

# CUYAHOGA COUNTY BOARD OF HEALTH

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## 2006-2014 Cuyahoga County Maternal and Infant Indicator Data Brief

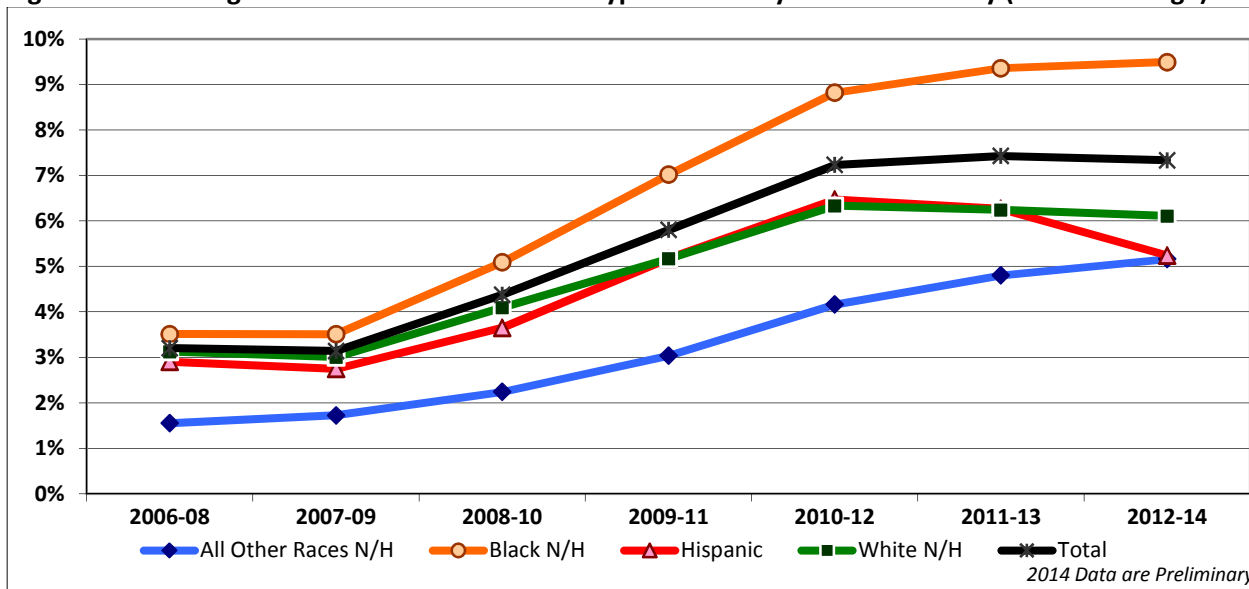
### Data Guide

The data presented below provides some evidence regarding the physical, social, and financial well-being of pregnant mothers as well as birth outcomes in Cuyahoga County from 2006 to 2014<sup>1</sup>. Data presented below are 3-year averages by race (All Other Races – Non-Hispanic, Black – Non-Hispanic, & White – Non-Hispanic) or ethnicity (Hispanic). The values for the corresponding figures are provided in tables starting on page 8. Data for 2014 are preliminary.<sup>1</sup>

### Gestational Hypertension

Gestational hypertension is a condition where high blood pressure (over 140/90) is present in a pregnant woman after 20 weeks of pregnancy and goes away after delivery of an infant.<sup>2</sup> Gestational hypertension can lead to a decreased blood flow to the expecting Mothers' organs, poor fetal growth, seizures, and even death to the expectant Mom and fetus.<sup>3</sup> The county rate is 7.3% for 2012-14, which is higher than the national average of 6%.<sup>3</sup> Almost 1 in 10 Black pregnant Moms had this condition between 2012-2014.

Figure 1: Percentage of Moms with Gestational Hypertension by Race or Ethnicity (3-Year Average)\*

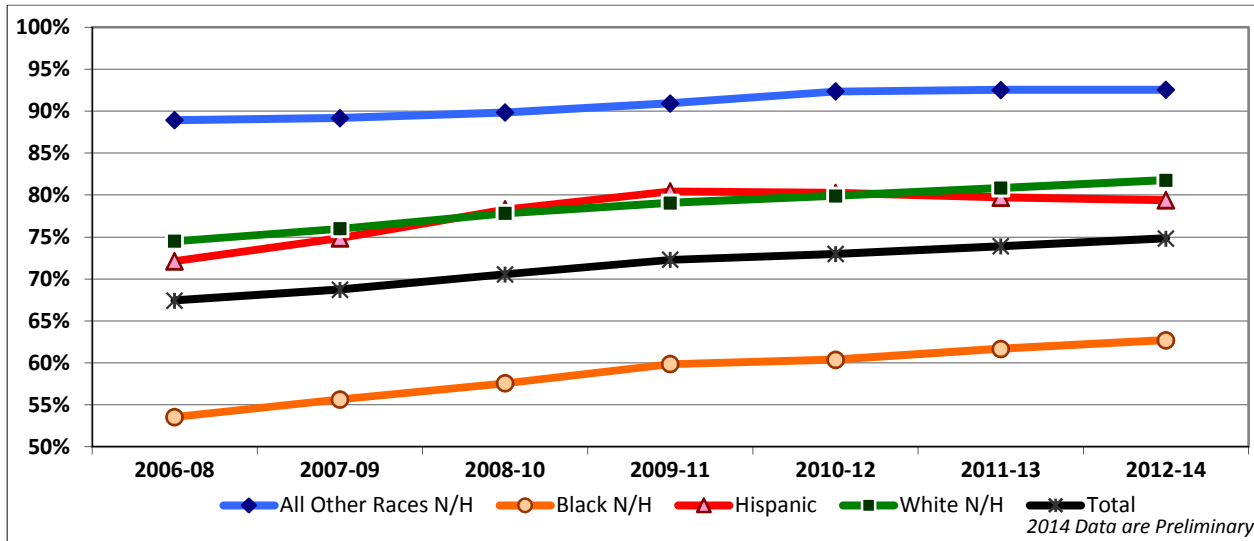


\*Note - Numbers almost doubled from 2009 to 2010 and has remained relatively stable through 2014. This increase has been noted in other locations throughout the state of Ohio.

