

# 2018



## ALLEGHENY COUNTY BIRTH REPORT



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## Introduction

This report is a statistical summary of 2018 live births in Allegheny County, based upon data from PA birth certificates<sup>1</sup>. Birth registrars at the state's hospitals and birthing centers obtain information to populate the birth certificate, including demographic and medical information, which are reported to the state through PADOH's electronic birth registration system. The Allegheny County Health Department (ACHD) then receives birth record data through a cooperative agreement with the state, which requires the following statement to be included: "These data were supplied by the Bureau of Health Statistics and Research, Pennsylvania Department of Health, Harrisburg, Pennsylvania. The Pennsylvania Department of Health specifically disclaims responsibility for any analysis, interpretations or conclusions." (See technical notes on page 31 for more information). Births that occurred to residents outside Allegheny County are not included in this report.

The purpose of this report is to provide summary statistics of 2018 Allegheny County live births for population and health indicators and describe statistically significant temporal and bivariate differences. ArcGIS Pro 2.3.2 was used to determine resident status; SAS 9.4 software was used to calculate frequencies and conduct chi-square tests for categorical variables. Joinpoint statistical software was used for temporal trend analysis, which tests significance using Monte Carlo Permutation; results are expressed as annual percent change (APC). ACHD uses this information to monitor trends, and to inform program planning and needs assessments. For example, ACHD identified Maternal and Child Health as a key priority area in its Plan for a Healthier Allegheny (PHA)<sup>2</sup>. Birth data provide useful metrics to assess maternal and child health-related objectives and actionable strategies.

The quality of the birth data presented in this report is directly related to the accuracy and completeness of the information collected through hospital and birthing centers. Therefore, missing data, underreporting, and potential misclassification may limit the interpretation of these analyses. Studies verified the underreporting of items on the birth certificate<sup>3-6</sup>, and also suggest that the magnitude of underreporting may differ for mothers at the highest sociodemographic risk for adverse pregnancy outcomes<sup>7</sup>. Additionally, data quality may vary by birthing facility. Thus, data should be interpreted in light of these limitations.

More Allegheny County data on socioeconomic, demographic, and health outcomes can be found at:

<https://www.alleghenycounty.us/Health-Department/Resources/Data-and-Reporting/Chronic-Disease-Epidemiology/Allegheny-County-Community-Indicators.aspx>

*\*Custom data requests can be made through the 'Contact Us' link at the bottom of this webpage.*

Additional details about the data source, definitions, methodology, and contact information are in the *technical notes* on page 30.



## EXECUTIVE SUMMARY

This annual report provides information about births in Allegheny County, PA, garnered from 2018 PA Birth Certificates with comparison to historical data.

### Births

- There were 12,816 births in Allegheny County in 2018.
- The crude birth rate was 10.5 per 1,000 population.
- The general fertility rate for women ages 15-44 was 54.3 per 1,000.
- The teen birth rate was 9.9 per 1,000 females aged 15-19 years in 2018, a decline from the 2017 teen birth rate of 10.2 per 1,000.
- Teen mothers had high rates of WIC (65.5% vs. 20.7%) and Medicaid enrollment (74.4% vs. 28.3%) compared to mothers 20 and older.

### Birth Outcomes

- Among Allegheny County resident live births in 2018, 84.6% were born with a normal birthweight, 8.5% were low birthweight (LBW), and 1.4% were very low birthweight (VLBW).
  - Compared to White women, Black women were more likely to have babies born LBW (14.8% vs 6.8%) and VLBW (2.9% vs 0.9%).
  - Compared having a college degree or, those with less than high school education were more likely to have babies born LBW (14.2% vs 6.2%) and VLBW (2.6% vs 0.8%).
- In Allegheny County in 2018, 9.7% of resident live births were preterm. It has risen to 9.7% since 2015, despite a decrease from 11.3% in 2003 to 9.0% in 2015.
- Preterm births have slightly decreased for Black mothers since 2017 (15.6% to 15.1%).

