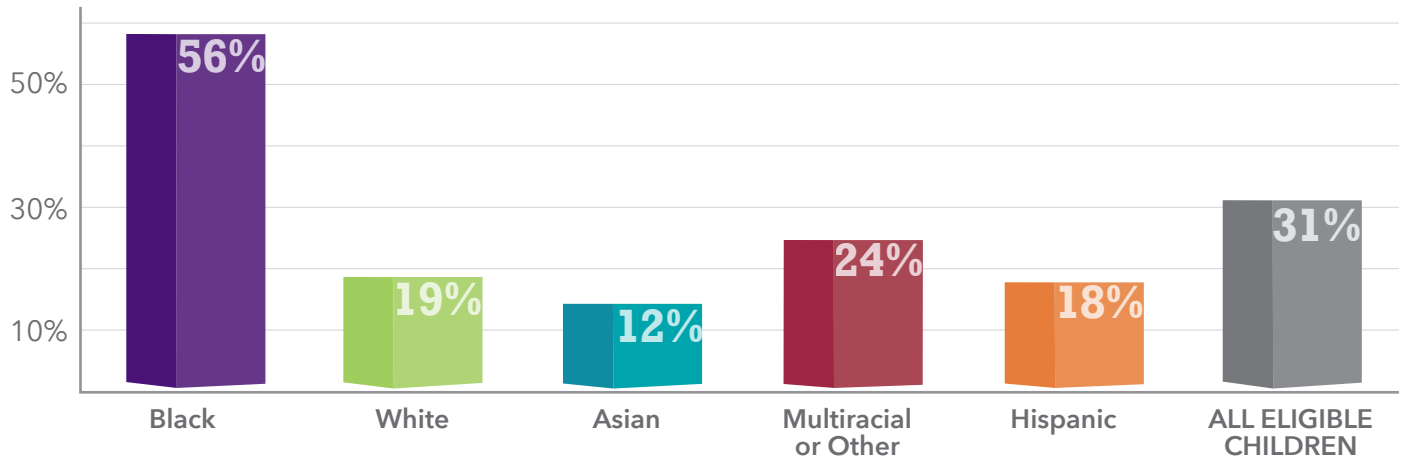
Race & Ethnicity	# of Infants in PFCC	# of Toddlers in PFCC	# of Preschoolers in PFCC	Total # 0-4 Age in PFCC	# of Eligible 0-4 Age <=130% FPL	% Eligible 0-4 Age in PFCC
Black	7,412	11,794	20,854	40,060	71,209	56.3%
White	3,416	6,012	12,263	21,691	114,703	18.9%
Asian	23	69	136	228	1,893	12.0%
Multirace/Other	1,235	2,062	3,562	6,859	28,796	23.8%
Hispanic	614	1,027	2,197	3,838	21,557	17.8%
<b>TOTAL CHILDREN</b>	<b>12,700</b>	<b>20,964</b>	<b>39,012</b>	<b>72,676</b>	<b>238,159</b>	<b>30.5%</b>

Data Source: Ohio Department of Job and Family Services, FY 2017

# Access to Publicly Funded Child Care

**2017 Statewide Percentage of ELIGIBLE 0-4 YEAR OLD CHILDREN SERVED in PFCC by Race & Ethnicity**

**Chart 1**



Data Source: Ohio Department of Job and Family Services, FY 2017

## Reflections

**WHY ARE MORE ELIGIBLE BLACK FAMILIES UTILIZING PUBLICLY FUNDED CHILD CARE THAN ELIGIBLE WHITE FAMILIES?**

A FAMILY OF THREE WITH ONE ADULT AND TWO CHILDREN LIVING AT 130% FPL HAS A GROSS ANNUAL INCOME OF \$33,176.

**IF THE AVERAGE COST OF PRIVATE CHILD CARE FOR AN INFANT IS \$9,364 AND A FOUR YEAR OLD IS \$8,003, HOW DO FAMILIES EARNING OVER \$33,176 AFFORD TO WORK WITHOUT THE SUPPORT OF PFCC? WHERE DO THESE YOUNG CHILDREN STAY WHILE THEIR PARENT(S) IS AT WORK?**

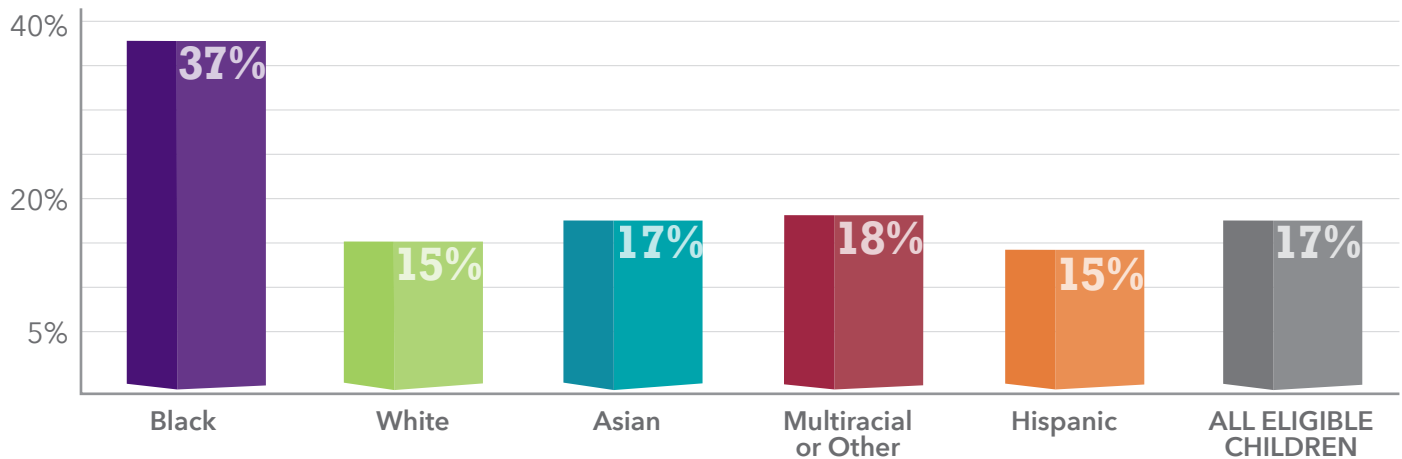
# Access to Publicly Funded Child Care

## Appalachian Region

### 2017 Children Served in PFCC by Race & Ethnicity

Race & Ethnicity	# of Infants in PFCC	# of Toddlers in PFCC	# of Preschoolers in PFCC	Total # 0-4 Age in PFCC	# of Eligible 0-4 Age <=130% FPL	% Eligible 0-4 Age in PFCC
Black	331	483	866	1,680	4,541	37.0%
White	802	1364	2764	4,930	32,575	15.1%
Asian	4	5	7	16	96	16.7%
Multirace/Other	135	212	377	724	3,990	18.1%
Hispanic				303	2,097	14.5%
<b>TOTAL CHILDREN</b>	<b>1,272</b>	<b>2,064</b>	<b>4,014</b>	<b>7,350*</b>	<b>43,299</b>	<b>17.0%</b>

*\*Note: The ODJFS County Level Data on Publicly Funded Childcare does not identify Hispanic children by race. As a result, the total of Hispanic children is duplicative with the breakdown of children served by race. The total number of children served is correct, however, the percentages of children served by racial group are slightly overstated as a result. The percentage of Hispanic children served is exact.*



## Reflection

THE APPALACHIAN REGION HAS THE LOWEST ACCESS RATE IN COMPARISON TO THE OTHER COMMUNITIES EXAMINED, WITH ONLY 17% OF ELIGIBLE CHILDREN BEING SERVED BY PFCC IN 32 OHIO COUNTIES—NEARLY 1/3 OF THE STATE.



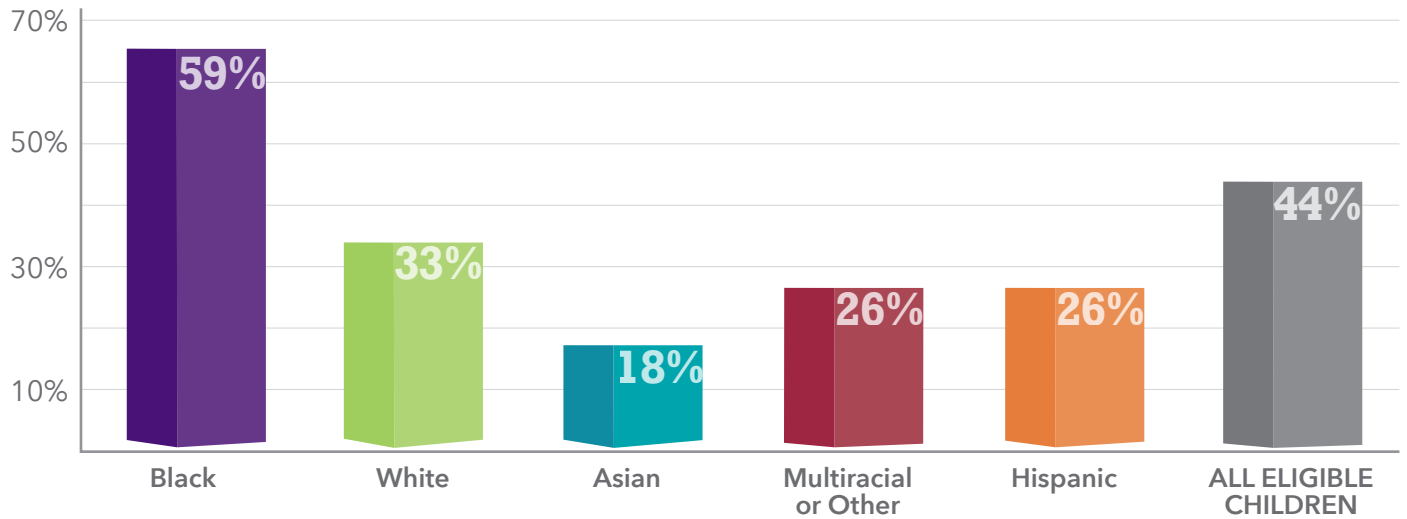
# Access to Publicly Funded Child Care

## Cuyahoga County

### 2017 Children Served in PFCC by Race & Ethnicity

Race & Ethnicity	# of Infants in PFCC	# of Toddlers in PFCC	# of Preschoolers in PFCC	Total # 0-4 Age in PFCC	# of Eligible 0-4 Age <=130% FPL	% Eligible 0-4 Age in PFCC
Black	1815	3078	5243	10,136	17,177	59.0%
White	239	478	976	1,693	5,155	32.8%
Asian	1	11	29	41	233	17.6%
Multirace/Other	153	236	416	805	3,069	26.2%
Hispanic				792	3,088	25.6%
<b>TOTAL CHILDREN</b>	<b>2,208</b>	<b>3,803</b>	<b>6,664</b>	<b>12,675*</b>	<b>28,723</b>	<b>44.1%</b>

*\*Note: The ODJFS County Level Data on Publicly Funded Childcare does not identify Hispanic children by race. As a result, the total of Hispanic children is duplicative with the breakdown of children served by race. The total number of children served is correct, however, the percentages of children served by racial group are slightly over-stated as a result. The percentage of Hispanic children served is exact.*



## Reflection

**WHAT BARRIERS DOES THE APPALACIAN REGION HAVE IN SERVING YOUNG CHILDREN IN A CHILD CARE ENVIRONMENT COMPARED TO ITS URBAN PEERS?**

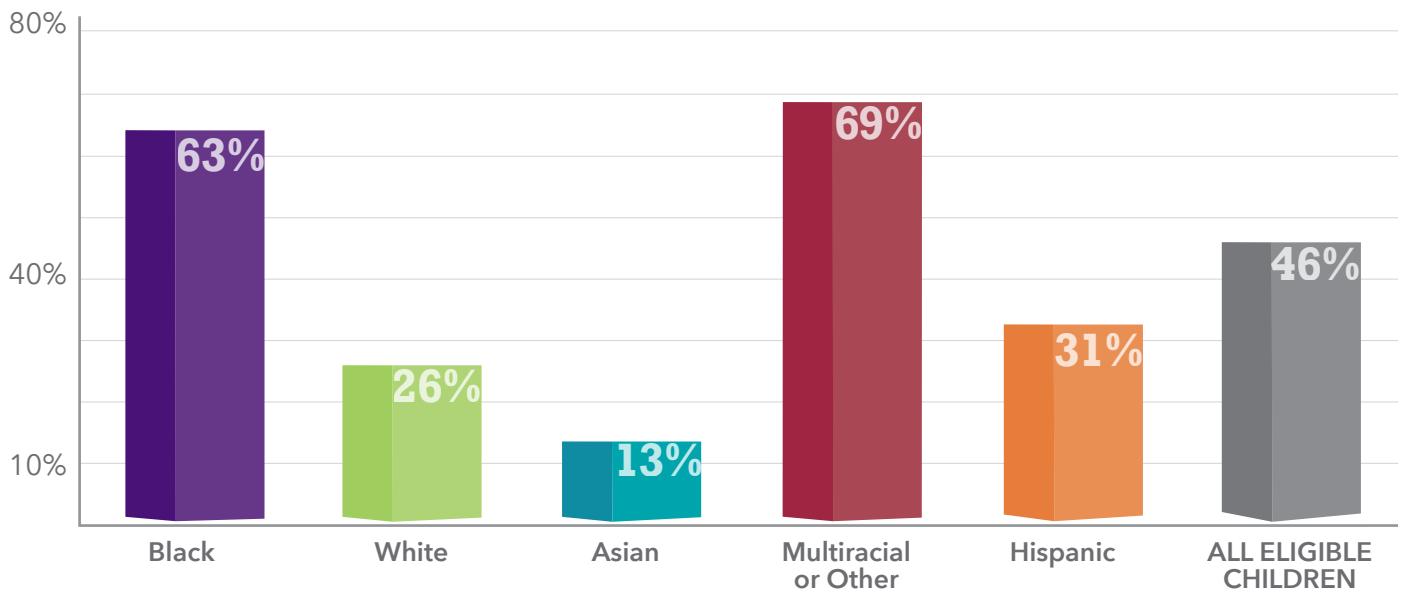
# Access to Publicly Funded Child Care

## Franklin County

### 2017 Children Served in PFCC by Race & Ethnicity

Race & Ethnicity	# of Infants in PFCC	# of Toddlers in PFCC	# of Preschoolers in PFCC	Total # 0-4 Age in PFCC	# of Eligible 0-4 Age <=130% FPL	% Eligible 0-4 Age in PFCC
Black	1849	2698	5186	9,733	15,543	62.6%
White	291	529	1119	1,939	7,413	26.2%
Asian	5	23	42	70	558	12.5%
Multirace/Other	502	769	1291	2,562	3,722	68.8%
Hispanic				1,221	4,003	30.5%
<b>TOTAL CHILDREN</b>	<b>2,647</b>	<b>4,019</b>	<b>7,638</b>	<b>14,304*</b>	<b>31,239</b>	<b>45.8%</b>

*\*Note: The ODJFS County Level Data on Publicly Funded Childcare does not identify Hispanic children by race. As a result, the total of Hispanic children is duplicative with the breakdown of children served by race. The total number of children served is correct, however, the percentages of children served by racial group are slightly overstated as a result. The percentage of Hispanic children served is exact.*





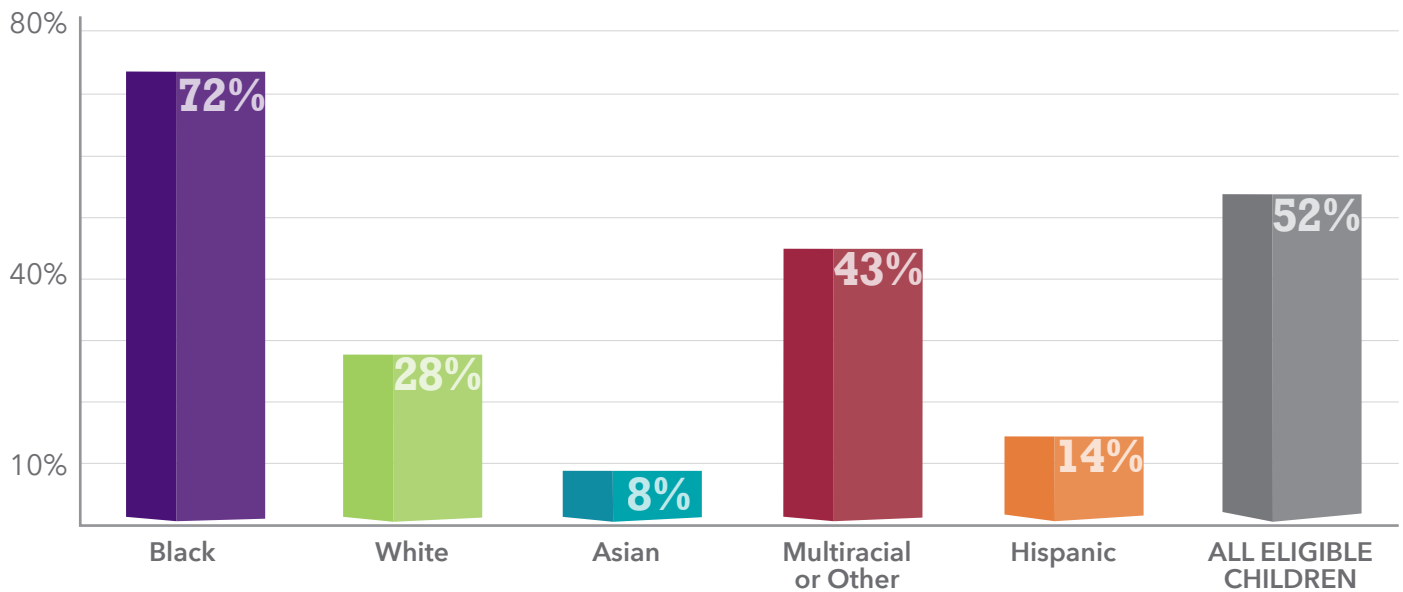
# Access to Publicly Funded Child Care

## Hamilton County

### 2017 Children Served in PFCC by Race & Ethnicity

Race & Ethnicity	# of Infants in PFCC	# of Toddlers in PFCC	# of Preschoolers in PFCC	Total # 0-4 Age in PFCC	# of Eligible 0-4 Age <=130% FPL	% Eligible 0-4 Age in PFCC
Black	1427	2335	4256	8,018	11,194	71.6%
White	193	364	840	1,397	4,966	28.1%
Asian	1	3	7	11	139	7.9%
Multirace/Other	131	259	479	869	2,047	42.5%
Hispanic				230	1,605	14.3%
<b>TOTAL CHILDREN</b>	<b>1,752</b>	<b>2,961</b>	<b>5,582</b>	<b>10,295*</b>	<b>19,951</b>	<b>51.6%</b>

*\*Note: The ODJFS County Level Data on Publicly Funded Childcare does not identify Hispanic children by race. As a result, the total of Hispanic children is duplicative with the breakdown of children served by race. The total number of children served is correct, however, the percentages of children served by racial group are slightly overstated as a result. The percentage of Hispanic children served is exact.*



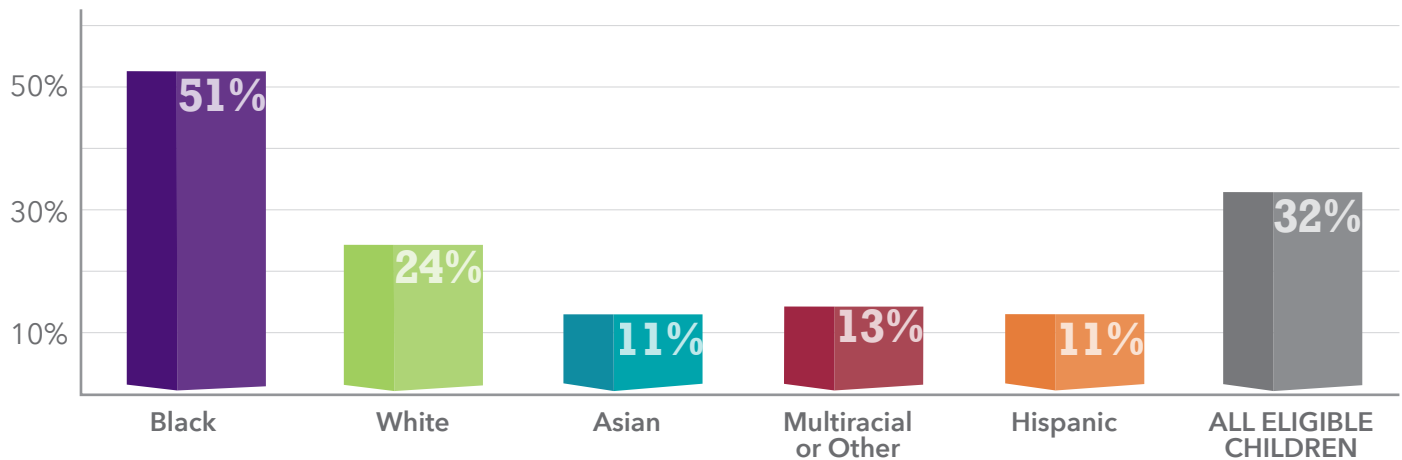
# Access to Publicly Funded Child Care

## Montgomery County

### 2017 Children Served in PFCC by Race & Ethnicity

Race & Ethnicity	# of Infants in PFCC	# of Toddlers in PFCC	# of Preschoolers in PFCC	Total # 0-4 Age in PFCC	# of Eligible 0-4 Age <=130% FPL	% Eligible 0-4 Age in PFCC
Black	579	909	1564	3,052	5,941	51.4%
White	159	359	711	1,229	5,229	23.5%
Asian	4	4	7	15	131	11.4%
Multirace/Other	35	72	153	260	2,062	12.6%
Hispanic				104	959	10.8%
<b>TOTAL CHILDREN</b>	<b>777</b>	<b>1,344</b>	<b>2,435</b>	<b>4,556</b>	<b>14,322</b>	<b>31.8%</b>

*\*Note: The ODJFS County Level Data on Publicly Funded Childcare does not identify Hispanic children by race. As a result, the total of Hispanic children is duplicative with the breakdown of children served by race. The total number of children served is correct, however, the percentages of children served by racial group are slightly overstated as a result. The percentage of Hispanic children served is exact.*



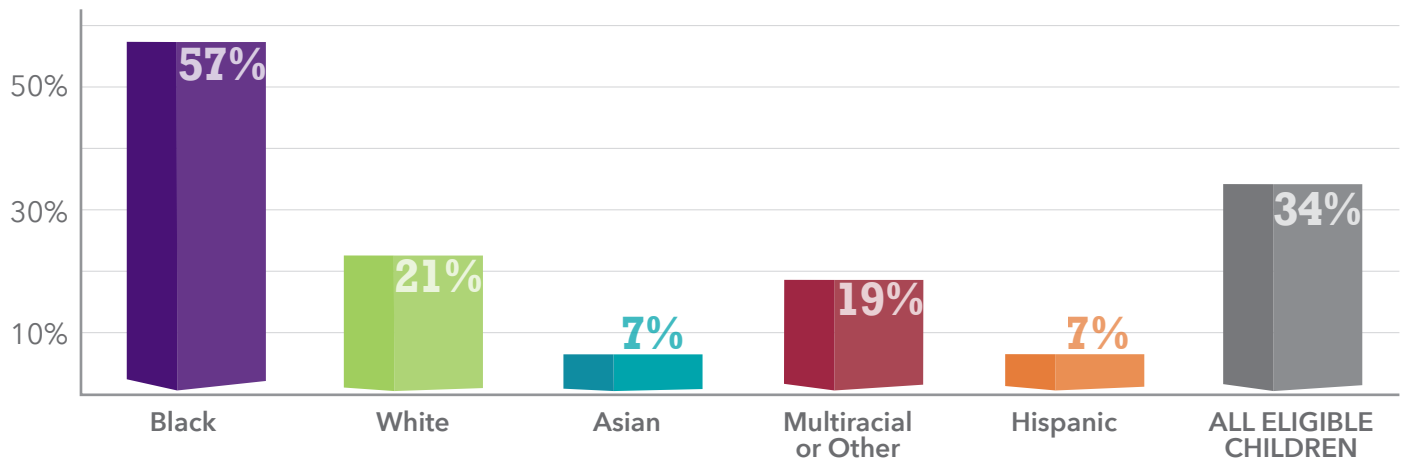
# Access to Publicly Funded Child Care

## Summit County

### 2017 Children Served in PFCC by Race & Ethnicity

Race & Ethnicity	# of Infants in PFCC	# of Toddlers in PFCC	# of Preschoolers in PFCC	Total # 0-4 Age in PFCC	# of Eligible 0-4 Age <=130% FPL	% Eligible 0-4 Age in PFCC
Black	426	694	1091	2,211	3,915	56.5%
White	97	201	457	755	3,615	20.9%
Asian	2	2	10	14	213	6.6%
Multirace/Other	33	66	114	213	1,108	19.2%
Hispanic				30	442	6.8%
<b>TOTAL CHILDREN</b>	<b>558</b>	<b>963</b>	<b>1,672</b>	<b>3,193*</b>	<b>9,293</b>	<b>34.4%</b>

*\*Note: The ODJFS County Level Data on Publicly Funded Childcare does not identify Hispanic children by race. As a result, the total of Hispanic children is duplicative with the breakdown of children served by race. The total number of children served is correct, however, the percentages of children served by racial group are slightly overstated as a result. The percentage of Hispanic children served is exact.*



## Reflections

**GIVEN WHAT WE KNOW ABOUT BRAIN SCIENCE (THAT DISPARITIES EMERGE AS EARLY AS 9 MONTHS OF AGE AMONG LOW INCOME LEARNERS COMPARED TO THEIR HIGH INCOME PEERS), HOW MAY THE QUALITY OF THE LEARNING ENVIRONMENTS CHILDREN ARE ACCESSING THROUGH PFCC MATTER?**

# Access to Publicly Funded Child Care

**ACCESS** to child care  
does **NOT** mean  
access to **QUALITY CARE.**

***In 2005, Ohio established the state child care quality rating and improvement system, Step Up to Quality (SUTQ), with the goal of increasing access to high-quality programs as part of Ohio's Race to the Top Early Learning Challenge Grant.***

In SUTQ, early care and education programs earn 1- to 5-star ratings based on meeting nationally researched quality program standards administered by the Ohio Department of Job and Family Services.

### ***A high-quality learning environment means:***

1. Enriching curriculum aligned with standards
2. Highly-educated teachers
3. Lower teacher-to-student ratios
4. Consistent communication and engagement with families

As part of the Race to the Top Grant, the state set statutory goals that mandated 100% of licensed child care providers be high-quality rated (3 to 5 stars) by 2025; to ensure adequate progress towards this goal, all programs are required to be rated (1 to 5 stars) by 2020.

High-quality, comprehensive child care programs for Ohio's earliest learners offer a 13% return on public investment because they improve children's educational success, health outcomes, and long-term positive behavior.



## **STEP UP TO QUALITY HAS BEEN INDEPENDENTLY VALIDATED IN OHIO WITH THE FOLLOWING FINDINGS:**

1. **HIGHER QUALITY & BETTER OUTCOMES:** There is a strong correlation between children scoring higher on Ohio's Kindergarten Readiness Assessment and attendance at a 3-5 Star Rated program.
2. **HIGHER RATINGS MEAN BETTER QUALITY:** Programs that are Star Rated showed higher quality classroom practices compared to programs that are not Star Rated.
3. **HIGHER ATTENDANCE MATTERS:** Students who attended publicly funded child care programs over a longer period of time scored higher on average on the Kindergarten Readiness Assessment.

# Access to Publicly Funded Child Care

**QUALITY MATTERS** for Ohio kids, but **WHO HAS ACCESS** to high-quality learning environments?

**Table 2**

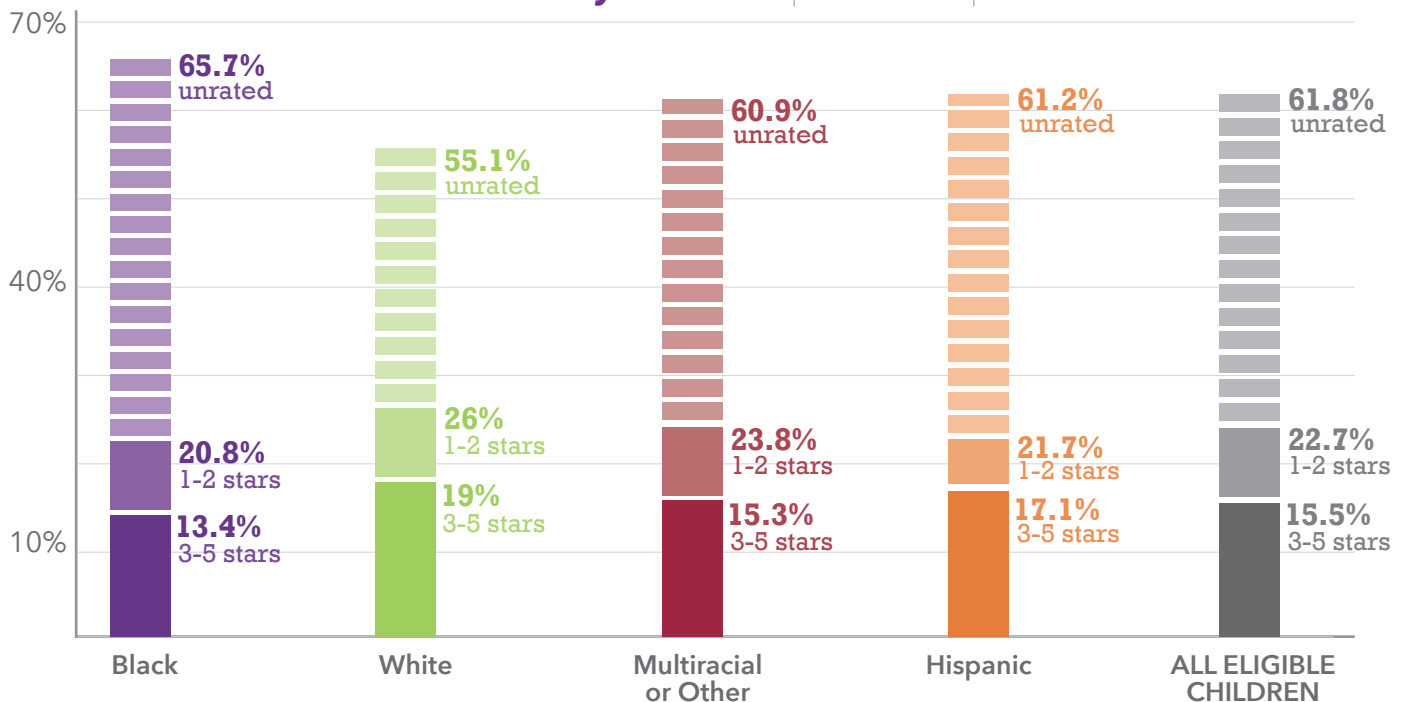
**2017 Statewide PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity**

Race & Ethnicity	Children in Unrated Programs	Children in 1-2 Star Programs	Children in 3-5 Star Programs	Total # of 0-4 Age PFCC Children
Black	26,326	8,347	5,387	40,060
White	11,949	5,630	4,112	21,691
Multirace/Other	4,316	1,686	1,085	7,087
Hispanic	2,349	834	655	3,838
<b>ALL CHILDREN</b>	<b>44,940</b>	<b>16,497</b>	<b>11,239</b>	<b>72,676</b>

Data Source: Ohio Department of Job and Family Services, FY 2017

**Chart 2**

**Percentages of PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity: unrated | 1-2 stars | 3-5 stars**



Data Source: Ohio Department of Job and Family Services, FY 2017



Access to  
**Publicly Funded Child Care**

**BLACK CHILDREN ACCOUNT FOR  
OVER HALF  
OF THE PFCC POPULATION.**

**YET:**

*Black children are more likely to be in an unrated setting and less likely to be in a high-quality learning environment than their white peers.*

**WHAT FACTORS MAY BE IMPACTING THIS GAP IN OPPORTUNITY?**

**MOST KIDS  
ACCESSING PFCC ARE IN  
UNRATED CHILD CARE PROGRAMS  
AS OF FY2017.**

**ONLY 15.5% OF ALL CHILDREN ACCESSING PFCC ARE IN  
HIGH-QUALITY SETTINGS PROVEN TO IMPROVE CHILD OUTCOMES.**

**WHAT ARE THE BARRIERS TO SERVING CHILDREN  
IN HIGH-QUALITY SETTINGS?**



# Access to Publicly Funded Child Care

## Appalachian Region

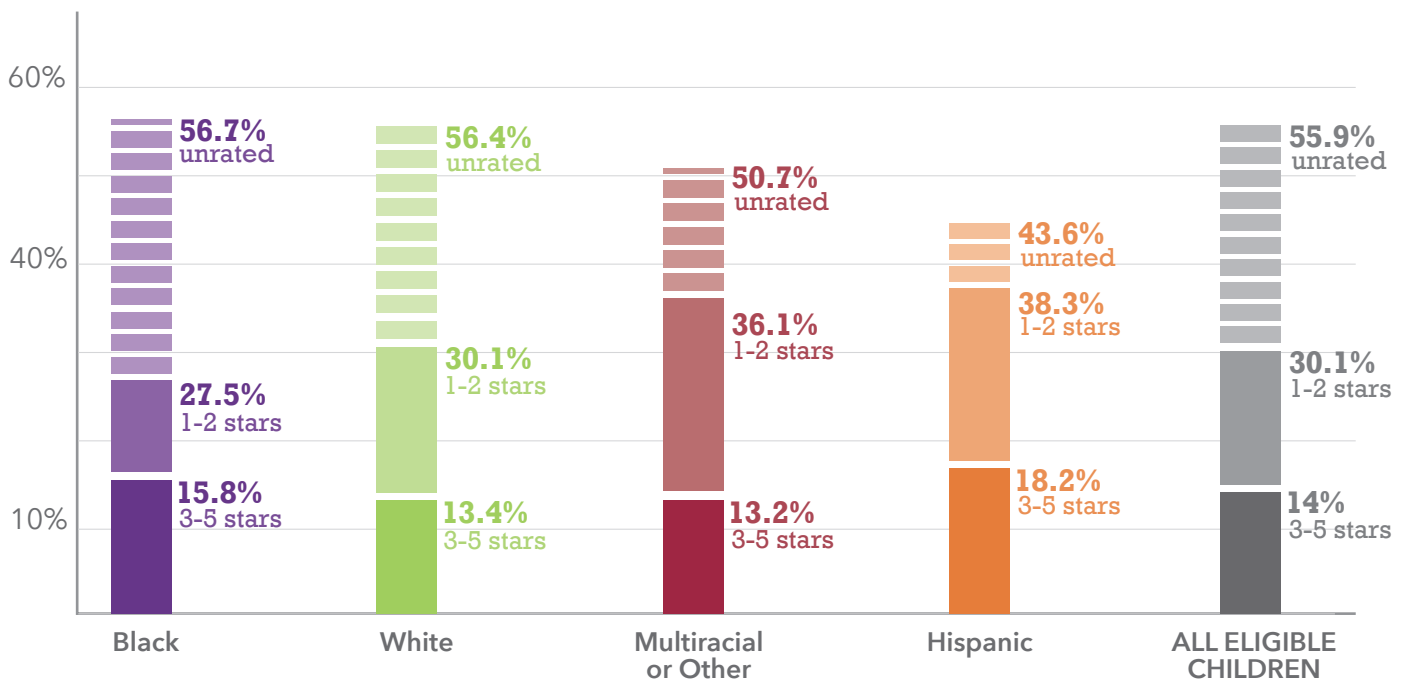
### 2017 Region PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity

Race & Ethnicity	Children in Unrated Programs	Children in 1-2 Star Programs	Children in 3-5 Star Programs	Total # of 0-4 Age PFCC Children
Black	952	462	266	1,680
White	2,781	1,486	663	4,930
Multirace/Other	375	267	98	740
Hispanic*	132	116	55	303
<b>ALL CHILDREN</b>	<b>4,108</b>	<b>2,215</b>	<b>1,027</b>	<b>7,350</b>

\*Note: Hispanic child counts represent the subset of students of any race that are Hispanic. These students are already included in the "All Children" total figure.

## Appalachian Region

### Percentages of PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity: unrated | 1-2 stars | 3-5 stars



Data Source: Ohio Department of Job and Family Services, FY 2017

# Access to Publicly Funded Child Care

## Cuyahoga County

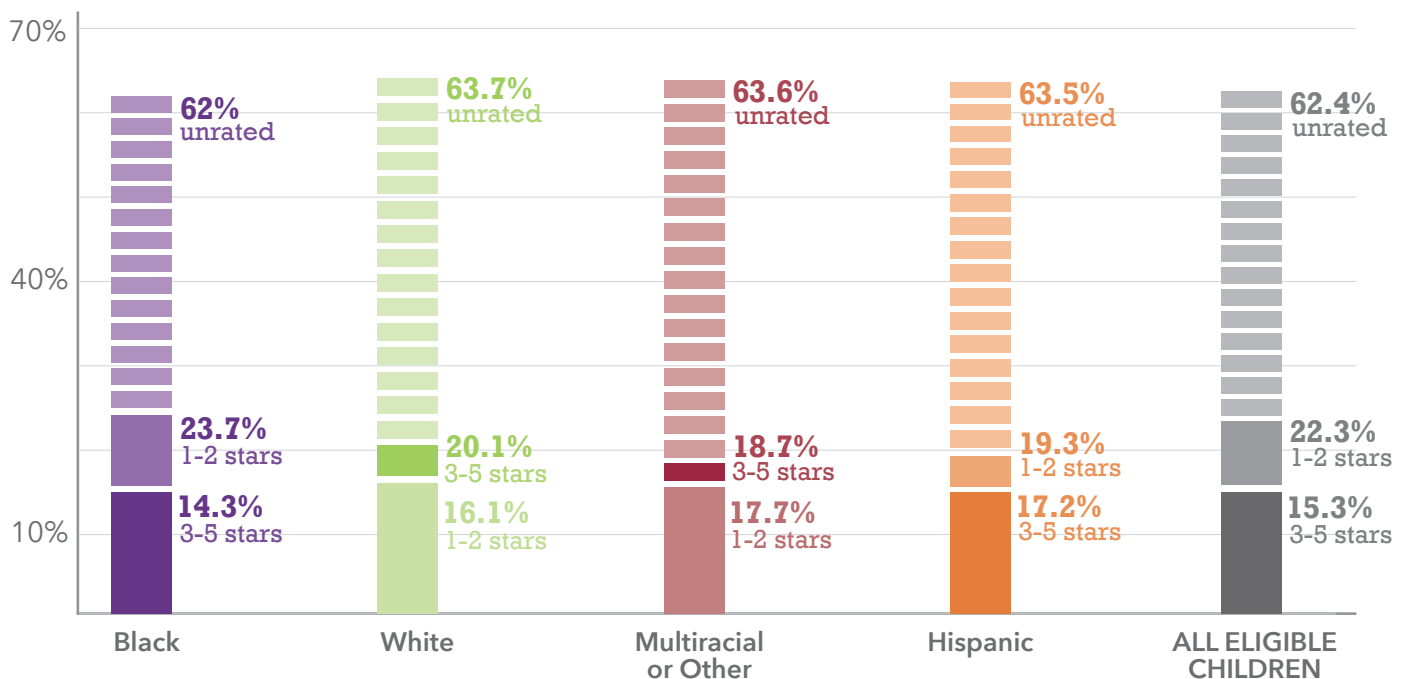
### 2017 County PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity

Race & Ethnicity	Children in Unrated Programs	Children in 1-2 Star Programs	Children in 3-5 Star Programs	Total # of 0-4 Age PFCC Children
Black	6,286	2,404	1,446	10,136
White	1,079	273	341	1,693
Multirace/Other	538	150	158	846
Hispanic*	503	153	136	792
<b>ALL CHILDREN</b>	<b>7,903</b>	<b>2,827</b>	<b>1,945</b>	<b>12,675</b>

\*Note: Hispanic child counts represent the subset of students of any race that are Hispanic. These students are already included in the "All Children" total figure.

## Cuyahoga County

### Percentages of PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity: unrated | 1-2 stars | 3-5 stars



Data Source: Ohio Department of Job and Family Services, FY 2017

# Access to Publicly Funded Child Care

## Franklin County

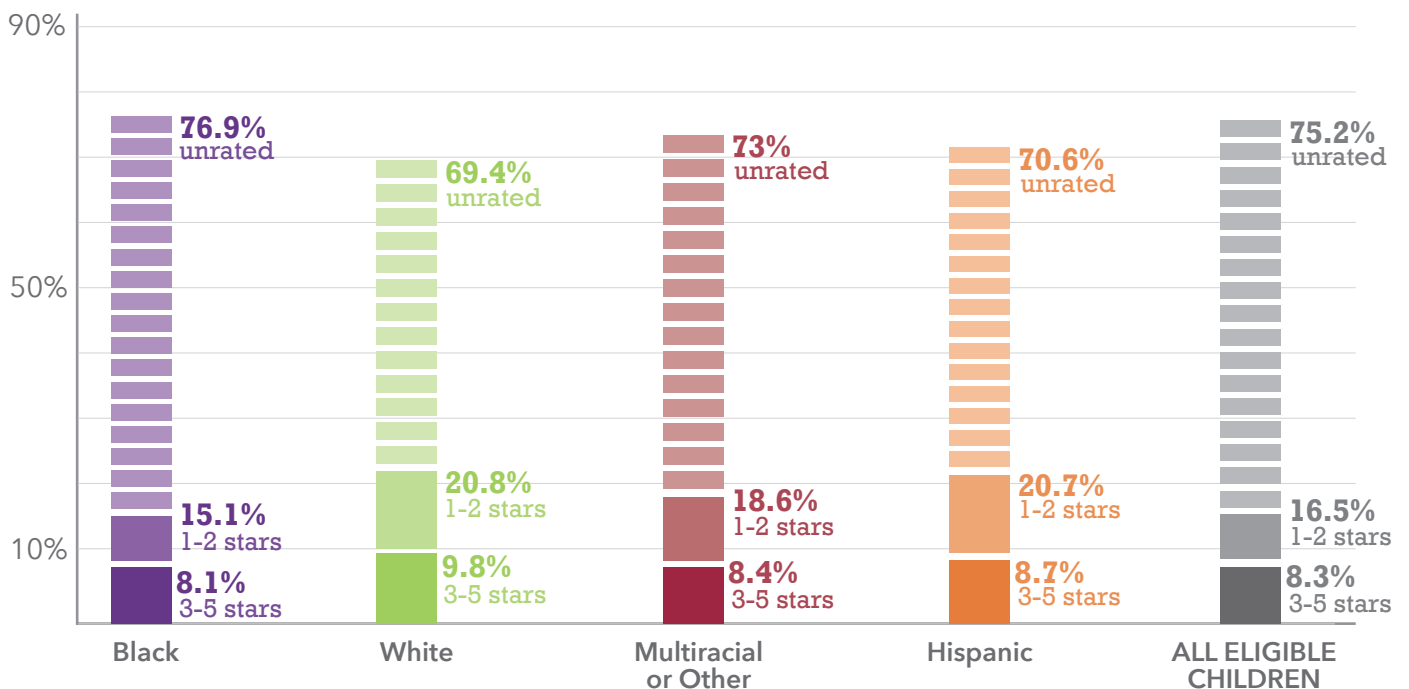
### 2017 County PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity

Race & Ethnicity	Children in Unrated Programs	Children in 1-2 Star Programs	Children in 3-5 Star Programs	Total # of 0-4 Age PFCC Children
Black	7,482	1,467	784	9,733
White	1,346	403	190	1,939
Multirace/Other	1,922	490	220	2,632
Hispanic*	862	253	106	1,221
<b>ALL CHILDREN</b>	<b>10,750</b>	<b>2,360</b>	<b>1,194</b>	<b>14,304</b>

\*Note: Hispanic child counts represent the subset of students of any race that are Hispanic. These students are already included in the "All Children" total figure.

## Franklin County

### Percentages of PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity: unrated | 1-2 stars | 3-5 stars



Data Source: Ohio Department of Job and Family Services, FY 2017

# Access to Publicly Funded Child Care

## Hamilton County

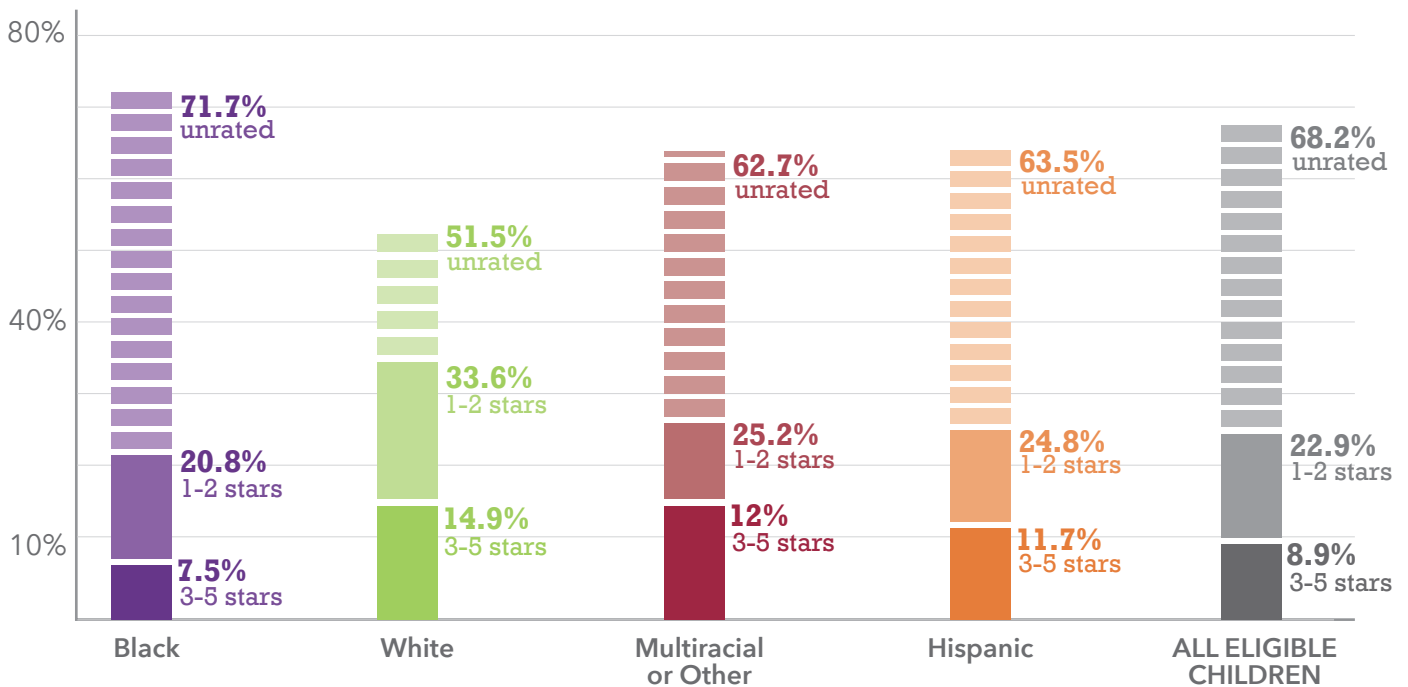
### 2017 County PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity

Race & Ethnicity	Children in Unrated Programs	Children in 1-2 Star Programs	Children in 3-5 Star Programs	Total # of 0-4 Age PFCC Children
Black	5,747	1,666	605	8,018
White	720	469	208	1,397
Multirace/Other	552	222	106	880
Hispanic*	146	57	27	230
<b>ALL CHILDREN</b>	<b>7,019</b>	<b>2,357</b>	<b>919</b>	<b>10,295</b>

\*Note: Hispanic child counts represent the subset of students of any race that are Hispanic. These students are already included in the "All Children" total figure.

## Hamilton County

### Percentages of PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity: unrated | 1-2 stars | 3-5 stars



Data Source: Ohio Department of Job and Family Services, FY 2017

# Access to Publicly Funded Child Care

## Montgomery County

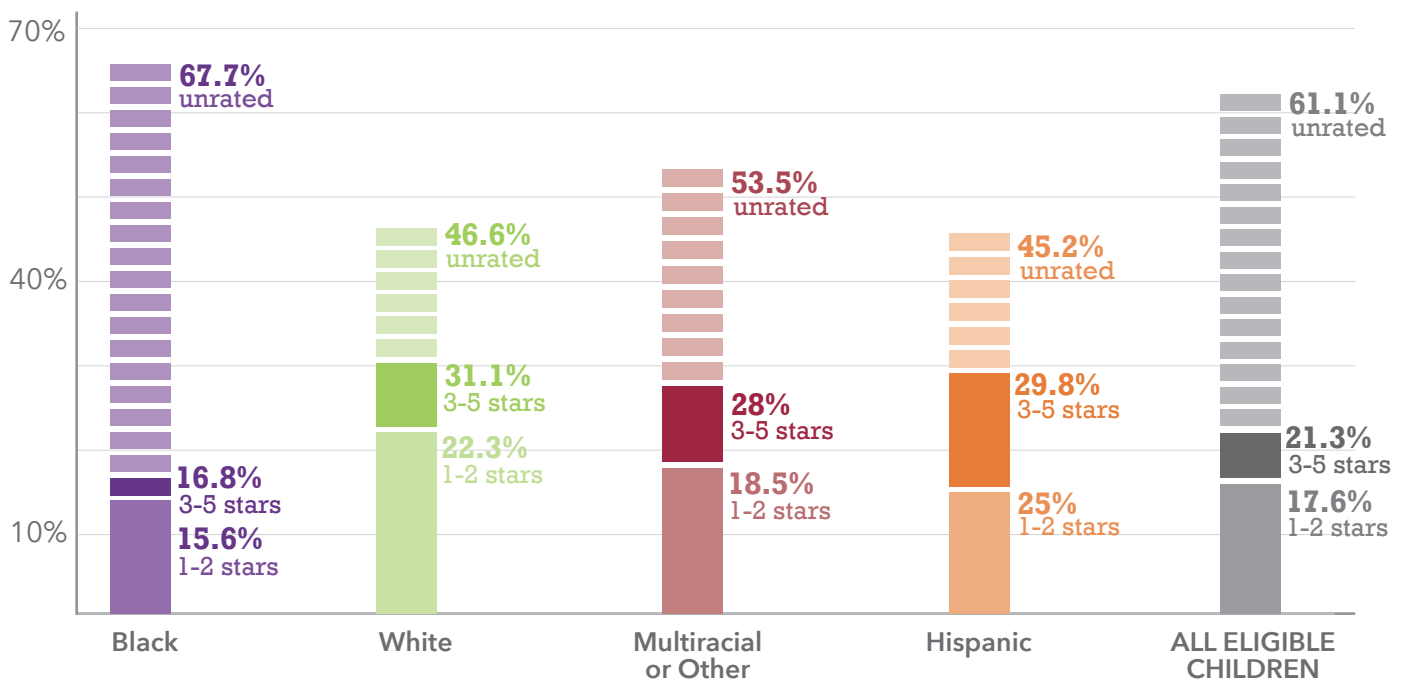
### 2017 County PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity

Race & Ethnicity	Children in Unrated Programs	Children in 1-2 Star Programs	Children in 3-5 Star Programs	Total # of 0-4 Age PFCC Children
Black	2,065	475	512	3,052
White	573	274	382	1,229
Multirace/Other	147	51	77	275
Hispanic*	47	26	31	104
<b>ALL CHILDREN</b>	<b>2,785</b>	<b>800</b>	<b>971</b>	<b>4,556</b>

\*Note: Hispanic child counts represent the subset of students of any race that are Hispanic. These students are already included in the "All Children" total figure.

## Montgomery County

### Percentages of PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity: unrated | 1-2 stars | 3-5 stars



Data Source: Ohio Department of Job and Family Services, FY 2017

# Access to Publicly Funded Child Care

## Summit County

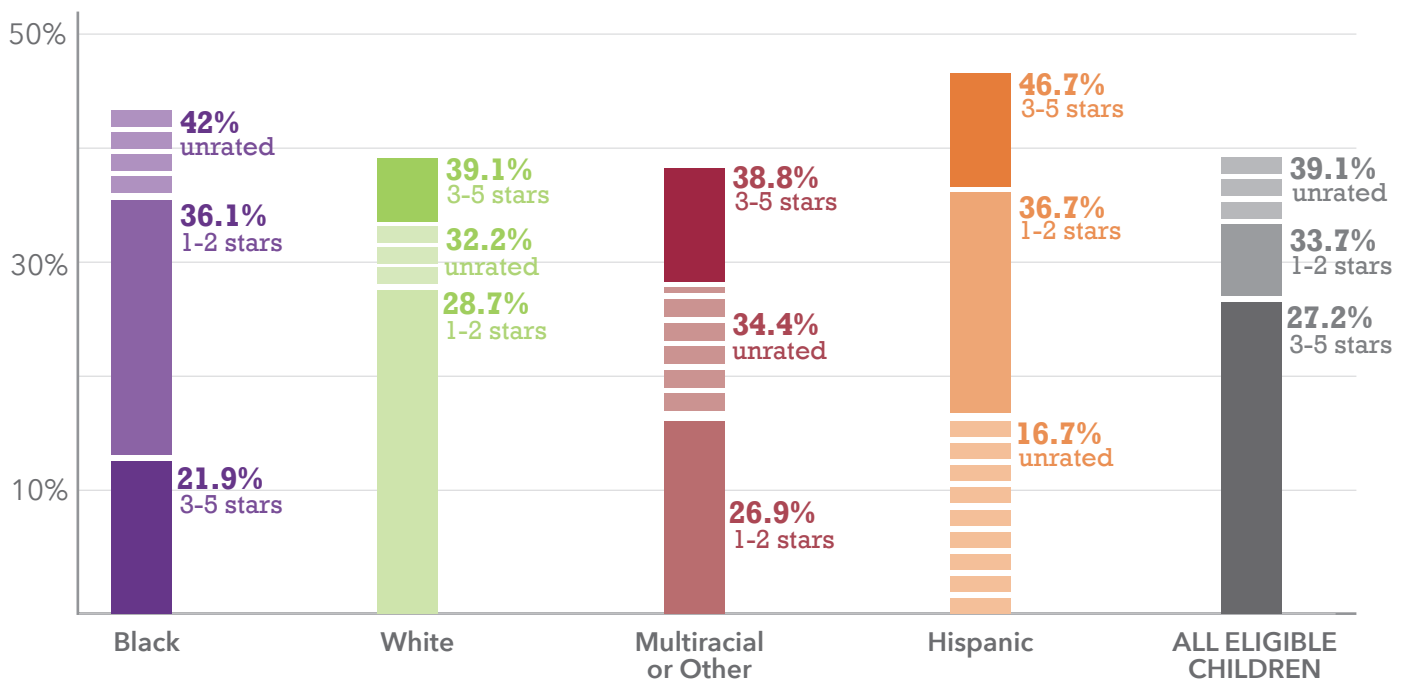
### 2017 County PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity

Race & Ethnicity	Children in Unrated Programs	Children in 1-2 Star Programs	Children in 3-5 Star Programs	Total # of 0-4 Age PFCC Children
Black	928	798	485	2,211
White	243	217	295	755
Multirace/Other	78	61	88	227
Hispanic*	5	11	14	30
<b>ALL CHILDREN</b>	<b>1,249</b>	<b>1,076</b>	<b>868</b>	<b>3,193</b>

\*Note: Hispanic child counts represent the subset of students of any race that are Hispanic. These students are already included in the "All Children" total figure.

## Summit County

### Percentages of PFCC CHILDREN by PROGRAM QUALITY and Race & Ethnicity: unrated | 1-2 stars | 3-5 stars



Data Source: Ohio Department of Job and Family Services, FY 2017



# Access to Publicly Funded Child Care

## How does child care **PROVIDER TYPE** intersect with **QUALITY CARE?**

There are three types of settings licensed to provide child care in Ohio:



Care occurring at the residence of the administrator where 7-12 children are served at one time or 4-12 children at one time if 4 or more children at one time are under 2 years old.



Care occurring at the residence of the administrator where 1-6 children are served at one time and no more than 3 children are under 2 years of age.

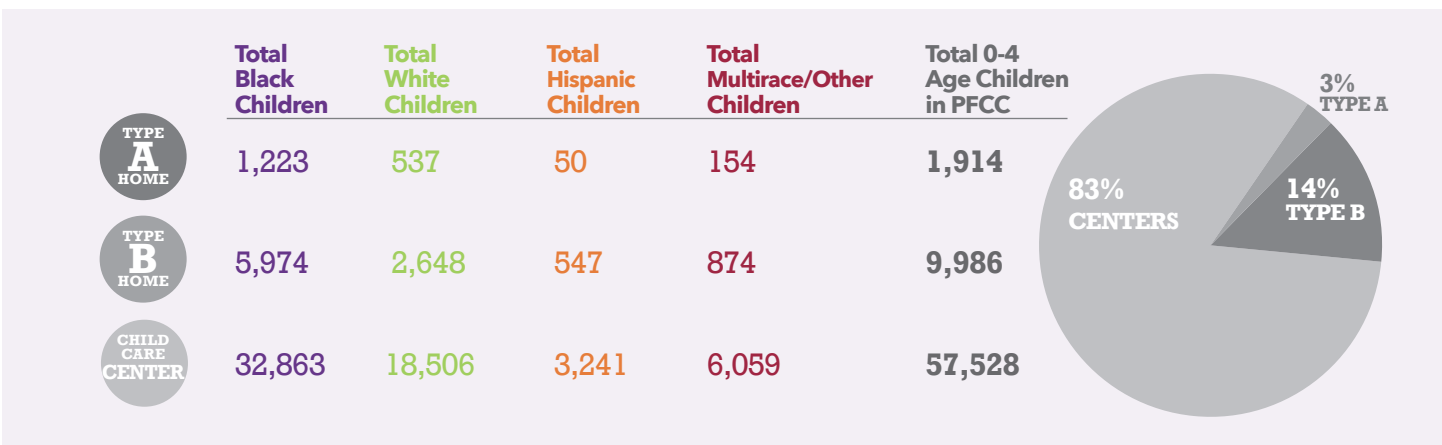


Any place that provides care for 13 or more children at one time or any place that is not the residence of the administrator where care is provided for 7-12 children at one time.

The following pages of analysis show a breakdown of programs by:

1. Provider type (Center, Type A Home, Type B Home)
2. Quality level (1- to 5-star)
3. Race and ethnicity of the children they are serving.

**FY17 Statewide % of Children by Race in PFCC by PROVIDER TYPE**

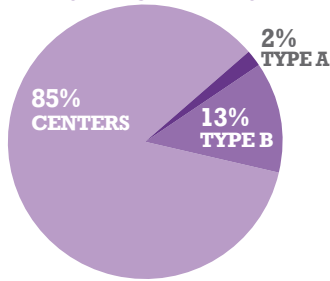


# Access to Publicly Funded Child Care

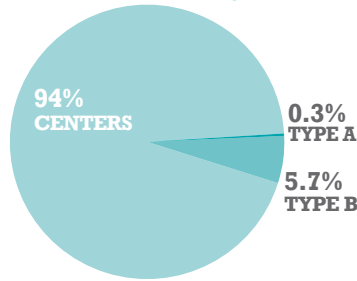
## FY17 Regional % of Children IN PFCC BY PROVIDER TYPE

	TYPE A HOME	TYPE B HOME	CHILD CARE CENTER	TOTAL PFCC Children
Statewide	1,914 (3%)	9,986 (14%)	57,528 (83%)	69,428
Cuyahoga County	202(2%)	1,715 (13%)	10,758 (85%)	12,675
Franklin County	38 (.3%)	810 (5.7%)	13,456 (94%)	14,304
Hamilton County	556 (5%)	2,235 (22%)	7,504 (73%)	10,305
Montgomery County	86 (2%)	363 (8%)	4,107 (90%)	4,556
Summit County	90 (3%)	381 (12%)	2,722 (85%)	3,193
Appalachian Region	319 (4%)	1,801 (25%)	5,240 (71%)	7,360

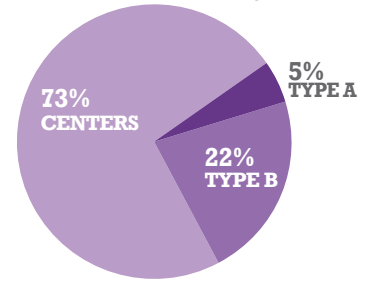
Cuyahoga County



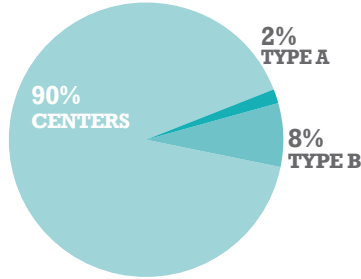
Franklin County



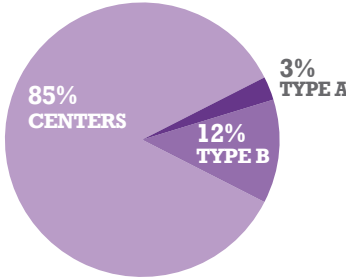
Hamilton County



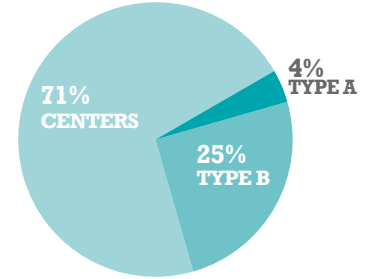
Montgomery County



Summit County



Appalachian Region



Reflections

**HAMILTON** COUNTY AND THE **APPALACHIAN** REGION ARE MORE RELIANT ON FAMILY HOME CHILD CARE (TYPE A AND B HOMES) THAN OTHER COMMUNITIES ACROSS THE SYSTEM.

OTHER COMMUNITIES INCLUDING FRANKLIN COUNTY ARE EVEN MORE DEPENDENT THAN THE STATE AS A WHOLE ON CENTER BASED CARE.