### Moms Breastfeeding at Discharge

Percentage of Moms breastfeeding at time of discharge has increased for all groups in Cuyahoga County in the past 8 years. This is important to note because breastfeeding has been found to be a protective measure for infants against sudden, unexplained infant death (SUID), allergic diseases, and lower respiratory tract and gastrointestinal tract infections.<sup>4</sup> The 2012-2014 county's rate of 74.8% is slightly below the Healthy People 2010 (HP10) goal for breastfeeding at any point of 75%<sup>5</sup> and lower than the Healthy People 2020 (HP20) goal of 81.9%.<sup>6</sup>

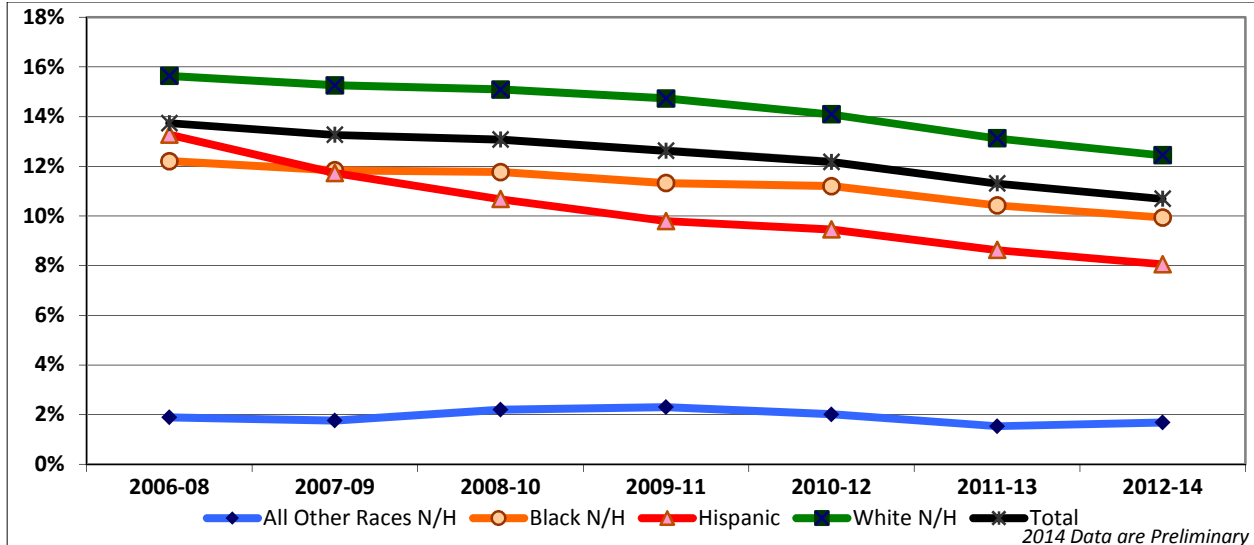
**Figure 2: Percentage of Moms Breastfeeding at Discharge by Race or Ethnicity (3-Year Average)**



### Moms Smoked at any time during Pregnancy

Moms who smoke during pregnancy increase the infant's risk of low birthweight births, premature births, heart defects, and behavioral disorders such as ADHD.<sup>7,8</sup> In the past 8 years, percentage of Moms who smoked at any point during the pregnancy was lower for all groups with the biggest decreases for Hispanic and White Mothers. Moms of All Other Races had less than 2% who smoked during any point of the pregnancy. The county's rate of 10.7% is significantly higher than the HP10 goal for smoking abstinence during pregnancy of 99%<sup>5</sup> and the HP20 goal is 98.6%<sup>6</sup> (Values less than or equal to 1.4% in this graph would meet the HP20 goal).

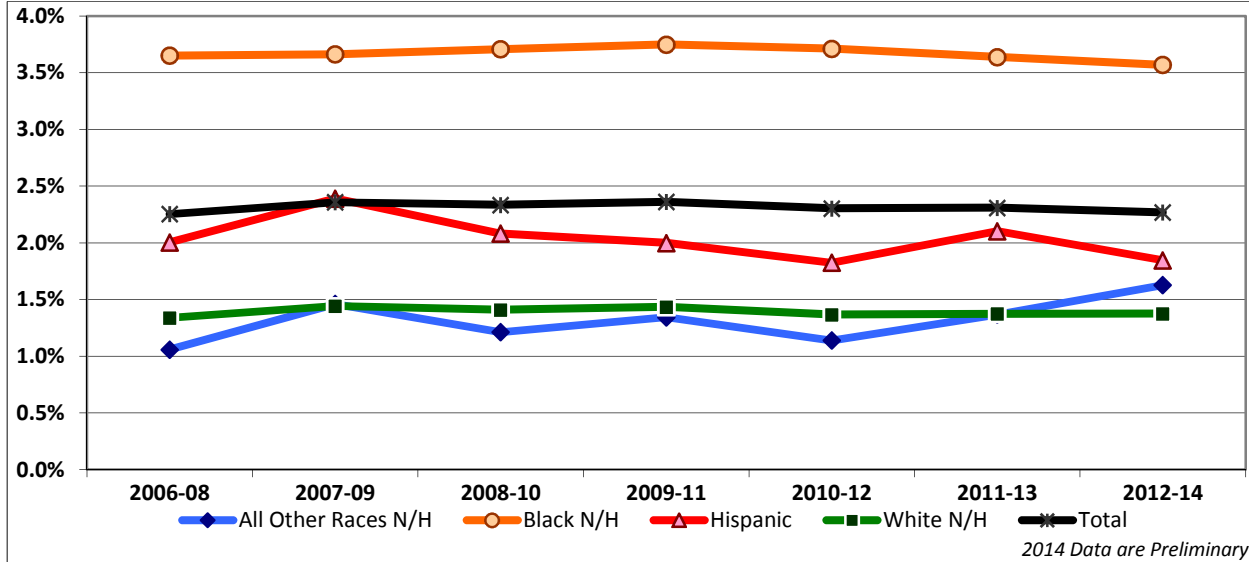
**Figure 3: Percentage of Moms Smoked at any point during Pregnancy by Race or Ethnicity (3-Year Average)**