### Health Behaviors

- In Allegheny County in 2018, 8.8% of pregnant women smoked at least one cigarette during their pregnancy, a decrease from the rates in 2017 (9.3%).
- 18.6% of women who smoked prior to pregnancy stopped during pregnancy. As the mother's educational attainment increased, the percentage of smoking cessation increased.
- 80.9% of women with a live birth in Allegheny County in 2018 intended to breastfeed. The proportion of mothers who intend to breastfeed has increased since 2003 overall for all races and Hispanic mothers.
- Mothers aged 35-39 and Asian/Pacific Islander mothers had the greatest proportion of intention to breastfeed (86.3% and 95.1%).



### Health Care

- 86% of mothers received prenatal care in the first trimester, and 0.5% never received prenatal care during pregnancy.
- Asian/Pacific Islander mothers had the largest percentage of first prenatal care visits in the first trimester (88.8%), while Multirace mothers had the largest percentage of first prenatal care visits in the second trimester (19.1%), and third trimester (9.9%).
- The percent of first trimester prenatal care increased with increasing education level.
- The percent of resident live births that involved a cesarean delivery method was 29.4% in 2018.
- In 2018, 22.4% of mothers were enrolled in WIC.





**2018 ALLEGHENY COUNTY  
BIRTH REPORT  
SUMMARY AND ILLUSTRATIONS**

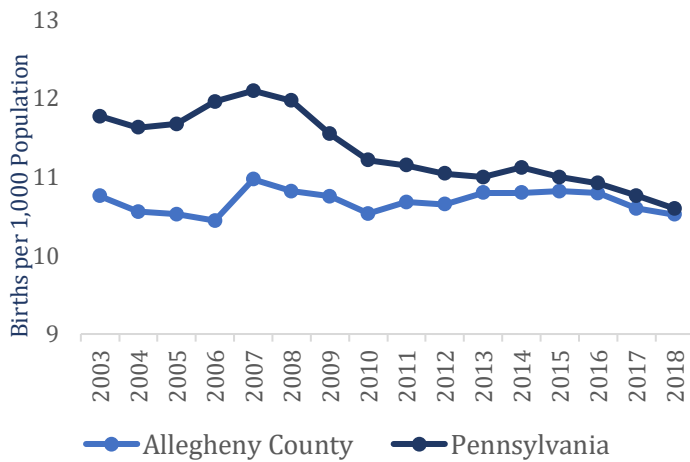


## BIRTHS

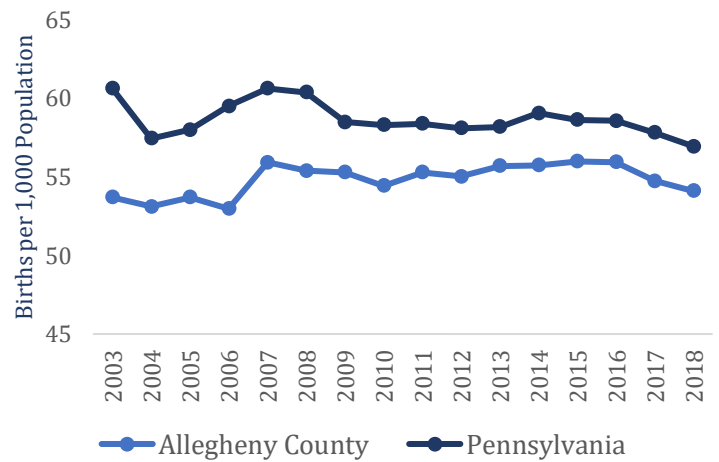
### Birth and Fertility Key Findings

- There were 12,816 resident live births in Allegheny County, resulting in a crude birth rate of 10.5 per 1,000 population, slightly lower than last year (10.6 per 1,000).
- The 2018 PA crude birth rate was 10.6 per 1,000 population, also lower than 2017 (10.8 per 1,000)
- Since 2016, the Allegheny County birthrate was trending downward, with an average annual percent change (AAPC) of -1.45%; however, this change is not statistically different.
- The Allegheny County general fertility rate was 54.1 per 1,000 women aged 15-44 years, lower than 2017 (54.7 per 1,000).
- From 2003 through 2018, the general fertility rate for Allegheny County was consistently lower than the general fertility rate for PA, with PA's rate at 56.9 per 1,000 in 2018.
- Since 2003, the general fertility rate for Allegheny County trended upward by an average of 0.4%; however, the rate has decreased by 2.0% since 2016, though not significant.