**WHAT CHALLENGES OR ASSETS DOES THIS BRING WHEN BUILDING CAPACITY FOR QUALITY CARE IN THESE COMMUNITIES?**

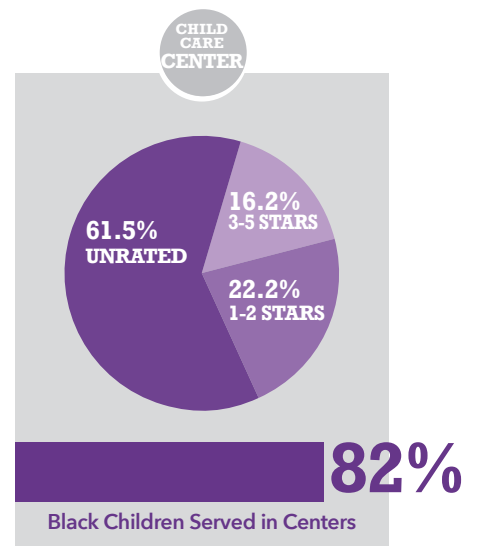
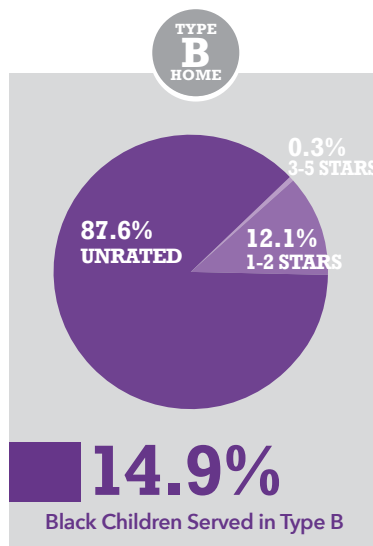
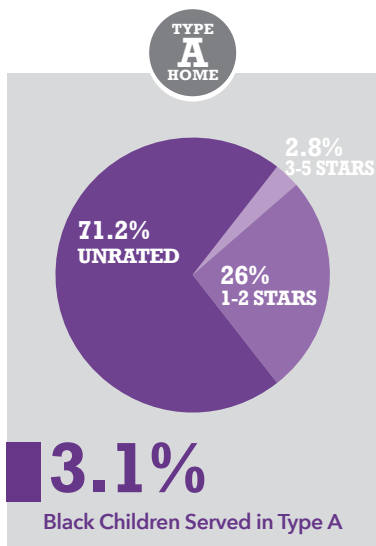
# Access to PFCC



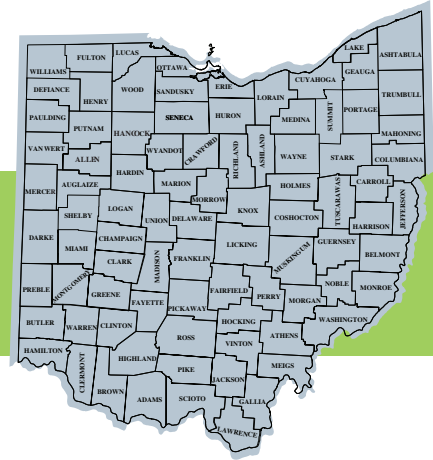
## STATEWIDE ANALYSIS: Black Children by Provider Type & Quality Level

### FY17 STATEWIDE BLACK CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Black Children in Unrated Provider	Black Children in 1-2 Star Provider	Black Children in 3-5 Star Provider	Total # Black Children in PFCC
<b>TYPE A HOME</b>	871	318	34	1,223
<b>TYPE B HOME</b>	5,233	722	19	5,974
<b>CHILD CARE CENTER</b>	20,222	7,307	5,334	32,863
<b>TOTAL</b>	<b>26,326</b>	<b>8,347</b>	<b>5,387</b>	<b>40,060</b>



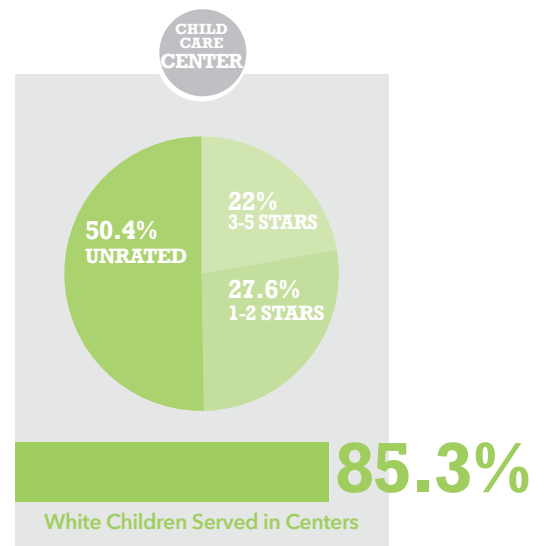
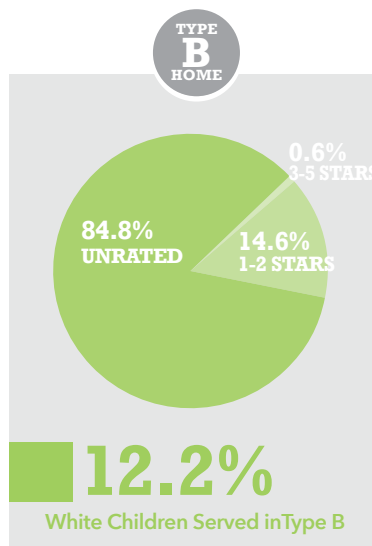
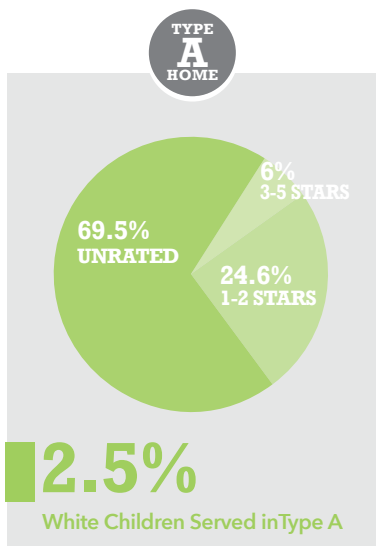
# Access to PFCC



## STATEWIDE ANALYSIS: White Children by Provider Type & Quality Level

**FY17 STATEWIDE WHITE CHILDREN  
Enrolled in PFCC by Provider Type & Quality Level**

	White Children in Unrated Provider	White Children in 1-2 Star Provider	White Children in 3-5 Star Provider	Total # White Children in PFCC
<b>TYPE A HOME</b>	373	132	32	537
<b>TYPE B HOME</b>	2,245	387	16	2,648
<b>CHILD CARE CENTER</b>	9,331	5,111	4,064	18,506
<b>TOTAL</b>	<b>11,949</b>	<b>5,630</b>	<b>4,112</b>	<b>21,691</b>



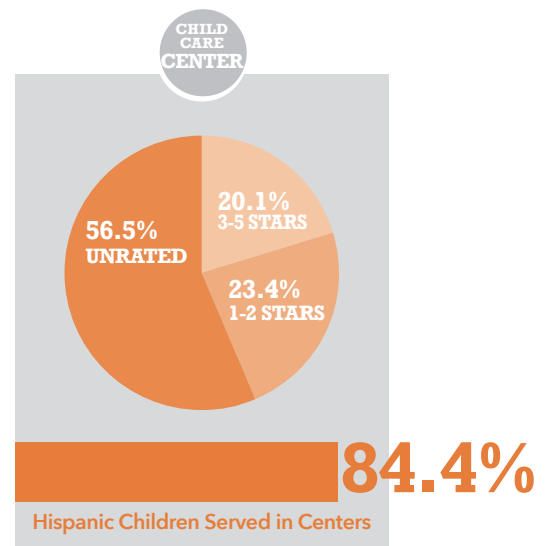
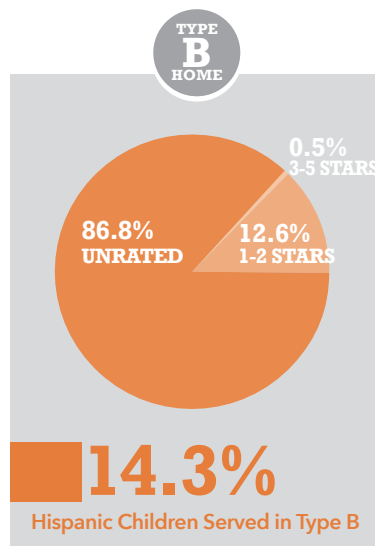
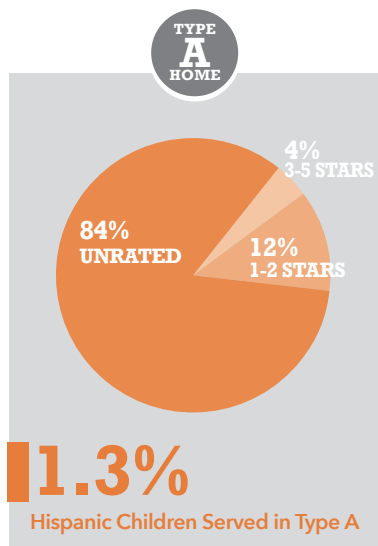
# Access to PFCC



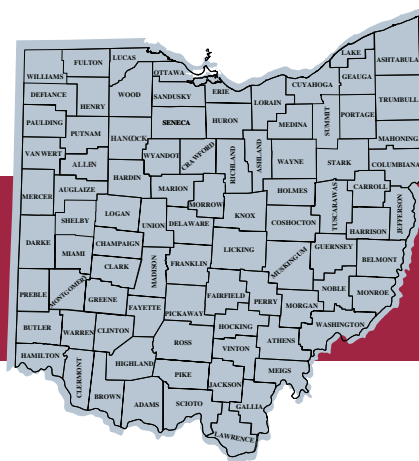
## STATEWIDE ANALYSIS: Hispanic Children by Provider Type & Quality Level

### FY17 STATEWIDE HISPANIC CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Hispanic Children in Unrated Provider	Hispanic Children in 1-2 Star Provider	Hispanic Children in 3-5 Star Provider	Total # Hispanic Children in PFCC
<b>TYPE A HOME</b>	42	6	2	50
<b>TYPE B HOME</b>	475	69	3	547
<b>CHILD CARE CENTER</b>	1,832	759	650	3,241
<b>TOTAL</b>	<b>2,349</b>	<b>834</b>	<b>655</b>	<b>3,838</b>



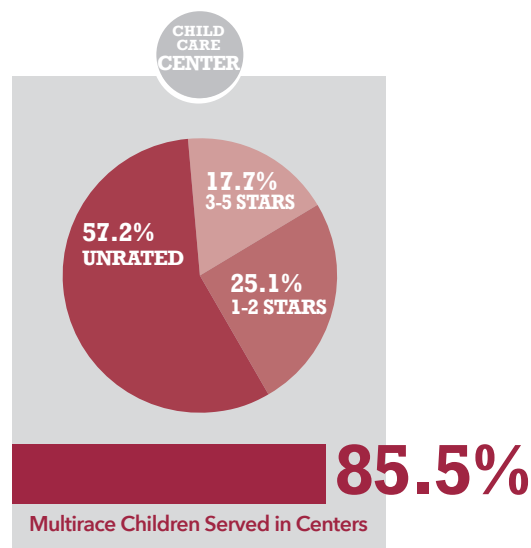
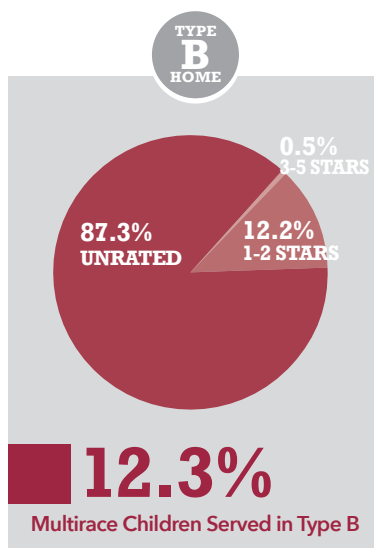
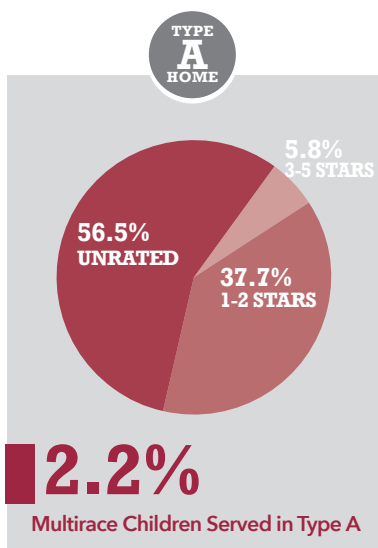
# Access to PFCC



## STATEWIDE ANALYSIS: Multirace Children by Provider Type & Quality Level

### FY17 STATEWIDE MULTIRACIAL/OTHER CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Multirace Children in Unrated Provider	Multirace Children in 1-2 Star Provider	Multirace Children in 3-5 Star Provider	Total # Multirace Children in PFCC
<b>TYPE A HOME</b>	87	58	9	154
<b>TYPE B HOME</b>	763	107	4	874
<b>CHILD CARE CENTER</b>	3,466	1,521	1,072	6,059
<b>TOTAL</b>	<b>4,316</b>	<b>1,686</b>	<b>1,085</b>	<b>7,087</b>





# WHY

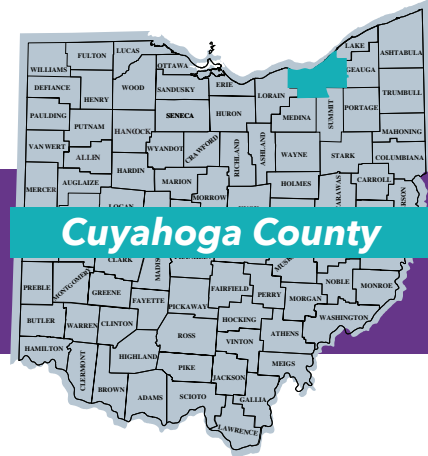
**DO CENTERS SEEM TO BE AT AN ADVANTAGE WHEN IT COMES TO BECOMING HIGHLY-RATED, OR RATED AT ALL, AS COMPARED TO HOME CHILD CARE PROVIDERS?**

**Reflections**

# WHY

**ARE CHILDREN OF COLOR MORE LIKELY TO BE IN FAMILY HOME CARE PROVIDERS THAN WHITE CHILDREN?**

Access to  
PFCC

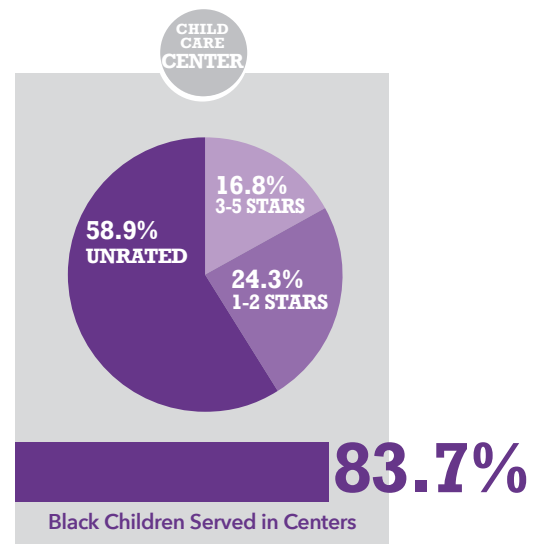
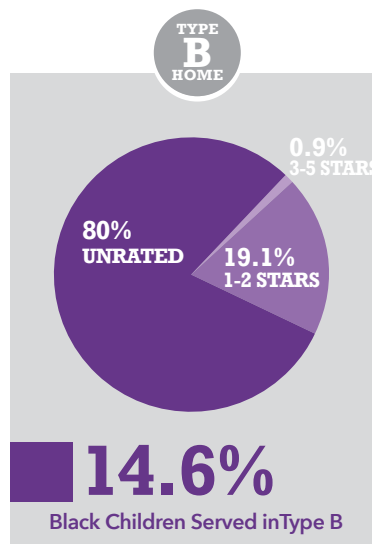
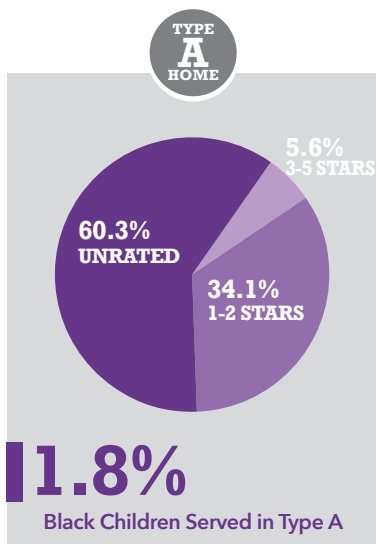


**Cuyahoga County**

**REGIONAL ANALYSIS:**  
*Black Children by Provider Type & Quality Level*

**FY17 CUYAHOGA COUNTY BLACK CHILDREN**  
*Enrolled in PFCC by Provider Type & Quality Level*

	Black Children in Unrated Provider	Black Children in 1-2 Star Provider	Black Children in 3-5 Star Provider	Total # Black Children in PFCC
<b>TYPE A HOME</b>	108	61	10	179
<b>TYPE B HOME</b>	1,182	282	13	1,477
<b>CHILD CARE CENTER</b>	4,996	2,061	1,423	8,480
<b>TOTAL</b>	<b>6,286</b>	<b>2,404</b>	<b>1,446</b>	<b>10,136</b>



# Access to PFCC

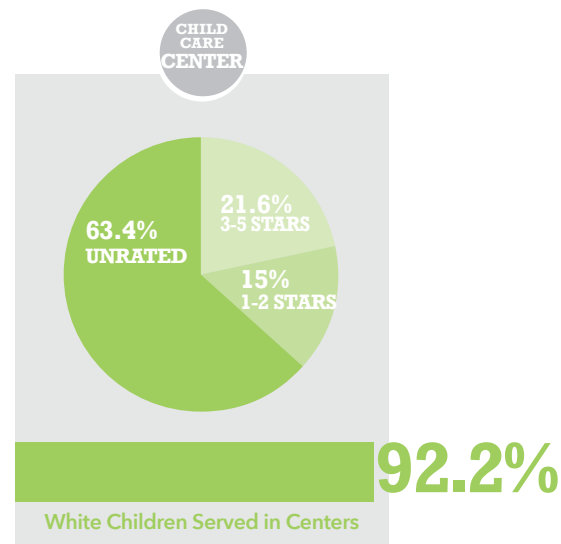
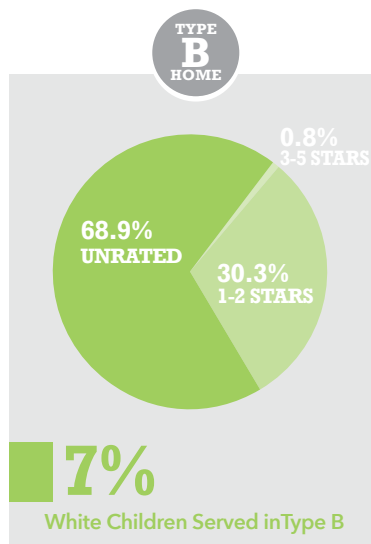
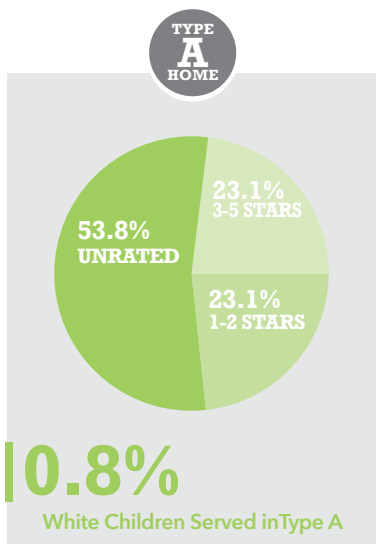


**Cuyahoga County**

## REGIONAL ANALYSIS: White Children by Provider Type & Quality Level

### FY17 CUYAHOGA COUNTY WHITE CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	White Children in Unrated Provider	White Children in 1-2 Star Provider	White Children in 3-5 Star Provider	Total # White Children in PFCC
<b>TYPE A HOME</b>	7	3	3	13
<b>TYPE B HOME</b>	82	36	1	119
<b>CHILD CARE CENTER</b>	990	234	337	1,561
<b>TOTAL</b>	<b>1,079</b>	<b>273</b>	<b>341</b>	<b>1,693</b>



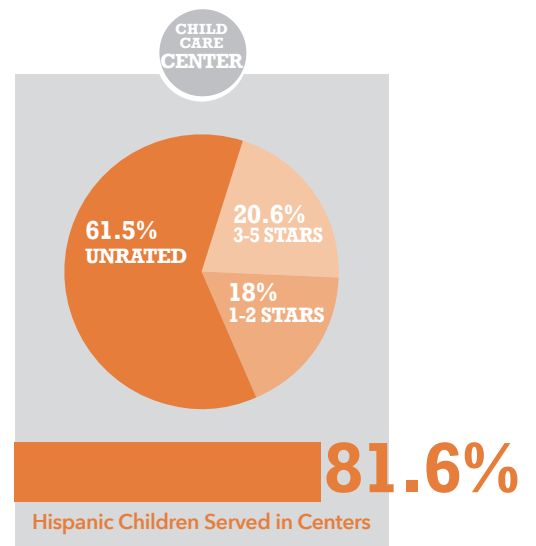
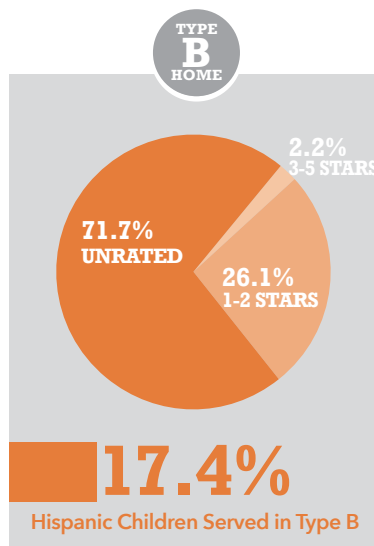
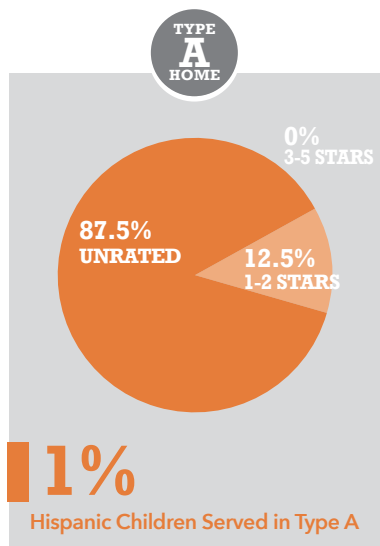
# Access to PFCC



## REGIONAL ANALYSIS: Hispanic Children by Provider Type & Quality Level

### FY17 CUYAHOGA COUNTY HISPANIC CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Hispanic Children in Unrated Provider	Hispanic Children in 1-2 Star Provider	Hispanic Children in 3-5 Star Provider	Total # Hispanic Children in PFCC
<b>TYPE A HOME</b>	7	1	0	8
<b>TYPE B HOME</b>	99	36	3	138
<b>CHILD CARE CENTER</b>	397	116	133	646
<b>TOTAL</b>	<b>503</b>	<b>153</b>	<b>136</b>	<b>792</b>



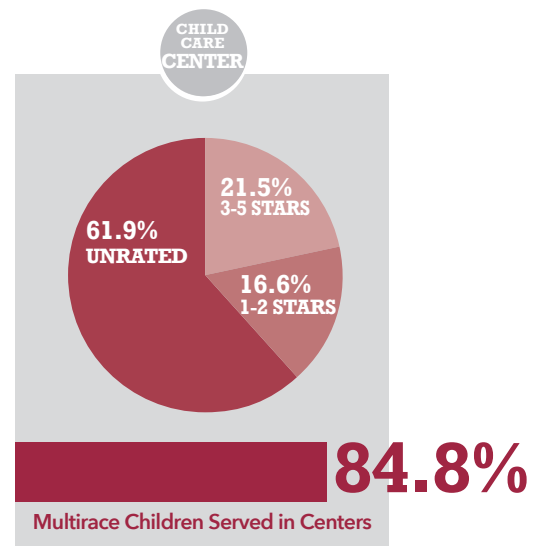
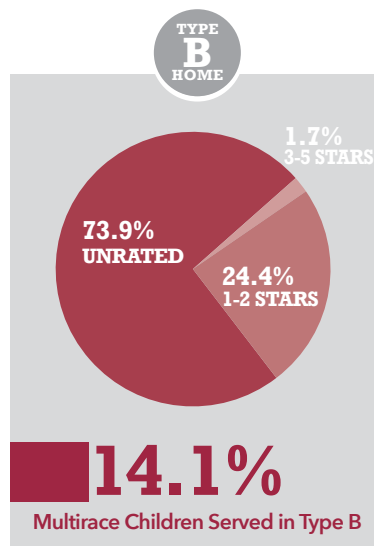
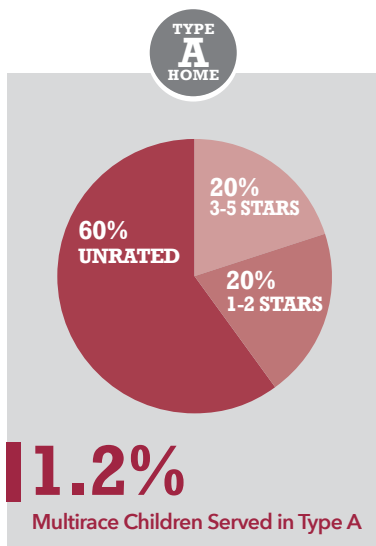
# Access to PFCC



## REGIONAL ANALYSIS: Multirace Children by Provider Type & Quality Level

### FY17 CUYAHOGA MULTIRACIAL/OTHER CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Multirace Children in Unrated Provider	Multirace Children in 1-2 Star Provider	Multirace Children in 3-5 Star Provider	Total # Multirace Children in PFCC
<b>TYPE A HOME</b>	6	2	2	10
<b>TYPE B HOME</b>	88	29	2	119
<b>CHILD CARE CENTER</b>	444	119	154	717
<b>TOTAL</b>	<b>538</b>	<b>150</b>	<b>158</b>	<b>846</b>



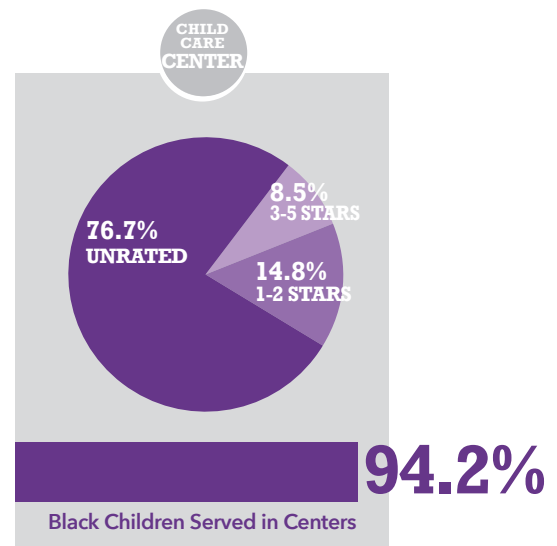
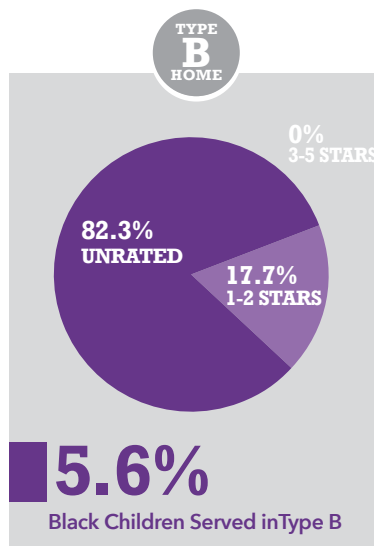
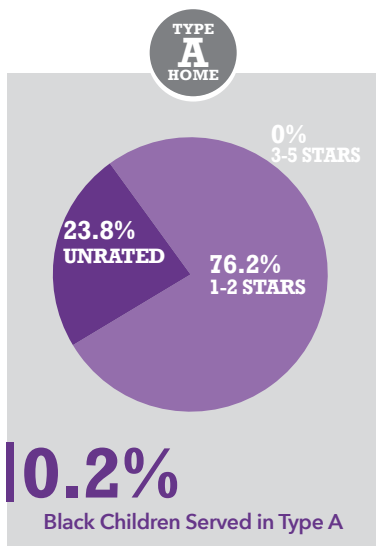
Access to  
**PFCC**



**REGIONAL ANALYSIS:**  
*Black Children by Provider Type & Quality Level*

**FY17 FRANKLIN COUNTY BLACK CHILDREN**  
*Enrolled in PFCC by Provider Type & Quality Level*

	Black Children in Unrated Provider	Black Children in 1-2 Star Provider	Black Children in 3-5 Star Provider	Total # Black Children in PFCC
<b>TYPE A HOME</b>	5	16	0	21
<b>TYPE B HOME</b>	446	96	0	542
<b>CHILD CARE CENTER</b>	7,031	1,355	784	9,170
<b>TOTAL</b>	<b>7,482</b>	<b>1,467</b>	<b>784</b>	<b>9,733</b>





# Access to PFCC

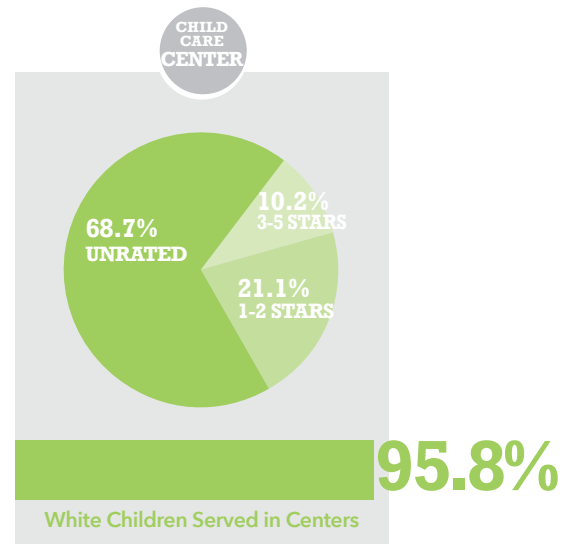
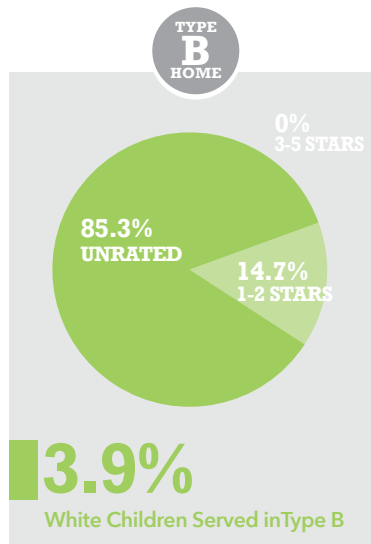
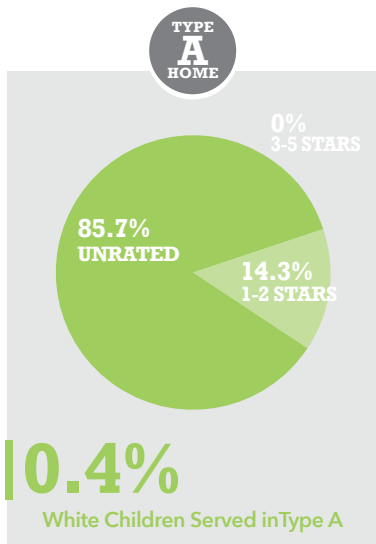


**Franklin County**

## REGIONAL ANALYSIS: White Children by Provider Type & Quality Level

### FY17 FRANKLIN COUNTY WHITE CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	White Children in Unrated Provider	White Children in 1-2 Star Provider	White Children in 3-5 Star Provider	Total # White Children in PFCC
<b>TYPE A HOME</b>	6	1	0	7
<b>TYPE B HOME</b>	64	11	0	75
<b>CHILD CARE CENTER</b>	1,276	391	190	1,857
<b>TOTAL</b>	<b>1,346</b>	<b>403</b>	<b>190</b>	<b>1,939</b>



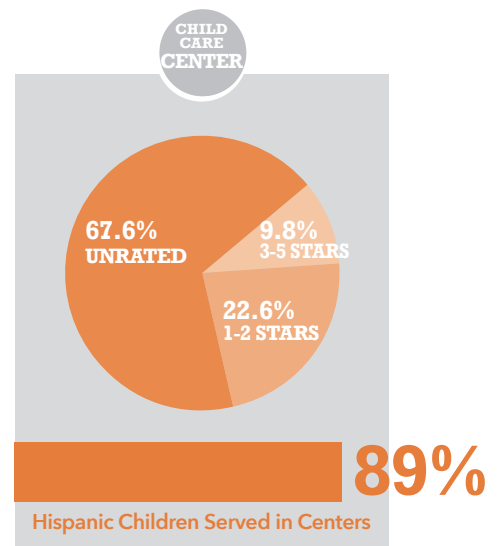
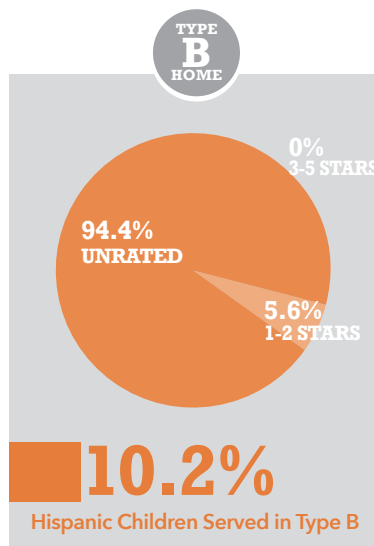
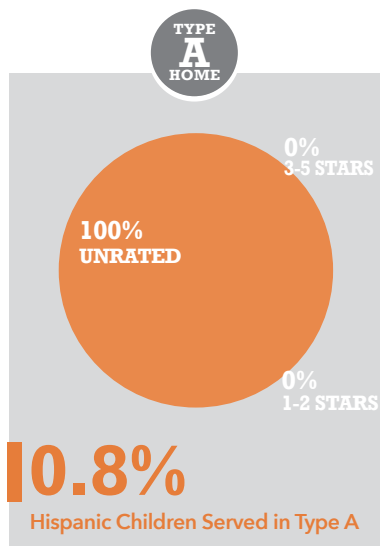
# Access to PFCC



## REGIONAL ANALYSIS: Hispanic Children by Provider Type & Quality Level

### FY17 FRANKLIN COUNTY HISPANIC CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Hispanic Children in Unrated Provider	Hispanic Children in 1-2 Star Provider	Hispanic Children in 3-5 Star Provider	Total # Hispanic Children in PFCC
<b>TYPE A HOME</b>	10	0	0	10
<b>TYPE B HOME</b>	117	7	0	124
<b>CHILD CARE CENTER</b>	735	246	106	1,087
<b>TOTAL</b>	<b>862</b>	<b>253</b>	<b>106</b>	<b>1,221</b>



# Access to PFCC

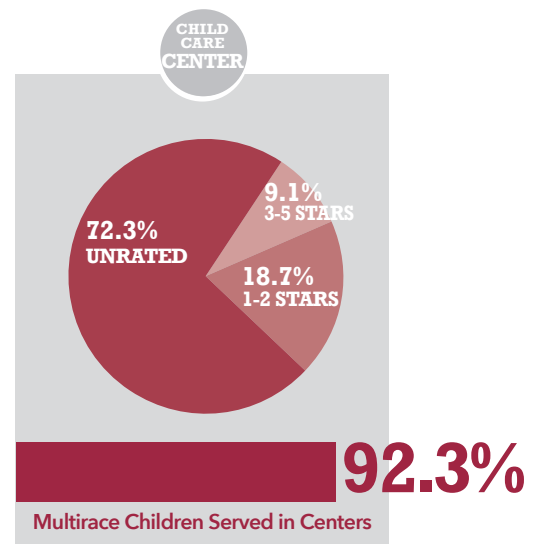
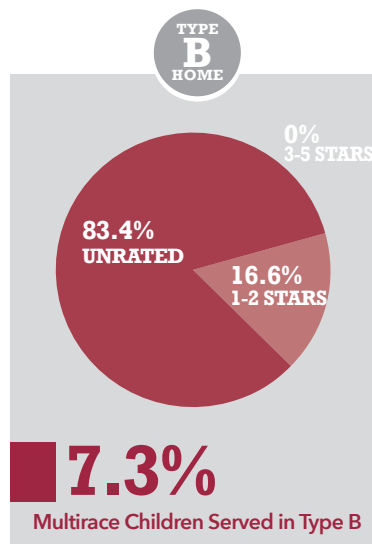
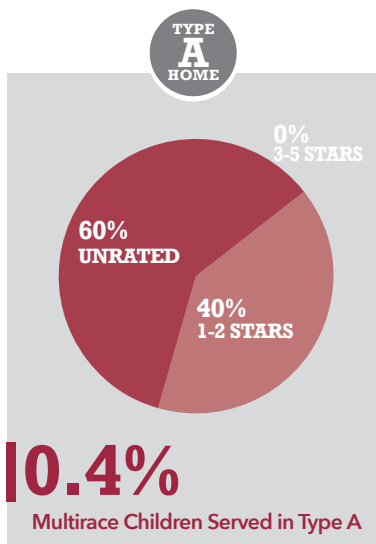


**Franklin County**

## REGIONAL ANALYSIS: Multirace Children by Provider Type & Quality Level

### FY17 FRANKLIN MULTIRACIAL/OTHER CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Multirace Children in Unrated Provider	Multirace Children in 1-2 Star Provider	Multirace Children in 3-5 Star Provider	Total # Multirace Children in PFCC
<b>TYPE A HOME</b>	6	4	0	10
<b>TYPE B HOME</b>	161	32	0	193
<b>CHILD CARE CENTER</b>	1,755	454	220	2,429
<b>TOTAL</b>	<b>1,922</b>	<b>490</b>	<b>220</b>	<b>2,632</b>



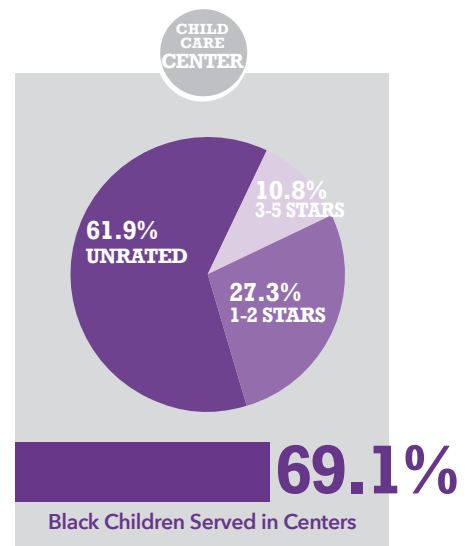
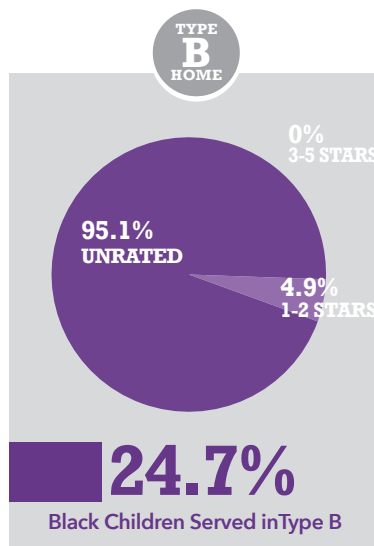
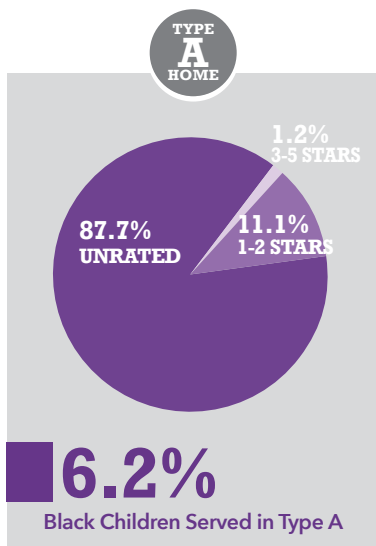
# Access to PFCC



## REGIONAL ANALYSIS: Black Children by Provider Type & Quality Level

### FY17 HAMILTON COUNTY BLACK CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Black Children in Unrated Provider	Black Children in 1-2 Star Provider	Black Children in 3-5 Star Provider	Total # Black Children in PFCC
<b>TYPE A HOME</b>	436	55	6	497
<b>TYPE B HOME</b>	1,885	97	0	1,982
<b>CHILD CARE CENTER</b>	3,426	1,514	599	5,539
<b>TOTAL</b>	<b>5,747</b>	<b>1,666</b>	<b>605</b>	<b>8,018</b>



# Access to PFCC

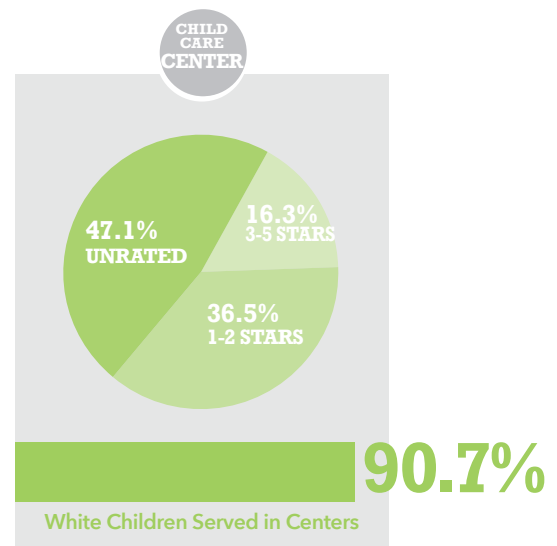
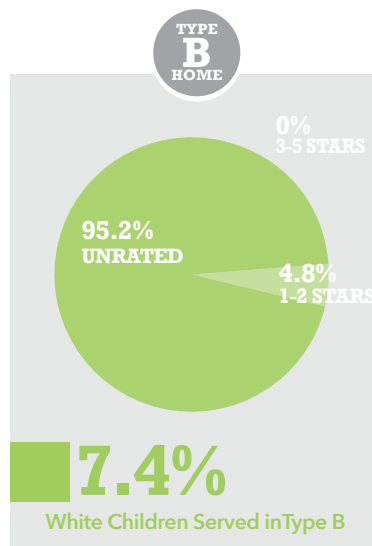
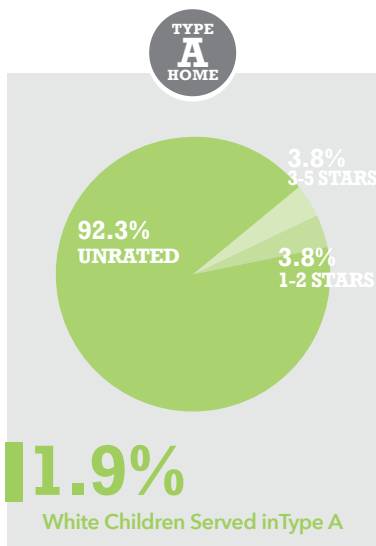


**Hamilton County**

## REGIONAL ANALYSIS: White Children by Provider Type & Quality Level

### FY17 HAMILTON COUNTY WHITE CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	White Children in Unrated Provider	White Children in 1-2 Star Provider	White Children in 3-5 Star Provider	Total # White Children in PFCC
<b>TYPE A HOME</b>	24	1	1	26
<b>TYPE B HOME</b>	99	5	0	104
<b>CHILD CARE CENTER</b>	597	463	207	1,267
<b>TOTAL</b>	<b>720</b>	<b>469</b>	<b>208</b>	<b>1,397</b>



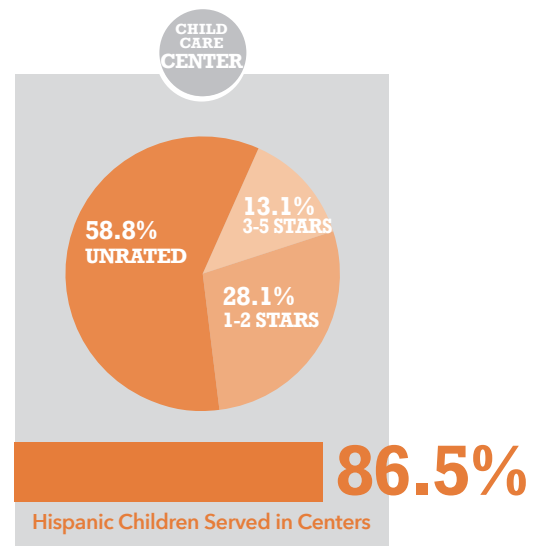
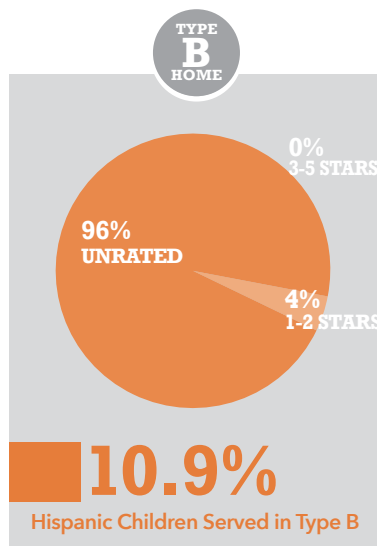
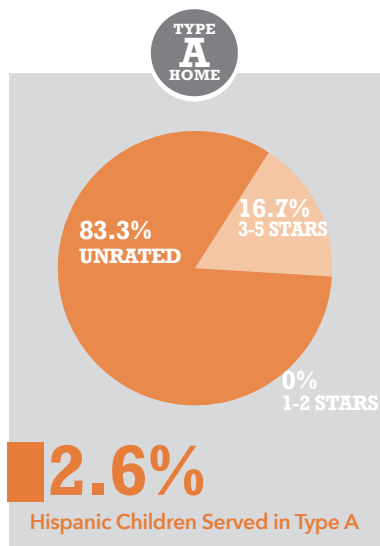
# Access to PFCC



## REGIONAL ANALYSIS: Hispanic Children by Provider Type & Quality Level

### FY17 HAMILTON COUNTY HISPANIC CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Hispanic Children in Unrated Provider	Hispanic Children in 1-2 Star Provider	Hispanic Children in 3-5 Star Provider	Total # Hispanic Children in PFCC
<b>TYPE A HOME</b>	5	0	1	6
<b>TYPE B HOME</b>	24	1	0	25
<b>CHILD CARE CENTER</b>	117	56	26	199
<b>TOTAL</b>	<b>146</b>	<b>57</b>	<b>27</b>	<b>230</b>





# Access to PFCC

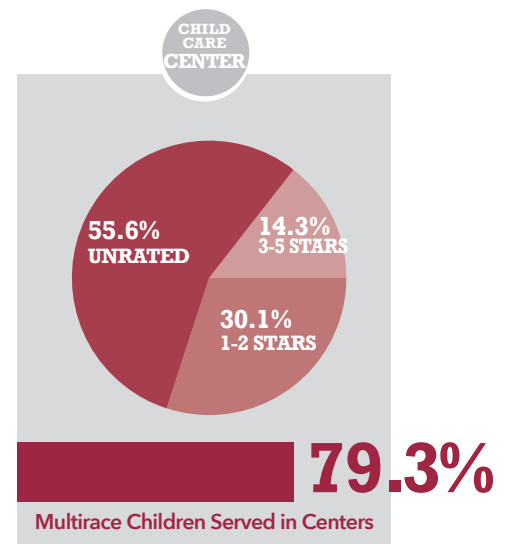
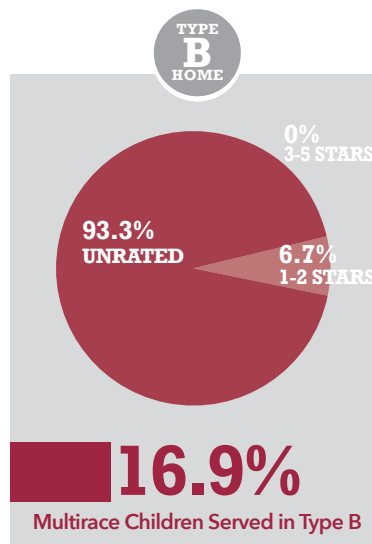
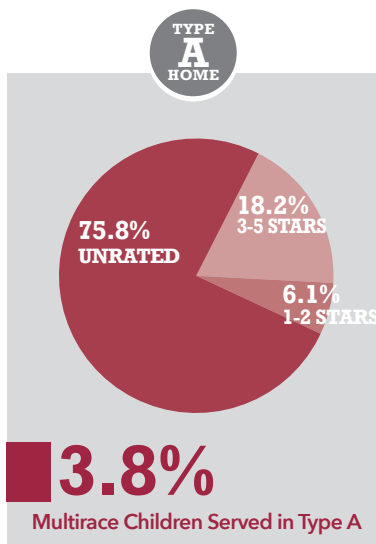


## Hamilton County

### REGIONAL ANALYSIS: Multirace Children by Provider Type & Quality Level

#### FY17 HAMILTON MULTIRACIAL/OTHER CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Multirace Children in Unrated Provider	Multirace Children in 1-2 Star Provider	Multirace Children in 3-5 Star Provider	Total # Multirace Children in PFCC
<b>TYPE A HOME</b>	25	2	6	33
<b>TYPE B HOME</b>	139	10	0	149
<b>CHILD CARE CENTER</b>	388	210	100	698
<b>TOTAL</b>	<b>552</b>	<b>222</b>	<b>106</b>	<b>880</b>



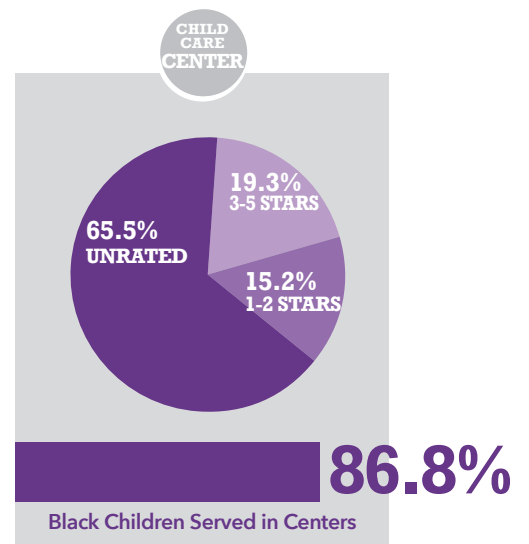
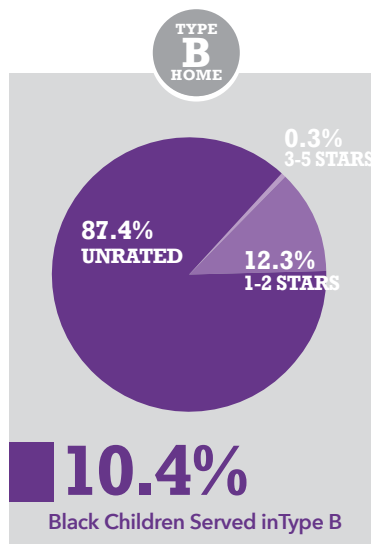
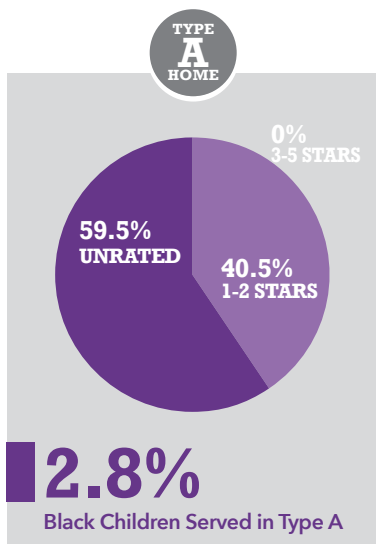
# Access to PFCC



## REGIONAL ANALYSIS: Black Children by Provider Type & Quality Level

### FY17 MONTGOMERY COUNTY BLACK CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Black Children in Unrated Provider	Black Children in 1-2 Star Provider	Black Children in 3-5 Star Provider	Total # Black Children in PFCC
<b>TYPE A HOME</b>	50	34	0	84
<b>TYPE B HOME</b>	278	39	1	318
<b>CHILD CARE CENTER</b>	1,737	402	511	2,650
<b>TOTAL</b>	<b>2,065</b>	<b>475</b>	<b>512</b>	<b>3,052</b>



# Access to PFCC

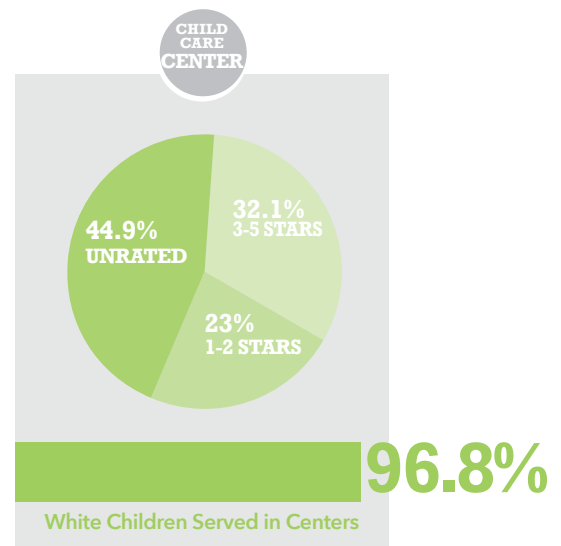
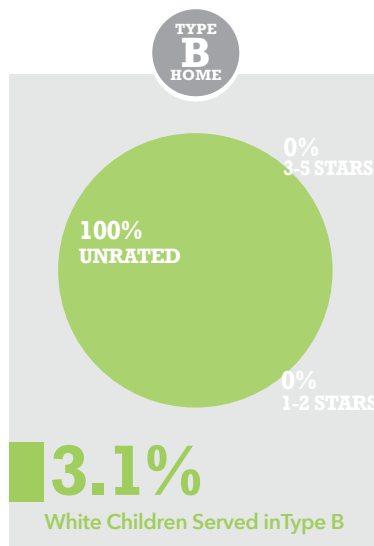
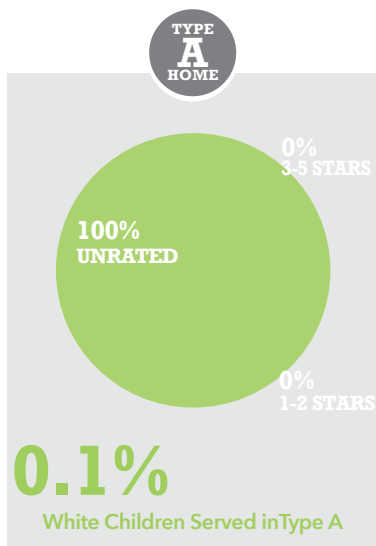


**Montgomery County**

## REGIONAL ANALYSIS: White Children by Provider Type & Quality Level

### FY17 MONTGOMERY COUNTY WHITE CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	White Children in Unrated Provider	White Children in 1-2 Star Provider	White Children in 3-5 Star Provider	Total # White Children in PFCC
<b>TYPE A HOME</b>	1	0	0	1
<b>TYPE B HOME</b>	38	0	0	38
<b>CHILD CARE CENTER</b>	534	274	382	1,190
<b>TOTAL</b>	<b>573</b>	<b>274</b>	<b>382</b>	<b>1,229</b>



# Access to PFCC

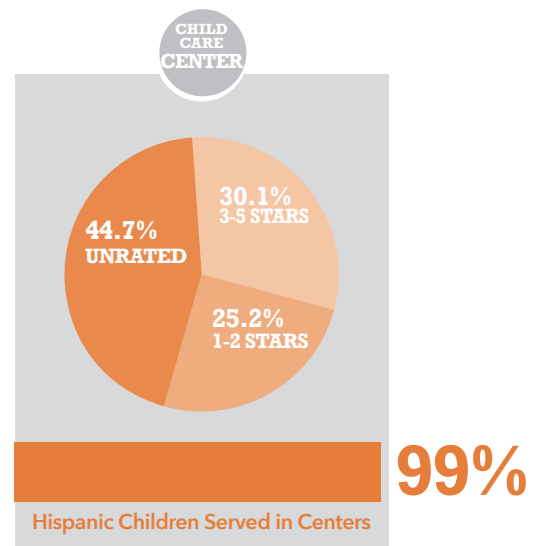
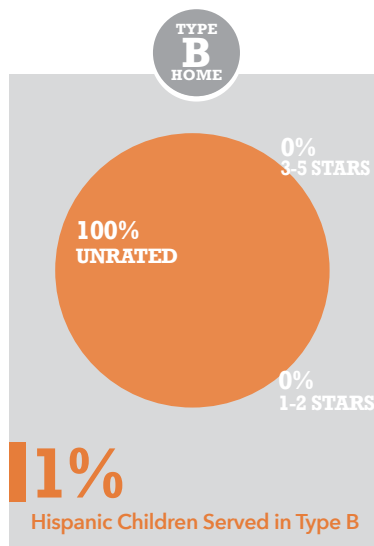
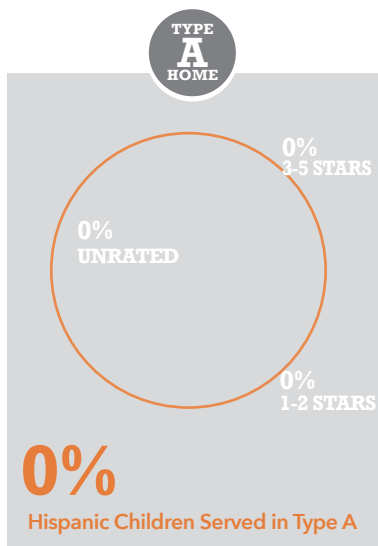


**Montgomery County**

## REGIONAL ANALYSIS: Hispanic Children by Provider Type & Quality Level

### FY17 MONTGOMERY COUNTY HISPANIC CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Hispanic Children in Unrated Provider	Hispanic Children in 1-2 Star Provider	Hispanic Children in 3-5 Star Provider	Total # Hispanic Children in PFCC
<b>TYPE A HOME</b>	0	0	0	0
<b>TYPE B HOME</b>	1	0	0	1
<b>CHILD CARE CENTER</b>	46	26	31	103
<b>TOTAL</b>	<b>47</b>	<b>26</b>	<b>31</b>	<b>104</b>



# Access to PFCC

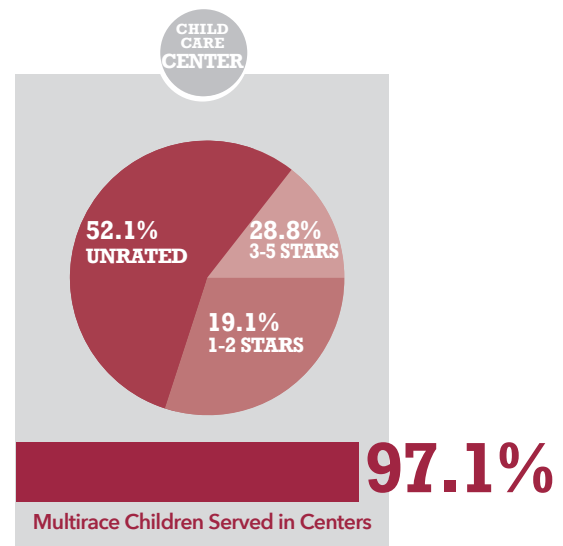
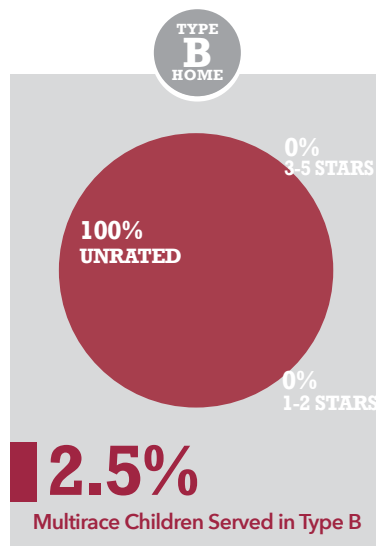
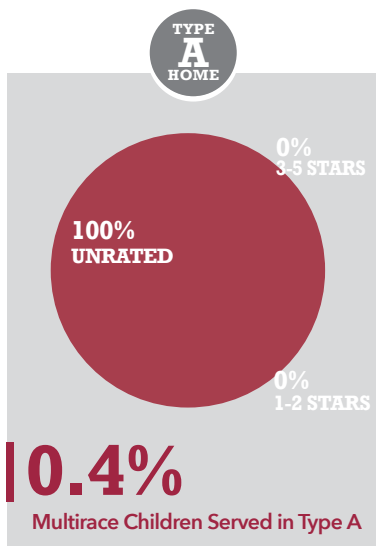


**Montgomery County**

## REGIONAL ANALYSIS: Multirace Children by Provider Type & Quality Level

### FY17 MONTGOMERY MULTIRACIAL/OTHER CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Multirace Children in Unrated Provider	Multirace Children in 1-2 Star Provider	Multirace Children in 3-5 Star Provider	Total # Multirace Children in PFCC
<b>TYPE A HOME</b>	1	0	0	1
<b>TYPE B HOME</b>	7	0	0	7
<b>CHILD CARE CENTER</b>	139	51	77	267
<b>TOTAL</b>	<b>147</b>	<b>51</b>	<b>77</b>	<b>275</b>



# Access to PFCC

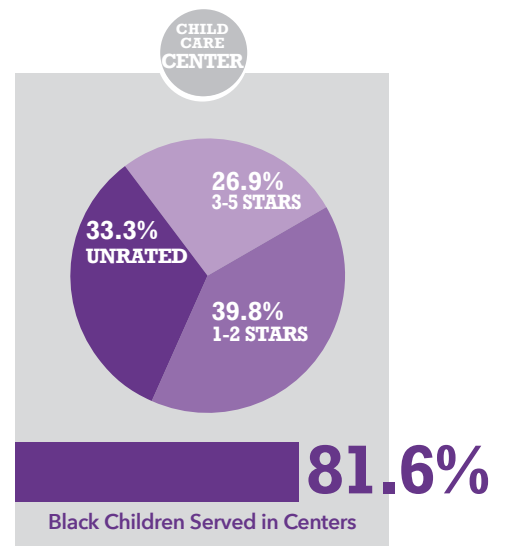
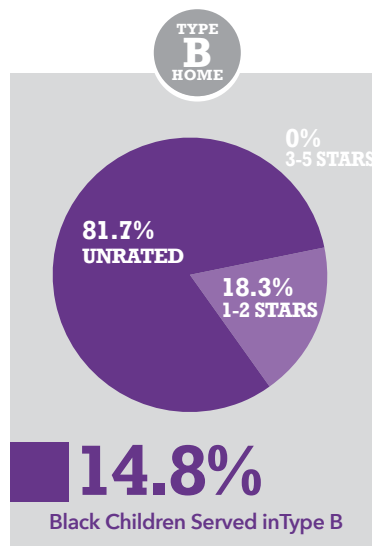
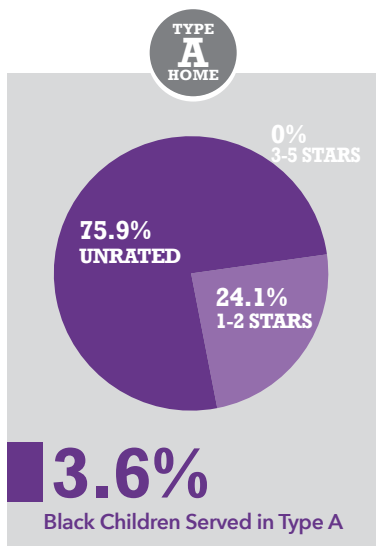


**Summit County**

## REGIONAL ANALYSIS: Black Children by Provider Type & Quality Level

### FY17 SUMMIT COUNTY BLACK CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Black Children in Unrated Provider	Black Children in 1-2 Star Provider	Black Children in 3-5 Star Provider	Total # Black Children in PFCC
<b>TYPE A HOME</b>	60	19	0	79
<b>TYPE B HOME</b>	267	60	0	327
<b>CHILD CARE CENTER</b>	601	719	485	1,805
<b>TOTAL</b>	<b>928</b>	<b>798</b>	<b>485</b>	<b>2,211</b>





# Access to PFCC

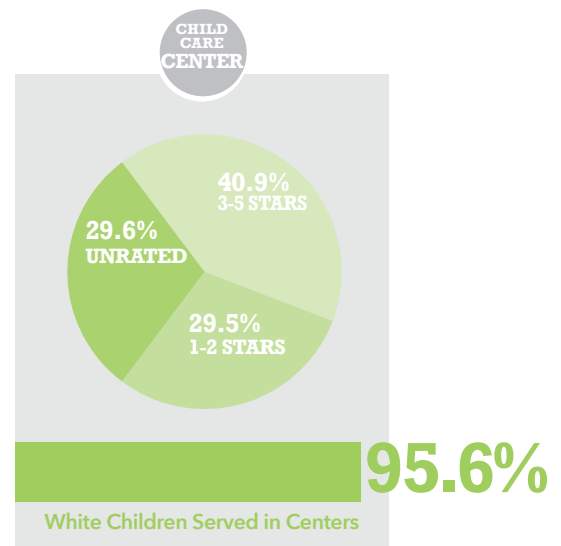
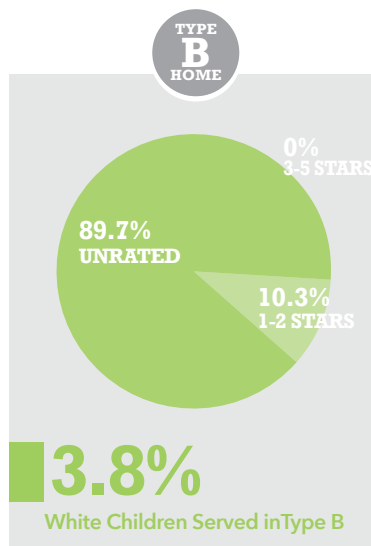
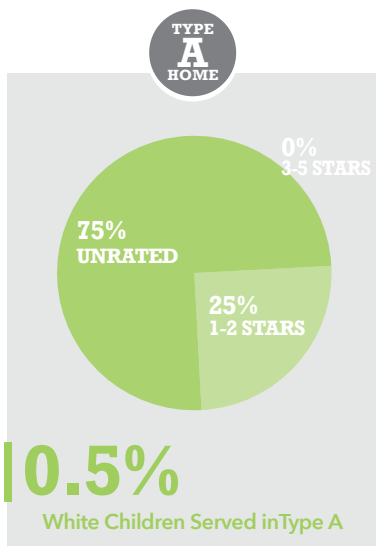


**Summit County**

## REGIONAL ANALYSIS: White Children by Provider Type & Quality Level

### FY17 SUMMIT COUNTY WHITE CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	White Children in Unrated Provider	White Children in 1-2 Star Provider	White Children in 3-5 Star Provider	Total # White Children in PFCC
<b>TYPE A HOME</b>	3	1	0	4
<b>TYPE B HOME</b>	26	3	0	29
<b>CHILD CARE CENTER</b>	214	213	295	722
<b>TOTAL</b>	<b>243</b>	<b>217</b>	<b>295</b>	<b>755</b>



# Access to PFCC

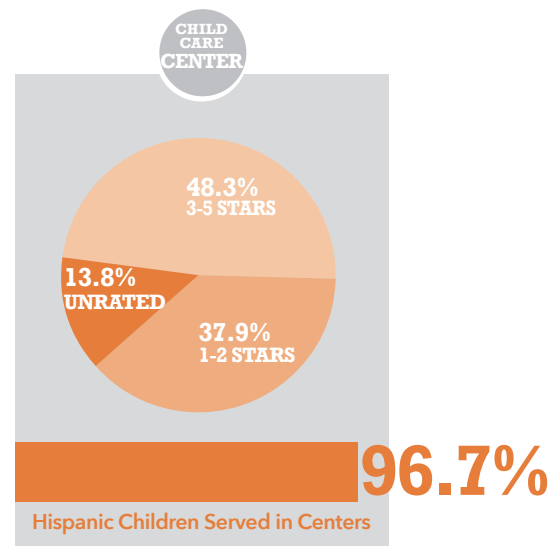
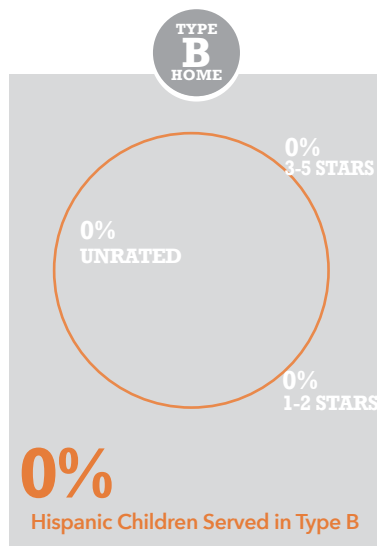
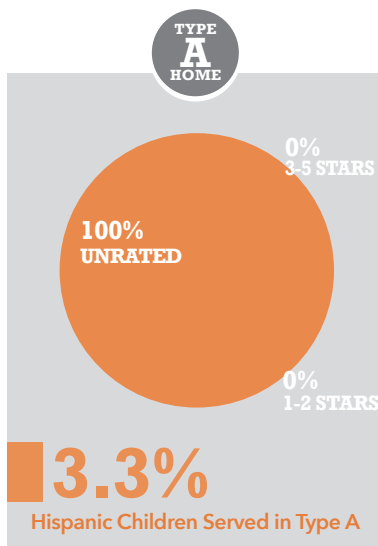


**Summit County**

## REGIONAL ANALYSIS: Hispanic Children by Provider Type & Quality Level

### FY17 SUMMIT COUNTY HISPANIC CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Hispanic Children in Unrated Provider	Hispanic Children in 1-2 Star Provider	Hispanic Children in 3-5 Star Provider	Total # Hispanic Children in PFCC
<b>TYPE A HOME</b>	1	0	0	1
<b>TYPE B HOME</b>	0	0	0	0
<b>CHILD CARE CENTER</b>	4	11	14	29
<b>TOTAL</b>	<b>5</b>	<b>11</b>	<b>14</b>	<b>30</b>



# Access to PFCC

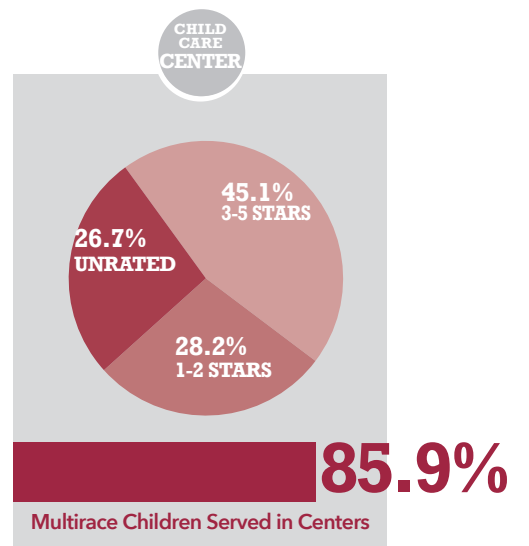
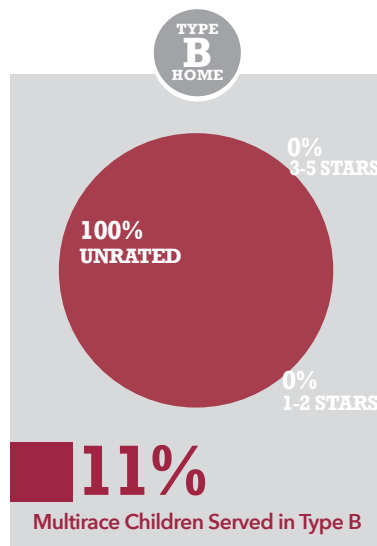
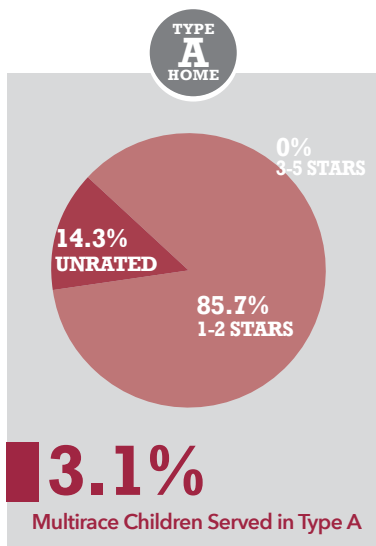


**Summit County**

## REGIONAL ANALYSIS: Multirace Children by Provider Type & Quality Level

### FY17 SUMMIT COUNTY MULTIRACIAL/OTHER CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Multirace Children in Unrated Provider	Multirace Children in 1-2 Star Provider	Multirace Children in 3-5 Star Provider	Total # Multirace Children in PFCC
<b>TYPE A HOME</b>	1	6	0	7
<b>TYPE B HOME</b>	25	0	0	25
<b>CHILD CARE CENTER</b>	52	55	88	195
<b>TOTAL</b>	<b>78</b>	<b>61</b>	<b>88</b>	<b>227</b>











# Access to PFCC

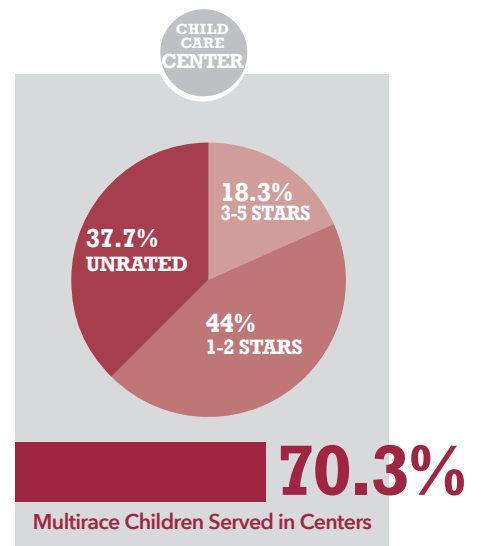
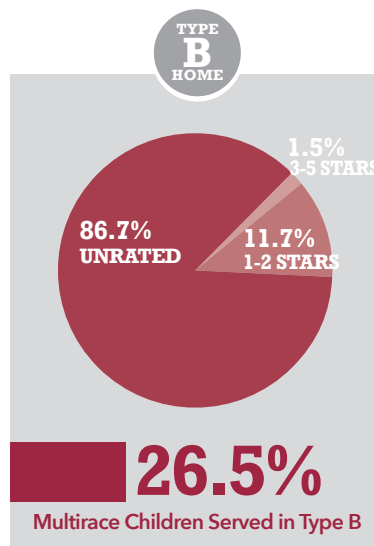
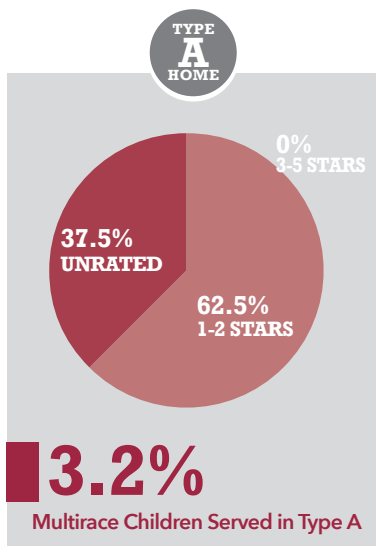


**Appalachian Region**

## REGIONAL ANALYSIS: Multirace Children by Provider Type & Quality Level

### FY17 APPALACHIAN REGION MULTIRACIAL/OTHER CHILDREN Enrolled in PFCC by Provider Type & Quality Level

	Multirace Children in Unrated Provider	Multirace Children in 1-2 Star Provider	Multirace Children in 3-5 Star Provider	Total # Multirace Children in PFCC
<b>TYPE A HOME</b>	9	15	0	24
<b>TYPE B HOME</b>	170	23	3	196
<b>CHILD CARE CENTER</b>	196	229	95	520
<b>TOTAL</b>	<b>375</b>	<b>267</b>	<b>98</b>	<b>740</b>



Access to  
PFCC

# DO BABIES CARRY A BIGGER BURDEN?

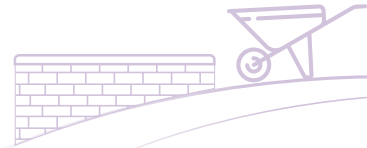
THE YOUNGER THE CHILD IS, THE LESS LIKELY THEY ARE ACCESSING PUBLICLY FUNDED CHILD CARE.