### Very Low Birthweight Births (Less than 1,500 grams)

Percentage of babies born at approximately 3 pounds 4 ounces or less (less than 1,500 grams) in Cuyahoga County is 2.3% for 2012-14 and has been consistent in the past 8 years. **Black babies are at least twice as likely to born under 1,500 grams in our county.** The county rate of 2.3% is significantly higher than the HP10 goal of 0.9%<sup>5</sup> and the HP20 goal of 1.4%.<sup>6</sup>

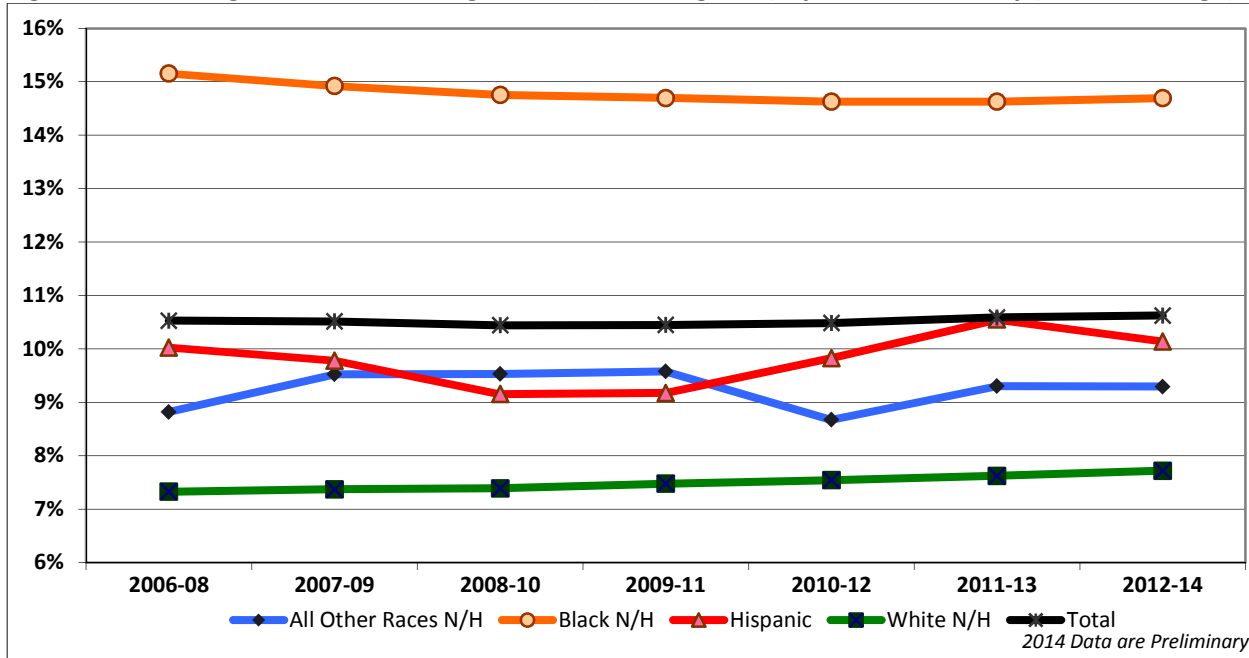
**Figure 4: Percentage of Very Low Birth Weight Births (< 1,500 grams) by Race or Ethnicity (3-Year Average)**



### Low Birthweight Births (Less than 2,500 grams)

Percentage of babies born at approximately 5 pounds 8 ounces or less (less than 2,500 grams) in Cuyahoga County is 10.6% for 2012-14 and has been consistent in the past 8 years. Black babies are almost 50% more likely to born under 2,500 grams in our county. The county rate of 10.6% is significantly higher than the HP10 goal of 5.0%<sup>5</sup> and the HP20 goal of 7.8%.<sup>6</sup>

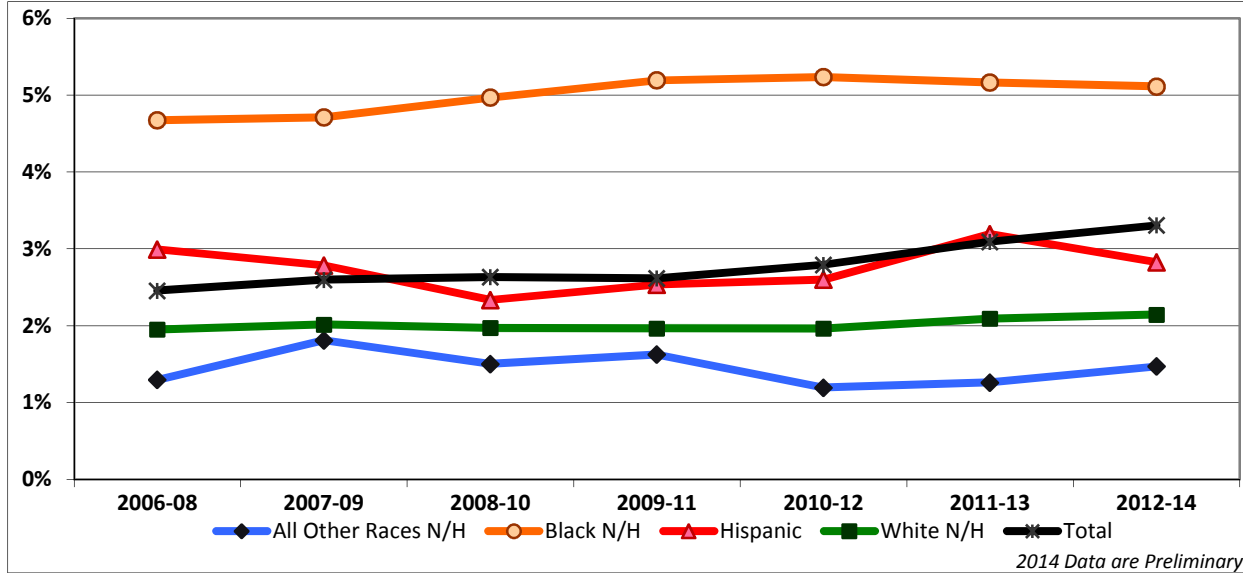
**Figure 5: Percentage of Low Birth Weight Births (< 2,500 grams) by Race or Ethnicity (3-Year Average)**