**Figure 1. Crude Birth Rate:**  
Allegheny County and Pennsylvania, 2003-2018



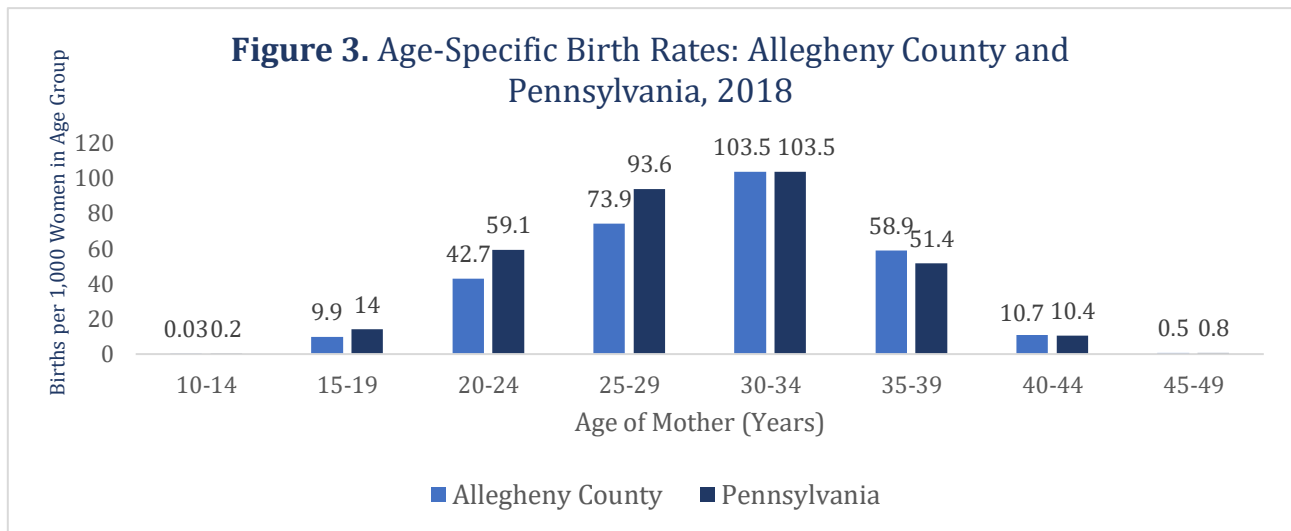
**Figure 2. General Fertility Rate:**  
Allegheny County and Pennsylvania, 2003-2018





## Maternal Age Key Findings

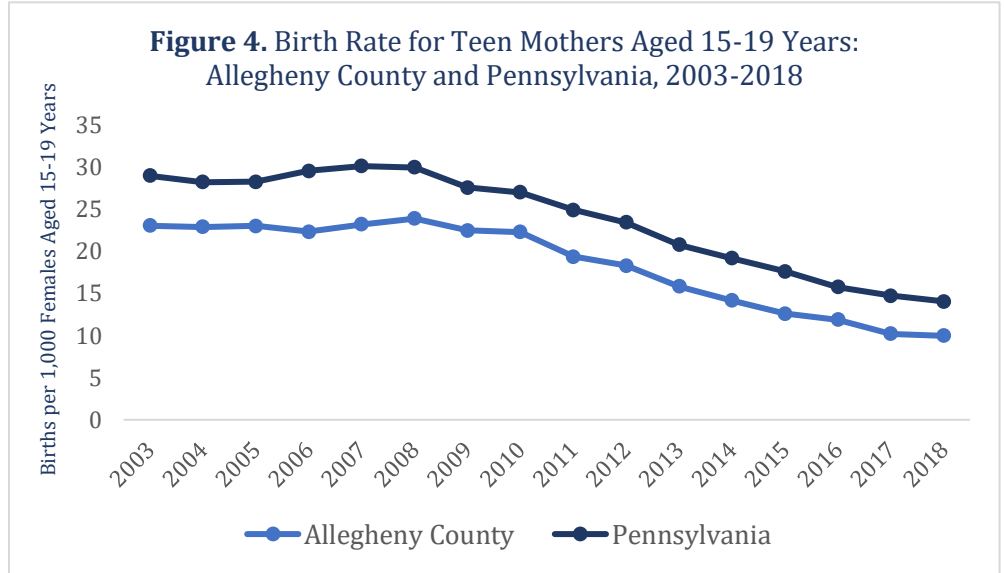
- The mean age of women who gave birth in Allegheny County was 30 years. The median age was also 30 years.
- Birth rates were greatest among women aged 30-34 years for both Allegheny County and PA. Overall, the birth rate of those younger than 30 years has decreased, while the birth rate of those 30 years and older has increased. The 35-39 age group experienced a significant increase of 1.1% since 2003, and for women aged 45 years and older, has significantly increased by 2.7%.