## FY17 STATEWIDE PFCC CHILDREN Enrolled **BY AGE** & Quality Level

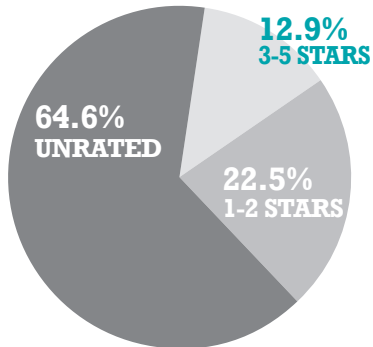
	# Children in Unrated Programs	# Children in 1-2 Star Programs	# Children in 3-5 Star Programs	Total # 0-4 Age Children in PFCC
<b>Infants:</b>	8,206	2,855	1,639	12,700
<b>Toddlers:</b>	13,096	4,807	3,061	20,964
<b>Pre-school:</b>	23,638	8,835	6,539	39,012
<b>ALL 0-4 AGE:</b>	<b>44,940</b>	<b>16,497</b>	<b>11,239</b>	<b>72,676</b>

WHAT OTHER INFORMATION DO WE NEED TO UNDERSTAND WHY BABIES ARE NOT ACCESSING THIS SYSTEM AT THE SAME RATE AS OLDER CHILDREN?

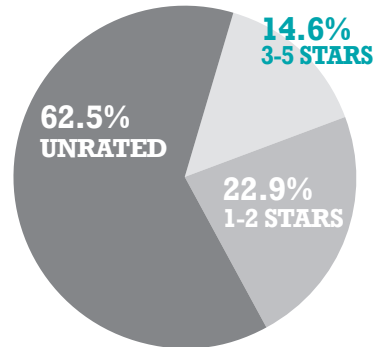
# Access to PFCC



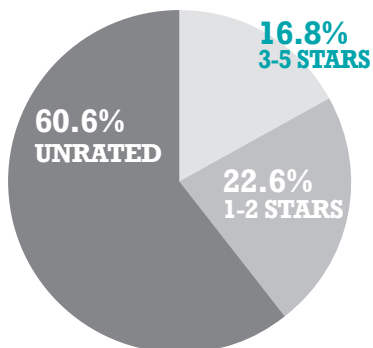
## Ohio Infants



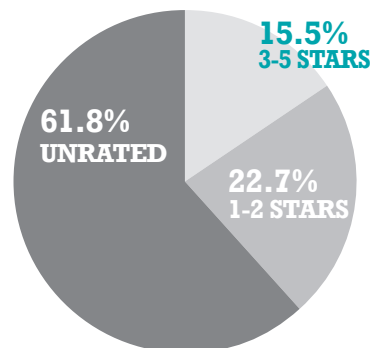
## Ohio Toddlers



## Ohio Pre-schoolers



## ALL 0-4 Ohio Children



### Reflections

**WHILE FEWER INFANTS ARE ACCESSING PFCC COMPARED TO OLDER CHILDREN, THEY ARE ALSO LESS LIKELY TO BE IN A HIGH-QUALITY PROGRAM.**

# WHY?



# Access to Head Start

*Head Start is a federally funded program that supports young children's growth and development in a positive learning environment through a variety of services and models based upon the needs of the local community.*


**ESTABLISHED**  
**50 YEARS AGO**  
**AS A PRESCHOOL PROGRAM.**

**SERVES**  
**3&4 YEAR OLDS**  
**PREDOMINANTLY.**

The program supports a child's early learning, health and family well-being. Eligibility for Head Start is 100% of federal poverty level (FPL), however, programs may enroll up to an additional 35% of children from families between 100% and 130% FPL and up to 10% of children that are above 130% FPL that demonstrate need in other ways.

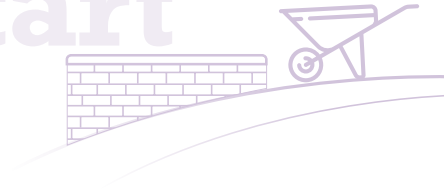
Head Start plays a key role in providing quality early childhood opportunities in Ohio. Children who participate in Head Start have innumerable benefits both immediately and throughout their life course from school readiness to postsecondary attainment. The impact is stronger among certain at-risk subgroups of poor children—including Hispanic children, African-American children, dual language learners, and children who are homeless or are in foster care.

The Head Start Impact Study found that children in the program scored better than a control group in all measured domains of cognitive and social-emotional development. Further, Head Start children were more likely to be immunized, receive dental checkups, have healthy eating patterns and have a significantly healthier body mass index.



*The **IMPACT** of  
Head Start during the  
**CRITICAL YEARS** of  
a child's development  
is stronger among  
**AT-RISK** subgroups  
of **POOR CHILDREN.***

# Access to Head Start

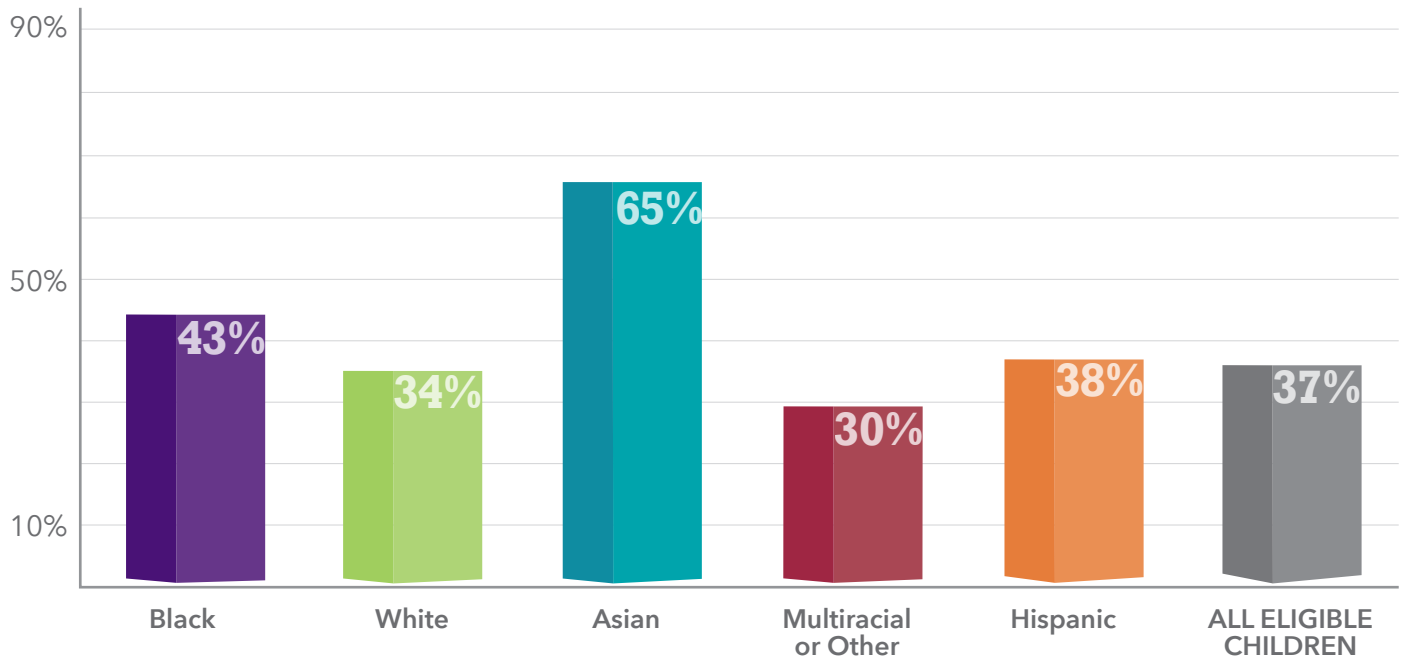


**STATEWIDE**

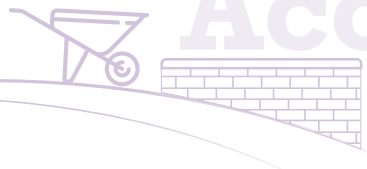
## FY17 Percentage of Head Start Children Served by Race & Ethnicity

Race & Ethnicity	# of Head Start Children*	Est. # of 3-4 Age <=130% FPL	% of Eligible 3-4 Age in Head Start
Black	12,167	28,484	42.7%
White	15,494	45,881	33.8%
Asian	489	757	64.6%
Multirace/Other	3,409	11,518	29.6%
Hispanic	3,310	8,623	38.4%
<b>ALL CHILDREN</b>	<b>34,869</b>	<b>95,264</b>	<b>36.6%</b>

*\*All children in the statewide and community analysis to follow include 1,552 2-year olds and 610 5-year olds. This analysis compares the total number of children to eligible children ages 3 and 4 because 94% of children served in the program are 3 or 4 years old.*



# Access to Head Start

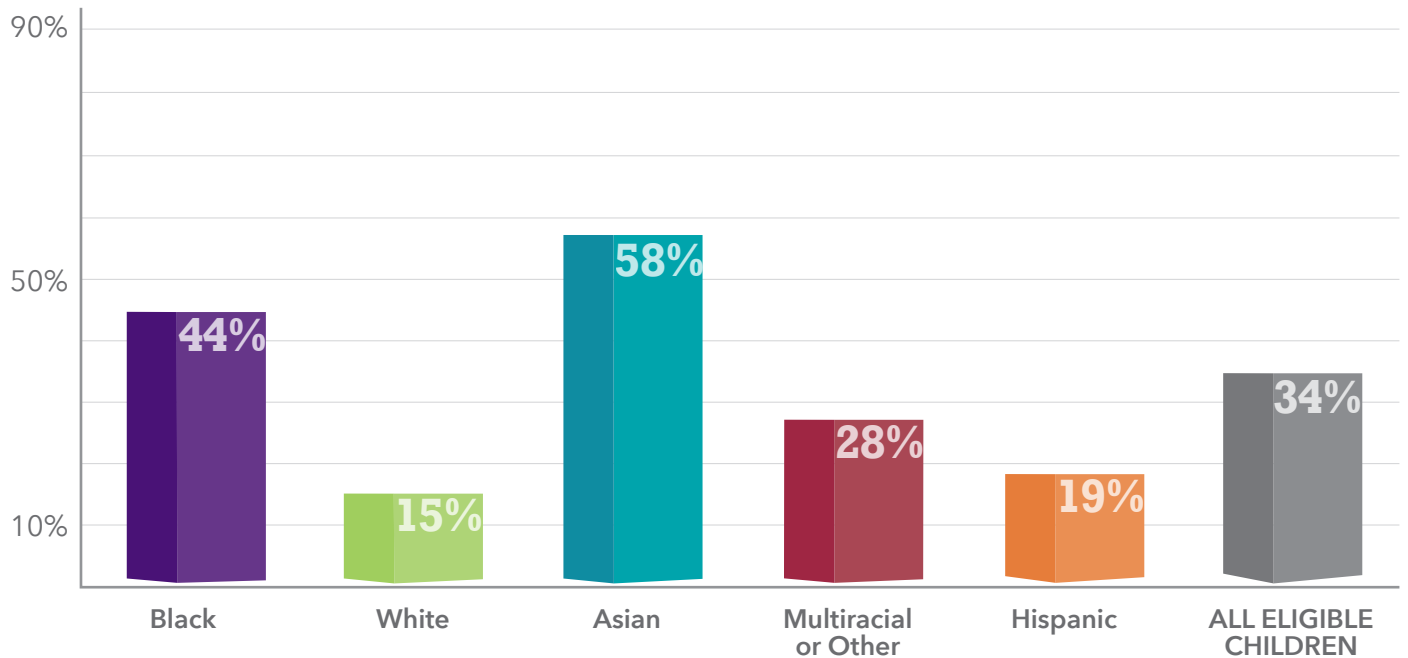


## Cuyahoga County

### FY17 Percentage of Head Start Children Served by Race & Ethnicity

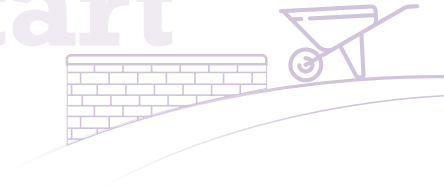
Race & Ethnicity	# of Head Start Children	Est. # of 3-4 Age <=130% FPL	% of Eligible 3-4 Age in Head Start
Black	3,031	6,871	44.1%
White	301	2,062	14.6%
Asian	54	93	57.9%
Multirace/Other	342	1,228	27.9%
Hispanic	228	1,235	18.5%
<b>ALL CHILDREN</b>	<b>3,956</b>	<b>11,489</b>	<b>34.4%</b>

Data Source: Ohio Department of Job and Family Services





# Access to Head Start

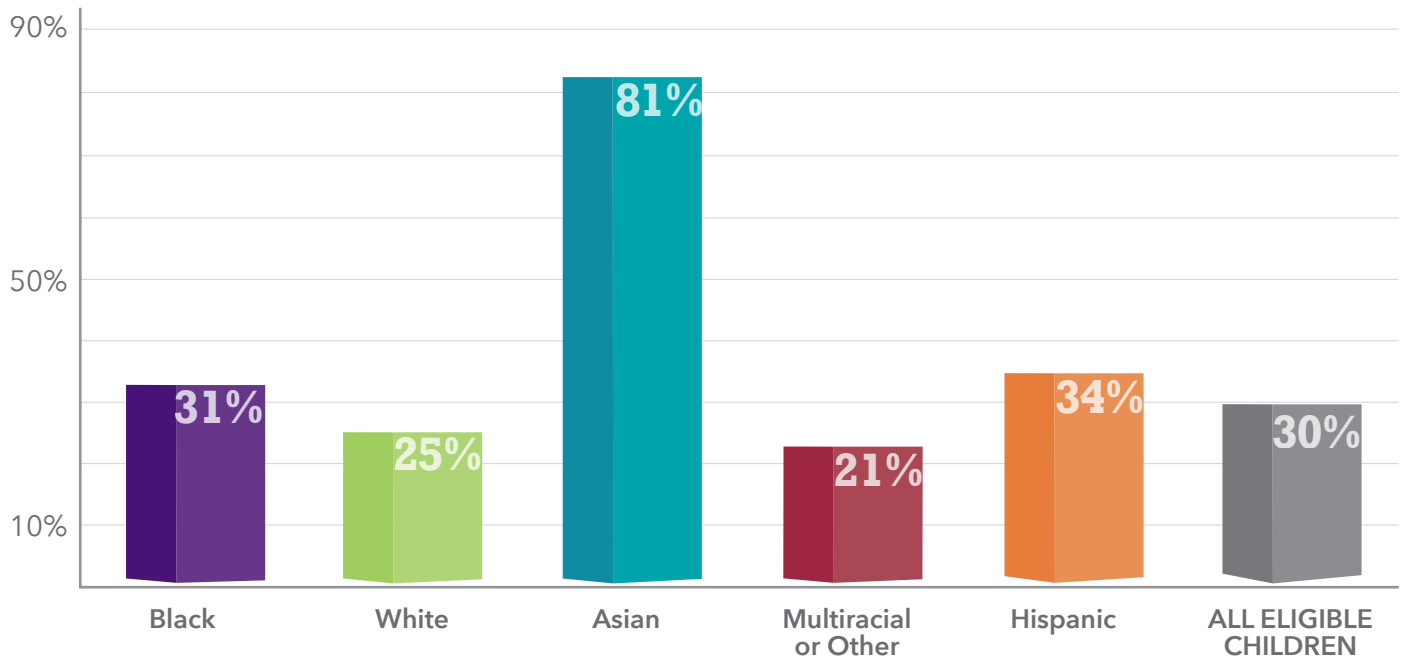


**Franklin County**

## FY17 Percentage of Head Start Children Served by Race & Ethnicity

Race & Ethnicity	# of Head Start Children	Est. # of 3-4 Age <=130% FPL	% of Eligible 3-4 Age in Head Start
Black	1,934	6,217	31.1%
White	739	2,965	24.9%
Asian	180	223	80.6%
Multirace/Other	307	1,489	20.6%
Hispanic	550	1,601	34.4%
<b>ALL CHILDREN</b>	<b>3,710</b>	<b>12,495</b>	<b>29.7%</b>

Data Source: Ohio Department of Job and Family Services



# Access to Head Start

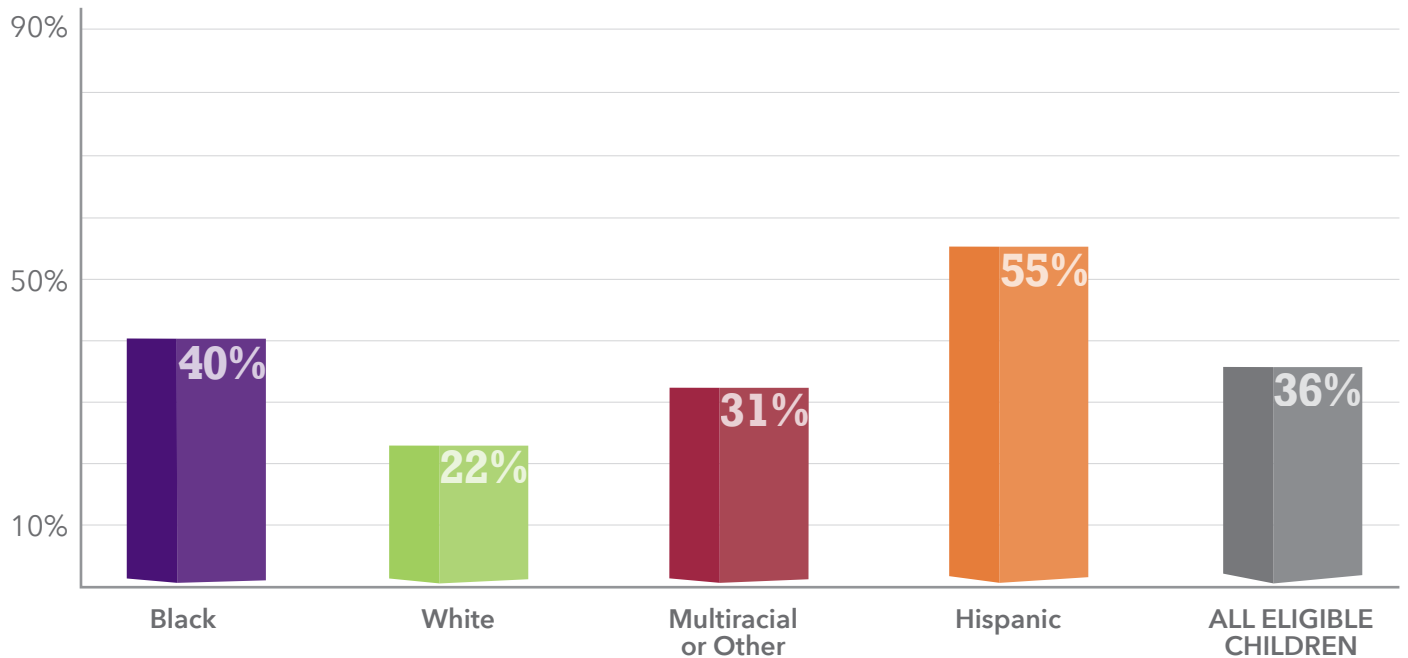


## Hamilton County

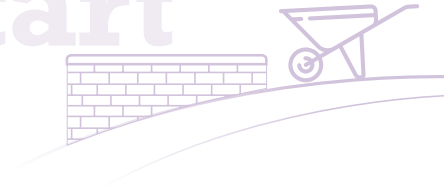
### FY17 Percentage of Head Start Children Served by Race & Ethnicity

Race & Ethnicity	# of Head Start Children	Est. # of 3-4 Age <=130% FPL	% of Eligible 3-4 Age in Head Start
Black	1,807	4,478	40.4%
White	436	1,986	21.9%
Multirace/Other*	272	874	31.1%
Hispanic	355	642	55.3%
<b>ALL CHILDREN</b>	<b>2,870</b>	<b>7,980</b>	<b>36.0%</b>

\*Note: Due to a data anomaly with the number of Asian children in Head Start, Asian children were combined with multiracial and other children for the purposes of the Hamilton County analysis.



# Access to Head Start

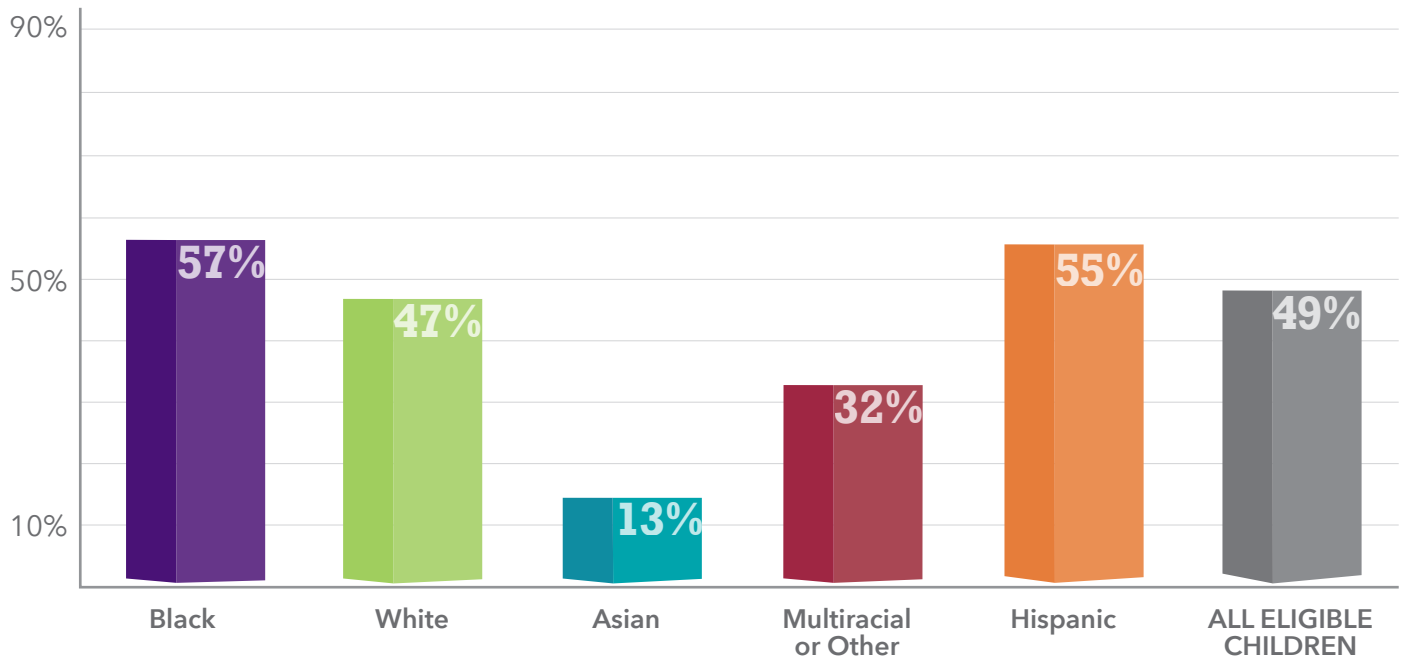


## Montgomery County

### FY17 Percentage of Head Start Children Served by Race & Ethnicity

Race & Ethnicity	# of Head Start Children	Est. # of 3-4 Age <=130% FPL	% of Eligible 3-4 Age in Head Start
Black	1,364	2,376	57.4%
White	978	2,091	46.8%
Asian	7	53	13.3%
Multirace/Other	261	825	31.7%
Hispanic	210	384	54.7%
<b>ALL CHILDREN</b>	<b>2,820</b>	<b>5,729</b>	<b>49.2%</b>

Data Source: Ohio Department of Job and Family Services



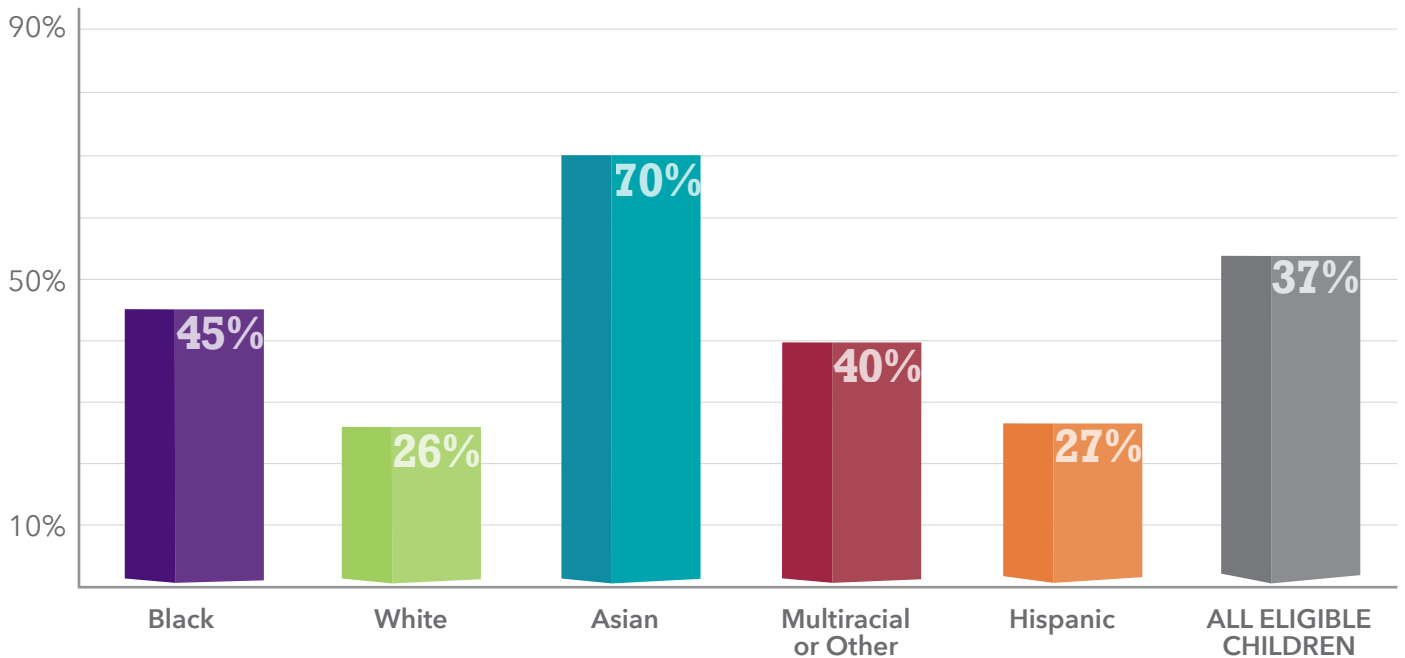
# Access to Head Start

## Summit County

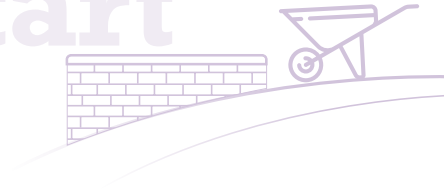
### FY17 Percentage of Head Start Children Served by Race & Ethnicity

Race & Ethnicity	# of Head Start Children	Est. # of 3-4 Age <=130% FPL	% of Eligible 3-4 Age in Head Start
Black	702	1,566	44.8%
White	378	1,446	26.1%
Asian	60	85	70.3%
Multirace/Other	175	443	39.5%
Hispanic	48	177	27.2%
<b>ALL CHILDREN</b>	<b>1,363</b>	<b>3,717</b>	<b>36.7%</b>

Data Source: Ohio Department of Job and Family Services



# Access to Head Start

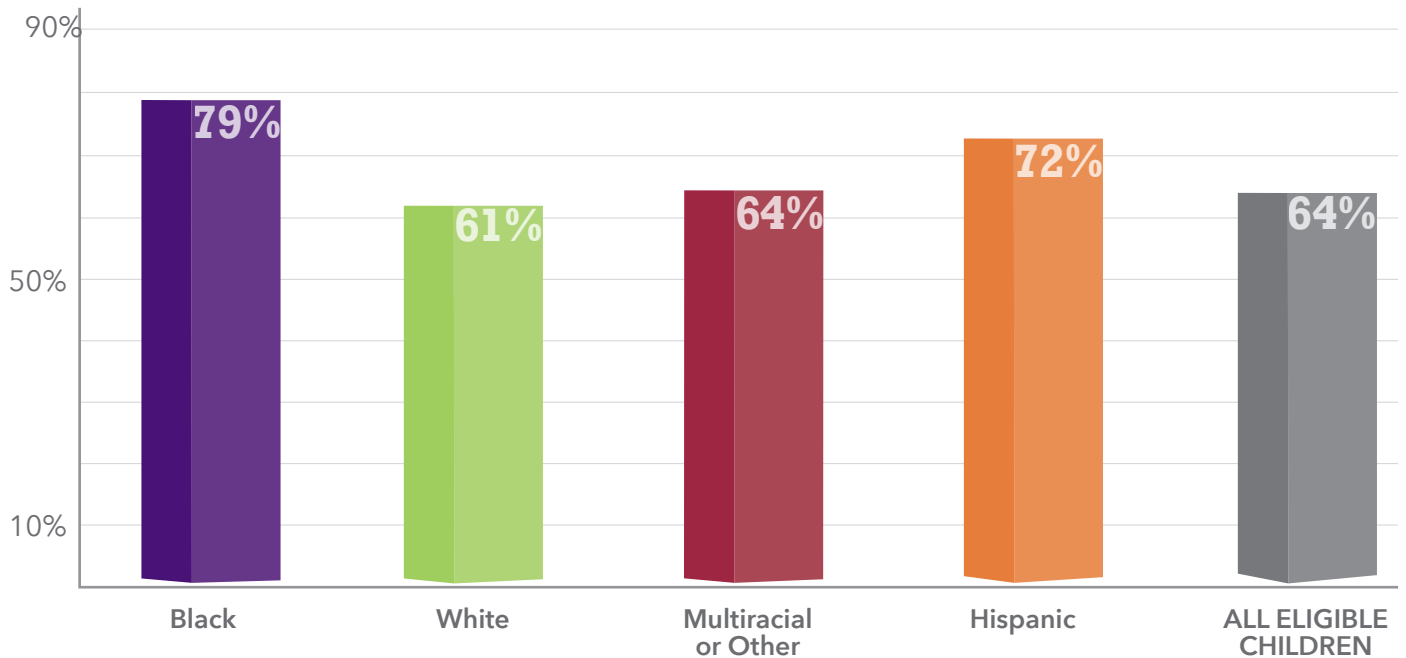


## Appalachian Region

### FY17 Percentage of Head Start Children Served by Race & Ethnicity

Race & Ethnicity	# of Head Start Children	Est. # of 3-4 Age <=130% FPL	% of Eligible 3-4 Age in Head Start
Black	1431	1,816	78.8%
White	7947	13,030	61.0%
Multirace/Other*	1043	1,635	63.8%
Hispanic	607	839	72.4%
<b>ALL CHILDREN</b>	<b>11,028</b>	<b>17,320</b>	<b>63.7%</b>

\*Note: Due to small numbers, Asian children have been combined with Multiracial and other children for the Appalachian Region





# Access to Head Start

## HEAD START'S **REACH**

**IS GREATER IN SOME COMMUNITIES THAN OTHERS.**

*Head Start is particularly critical for 3 and 4 year olds in the Appalachian Region with the program serving 63.7% of all eligible 3 and 4 year olds at 130% FPL. This Ohio region is similar to other rural areas across the nation.*

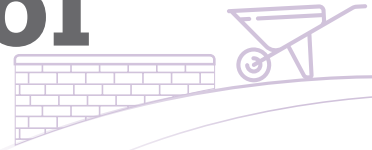
### Reflections

WITHOUT HEAD START, RURAL CHILDREN WOULD NOT HAVE ACCESS TO QUALITY EARLY CHILDHOOD PROGRAMS, PARTICULARLY CENTER-BASED CHILD CARE CENTERS.

**HOW HAS THIS FEDERALLY FUNDED PROGRAM FILLED IN WHERE STATE SUPPLY OF CHILD CARE HAS NOT DELIVERED?**



# Access to Preschool



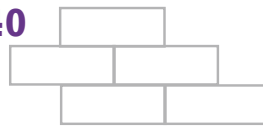
***The Ohio Department of Education (ODE) provides publicly funded preschool services for typically developing children through the Early Childhood Education (ECE) grant program. ODE awards a set of early childhood grants to qualified providers in school and private child care settings.***

Qualified providers must be highly rated (3-5 stars) under Step Up to Quality, Ohio's quality rating and improvement system. These grants can fund preschool slots for children in families that are at or below 200% of the federal poverty level (FPL). Children who participate in the ECE program receive a high-quality preschool experience for 12.5 hours per week.

Children in high-quality preschool, like other high-quality early childhood programs, reap immediate and long-term benefits throughout their life. They are more likely to demonstrate kindergarten readiness, less likely to be held back and more likely to graduate from high school. They are also more likely to find and hold living-wage jobs, more likely to be in good health and less likely to be involved in criminal behavior. The economics behind these benefits supports the case for high-quality preschool with a \$9.20 return on investment through age 40 for every public dollar invested.

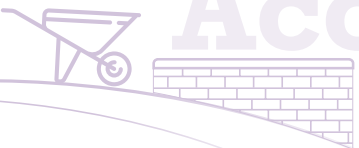
Children who have  
**ACCESS** to preschool  
**RECEIVE** a  
**HIGH-QUALITY**  
experience for  
**12.5 HOURS**  
per week.

**\$9.20 ROI**  
**THROUGH AGE 40**



FOR EVERY **\$1** INVESTED IN  
**PRESCHOOL**

# Access to Preschool

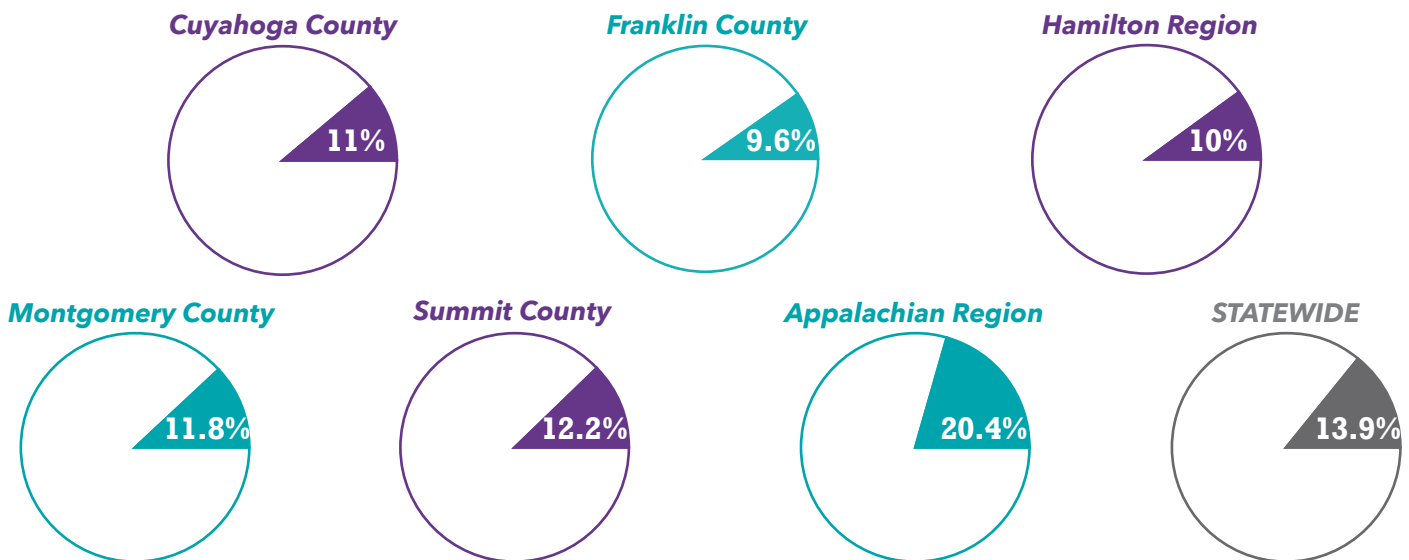


**Table 1**

**FY17 ODE Early Childhood Education (ECE) Slots by Region for 3-4 Year Olds**

Region	# of ODE ECE Slots	Total # of 3-4 Age Under 200% FPL
Cuyahoga County	1,628	14,848
Franklin County	1,639	17,129
Hamilton County	1,037	10,383
Montgomery County	900	7,606
Summit County	641	5,259
Appalachian Region	4,982	24,400
STATEWIDE	18,387	132,443

**Chart 1 Percent of Eligible Children Served by Early Childhood Education Slots**

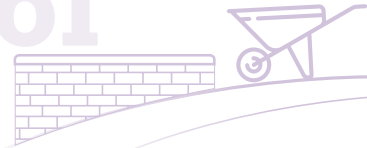


**Reflections**

COMPARED TO OTHER HIGH-QUALITY EARLY CHILDHOOD PROGRAMS SUCH AS PUBLICLY FUNDED CHILD CARE AND HEAD START, THE ECE PROGRAM IS SERVING RELATIVELY FEWER CHILDREN. FURTHERMORE, THE 12.5 HOUR WEEKLY EXPERIENCE OFTEN MUST BE SUPPLEMENTED BY ADDITIONAL CHILD CARE SERVICES TO MEET THE NEEDS OF WORKING FAMILIES.

**IF A CHILD FALLS BETWEEN 130 AND 200% FPL, THUS QUALIFYING FOR ECE PRESCHOOL BUT NOT PFCC OR HEAD START, WHAT CHALLENGES MAY THEIR FAMILY FACE IN UTILIZING THE PROGRAM?**

# Access to Preschool



## **The second publicly funded preschool program provided by the Ohio Department of Education is special education preschool.**

Children age 3-5 with disabilities are eligible for special education preschool services through Ohio's K-12 school districts and Education Service Centers. ODE's special education preschool services are open to all children with disabilities and there is no income eligibility criteria.

**Table 2**

### **FY17 Number of Children Served By ODE ECE & Special Education Preschool by Region**

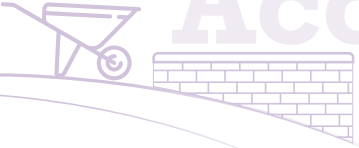
<b>Region</b>	<b># of ODE ECE Slots</b>	<b># of Preschool Special Ed Children</b>	<b>Total # of Preschool Children Served by ODE</b>
Cuyahoga County	1,628	1,858	3,486
Franklin County	1,639	2,163	3,802
Hamilton County	1,037	809	1,846
Montgomery County	900	989	1,889
Summit County	641	717	1,358
Appalachian Region	4,982	3,449	8,431
STATEWIDE	18,387	20,600	38,987

The following tables provides a summary of the number and percentage of ODE preschool children who are economically disadvantaged.

### **The ODE “economically disadvantaged” student meets any of the following conditions:**

1. Students who are known to be eligible to receive free or reduced-price lunches—a program through the United States Department of Agriculture (U.S.D.A) National School Lunch Program. The Federal eligibility criteria for free and reduced-price lunch is 185% FPL.
2. Students who have not submitted an application for free or reduced-price lunch or who have not been directly certified as eligible but reside in a household in which a member is known to be eligible for free or reduced-price lunch.
3. Students who are known to be recipients of or whose guardians are known to be recipients of public assistance.
4. Students whose parents or guardians have completed a Title I student income form and meet the income guidelines specified. Also, some districts have opted for the federal Community Eligibility Program (CEP) that enables eligible school districts to identify all or nearly all of their students as disadvantaged in order to remove the stigma associated with identifying a need for school lunch and breakfast.

# Access to Preschool



**Table 3**

**FY17 Number of ODE Preschool Children Served by Economic Status & Region**

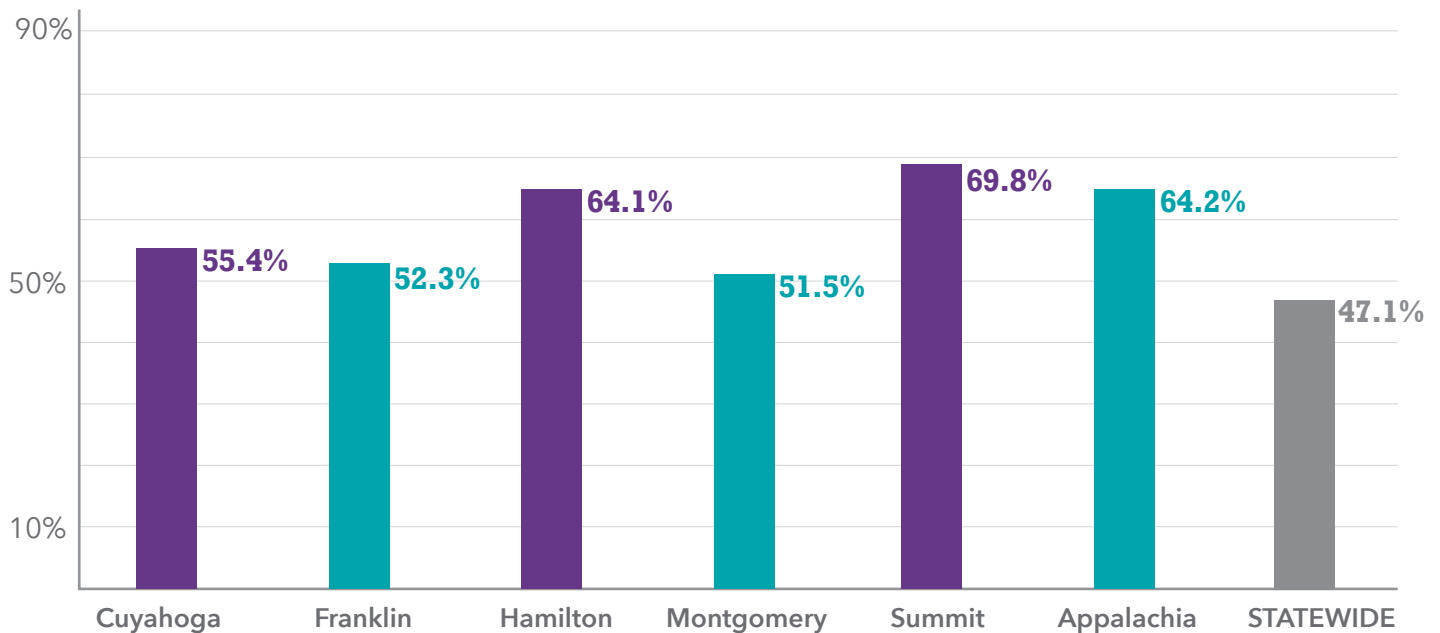
Region	# of ODE Preschool Children NOT Disadvantaged	# of ODE Economically Disadvantaged	Total # of ODE Preschool Children
Cuyahoga County	2,084	2,584	4,668
Franklin County	1,958	2,150	4,108
Hamilton County	894	1,596	2,490
Montgomery County	1,380	1,464	2,844
Summit County	307	711	1,018
Appalachian Region	2,367	4,252	6,619
STATEWIDE	20,053	17,886	37,939

Data Source: Ohio Department of Education, FY17 School Report Card

Note: The total number of ODE Preschool Children reflected here is lower than the number reflected in Table 2 because different data sets were utilized to gather economic status information and not all children are coded as either disadvantaged or not disadvantaged.

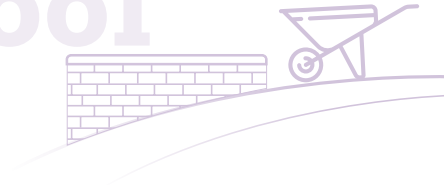
**Chart 2**

**FY17 Percentage of ODE Preschool Children that are Economically Disadvantaged by Region**



Data Source: Ohio Department of Health

# Access to Preschool



**Table 4** FY17 Number of Preschool Children Served by ODE by Race and Region

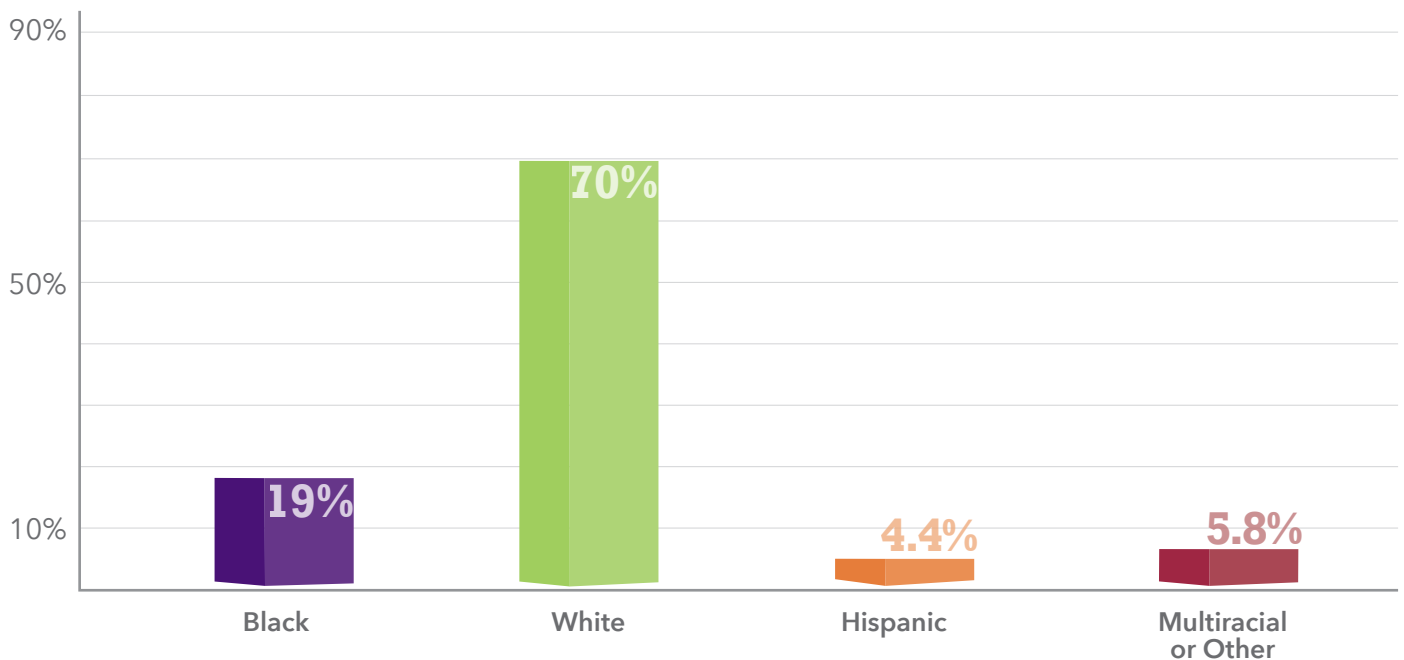
Region	# Black Preschool Children	# White Preschool Children	# Hispanic Preschool Children	# Multirace/Other Preschool Children	# Asian Preschool Children	Total # Preschool Children
Cuyahoga	1,904	2,125	208	89	129	4,455
Franklin	1,209	1,966	421	256	161	4,013
Hamilton	990	1,039	163	125	92	2,409
Montgomery	855	1,673	46	70	79	2,723
Summit	252	582	24	43	56	957
Appalachia	436	5,626	132	188	0	6,382
<b>STATEWIDE</b>	<b>7,042</b>	<b>25,579</b>	<b>1,614</b>	<b>1,456</b>	<b>666</b>	<b>36,357</b>

Note: An accounting of the race of preschool children served by ODE in the ECE program only was not available for FY17 at the time of this report. Accordingly, race for preschool children was reported as an aggregate of both ECE and Special Education program participants.

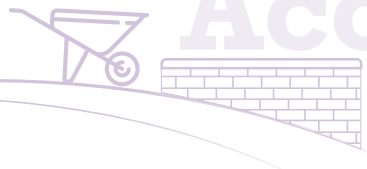
**Table 4 and the following regional charts provide a summary of ODE Preschool children served by race for the state as a whole and the six communities selected for this analysis.**

**STATEWIDE**

**FY17 ODE Percentage of Preschool Children Served by Race**

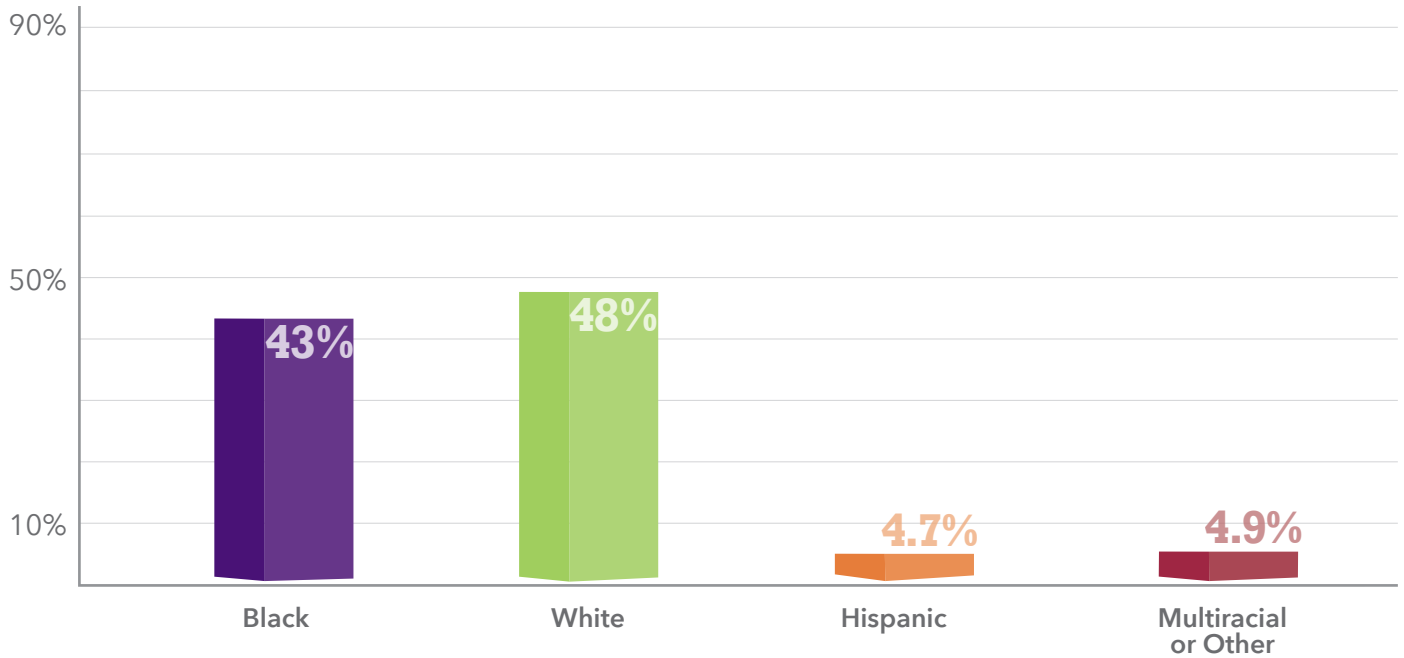


# Access to Preschool



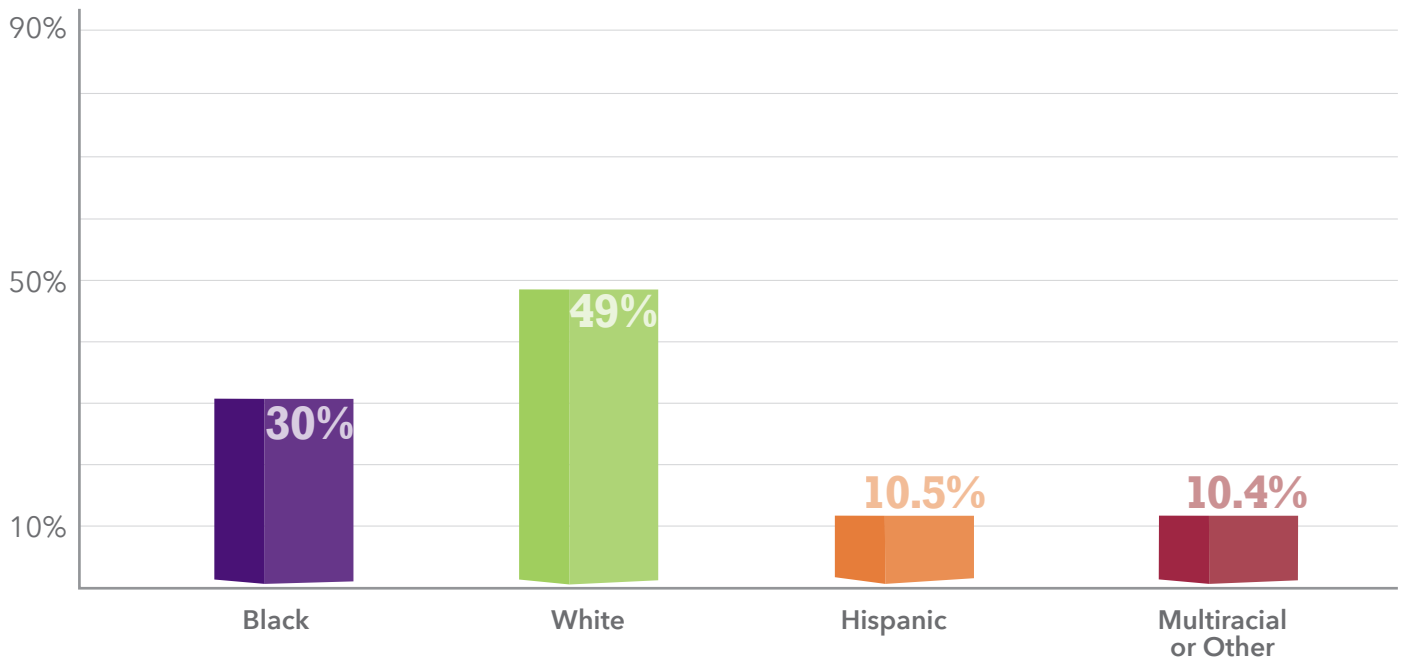
## Cuyahoga County

*FY17 ODE Percentage of Preschool Children Served by Race*

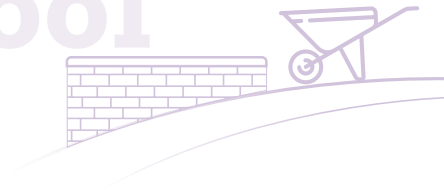


## Franklin County

*FY17 ODE Percentage of Preschool Children Served by Race*

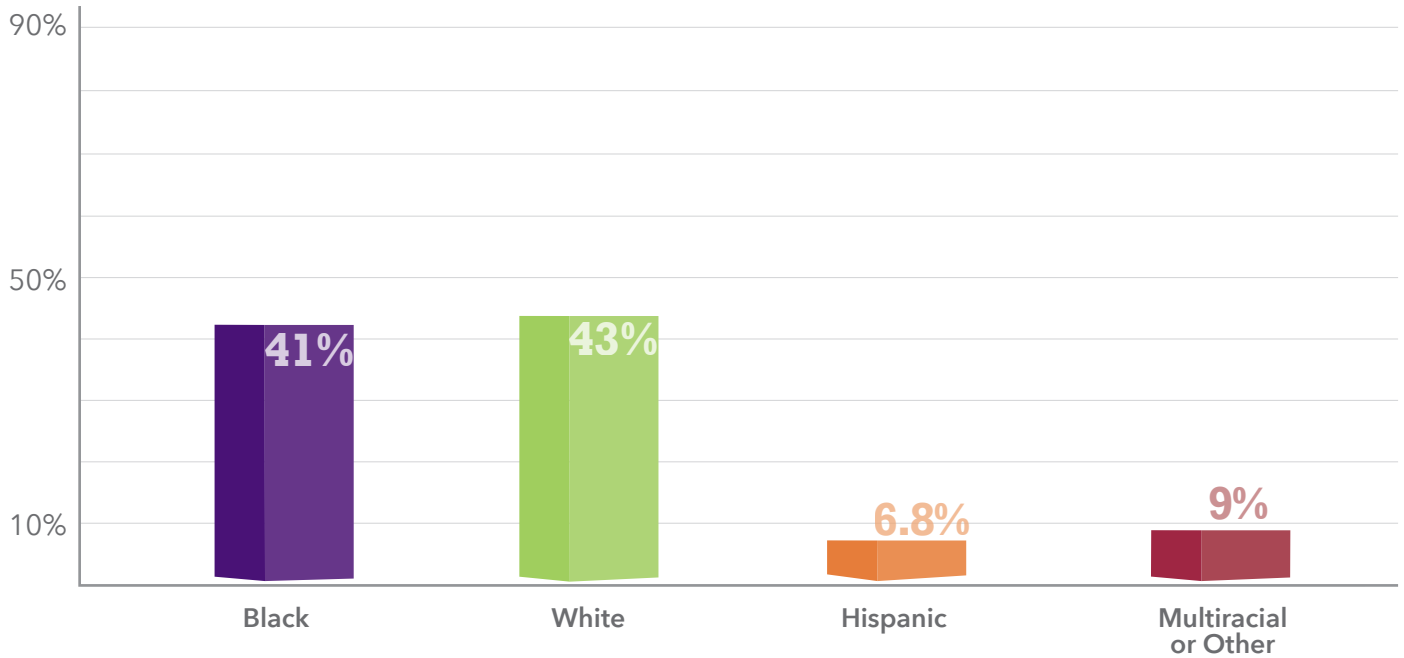


# Access to Preschool



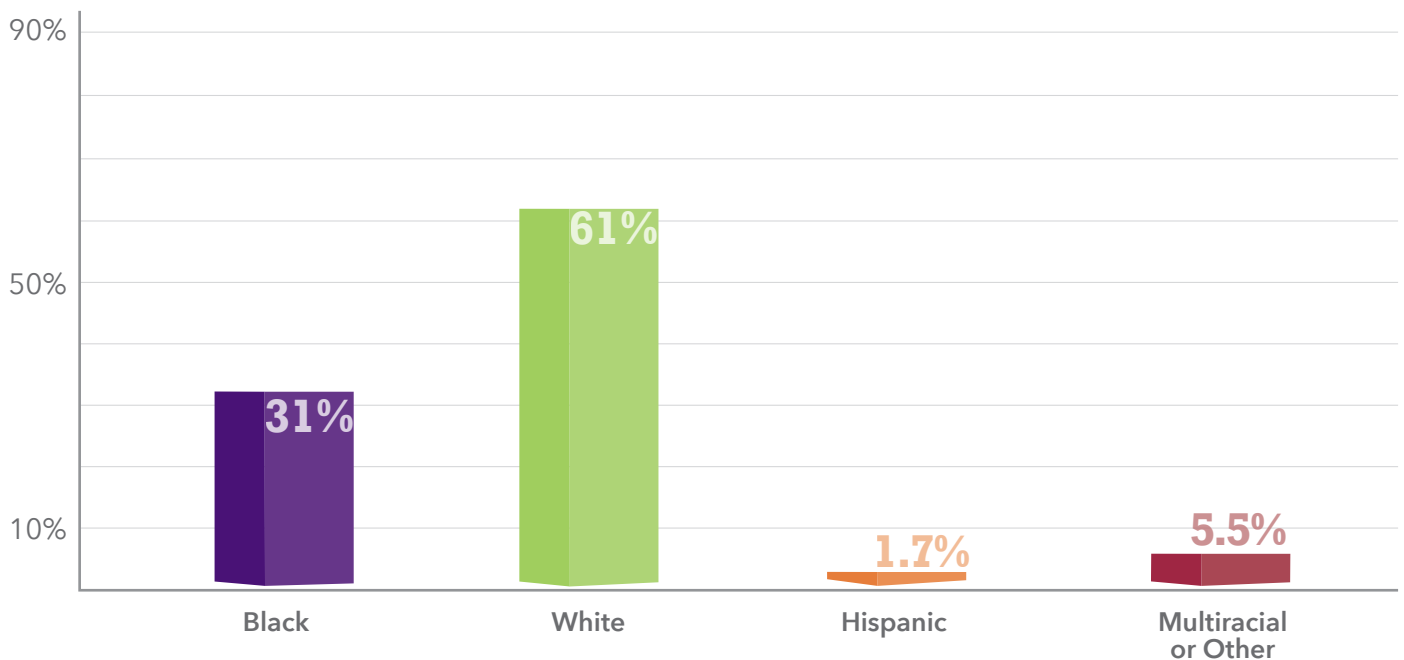
## Hamilton County

*FY17 ODE Percentage of Preschool Children Served by Race*



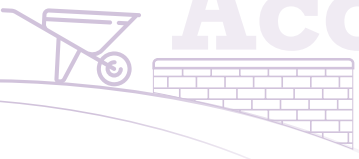
## Montgomery County

*FY17 ODE Percentage of Preschool Children Served by Race*



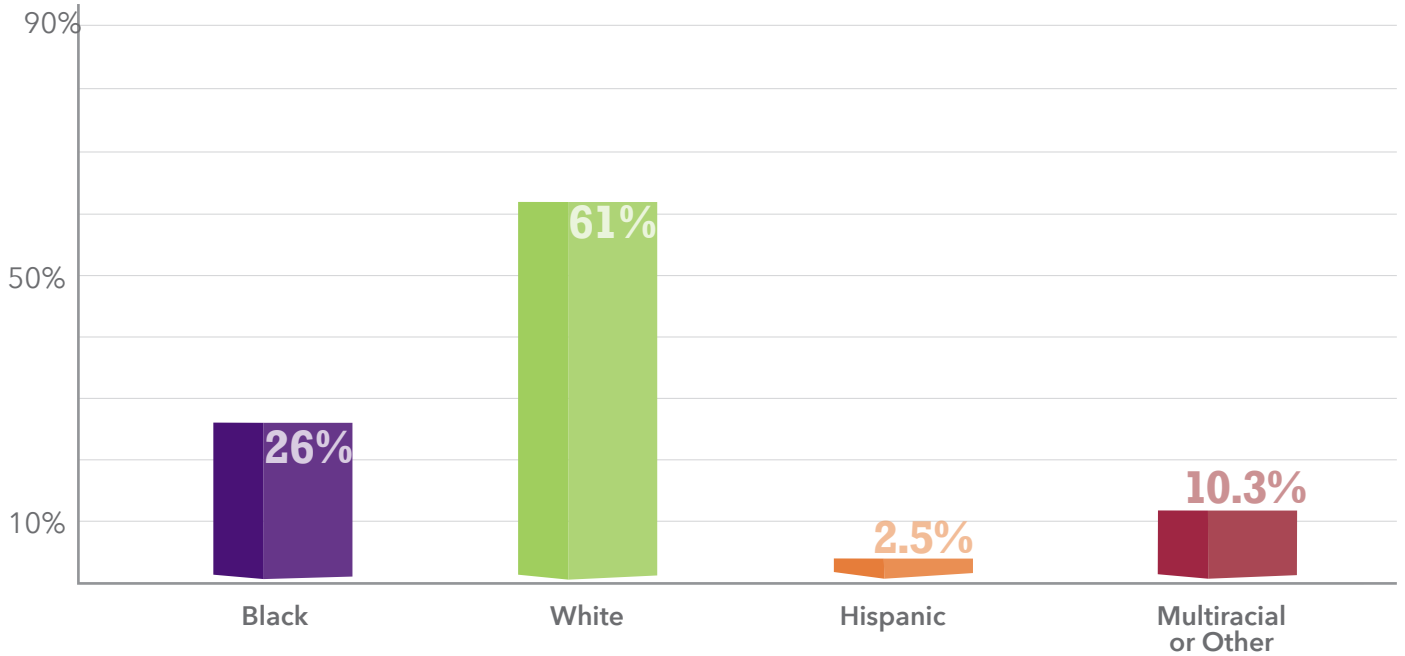


# Access to Preschool



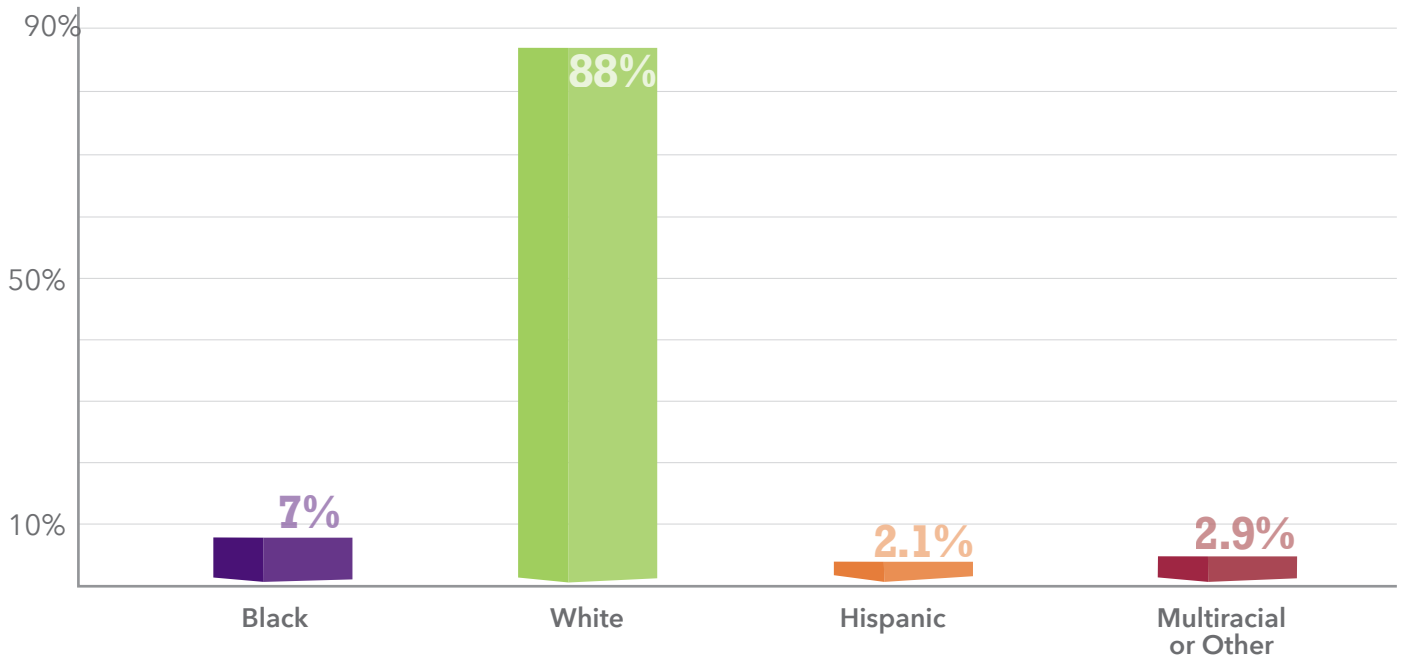
## Summit County

*FY17 ODE Percentage of Preschool Children Served by Race*



## Appalachian Region

*FY17 ODE Percentage of Preschool Children Served by Race*



# Access to Early Childhood Experiences



***This summary combines the early childhood education experiences of children to determine how many 0-4 year olds are participating in the following early childhood programs in Ohio:***

1. Publicly funded childcare (PFCC)
2. Head Start
3. Public preschool (Early Childhood Education grants and Special Education preschool)

The analysis below provides an overview of the early childhood services discussed in earlier sections of this report—showing the number of children served and the percentage of children served relative to the total number of 0-4 year old children eligible for these services at 130% FPL.