### Very Preterm Births (Less than 32 weeks gestation)

Percentage of babies born at least two months early (< 32 weeks) in Cuyahoga County is 3.3% for 2012-14 and has increased in the past few years. **Black babies are at least twice as likely to be born very prematurely in our county than All Other Races and White babies.** The county rate of 3.3% is significantly higher than the HP10 goal of 1.1%<sup>5</sup> and the HP20 goal of 1.8%.<sup>6</sup>

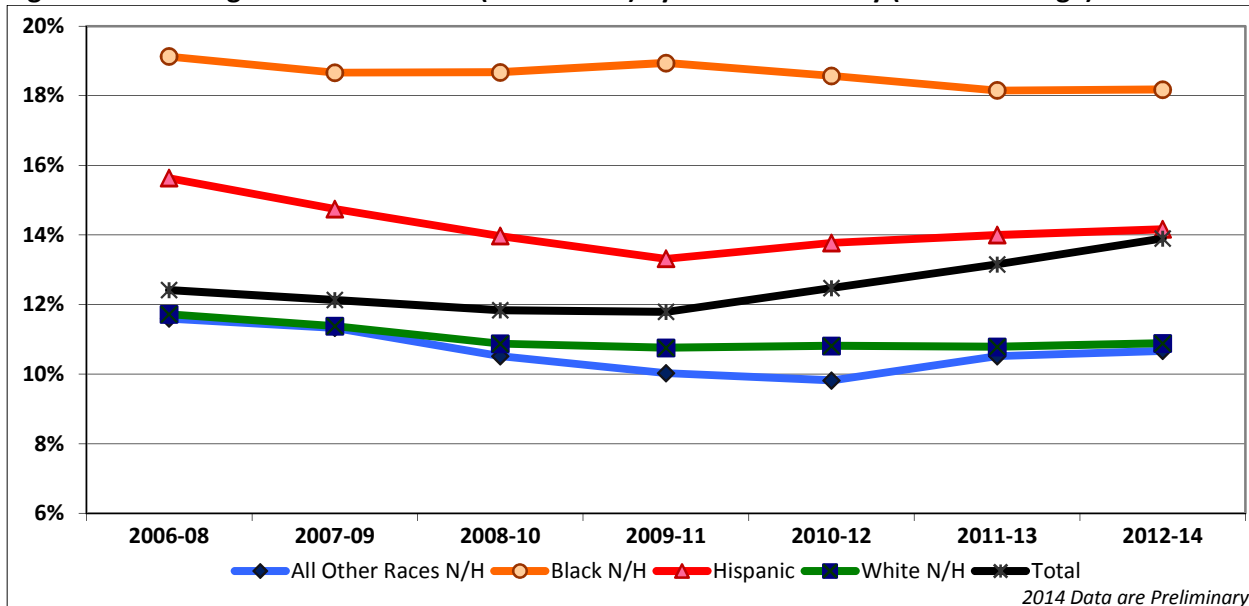
**Figure 6: Percentage of Very Preterm Births (< 32 Weeks) by Race or Ethnicity (3-Year Average)**



### Preterm Births (Less than 37 weeks gestation)

Preterm birth is the leading cause of infant mortality in Cuyahoga County and worldwide.<sup>9,10</sup> The total estimated medical costs for the first year of life for an infant born at 32-36 weeks of gestation is more than 4 times higher than a baby born at 37-40 weeks gestation.<sup>11</sup> Percentage of babies born about 1 month early (< 37 weeks) in Cuyahoga County is 13.9% for 2012-14 and has increased in the past few years. **Almost 1 in 5 Black babies are born prematurely in our county.** The county rate of 13.9% is significantly higher than the HP10 goal of 7.6%<sup>5</sup> and the HP20 goal of 11.4%.<sup>6</sup>

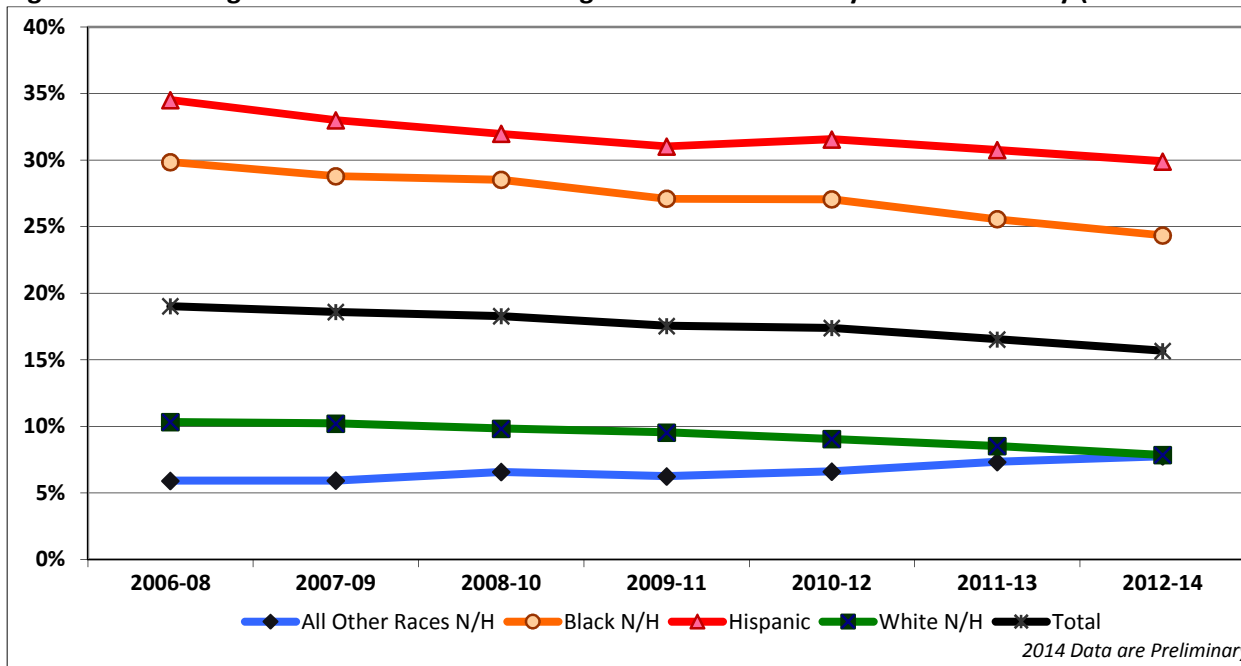
**Figure 7: Percentage of Preterm Births (< 37 Weeks) by Race or Ethnicity (3-Year Average)**