## Teen Birth Key Findings

- Teen births comprised 2.7% of all live births in Allegheny County, which was less than the state's percentage of teen births (4.1%).
- The percentage of teen births in Allegheny County decreased from 2017 (2.8%).
- From 2003 to 2018, the overall average annual percent decrease per year was 5.27%. This decrease was even more apparent from 2010 to 2018, with a significant average annual percent change (APC) of -10.32%.
- Of all live births, Black mothers made up the largest proportion of teen mothers (7.8%), while white mothers made up the smallest proportion of teen mothers (1.4%).
- The rate of births to teen mothers in Allegheny County decreased from 23.0 per 1,000 females aged 15-19 years in 2003 to 9.9 per 1,000 females aged 15-19 years in 2018 (Figure 4).

- Teen mothers had higher rates of being enrolled in WIC (65.5% vs. 20.7%) and Medicaid (74.4% vs. 28.3%) compared to non-teen mothers.
- Non-teen mothers more commonly intended to breastfeed (80.1% vs. 61.1%) and had higher rates of being enrolled in private insurance (71.7% vs. 25.8%).
- Teen mothers were almost 50% more likely to have a baby with LBW compared to non-teen mothers (RR=1.48, 95%CI: (1.06, 2.07), p=0.0194).



## Most Popular Names

**Table 1.** Top 20 Most Popular Names of Children by Sex of Child: Allegheny County, 2018

Sex of Child					
Male			Female		
Ranking	Name	Number	Ranking	Name	Number
1	Mason	67	1	Charlotte	75
2	Benjamin	58	2	Olivia	64
2	Jack	58	3	Ava	59
2	William	58	4	Sophia	53
5	Liam	57	5	Emma	48
6	Logan	56	6	Harper	44
7	Noah	49	7	Ella	42
8	James	46	8	Amelia	41
8	Owen	46	9	Nora	40
10	Michael	45	10	Aria	36
11	Alexander	44	11	Isabella	35
11	Leo	44	11	Mia	35
13	Samuel	43	13	Avery	34
14	Wyatt	41	14	Evelyn	31
15	Anthony	40	14	Lily	31
15	Charles	40	14	Mila	31
15	Jacob	40	17	Abigail	30
15	Joseph	40	18	Elizabeth	29
19	Henry	39	18	Grace	29
19	Jackson	39	18	Madison	29