## ***FY17 Children Age 0-4 Receiving PFCC, Head Start, and ODE Pre-K Early Childhood Services, by Region***

<b>Region</b>	<b># Children 0-4 Age in PFCC*</b>	<b># Children 0-4 Age in Head Start**</b>	<b># Children Receiving PFCC &amp; Head Start</b>	<b>Est. ECE &amp; Special Ed Preschool 130% FPL***</b>	<b>Total # ECE Children Served</b>	<b># Children 0-4 Age Less Than 130% FPL</b>	<b>% Children 0-4 Age Served of Eligible</b>
Cuyahoga	12,675	3,956	-1,084	1,975	17,522	28,723	61.0%
Franklin	14,304	3,710	-764	1,580	18,830	31,329	60.1%
Hamilton	10,295	2,870	-317	1,249	14,097	19,951	70.7%
Montgomery	4,556	2,820	-858	1,146	7,664	14,322	53.5%
Summit	3,193	1,363	0	543	5,099	9,293	54.9%
Appalachia	7,350	11,028	-187	3,142	21,333	43,299	49.3%
<b>STATEWIDE</b>	<b>76,276</b>	<b>34,869</b>	<b>-3,709</b>	<b>13,135</b>	<b>120,571</b>	<b>238,159</b>	<b>50.6%</b>

\*PFCC Child Care Children 0-4 includes some 5 year olds who may have been 4 years old at some point during FY17. Additionally, there are some families accessing PFCC above 130% FPL given Ohio's two-tiered eligibility system (i.e. you continue to receive PFCC if you remain continuously eligible up until the point your income reaches 300% FPL). Only about 10% of the whole PFCC population of children (not just 0-4 year olds) who are utilizing PFCC are above 130% FPL.

\*\*Head Start Children 0-4 include 652 pregnant women, some of whom may have given birth during FY17, and 610 five year olds who may have been 4 years old at some point during FY17.

\*\*\*Early Childhood Education grants (200% FPL eligibility) and Special Education Preschool Program (eligibility not based on income) participant numbers have been adjusted to reflect only those children in these programs at or below 130% FPL.

Note: This analysis does not include utilization overlap between Head Start and ECE. This overlap is not known at the time of this report. The analysis also does not include utilization overlap between PFCC and ECE, however, there are an estimated 2,000 kids double-counted in PFCC and ECE which likely inflates the percentages accessing these programs by about 12%.

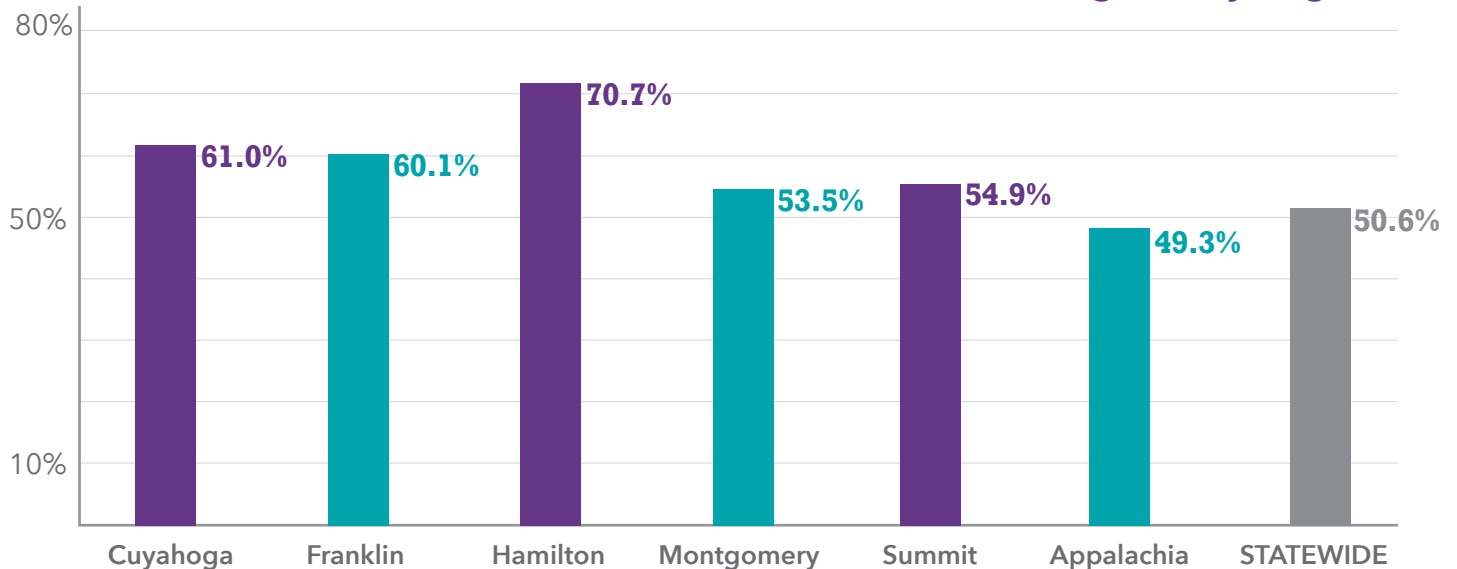
Access to

## Early Childhood Experiences

**ONLY 50.6% OF OHIO CHILDREN AT OR BELOW 130% FPL HAVE ACCESS TO AN EARLY CHILDHOOD EXPERIENCE.**

*Access does not equal quality. Our largest state-funded program serving the most children (PFCC) primarily serves children in unrated settings, so Ohio cannot ensure these children have access to the high-quality learning environments that are driving positive child outcomes.*

**FY17 % of 0-4 Year Olds Receiving PFCC, Head Start, and ODE Pre-K Early Childhood Services Relative the Number of Children Eligible, by Region**



Data Source: Ohio Department of Education

## Reflections

GIVEN THAT THE PERCENTAGE OF CHILDREN ACCESSING EARLY CHILDHOOD EXPERIENCES IN THE URBAN COMMUNITIES ANALYZED ABOVE ARE ALL HIGHER THAN THE STATE PERCENTAGE, **WHAT MUST BE OCCURRING IN THE REMAINDER OF THE STATE THAT LOWERS THE STATEWIDE PERCENTAGE?**

**HOW SHOULD OHIO CONSIDER HELPING CHILDREN AND FAMILIES ABOVE 130% FPL WHO DO NOT QUALIFY FOR STATE FUNDED EARLY CHILDHOOD PROGRAMS?**

# Kindergarten Readiness



**One of the primary purposes of providing Ohio’s most at-risk children access to high-quality early childhood experiences is to prepare them for school.**

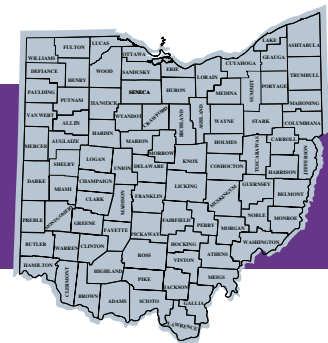
This is critically important because we know that a child's readiness to begin Kindergarten predicts their future success—including their ability to be proficient in reading by the third grade. The Ohio Kindergarten Readiness Assessment, among other uses, assesses children in public and community school kindergarten programs at the beginning of the school year. The assessment is based on Ohio’s Early Learning and Development standards and focuses on the following four areas of early learning:

1. Social Foundations—including social-emotional development, and learning approaches
2. Mathematics
3. Language and Literacy
4. Physical Well-Being and Motor Development

Tables 1 and 2 and Chart 1 below provide a breakdown of the students across the state of Ohio by race and ethnicity who scored at the three different levels on the FY17 KRA:

**Demonstrating Readiness | Approaching Readiness | Emerging Readiness**

## STATEWIDE ANALYSIS: Kindergarten Readiness by Race



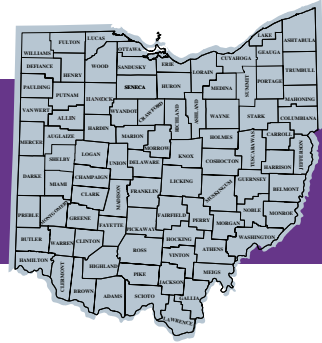
**Table 1**

**FY17 Ohio Students DEMONSTRATING READINESS for Kindergarten by Race & Ethnicity**

Race & Ethnicity	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
Black	4,778	7,851	7,392	20,021
White	37,562	28,104	14,263	79,929
Asian	1,219	963	782	2,964
Multiracial	2,406	2,787	1,760	6,953
Hispanic	1,657	2,777	2,784	7,218
Other/Unknown	173	220	257	650
American Indian	41	54	41	136
<b>ALL STUDENTS</b>	<b>47,836</b>	<b>42,756</b>	<b>27,279</b>	<b>117,871</b>

Data Source: Ohio Department of Education School Report Cards "Download Data" webpage, State Data, State Kindergarten Readiness Assessment (KRA) data

# Kindergarten Readiness

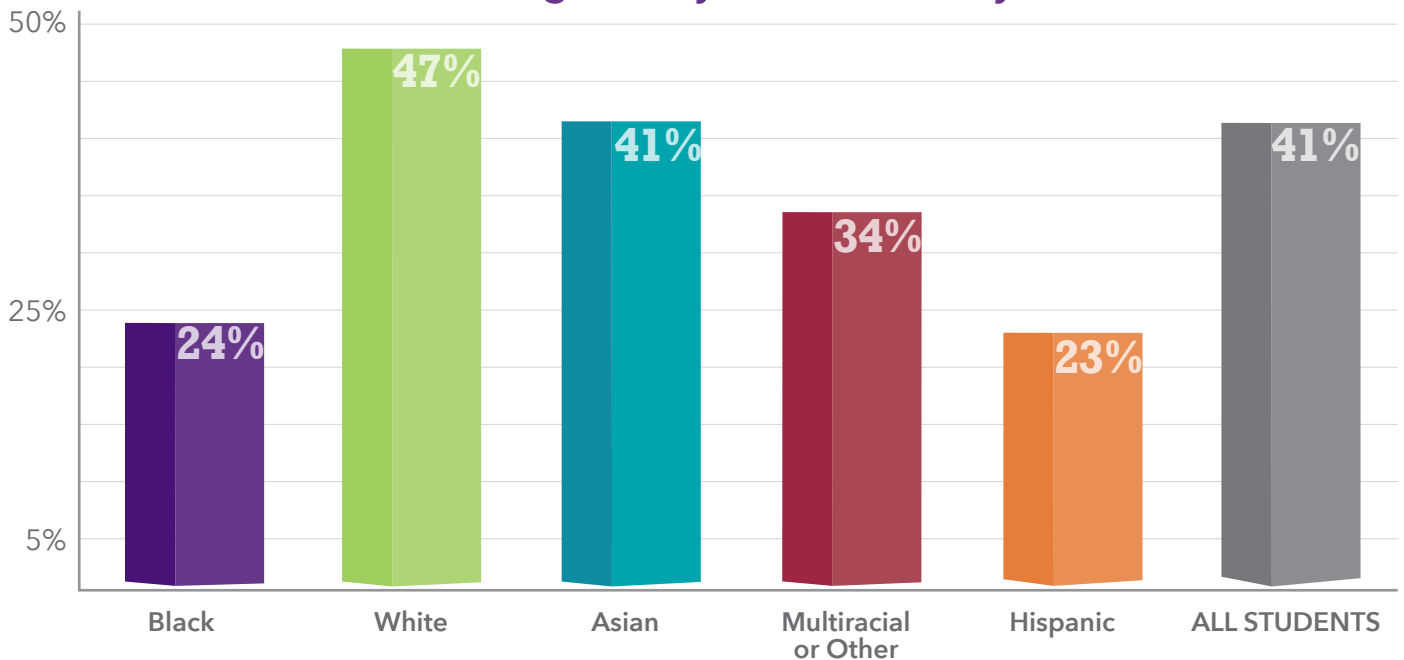


## STATEWIDE ANALYSIS: Kindergarten Readiness by Race

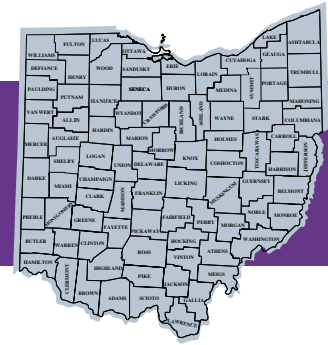
**Table 2** FY17 % of Ohio Students **DEMONSTRATING READINESS** for Kindergarten by Race & Ethnicity

Race & Ethnicity	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
Black	23.9%	39.2%	36.9%
White	47.0%	35.2%	17.8%
Asian	41.1%	32.5%	26.4%
Multiracial	34.6%	40.1%	25.3%
Hispanic	23.0%	38.5%	38.6%
Other/Unknown	26.6%	33.8%	39.5%
American Indian	30.1%	39.7%	30.1%
<b>ALL STUDENTS</b>	<b>40.6%</b>	<b>36.3%</b>	<b>23.1%</b>

**Chart 1** FY17 % of Ohio Students **DEMONSTRATING READINESS** for Kindergarten by Race & Ethnicity



# Kindergarten Readiness



## STATEWIDE ANALYSIS: Kindergarten Readiness by Economic Status

ONLY **40%** OF **OHIO CHILDREN**  
ENTER KINDERGARTEN READY TO LEARN.

Reflections

**WHAT IS THE MOST EFFECTIVE WAY TO GET ALL CHILDREN READY FOR KINDERGARTEN? DOES THIS DIFFER FOR CHILDREN OF COLOR?**

**HOW CAN WE SHARE THIS INFORMATION WITH FAMILIES?**

**Table 3**

**FY17 Ohio Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS\***

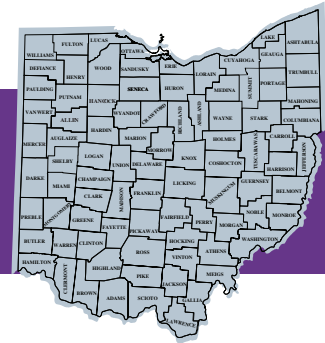
Economic Status	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
NOT Disadvantaged	30,810	17,229	6,002	54,041
Disadvantaged	16,853	25,307	21,020	63,180
Other/Unknown	173	220	257	650
<b>ALL STUDENTS</b>	<b>47,836</b>	<b>42,756</b>	<b>27,279</b>	<b>117,871</b>

Data Source: Ohio Department of Education School Report Cards "Download Data" webpage, State Data, State Kindergarten Readiness Assessment (KRA) data

\*The definition of **economically disadvantaged** is clarified in the Sources & Definitions section at the end of this report.



# Kindergarten Readiness



## STATEWIDE ANALYSIS: Kindergarten Readiness by Economic Status

**Table 4**

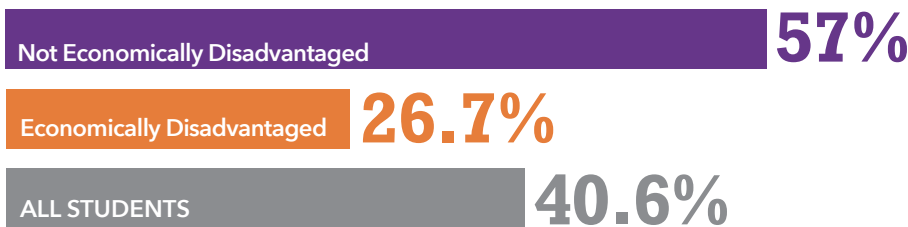
**FY17 % Ohio Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS**

Economic Status	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
NOT Disadvantaged	57.0%	31.9%	11.1%
Disadvantaged	26.7%	40.1%	33.3%
Other/Unknown	26.6%	33.8%	39.5%
<b>ALL STUDENTS</b>	<b>40.6%</b>	<b>36.3%</b>	<b>23.1%</b>

*Data Source: Ohio Department of Education School Report Cards "Download Data" webpage, State Data, State Kindergarten Readiness Assessment (KRA) data*

**Chart 2**

**FY17 % of Ohio Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS**

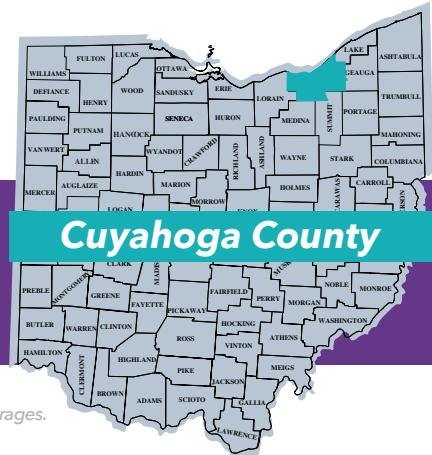


ONLY 26.7% OF ECONOMICALLY DISADVANTAGED STUDENTS ARE READY FOR KINDERGARTEN. HOWEVER, BLACK AND HISPANIC CHILDREN, REGARDLESS OF ECONOMIC STATUS, PERFORM WORSE THAN ECONOMICALLY DISADVANTAGED STUDENTS WITH 23.9% AND 23% OF THOSE CHILDREN ENTERING KINDERGARTEN READY TO LEARN RESPECTIVELY.

**POVERTY IS NOT TELLING THE WHOLE STORY OF WHY KIDS ARE NOT READY FOR SCHOOL. WHAT DO WE NEED TO UNDERSTAND TO CREATE A COMPLETE PICTURE OF THE CHALLENGES FACING OHIO KIDS?**



# Kindergarten Readiness



**Cuyahoga County**

## REGIONAL ANALYSIS: Kindergarten Readiness by Economic Status

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

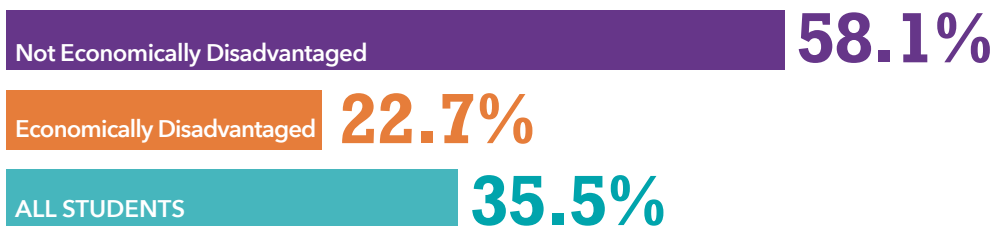
### FY17 CUYAHOGA COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
NOT Disadvantaged	2,007	1,091	356	3,454
Disadvantaged	1,296	2,117	2,258	5,671
<b>ALL STUDENTS</b>	<b>3,303</b>	<b>3,208</b>	<b>2,614</b>	<b>9,125</b>

### FY17 % of CUYAHOGA COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
NOT Disadvantaged	58.1%	31.6%	10.3%
Disadvantaged	22.7%	37.1%	39.6%
<b>ALL STUDENTS</b>	<b>35.5%</b>	<b>36.3%</b>	<b>28.3%</b>

### FY17 % of CUYAHOGA COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS



**Economically disadvantaged kids in Cuyahoga County are doing worse than the statewide population of economically disadvantaged students on the KRA. Why?**

# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Economic Status

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

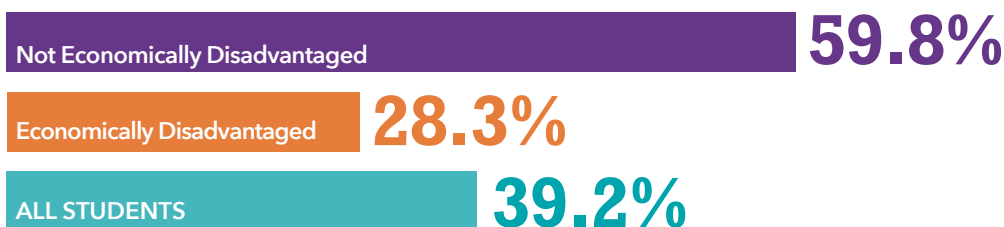
### FY17 FRANKLIN COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
NOT Disadvantaged	2,216	1,088	400	3,704
Disadvantaged	2,117	2,810	2,529	7,456
<b>ALL STUDENTS</b>	<b>4,333</b>	<b>3,898</b>	<b>2,929</b>	<b>11,160</b>

### FY17 % of FRANKLIN COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
NOT Disadvantaged	59.8%	29.4%	10.8%
Disadvantaged	28.3%	37.6%	33.8%
<b>ALL STUDENTS</b>	<b>39.2%</b>	<b>34.2%</b>	<b>26.6%</b>

### FY17 % of FRANKLIN COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS



# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Economic Status

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

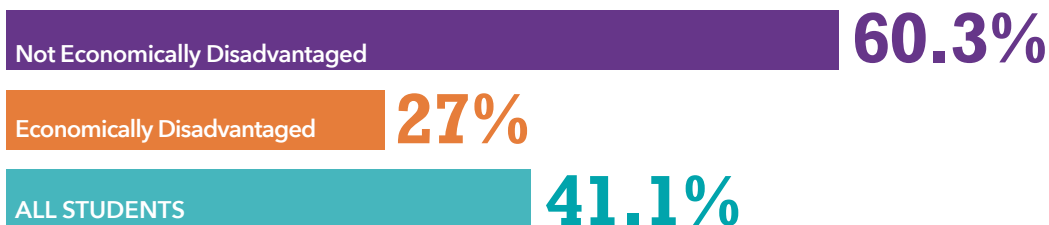
### FY17 HAMILTON COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
NOT Disadvantaged	1,553	737	271	2,561
Disadvantaged	1,069	1,527	1,331	3,927
<b>ALL STUDENTS</b>	<b>2,622</b>	<b>2,264</b>	<b>1,602</b>	<b>6,488</b>

### FY17 % of HAMILTON COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
NOT Disadvantaged	60.3%	28.6%	10.5%
Disadvantaged	27.0%	38.6%	33.7%
<b>ALL STUDENTS</b>	<b>41.1%</b>	<b>34.5%</b>	<b>24.4%</b>

### FY17 % of HAMILTON COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS



# Kindergarten Readiness



Montgomery County

## REGIONAL ANALYSIS: Kindergarten Readiness by Economic Status

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

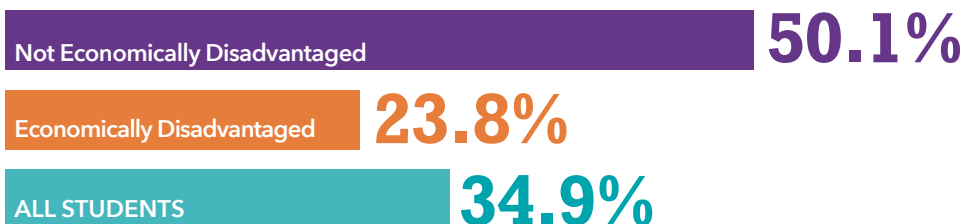
### FY17 MONTGOMERY COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
NOT Disadvantaged	763	568	191	1,522
Disadvantaged	597	1,052	850	2,499
<b>ALL STUDENTS</b>	<b>1,360</b>	<b>1,620</b>	<b>1,041</b>	<b>4,021</b>

### FY17 % of MONTGOMERY COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
NOT Disadvantaged	50.1%	37.3%	12.5%
Disadvantaged	23.8%	42.0%	34.0%
<b>ALL STUDENTS</b>	<b>34.9%</b>	<b>39.6%</b>	<b>25.6%</b>

### FY17 % of MONTGOMERY COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS



*Economically disadvantaged kids in Montgomery County are doing worse than the statewide population of economically disadvantaged students on the KRA. Why?*

# Kindergarten Readiness



**Summit County**

## REGIONAL ANALYSIS: Kindergarten Readiness by Economic Status

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

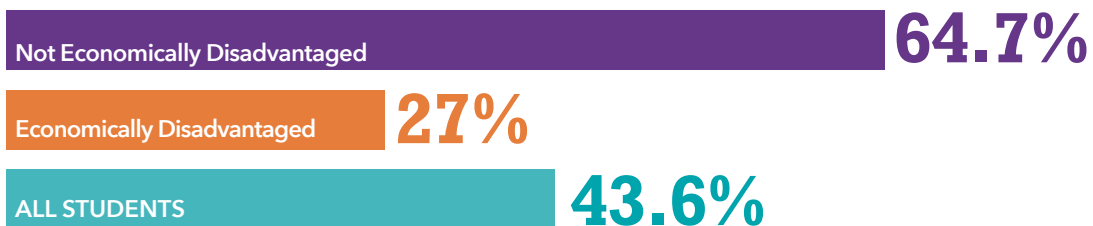
### FY17 SUMMIT COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
NOT Disadvantaged	1,444	608	181	2,233
Disadvantaged	718	985	949	2,652
<b>ALL STUDENTS</b>	<b>2,162</b>	<b>1,593</b>	<b>1,130</b>	<b>4,885</b>

### FY17 % of SUMMIT COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
NOT Disadvantaged	64.7%	27.2%	8.1%
Disadvantaged	27.0%	37.1%	35.7%
<b>ALL STUDENTS</b>	<b>43.6%</b>	<b>32.9%</b>	<b>23.5%</b>

### FY17 % of SUMMIT COUNTY Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS



# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Economic Status

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

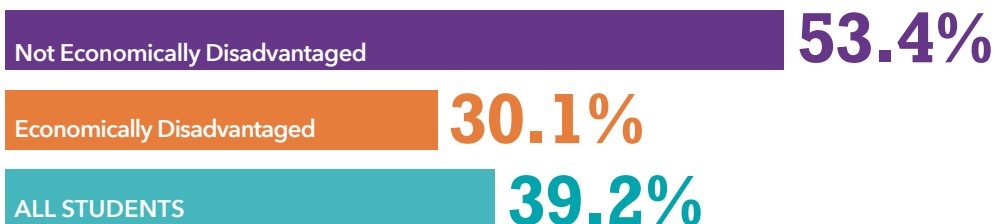
### FY17 APPALACHIAN REGION Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
NOT Disadvantaged	4,459	2,790	1,040	8,289
Disadvantaged	3,458	4,544	3,498	11,500
<b>ALL STUDENTS</b>	<b>7,917</b>	<b>7,334</b>	<b>4,538</b>	<b>19,789</b>

### FY17 % of APPALACHIAN REGION Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS

Economic Status	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
NOT Disadvantaged	53.4%	33.4%	12.5%
Disadvantaged	30.1%	39.5%	30.4%
<b>ALL STUDENTS</b>	<b>39.2%</b>	<b>37.3%</b>	<b>23.5%</b>

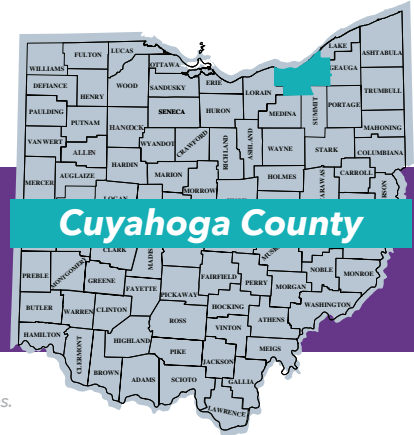
### FY17 % of APPALACHIAN REGION Students Demonstrating Readiness for Kindergarten by ECONOMIC STATUS



*Economically disadvantaged kids in the Appalachian Region are doing better than the statewide population of economically disadvantaged students on the KRA. Why?*



# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Race & Ethnicity

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

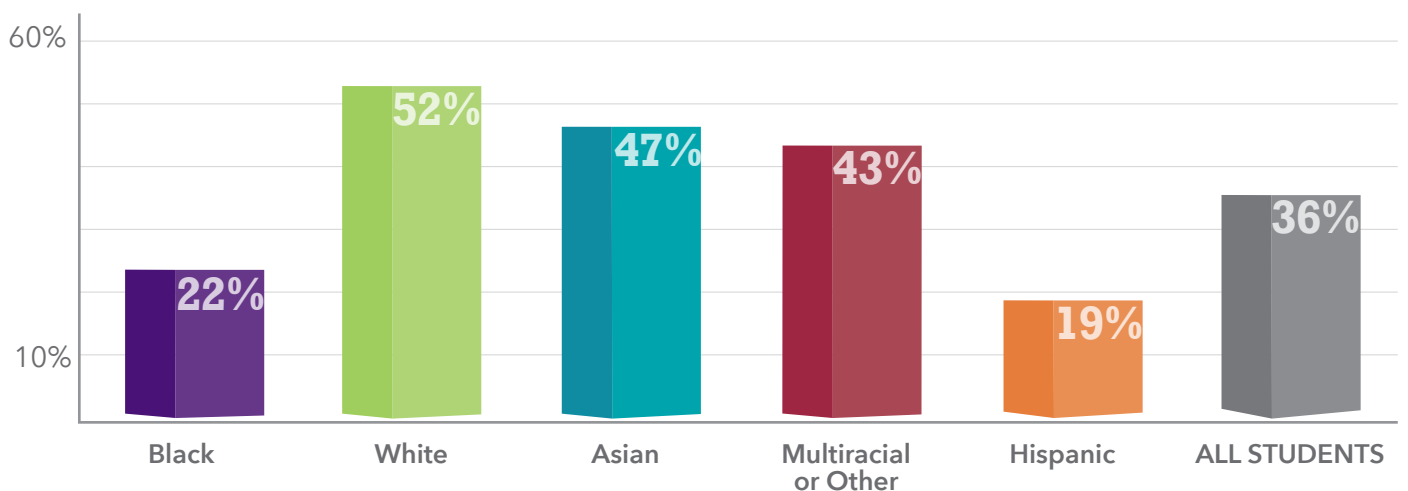
### FY17 CUYAHOGA COUNTY Students Demonstrating Readiness

Race & Ethnicity	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
Black	863	1,529	1,486	3,877
White	2,016	1,197	641	3,854
Asian	109	70	55	233
Multiracial/Other	134	104	71	309
Hispanic	132	230	317	679
ALL STUDENTS	3,253	3,130	2,569	8,953

### FY17 % CUYAHOGA COUNTY Students Demonstrating Readiness

Race & Ethnicity	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
Black	22.2%	39.4%	38.3%
White	52.3%	31.1%	16.6%
Asian	46.7%	29.8%	23.5%
Multiracial/Other	43.4%	33.7%	23.0%
Hispanic	19.4%	33.9%	46.7%
ALL STUDENTS	36.3%	35.0%	28.7%

### FY17 % CUYAHOGA COUNTY Students Demonstrating Readiness



# Kindergarten Readiness



**Franklin County**

## REGIONAL ANALYSIS: Kindergarten Readiness by Race & Ethnicity

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

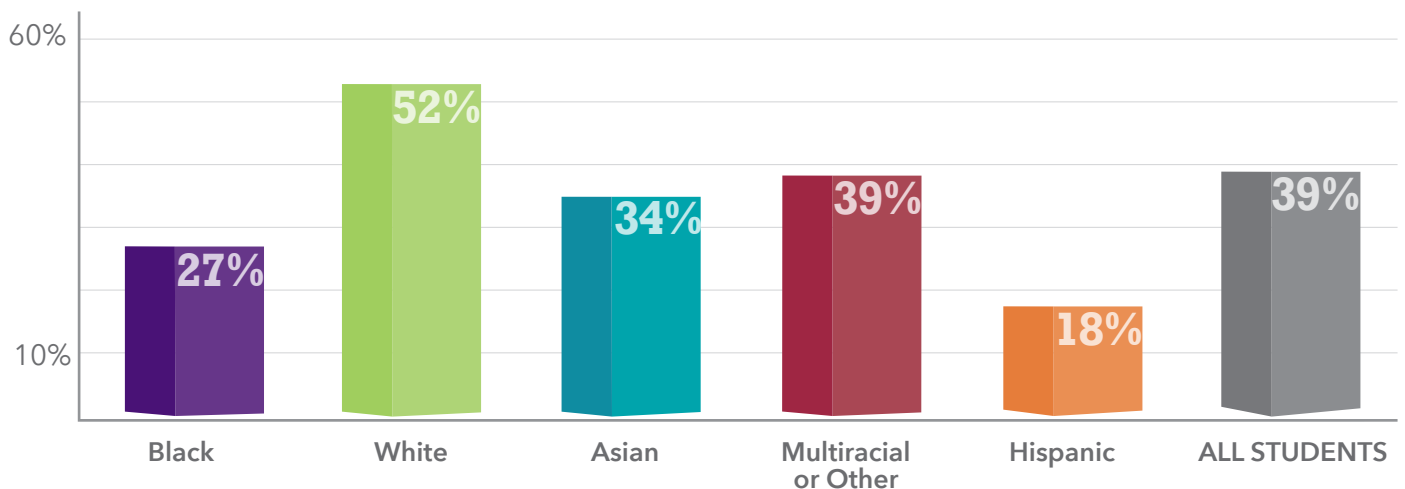
### FY17 FRANKLIN COUNTY Students Demonstrating Readiness

Race & Ethnicity	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
Black	948	1,323	1,269	3,541
White	2,744	1,691	819	5,253
Asian	171	171	161	503
Multiracial/Other	276	268	169	713
Hispanic	200	418	489	1,107
ALL STUDENTS	4,340	3,872	2,907	11,118

### FY17 % FRANKLIN COUNTY Students Demonstrating Readiness

Race & Ethnicity	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
Black	26.8%	37.4%	35.8%
White	52.2%	32.2%	15.6%
Asian	34.1%	34.0%	31.9%
Multiracial/Other	38.7%	37.6%	23.7%
Hispanic	18.1%	37.8%	44.2%
ALL STUDENTS	39.0%	34.8%	26.1%

### FY17 % FRANKLIN COUNTY Students Demonstrating Readiness



# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Race & Ethnicity

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

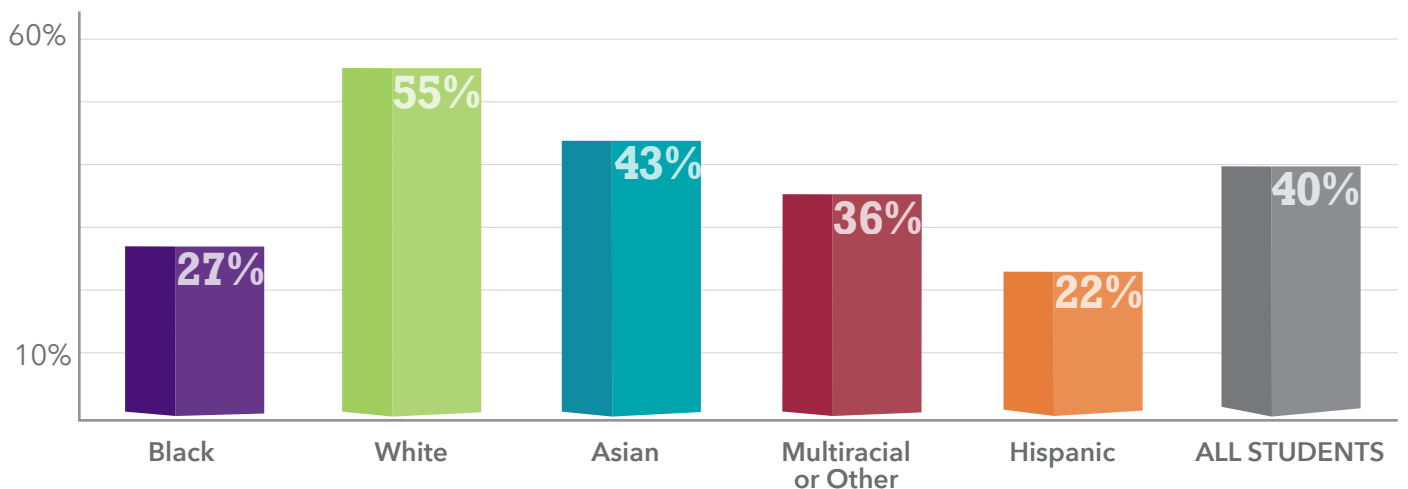
### FY17 HAMILTON COUNTY Students Demonstrating Readiness

Race & Ethnicity	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
Black	728	1,041	896	2,665
White	1,534	870	408	2,812
Asian	64	43	42	149
Multiracial/Other	136	147	99	381
Hispanic	76	134	142	352
ALL STUDENTS	2,538	2,234	1,587	6,359

### FY17 % HAMILTON COUNTY Students Demonstrating Readiness

Race & Ethnicity	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
Black	27.3%	39.1%	33.6%
White	54.5%	30.9%	14.5%
Asian	43.2%	28.7%	28.1%
Multiracial/Other	35.6%	38.4%	26.0%
Hispanic	21.7%	38.1%	40.2%
ALL STUDENTS	39.9%	35.1%	25.0%

### FY17 % HAMILTON COUNTY Students Demonstrating Readiness



# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Race & Ethnicity

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

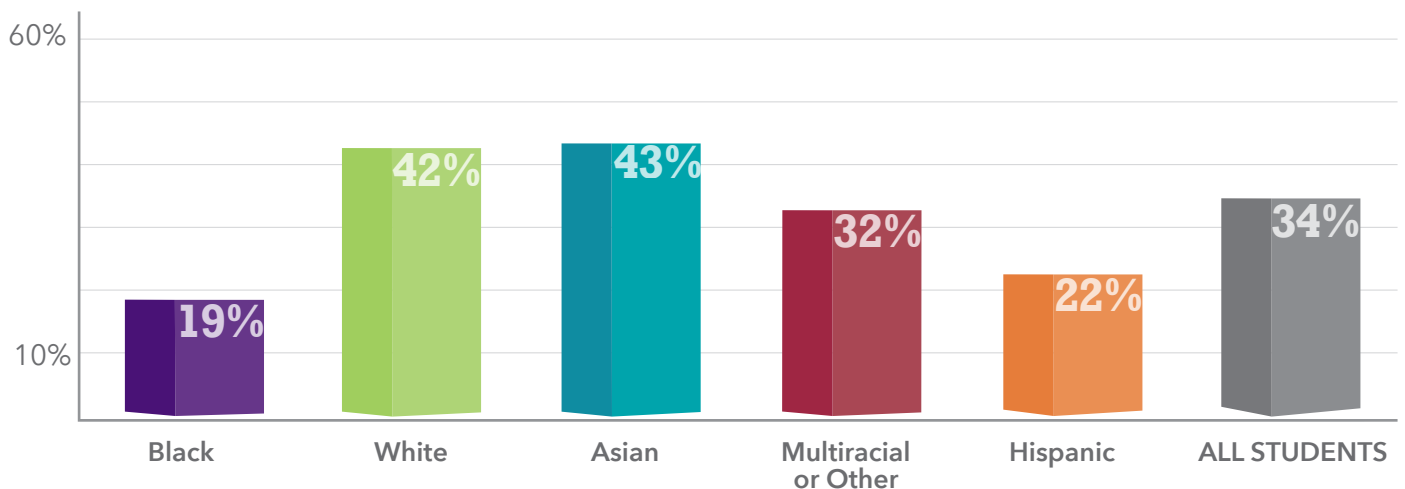
### FY17 MONTGOMERY COUNTY Students Demonstrating Readiness

Race & Ethnicity	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
Black	224	509	468	1,201
White	978	935	435	2,348
Asian	18	14	10	42
Multiracial/Other	68	84	65	217
Hispanic	26	49	45	119
ALL STUDENTS	1,314	1,590	1,023	3,928

### FY17 % MONTGOMERY COUNTY Students Demonstrating Readiness

Race & Ethnicity	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
Black	18.7%	42.4%	39.0%
White	41.7%	39.8%	18.5%
Asian	42.5%	32.8%	24.7%
Multiracial/Other	31.5%	38.6%	29.9%
Hispanic	21.6%	40.9%	37.5%
ALL STUDENTS	33.5%	40.5%	26.1%

### FY17 % MONTGOMERY COUNTY Students Demonstrating Readiness



# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Race & Ethnicity

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

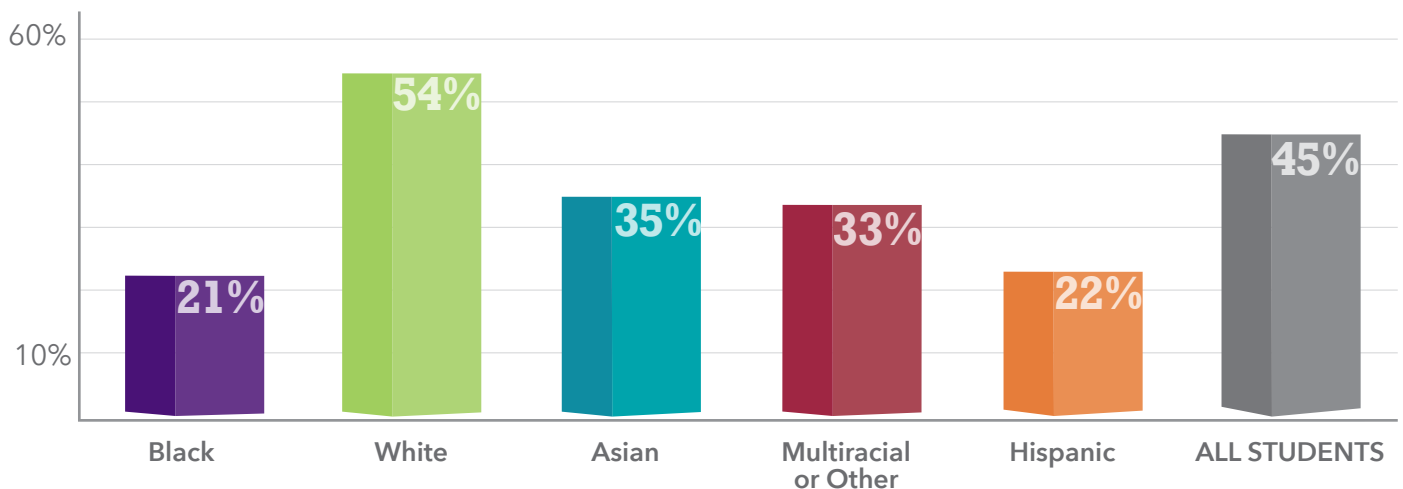
### FY17 SUMMIT COUNTY Students Demonstrating Readiness

Race & Ethnicity	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
Black	205	373	413	991
White	1,743	996	475	3,214
Asian	19	20	15	54
Multiracial/Other	78	97	63	238
Hispanic	17	20	41	78
ALL STUDENTS	2,062	1,506	1,007	4,574

### FY17 % SUMMIT COUNTY Students Demonstrating Readiness

Race & Ethnicity	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
Black	20.7%	37.7%	41.7%
White	54.2%	31.0%	14.8%
Asian	35.3%	37.0%	27.8%
Multiracial/Other	32.9%	40.7%	26.5%
Hispanic	22.1%	25.5%	52.4%
ALL STUDENTS	45.1%	32.9%	22.0%

### FY17 % SUMMIT COUNTY Students Demonstrating Readiness



# Kindergarten Readiness



## REGIONAL ANALYSIS: Kindergarten Readiness by Race & Ethnicity

Note: Data is only reported at the school district level. The numbers at each KRA performance level are estimated based on Kindergarten enrollment data and used to weight percentages to compute county averages.

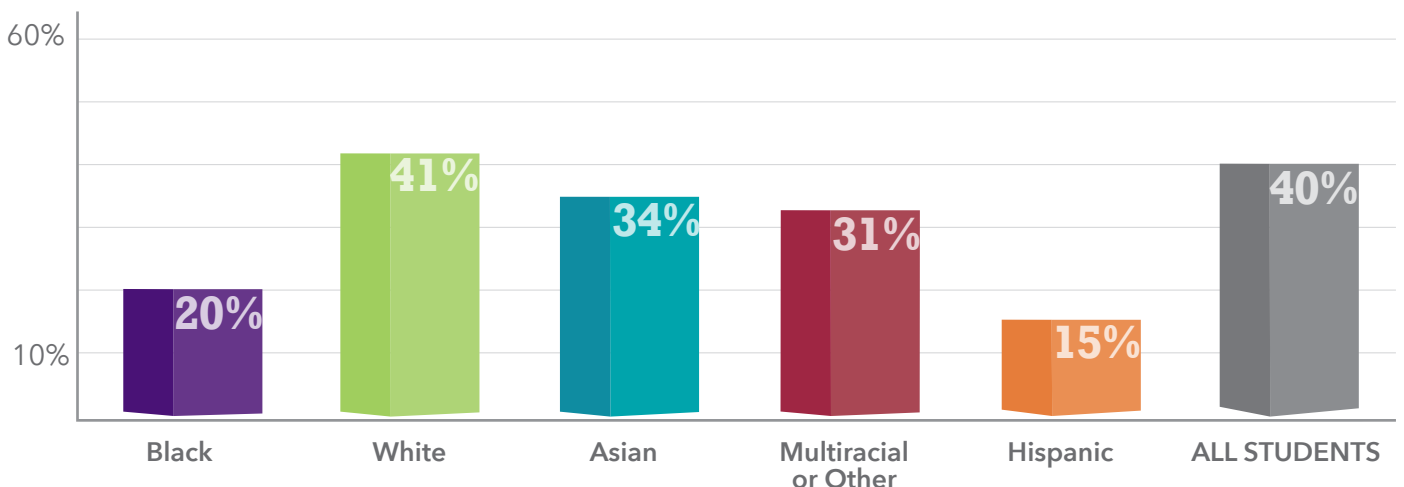
### FY17 APPALACHIAN REGION Students Demonstrating Readiness

Race & Ethnicity	# of Students Demonstrating Readiness	# of Students Approaching Readiness	# Students Emerging Readiness	TOTALS
Black	119	227	255	602
White	7,257	6,567	3,812	17,636
Asian	6	8	3	17
Multiracial/Other	118	143	117	378
Hispanic	43	97	145	286
ALL STUDENTS	7,543	7,042	4,333	18,919

### FY17 % APPALACHIAN REGION Students Demonstrating Readiness

Race & Ethnicity	% of Students Demonstrating Readiness	% of Students Approaching Readiness	% Students Emerging Readiness
Black	19.8%	37.7%	42.5%
White	41.1%	37.2%	21.6%
Asian	34.4%	48.4%	17.2%
Multiracial/Other	31.3%	37.8%	31.0%
Hispanic	15.2%	34.0%	50.8%
ALL STUDENTS	39.9%	37.2%	22.9%

### FY17 % APPALACHIAN REGION Students Demonstrating Readiness





# Kindergarten Readiness

## WHY ARE

**BLACK CHILDREN IN  
MONTGOMERY COUNTY  
THE LEAST READY FOR  
KINDERGARTEN?**

*Learn to Earn Dayton has found when they further disaggregate this same data by both race and gender that black males fared even worse than black females. Only slightly more than 1 in 10 black boys start kindergarten ready to learn in Montgomery County.*

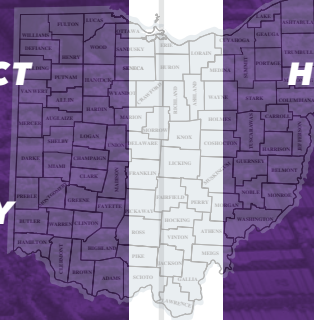
## WHY ARE

**CHILDREN OF COLOR IN  
THE PRIMARILY RURAL  
APPALACHIAN REGION  
FALLING BEHIND?**

*Although there are far less children of color in the Appalachian region, children of color in this primarily rural region of the state are performing worse than the largest urban areas and the state average of children of color ready for kindergarten.*

Reflection

**HOW DOES RACE INTERSECT  
WITH GENDER TO TELL  
A MORE COMPLETE STORY  
OF OHIO KIDS?**



**HOW ELSE CAN WE ENHANCE  
STUDENT ACHIEVEMENT  
IN KINDERGARTEN  
AND BEYOND?**

Reflection

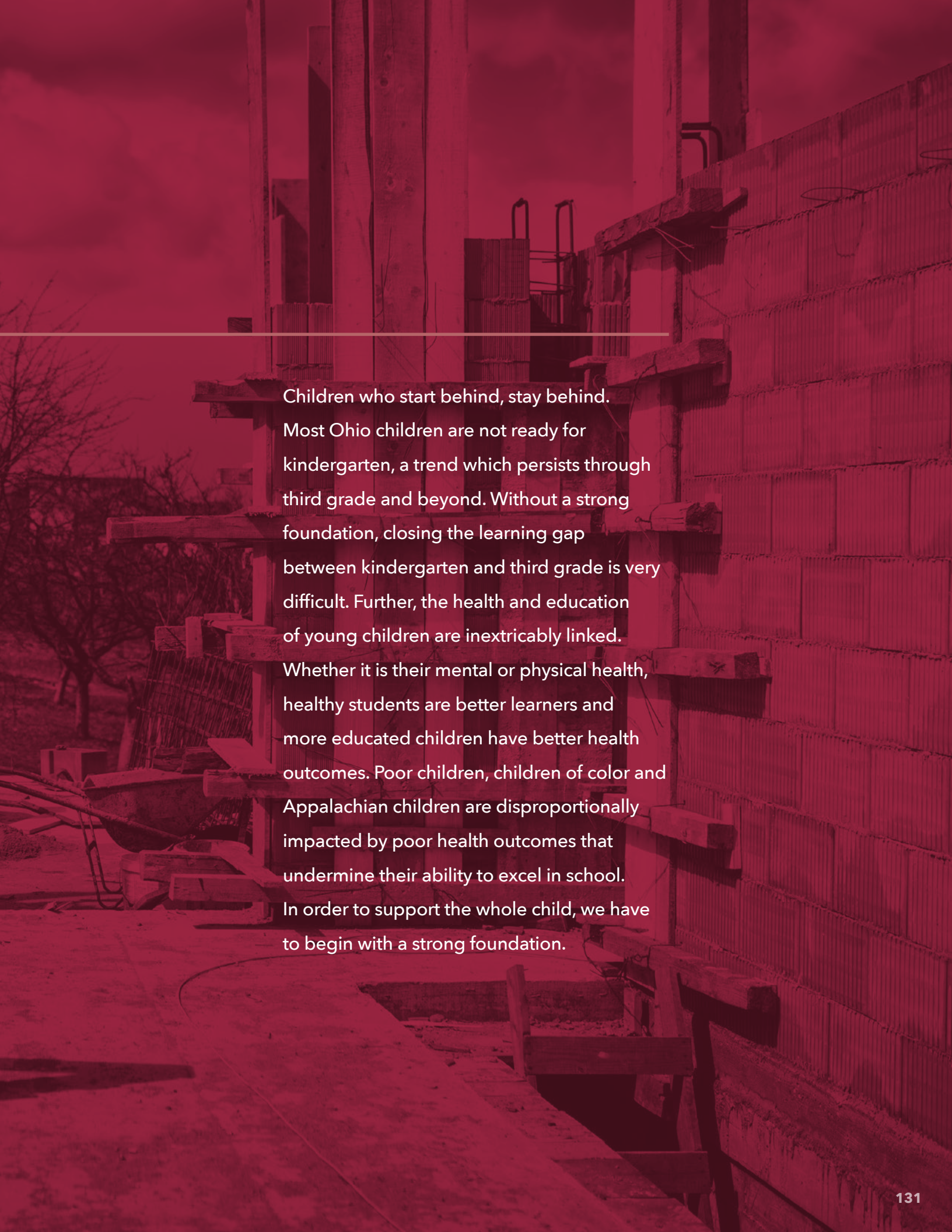
# Strong Foundation Walls

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- ACCESS TO HEALTHCARE COVERAGE
- ORAL HEALTH
- INCIDENCE OF LEAD POISONING
- INCIDENCE OF ASTHMA
- EARLY CHILDHOOD OBESITY
- 3RD GRADE READING ACHIEVEMENT
- EARLY CHILDHOOD SUSPENSION & EXPULSION







Children who start behind, stay behind.

Most Ohio children are not ready for kindergarten, a trend which persists through third grade and beyond. Without a strong foundation, closing the learning gap between kindergarten and third grade is very difficult. Further, the health and education of young children are inextricably linked.

Whether it is their mental or physical health, healthy students are better learners and more educated children have better health outcomes. Poor children, children of color and Appalachian children are disproportionately impacted by poor health outcomes that undermine their ability to excel in school.

In order to support the whole child, we have to begin with a strong foundation.

# Access to Healthcare Coverage

**Access to essential healthcare services for all Ohio kids helps to ensure they grow up as healthy, productive adults. Adequate, stable, predictable funding for children covered by Ohio Medicaid is critical to the health of our children, our future workforce and the long-term vitality of the state.**

Ohio Medicaid offers three programs for children, pregnant women and families with limited income to receive healthcare. Once eligible for Medicaid through any one of these programs, each child (birth through age 20) has access to an important group of services known as Healthchek. Healthchek is Ohio's Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Program. It is a service package for babies, kids, and young adults younger than age 21 who are enrolled on Ohio Medicaid.

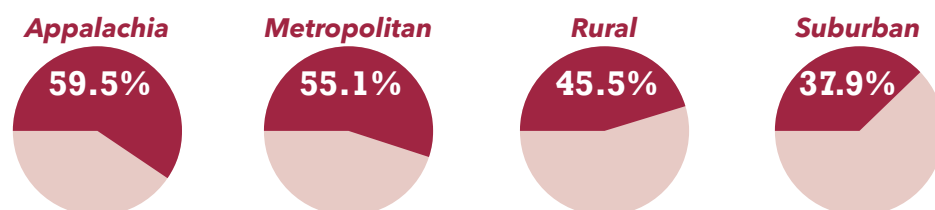
The purpose of Healthchek is to discover and treat health problems early. If a potential health problem is found, further diagnosis and treatment are covered by Medicaid. Healthchek covers preventive services including well-child checkups, immunizations, and dental care and covers a comprehensive array of services for children, including developmental, vision and hearing screenings. This program aims to ensure developmental delays can be diagnosed and treated as early as possible, or averted altogether.

The Medicaid program is available to insured or uninsured children (up to age 19) in families with income up to 156% of the Federal Poverty Level (FPL) and pregnant women in families with income up to 200% FPL. The Children's Health Insurance Plan (CHIP) program builds upon the Medicaid program and is available to uninsured children (up to age 19) in families with income up to 206% FPL. Healthy Families is a Medicaid program available to families with income up to 90% FPL and a child younger than age 19.

Medicaid programs provide healthcare coverage for nearly HALF of Ohio's 2.5 million children—or 1.2 million kids. Children make up more than 40% of enrollees in Ohio's Medicaid program.

Medicaid programs  
**PROVIDE** healthcare  
coverage for  
**NEARLY HALF**  
of Ohio's  
**2.5 MILLION**  
children. (1.2 million)

## Percentages of Ohio Children Enrolled in Medicaid by County Type



Source:  
2014, Ohio Kids Count, Children's Defense Fund

# Access to Healthcare Coverage

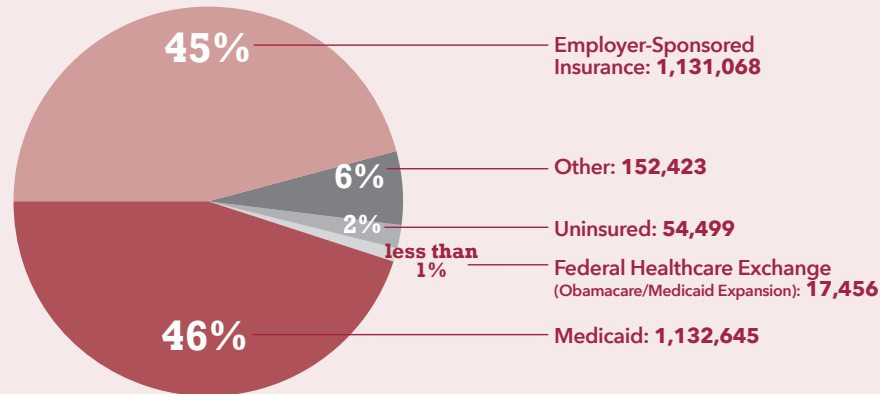


## THE FACTS:

### Children's Healthcare Coverage in Ohio:

**2,488,091**  
CHILDREN

#### FY 2017 Healthcare Coverage by Provider Type



### Medicaid & Healthy Start (CHIP) serve Ohio's most vulnerable children.

A large share of at-risk children rely on public coverage for the health care they need to thrive. Below are percentages of Ohio children who depend on Medicaid & Healthy Start (CHIP).

**81%**  **CHILDREN LIVING IN POVERTY** (or near poverty).

**44%**  **INFANTS, TODDLERS & PRE-SCHOOLERS** in their early years key to healthy development and school readiness.

**47%**  **CHILDREN WITH DISABILITIES** or other special healthcare needs such as juvenile diabetes, congenital heart conditions, or asthma.

**100%**  **CHILDREN IN FOSTER CARE** who face poverty, family dysfunction, neglect, and abuse that results in high rates of chronic health, emotional and developmental problems.

**52%**  **NEWBORNS** in families—to assure a healthy delivery and strong start during their critical first year of life.



# Access to Healthcare Coverage

**MEDICAID HELPS CHILDREN GROW UP  
TO REACH THEIR FULL POTENTIAL.**

## **CHILDREN ENROLLED IN MEDICAID:**

- *Miss fewer school days due to illness or injury*
- *Do better in school*
- *Are more likely to graduate high school and attend college*
- *Grow up to be healthier as adults*
- *Earn higher wages*
- *Pay more in taxes*

## Reflections

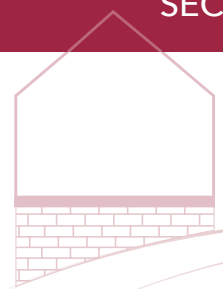
**FOR OHIO'S YOUNG CHILDREN, HOW ARE EDUCATION & HEALTH INEXTRICABLY LINKED?**

**HOW DOES POOR HEALTH PUT EDUCATION AT RISK?**

**HOW DOES EDUCATION CREATE OPPORTUNITIES FOR BETTER HEALTH?**

**HOW DO CONDITIONS IN A CHILD'S LIFE AFFECT BOTH EDUCATION & HEALTH?**

# Oral Health



**Healthy mouths and teeth are an important part of a child's wellness. Tooth decay (cavities) is one of the most common chronic conditions for children in the United States.**

Untreated tooth decay can cause pain as well as infections that may lead to problems with eating, speaking, playing, and learning. A growing body of evidence has also linked oral health, particularly periodontal (gum) disease, to several chronic diseases, including diabetes, heart disease, and stroke.

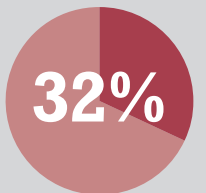
In pregnant women, poor oral health has also been associated with premature births and low birth weight. These conditions may be prevented in part with regular visits to the dentist but many children do not have access to regular dental care.

*Lower income children & those with no private dental insurance have **NEARLY 2X MORE** untreated cavities & toothaches.*

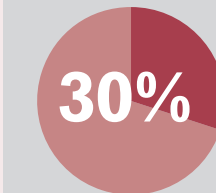
## BARRIERS TO CHILDREN ACCESSING DENTAL CARE



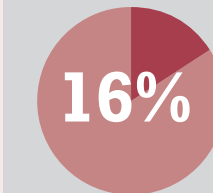
No Medicaid/dental insurance or Medicaid/insurance not accepted



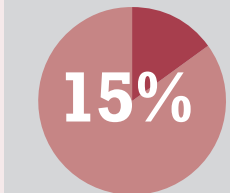
Cannot afford dental treatment



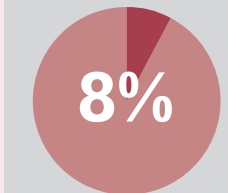
Wait time for appointment too long



Appointment hours not convenient



No transportation to get to dentist





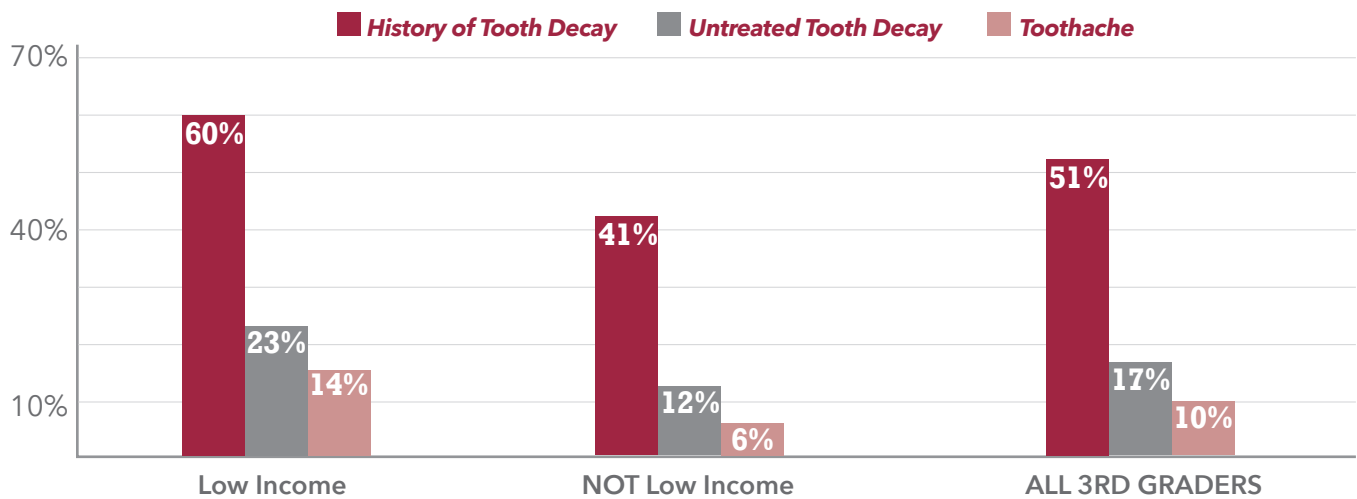
# Oral Health

## ORAL HEALTH STATUS & POVERTY

**Children from families with lower incomes were less likely to have seen a dentist in the past year than their higher income peers.**

Children from families with lower incomes were more likely to have a history of tooth decay, untreated tooth decay and reported toothaches. A history of tooth decay means that the child had cavities, fillings, crowns, or teeth missing due to cavities.

**Percentage of Third Grade Children with History of Tooth Decay, Untreated Tooth Decay and Toothache, BY FAMILY INCOME (2013-2015)**



Note: Low income here is defined as children enrolled in the Free and Reduced Price Meal Program (FRPMP) at school. Children are eligible for this program if their family income falls below 185% of the federal poverty level (FPL).

**88%** OF CHILDREN IN **higher income** FAMILIES



**72%** OF CHILDREN IN **lower income** FAMILIES

**GET REGULAR DENTAL CARE.**

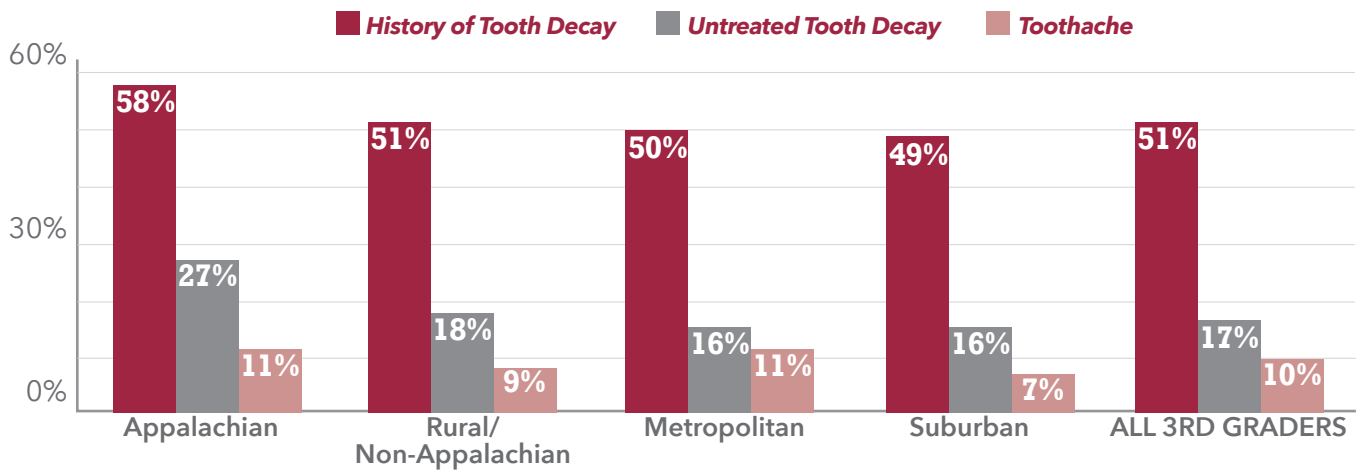
# Oral Health



## ORAL HEALTH STATUS & LOCATION

Children in Appalachian counties continue to have poorer oral health than children in metropolitan, suburban or rural, non-Appalachian counties. They are much more likely to have a history of tooth decay and untreated tooth decay.