### Moms with less than High School Education

Percentage of Moms who had less than a high school education at time of delivery was 15.7%, which means almost 1 in 6 Moms had less than a high school education. **Almost 1 in 4 Black Moms and almost 1 in 3 Hispanic Moms had no high school diploma or equivalent gave birth from 2012-14.**

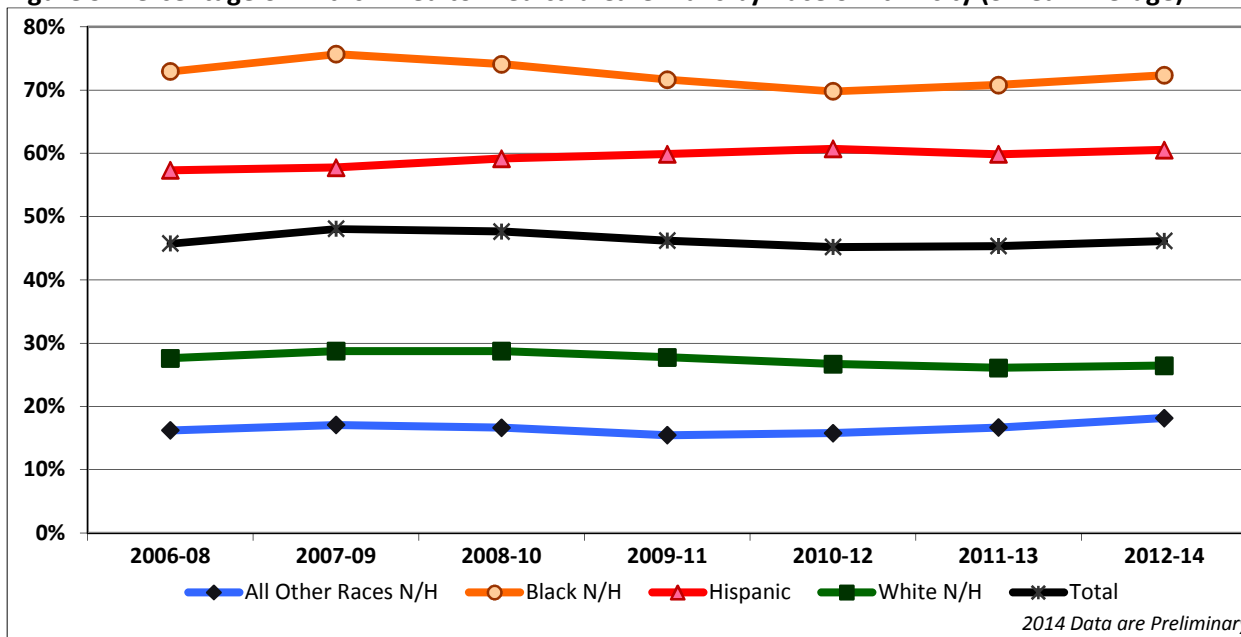
**Figure 8: Percentage of Moms with less than High School Education by Race or Ethnicity (3-Year Average)**



### Medicaid Billed for Delivery

Percentage of deliveries paid by Medicaid was 46.1%. In 2012-14 Almost 3 in 4 Black Moms and more than 3 in 5 Hispanic Moms had deliveries paid by Medicaid, while less than 1 in 5 deliveries of All Other Races were paid by this method.

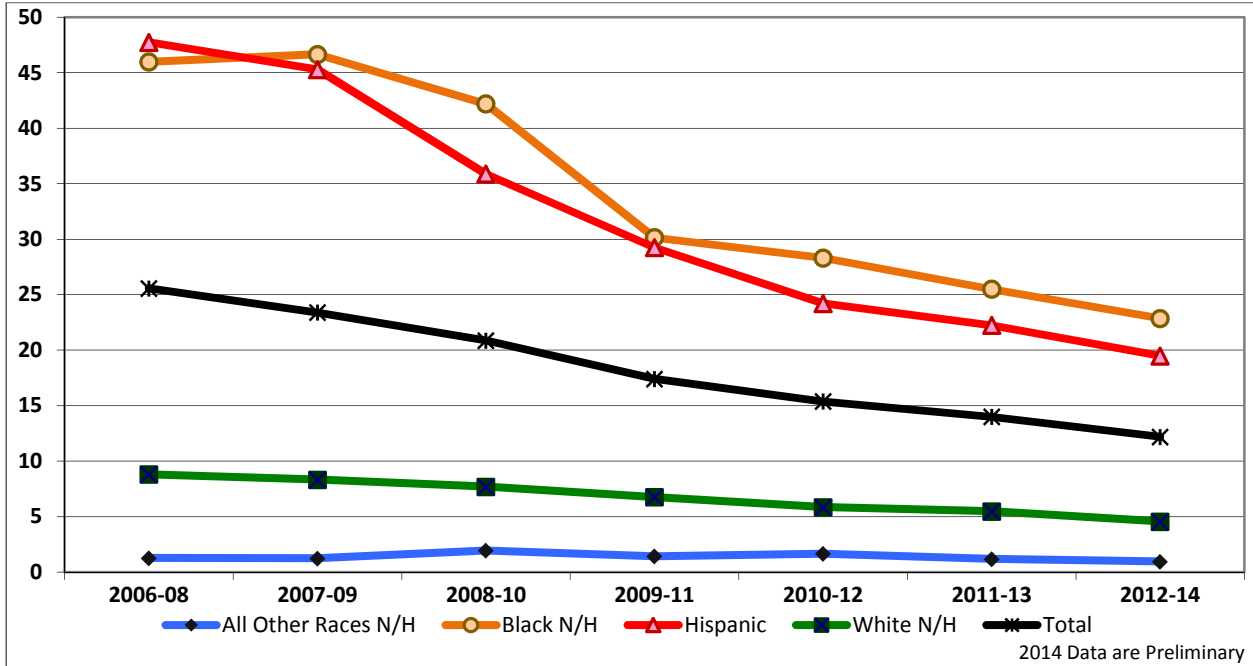
**Figure 9: Percentage of Births Billed to Medicaid Care Plans by Race or Ethnicity (3-Year Average)**