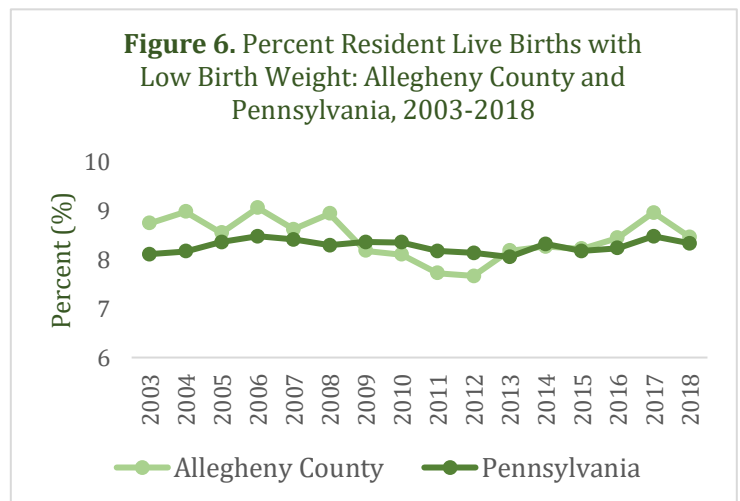
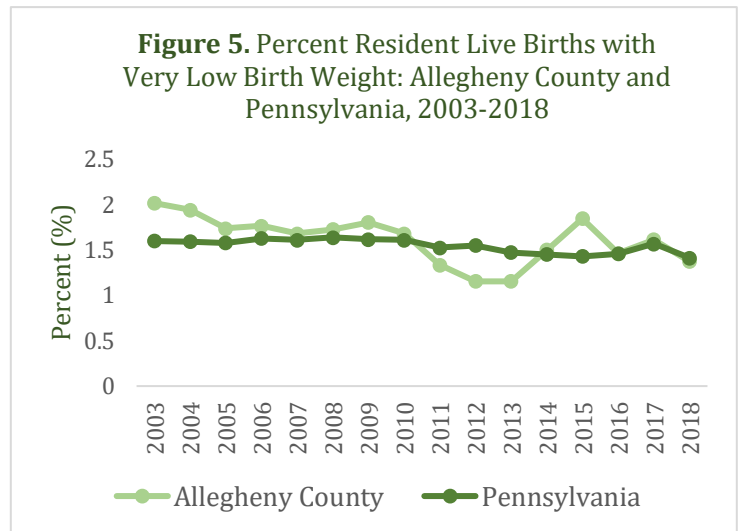


## Birth Outcomes

### Birthweight Key Findings

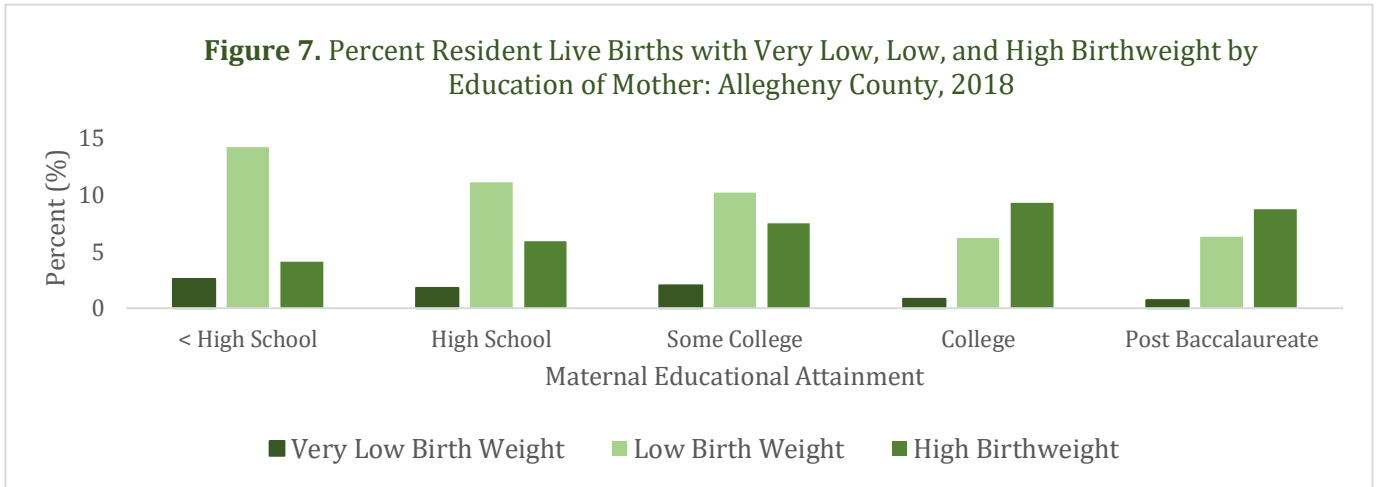
\*VLBW is defined as <1500g (3.3lbs), LBW is defined as <2500g (5.5lbs), normal birthweight is defined as weighing between 2500g and 4000g (5.5-8.8lbs), and high birthweight (HBW) is defined as >4000g (8.8lbs).