**Percentage of Third Grade Children with a History of Tooth Decay, Untreated Tooth Decay and Toothache, BY COUNTY TYPE (2013-2015)**



### IN APPALACHIAN REGION

Children with Untreated Cavities:

**Appalachia** **27%**

**Ohio** **16%**

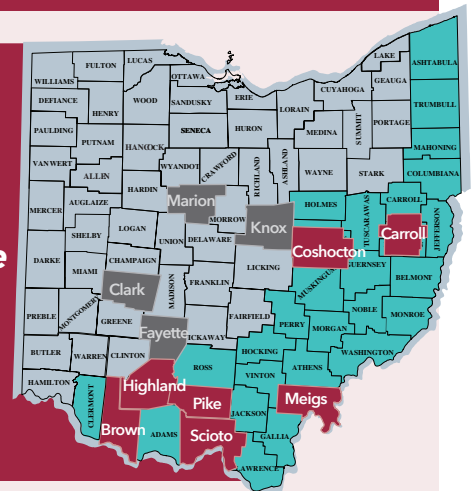
Children with a History of Tooth Decay\*:

**Appalachia** **58%**

**Ohio** **50%**

\*Note: A history of tooth decay is untreated cavities, fillings and crowns, or teeth extracted (pulled) due to cavities.

**Appalachia holds 7 of the 11 counties where children have the poorest oral health.**



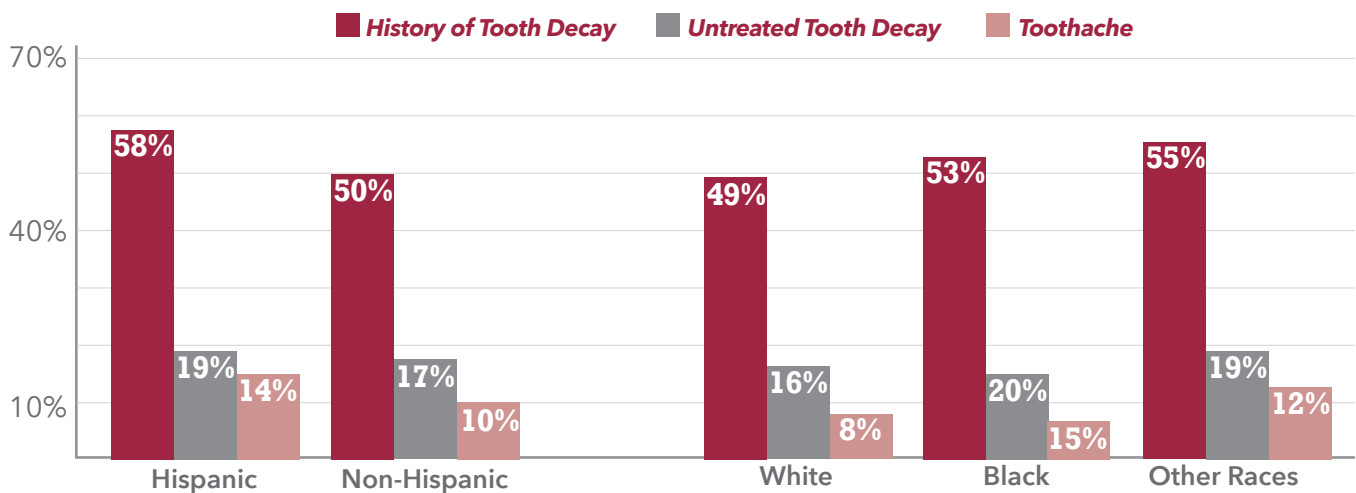
# Oral Health

## ORAL HEALTH STATUS & RACE/ETHNICITY

Hispanic children, regardless of race, were more likely to have a history of tooth decay, that is, they were more likely to have cavities, fillings, crowns, or teeth missing due to cavities (see chart below).

Parents of black children were more likely to report that their child had a toothache in the last six months than parents of children of other races.

**Percentage of Third Grade Children with History of Tooth Decay, Untreated Tooth Decay and Toothache, BY RACE & ETHNICITY (2013-2015)**



# Incidence of Lead Poisoning



**Lead poisoning can affect nearly every system in the body and is especially harmful to children in their first five years of life because it disrupts the rapid brain development they are undergoing.**

Lead poisoning can cause damage to the brain and nervous system, slowed growth and development, speech and hearing problems, learning disabilities (e.g., reduced IQ, ADHD), behavioral problems (e.g. juvenile delinquency and criminal behavior) and preterm birth for pregnant moms. At very high levels, lead poisoning can cause seizures, coma and even death.

There is no way of reversing damage already done by lead poisoning.

The primary source of lead exposure among children is deteriorated lead-based paint (dust). Other sources include soil, water and consumer products. Children can also be exposed in utero through their mother’s blood supply. While there is no safe level of lead in the body, public health actions are recommended to be initiated when a child has blood lead levels of 5 micrograms per deciliter of blood. Children living at or below the poverty line and who live in older housing are at greater risk.



In 2016, out of the 162,185 children tested there were 4,591 children ages 0-5 with confirmed blood lead levels of 5 µg/dL (micrograms per deciliter) or greater. More than 28% of those children (1,303) had confirmed blood levels of 10 µg/dL or greater.

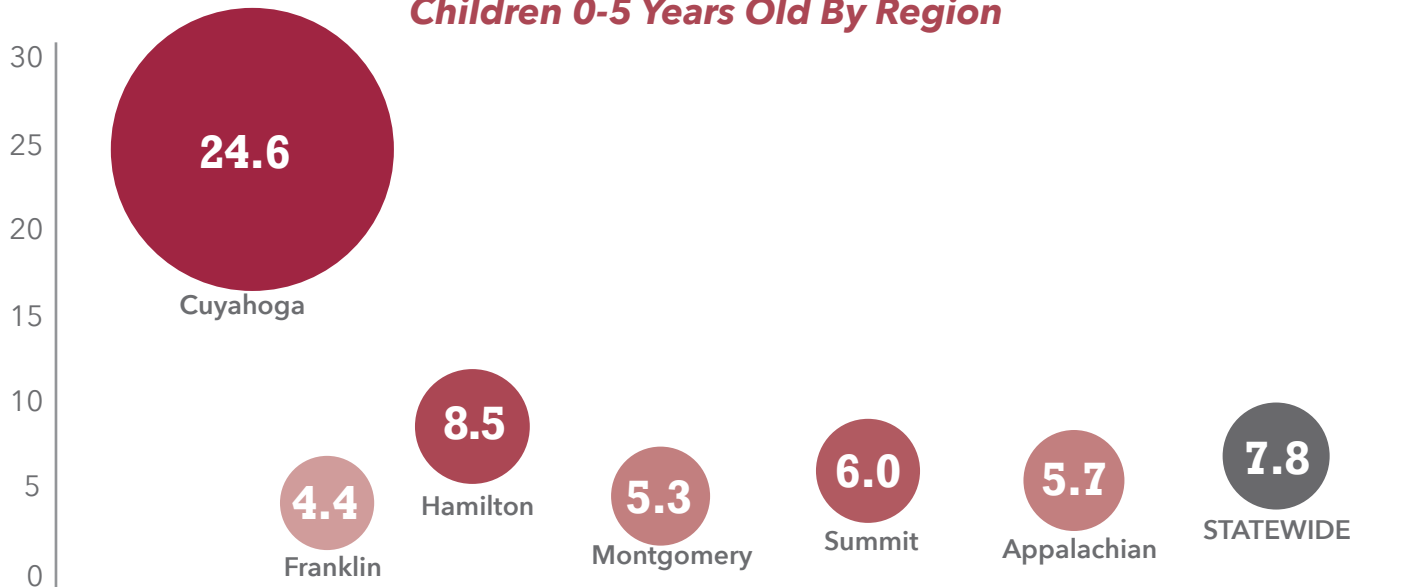
## Ohio Cases of Elevated Lead Levels in Children 0-5 Years Old By Region

Region	# Cases Confirmed Elevated Lead Levels	# Cases Unconfirmed Elevated Lead Levels*	TOTAL # Confirmed + Unconfirmed	# Children Under 6	# Cases of Lead Exposure Per 1000 Children
Cuyahoga	1,866	260	2,126	86,440	24.6
Franklin	235	225	460	103,908	4.4
Hamilton	425	110	535	63,122	8.5
Montgomery	125	82	207	38,946	5.3
Summit	153	64	217	36,291	6.0
Appalachian	477	274	751	132,825	5.7
<b>STATEWIDE</b>	<b>4,591</b>	<b>1,848</b>	<b>6,439</b>	<b>823,546</b>	<b>7.8</b>

\*Unconfirmed cases are children who had a capillary test of 5 µg/dL or greater and did not receive a confirmatory venous blood draw test. Data Source: Ohio Department of Health Data Warehouse FY 2016.

# Incidence of Lead Poisoning

**Ohio Cases of Elevated Lead Levels PER 1000 Children 0-5 Years Old By Region**



Data Source: Ohio Department of Health Data Warehouse FY 2016.

## WHY ARE CLEVELAND KIDS POISONED BY LEAD AT 3X THE STATE RATE?

Reflections

**WITH ONLY 162,185 TESTED, HOW MANY CHILDREN MAY HAVE UNDETECTED LEAD POISONING? HOW WOULD HAVING ACCESS TO PUBLIC HEALTH INTERVENTIONS TO PREVENT FURTHER EXPOSURE MITIGATE ITS EFFECTS?**

**LEAD POISONING IS PREVENTABLE. WHAT WOULD IT TAKE TO FIX THE PROBLEM?**

# Incidence of Asthma

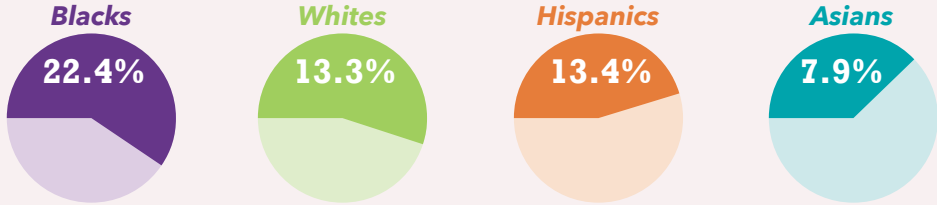
**Asthma is a chronic disease that affects the airways in the lungs. During an asthma attack, airways become inflamed, making it hard to breathe.**

Asthma attacks can be mild, moderate, or serious—and even life threatening. While there is no certainty around the cause of asthma, attacks are sometimes triggered by: allergens (like pollen, mold, animal dander, and dust mites), exercise, tobacco smoke, air pollution, airway infections and genetics. There is no cure for asthma. Children with asthma can manage their disease with medical care and prevent attacks by avoiding triggers.

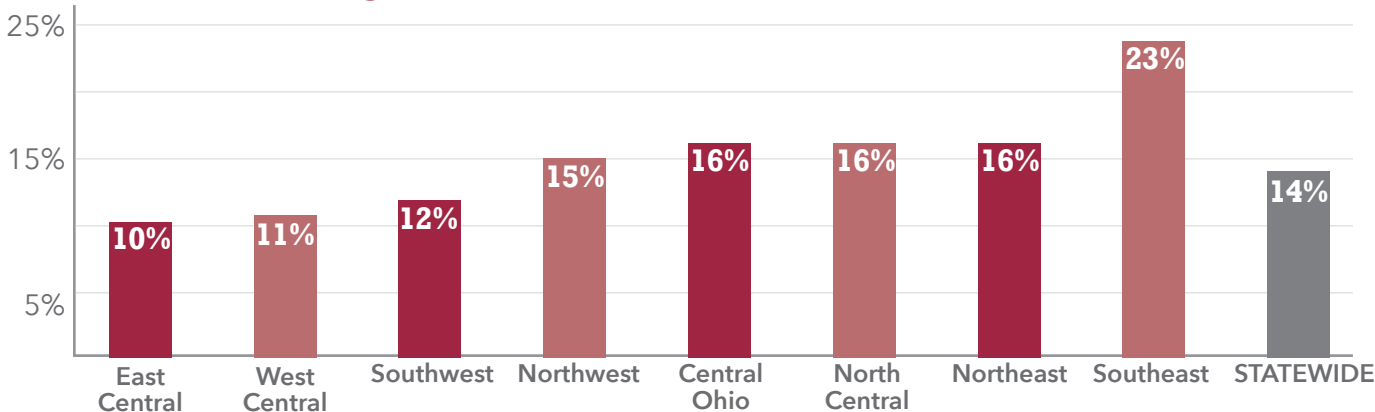
### Disparities in Asthma:

1. Asthma is more common among children, especially younger children, than adults.
2. **Income:** Asthma is more common among low income residents and residents of Appalachian counties.
  - Nearly 1 in 5 children living at or below the poverty line have asthma.
3. Children with reported asthma are significantly more likely to be in reported poor health, especially in Appalachia.
4. **Race & Ethnicity:** More than 1 in 5 black Ohio children have Asthma (22.4%). Black children are significantly more likely to have asthma than other races.

**1 in 7  
OHIO CHILDREN  
have asthma.**



### Percentage of Ohio Children with Asthma BY REGION

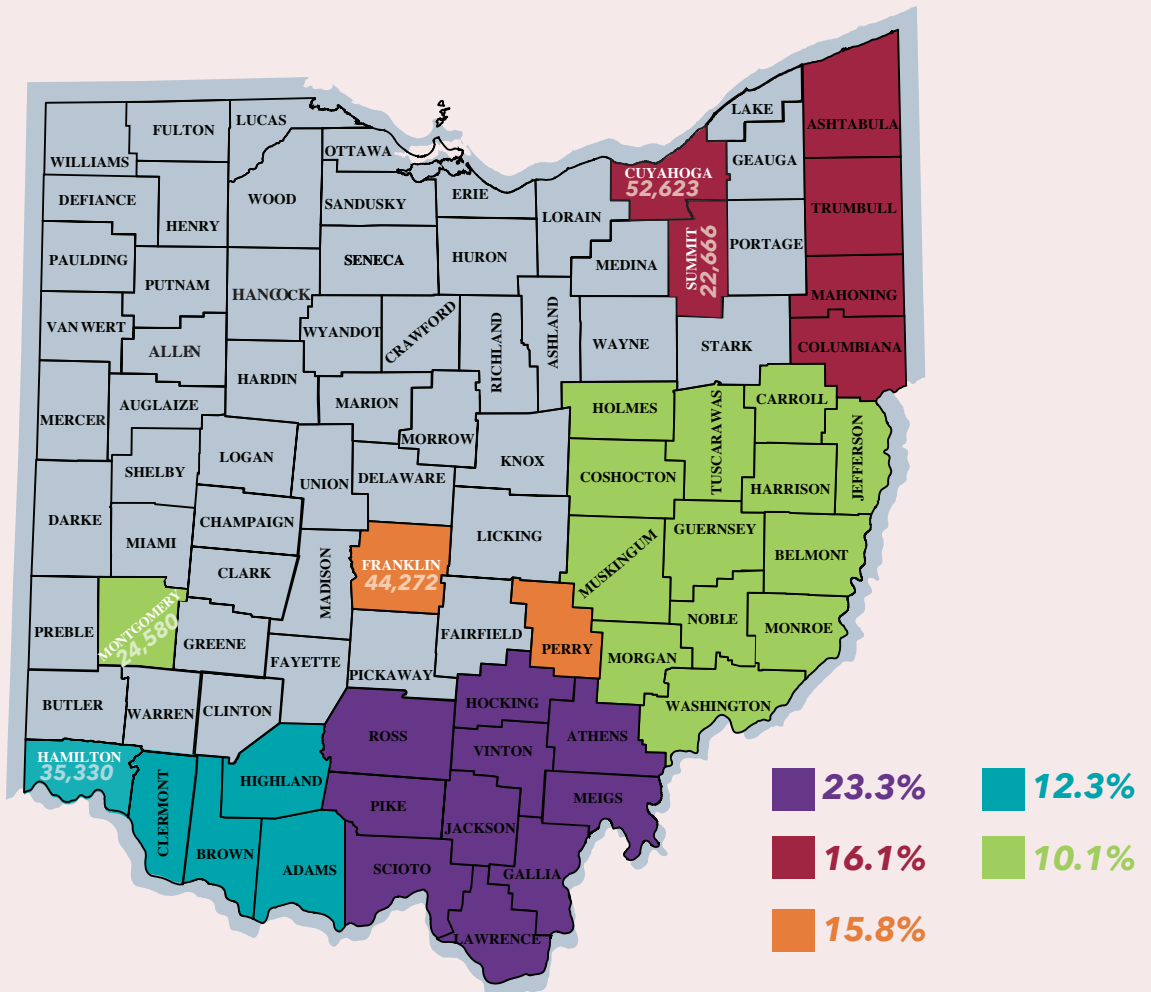


Data Source: Ohio Department of Health, 2012 Local Asthma Profiles



# Incidence of Asthma

**Percentage & Number of Children with Asthma BY COUNTY**



Note: Data for the incidence of asthma was reported regionally such that some counties in this analysis share the same incidence rate.

Reflections

**CHILDREN MISS APPROXIMATELY 13 MILLION SCHOOL DAYS PER YEAR ACROSS THE COUNTRY BECAUSE OF ASTHMA.**

**BASED UPON THE ABOVE STATISTICS, WHICH CHILDREN ARE AT AN INCREASED RISK FOR FAILURE AND MORE LIKELY TO FALL BEHIND IN THEIR SCHOOLWORK?**

# Early Childhood Obesity

**Childhood obesity occurs when a child is well above a normal or healthy weight for their age and height. Causes of childhood obesity are similar to those in adults including a person's behavior (i.e. diet and activity) and genetics.**

Prevalence of obesity is also dependent upon a child's community—where they live impacts their ability to make healthy choices. For example, if a child does not have access to healthy food or a community where it is safe to be physically active, they are more likely to be overweight.

## **Children who are obese are more likely to have:**

1. High blood pressure and high cholesterol.
2. Increased risk of type 2 diabetes.
3. Breathing problems such as asthma and sleep apnea.
4. Joint problems and musculoskeletal discomfort.
5. Fatty liver disease, gallstones and gastro-esophageal reflux (i.e. heartburn).
6. Increased risk of adult obesity and more severe risk factors for disease as adults.

## **Childhood obesity is related to:**

1. Psychological problems such as anxiety and depression.
2. Low self-esteem and lower self-reported quality of life.
3. Social problems such as bullying and stigma.

**Obesity is an excessively high body weight in relation to height. This proportion is measured by body mass index (BMI). A child's individual BMI is compared to other children of the same age and sex to determine their BMI percentile.**

**SEVERELY OBESE**

BMI at/above  
99th percentile

**OBESE**

BMI at/above  
95th percentile

**OVERWEIGHT**

BMI at/above 85th  
percentile (but below 95th)

**HEALTHY**

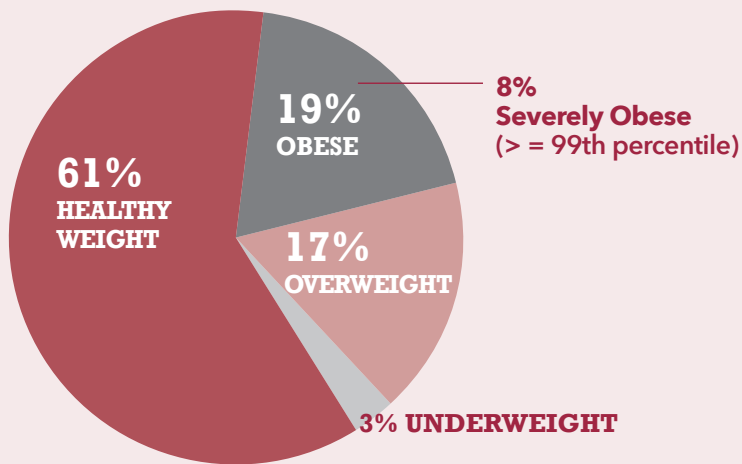
BMI at/above 5th  
percentile (but below 85th)

**UNDERWEIGHT**

BMI below  
5th percentile

# Early Childhood Obesity

## Estimated BMI Distribution Among ALL HEAD START STUDENTS, 2014



More than **1/3** of Ohio's 2014 Head Start students were classified as overweight or obese.

More than **40%** of the obese students were classified as **SEVERELY** obese.

Data Source: Ohio Department of Health, Early Childhood BMI Surveillance Project

## Ohio Prevalence of Overweight & Obese HEAD START STUDENTS BY COUNTY TYPE

In 2014, the prevalence of Head Start students that were overweight or obese **DID NOT** significantly vary by geographic subtype.

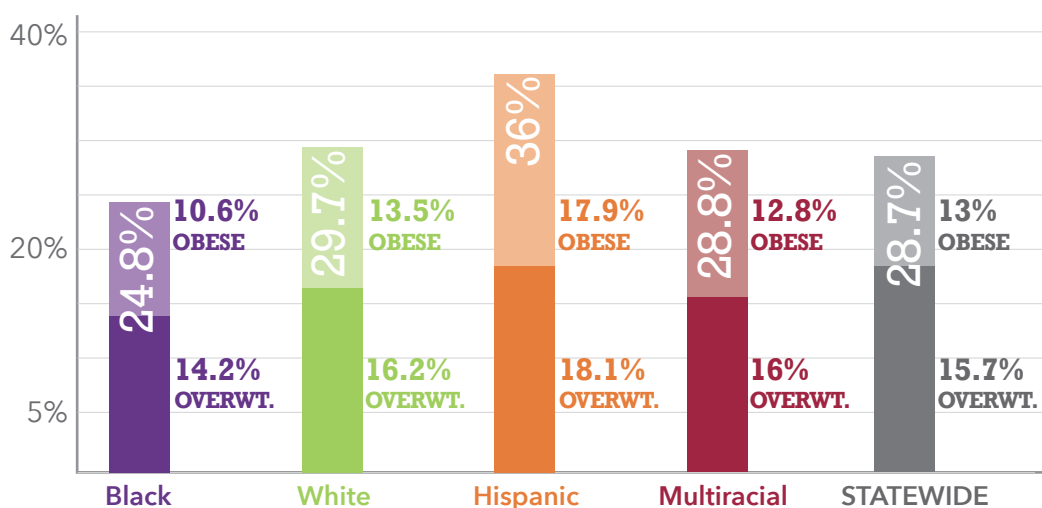
Data Source: Ohio Department of Health, Early Childhood BMI Surveillance Project.  
Note: County type defined by the Ohio Medicaid Assessment Survey.



# Early Childhood Obesity

## Ohio Prevalence of Overweight & Obese WIC Participants AGE 2 TO 5 YEARS BY RACE & ETHNICITY, 2014

While there are differences in prevalence of children who are obese and overweight based upon race and ethnicity, there is a consistent trend among geography when data is reviewed at the county level for WIC participants ages 2-5.



More than **28%** of age 2-5 Ohio WIC children were overweight or obese in 2014.

Data Source: Ohio Department of Health, Early Childhood BMI Surveillance Project

Note: The Special Supplemental Nutrition Program Women, Infants, and Children (WIC) provides Federal grants to States for supplemental food, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk. In Ohio, these women and children must meet be at or below 185% of the federal poverty level.

### Reflections

#### WHY IS IT CRITICAL TO ACT EARLY TO PREVENT EARLY CHILDHOOD OBESITY AND OTHER HEALTH FACTORS?

#### CONSIDER THE FOLLOWING FIVE REASONS WHY ACTING EARLY (AGES 0-5) IS CRITICAL IN PREVENTING EARLY CHILDHOOD OBESITY AND OBESITY LATER IN LIFE: (Source: Ohio Department of Health)

1. Children in Ohio are gaining weight at younger ages than ever before and carrying the extra weight into kindergarten.
2. Obesity prevention programs focused on 2-7 years olds have shown to be effective, resulting in lasting habit changes.
3. It is easier to impact the habits of 0-5 year olds than to change habits in adulthood.
4. Preferences for food and levels of activity are set by the time children are 2-3 years old.
5. Delayed action regarding obesity prevention can lead to steeply rising costs and morbidity, while early intervention can lead to decreased health risks later.

## 3rd Grade

# Reading Achievement

***A compelling body of research has shown that children who are behind in reading in third grade have a very difficult time catching up over the duration of their primary and secondary education careers.***

The gap between struggling and fluent readers does not diminish over time. Just as kindergarten readiness predicts third grade reading achievement, third grade reading predicts high school graduation. Children who do not read by the end of third grade are four times more likely to leave school without a diploma than proficient readers.

***There are six performance levels for third grade reading achievement:***

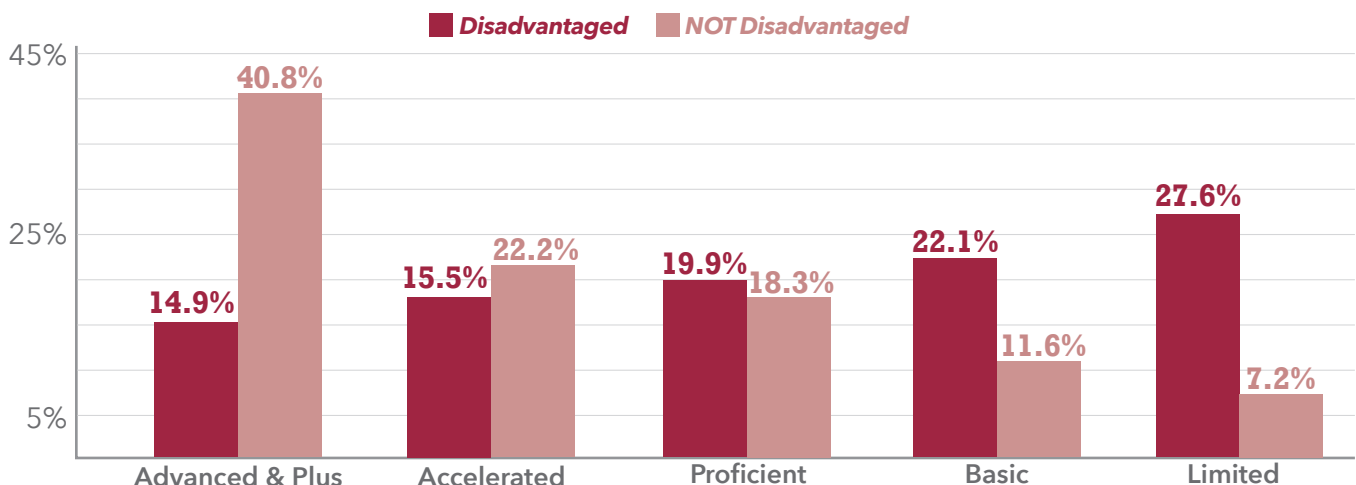
**Advanced Plus | Advanced | Accelerated | Proficient | Basic | Limited**

More than 2.5 times as many non-disadvantaged students (40.8%) performed at the “Advanced” and “Advanced Plus” levels on third grade reading in FY17 than did economically disadvantaged students (14.9%). At the other end of the spectrum, the 27.6% rate at which economically disadvantaged students performed at the Limited (lowest) level on the third grade reading exam was nearly four times that of the non-disadvantaged students (7.2%).

*Children who do not read by the end of 3rd grade are **4 TIMES MORE LIKELY** to leave school without a diploma.*

**Chart 1**

**FY17 Third Grade Reading Performance of Students BY ECONOMIC STATUS**



Data Source: Ohio Department of Education, School Report Card 2017

# 3rd Grade Reading Achievement

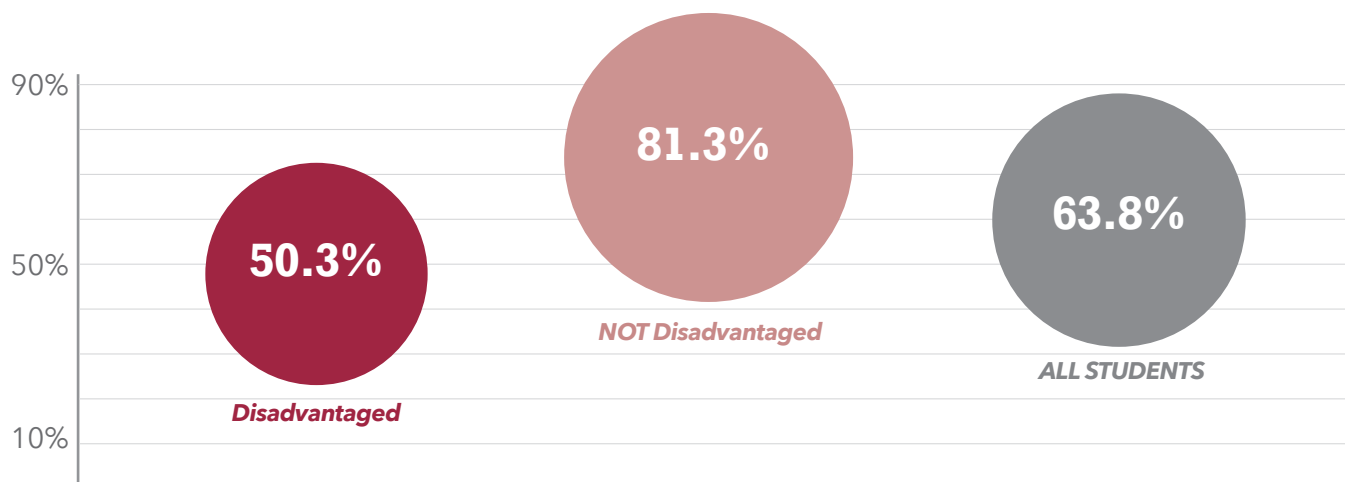
Chart 2 provides a simple overview of the data in Chart 1.

**81.3%**  
**OF NOT DISADVANTAGED STUDENTS**  
*performed at the proficient or higher level*  
*on the FY17 third grade reading test.*

**ONLY 50.3% OF ECONOMICALLY**  
**DISADVANTAGED STUDENTS DID SO.**

**Chart 2**

**FY17 Percent of Students Proficient & Above  
 BY ECONOMIC STATUS**



Data Source: Ohio Department of Education, School Report Card 2017

**Reflections**

GIVEN THAT KINDERGARTEN READINESS PREDICTS THIRD GRADE READING AND THIRD GRADE READING PREDICTS HIGH SCHOOL GRADUATION...

**HOW CAN WE BEST POSITION ALL KIDS FOR SUCCESS, ESPECIALLY THOSE ECONOMICALLY DISADVANTAGED KIDS WHO ARE NOT PROFICIENT IN READING BY THE THIRD GRADE?**



3rd Grade

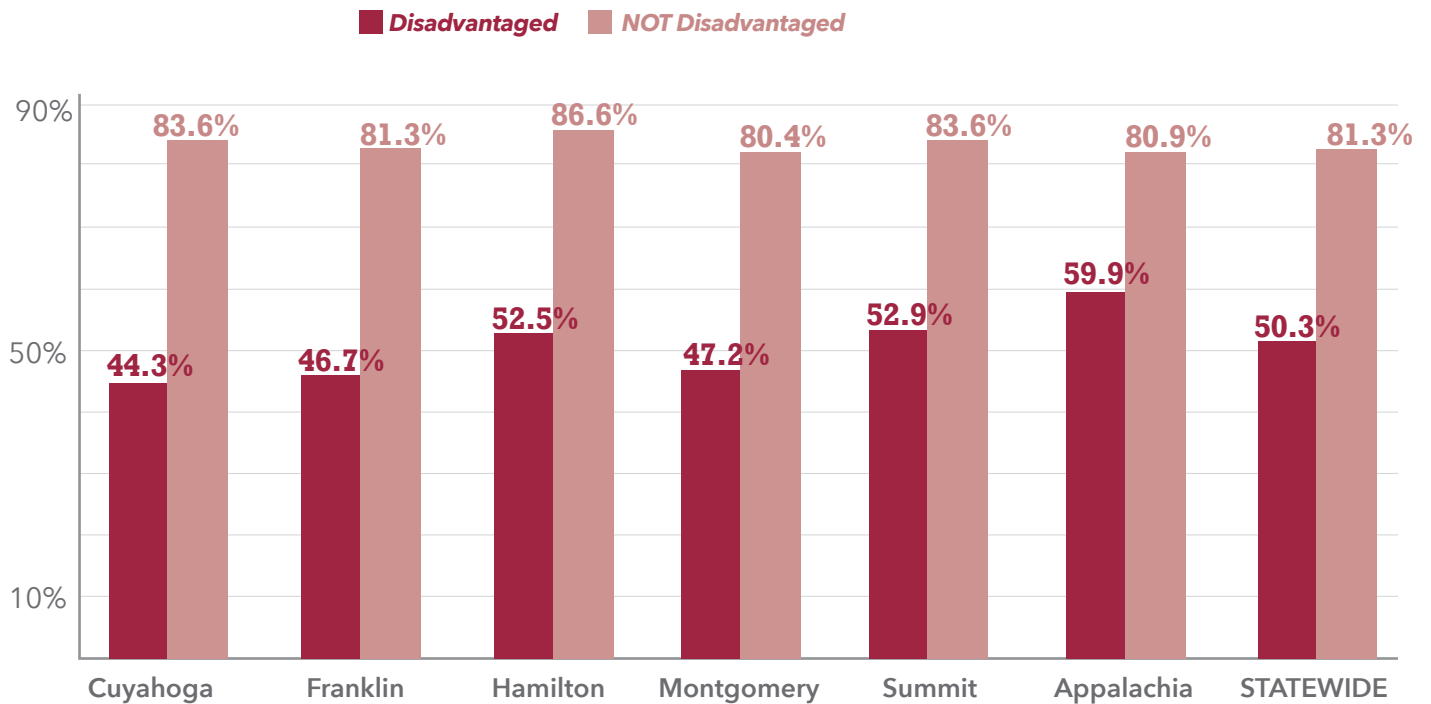
# Reading Achievement

*Chart 3 provides a comparison of third grade reading proficiency in selected regions in Ohio with that of the state overall.*

*All regions exhibit a significant disparity in the performance of economically disadvantaged students compared to their more affluent peers.*

**Chart 3**

**FY17 Percent of Students Proficient & Above BY ECONOMIC STATUS IN SELECTED REGIONS**



Data Source: Ohio Department of Education, School Report Card 2017

## 3rd Grade

## Reading Achievement

**Table 1 provides an overview of the number of economically disadvantaged and non-disadvantaged third grade students tested and the number and percentage of those achieving the level of proficiency or above on the exam for selected regions of the state.**

*(The percentages shown in Table 1 are the same as those shown in Chart 3.)*

**Table 1** **FY17 Number of Third Grade Reading Students Tested, & Number/Percentage Demonstrating Proficiency or Above, BY ECONOMIC STATUS IN SELECTED REGIONS**

<b>Region</b>	<b># Economically Disadvantaged Students Tested</b>	<b>% Economically Disadvantaged Students Proficient or Above</b>	<b># Economically Disadvantaged Students Proficient or Above</b>	<b># Non-Econ. Disadvantaged Students Tested</b>	<b>% Non-Econ. Disadvantaged Students Proficient or Above</b>	<b>% Non-Econ. Disadvantaged Students Proficient or Above</b>
Cuyahoga	3,864	44.3%	1,712	6,447	83.6%	5,390
Franklin	5,251	46.7%	2,452	8,226	81.3%	6,688
Hamilton	3,322	52.5%	1,744	4,680	86.6%	4,053
Montgomery	2,068	47.2%	976	2,827	80.4%	2,273
Summit	2,497	52.9%	1,321	2,606	83.6%	2,179
Appalachian	7,827	59.9%	4,688	12,467	80.9%	10,086
<b>STATEWIDE</b>	<b>77,152</b>	<b>50.3%</b>	<b>38,783</b>	<b>59,367</b>	<b>81.3%</b>	<b>48,251</b>

Data Source: Ohio Department of Education, School Report Card 2017

3rd Grade

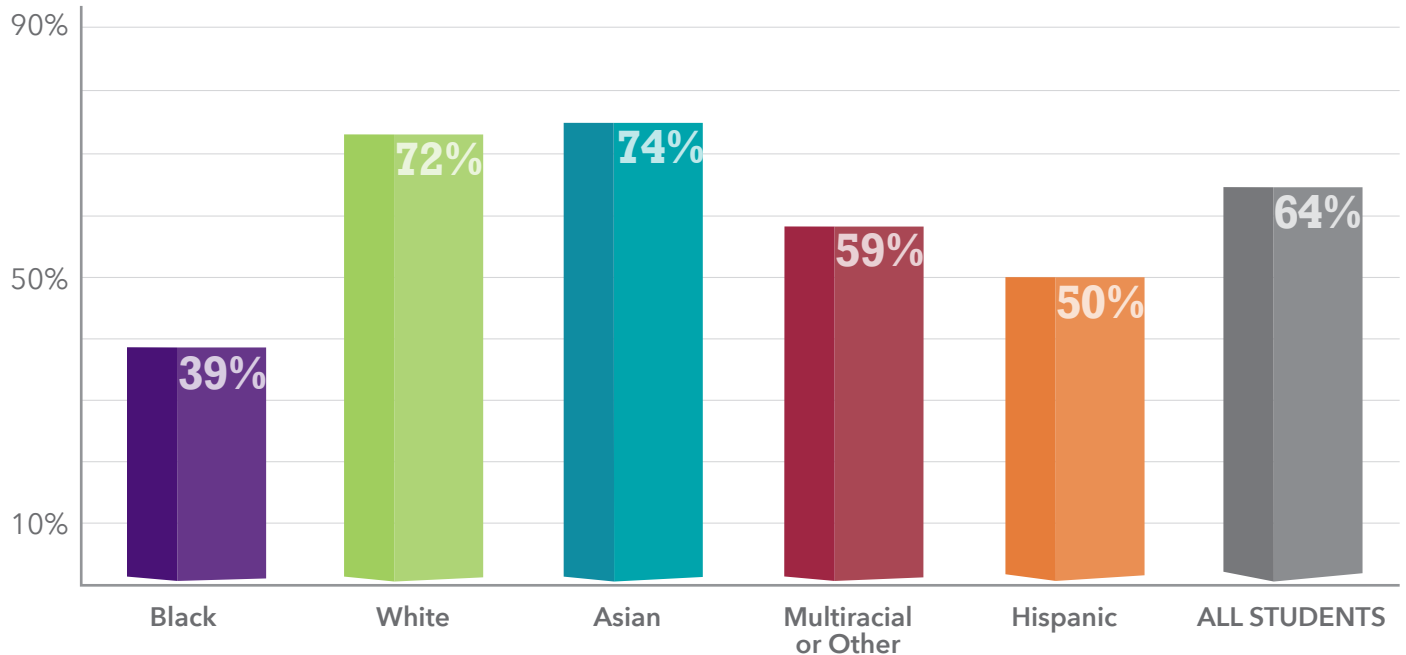
# Reading Achievement

## ANALYSIS BY RACE/ETHNICITY

The data in Chart 4 below shows that black students performed slightly over half as well on Ohio's third grade reading exam as did white and Asian students in FY17. Only 39.3% of black students performed at the proficient, accelerated or advanced levels, while 71.5% of white students scored proficient or better and 73.9% of Asian students did so. Hispanic and multi-racial students also performed significantly lower in third grade reading than did the white and Asian students.

**Chart 4**

### STATEWIDE FY17 Percent of Students Proficient & Above BY RACE & ETHNICITY

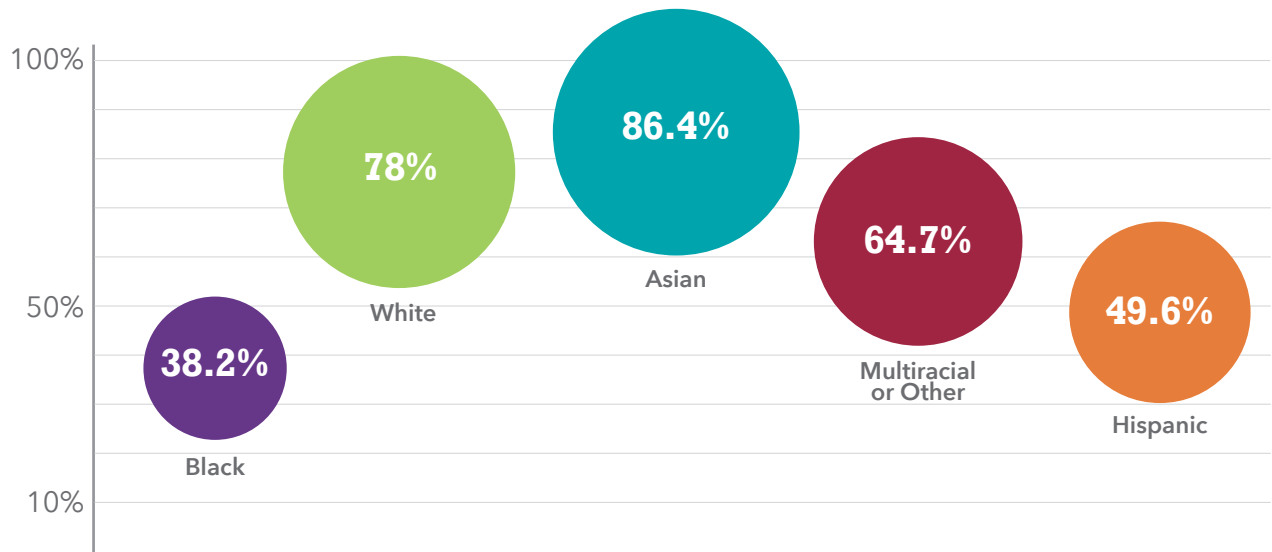


*Note: Due to small numbers of students, the county and Appalachian region graphs by race and ethnicity do not include results for Pacific Islanders or American Indian/Alaskan Natives as part of the "Other" category as do the other counties.*

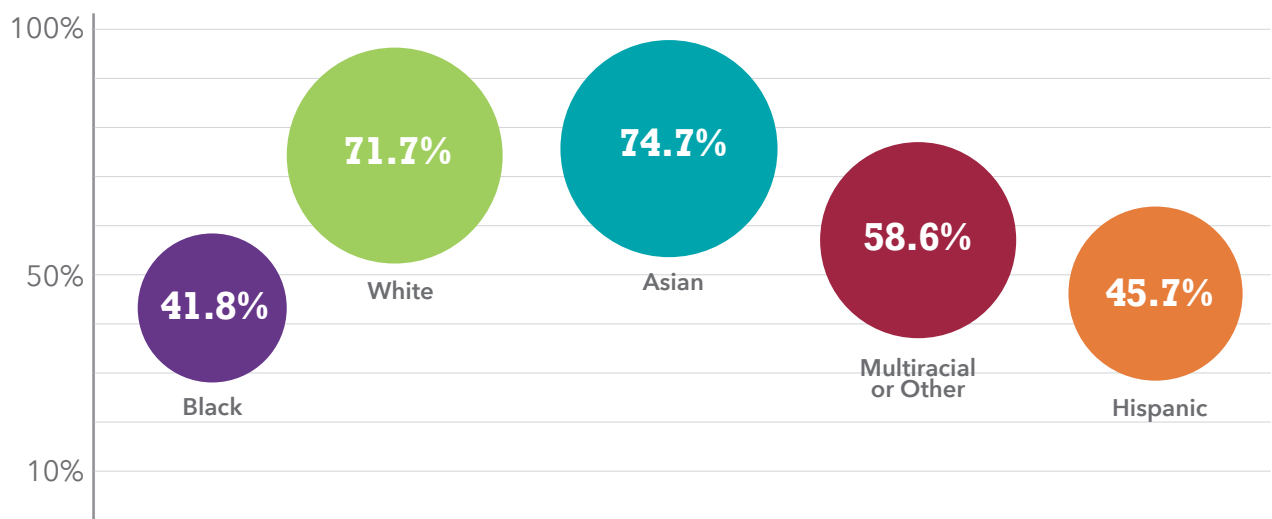
# 3rd Grade Reading Achievement

## REGIONAL FY17 Percent of Students Proficient & Above BY RACE & ETHNICITY

### Cuyahoga County



### Franklin County

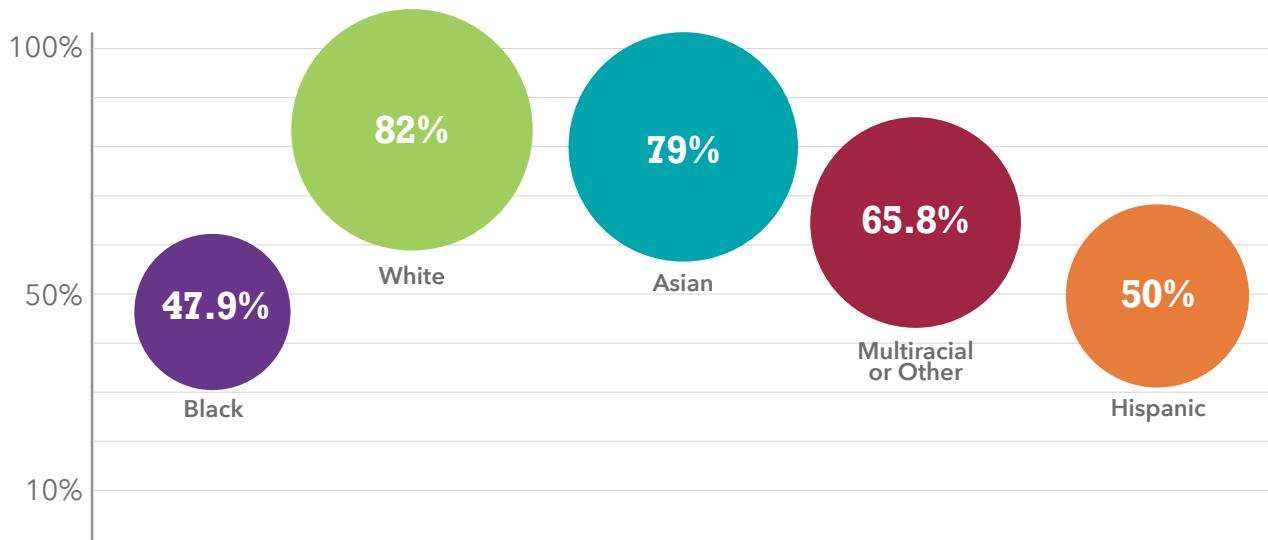


Data Source: Ohio Department of Education, School Report Card 2017

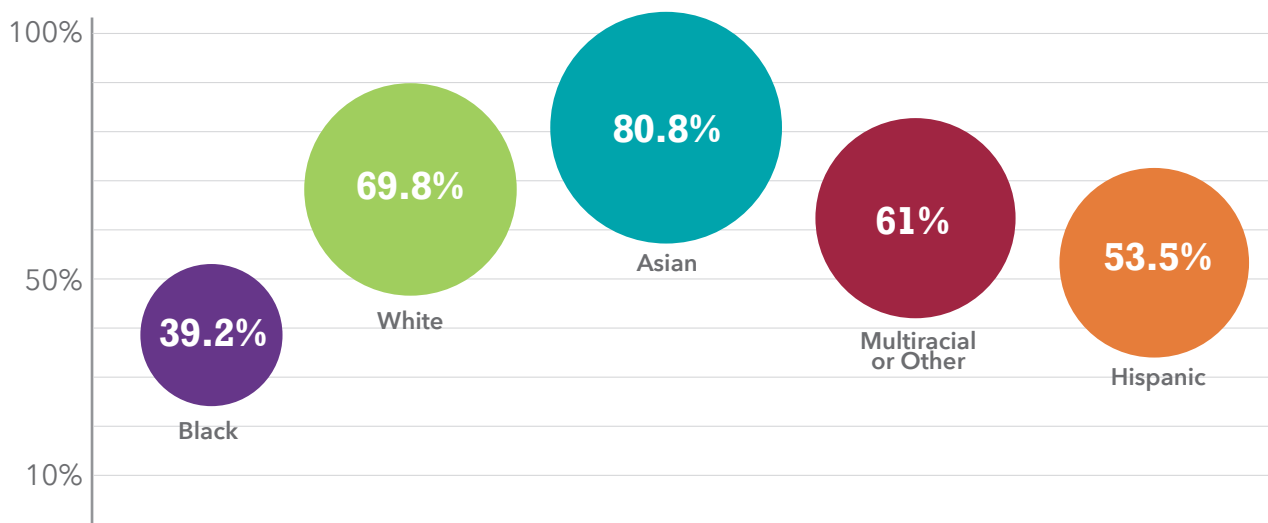
# 3rd Grade Reading Achievement

## REGIONAL FY17 Percent of Students Proficient & Above BY RACE & ETHNICITY

### Hamilton County



### Montgomery Region

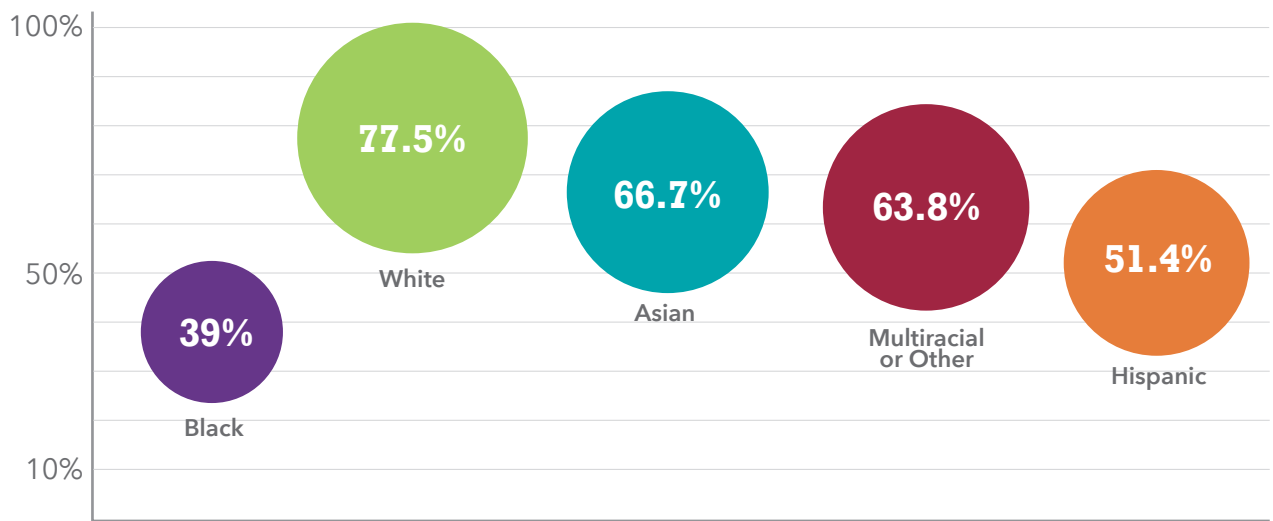


Data Source: Ohio Department of Education, School Report Card 2017

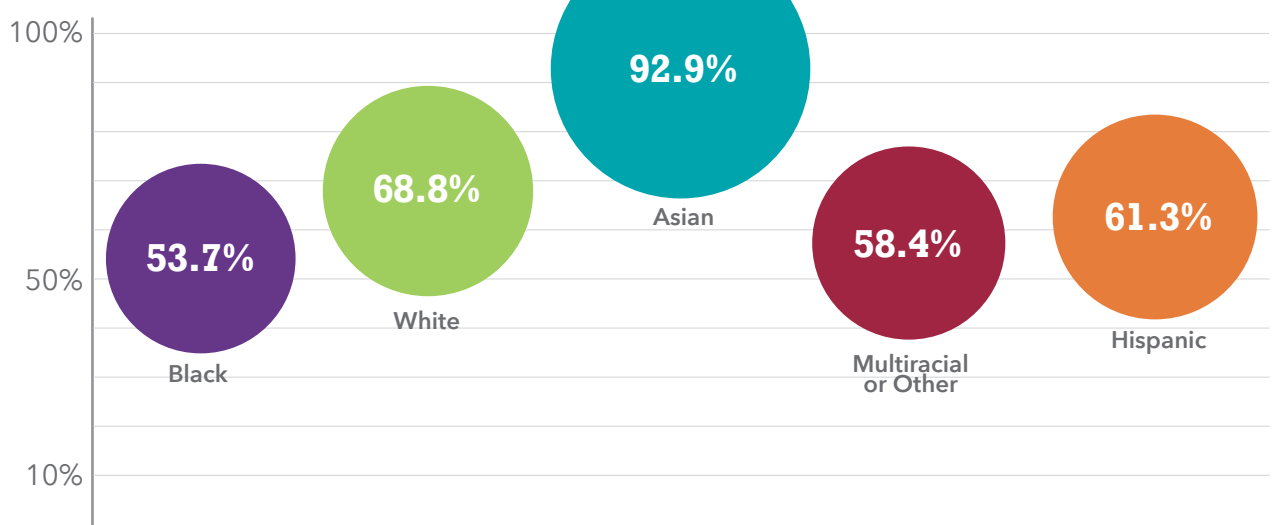
# 3rd Grade Reading Achievement

## REGIONAL FY17 Percent of Students Proficient & Above BY RACE & ETHNICITY

### Summit County



### Appalachian Region



Note: The Appalachian Region graph is based on the simple average rather than weighted average of county test results.  
Data Source: Ohio Department of Education, School Report Card 2017



## Early Childhood

# Suspension & Expulsion

**As we continue to follow Ohio's youngest students throughout their academic careers, we find that in FY17 there were over 34,000 suspensions and expulsions issued to Ohio students pre-k through third grade—the vast majority of those being for non-violent behaviors such as disruption.**

Young students who are expelled or suspended are as much as 10 times more likely to drop out of high school, experience academic failure and grade retention, hold negative attitudes toward school and face incarceration than those who are not. Considering that most children already do not enter school ready for kindergarten, this alarming impact on over 34,000 of Ohio's youngest children is devastating.

If we look at disaggregated data to further understand the use of suspensions and expulsions, we are again reminded of the children who too often get left behind.

**Among all suspensions and expulsions given to OHIO KINDERGARTNERS, black students were 7 times more likely to be disciplined than white students and Hispanic students were 1.6 times more likely to be disciplined than white kindergartners.**



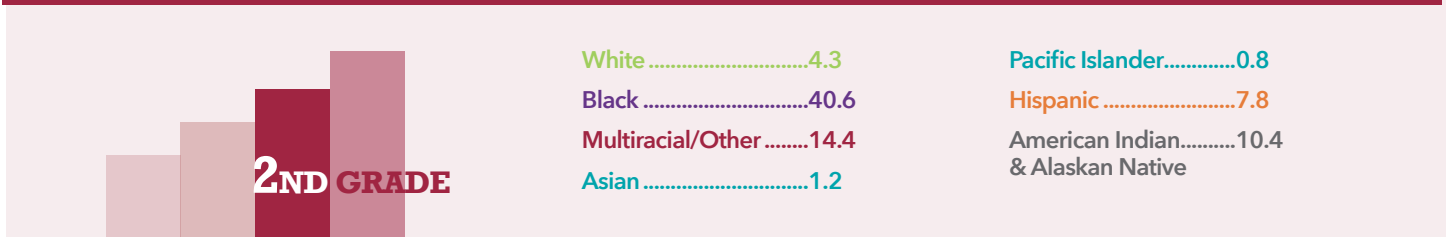
**These unconscionable gaps between white children and children of color widen with each passing year for our most at-risk 4-8 year olds. Among OHIO 1ST GRADE suspensions and expulsions, black students were 8.6 times more likely to be disciplined than white students and Hispanic students were 1.54 times more likely to be disciplined than white students.**



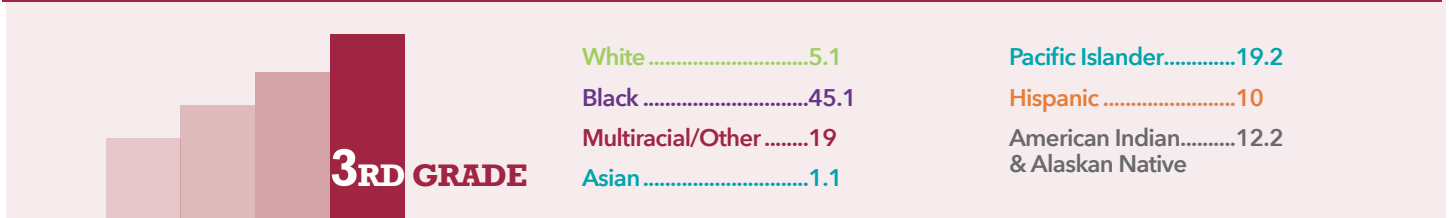
Note: Numbers reflect disciplinary action per 100 students.

# Early Childhood Suspension & Expulsion

**Among OHIO 2ND GRADE suspensions and expulsions, black students were 9.4 times more likely to be disciplined than white students and Hispanic students were 1.8 times more likely to be disciplined than white students.**



**Among OHIO 3RD GRADE suspensions and expulsions, black students were 8.8 times more likely to be disciplined than white students and Hispanic third graders were 2 times more likely to be disciplined than white third graders.**



*Note: Numbers reflect disciplinary action per 100 students.*

## Reflections

**WHY ARE CHILDREN OF COLOR BEING SUSPENDED AND EXPELLED AT A HIGHER RATE?**

**HOW SHOULD DISCIPLINARY POLICES REFLECT AN UNDERSTANDING OF THE IMPACT OF TRAUMA ON CHILDREN?**

**HOW CAN WE DECREASE SUSPENSION RATES, WHILE STILL HOLDING STUDENTS ACCOUNTABLE FOR UNACCEPTABLE BEHAVIOR?**

**WHAT ARE PRACTICAL AND EFFECTIVE ALTERNATIVES TO OUT-OF-SCHOOL SUSPENSIONS?**

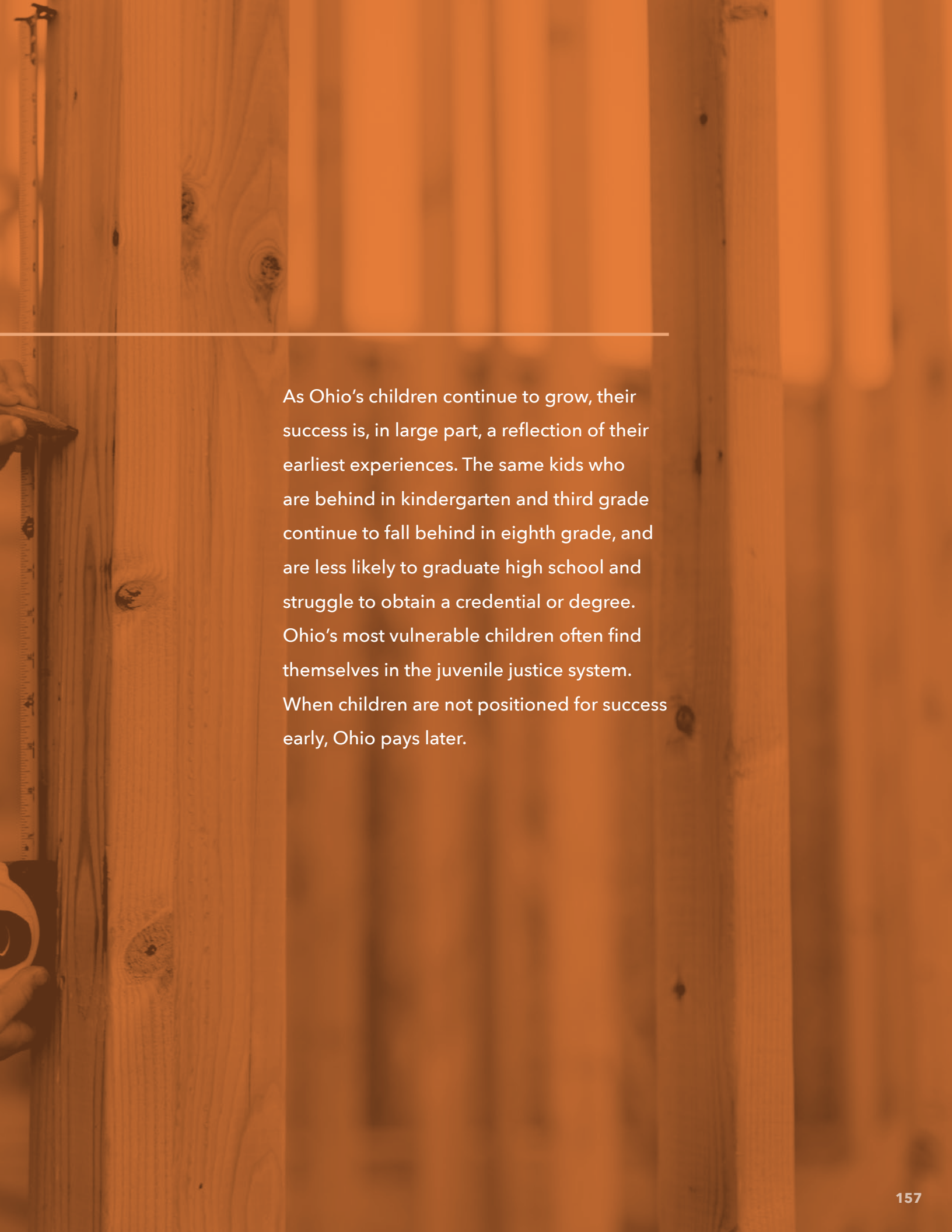
# Taking *an* Evaluative View

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- SPECIAL EDUCATION
- JUVENILE JUSTICE
- 8TH GRADE MATH ACHIEVEMENT
- HIGH SCHOOL GRADUATION
- POSTSECONDARY ATTAINMENT







As Ohio's children continue to grow, their success is, in large part, a reflection of their earliest experiences. The same kids who are behind in kindergarten and third grade continue to fall behind in eighth grade, and are less likely to graduate high school and struggle to obtain a credential or degree. Ohio's most vulnerable children often find themselves in the juvenile justice system. When children are not positioned for success early, Ohio pays later.

# Special Education

**Special Education services are provided to students ages 3 to 21 and are guided by both federal (Individuals with Disabilities Education Act) and state (Ohio Operating Standards for the Education of Children with Disabilities) requirements.**

In Ohio, of the 1,674,341 children served in the public school system, 244,777 (15%) are students with a disability who are being educated in consideration of their individual differences, so they can reach their highest level of success in school.

**The following are the categories of disability defined by the Individuals with Disabilities Education Act (IDEA):**

1. Autism
2. Blind and Visually Impaired
3. Deaf and Hearing Impaired
4. Deaf-Blindness
5. Developmental Delay
6. Emotional Disturbances
7. Intellectual Disability
8. Multiple Disability
9. Orthopedic Impairment
10. Other Health Impairments
11. Specific Learning Disability
12. Speech or Language Impairment
13. Traumatic Brain Injury

*In Ohio,  
15% of STUDENTS  
served in the public  
school system are receiving  
special education services.*

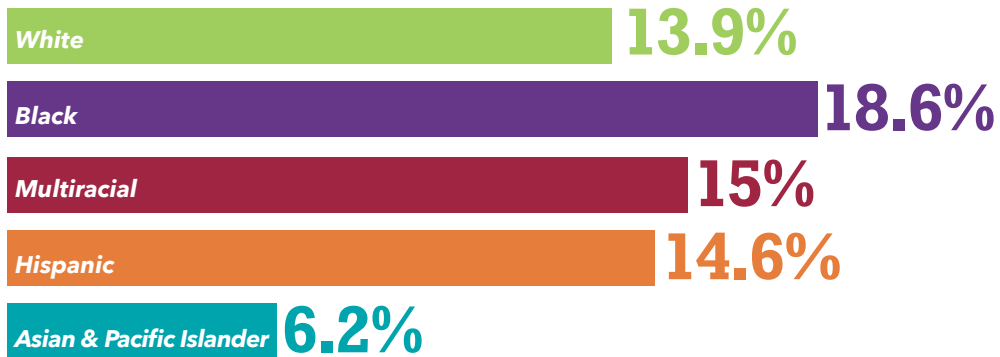
## **FY17 Percentage of ENROLLED STUDENTS WITH A DISABILITY by Race**

<b>Race &amp; Ethnicity</b>	<b># of Students Enrolled</b>	<b># of Students with a Disability</b>	<b>% of Students with a Disability</b>
White	1,178,393	164,181	13.9%
Black	278,839	51,729	18.6%
Multiracial/Other	83,803	12,726	15%
Asian	38,204	2,280	6.0%
Hispanic	91,724	13,350	14.6%
Pacific Islander	1,308	160	12.2%
American Indian/Alaskan Native	2,070	351	17%
<b>ALL STUDENTS</b>	<b>1,674,341</b>	<b>244,777</b>	<b>14.6%</b>

Data Source: Ohio Department of Education

# Special Education

## FY17 Percentage of ENROLLED STUDENTS WITH A DISABILITY by Race



## FY17 Students with DISABILITY-EMOTIONAL DISTURBANCE by Race

Race & Ethnicity	# of Students	% of Students by Race
White	8,594	0.7%
Black	5,442	2.0%
Multiracial/Other	1,084	1.3%
Asian	45	0.1%
Hispanic	637	0.7%
Pacific Islander	10	0.8%
American Indian/Alaskan Native	19	0.9%

Emotional disturbance is a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance:

1. An inability to learn that cannot be explained by intellectual, sensory, or health factors.
2. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
3. Inappropriate types of behavior or feelings under normal circumstances.
4. A general pervasive mood of unhappiness or depression.
5. A tendency to develop physical symptoms or fears associated with personal or school problems.

Reflection

**BLACK STUDENTS ARE DISPROPORTIONATELY RECEIVING SPECIAL EDUCATION SERVICES BASED UPON EMOTIONAL DISTURBANCE. WHAT ROLE MAY THE INCIDENCE OF TRAUMA PLAY IN THIS DISPARITY?**

**WHAT ROLE MAY IMPLICIT BIAS PLAY IN THIS DISPARITY?**



# Special Education

## FY17 Students with DISABILITY-DEVELOPMENTAL DELAY by Race

Race & Ethnicity	# of Students	% of Students by Race
White	3,278	0.3%
Black	936	0.3%
Multiracial/Other	259	0.3%
Asian	112	0.3%
Hispanic	297	0.3%
Pacific Islander	10	0.8%
American Indian/Alaskan Native	110	5.3%

Note: According to the Ohio Operating Standards for the Education of Children with Disabilities, a student with a developmental delay is a child 3 to 5 years old that an evaluation team of qualified professionals determines is experiencing a delay in one or more of the following areas: physical development; cognitive development; communication development; social or emotional development; or adaptive development.

## FY17 Students with DISABILITY-SPECIFIC LEARNING DISABILITY by Race

Race & Ethnicity	# of Students	% of Students by Race
White	62,455	5.3%
Black	20,944	7.5%
Multiracial/Other	4,779	5.6%
Asian	560	1.5%
Hispanic	6,093	6.6%
Pacific Islander	70	5.4%
American Indian/Alaskan Native	151	7.3%

Note: Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of intellectual disability, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

**WHAT MORE DO WE NEED TO UNDERSTAND TO DETERMINE WHY DISPARITIES APPEAR IN SOME CATEGORIES OF DISABILITY AND NOT OTHERS?**

**HOW CAN WE BETTER SUPPORT CHILDREN OF COLOR BEFORE THEY ENTER SCHOOL TO REDUCE THE NEED FOR SPECIAL EDUCATION SERVICES FOR THESE CHILDREN?**

# Juvenile Justice



***The Ohio Department of Youth Services (DYS) is the juvenile corrections system for the state of Ohio.***

DYS is statutorily mandated to confine felony offenders, ages 10 to 21, who have been adjudicated and committed by one of Ohio's 88 county juvenile courts. During their stay with DHS, youth are engaged in programming that is designed to address their criminological and behavioral needs. Each of the DHS facilities also operates a year-round school that offers general curriculum as well as vocation opportunities.