### 15-17 Year-Old Teen Birth Rate

The chart shows the rate of births to females aged 15-17 per 1,000 in this age group.<sup>12,13</sup> The county teen birth rate has decreased by more than 50% from 25.6 in 2006-08 to 12.2 in 2012-14. The majority of the decline has been in the Hispanic and Black teen rates that have decreased by more than 50% in the past 8 years.

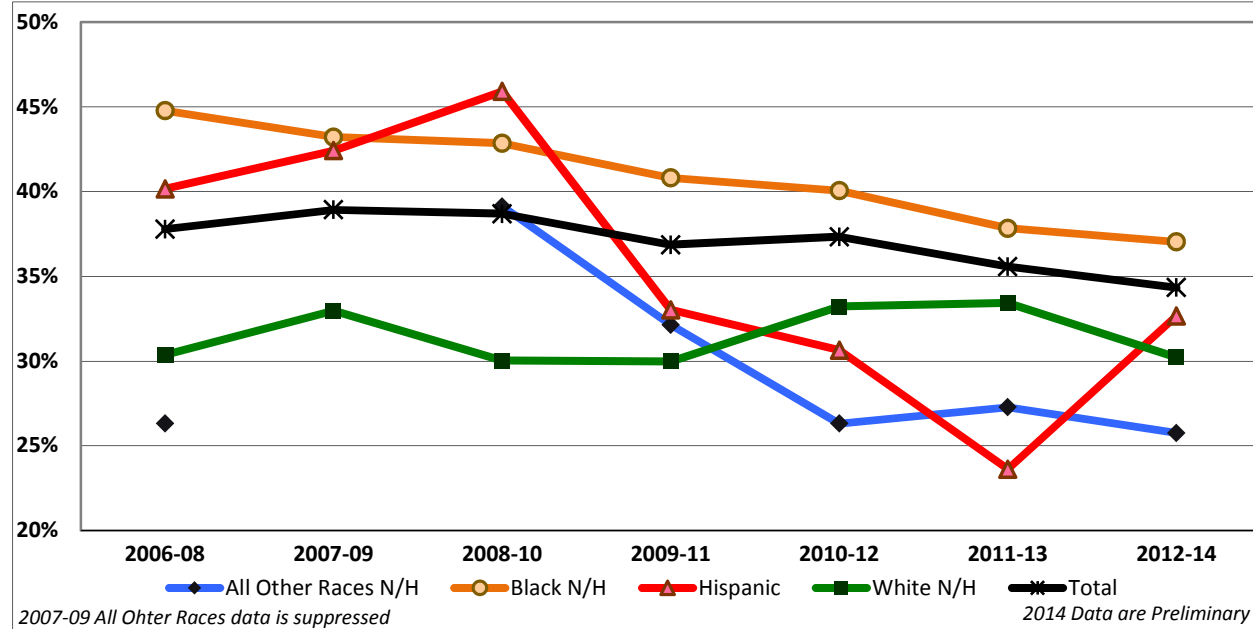
**Figure 10: Teen Birth Rate for Females 15-17 Years Old per 1,000 by Race or Ethnicity (3-Year Average)**



### Preterm Births for Moms with a Prior Preterm Birth

More than 1 in 3 Moms who had at least 1 prior preterm birth had a subsequent preterm delivery. The county percentage has slowly declined over the past 8 years, with the biggest declines occurred for Black and Hispanic Moms.

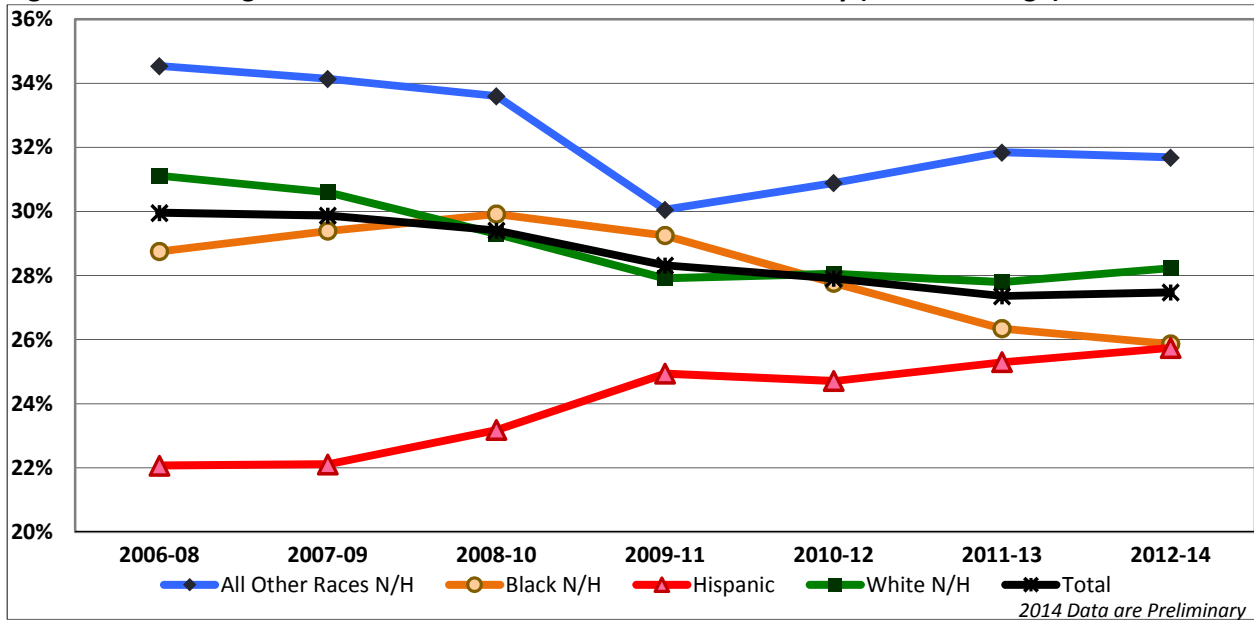
**Figure 11: Percentage of Preterm Births for Moms with History of Previous Preterm Birth (3-Year Average)**