- The majority (83.7%) of all live births in 2018 were a normal birthweight (2500g-4000g).
- 8.6% of all live births were LBW, lower than 2017 (9.8%).
- 1.4% of all live births were VLBW.
- The percentage of LBW births in the county increased significantly by 1.9% since 2011 (APC: 1.86%).
- From 2003 to 2018, the overall trend of VLBW infants in Allegheny County decreased significantly (APC: -1.94%).
- Mothers aged 20-24 years had the highest percentage of VLBW infants (1.9%), while mothers aged 15-19 years had the highest percentage of LBW infants (12.1%).
- The racial group with the highest percentage of LBW (14.8%) and VLBW (2.9%) children was Black, down from 2017 (15.4% and 4.0%).
- Asian/Pacific Islander mothers had the largest proportion of normal birthweight infants (87.4%).
- Mothers who smoked during pregnancy (7.5% of mothers) were 2.58 times more likely to have a LBW and VLBW and infant compared to mothers who never smoked [(RR=2.58, 95%CI: (2.17,3.06), p<0.0001) and (RR=1.75, 95%CI: (1.14,2.72), p=0.018)].





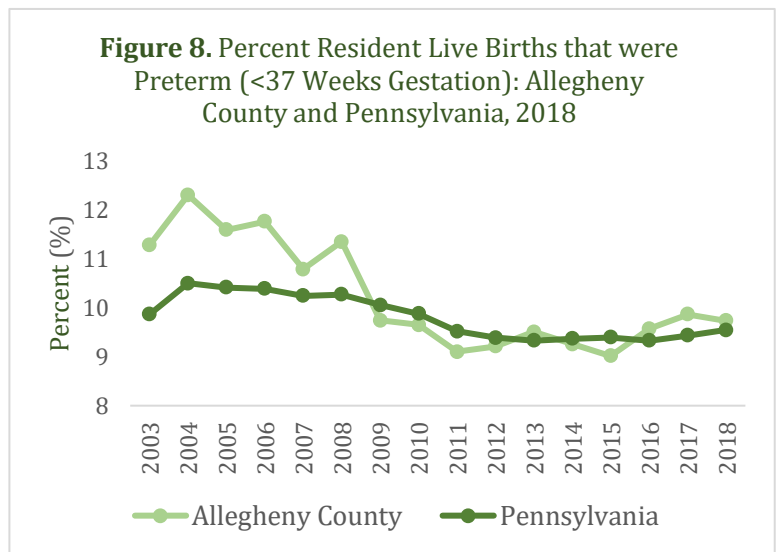
- VLBW and LBW decreased with increasing educational attainment, while HBW increased.



## Preterm Birth Key Findings

*\*Preterm birth is defined as <37 weeks gestation. Full term is defined as greater than or equal to 37 weeks gestation.*

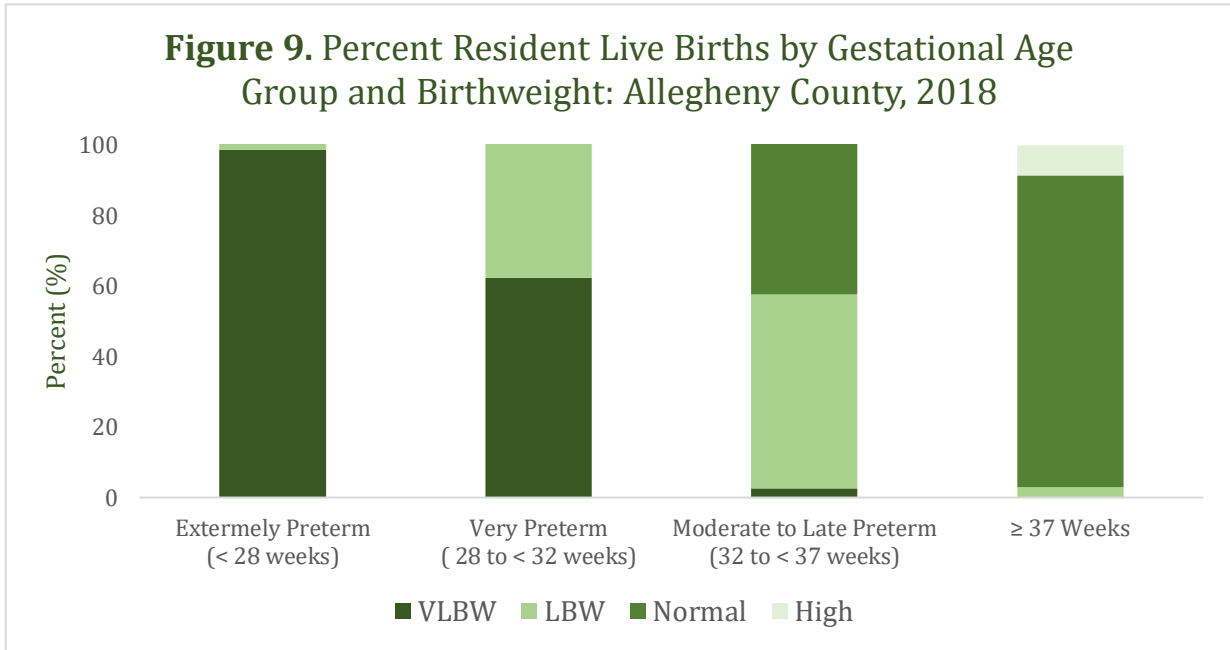
- 9.7% of all live births in 2018 were considered preterm, which is above the state's percentage of preterm birth (9.5%).
- While preterm births increased from 2016 to 2018 (8.6% to 9.5%), the overall trend since 2003 was downward, with a significant average annual percent change (APC) of -1.92%.