## ***What is an adjudication versus a commitment?***

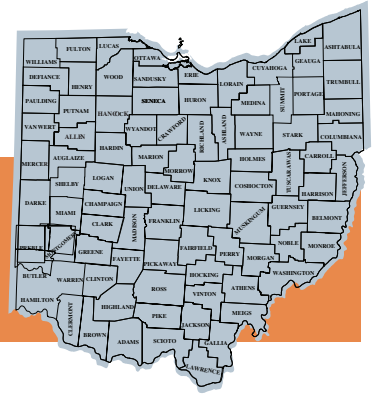
An adjudication of delinquency in the juvenile court is analogous to an adult "conviction." It is a formal finding by the court after an adjudicatory hearing or entering of a guilty plea/admission that the juvenile has committed the act for which he or she has been charged.

A commitment, also known as placement or incarceration, is one of the options available to the court as a possible sentence after a youth has been adjudicated. It is the transfer of legal responsibility over the child to the state for placement in a facility.

### **DATA NOTE:**

The data analysis below looks at both adjudications and commitments for Ohio youth and is disaggregated by race. The juvenile courts report Hispanic ethnicity separately from race and report all races with which a youth identifies. "Other" means race was reported as Asian, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander. "Multiple Races" means two or more races were reported for the youth. "Hispanic" means that the youth is of Hispanic ethnicity. Each youth is counted under only one category.

# Juvenile Justice

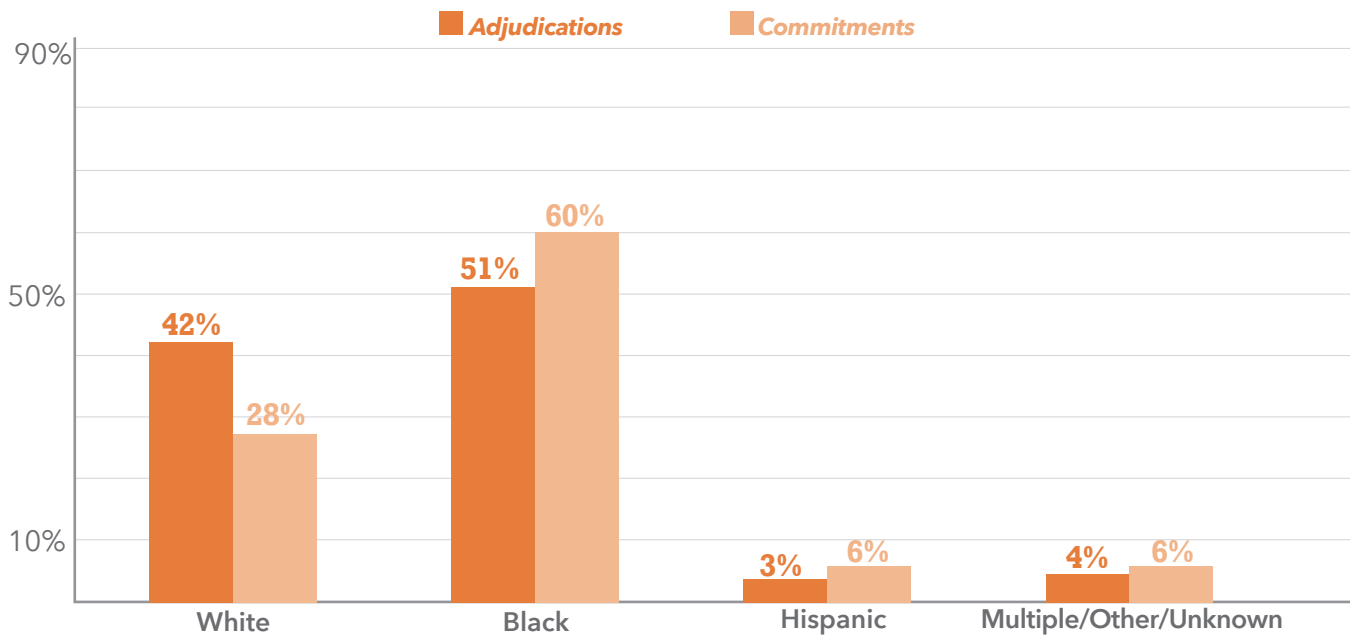


*Why do children of color make up most of the adjudicated and committed youth populations?*

## FY17 STATEWIDE Number & Percentage of Youth Felony Adjudications & Commitments by Race

Race & Ethnicity	# of Adjudications	% of Adjudications	# of Commitments	% of Commitments
White	1,881	41.8%	118	28.2%
Black	2,299	51.1%	250	59.8%
Hispanic	145	3.2%	24	5.7%
Multiple Races	99	2.2%	14	3.3%
Other	13	0.3%	7	1.7%
Unknown	59	1.3%	5	1.2%
<b>TOTAL</b>	<b>4,496</b>	<b>100.0%</b>	<b>418</b>	<b>100.0%</b>

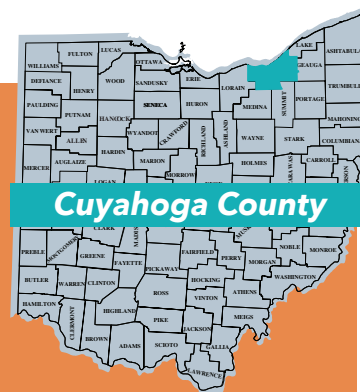
## FY17 STATEWIDE Percentage of Youth Felony Adjudications & Commitments by Race



Data Source: Ohio Department of Youth Services FY2017 Profile of Youth Adjudicated or Committed for Felony Offenses

# Juvenile Justice

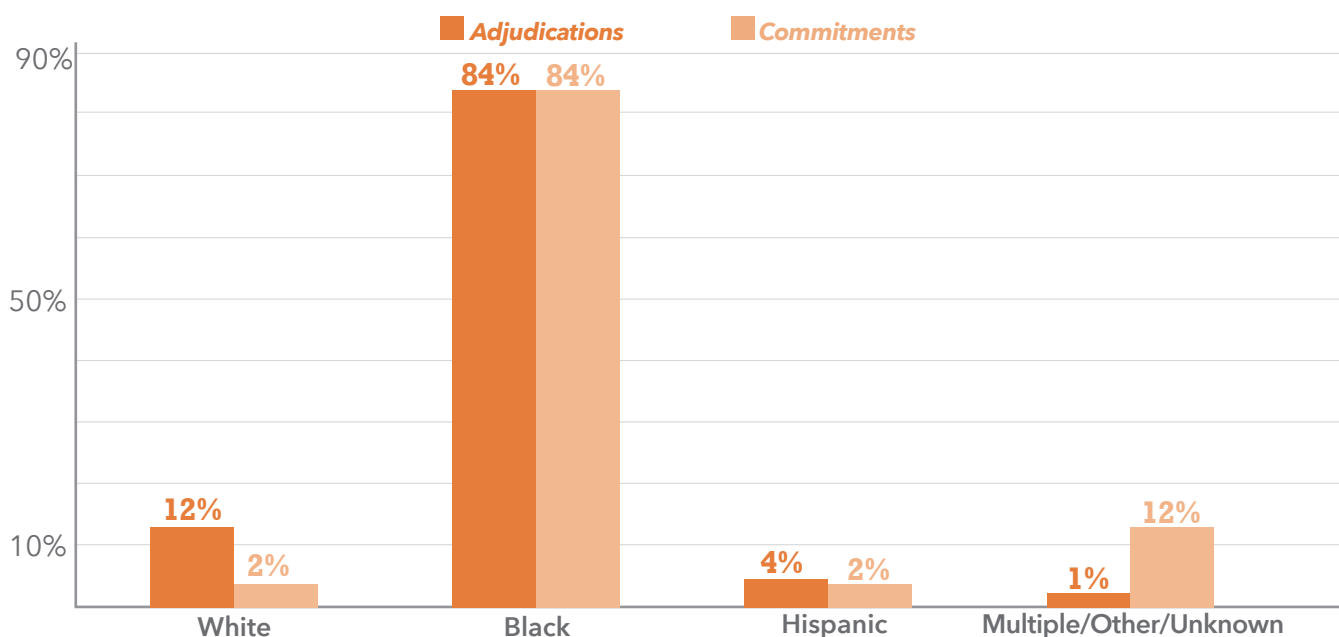
17% of all adjudications & 29% of all commitments in Ohio are made in Cuyahoga County. 84% of all these are of black youth. This is far more than the entire Appalachian Region of 32 counties. What is happening here compared to other Ohio communities?



**FY17 CUYAHOGA COUNTY Number & Percentage of Youth Felony Adjudications & Commitments by Race**

Race & Ethnicity	# of Adjudications	% of Adjudications	# of Commitments	% of Commitments
White	88	11.8%	2	1.6%
Black	624	83.8%	103	84.4%
Hispanic	26	3.5%	2	1.6%
Multiple Races	4	0.5%	7	5.7%
Other	2	0.3%	4	3.3%
Unknown	1	0.1%	4	3.3%
<b>TOTAL</b>	<b>745</b>	<b>100.0%</b>	<b>122</b>	<b>100.0%</b>

**FY17 CUYAHOGA COUNTY Percentage of Youth Felony Adjudications & Commitments by Race**



Data Source: Ohio Department of Youth Services FY2017 Profile of Youth Adjudicated or Committed for Felony Offenses

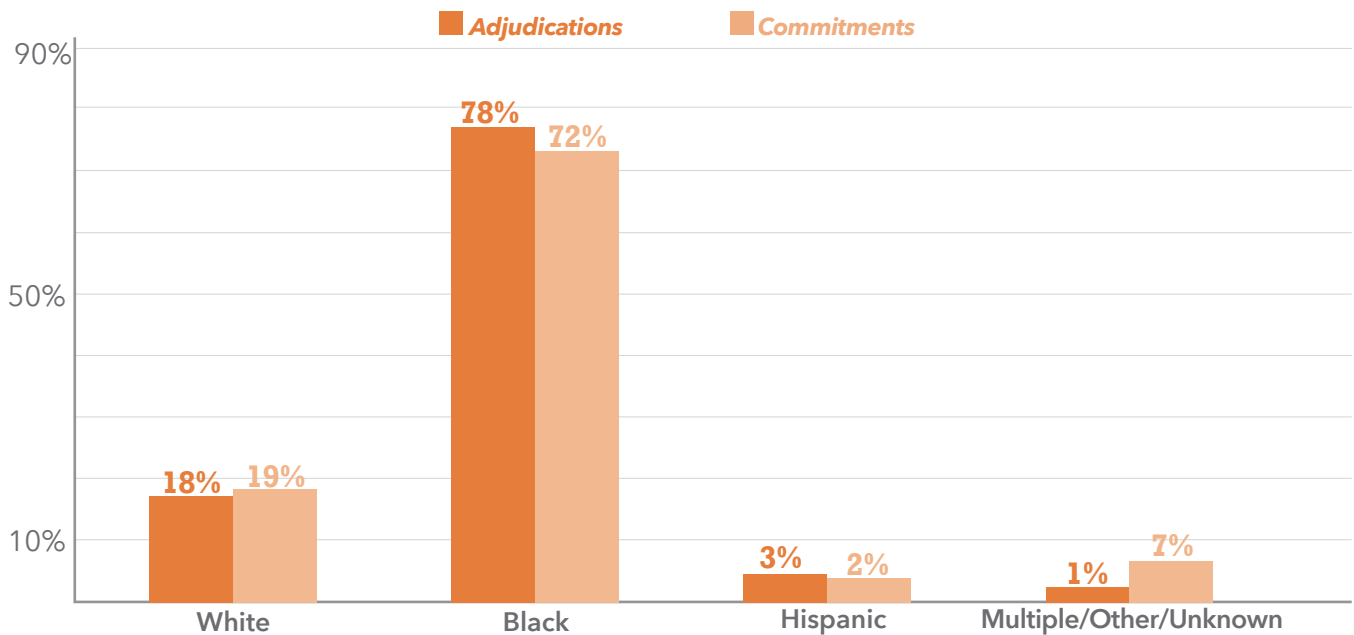
# Juvenile Justice



**FY17 FRANKLIN COUNTY Number & Percentage of Youth Felony Adjudications & Commitments by Race**

Race & Ethnicity	# of Adjudications	% of Adjudications	# of Commitments	% of Commitments
White	88	18.4%	10	18.5%
Black	373	77.9%	39	72.2%
Hispanic	13	2.7%	1	1.9%
Multiple Races	0	0.0%	1	1.9%
Other	5	1.0%	2	3.7%
Unknown	0	0.0%	1	1.9%
<b>TOTAL</b>	<b>479</b>	<b>100.0%</b>	<b>54</b>	<b>100.0%</b>

**FY17 FRANKLIN COUNTY Percentage of Youth Felony Adjudications & Commitments by Race**



Data Source: Ohio Department of Youth Services FY2017 Profile of Youth Adjudicated or Committed for Felony Offenses

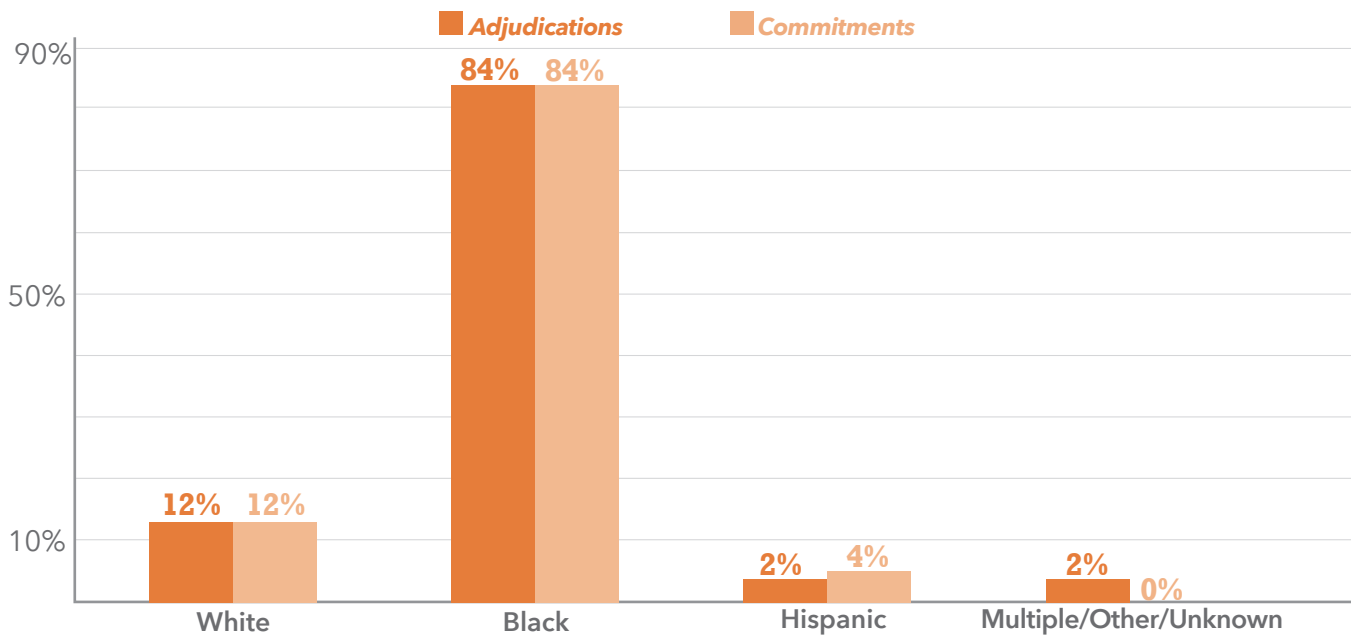
# Juvenile Justice



**FY17 HAMILTON COUNTY Number & Percentage of Youth Felony Adjudications & Commitments by Race**

Race & Ethnicity	# of Adjudications	% of Adjudications	# of Commitments	% of Commitments
White	51	12.2%	6	12.0%
Black	349	83.7%	42	84.0%
Hispanic	7	1.7%	2	4.0%
Multiple Races	3	0.7%	0	0.0%
Other	1	0.2%	0	0.0%
Unknown	6	1.4%	0	0.0%
<b>TOTAL</b>	<b>417</b>	<b>100.0%</b>	<b>50</b>	<b>100.0%</b>

**FY17 HAMILTON COUNTY Percentage of Youth Felony Adjudications & Commitments by Race**



Data Source: Ohio Department of Youth Services FY2017 Profile of Youth Adjudicated or Committed for Felony Offenses



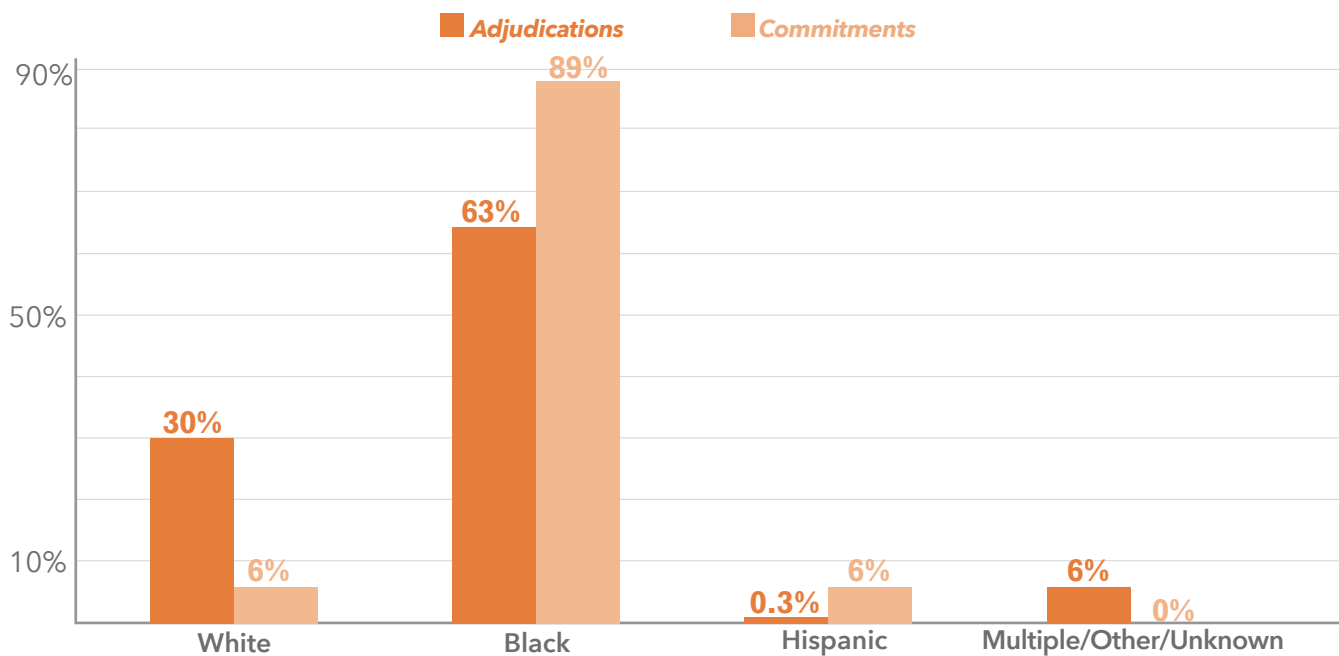
# Juvenile Justice



**FY17 MONTGOMERY COUNTY Number & Percentage of Youth Felony Adjudications & Commitments by Race**

Race & Ethnicity	# of Adjudications	% of Adjudications	# of Commitments	% of Commitments
White	88	30.4%	1	5.6%
Black	182	63.0%	16	88.9%
Hispanic	1	0.3%	1	5.6%
Multiple Races	17	5.9%	0	0.0%
Other	0	0.0%	0	0.0%
Unknown	1	0.3%	0	0.0%
<b>TOTAL</b>	<b>289</b>	<b>100.0%</b>	<b>18</b>	<b>100.0%</b>

**FY17 MONTGOMERY COUNTY Percentage of Youth Felony Adjudications & Commitments by Race**



Data Source: Ohio Department of Youth Services FY2017 Profile of Youth Adjudicated or Committed for Felony Offenses

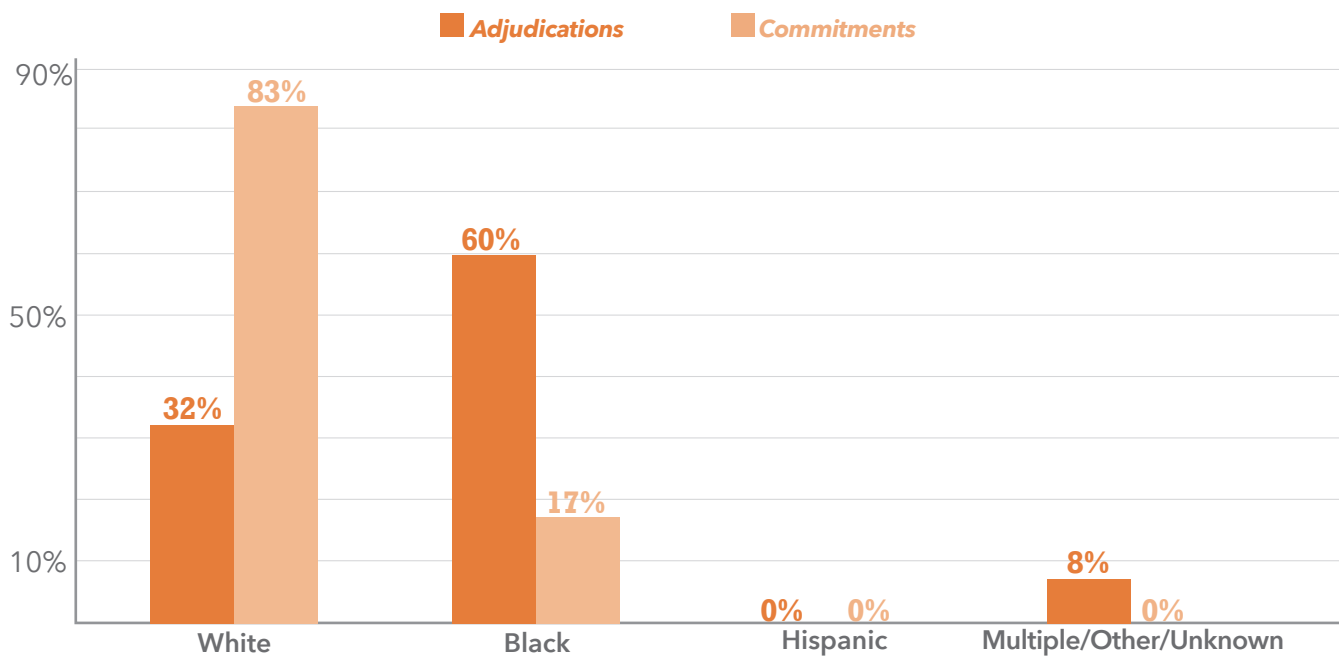
# Juvenile Justice



**FY17 SUMMIT COUNTY Number & Percentage of Youth Felony Adjudications & Commitments by Race**

Race & Ethnicity	# of Adjudications	% of Adjudications	# of Commitments	% of Commitments
White	84	31.8%	5	83.3%
Black	158	59.8%	1	16.7%
Hispanic	0	0.0%	0	0.0%
Multiple Races	20	7.6%	0	0.0%
Other	0	0.0%	0	0.0%
Unknown	2	0.8%	0	0.0%
<b>TOTAL</b>	<b>264</b>	<b>100.0%</b>	<b>6</b>	<b>100.0%</b>

**FY17 SUMMIT COUNTY Percentage of Youth Felony Adjudications & Commitments by Race**



Data Source: Ohio Department of Youth Services FY2017 Profile of Youth Adjudicated or Committed for Felony Offenses

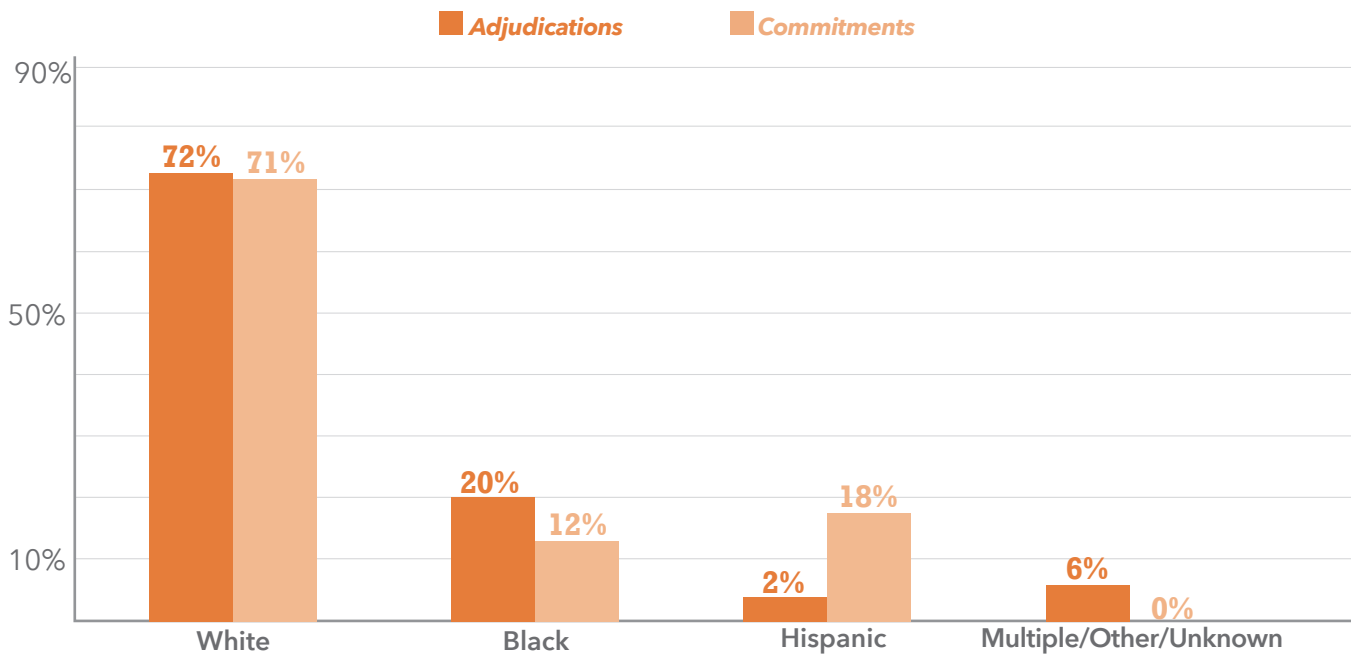
# Juvenile Justice



**FY17 APPALACHIAN REGION Number & Percentage of Youth Felony Adjudications & Commitments by Race**

Race & Ethnicity	# of Adjudications	% of Adjudications	# of Commitments	% of Commitments
White	425	71.9%	24	70.6%
Black	120	20.3%	4	11.8%
Hispanic	10	1.7%	6	17.6%
Multiple Races	22	3.7%	0	0.0%
Other	0	0.0%	0	0.0%
Unknown	14	2.4%	0	0.0%
<b>TOTAL</b>	<b>591</b>	<b>100.0%</b>	<b>34</b>	<b>100.0%</b>

**FY17 APPALACHIAN REGION Percentage of Youth Felony Adjudications & Commitments by Race**



Data Source: Ohio Department of Youth Services FY2017 Profile of Youth Adjudicated or Committed for Felony Offenses

# Juvenile Justice



**ABOUT**  
**\$95 MILLION**  
**ARE SPENT EVERY YEAR ON YOUTH COMMITTED TO**  
**A JUVENILE DETENTION FACILITY IN OHIO.**

**THE RECIDIVISM RATE**  
**IS NEARLY**  
**50%.**

**Reflection**

**WHEN AND HOW**  
**COULD WE MAKE A SMARTER INVESTMENT IN THESE CHILDREN**  
**TO PREVENT THEM FROM ENTERING THE JUVENILE COURT SYSTEM**  
**AND POSITION THEM FOR SUCCESS EARLY IN LIFE?**

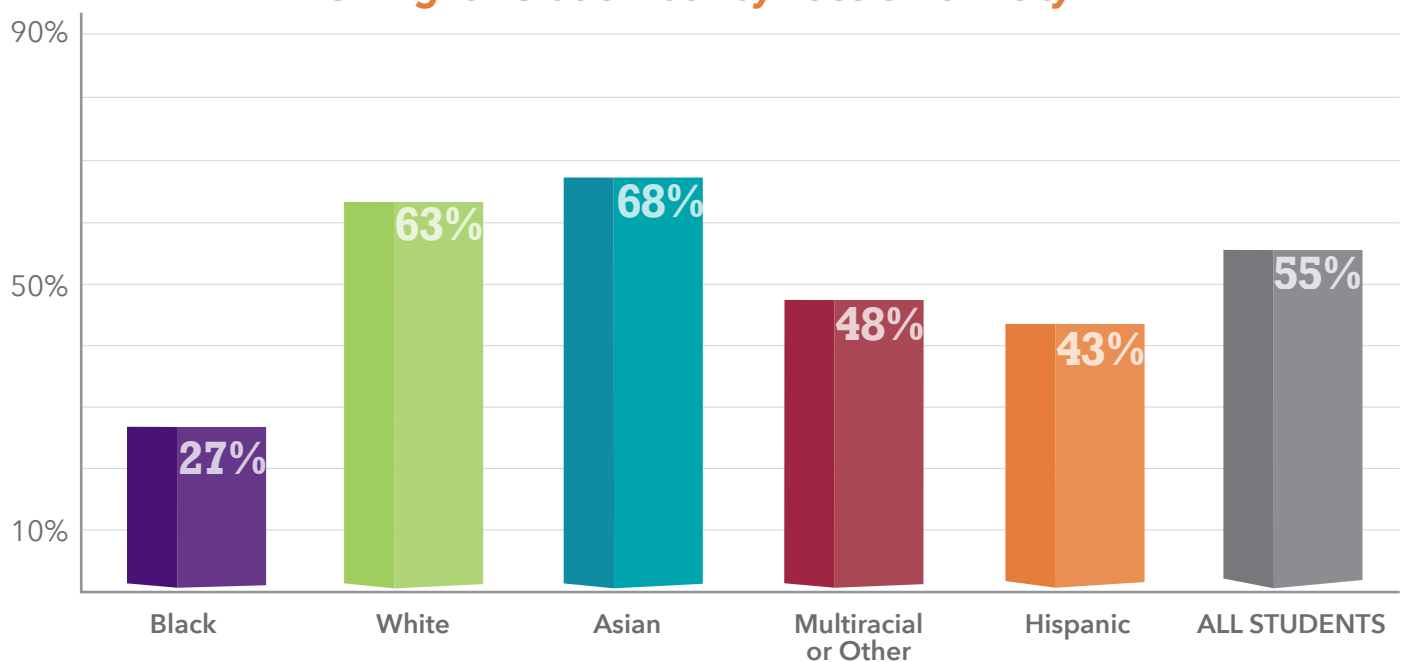
8th Grade

# Math Achievement

*Ohio Reading and Mathematics Achievement Assessments are annual tests given to students in grades 3-8 to measure how well students have learned the reading and math concepts taught in these grades.*

*Research shows that Eighth grade math achievement predicts high school graduation and postsecondary attainment.*

## STATEWIDE ANALYSIS FY17 Percent of Students Proficient & Above on Eighth Grade Math by Race & Ethnicity



*Note: Due to small numbers of students, the county and Appalachian region graphs by race and ethnicity do not show results for Pacific Islanders or American Indian/Alaskan Natives.*

*Data Source: Ohio Department of Education, Ohio School Report Card FY17*

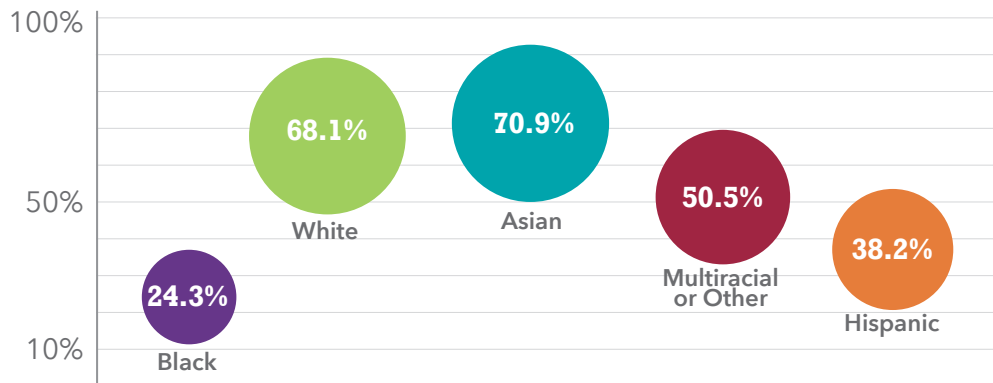
## Reflection

**ONLY 54.9% OF ALL STUDENTS ARE PROFICIENT IN EIGHTH GRADE MATH. WHAT IS THE IMPLICATION OF THIS STATISTIC FOR COLLEGE AND CAREER READINESS? AND HOW CAN WE INCREASE MATH PROFICIENCY AMONG CHILDREN OF COLOR?**

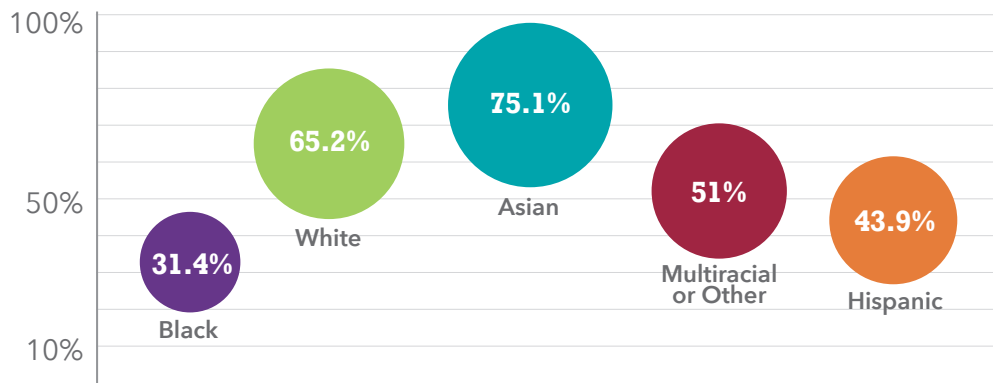
# 8th Grade Math Achievement

## REGIONAL ANALYSIS FY17 Percent of Students Proficient & Above on Eighth Grade Math by Race & Ethnicity

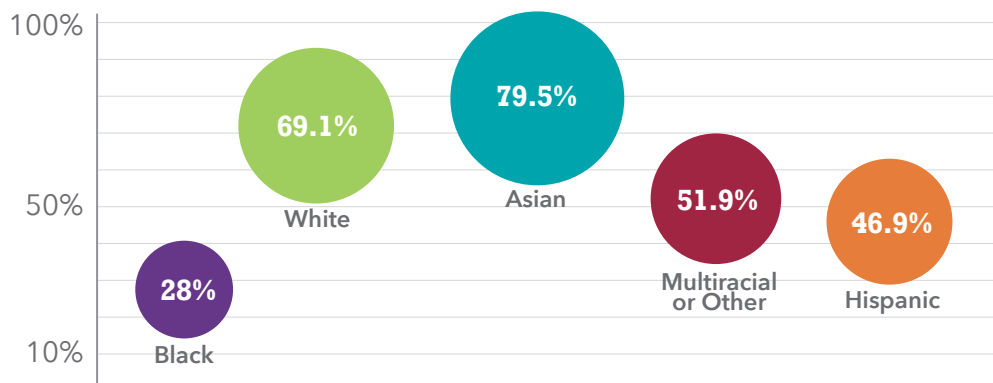
### Cuyahoga County



### Franklin County



### Hamilton County



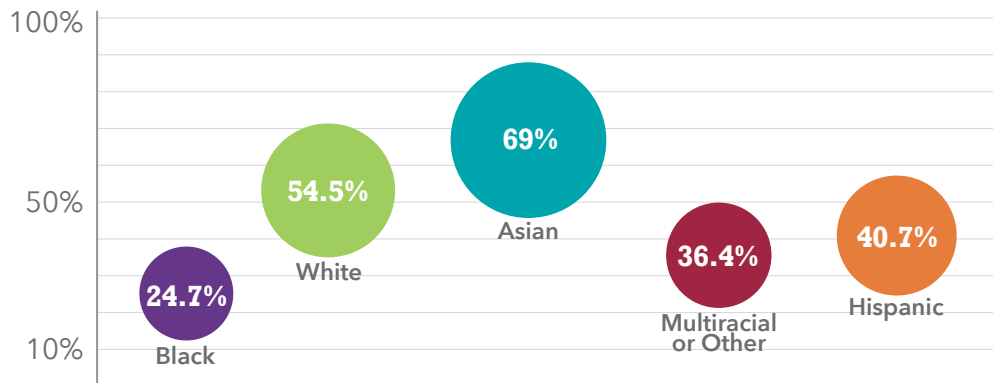
Data Source: Ohio Department of Education, Ohio School Report Card FY17



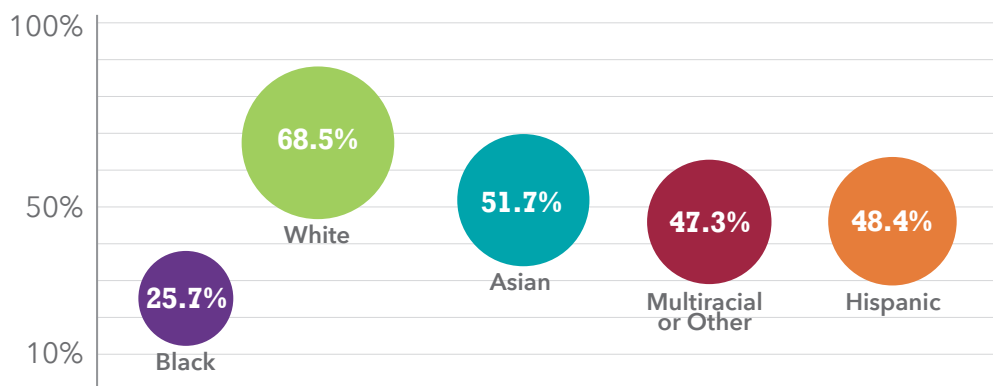
# 8th Grade Math Achievement

## REGIONAL ANALYSIS FY17 Percent of Students Proficient & Above on Eighth Grade Math BY RACE & ETHNICITY

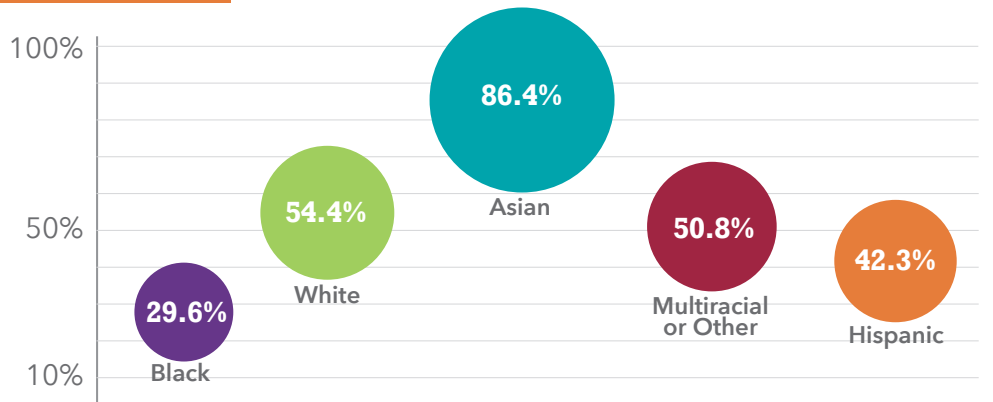
### Montgomery County



### Summit County



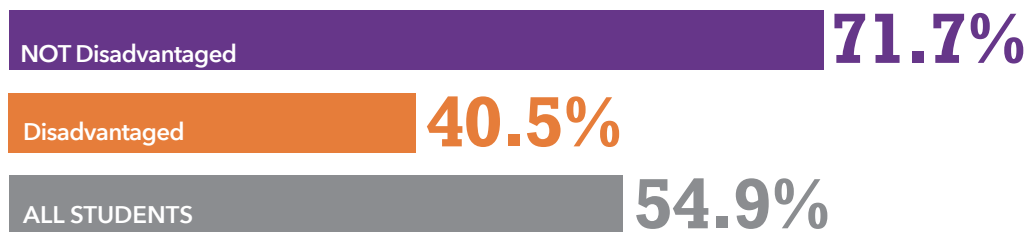
### Appalachian Region



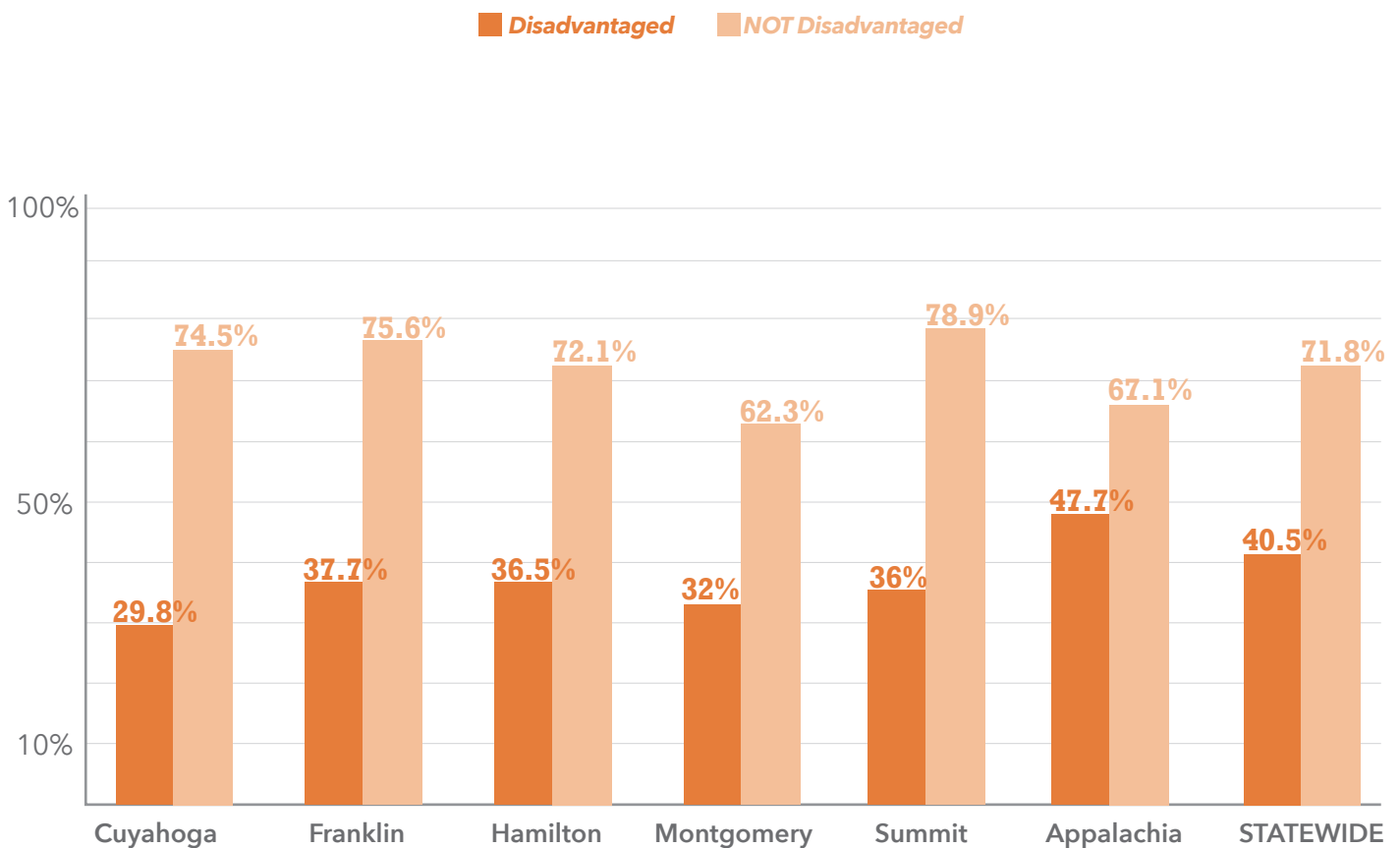
Data Note: The above graph is based on the simple average rather than weighted average of county test results.  
Data Source: Ohio Department of Education, Ohio School Report Card FY17

# 8th Grade Math Achievement

## FY17 Percent of Students Proficient & Above on Eighth Grade Math BY ECONOMIC STATUS



## FY17 Percent of Students Proficient & Above on Eighth Grade Math BY ECONOMIC STATUS IN SELECTED REGIONS



Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

**High school graduation predicts postsecondary educational success. Children who graduate from high school are more likely to continue their education after high school.**

The following analysis summarizes Ohio FY2016's four-year graduation rates by race and ethnicity. Considering the number of students graduating on time during the 2015-2016 school year, Save the Children ranked Ohio **29th in the nation for high school drop outs.**

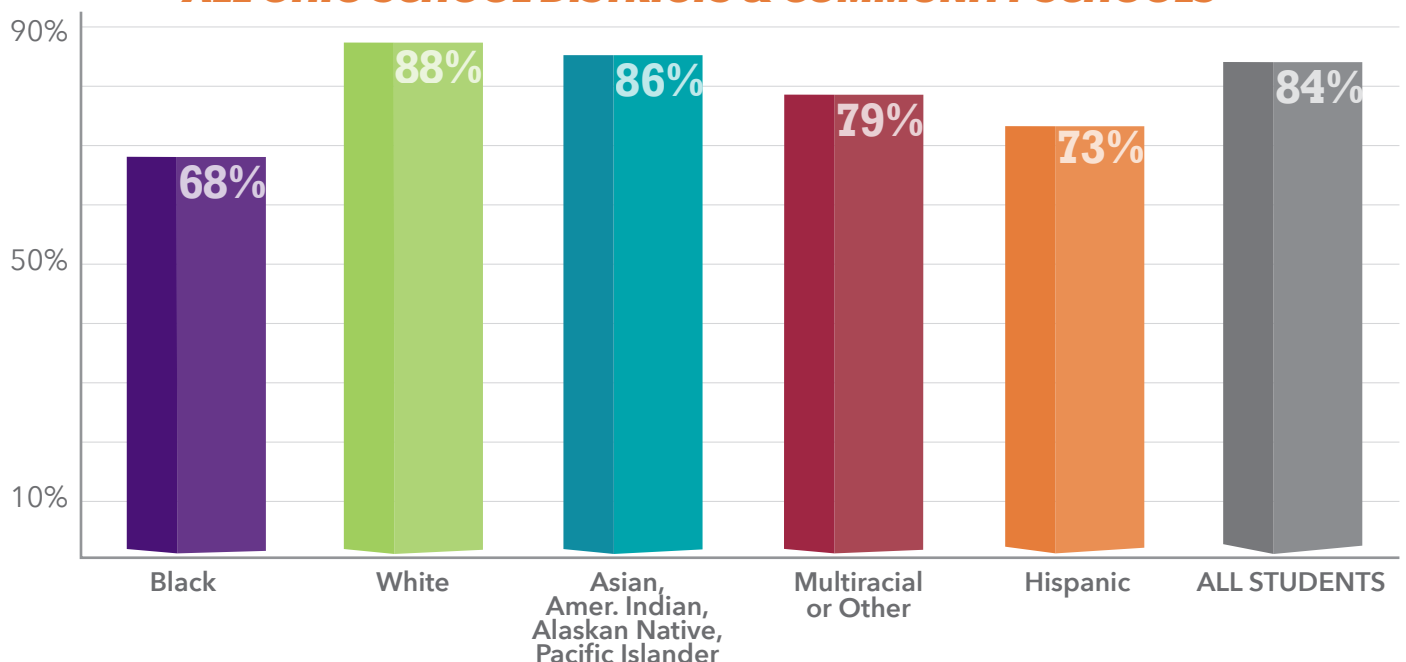
During FY 2016, for all of Ohio's 610 "traditional" school districts and all of Ohio's community schools\*, the four-year graduation rate is 83.5%. White non-Hispanic students have the highest graduation rate at 87.9%. Black non-Hispanic students have the lowest graduation rate at 68.1%.

\*Community schools, often called charter schools in other states, are public nonprofit, nonsectarian schools that operate independently of any school district but under a contract with an authorized sponsoring entity that is established by statute or approved by the State Board of Education. Community schools are public schools of choice and are state and federally funded.

**Table 1** **FY16 4-Year Graduation Rate by Race & Ethnicity, ALL OHIO SCHOOL DISTRICTS & COMMUNITY SCHOOLS**

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	14,576	6,829	21,405	68.1%
White	89,570	12,324	101,894	87.9%
Asian, Amer. Indian, Alaskan Native & Pacific Islander	2,541	433	2,974	85.5%
Multiracial	4,037	1,148	5,106	79.1%
Hispanic	3,980	1,476	5,456	72.9%
<b>ALL STUDENTS</b>	<b>114,443</b>	<b>22,641</b>	<b>137,084</b>	<b>83.5%</b>

**Chart 1** **FY16 4-Year Graduation Rate by Race & Ethnicity, ALL OHIO SCHOOL DISTRICTS & COMMUNITY SCHOOLS**



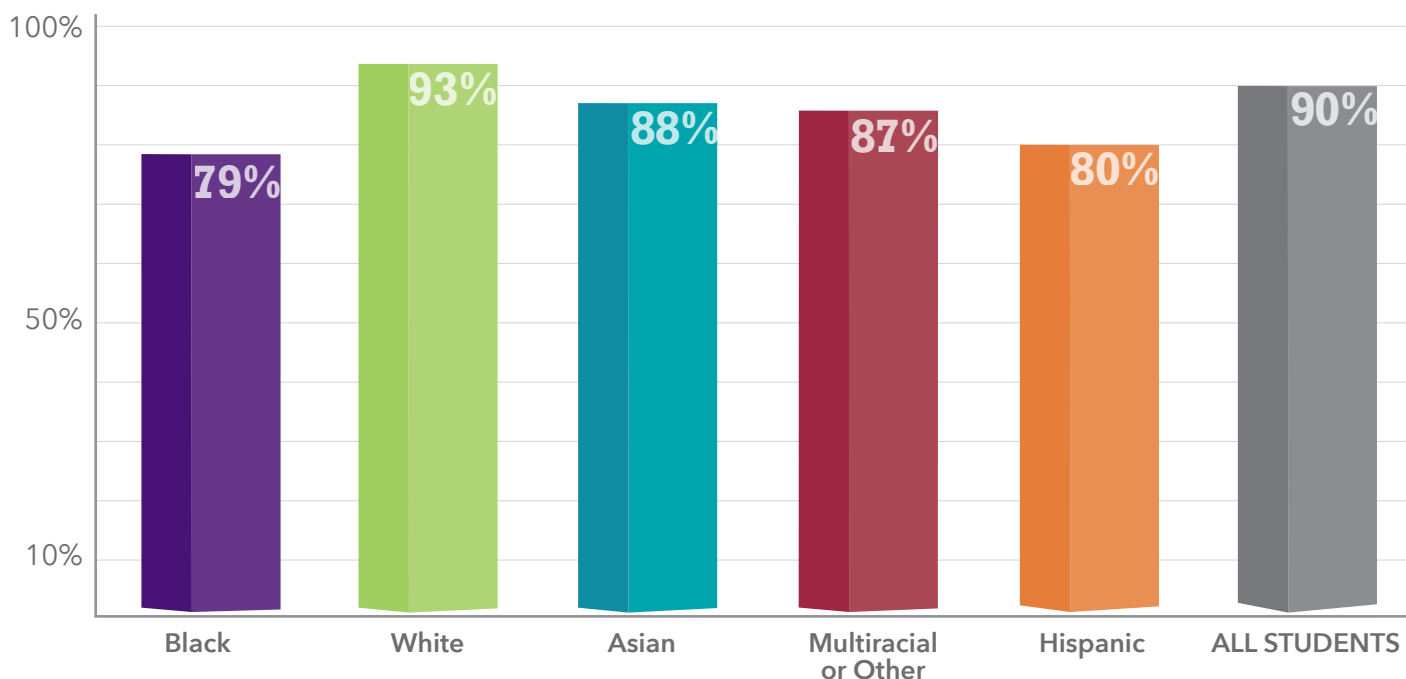
# High School Graduation

**Only analyzing Ohio's 610 "traditional" school districts, the 4-year graduation rate is 90.1%. White non-Hispanic students have the highest graduation rate at 92.9%. Black non-Hispanic students have the lowest graduation rate at 78.9%.**

**Table 2** *FY16 4-Year Graduation Rate by Race & Ethnicity, ALL OHIO K-12 DISTRICTS*

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	13,449	3,593	17,042	78.9%
White	85,487	6,551	92,038	92.9%
Asian	2,291	302	2,593	88.4%
Multiracial	3,698	563	4,261	86.8%
Hispanic	3,709	902	4,611	80.4%
Amer. Indian/Alaskan Native	135	26	161	83.9%
Pacific Islander	57	10	67	85.1%
<b>ALL STUDENTS</b>	<b>108,826</b>	<b>11,947</b>	<b>120,773</b>	<b>90.1%</b>

**Chart 2** *FY16 4-Year Graduation Rate by Race & Ethnicity, ALL OHIO K-12 DISTRICTS*



Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

*Table 3 below shows graduation rates by race and ethnicity in Ohio's community schools only.*

*Overall, 36.4% of community school students graduate.*

**THE  
GAP  
BETWEEN BLACK & WHITE STUDENTS'  
GRADUATION RATES IN COMMUNITY SCHOOLS IS  
15.6%**

*This gap is 1.4% higher than the gap between black and white student graduation rates in Ohio's traditional school districts.*

**Table 3**

***FY16 4-Year Graduation Rate by Race & Ethnicity,  
ALL COMMUNITY SCHOOLS***

<b>Race &amp; Ethnicity</b>	<b># of Graduates</b>	<b># of Non-Graduates</b>	<b>Total Potential Grads</b>	<b>Graduation Rate</b>
White	4,083	5,773	9,856	41.4%
Black	1,127	3,236	4,363	25.8%
Hispanic	271	574	845	32.1%
Multiracial	339	585	924	36.7%
Asian, Amer. Indian, Alaskan Native & Pacific Islander	58	95	153	37.9%
<b>ALL STUDENTS</b>	<b>5,878</b>	<b>10,263</b>	<b>16,141</b>	<b>36.4%</b>

# High School Graduation

**Tables 4 and 5 below separate students in community schools from those in Dropout Prevention & Recovery community schools.**

Dropout Prevention & Recovery community schools are community schools that primarily enroll students between 16 and 22 years of age who dropped out of high school or are at risk of dropping out of high school and serve a majority of their students through dropout prevention and recovery programs.

When Dropout Prevention and Recovery community schools are separated from the “regular” community schools (which include e-schools), Table 4 shows that 44.6% of students in regular community schools graduate and only 24.8% of students in Dropout Prevention and Recovery community schools graduate. The 44.8% graduation rate for “regular” community schools is less than half of the graduation rate for all K-12 districts and the graduation rate in dropout prevention & recovery schools is only 24.8%.

**Table 4** *FY16 4-Year Graduation Rate by Race & Ethnicity, COMMUNITY SCHOOLS (EXCLUDING DROPOUT PREVENTION & RECOVERY SCHOOLS)*

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
White	3,074	3,507	6,581	46.7%
Black	657	1,093	1,750	37.5%
Hispanic	205	313	518	39.6%
Multiracial	249	304	553	45.0%
Asian, Amer. Indian, Alaskan Native & Pacific Islander	44	46	90	48.9%
<b>ALL STUDENTS</b>	<b>4,229</b>	<b>5,263</b>	<b>9,492</b>	<b>44.6%</b>

**Table 5** *FY16 4-Year Graduation Rate by Race & Ethnicity, DROPOUT PREVENTION & RECOVERY COMMUNITY SCHOOLS*

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
White	1,009	2,266	3,275	30.8%
Black	470	2,143	2,613	18.0%
Hispanic	66	261	327	20.2%
Multiracial	90	281	371	24.3%
Asian, Amer. Indian, Alaskan Native & Pacific Islander	14	49	63	22.2%
<b>ALL STUDENTS</b>	<b>1,649</b>	<b>5,000</b>	<b>6,649</b>	<b>24.8%</b>

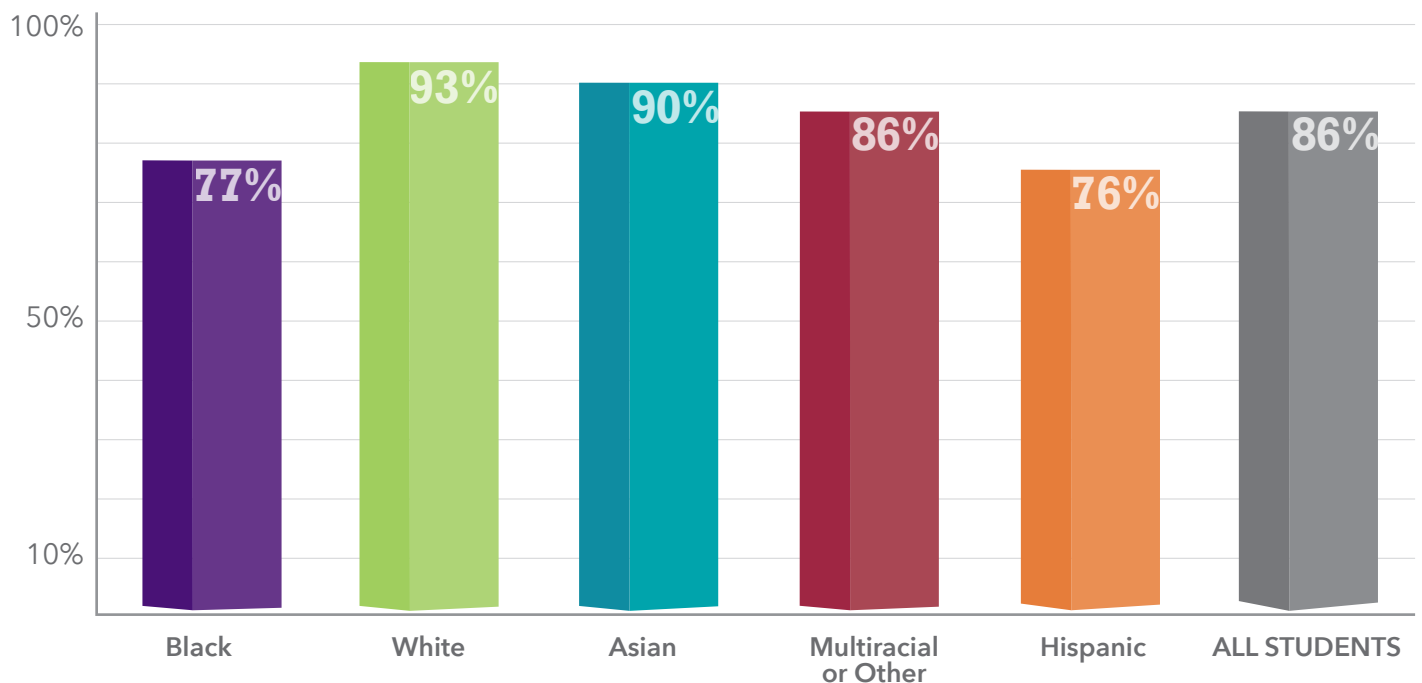


# High School Graduation

## Cuyahoga County

### FY16 4-Year Graduation Rate by Race & Ethnicity

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	3,377	1,018	4,395	76.8%
White	5,384	412	5,796	92.9%
Asian	332	36	368	90.2%
Multiracial	310	50	360	86.1%
Hispanic	567	176	743	76.3%
<b>ALL STUDENTS</b>	<b>9,970</b>	<b>1,692</b>	<b>11,662</b>	<b>85.5%</b>



Data Source: Ohio Department of Education, School Report Card FY16

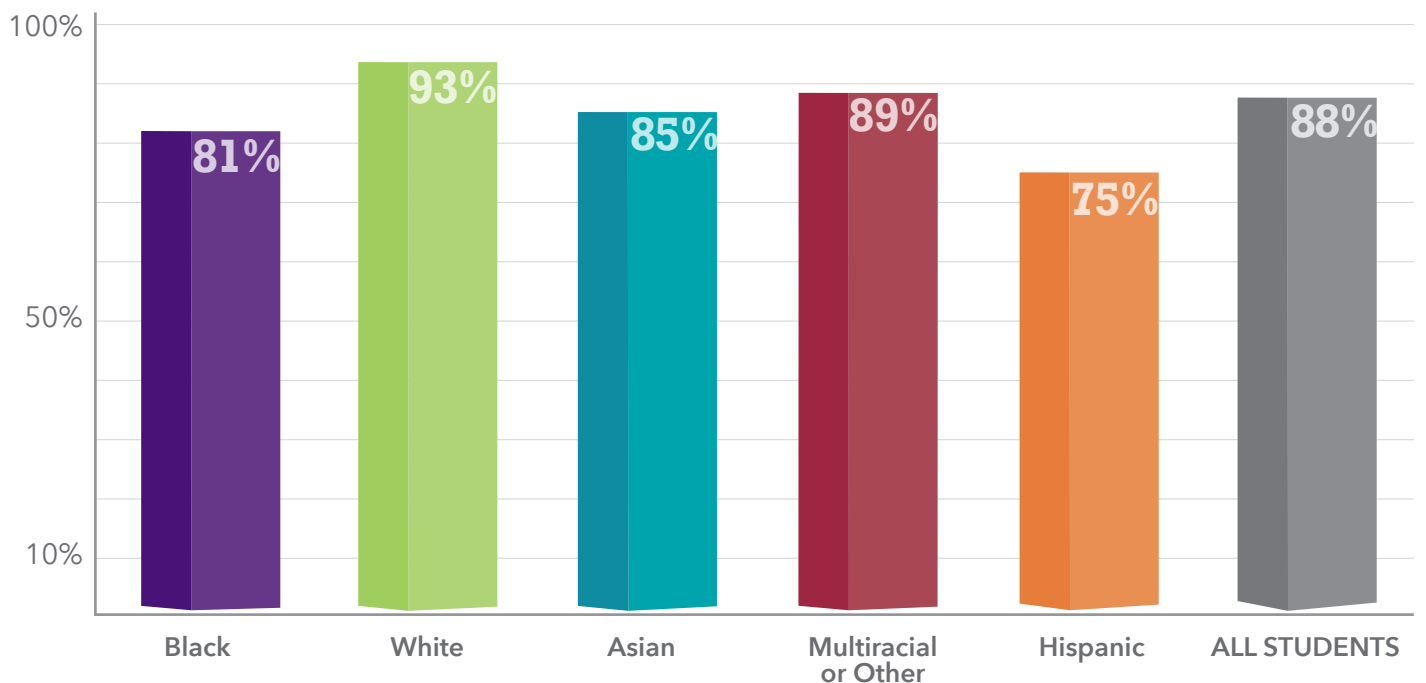
The county and regional 4-year graduation analysis below only include traditional schools and does not include community schools because students attending community schools, including online schools, often reach beyond county or region.