### First time Moms who had Cesarean Delivery (C-Section)

The percentage of first time Moms who had a cesarean delivery (C-section) has slowly decreased from 30% to 27.5%. Hispanic Moms have seen an increase while the three racial groups have seen declines in C-Sections over the past 8 years.

Figure 12: Percentage of First Time Moms who had Cesarean Delivery (3-Year Average)



## 2006 – 2014 Cuyahoga County Maternal & Infant Health Indicator Tables

**Table 1: Moms with Gestational Hypertension by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	1.5%	1.7%	2.2%	3.0%	4.2%	4.8%	5.2%
Black N/H	3.5%	3.5%	5.1%	7.0%	8.8%	9.4%	9.5%
Hispanic	2.9%	2.7%	3.6%	5.2%	6.5%	6.3%	5.2%
White N/H	3.1%	3.0%	4.1%	5.2%	6.3%	6.2%	6.1%
<b>Total</b>	<b>3.2%</b>	<b>3.1%</b>	<b>4.4%</b>	<b>5.8%</b>	<b>7.2%</b>	<b>7.4%</b>	<b>7.3%</b>

**Table 2: Moms Breastfeeding at Discharge by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	88.9%	89.2%	89.8%	90.9%	92.3%	92.5%	92.5%
Black N/H	53.5%	55.7%	57.6%	59.9%	60.4%	61.7%	62.7%
Hispanic	72.1%	74.9%	78.3%	80.4%	80.2%	79.7%	79.4%
White N/H	74.5%	76.0%	77.8%	79.0%	79.9%	80.8%	81.8%
<b>Total</b>	<b>67.4%</b>	<b>68.7%</b>	<b>70.6%</b>	<b>72.3%</b>	<b>73.0%</b>	<b>73.9%</b>	<b>74.8%</b>

**Table 3: Moms Smoking at any Point during Pregnancy by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	1.9%	1.8%	2.2%	2.3%	2.0%	1.5%	1.7%
Black N/H	12.2%	11.8%	11.8%	11.3%	11.2%	10.4%	9.9%
Hispanic	13.3%	11.7%	10.7%	9.8%	9.4%	8.6%	8.0%
White N/H	15.6%	15.3%	15.1%	14.7%	14.1%	13.1%	12.4%
<b>Total</b>	<b>13.7%</b>	<b>13.3%</b>	<b>13.1%</b>	<b>12.6%</b>	<b>12.2%</b>	<b>11.3%</b>	<b>10.7%</b>

**Table 4: Percentage of Very Low Birth Weight Births (< 1,500 grams) by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	1.1%	1.5%	1.2%	1.3%	1.1%	1.4%	1.6%
Black N/H	3.7%	3.7%	3.7%	3.7%	3.7%	3.6%	3.6%
Hispanic	2.0%	2.4%	2.1%	2.0%	1.8%	2.1%	1.8%
White N/H	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
<b>Total</b>	<b>2.3%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>2.3%</b>	<b>2.3%</b>

**Table 5: Percentage of Low Birth Weight Births (< 2,500 grams) by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	8.8%	9.5%	9.5%	9.6%	8.7%	9.3%	9.3%
Black N/H	15.2%	14.9%	14.8%	14.7%	14.6%	14.6%	14.7%
Hispanic	10.0%	9.8%	9.1%	9.2%	9.8%	10.5%	10.1%
White N/H	7.3%	7.4%	7.4%	7.5%	7.5%	7.6%	7.7%
<b>Total</b>	<b>10.5%</b>	<b>10.5%</b>	<b>10.4%</b>	<b>10.4%</b>	<b>10.5%</b>	<b>10.6%</b>	<b>10.6%</b>

**Table 6: Percentage of Very Preterm Births (< 32 weeks) by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	1.3%	1.8%	1.5%	1.6%	1.2%	1.3%	1.5%
Black N/H	4.7%	4.7%	5.0%	5.2%	5.2%	5.2%	5.1%
Hispanic	3.0%	2.8%	2.3%	2.5%	2.6%	3.2%	2.8%
White N/H	1.9%	2.0%	2.0%	2.0%	2.0%	2.1%	2.1%
<b>Total</b>	<b>2.5%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.8%</b>	<b>3.1%</b>	<b>3.3%</b>



**Table 7: Percentage of Preterm Births (< 37 weeks) by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	11.6%	11.3%	10.5%	10.0%	9.8%	10.5%	10.7%
Black N/H	19.1%	18.7%	18.7%	18.9%	18.6%	18.2%	18.2%
Hispanic	15.6%	14.7%	14.0%	13.3%	13.8%	14.0%	14.2%
White N/H	11.7%	11.4%	10.9%	10.8%	10.8%	10.8%	10.9%
<b>Total</b>	<b>12.4%</b>	<b>12.1%</b>	<b>11.8%</b>	<b>11.8%</b>	<b>12.5%</b>	<b>13.2%</b>	<b>13.9%</b>

**Table 8: Moms with less than High School Education at Time of Delivery by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	5.9%	5.9%	6.6%	6.2%	6.6%	7.3%	7.7%
Black N/H	29.9%	28.8%	28.5%	27.1%	27.1%	25.6%	24.3%
Hispanic	34.5%	33.0%	32.0%	31.0%	31.6%	30.7%	29.9%
White N/H	10.3%	10.2%	9.8%	9.5%	9.0%	8.5%	7.8%
<b>Total</b>	<b>19.0%</b>	<b>18.6%</b>	<b>18.3%</b>	<b>17.5%</b>	<b>17.4%</b>	<b>16.5%</b>	<b>15.7%</b>

**Table 9: Percentage of Births Billed to Medicaid Care Plans by Race or Ethnicity (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	16.2%	17.1%	16.6%	15.4%	15.8%	16.6%	18.1%
Black N/H	72.9%	75.7%	74.1%	71.6%	69.8%	70.8%	72.3%
Hispanic	57.3%	57.7%	59.2%	59.9%	60.7%	59.8%	60.5%
White N/H	27.6%	28.7%	28.7%	27.7%	26.7%	26.1%	26.4%
<b>Total</b>	<b>45.7%</b>	<b>48.0%</b>	<b>47.6%</b>	<b>46.2%</b>	<b>45.2%</b>	<b>45.3%</b>	<b>46.1%</b>

**Table 10: Rate of Teen Moms aged 15-17 Years Old per 1,000 in their age group (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	1.3	1.2	1.9	1.4	1.7	1.2	0.9
Black N/H	46.0	46.6	42.2	30.1	28.3	25.5	22.9
Hispanic	47.7	45.3	35.9	29.2	24.2	22.2	19.5
White N/H	8.8	8.3	7.7	6.8	5.9	5.5	4.6
<b>Total</b>	<b>25.6</b>	<b>23.4</b>	<b>20.9</b>	<b>17.4</b>	<b>15.4</b>	<b>14.0</b>	<b>12.2</b>

**Table 11: Percentage of Preterm Births for Moms with History of Previous Preterm Birth (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	26.3%	Suppress	39.1%	32.1%	26.3%	27.3%	25.8%
Black N/H	44.8%	43.2%	42.9%	40.8%	40.1%	37.8%	37.0%
Hispanic	40.2%	42.4%	45.9%	33.0%	30.6%	23.6%	32.7%
White N/H	30.4%	33.0%	30.0%	30.0%	33.2%	33.4%	30.2%
<b>Total</b>	<b>37.8%</b>	<b>38.9%</b>	<b>38.7%</b>	<b>36.9%</b>	<b>37.3%</b>	<b>35.6%</b>	<b>34.3%</b>

**Table 12: Percentage of First Time Moms who had a Cesarean Delivery (3-Year Average)**

	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14
All Other Races N/H	34.5%	34.1%	33.6%	30.1%	30.9%	31.8%	31.7%
Black N/H	28.8%	29.4%	29.9%	29.2%	27.8%	26.3%	25.9%
Hispanic	22.1%	22.1%	23.2%	24.9%	24.7%	25.3%	25.7%
White N/H	31.1%	30.6%	29.3%	27.9%	28.1%	27.8%	28.2%
<b>Total</b>	<b>30.0%</b>	<b>29.9%</b>	<b>29.4%</b>	<b>28.3%</b>	<b>27.9%</b>	<b>27.4%</b>	<b>27.5%</b>

## Data Sources

<sup>1</sup>The estimates are derived from unconfirmed delivery hospital data and historical patterns of geographic and racial distributions. Past experience indicates that the estimation technique used is quite accurate and provides a reasonable projection well in advance of the availability of state data for confirmed rates. Center for Public Health Statistics and Informatics, Ohio Department of Health (ODH). The Department specifically disclaims responsibility for any analyses, interpretations or conclusions.

<sup>2</sup>Gestational Hypertension: Pregnancy Induced Hypertension (PIH). American Pregnancy Association. Available online at <http://americanpregnancy.org/pregnancy-complications/pregnancy-induced-hypertension/>.

<sup>3</sup>University of Rochester Medical Center Encyclopedia. Available online at <https://www.urmc.rochester.edu/encyclopedia>.

<sup>4</sup>Section on Breastfeeding – American Academy of Pediatrics. Policy Statement: Breastfeeding and the Use of Human Milk. Vol 129; No 3. March 2012. Available online at <http://pediatrics.aappublications.org/content/129/3/e827>.

<sup>5</sup>HHS, Office of Disease Prevention and Health Promotion. Healthy People 2010. Washington, DC. Available online at <http://wonder.cdc.gov/data2010/focus.htm>.

<sup>6</sup>HHS, Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Available online at <http://www.healthypeople.gov/2020>.

<sup>7</sup>Malik S, Cleves MA, Honein MA, Romitti PA, Botto LD, Yang S, & Hobbs CA, Maternal Smoking and Congenital Heart Defects. Pediatrics. Vol 121; No 4. April 2008. pgs. e810-6.

<sup>8</sup>Linnet KM, Wisborg K, Obel C, Secher NJ, Thomsen PH, Agerbo E, & Henriksen TB. Smoking During Pregnancy and the Risk for Hyperkinetic Disorder in Offspring. Pediatrics. Vol 116; No 2. August 2005.

<sup>9</sup>The Cuyahoga County Child Fatality Review Committee (2015). Protecting our Future: Child fatalities for 2014 (18th ed.). Available online at <http://protectingourfuture.cuyahogacounty.us/>.

<sup>10</sup>Patel RM. Short- and Long-Term Outcomes for Extremely Preterm Infants. American Journal of Perinatology. eFirst Jan 2016.

<sup>11</sup>Institute of Medicine. Preterm Birth: Causes, Consequences, and Prevention. Washington, DC: The National Academies Press, 2007.

<sup>12</sup>US Census Bureau. 2000 Census of population and housing; Summary file 1. Available online at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

<sup>13</sup>US Census Bureau. 2010 Census of population and housing; Summary file 1. Available online at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

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