# High School Graduation

## Franklin County

**FY16 4-Year Graduation Rate by Race & Ethnicity**

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	2,556	600	3,156	81.0%
White	6,189	494	6,683	92.6%
Asian	552	97	649	85.1%
Multiracial	489	58	547	89.4%
Hispanic	568	186	754	75.3%
<b>ALL STUDENTS</b>	<b>10,354</b>	<b>1,435</b>	<b>11,789</b>	<b>87.8%</b>



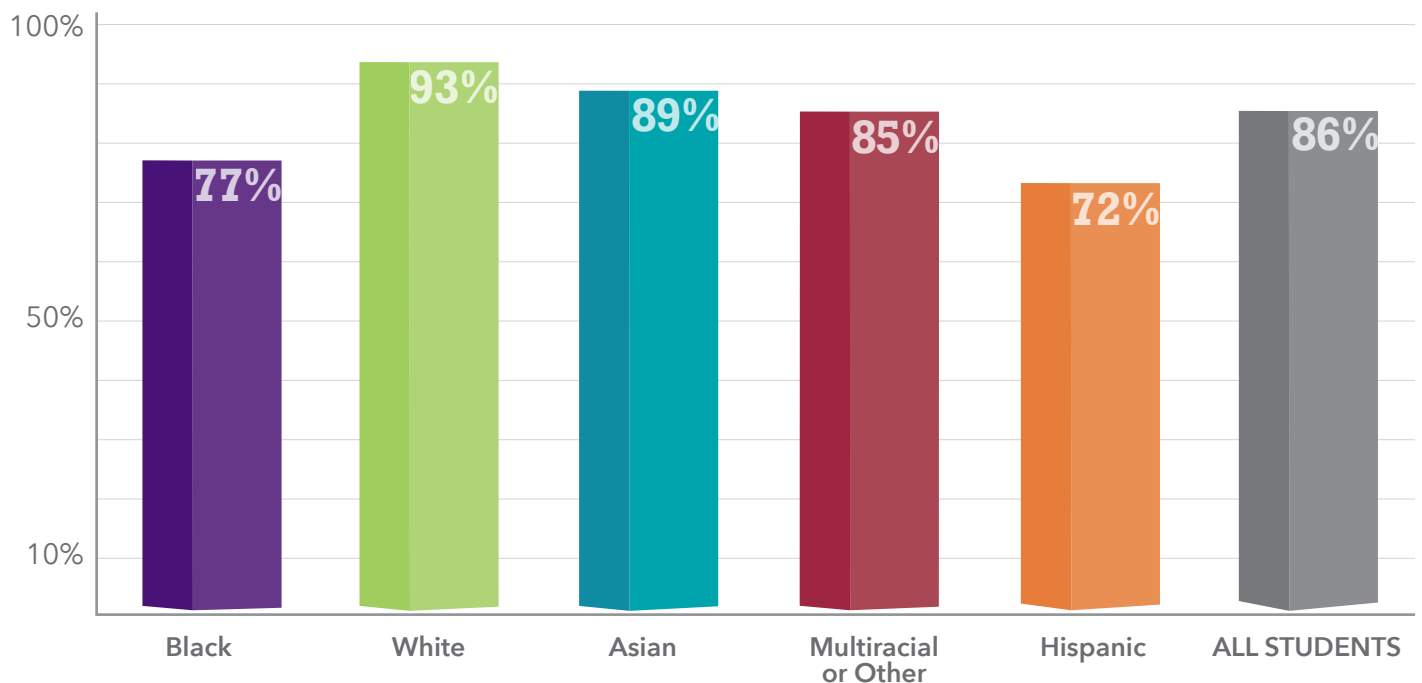
Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

## Hamilton County

### FY16 4-Year Graduation Rate by Race & Ethnicity

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	1,919	579	2,498	76.8%
White	3,808	310	4,118	92.5%
Asian	188	23	211	89.1%
Multiracial	233	42	275	84.7%
Hispanic	158	61	219	72.1%
<b>ALL STUDENTS</b>	<b>6,306</b>	<b>1,015</b>	<b>7,321</b>	<b>86.1%</b>



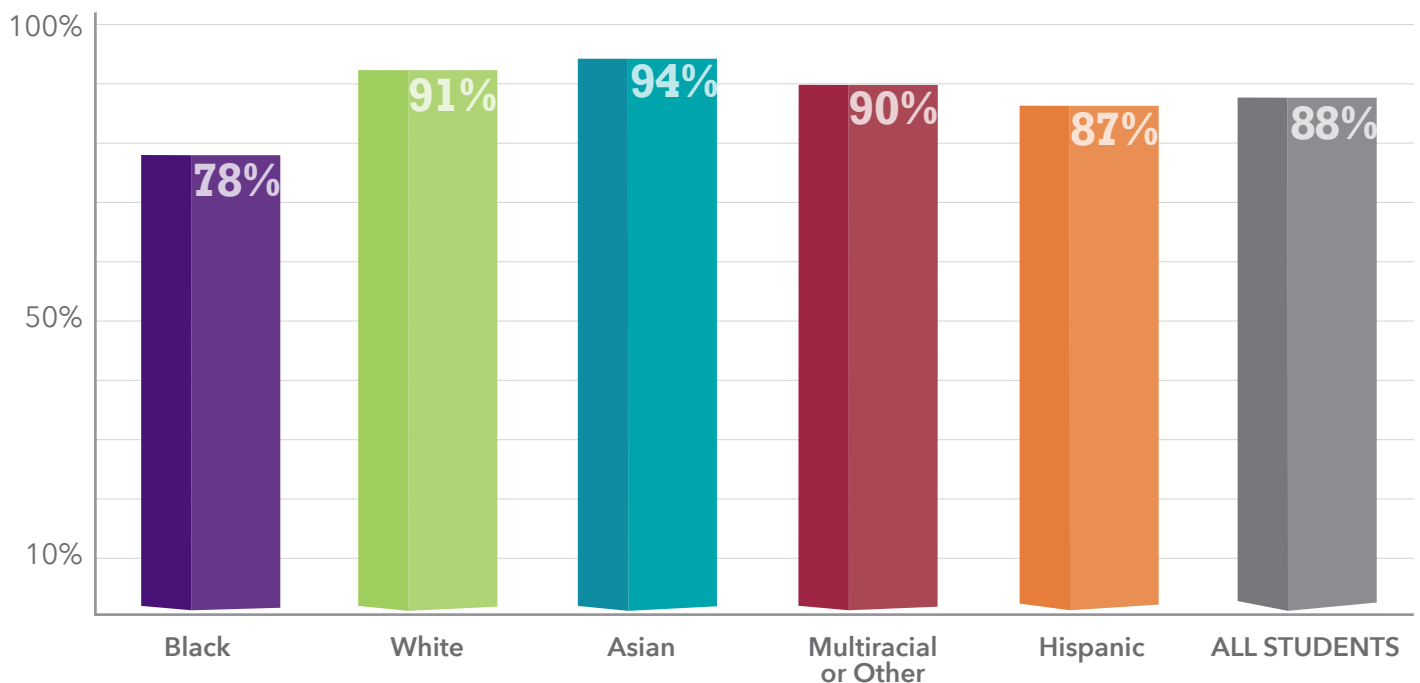
Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

## Montgomery County

### FY16 4-Year Graduation Rate by Race & Ethnicity

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	1,008	282	1,290	78.1%
White	3,033	303	3,336	90.9%
Asian	92	6	98	93.9%
Multiracial	170	19	189	89.9%
Hispanic	131	19	150	87.3%
<b>ALL STUDENTS</b>	<b>4,434</b>	<b>629</b>	<b>5,063</b>	<b>87.6%</b>



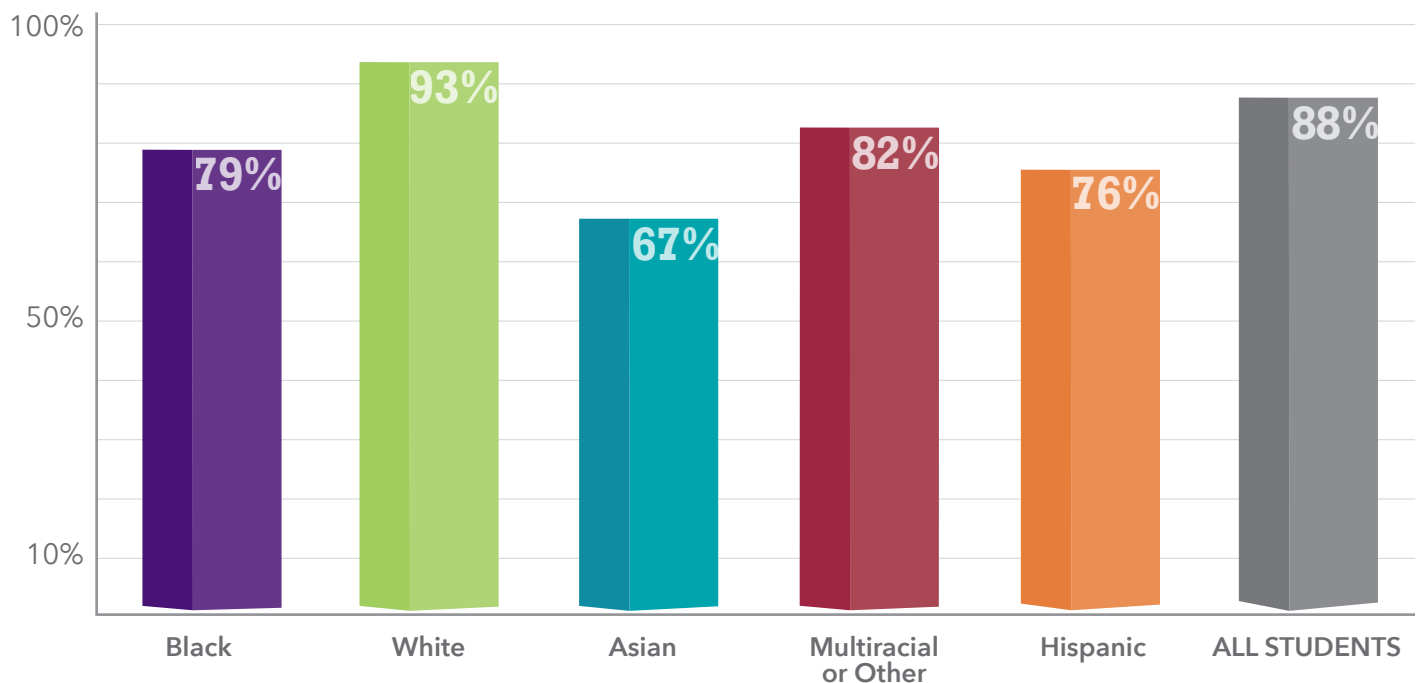
Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

## Summit County

### FY16 4-Year Graduation Rate by Race & Ethnicity

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	845	227	1,072	78.8%
White	3,662	268	3,930	93.2%
Asian	183	91	274	66.8%
Multiracial	169	36	205	82.4%
Hispanic	88	28	116	75.9%
<b>ALL STUDENTS</b>	<b>4,947</b>	<b>650</b>	<b>5,597</b>	<b>88.4%</b>



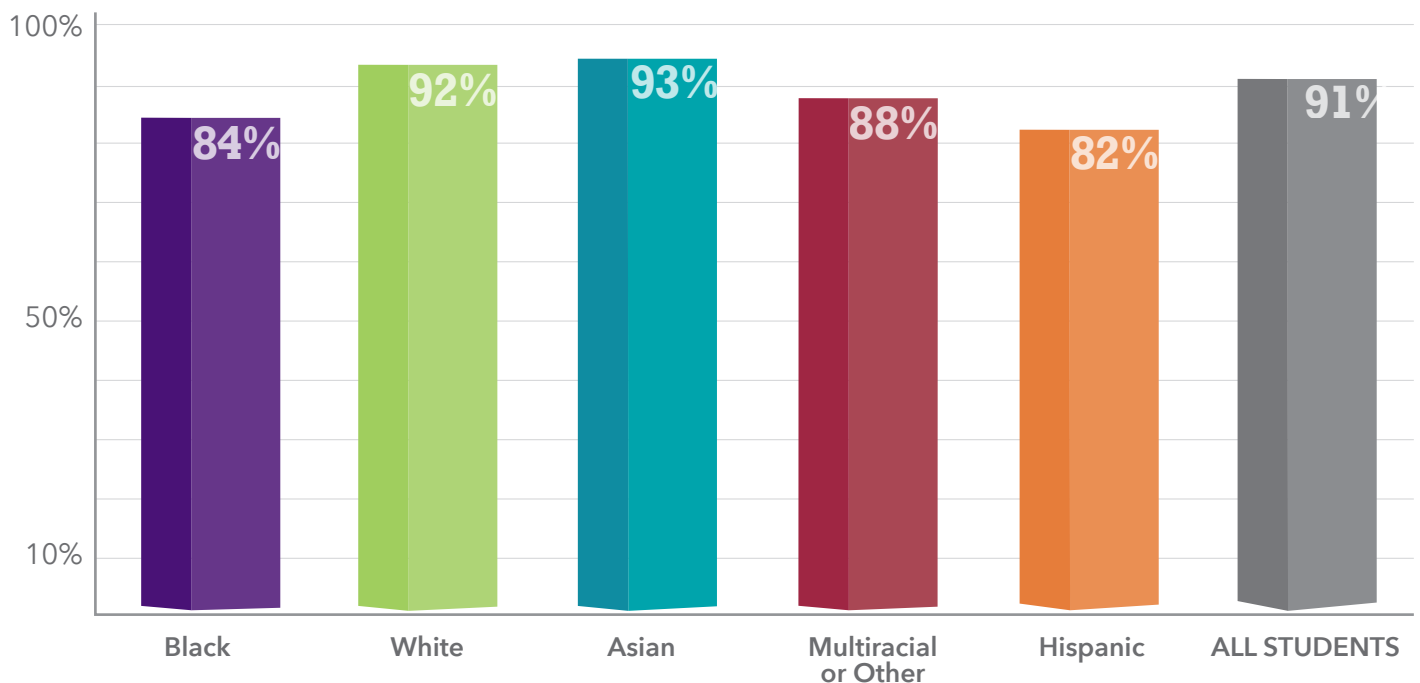
Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

## Appalachian Region

### FY16 4-Year Graduation Rate by Race & Ethnicity

Race & Ethnicity	# of Graduates	# of Non-Graduates	Total Potential Grads	Graduation Rate
Black	758	148	906	83.7%
White	17,753	1,588	19,341	91.8%
Asian	92	7	99	92.9%
Multiracial	511	71	582	87.8%
Hispanic	317	72	389	81.5%
<b>ALL STUDENTS</b>	<b>19,431</b>	<b>1,886</b>	<b>21,317</b>	<b>91.2%</b>



Data Source: Ohio Department of Education, School Report Card FY16  
 The county and regional 4-year graduation analysis below only include traditional schools and does not include community schools because students attending community schools, including online schools, often reach beyond county or region.



# High School Graduation

**The following high school graduation data provides a different perspective on Ohio's graduation rates by comparing economically disadvantaged\* and non-disadvantaged students.**

All data shown in these tables and charts relates to FY16 graduation rates for students attending the 610 "traditional" K-12 public school districts in Ohio. Community Schools (aka "charter schools") are excluded from these figures because it is not possible to source which counties these students reside in, particularly for electronic schools.

**Table 6**

## FY16 4-Year Graduation Rate by ECONOMIC STATUS, ALL OHIO K-12 DISTRICTS

Economic Status	# of Graduates	# of Non-Graduates	Total Potential Graduates	Graduation RATE
NOT Disadvantaged	70,671	3,785	74,456	94.9%
Disadvantaged	36,980	7,810	44,790	82.6%
<b>ALL STUDENTS</b>	<b>107,651</b>	<b>11,595</b>	<b>119,246</b>	<b>90.3%</b>

## FY16 4-Year Graduation Rate by ECONOMIC STATUS, ALL OHIO K-12 DISTRICTS



Data Source: Ohio Department of Education, School Report Card FY16

\*The definition of **economically disadvantaged** is clarified in the Sources & Definitions section at the end of this report.

# High School Graduation

## Cuyahoga County

### FY16 4-Year Graduation Rate by **ECONOMIC STATUS**

Economic Status	# of Graduates	# of Non-Graduates	Total Potential Graduates	Graduation RATE
NOT Disadvantaged	5,597	381	5,978	93.6%
Disadvantaged	4,324	1,286	5,610	77.1%
<b>ALL STUDENTS</b>	<b>9,921</b>	<b>1,667</b>	<b>11,588</b>	<b>85.6%</b>



## Franklin County

### FY16 4-Year Graduation Rate by **ECONOMIC STATUS**

Economic Status	# of Graduates	# of Non-Graduates	Total Potential Graduates	Graduation RATE
NOT Disadvantaged	6,143	285	6,428	95.6%
Disadvantaged	4,161	1,134	5,295	78.6%
<b>ALL STUDENTS</b>	<b>10,304</b>	<b>1,419</b>	<b>11,723</b>	<b>87.9%</b>



Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

## Hamilton County

### FY16 4-Year Graduation Rate by **ECONOMIC STATUS**

Economic Status	# of Graduates	# of Non-Graduates	Total Potential Graduates	Graduation RATE
NOT Disadvantaged	4,014	373	4,387	91.5%
Disadvantaged	2,310	642	2,952	78.3%
<b>ALL STUDENTS</b>	<b>6,324</b>	<b>1,015</b>	<b>7,339</b>	<b>86.2%</b>



## Montgomery County

### FY16 4-Year Graduation Rate by **ECONOMIC STATUS**

Economic Status	# of Graduates	# of Non-Graduates	Total Potential Graduates	Graduation RATE
NOT Disadvantaged	2,629	145	2,774	94.8%
Disadvantaged	1,782	453	2,235	79.7%
<b>ALL STUDENTS</b>	<b>4,411</b>	<b>598</b>	<b>5,009</b>	<b>88.1%</b>



# High School Graduation

## Summit County

### FY16 4-Year Graduation Rate by **ECONOMIC STATUS**

Economic Status	# of Graduates	# of Non-Graduates	Total Potential Graduates	Graduation RATE
NOT Disadvantaged	2,951	114	3,065	96.3%
Disadvantaged	1,960	480	2,440	80.3%
<b>ALL STUDENTS</b>	<b>4,911</b>	<b>594</b>	<b>5,505</b>	<b>89.2%</b>



## Appalachian Region

### FY16 4-Year Graduation Rate by **ECONOMIC STATUS**

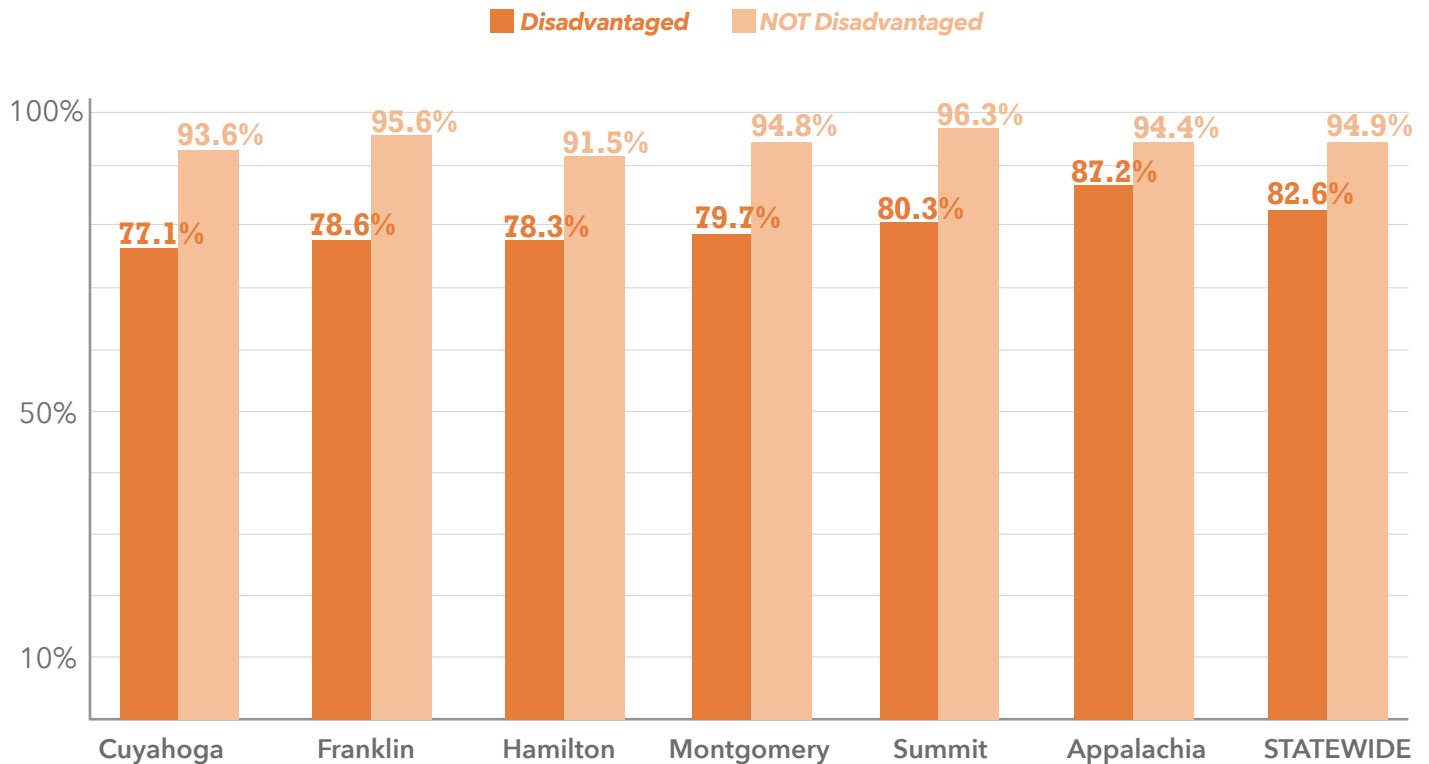
Economic Status	# of Graduates	# of Non-Graduates	Total Potential Graduates	Graduation RATE
NOT Disadvantaged	10,893	649	11,542	94.4%
Disadvantaged	8,200	1,203	9,403	87.2%
<b>ALL STUDENTS</b>	<b>19,093</b>	<b>1,852</b>	<b>20,945</b>	<b>91.2%</b>



Data Source: Ohio Department of Education, School Report Card FY16

# High School Graduation

## FY16 4-Year Graduation Rate of Students by ECONOMIC STATUS IN SELECTED OHIO REGIONS



Data Source: Ohio Department of Education, School Report Card FY16

### Reflection

**HOW DO OHIO'S HIGH SCHOOL GRADUATION RATES IMPACT THE STRENGTH OF THE STATE'S FUTURE WORKFORCE?**

**HOW CAN WE CREATE A CULTURE THAT EMPHASIZES GRADUATING FROM HIGH SCHOOL AND GOING ON TO ATTEND COLLEGE OR EARN A CREDENTIAL?**

# Postsecondary Attainment



**Only 43% of Ohio's workforce (Ohio residents ages 25-64) have some type of credential beyond high school that qualifies them for available jobs, including high-quality certificates, associate degrees and higher.**

Currently, 56% of in-demand jobs in Ohio require a postsecondary certificate or above. By 2020, 65% of jobs in Ohio will require a postsecondary degree, certificate or credential. While Ohio has a set a goal to reach 65% attainment by 2025 to match the skills of the workforce to available meaningful employment, the state is far off from reaching this goal.



## STATEWIDE ANALYSIS: Educational Attainment by Race & Ethnicity

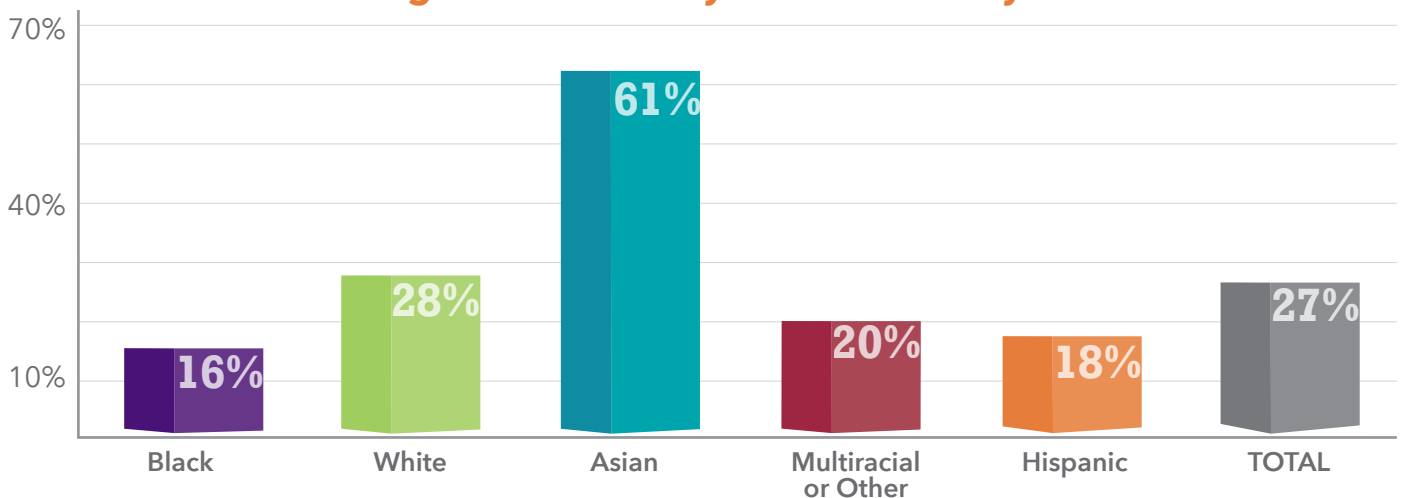
**Table 1**

**Ohio Educational Attainment of Persons Age 25 or Older by Race & Ethnicity**

Race & Ethnicity	# of NON High School Graduates	# of High School Grads or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older	% of NON High School Graduates	% of High School Grads or Some College	% with Bachelors Degree or Higher
Black	137,794	593,162	140,673	871,629	15.8%	68.1%	16.1%
White	603,441	4,118,241	1,799,503	6,521,185	9.3%	63.2%	27.6%
Asian	19,055	39,774	91,110	149,939	12.7%	26.5%	60.8%
Multiracial/Other	32,740	106,343	34,655	173,738	18.8%	61.2%	19.9%
Hispanic	53,206	113,479	36,210	202,895	26.2%	55.9%	17.8%
<b>TOTAL</b>	<b>846,236</b>	<b>4,970,999</b>	<b>2,102,151</b>	<b>7,919,386</b>	<b>10.7%</b>	<b>62.8%</b>	<b>26.5%</b>

**Chart 1**

**Ohio Percentage with a Bachelors Degree or Higher Age 25 or Older by Race & Ethnicity**



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.



# Postsecondary Attainment

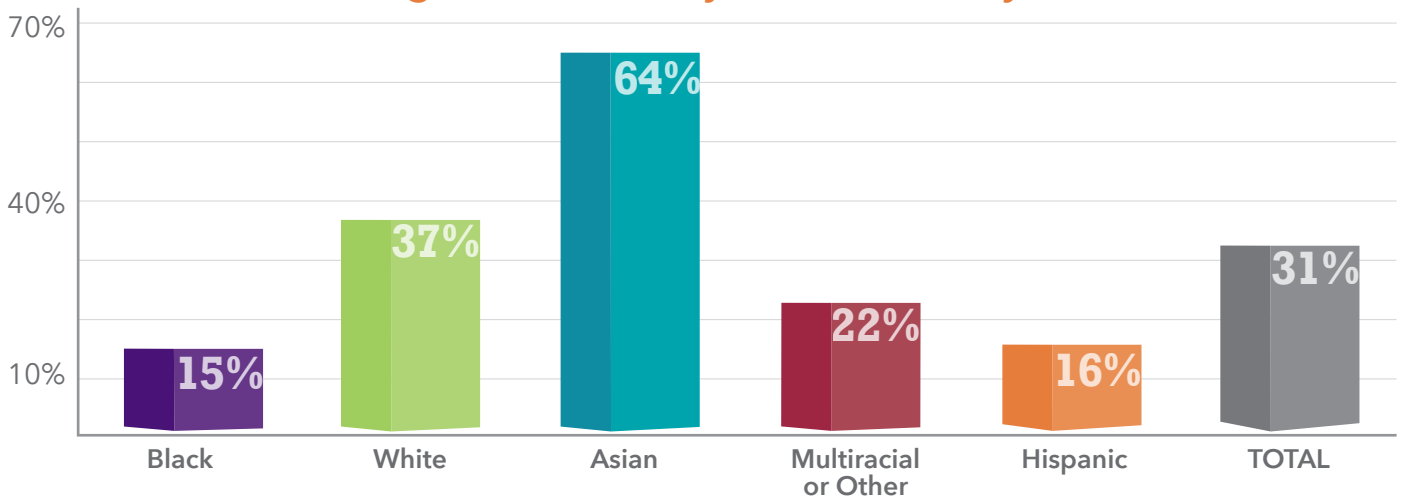
## REGIONAL ANALYSIS: Educational Attainment by Race & Ethnicity



### Educational Attainment of Persons Age 25 or Older by Race & Ethnicity

Race & Ethnicity	# of NON High School Graduates	# of High School Grads or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older	% of NON High School Graduates	% of High School Grads or Some College	% with Bachelors Degree or Higher
Black	40,657	160,603	34,147	235,407	17.3%	68.2%	14.5%
White	45,140	309,452	209,661	564,253	8.0%	54.8%	37.2%
Asian	2,964	6,013	16,064	25,041	11.8%	24.0%	64.2%
Multiracial/Other	5,007	13,789	5,257	24,053	20.8%	57.3%	21.9%
Hispanic	10,191	20,805	5,968	36,964	27.6%	56.3%	16.1%
<b>TOTAL</b>	<b>103,959</b>	<b>510,662</b>	<b>271,097</b>	<b>885,718</b>	<b>11.7%</b>	<b>57.7%</b>	<b>30.6%</b>

### Percentage with a Bachelors Degree or Higher Age 25 or Older by Race & Ethnicity



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

## REGIONAL ANALYSIS:

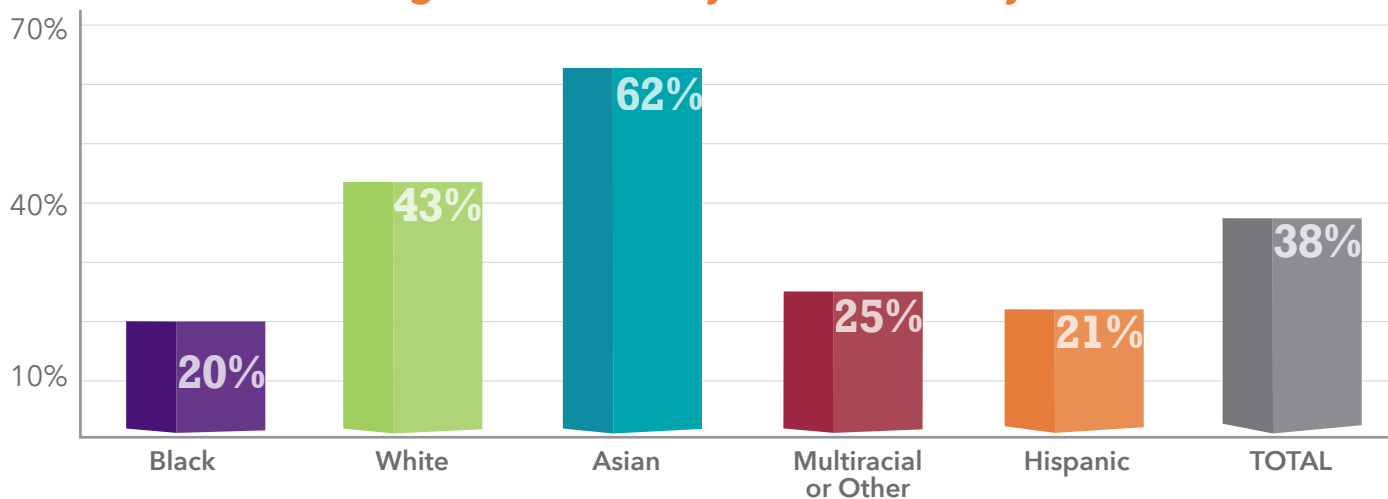
### Educational Attainment by Race & Ethnicity



### Educational Attainment of Persons Age 25 or Older by Race & Ethnicity

Race & Ethnicity	# of NON High School Graduates	# of High School Grads or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older	% of NON High School Graduates	% of High School Grads or Some College	% with Bachelors Degree or Higher
Black	22,433	104,630	31,418	158,481	14.2%	66.0%	19.8%
White	40,064	283,490	245,211	568,765	7.0%	49.8%	43.1%
Asian	4,851	9,249	23,416	37,516	12.9%	24.7%	62.4%
Multiracial/Other	5,185	15,701	6,789	27,675	18.7%	56.7%	24.5%
Hispanic	9,483	15,060	6,478	31,021	30.6%	48.5%	20.9%
<b>TOTAL</b>	<b>82,016</b>	<b>428,130</b>	<b>313,312</b>	<b>823,458</b>	<b>10.0%</b>	<b>52.0%</b>	<b>38.0%</b>

### Percentage with a Bachelors Degree or Higher Age 25 or Older by Race & Ethnicity



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

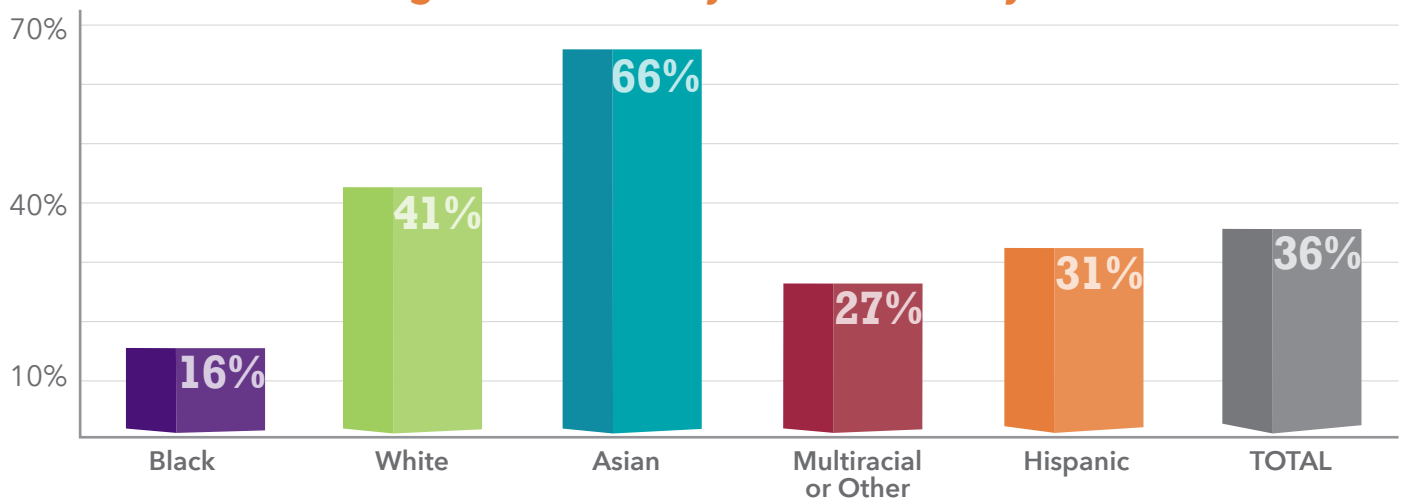
## REGIONAL ANALYSIS: Educational Attainment by Race & Ethnicity



### Educational Attainment of Persons Age 25 or Older by Race & Ethnicity

Race & Ethnicity	# of NON High School Graduates	# of High School Grads or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older	% of NON High School Graduates	% of High School Grads or Some College	% with Bachelors Degree or Higher
Black	20,035	86,385	20,145	126,565	15.8%	68.3%	15.9%
White	27,364	196,099	157,380	380,843	7.2%	51.5%	41.3%
Asian	1,730	2,615	8,566	12,911	13.4%	20.3%	66.3%
Multiracial/Other	2,243	6,162	3,149	11,554	19.4%	53.3%	27.3%
Hispanic	3,362	4,708	3,624	11,694	28.7%	40.3%	31.0%
<b>TOTAL</b>	<b>54,734</b>	<b>295,969</b>	<b>192,864</b>	<b>543,567</b>	<b>10.1%</b>	<b>54.4%</b>	<b>35.5%</b>

### Percentage with a Bachelors Degree or Higher Age 25 or Older by Race & Ethnicity



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

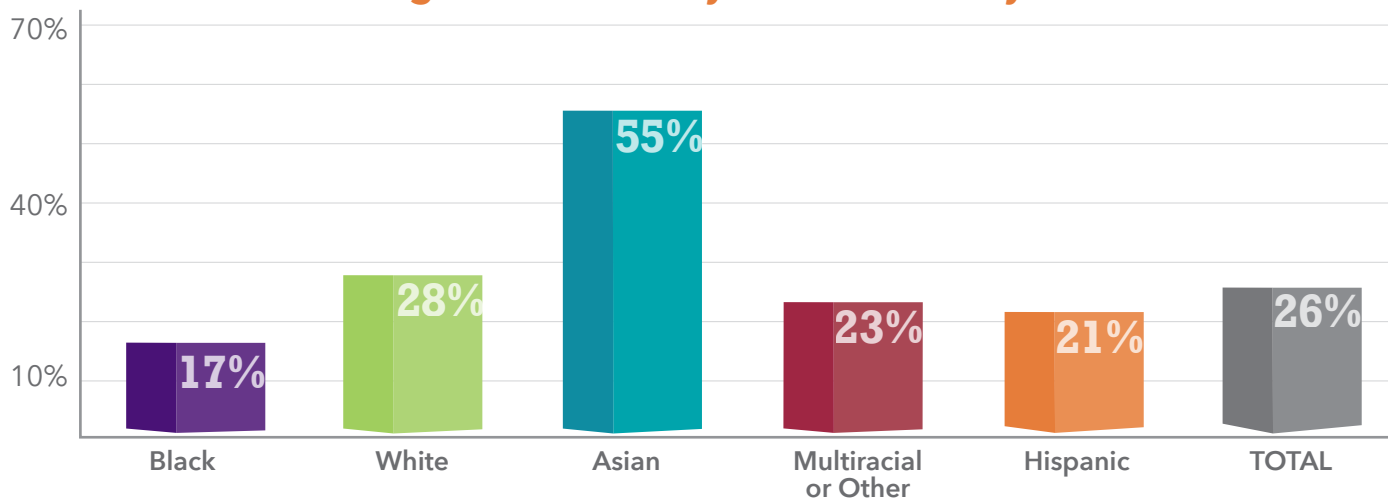
## REGIONAL ANALYSIS: Educational Attainment by Race & Ethnicity



### Educational Attainment of Persons Age 25 or Older by Race & Ethnicity

Race & Ethnicity	# of NON High School Graduates	# of High School Grads or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older	% of NON High School Graduates	% of High School Grads or Some College	% with Bachelors Degree or Higher
Black	9,760	47,974	12,080	69,814	14.0%	68.7%	17.3%
White	24,646	172,539	75,859	273,044	9.0%	63.2%	27.8%
Asian	1,072	2,219	3,964	7,255	14.8%	30.6%	54.6%
Multiracial/Other	948	4,855	1,769	7,572	12.5%	64.1%	23.4%
Hispanic	1,634	3,975	1,454	7,063	23.1%	56.3%	20.6%
<b>TOTAL</b>	<b>38,060</b>	<b>231,562</b>	<b>95,126</b>	<b>364,748</b>	<b>10.4%</b>	<b>63.5%</b>	<b>26.1%</b>

### Percentage with a Bachelors Degree or Higher Age 25 or Older by Race & Ethnicity



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

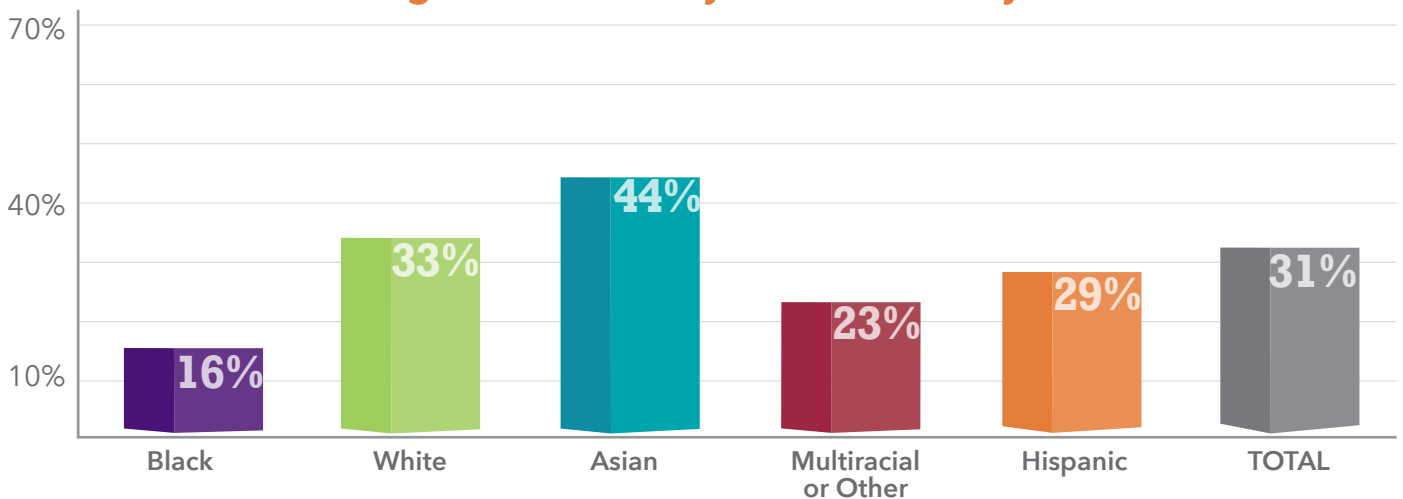
## REGIONAL ANALYSIS: Educational Attainment by Race & Ethnicity



### Educational Attainment of Persons Age 25 or Older by Race & Ethnicity

Race & Ethnicity	# of NON High School Graduates	# of High School Grads or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older	% of NON High School Graduates	% of High School Grads or Some College	% with Bachelors Degree or Higher
Black	6,604	33,174	7,802	47,580	13.9%	69.7%	16.4%
White	22,890	184,013	100,416	307,319	7.4%	59.9%	32.7%
Asian	2,670	2,783	4,202	9,655	27.7%	28.8%	43.5%
Multiracial/Other	893	4,164	1,549	6,606	13.5%	63.0%	23.4%
Hispanic	1,058	2,640	1,543	5,241	20.2%	50.4%	29.4%
<b>TOTAL</b>	<b>34,115</b>	<b>226,774</b>	<b>115,512</b>	<b>376,401</b>	<b>9.1%</b>	<b>60.2%</b>	<b>30.7%</b>

### Percentage with a Bachelors Degree or Higher Age 25 or Older by Race & Ethnicity



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

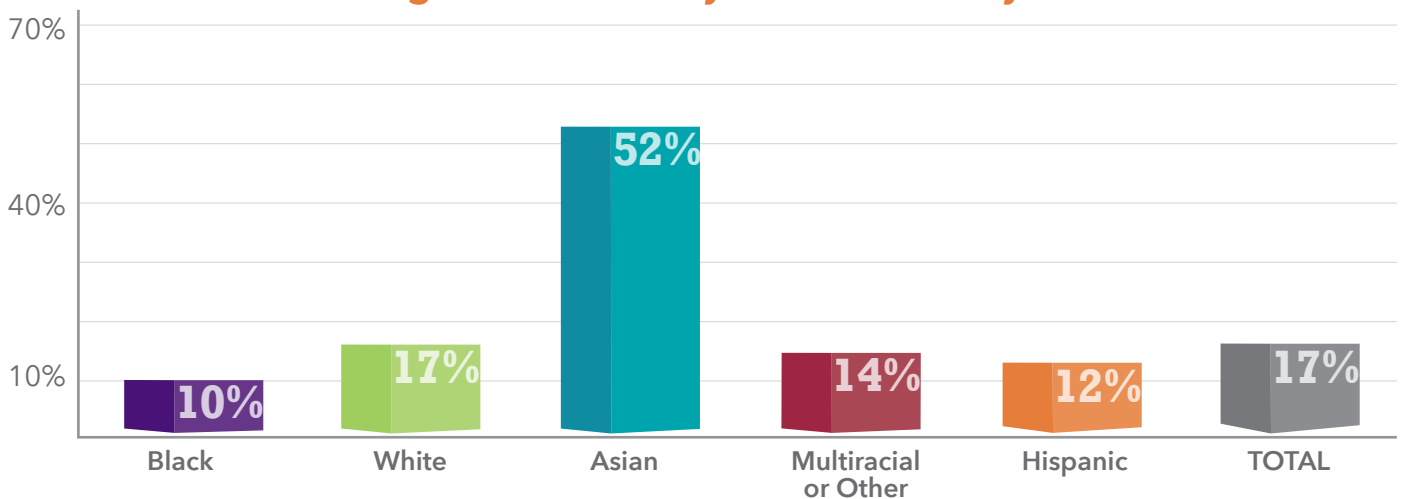
## REGIONAL ANALYSIS: Educational Attainment by Race & Ethnicity



### Educational Attainment of Persons Age 25 or Older by Race & Ethnicity

Race & Ethnicity	# of NON High School Graduates	# of High School Grads or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older	% of NON High School Graduates	% of High School Grads or Some College	% with Bachelors Degree or Higher
Black	10,108	39,865	5,437	55,410	18.2%	71.9%	9.8%
White	166,158	901,362	223,826	1,291,346	12.9%	69.8%	17.3%
Asian	951	2,702	3,989	7,642	12.4%	35.4%	52.2%
Multiracial/Other	4,664	15,022	3,218	22,904	20.4%	65.6%	14.0%
Hispanic	5,386	11,542	2,354	19,282	27.9%	59.9%	12.2%
<b>TOTAL</b>	<b>187,267</b>	<b>970,493</b>	<b>238,824</b>	<b>1,396,584</b>	<b>13.4%</b>	<b>69.5%</b>	<b>17.1%</b>

### Percentage with a Bachelors Degree or Higher Age 25 or Older by Race & Ethnicity



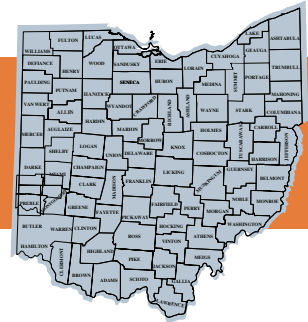
Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.



# Postsecondary Attainment

Educational attainment by income is only available for persons above and below 100% of the federal poverty level (FPL). The graphs in this section show the percentage of each group that are at the 4 different levels of educational attainment reported by the American Community Survey data.

*For example, Table 2b and Chart 2 show that 24.6% of persons below FPL are not college graduates while only 8.3% of those above FPL are not college graduates.*



## STATEWIDE ANALYSIS: Educational Attainment by Income Level

### Ohio Educational Attainment of Persons Age 25 or Older by Income

Table 2a

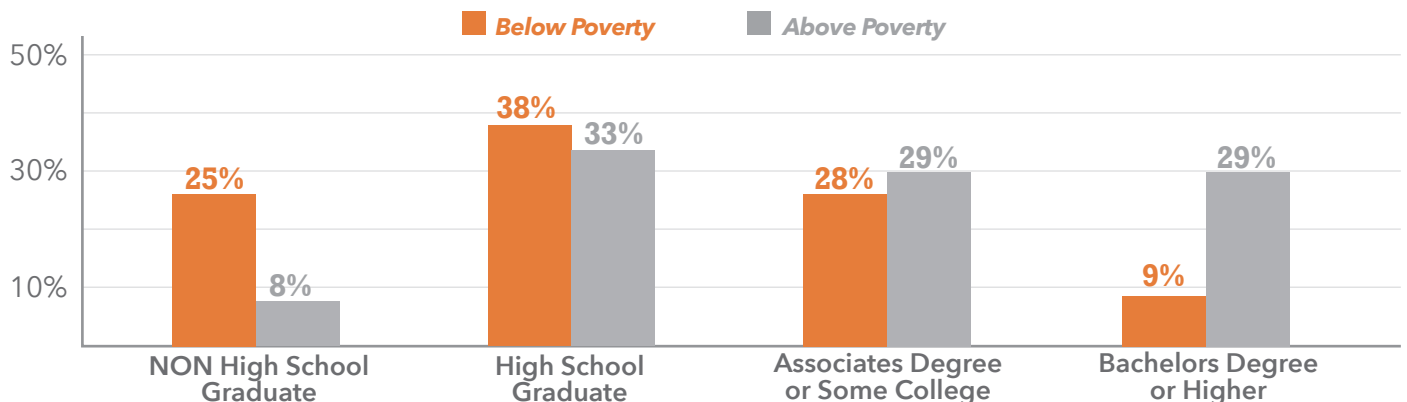
Income	# of NON High School Graduates	# of High School Graduates	# with Associates Degree or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older
Below Poverty	222,684	348,569	253,582	82,145	906,980
Above Poverty	561,088	2,243,234	1,988,669	1,999,243	6,792,234

Table 2b

Income	% of NON High School Graduates	% of High School Graduates	% with Associates Degree or Some College	% with Bachelors Degree or Higher
Below Poverty	24.6%	38.4%	28.0%	9.1%
Above Poverty	8.3%	33.0%	29.3%	29.4%

Chart 2

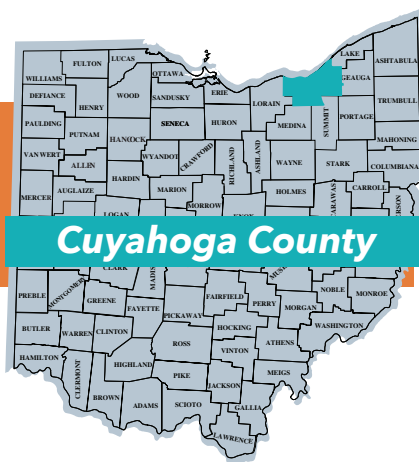
### Ohio Percentage Educational Attainment of Persons Age 25 or Older by Income



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

## REGIONAL ANALYSIS: Educational Attainment by Income Level

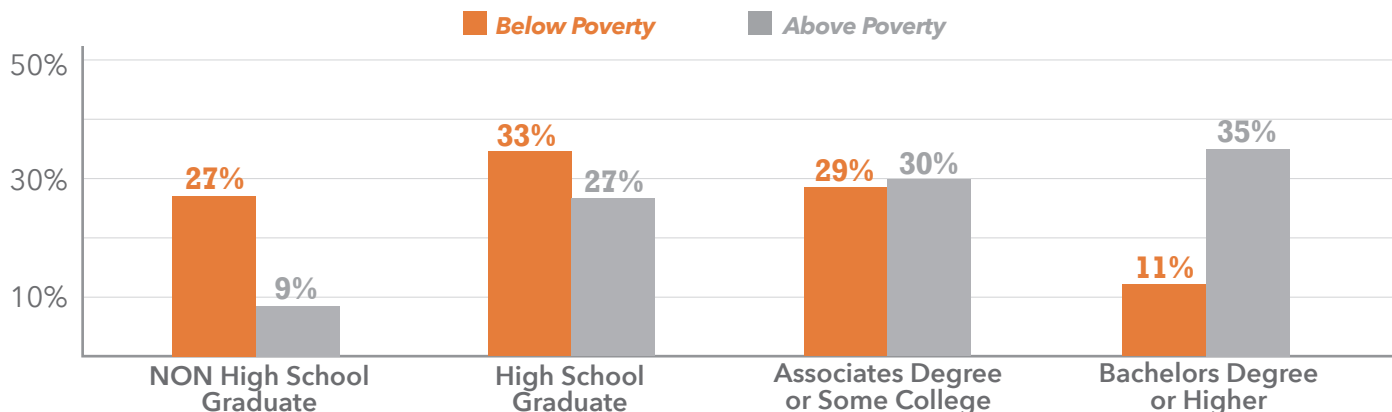


### Educational Attainment of Persons Age 25 or Older by Income

Income	# of NON High School Graduates	# of High School Graduates	# with Associates Degree or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older
Below Poverty	34,008	42,081	36,938	14,024	127,051
Above Poverty	62,129	199,617	215,751	253,913	731,410

Income	% of NON High School Graduates	% of High School Graduates	% with Associates Degree or Some College	% with Bachelors Degree or Higher
Below Poverty	26.8%	33.1%	29.1%	11.0%
Above Poverty	8.5%	27.3%	29.5%	34.7%

### Percentage Educational Attainment of Persons Age 25 or Older by Income



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

## REGIONAL ANALYSIS: Educational Attainment by Income Level

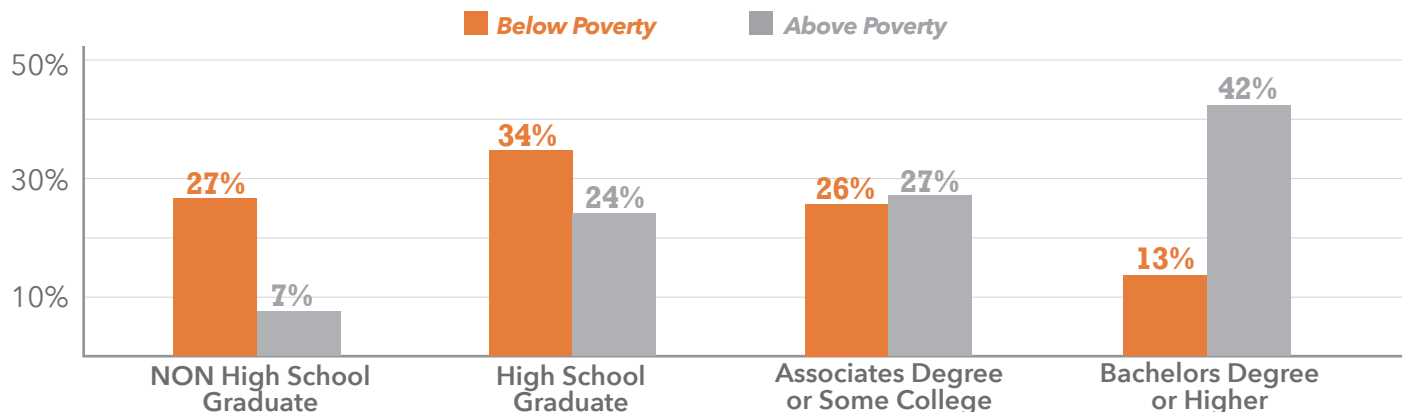


### Educational Attainment of Persons Age 25 or Older by Income

Income	# of NON High School Graduates	# of High School Graduates	# with Associates Degree or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older
Below Poverty	26,300	33,119	25,703	13,069	98,191
Above Poverty	50,095	167,081	192,469	297,537	707,182

Income	% of NON High School Graduates	% of High School Graduates	% with Associates Degree or Some College	% with Bachelors Degree or Higher
Below Poverty	26.8%	33.7%	26.2%	13.3%
Above Poverty	7.1%	23.6%	27.2%	42.1%

### Percentage Educational Attainment of Persons Age 25 or Older by Income



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

## REGIONAL ANALYSIS: Educational Attainment by Income Level

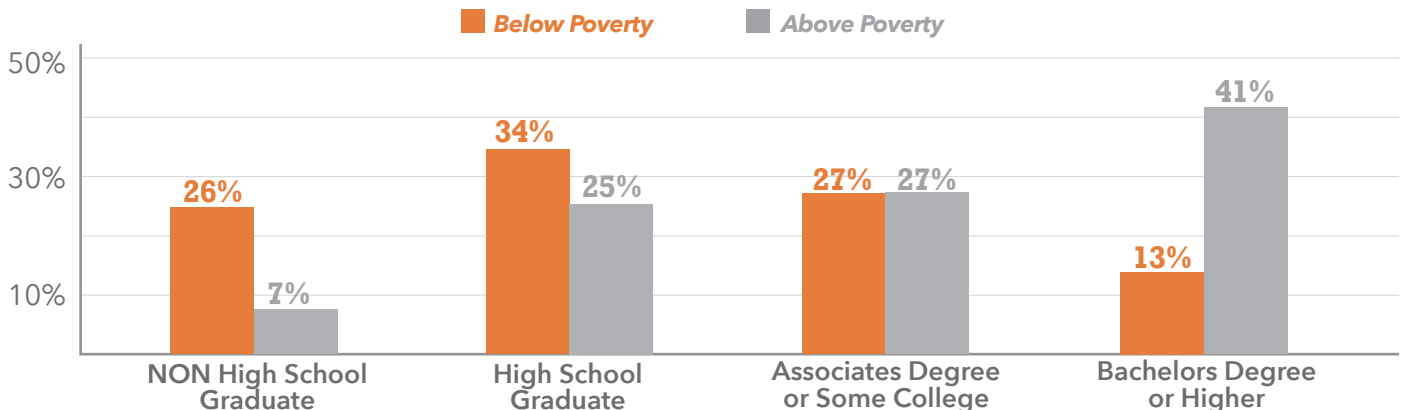


### Educational Attainment of Persons Age 25 or Older by Income

Income	# of NON High School Graduates	# of High School Graduates	# with Associates Degree or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older
Below Poverty	43,884	56,882	45,557	22,141	168,464
Above Poverty	84,032	286,465	319,463	479,397	1,169,357

Income	% of NON High School Graduates	% of High School Graduates	% with Associates Degree or Some College	% with Bachelors Degree or Higher
Below Poverty	26.0%	33.8%	27.0%	13.1%
Above Poverty	7.2%	24.5%	27.3%	41.0%

### Percentage Educational Attainment of Persons Age 25 or Older by Income



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

## REGIONAL ANALYSIS: Educational Attainment by Income Level

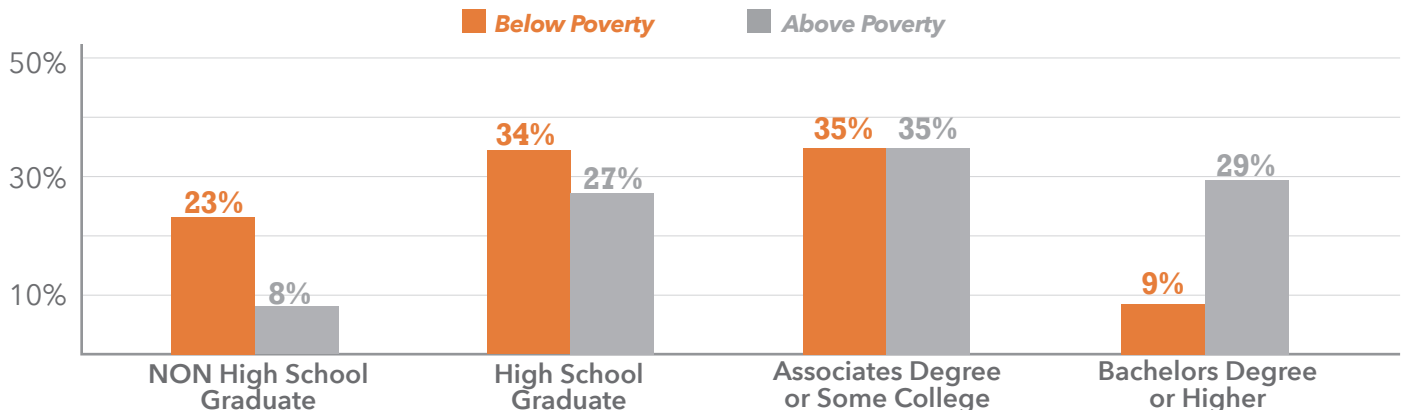


### Educational Attainment of Persons Age 25 or Older by Income

Income	# of NON High School Graduates	# of High School Graduates	# with Associates Degree or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older
Below Poverty	11,302	16,844	17,375	4,308	49,829
Above Poverty	24,655	83,763	108,619	89,704	306,741

Income	% of NON High School Graduates	% of High School Graduates	% with Associates Degree or Some College	% with Bachelors Degree or Higher
Below Poverty	22.7%	33.8%	34.9%	8.6%
Above Poverty	8.0%	27.3%	35.4%	29.2%

### Percentage Educational Attainment of Persons Age 25 or Older by Income



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.

# Postsecondary Attainment

## REGIONAL ANALYSIS: Educational Attainment by Income Level



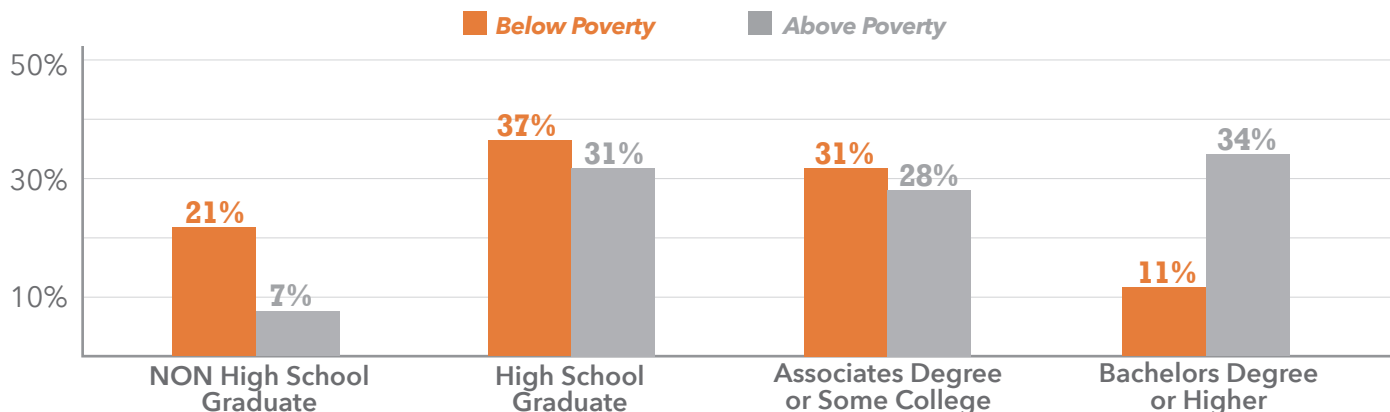
**Summit County**

### Educational Attainment of Persons Age 25 or Older by Income

Income	# of NON High School Graduates	# of High School Graduates	# with Associates Degree or Some College	# with Bachelors Degree or Higher	TOTAL Persons Age 25 or Older
Below Poverty	8,742	15,317	12,548	4,337	40,944
Above Poverty	23,757	103,320	92,130	110,325	329,532

Income	% of NON High School Graduates	% of High School Graduates	% with Associates Degree or Some College	% with Bachelors Degree or Higher
Below Poverty	21.4%	37.4%	30.6%	10.6%
Above Poverty	7.2%	31.4%	28.0%	33.5%

### Percentage Educational Attainment of Persons Age 25 or Older by Income



Data source: U.S. Department of the Census American Community Survey (ACS) 2016 5 Year data set, file S1501 for Race & Ethnicity and file B17003 for Income.





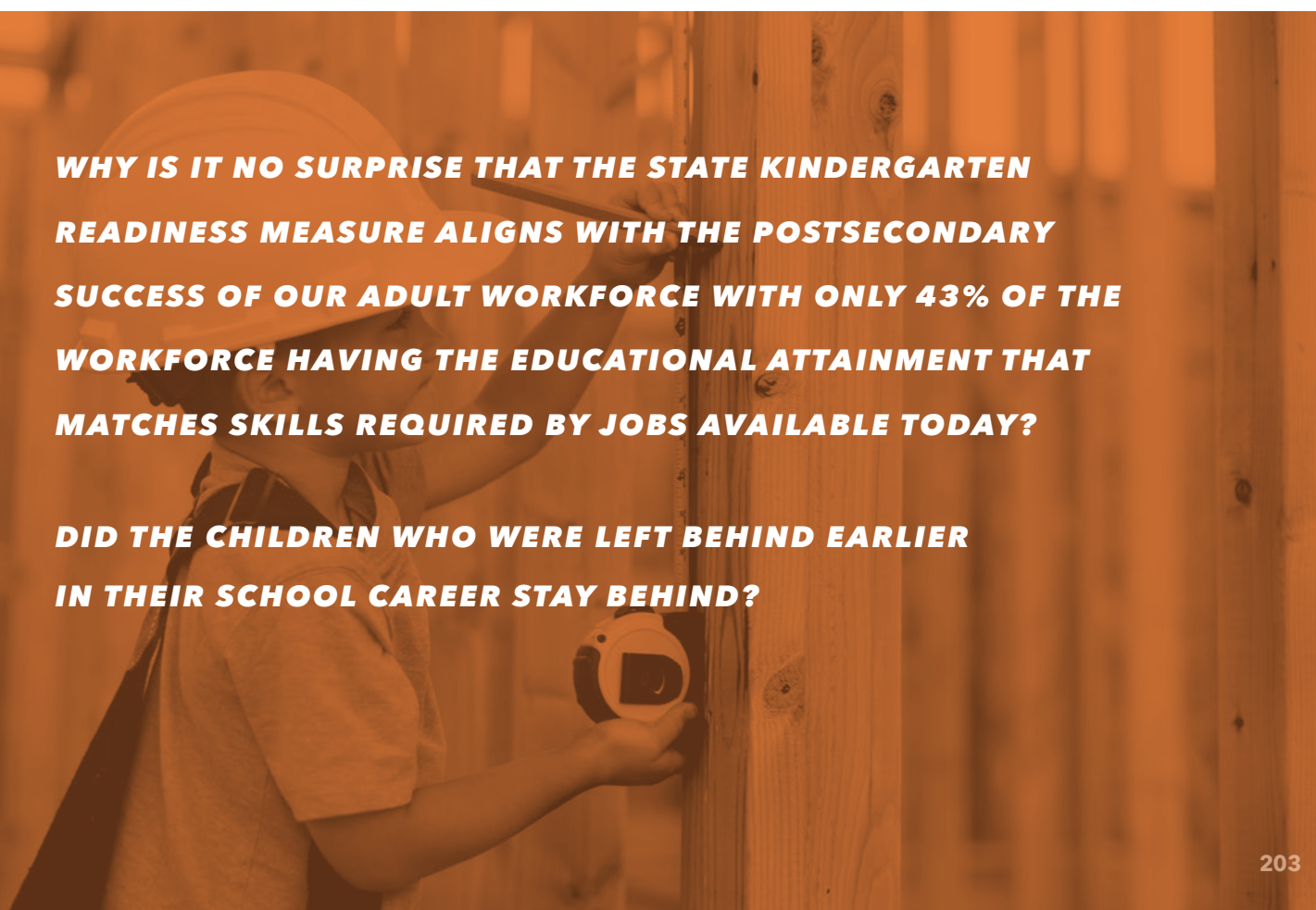


REMEMBER:  
**ONLY 40%**  
OF OHIO KINDERGARTNERS  
ENTER THE CLASSROOM  
**READY TO LEARN.**

**Reflection**

**WHY IS IT NO SURPRISE THAT THE STATE KINDERGARTEN READINESS MEASURE ALIGNS WITH THE POSTSECONDARY SUCCESS OF OUR ADULT WORKFORCE WITH ONLY 43% OF THE WORKFORCE HAVING THE EDUCATIONAL ATTAINMENT THAT MATCHES SKILLS REQUIRED BY JOBS AVAILABLE TODAY?**

**DID THE CHILDREN WHO WERE LEFT BEHIND EARLIER IN THEIR SCHOOL CAREER STAY BEHIND?**

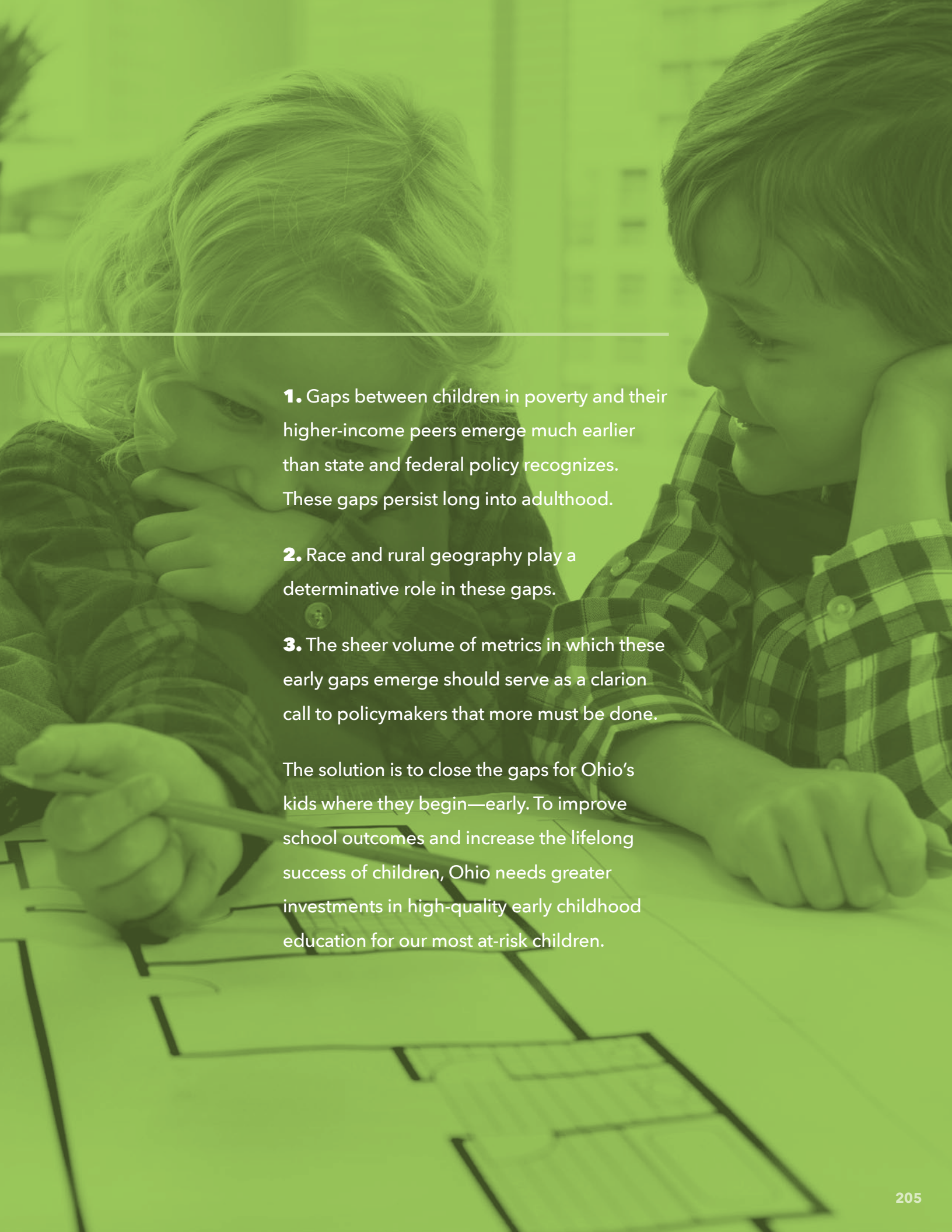


# Drafting a New Blueprint *for* Success

A CALL TO ACTION







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**1.** Gaps between children in poverty and their higher-income peers emerge much earlier than state and federal policy recognizes. These gaps persist long into adulthood.

**2.** Race and rural geography play a determinative role in these gaps.

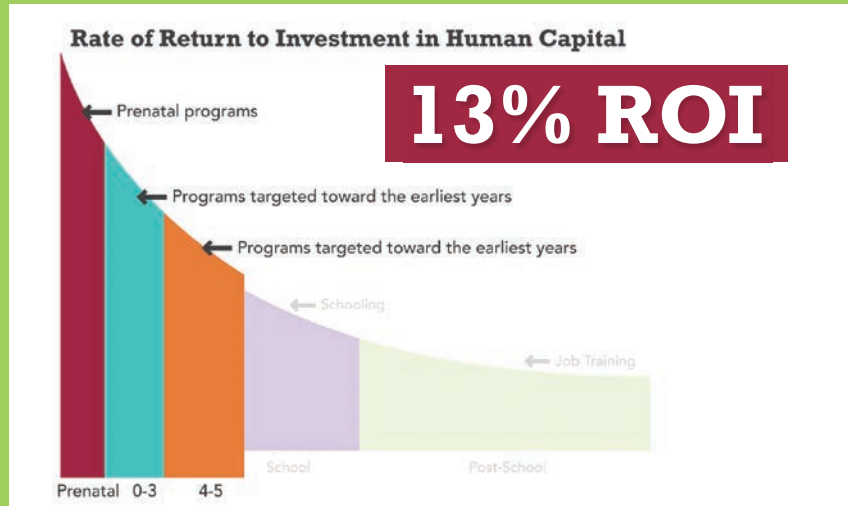
**3.** The sheer volume of metrics in which these early gaps emerge should serve as a clarion call to policymakers that more must be done.

The solution is to close the gaps for Ohio's kids where they begin—early. To improve school outcomes and increase the lifelong success of children, Ohio needs greater investments in high-quality early childhood education for our most at-risk children.

# A Call to Action

*The return on public investment in high-quality, early childhood programs is upwards of 13%.*

*Providing high quality early childhood education for Ohio's most at-risk children, during the most critical period of their development, yields the greatest return on public investment.*



*Data source: Dr. James Heckman, Nobel Laureate in Economics*

*Experts conclude that when investments are made early, children are:*



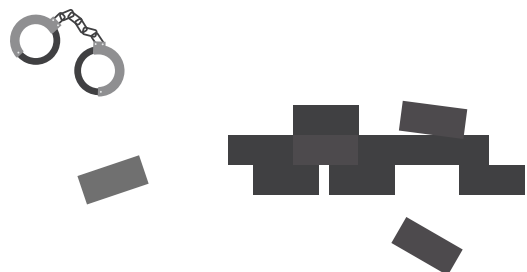
## More likely to...

- Be kindergarten ready.
- Graduate high school.
- Have higher earnings and better health.



## Less likely to...

- Be held back a grade.
- Be reliant on public assistance.
- Engage in criminal behavior.



# A Call to Action

## EARLY

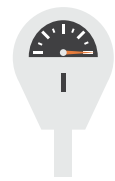
CHILDHOOD EDUCATION IS A POWERFUL

## PREVENTION

POLICY FOR OHIO'S MOST AT-RISK KIDS.

OHIO CAN INVEST NOW  
OR WE WILL PAY SIGNIFICANTLY LATER.

### Just Like...



We can pay a few cents for a parking meter...



Or, pay for an expensive ticket later.



We can buy a low-cost smoke detector...



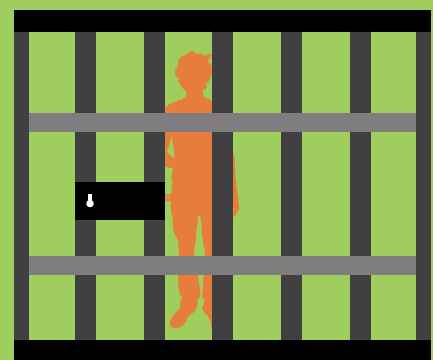
Or, pay to rebuild a home after a tragic house fire.

SIMILARLY:

*We can invest in quality early childhood education...*



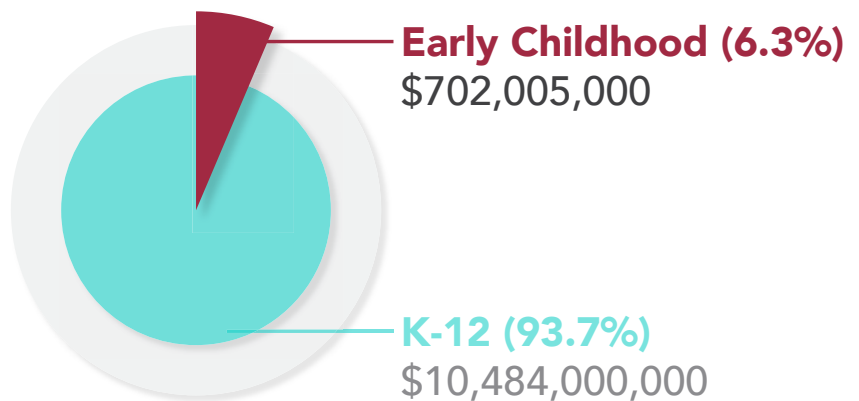
*Or, pay later in the costly juvenile justice & adult corrections systems.*



# A Call to Action

**ONLY 6.3%**  
OF STATE INVESTMENTS IN EDUCATION  
ARE SPENT ON CHILDREN FROM BIRTH TO AGE 5.

*Current investments in the education of Ohio's children DO NOT REFLECT WHAT WE KNOW about brain science and the economics of human development.*



**Conclusion**

TO IMPROVE SCHOOL OUTCOMES AND INCREASE THE LIFELONG SUCCESS OF CHILDREN, OHIO NEEDS GREATER INVESTMENTS IN HIGH-QUALITY EARLY CHILDHOOD EDUCATION FOR OUR MOST AT-RISK CHILDREN.

**IT IS THE PROVEN INVESTMENT  
FOR KIDS, COMMUNITIES & TAXPAYERS.**

**It's time to draft a new blueprint for success.**

**JOIN US.**



# Sources & Definitions

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## KEY DEFINITION

### Economically Disadvantaged:

The portion of a school district's student population that meets any of the following conditions:

1. Students who are known to be eligible to receive free or reduced-price lunches; a program through the United States Department of Agriculture (U.S.D.A) National School Lunch Program. The Federal eligibility criteria for free and reduced price lunch is 185% FPL.
2. Students who have not submitted an application for free or reduced-price lunch or who have not been directly certified as eligible but reside in a household in which a member is known to be eligible for free or reduced-price lunch.
3. Students who are known to be recipients of or whose guardians are known to be recipients of public assistance.
4. Students whose parents or guardians have completed a Title I student income form and meet the income guidelines specified. Also, some districts have opted for the federal Community Eligibility Program (CEP) that enables eligible school districts to identify all or nearly all of their students as disadvantaged in order to remove the stigma associated with identifying a need for school lunch and breakfast.



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# Contributors

## Shannon Jones

### *Executive Director*

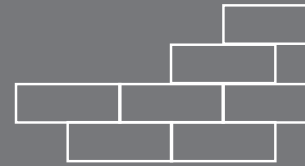
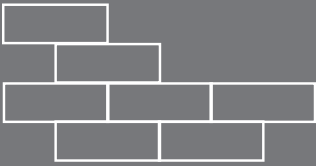
As Executive Director, Shannon leads Groundwork Ohio's statewide effort to advance quality early care and education so every Ohio child has the best chance for lifelong success. Prior to joining Groundwork, Shannon served in the Ohio General Assembly for a decade as a state representative and a state senator, where she was chosen by her colleagues for key leadership posts in both chambers. She is the only woman in her party, and first in Ohio history, ever to achieve the distinction of election to the leadership teams in both chambers. Known as a leader who is willing to tackle the most difficult and complex issues, Shannon used her trusted influence to put kids at the top of the legislative agenda. Her efforts resulted in a renewed focus by the state on policies that support the health and educational opportunities of Ohio's most vulnerable children. Shannon's most significant legislative effort led to a statewide bipartisan mandate to improve Ohio's abysmal infant mortality epidemic. She has continued to provide this same spirit of leadership at Groundwork with her fierce commitment to tell the full story of racial and geographic disparities experienced by Ohio's youngest children through the Ohio Race and Rural Equity Report. Shannon earned a bachelor's degree from the University of Cincinnati, and in 2008 was selected for the Rodel Fellowship by the prestigious Aspen Global Leadership Institute. She also currently serves as a Warren County Commissioner and as a board member for the Health Policy Institute of Ohio and the YWCA of Dayton.

## Lynanne Gutierrez

### *Policy Director & Legal Counsel*

Lynanne Gutierrez supports Groundwork Ohio's statewide effort to advance quality early care and education through the promotion of evidenced-based and data-driven policies. A dedicated child advocate, Lynanne supports Groundwork's strategic policy and advocacy efforts through effective communication, research and data analysis. Committed to equitable outcomes for all Ohio children, Lynanne has been the project lead for the Ohio Early Childhood Race & Rural Equity project, including managing the daily work of the report. Lynanne previously worked as a Policy Associate for Voices for Ohio Children. Prior to her advocacy work at Voices, Lynanne was in private law practice for five years. She specialized in child and family law, serving some of central Ohio's most vulnerable children and families. It was during this time that it became clear to her that in order to best serve children and families, more emphasis must be placed on prevention and systemic change. Before becoming an attorney, Lynanne served as a Senior Legislative Aide in the Ohio Senate. Lynanne has a bachelor's degree from The Ohio State University and a Juris Doctorate from Capital Law School.





## **Howard Fleeter & Associates** *(Dr. Howard Fleeter)*

Dr. Fleeter has been a partner in the research and consulting firm Howard Fleeter & Associates (formerly Levin, Driscoll & Fleeter) since 2002. He has extensive experience working with Ohio policymakers and stakeholders on issues of early childhood, K-12 education, and human services policy and finance, tax reform and analysis, state budgeting, cost-benefit analysis, economic impact analysis, and other related fiscal policy issues. Dr. Fleeter provided expert data analysis for the Ohio Early Childhood Race and Rural Equity Report. Dr. Fleeter received a BA from Northwestern University in 1983 and a Ph.D. in Economics from the University of California, Berkeley in 1990. He has been a faculty member in the School of Public Policy and Management at Ohio State University and the School of Education at the University of Massachusetts Amherst.

## **JP Design** *(Jennifer Peters)*

Jennifer brings design implementation to briefs and marketing materials for Groundwork. Her designs for the Ohio Early Childhood Race & Rural Equity Report helped to translate the massive amount of data into a cohesive and impactful advocacy story through her graphic and organizational expertise for quality communication. With a diverse background of marketing and design experiences, she utilizes inherent passion and energy combined with industry expertise to produce a variety of projects. Jen received a BFA from Miami University in 2003 and has also been an instructor of visual communication courses at Columbus College of Art & Design. JP's mission is to provide visual and verbal solutions that meet the appropriate creative and strategic objectives of each, unique client.

## **Julia Hohner** *Communications & Policy Associate*

Julia Hohner advances Groundwork's mission through strategic communication and policy initiatives. Julia supports the daily work of the Ohio Early Childhood Race and Rural Equity Project through digital, print, and social media communication. Before Groundwork, Julia worked as a Graduate Assistant in John Carroll University's Center for Service and Social Action. Her efforts focused on managing several service learning opportunities for John Carroll students including the Carroll Reads Early Literacy, We the People, and Youth for Justice programs facilitated at schools in Cleveland and East Cleveland, as well as a social emotional learning program facilitated with residents of the Cuyahoga County Juvenile Detention Center. Prior to her time at John Carroll, Julia worked as a Retreat Associate at CrossRoads Ministry, an urban justice-based retreat center in Louisville, Kentucky. Julia has a B.S. from John Carroll University and will be completing a M.A. in Nonprofit Administration in the summer of 2018.



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# States and the Rising Cost of Pharmaceuticals: A Call to Action

*NASHP's Pharmacy Costs Work Group*



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## Background

States have a big stake in the rising costs of pharmaceuticals. They have broad regulatory responsibilities for consumer protection and they are significant purchasers of pharmaceuticals for Medicaid, corrections, public employees, and higher education constituents.

The Work Group found the industry's business model relies on price over volume to generate revenue. This skewed reliance creates:

- Record drug launch prices
- High annual price increases across all of a company's products
- Exorbitant price spikes for products with exclusive market positions – including drugs no longer protected by patents<sup>1</sup>

In 2013, the cost to insure 2.7 million public employees and their families was \$31 billion, including employee contributions. Assuming public employer plans reflect those in the private sector, drug spending makes up 19 percent of health plan costs.<sup>2</sup>

Medicaid now covers 70 million beneficiaries, making it the largest insurer in the country, and it spent \$27 billion in 2014 on outpatient drugs (state and federal share), including rebates and managed care plans. After years of slow growth, spending on drugs increased 24.6 percent

in states that expanded Medicaid and 14.1 percent in non-expansion states. Drug coverage now represents 6 percent<sup>3</sup> of total Medicaid spending, and this does not include the cost of physician-administered drugs.<sup>4</sup>

Additionally, states face significant costs for prescription drugs used to treat inmates in state corrections institutions, accounting for nearly \$8 billion in spending 2011. This figure did not include new, costly drugs such as new Hepatitis C medications.<sup>5</sup>

States have worked hard to contain the cost of prescription medicines by employing strategies, summarized in an earlier National Academy for State Health Policy (NASHP) paper,<sup>6</sup> such as negotiating supplemental rebates for Medicaid programs, implementing preferred drug lists (PDL) and utilizing pharmacy benefits managers and more.<sup>7</sup> Despite these efforts to maintain affordability, drug pricing and the unpredictability of price increases continues to vex state budgets.

Consumers are also feeling the pinch. Seventy percent of all Americans take at least one prescription medicine. In 2012, consumers paid out-of-pocket for about 18 percent of retail prescription drugs purchased.<sup>8</sup> As a result, state leaders are sensitive to public calls for government action to rein in drug prices. Seventy-eight percent of Americans favor limiting what companies can charge for high-cost drugs and more than two-thirds support re-importation of pharmaceutical drugs from Canada.<sup>9</sup>

The confluence of growing public support for action and the pressure of rising prices on state budgets that must be balanced has led state officials to seek new and sustainable strategies to constrain the high cost of pharmaceuticals. States have long been the laboratories of innovative health care reform in this country and were responsible for:

- Creating children's health coverage long before the Congress enacted the Children's Health Insurance Program (CHIP);
- Enacting insurance reforms before the federal Health Insurance Portability and Accounting Act (HIPAA) was enacted;

- Subsidizing health coverage and requiring insurers to meet standards of coverage and cost long before the Affordable Care Act (ACA) was established.

Now, states are tackling the issue of rising drug prices.

## About the Work Group

NASHP convened a Pharmacy Costs Work Group of state leaders from governors' staffs, state legislatures, Medicaid, public employees health insurance programs, offices of attorneys general, state-based insurance exchanges, comptrollers' offices and corrections departments. Their job was to apply their unique perspectives and expertise to find new approaches to limit pharmaceutical costs. The Work Group recognized that rising and unpredictable costs were straining state budgets; but members were careful to balance that expense against the value that drugs provide while acknowledging the importance of the pharmaceutical industry to jobs and the economy. The Work Group examined the many levers state governments have as policymakers, regulators and purchasers of drugs. Participants recognized that without thoughtful policy reform, states could find themselves confronted with poor but necessary choices when balancing future budgets. Members acknowledged, for example, that drug coverage is an optional benefit under Medicaid and unless there is relief, states may be forced to review the sustainability of that benefit.

The Work Group believes the industry, to stay competitive, views high launch prices for new drugs as an opportunity to raise prices of older, therapeutically-competitive products. Competitors with drugs in the same class tend to raise prices by similar amounts as they mirror each other's pricing practices. Instead of competition holding down prices, competitors match each other's price increases.

State payers' efforts to negotiate discounts achieve only modest reductions in this rising tide of prices. Current state approaches do not make pharmaceuticals affordable, nor do they effectively incentivize the industry to change these current practices.

The Work Group understands that the basic pharmaceutical business model is built on three pillars:

- The drive to bring new products to market
- Promoting strong sales of those debut products
- Pricing products aggressively to maximize revenue throughout the product's lifecycle

These three driving forces underlying the pharmaceutical business model operate within an ever-changing business climate fueled by:

- The rising cost of bringing new therapeutic innovations to market;
- The need to accelerate scientific advances, which creates more branded competition than ever before;
- New barriers to successful market entry/market launch, such as prior authorization, litigation intended to block the introduction of biosimilars, high patient cost sharing and limited drug formularies;
- Unprecedented levels of generic competition in most therapeutic classes.

This constellation of new and old market dynamics has led to changes in pharmaceutical research and development (R&D). The industry is migrating to developing products for smaller patient populations, which means price becomes more important to revenue than volume. As a result, the industry now relies on high launch prices and annual price increases across their portfolios to generate revenue and returns for shareholders. States, as large drug purchasers, generally negotiate discounts against those high launch prices and against annual price increases, but they are powerless to change the trajectory of the industry pricing model.

State governments operate with no ability to deficit spend and face uncertain tax revenues year to year. States also tend to purchase health care in silos – each state agency or department may make different purchasing decisions and negotiate different deals. State governments must balance budgets and provide for the health, safety and general welfare of their citizens, but they also share an interest in sustaining the drug industry’s incentive for innovation. This balancing act requires new approaches to drug pricing, spending and utilization.

## Summary of Policy Options

As a result of its research and deliberations, the Work Group identified a range of policy options for states to consider -- from regulatory interventions to more market-oriented approaches -- to tackle rising drug prices. Some of the policy ideas require federal government support to implement, others are relatively novel. Some of the policy approaches require more discussion and development and our goal is to promote that public discussion. The market-oriented approaches are intended to change states’ approaches to purchasing and the industry’s approach to the market to achieve a middle ground where both states and the pharmaceutical industry can succeed.

These policy options include:

- Increase price transparency to create public visibility and accountability;
- Create a public utility model to oversee in-state drug prices;
- Bulk purchase and distribution of high-priced, broadly-indicated drugs that protect public health;
- Utilize state unfair trade and consumer protection laws to address high drug prices
- Seek the ability to re-import drugs from Canada on a state-by-state basis;
- Pursue Medicaid waivers and legislative changes to promote greater purchasing flexibility;
- Enable states to operate as pharmacy benefit managers to broaden their purchasing and negotiating powers;
- Pursue return on investment pricing and forward financing approaches to allow flexible financing based on long-term, avoided costs;
- Ensure state participation in Medicare Part D through Employer Group Waiver Plans;
- Protect consumers against misleading marketing;
- Use shareholder activism through state pension funds to influence pharmaceutical company actions.

The proposals in this paper require more dialogue, debate, development and experimentation. These policy proposals may not be appropriate for all states or agencies, nor for every pharmaceutical product. But states need to act and this paper presents a toolbox of options to consider. It may be appropriate to combine different policy options to maximize their benefits and effectiveness in order to control drug spending.

## Strategy One: Increase Drug Price Transparency

Promoting greater transparency in the current opaque pricing and payment environment may be a helpful first-step to address rising prescription drug costs. While not a complete panacea, these efforts can give states critical information for more effective decision-making, and it can provide the data needed to implement other strategies.

In this spirit, a number of states<sup>10</sup> have proposed prescription drug price transparency laws that include one or more of the following mandated reporting strategies:

- Require manufacturers to provide cost data related to the development and marketing of a particular drug or group of drugs, such as high-priced drugs that cost \$10,000 or more per treatment;
- Require manufacturers to publicly report and justify price increases for in-market drugs; and/or
- Require disclosure of price discounts provided by the manufacturer to healthcare entities in the state.

The strengths and weaknesses of these reporting requirements designed to increase drug price transparency are addressed below.

### Drug Development Cost Reporting

Proponents of mandatory drug development cost reporting argue it would help states determine whether prices are fair, and enable them to negotiate better terms when they are not. While additional leverage may be possible, there are challenges inherent in requiring manufacturers to report R&D costs for a drug's development.<sup>11</sup> R&D budgets within a company are allocated across different therapeutic areas, and only 12 out of every 100 molecules that undergo testing make it to market.<sup>12</sup> Revenues from successful products are used not just to pay the cost of that one successful drug's development, but rather to support ongoing R&D efforts for all company's products. In short, drug pricing is based more on what the market will bear than on actual cost to a manufacturer.

It may be more useful for states to require pricing documentation, such as a manufacturer's analyses of what the market will bear given its current and anticipated product competition, for select high-priced drugs. Manufacturers will no doubt argue that this information is proprietary. However, launch prices are public, and how manufacturers arrive at these prices may be less proprietary than data on drug-specific spending for R&D or marketing.

### Requiring Justification of Price Increases

Requiring justification for price increases could temper their frequency and degree. Vermont recently enacted a law that requires manufacturers of high-priced medications to justify their price increases to achieve this objective. This strategy might involve implementation of a price increase threshold above

which reporting would be required – necessary given the impracticality of reviewing all price increases – which could prompt manufacturers to keep their price increases below the review threshold. Without additional oversight measures, though, gaming would still be possible. To compensate for manufacturers' inability to increase prices throughout the lifecycle of a drug, manufacturers could simply avoid the rate increase review by inflating their drugs' launch prices. To avoid this, states could implement both price increase justification requirements with launch price determination reporting described above.

## Public Disclosure of Price Discounts and Rebates

It is an open question whether public disclosure of price discounts and rebates would benefit states and consumers. Were the pharmaceutical market a zero-sum game, such disclosures could result in closer clustering around a drug's mean price, with some payers paying higher net drug prices than before and some lower. It is possible, though, that greater savings for some need not come at the expense of others. Indeed, were manufacturers able to extract additional revenue from a particular payer, market economics suggest that they would have already done so.

## Confidential Disclosure of Price Discounts and Rebates to States

Regardless of the merits of public disclosure, knowledge about what contributes to surging prices, what profit is extracted by middlemen, and what incentives promote high-cost medication sales would help states develop and prioritize policy solutions to limit drug costs. This transparency could be achieved by imposing confidential reporting requirements on manufacturers, pharmacy benefits managers and 340B programs (a federal program that requires manufacturers to provide drugs to eligible healthcare organizations at reduced prices). States already have similar mechanisms in place for reporting sensitive information to insurance departments. Specifically, the following information could be mandated and used to inform states' cost-saving strategies.

- The net drug prices charged to state payers (e.g., Medicaid managed care plans) and their payers in the state;
- Drug-specific rebates offered to pharmacy benefits managers in the state;
- Drug-specific savings passed on to 340B programs in the state.

## Strategy Two: Create a Public Utility Model to Oversee Drug Prices

States could regulate the pharmaceutical industry as a public utility. Examples of this regulatory approach include widely-implemented rate reviews and approval mechanisms for electricity and gas. Within healthcare, states already review health insurance premiums and can accept or reject proposed annual increases exceeding 10 percent.<sup>13</sup>

Under a public utility model, states could create a drug price review board to review, approve or adjust launch prices for all newly-approved drugs, or drugs with list prices above a certain dollar threshold. The board could also review price increases for brand or generic drugs that exceed a certain threshold (e.g., 10 percent for brand-name drugs and 20 percent for generics). As part of this review, the board could hold open hearings, review data submitted by manufacturers and collect other publicly-available information. It could also direct new research to assess the appropriateness of specific launch prices or price increases. Public utility commissions are typically funded in part by fees placed on the regulated industry.

States could structure their review boards in a number of ways. One model would be to create a standing committee with specified terms and advisors with expertise in different therapeutic categories, both of which would include patients, healthcare providers, pharmacists, clinical researchers and payers' medical officers. Several states already have cost review boards that provide the infrastructure needed to support pharmaceutical price review.

Legally, states have considerable discretion to exercise their power to protect consumers of essential goods and services in markets that do not operate well or rely on a monopoly supplier. Prescription drugs are an essential good; they are as necessary to quality of life -- and life itself -- as water and sanitation. The prescription drug market does not operate well for most consumers, in large part due to federally-granted market exclusivities that enable manufacturers to charge monopolistic prices.<sup>14</sup>

Under a public utility framework, states would be responsible for setting reasonable rates for drug manufacturers. On this issue, states would have substantial flexibility. As the Supreme Court held in *Federal Power Commission v. Natural Gas Pipeline Co. of America*:

*The Constitution does not bind ratemaking bodies to the service of any single formula or combination of formulas. Agencies to whom this legislative power has been delegated are free, within the ambit of their statutory authority, to make the pragmatic adjustments which may be called for by particular circumstances. Once a fair hearing has been given, proper findings made, and other statutory requirements satisfied, the courts cannot intervene in the absence of a clear showing that the limits of due process have been overstepped.*<sup>15</sup>

Of course, manufacturers could always elect to exit markets in which regulatory price setting is used, choosing not to supply drugs subject to price controls. While the possibility of such an outcome may be greater in smaller states with less purchasing power, it is currently threatened in the event that California passes Proposition 61 on November 8, 2016, which would require manufacturers to offer state payers the same prices as the U.S. Department of Veterans Affairs. The likelihood of a manufacturer opting to completely exit a state's marketplace, though, has not been tested.

Public utility price setting may also have implications for state Medicaid programs. If a board were to set the price of a drug less than 76.9 percent of its average manufacturer price, the federal Medicaid best-price provision could be triggered, which would require the drug's manufacturer to offer the same price to state Medicaid programs throughout the country. Similarly, were a manufacturer to refuse to supply a drug to a state or state payers at a board-set price, the state Medicaid program would likely have to continue providing the drug under a federal rebate agreement. Medicaid issues are addressed later in this paper.

## Strategy Three: Bulk-Purchase Drugs That Protect Public Health

Two models exist for this proposal: the federal Vaccines for Children (VFC) program and another, more recent, initiative to make naloxone, a generic drug that reverses the effects of an opioid overdose, more widely available.



**Vaccines for Children (VFC) Model:** The VFC is a program, implemented in the 1990s, designed to improve vaccination of children who are:

- Enrolled in Medicaid
- Uninsured, or
- Under-insured by private plans that do not adequately cover childhood vaccines

Because vaccine costs limited public access to this vital preventive healthcare resource, the program was designed to constrain price increases. The legislation achieved this by limiting the annual price increases of vaccines in existence at the inception of the program, which the program covered.

Under the program, the U.S. Centers for Disease Control and Prevention (CDC) negotiates bulk purchase of vaccines directly from manufacturers. The vaccine products are shipped to states, which distribute them to participating healthcare providers who administer the vaccines and agree not to charge for the products. Central contracting allows drug manufacturers to anticipate production needs and avoid the labor and cost of distributing products to communities with the greatest need because the CDC and states track where the vaccines are most needed.

**Naloxone Initiative:** Opioid addiction is a public health crisis. Numerous states are working to make naloxone readily available to emergency responders and to family and friends of known opioid users so they can effectively respond to overdose situations. Manufacturers have capitalized on this increased demand by raising naloxone prices from 92 cents to more than \$30 a dose over the last decade. A new auto-injector version<sup>16</sup> costs more than \$2,000 a dose.

To blunt the impact of these price increases, some states have authorized bulk purchasing and distribution of naloxone. Under this model, legislation generally authorizes one state agency – often the state Attorney General’s office – to negotiate the bulk purchase price of the drug. The drug is then made available to a variety of state and municipal purchasers, such as schools, jails, police departments and, in some instances, privately-insured groups. The purchase is generally funded from a trust, which in turn is funded by fees levied on the participating groups based on the number of drug units used during a prior period. Purchasers wishing to gain access to the preferential pricing are required to pay those fees into the trust; there is no mandate imposed on private sector participants. Manufacturers, in turn, gain ready access to a large patient population.

These two programs provide models for new approaches to fund and distribute drugs critical to public health.

Today, Hepatitis C is considered a major public health threat - curing the disease and halting its spread is essential. There are new medications available that, in some patients, cure this disease more than 90 percent of the time. However, the cost of the new drugs is staggering, threatening the budgets of state health programs and private insurers alike. For example, the wholesale cost of one of the drugs, is more than \$1,000 per pill and it is usually taken daily for eight and 24 weeks. Similarly, the rapidly-escalating cost of the leading emergency response treatment for people experiencing anaphylaxis has become a pressing public health concern. The price increased 15 times since 2009, from \$124 to \$609. The manufacturer’s recent introduction of an “authorized generic” version of the product has done little to alleviate cost concerns.

States and the federal government could adapt the VFC model for drugs that are critical to public health. States could negotiate favorable prices for high-priority drugs and also ensure their availability for their citizens. This includes Medicaid and CHIP enrollees, state employees and retirees and prison populations. States can also leverage their negotiating position and improve price, supply and accessibility of those same drugs for other groups. Just as the VFC program makes vaccine available and affordable to a large number of children outside of publicly-sponsored programs, a VFC-like program for other critical pharmaceuticals could expand access to other state populations and state-sponsored coverage programs.

It is not clear, however, whether the U.S. Department of Health and Human Services (DHHS) and CDC currently have the legal authority to create this type of program at the federal level for non-vaccine drugs. Congressional action may be needed. In contrast to the VFC program that makes free vaccines available to eligible children, a new, hybrid model could be structured with states and commercial payers covering the costs they currently bear without any federal assistance. In the absence of federal action, states acting individually or together, could create such a program.

The “naloxone initiative” could be adapted to pay for other critical drugs, including drugs used to treat life-threatening chronic conditions such as Hepatitis C or acute allergies. Enabling legislation would have to be amended or enacted to broaden a state’s scope of authority beyond naloxone (in those states that adapted these statutes) to encompass other critically important drugs.

## Strategy Four: Utilize Consumer Protection Laws

The concept of unfair trade practices or commercial conduct is not new and is generally outlawed by state and federal consumer protection laws. The goal is to prohibit unfair trade practices that materially mislead or deceive the average consumer. It is an activity that is variously defined as immoral, unfair, and/or which causes substantial harm to consumers.

### Predatory Pricing

Pricing that affects the behavior of consumers or a patient population targeted by drug manufacturers could fall under the broad definition of unfair trade. Pricing that distorts patient behavior to the detriment of the patient – which forces them to forego treatment altogether or partially because of high drug price – can be interpreted to have materially distorted behavior and harmed consumers. Additionally, medical advocates have called pricing of certain critical drugs immoral and/or unethical. There are a number of ways to think about the application of these laws to pharmaceutical pricing.

In early 2016, the Massachusetts Attorney General’s Office threatened to apply the Commonwealth’s unfair trade practice laws against Gilead Sciences Inc. for its high-pricing pricing of its new Hepatitis C treatments, which included Harvoni. Between 2014 and early 2016, the Commonwealth’s Medicaid program spent about \$318 million on Hepatitis C drugs for about 2,800 people. Massachusetts argued that the pricing of Gilead’s Hepatitis C treatments was unaffordable and allowed the disease to continue to spread, threatening public health. The two sides reached a settlement with Gilead agreeing to pay an unspecified amount through supplemental Medicaid rebates effective August 1, 2016, which will save Massachusetts a significant amount of money. Gilead’s products were placed on the Medicaid preferred drug list as a result of the settlement, with the caveat that Medicaid patients could access other Hepatitis C drugs as well.<sup>17</sup>

It would appear that the Medicaid best-price provision was implicated in the Massachusetts outcome, given that the result was a *supplemental Medicaid* rebate agreement rather than a more general price reduction for all consumers in the Commonwealth. A Medicaid supplemental rebate is exempt from Medicaid best-price calculations. In contrast, a broader all-payer, all-consumer price discount agreement would not be exempt from Medicaid best-price.

### **Antitrust Enforcement of Pay-for-Delay Settlements**

Strategies employed by brand-name drug manufacturers to extend market exclusivity help fuel high drug costs. “Pay-for-delay” settlements, in which generic manufacturers agree to postpone entering the market in return for compensation, have proven particularly successful. In 2010, the Federal Trade Commission estimated that such settlements cost the nation’s healthcare system \$3.5 billion annually from the delayed entry of safe, effective and low-cost generic drugs.<sup>18</sup> Three years later, the Supreme Court held that such settlements could violate state and federal antitrust laws,<sup>19</sup> a subset of unfair trade practices law prohibiting restraint of trade. The practical effect of the ruling has been to substantially reduce the number of cash-based, pay-for-delay settlements. Nevertheless, the number of pay-for-delay settlements involving alternate forms of payment, such as a promise by a brand-name manufacturer not to sell an “authorized” generic drug during the limited competition period enjoyed by the first successful generic challenger, remains high.<sup>20</sup> State Attorneys General could make a more concerted effort to bring suit against these non-cash-based, pay-for-delay settlements under state antitrust law.

## **Strategy Five: Re-import Affordable Drugs from Canada**

Re-importation is not a new concept but new provisions regulating drug safety, growing public support and potential new roles for states make this proposal worthy of consideration. Current laws allow re-importation of drugs from Canada by wholesalers and pharmacies only after DHHS certifies that the program of re-importation is safe and likely to result in savings for the American public. To date, DHHS has never made such a finding in the U.S.

Under this option, states acting as licensed wholesalers or contracting with licensed wholesalers, would ask DHHS to confirm that the re-importation of drugs from Canada was safe. Rather than a national certification as is required under current law, states would be able to demonstrate to DHHS how they would ensure the safety, purity and pedigree of products to be imported to the state.

There is a new component to this policy option that did not exist the last time re-importation was publicly debated - enactment of the Drug Quality and Security Act (DQSA) of 2013. Title II of DQSA requires stakeholders to document a chain of custody all the way back to the manufacturing plant. While the track-and-trace operational details (the data field structure etc.) may be different between Canada and the U.S., the more important point is that the U.S. now has capacity to track the pedigree of drugs at the lot-level and will be able to track pedigree at the package level by 2023. The DQSA lays the groundwork for tracking and establishing the pedigree of pharmaceuticals. According to the legislation:

*“The track-and-trace requirements of the DQSA are meant to improve drug security throughout the supply chain, including making it easier to track where a drug has been, to identify and remove counterfeit products, and to simplify drug recalls.*

*All members of the supply chain—manufacturers, re-packagers, wholesale distributors, third-party logistics providers and dispensers, including retail pharmacies—will have to comply with the law as it’s phased in over the next nine years.”<sup>21</sup>*

While the idea of states as drug wholesalers and re-importers may be novel, the fundamentals of this approach are already in place and can be leveraged to allow interested states to begin to take on this new role in order to lower drug costs and improve the health and welfare of their residents.

## Strategy Six: Change Medicaid to Promote Greater Purchasing Flexibility

### Background

It is important to know several things about Medicaid drug coverage:

- Federal Medicaid law requires pharmaceutical companies to comply with the provision of per unit rebates to states, or else they are banned from sales to Medicaid and other federal programs.
- The law provides for a base rebate of 23.1 percent of an average manufacturer price (AMP) for each unit of drug dispensed, as well as a consumer price index (CPI) penalty add-on rebate when the price growth of the product exceeds the growth in the CPI in a quarterly reporting period.
- The AMP is calculated using sales to a limited group of payers and dispensers, and today the AMP closely tracks the price pharmacies pay for drugs, rather than factoring in other prices paid in the broader marketplace.
- State Medicaid programs benefit any time a manufacturer contracts with almost any other entity for a discount that exceeds 23.1 percent of AMP. State Medicaid programs automatically receive that new best-price for each unit dispensed to a Medicaid beneficiary.
- States also have the ability to negotiate additional manufacturer rebates and leverage their ability to create PDL, which serve a similar purpose to drug formularies in the private sector and Medicaid managed care, albeit with major restrictions imposed by federal law.
- In return for the federal rebate, state Medicaid programs are required to cover all drugs from manufacturers participating in the federal rebate program. However, states can use other techniques to promote drug choices, such as easing access to drugs on their PDL and restricting drugs not on their PDL. So, while states must cover all drugs that have a rebate, they have considerable latitude in limiting access to drugs with no supplemental rebate.
- Federal law does not require states to provide a Medicaid drug benefit, in fact prescription drug coverage for adults is optional. If states do provide this benefit - and all currently do - they must

provide coverage in amount, duration and scope to meet the general needs of the eligible population, and they must provide the same benefit to the entire eligible population. As essential as the drug benefit is, faced with double-digit growth in pharmaceutical spending, some states may have few options but to re-visit the sustainability of this optional drug coverage.

Some state officials believe federal law limits their ability to run a cost-efficient Medicaid drug benefit program because federal regulations prohibit or limit adoption of effective, private-sector formulary management techniques, which allow providers and pharmacists to work together to promote specific drug treatments. Some manufacturers believe that the best-price provision of the law limits their ability to creatively contract with commercial health plans or other state agencies.

It is not clear to what extent Medicaid law impedes performance-based, or value-based contracting. The Centers for Medicaid and Medicare Services (CMS) issued a brief guidance document<sup>22</sup> to states in July, 2016, that stipulates that commercial sector performance-based or value-based contracts can affect Medicaid best-price and that each potential arrangement is unique and therefore will require legal review. In thinking through the various non-Medicaid policy options in this paper, it does appear that the Medicaid law could be implicated in a number of approaches. This uncertainty warrants a separate, serious assessment.

To execute value-based pricing arrangement directly with Medicaid, CMS encourages use of the established supplemental rebate agreement, which is exempt from the Medicaid best-price rule.

It is clear that state Medicaid programs cannot completely forego covering therapeutic alternatives in favor of sole-source contracting for the best rebate. Medicaid programs can favor one product over another, but they must allow access to all drugs for which there is a federal rebate agreement in place. This makes it harder for state agencies to band together and operate like a pharmacy benefit manager (PBM) – which works to maintain or reduce drug costs while working to improve health outcomes - in order to gain market leverage.

## Medicaid Policy Options

There are several potential policy options here. The concepts below are designed to start a conversation about how to minimize Medicaid's dampening effect on states' ability to negotiate with the pharmaceutical industry. These approaches could be mandated by law or facilitated through waivers.

- **Using a waiver process, allow states to opt out of the Medicaid rebate provisions of the drug benefit for all drugs while still maintaining a Medicaid prescription drug benefit that is eligible for federal matching funds.** Under this approach, state Medicaid programs would no longer get the mandatory minimum or best-price rebates. In exchange, a state's Medicaid program could more easily join sister state agencies and/or even other states to form a PBM to run a formulary as commercial payers do. A Medicaid program or consortium of states would have more flexibility to:
  - Respond to a State Drug Price Review Board determination or utilize performance-based contracting and pricing;
  - Exclude some drugs in classes where there are therapeutic alternatives;
  - Deploy reference pricing reimbursement;



- Establish pharmacy networks that are willing to do more patient management, for example, or are willing to accept depot shipments.
- **Allow states to utilize the waiver process to opt out of Medicaid rebate provisions for a limited number of drug classes.** This approach could be appropriate for Medicaid programs that want to innovate in specific classes of drugs by employing:
  - New service delivery options
  - New copayment structures
  - A non-Medicaid purchasing pool or state PBM arrangement, or
  - Bulk purchasing of sole source products. An example would be allowing state Medicaid programs to participate in a VFC-style program for a particular class of drugs, such as Hepatitis C treatments purchased from the CDC or a prime vendor.
- **Allow states to waive requirements of the Medicaid drug rebate law while maintaining access to the minimum and best-price rebates.** Under this option, state Medicaid programs would continue to be guaranteed the minimum federal rebate and the best-price rebate but they would also be able to employ selective contracting, performance contracting and sole source contracting, etc., to enhance market leverage for better supplemental rebates.
- **Expand Medicaid rebate laws to a variety of state health financing and delivery programs, including state-operated exchange plans.** Under this policy option, non-Medicaid state programs and agencies would have access to some or all of the Medicaid price provisions, including the base rebate, the inflation rebate, best-price and/or line extension rebate. Unlike the other options in this section, this approach could limit the ability of commercial payers to negotiate performance-based contracts that implicate Medicaid best-price because the financial penalty to manufacturers of creating a best-price would be more financially significant than today, as other agencies bring more covered members to the Medicaid rebate program.

Effective, long-term treatment with medications profoundly affects a state's future delivery of:

- Mental health services
- State employees and retirees' medical care
- Long-term services and supports
- Social services
- Education
- Corrections, and
- Other programs that affect state spending and revenue

## Strategy Seven: States Become Pharmacy Benefit Managers

### States Could Take the Long View and Reassess Pharmaceuticals' Value to Society

Considerable opportunity to change the pricing dynamic between states and the pharmaceutical industry rests with states' ability to take a long-range view of spending and recalculate how they view the long-term value of pharmaceuticals to society.



States are employers, Medicaid administrators, correctional administrators, educators, mental health, public health and social service providers. States have economic and societal interests beyond immediate healthcare that include employee productivity, long-term services and supports, educational costs, management of correctional systems, and public and mental health services. States can view the economic and social value of pharmaceuticals over several years – a view that commercial payers may not be able to take. In thinking about the value of pharmaceuticals, states could conceivably assess the value of a product based on its long-term effect on spending across a broad range of state programs and services beyond immediate medical care or one program area.

By factoring in the economic impact of investments in pharmaceuticals across programs and spending areas over years, states could have a very different perspective than private commercial payers do. This unique, holistic perspective of pharmaceutical spending could provide opportunities for states to:

- Increase state market leverage relative to the pharmaceutical industry;
- Improve the sophistication of assessing the value of pharmaceuticals;
- Improve patient access to important new medicines; and
- Move the value and price of pharmaceuticals closer together.

This broad, long view provides an opportunity to negotiate with manufacturers for prices that reflect a state's return on investment (ROI). This ROI would measure and incorporate the cost avoidance produced by a drug across relevant state programs and cost centers. That ROI analysis could move states closer toward the industry position – that today's market does not appropriately recognize the real value of new pharmaceutical products. The ROI would be the basis governing price negotiation between a unified state purchaser (the state as PBM) and a manufacturer.

It is important to note that this view of pharmaceutical value does not mean that current industry pricing reflects that value. Instead, a long and broad view provides the basis for a real-world assessment of a product's value and provides the opportunity to establish a negotiated price that maximizes the value of the drug for states and for society.

Such an approach is a big stretch for states, but some of the opportunities to manage drug spending and improve patient access that could result from such thinking would be extremely beneficial for state governments and residents. Over the long-term, a movement toward ROI contracting would better align the interests of the pharmaceutical industry and large government purchasers as price would be linked to the amount of future costs avoided by the government purchaser and society.

## What States Can Do Today - Purchasing Pools

States' efforts to date have largely focused not on price but rather on discounting strategies. Pooled purchasing by state Medicaid agencies has been a hallmark of that work. As of 2016, most states were involved in one or more of four Medicaid pharmaceutical pricing pools.<sup>23</sup> State membership in the pricing pools is not static, state Medicaid programs have entered and exited the different pools at varying times. These pools negotiate Medicaid supple-

State-purchasing pools allow states to negotiate prices and make purchases on behalf of one or more states or groups, including:

- Agencies that pay for pharmaceuticals
- Exchange-covered members in state-operated exchanges
- Uninsured individuals who are not eligible for other public or private drug coverage
- Public or private healthcare facilities that dispense or administer drugs
- Private sector employers
- Any combination of the above

mental rebates on top of the federal law base rebate of 23.1 percent of AMP for each unit of product dispensed.

Just two multi-state purchasing pools focus on state agencies and populations other than Medicaid – the Minnesota Multistate Contracting Alliance for Pharmacy and the Northwest Prescription Drug Consortium serving Washington and Oregon. The Minnesota alliance is a prime vendor program for states, cities and facilities and negotiates and purchases pharmaceuticals and other medical supplies. The Northwest Consortium was originally focused on making pharmaceuticals more affordable for the uninsured. It provides member groups with clinical pharmacy expertise and tailored formularies regardless of group size. All group members pay the same rates, all have 100 percent transparent contracts and all pharmacy discounts are passed through to groups with no spread kept by the contractor.

Consortium prices are better than commercial rates available to other large groups in Oregon and Washington because they are backed by a most favored nation-guarantee and an annual third-party market pricing check. All manufacturer rebates are passed through at 100 percent to member groups, including rebates on specialty drugs. Price discounts are guaranteed by a performance-based ceiling expenditure cap, and the contractor administrative expense is fixed. There are also a number of single-state drug purchasing/price negotiation initiatives that involve agencies and entities other than Medicaid. With a large number of covered members, state pool participants gain advantages such as:

- Helping the state and its covered members keep income that is otherwise extracted by commercial PBMs. Instead, the state purchasing pools can commit to cost-plus pricing (passing along all the negotiated savings but for the margin needed to cover administrative costs).
- And creating administrative efficiencies for participating agencies through central negotiation, pricing and even administration of the rebate operation.

However, these efforts have significant limitations. Purchasing pools do not change the trajectory of high launch prices and high annual price increases. Purchasing pools do not have much negotiation leverage. Pool members are typically not required to use the drugs negotiated by the pool and members have different formularies and different drug benefit structures. Manufacturers typically provide deeper discounts to entities that can incentivize members to purchase their products. A pool of nonaligned members with different benefit structures does not drive utilization. Another disincentive is that potential pool members may believe that they have stronger formulary controls that can garner better pricing and therefore do not join purchasing pools.

## **What States Could Do Tomorrow: Become Pharmacy Benefit Managers**

State purchasing pools are important initiatives that represented ground-breaking policy when they were created. However, these purchasing initiatives are limited, as discussed above. While they keep pace with rising pharmaceutical prices, they are not structured to modify the trajectory of those prices. Instead, states can consider strengthening their negotiating leverage by operating more like commercial pharmacy benefit managers.

In order to strengthen market position and operate more like a commercial PBM, states could:

- Have pool participants use unified formularies for all covered members and dependents;
- Use different approaches for different types and therapeutic classes of pharmaceuticals;
- Require pharmaceutical manufacturers to price for ROI to the state within a specified time frame;

- Contract with pharmaceutical manufacturers to forward-fund utilization of a drug for an initial period of time until the state purchaser begins to gain a ROI across spending centers from the product (called ROI contracting).

Each of these options is explored in more detail below.

## **Purchasing pool participants unify around one formulary structure and management**

The ability to negotiate with the pharmaceutical industry is strengthened when the payer has more covered members and exerts more control over drug promotion and utilization by them. Many state purchasing pools negotiate discounts on behalf of participant members that may or may not put the drug on a formulary, may or may not put the drug on the same tier and may or may not apply utilization management controls such as prior authorization and step therapy, which requires members to try a less-expensive drug first before moving up a “step” to a more expensive drug.

If purchasing pools can provide a manufacturer with a clear understanding of the structure and management of drugs for all members of the pool, the manufacturer can enter into more serious negotiations. Such uniformity provides the payer and manufacturer much more opportunity for innovative contracting around performance and ROI contracting.

However, it may be difficult to unify drug benefit design and coverage across programs and managed care contractors. In 2014, a handful of states (Florida, Kansas, Texas, and West Virginia) used a unified PDL for their Medicaid programs, holding managed care organizations to the same PDL as used for Medicaid fee-for-service. Others have considered this strategy as well. One of the considerations motivating the adoption of a single PDL was to enhance the program’s negotiating position with manufacturers to gain a better price. It is not unreasonable to assume that a state’s bargaining position would be enhanced if all public payers joined together and adhered to a single set of policies regarding a drug formulary and PDLs. As managed care has grown in Medicaid, states have held plans accountable for total cost of care and quality outcomes. Those plans, in turn, tend to use national pharmacy benefit managers to secure better drug prices, yet little is known about the effectiveness of those negotiations nor where risk is shared and savings accrue. But states routinely carve-in or carve-out the drug benefit from Medicaid managed care plans. Becoming a strong purchaser is potentially key to gaining leverage in the market. And a state, operating on behalf of its managed care contractors and other health vendors, could bring scale to innovative contracting that is difficult to achieve as a single-contractor.

It is not yet clear if states using this strategy for their Medicaid programs have, in fact, realized savings. Until 2011, New York’s Medicaid drug benefit was carved out of Medicaid managed care and was subject to its Medicaid Preferred Drug Program (PDP). In 2011, the benefit was shifted back to the individual Medicaid managed care organizations and the PDP now only applies to the small fraction of enrollees in Medicaid fee-for-service programs.

A 2016 report prepared for the Texas Association of Health Plans<sup>24</sup> argues that substantial savings would accrue to the state if flexibility were given to the Medicaid managed care organizations, citing the plans’ ability to negotiate net prices that are lower than the state’s price with supplemental rebates

factored in. Favorable net prices are achievable by plans optimizing the mix of drugs (generics and brand-name drugs) in their formularies. The authors state that Texas would achieve \$100 million in annual general fund savings if it rescinded the unified PDL requirement. There are no data readily available to either confirm or refute the conclusions in the report prepared for the Texas health plans.

### Vary Management Approach by Type of Product and/or Therapeutic Class

States might also think about varying their purchasing strategies depending on the type of drug and product. Preventive pharmaceuticals may lend themselves more easily to performance-based contracting or ROI contracting. Pharmaceuticals that can demonstrate cost avoidance – such as reduced inpatient hospital days, less school absenteeism due to illness and utilization of fewer health-related services – could be treated differently in negotiations.

An example of this type of approach is pricing based on indication and outcomes. The drug manufacturer contracts with payers around the ability of the product to reduce inpatient hospital days for adherent patients. To the extent that the product meets performance goals, the payer pays more (rebates are reduced). If the product does not perform as expected and does not reduce inpatient days, then the price is lower and the manufacturer's rebate is higher.

Products with clear, measurable endpoints or clinical effects are more amenable to this performance-based contracting. Performance-based contracts are becoming more common in the U.S.

## Strategy Eight: Pursue Return on Investment Pricing Strategies

As discussed above, a state has the option of taking a longer view of the role and effect of medical care on the health and welfare of its citizens. This longer view would take into consideration the impact of medical spending on education spending and outcomes, worker disability days and productivity, mental health service spending, long-term services and supports, and other expenditures.

### Hypothetical Examples of ROI

The factors in any ROI estimation analysis will vary depending on the disease or condition, as well as particular state programs and spending patterns.

An ROI estimation analysis is not appropriate for all pharmaceutical products. However, an equitable ROI approach over a reasonable period of time is important to moving price and value closer together. The sophistication of the ROI estimation analysis will improve over time – including the ability to account for more intangible costs and savings such as patient or caregiver productivity.

A limiting factor to ROI pricing is the best-price provision of Medicaid law. Under the law, almost any price in the U.S. market that is better than a 23.1 percent discount off the Average Manufacturer Price in a calendar quarter becomes the national best price – the price at which the manufacturer must sell to all state Medicaid programs. ROI pricing could mean that a product price comes in with a discount greater than 23.1 percent. This is not a given, but it is not out of the question. Because of this, ROI pricing will have to involve a conversation with CMS.

However, with an eye toward Medicaid best-price, routine use of ROI analysis pricing may, over time, encourage lower industry launch prices and restrained price increases. Lower launch prices may be more aligned with ROI pricing, and perhaps not trigger the best-price provision or the effect of the triggering the provision may not be substantial.

ROI investment estimation analysis and pricing would put to the test the industry's assertion that pricing reflects the value of drugs over time by linking payment or price to a longer term ROI. Using this negotiating approach, the pharmaceutical industry would be forced to acknowledge the reality of budget impact and inability of governments to fund endless, unpredictable and growing amounts of new expensive treatments without reducing funding for other vital parts of state budgets, such as education, safe water, roads, environmental protection, and social services.

While the negotiating approach could be difficult and time-consuming at first, the cost-avoidance estimation tool approach has the potential over time to clarify how public payers can assess the value of a medical intervention and how the pharmaceutical industry brings products to market.

The negotiation between a state purchaser (a pooled purchaser or PBM ideally) and a manufacturer would establish a price that reflects the value of the product to the state as distinct from a price the manufacturer would set.

The first step in the price negotiation would be to estimate all the spending offsets/cost avoidance a state could expect across relevant state cost centers/programs that are estimated to result from coverage and use of the drug.

Based on that estimation analysis (which the manufacturer and state must agree on) the price would be set so that the expected state spending on the drug over a negotiated number of years would be based on the estimated/agreed-upon cumulative state costs avoided during that same period of time. For purposes of this discussion, that period of time would be 10 years.<sup>25</sup>

This approach would estimate the dollar amount of what the industry insists is generally true – that the price of pharmaceuticals reflect the value of the drug over time. Industry believes that price reflects the value to patients and society, and that value cannot be fairly assessed in the typically short payer economic timeframe. This ROI estimation negotiation would challenge the industry to negotiate a price that represents an estimated - but detailed - value to a state. It is a negotiation tool premised on bringing price and value together through estimating costs that will be avoided across an array of relevant state spending programs.

States do not approach healthcare spending this way today. Current state thinking about health spending is just as siloed as it is in the commercial sector. However, states have the ability and opportunity to think more broadly about healthcare spending and may need to do so in order to leverage opportunities for improved pharmaceutical spending, and to push the pharmaceutical industry to shift its pricing model as well.

The ROI estimation approach would be limited in early years. It would appear more practical to use ROI pricing for products that provide a relative amount of clarity about treatment impact in a population. States and manufacturers would negotiate the ROI formula and would have to agree to the validity of the formula.

States interested in negotiating with pharmaceutical companies using the ROI strategy outlined here could benefit from independent research to determine the value of drugs over time. One such resource is the Institute for Clinical and Economic Review (ICER), an independent, non-profit organization that evaluates new and innovative drugs and produces independent, scientifically rigorous reports to inform and support decision-makers.



In addition to helping answer questions about a drug's comparative clinical effectiveness, ICER's reports on new drugs, at or near the time of approval by the U.S. Food and Drug Administration (FDA), calculate value-based price benchmarks that align prices for new drugs with the long-term benefits for patients and the health system. Because all of ICER's work is public and vetted by independent public panels, states are free to use it to help identify drugs with prices out of line with the value they provide each state.

Once the ROI estimation analysis/formula is agreed upon, the price would be established. The price would be set to reflect the balance between estimated state spending for the drug and the estimated costs avoided resulting from utilization of the drug. Market dynamics and negotiating leverage would determine the final price of the drug, but the starting point for negotiations would be the projected long-term value of the drug to the state rather than a price that is independently and artificially set by the manufacturer.

In the "out" years, the ROI analysis and ROI price would be adjusted to account for changes in the market, including new therapeutic products in that drug category or class, expected utilization by the targeted patients and changes in other costs that are factors in the ROI formula. Each year represents a new and separate estimation, pricing and contract year.

For any particular product, it could be that ROI price contracting may not be necessary during out years as new, branded or generic therapeutic alternates enter the market and cause the price to drop substantially. As a result, market competition takes over and supplants ROI estimating and pricing. In this case, ROI estimation and pricing are simply bridging tools that guarantee that a drug's price and the cost to a state provide value in the absence of other therapeutic options.

To effectively negotiate beneficial contract terms under an ROI strategy, a state will have to utilize effective strategies commonly used in negotiations with pharmaceutical manufacturers today, including a product's ability to impact market share and market access. For example, the purchasing pool/state PBM may agree not to modify the FDA-approved and labeled indicated population - as states and other payers have attempted to do with Hepatitis C treatment criteria.

States may also consider entering into performance-based contracts in which reimbursement is based in part on the achievement of clinical outcomes related to savings estimates, similar to the pay-for-performance agreements now negotiated between some manufactures and large payers. A performance-based contract based on the direct measurement of an ROI target may not be feasible in the short-term. The ROI is theoretical and not intended to represent an absolute; instead, it is an estimate and a negotiation tool. Over time, the ROI formulas, analyses and data sources may evolve to such a point as to be able to verify the ROI and create contract provisions around it. Alternatively, contracts that measure clinical outcomes may stand as a proxy for meeting estimated savings targets, and thereby allow states to enter into risk-based contracts that may be attractive to both parties.

Over time, the sophistication of the ROI estimating formulas will improve. However, the basis of the approach and the result of the negotiation is a contractual agreement around an estimated, formula-based state ROI and the resulting price.



## Forward Financing Using ROI Pricing

ROI pricing could be coupled with manufacturer financing of utilization over a period of time. The period of time would be negotiated, but states may be interested in financing through to the point at which their estimated costs avoided are equal to costs of product utilization. This would be a new way for states to think about drug purchasing.

In an ROI estimation/forward financing strategy, risk is removed, product price is negotiated up front, and the manufacturer provides product in the state with reimbursement/payment delayed until some negotiated future point.

Forward financing requires manufacturers to finance the utilization of their product (through direct delivery of product without immediate payment) under the terms of an ROI contract until the year in which estimated state costs to purchase the product equal the costs avoided over that time period. Essentially, a manufacturer provides the product for a calendar year. The utilization is tracked for 2016, and the ROI estimation analysis shows that at the negotiated price, the cost of utilization in 2016 is estimated to be balanced by costs avoided by the year 2026.

For any forward financing year, a manufacturer could supply product for some or all of the state purchasing pool/PBM through direct delivery using specialty pharmacy distribution or depot distribution like the AIDS Drug Assistance Program (ADAP) or VFC. States would repay the manufacturer for product at the agreed upon, theoretical, point in time at which the economic benefits to the state (costs avoided) balance the costs of covering the product in the original contract year.

In return for forward financing, manufacturers would gain either market share, market access or seek to benefit from upside risk. For example, states could be obligated, under terms of the contract, to provide ready access to the product for the indicated patient population. Take Hepatitis C treatments for example, all members of the state's purchasing pool/PBM would be obligated to cover the products in accord with FDA-approved indications. In the Hepatitis C example, members of the state purchasing pool could not limit coverage to people who are sicker than the FDA-approved use, or to people who are clean of any addiction for a number of years. It is appropriate that people who are covered by the purchasing pool should benefit to the fullest extent from the new medicines. Other considerations include formulary management or performance-based contracts in which the manufacturer receives a higher price if clinical outcomes are met. Manufacturers could benefit if they increase market share or market access beyond what would otherwise be achieved through negotiations that did not include a forward-financing provision. Any additional costs of forward financing to the state must be weighed against the benefits, namely reduced volatility in pharmaceutical costs as payments are delayed until the benefits of the product begin to accrue to the state.

To implement forward financing, states and manufacturers would get the product to the purchasing pool/PBM network pharmacies. There is precedent for this type of depot approach or direct delivery of product in the VFC and ADAP programs. In a depot or other product delivery system, the pharmacist is paid the usual dispensing fee by the state program and the patient pays cost-sharing at the point of service (doctor's office or pharmacy counter). Claims are filed so that utilization is tracked. Patient cost-sharing is remitted to the manufacturer on some regular schedule, and this cost-sharing would offset the amount due by the state to the manufacturer at the start of the repayment period. How distribution and pharmacy product reimbursement is handled will depend on the state, the manufacturer and the

product. However, specialized pharmaceutical purchase and delivery systems are common in today's market – much more so than when VFC was first established.

The state repayment schedule would be patient cohort-based, consistent with annual ROI contracting. As an example, if the basis of a contract today is a 10-year ROI price - with economic benefits accruing by 2026 for product purchased in 2016 - then the state repays the manufacturer in 2026 for utilization from 2016, minus the patient cost sharing that was remitted to the manufacturer in 2016.

Like the ROI financing discussed above, it would be necessary to renegotiate the ROI analysis, time horizon and thus the price each year for utilization in that new contract year because many of the factors in the ROI estimation analysis will have changed.

Forward financing using ROI pricing benefits states by matching price to value and delaying unanticipated budget impacts associated with the launch of new pharmaceutical products until the benefits of such products, in terms of future cost avoidance, begin to accrue. At the time when payments to the manufacturer start, states would have started to see budgetary effects resulting from the health and societal benefit of the treatment. Again, this proposal assumes that state agencies work together as one PBM.

There are a number of administrative, political and budgeting issues to be worked out in this model. This paper provides the starting point for the work that needs to be done. The important point is that it is a model that allows states to provide ready access to new important pharmaceuticals and has the potential to reduce industry reliance on high launch prices and annual price increases. ROI pricing with forward funding is a market-based approach that leverages the strengths and interests of each party and it can help states manage drug price volatility.

## **Strategy Nine: Ensure State Participation in Medicare Part D through Employer Group Waiver Plans**

States as employers can leverage the Medicare Part D prescription drug benefit subsidy for their state retirees by creating an Employer Group Waiver Plan (EGWP). This Medicare Part D prescription drug plan is offered to retirees who have been promised prescription drug coverage as a retirement benefit. This option became more widely used after federal law was changed to eliminate a 20 percent subsidy of employer-sponsored retiree drug benefits. The purpose of this original subsidy was to encourage employers to continue to provide retiree drug benefits rather than dropping retiree prescription drug coverage altogether and placing a greater financial burden on Medicare.

However, since the subsidy was eliminated in 2013, employers have accessed the EGWP program, which allows them to continue to shoulder some financial responsibility for their retiree drug benefits while shifting more of the burden to Medicare.

It is not known how many states have converted to EGWP status for their government retirees, but there was a trend in this direction in 2013.

## Strategy Ten: Protect Consumers Against Misleading Marketing

To help blunt consumer criticism of rising prescription drug prices, manufacturers have established coupon (or discount) programs. Coupons from these programs can often be accessed on the Internet, downloaded and printed for use at pharmacies. In some instances, they are distributed at doctors' offices or mailed to consumers' homes. Regardless of mode of delivery and administration, coupons reduce out-of-pocket, but not third-party payer costs. As a result, they can effectively steer patients toward high-priced drugs despite the availability of clinically-comparable, lower-cost alternatives. This action places upward pressure on insurance premiums, which are ultimately borne by the same consumers enjoying these short-term savings.

The use of coupon programs has increased significantly over the past few years. A 2014 report by the DHHS Office of Inspector General noted that there were 86 programs in mid-2009 and by the end of 2012 there were 525.<sup>26</sup> This 612 percent rise coincides with a period when many blockbuster drugs were coming off-patent.

Many coupon or discount programs have important restrictions.<sup>27</sup> First, coupons are often time-limited, expiring after a certain date or after a few months of use. This leaves patients facing high out-of-pocket costs. To avoid these costs, patients may switch medications—a difficult ask—or deviate from their prescribed treatment regimen.

Coupon or discount programs may also be available to only certain patients, like those with a particular diagnosis. Such restrictions may come as a surprise to patients when they present their coupon card to pharmacists, who must confirm eligibility at the point-of-sale. If patients are ineligible, pharmacists must explain the issue, effectively pushing the discussion of price away from doctors' offices.<sup>28</sup>

Many insurers and plan sponsors utilize copays and coinsurance in prescription drug benefit design to encourage the use of lower-cost, generic medicines when available and appropriate. While discount or coupon programs can facilitate access, they also countermand those incentives. Some payers have accordingly instituted policies prohibiting coupon use. The federal government, for example, has long deemed coupon use within federally-sponsored programs as an illegal kickback. Several states also prohibit coupon programs, but these outright bans have all been removed with Massachusetts the last state to do so in 2012.<sup>29</sup>

Several options are available to address coupon programs. States can impose transparency requirements on program administrators – who may be third-party organizations with unclear or suspect financial arrangements with manufacturers. Shedding light on those relationships might help payers and policymakers better understand the motivations underlying the programs, while raising awareness of their potential negative impact.

States could also pass legislation or promulgate regulations requiring manufacturers to more clearly highlight the use terms of their coupons. This could mean providing more prominent and accessible eligibility, expiration dates and impact information (e.g., poor likelihood of long-term adherence) on coupons and with advertisement -- similar to health warnings on cigarettes. The aim of such a policy would be to bolster consumer awareness, resulting in more informed buying decisions.

Such disclosure could also be driven by more indirect approaches. Consumer protection laws in all 50 states offer potential recourse for people harmed by deceptive trade practices. However, the strength of these laws -- from which insurers but not manufacturers are generally immune—vary considerably.<sup>30</sup> Some states, for example, have adopted a broad definition of deceptive. In these states, a designated state agency could file suit against manufacturers that failed to clearly disclose eligibility and/or expiry information if patients unwittingly relied upon a reasonable assumption that they would remain able to use their coupon indefinitely. Equitable relief could be sought that would help clarify ambiguity for future patients.

Finally, states could (re)instate bans on the use of coupons for state-sponsored programs, including state employee/retiree health programs. The justification for this exclusion could rest on the inflationary impact of coupon use on premium costs.

## Strategy Eleven: Use Shareholder Activism to Hold Pharmaceutical Companies Accountable

Public pension funds hold \$3.8 trillion in assets, with most invested in securities<sup>31</sup>. Pension funds have been under scrutiny for unfunded liabilities and states have been working to find general fund dollars to meet their pension obligations. In a very real way, increasing costs to state governments for the pharmaceuticals they purchase for their employees, retirees, corrections and Medicaid beneficiaries compete for scarce revenues at a time when pensions need to be fully-funded.

Conversely, pharmaceuticals tend to be profitable businesses and can be good investments promising healthy returns for pension funds. One strategy investors have used to influence corporate behavior is socially-responsible investing. Advocates seek to divest from companies whose businesses they deem contrary to the public good, such as tobacco. But pension managers are bound to achieve the best return on their investments and, given the size and scope of their investments in pharmaceuticals and their current rate of return, it could be challenging for pension investors to find a mix of other investments that achieve balance in a portfolio that delivers the same competitive returns.

Pensions, along with mutual funds, are the biggest investors in the market and the size of public pension investments invites consideration of a different strategy – shareholder activism – to gain concessions on price from the nation’s pharmaceutical industry. Publicly-traded companies must provide voting rights to shareholders in order to hold corporate managers accountable. Through proxy voting, shareholders can vote on the election of directors of corporate boards, advise on executive pay and weigh in on corporate buy-outs and mergers.

Shareholders can also submit resolutions for consideration by corporate boards as long as they hold a certain amount of stock for a fixed period of time. Sthreeuch shareholder proposals may require time to get traction, but any proposal that receives 3 percent of shareholder support in its first submission can be re-introduced again, but each year the proposal must receive increasing shareholder support. In 2011, the shareholder group As You Sow introduced a shareholder proposal to the McDonald’s Corporation asking the company to use more environmentally-friendly beverage containers. Twenty-nine percent of shareholders supported the proposal and McDonald’s took action.<sup>32</sup> CalPERS, the nation’s largest public pension fund with assets of \$229 billion, has been active in pursuing corporate reforms and since 1992 has published an annual Focus List of companies with poor financial and corporate governance designed to highlight and bring change to particular companies.<sup>33</sup>

Public pension managers as shareholders, acting collectively or through organizations like the Council for Institutional Investors, could introduce ballot proposals requiring certain pharmaceutical companies to reduce launch prices or engage in ROI pricing with state governments, for example. The challenge would be balancing the demand for lower prices with the need to assure shareholder value is not compromised. And, for the several states in which pension investment and health benefits are administered by a single agency, strict firewalls would be essential to assure the integrity of both.

## Next Steps

The Work Group, which released this report at NASHP's Annual Health Policy Conference in October 2016, invites interested states to develop these and other proposals. While these ideas require additional development, including conversations with purchasers and industry leaders, states must act as laboratories of innovation, continuing to press for reforms while exploring new policies. NASHP will convene a meeting with the Pharmaceutical Research and Manufacturers of America (PhRMA) and the Work Group in November to discuss the options presented here.

## Endnotes

1. For ease of reading, we use the term "pharmaceutical" or "Pharmaceutical industry" to encompass the depth and breadth of the industry producing brand name pharmaceuticals, generic pharmaceuticals, biologics/pharmaceuticals, vaccines, orphan drugs and specialty drugs
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