- Black mothers had the highest proportion of preterm births (15.1%) compared to all other races, while White mothers had the smallest proportion of preterm births (8.5%).
- The disparity in preterm birth incidence between Black and White mothers decreased since 2017 (Difference of 6.8% in 2017 to 5.3% in 2018). While preterm birth incidence for White mothers remained unchanged from 2017 to 2018 (8.4%), the incidence for Black mothers decreased 2017 to 2018 (15.1% to 13.7%), resulting in a smaller disparity.



- Black mothers had the greatest proportions of extremely and very preterm and moderate to late preterm births compared to all other races.



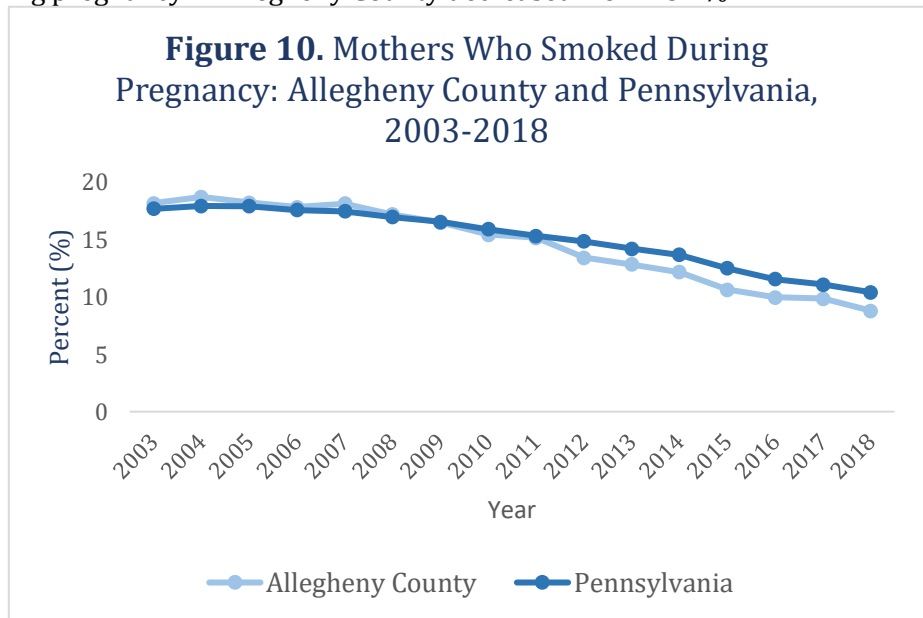


# Health Behaviors

## Smoking/Cessation Key Findings

Cessation is defined as when the mother reported smoking at least one cigarette in the three months prior to pregnancy but reported smoking zero cigarettes during the length of her pregnancy.

- 8.8% of Allegheny County mothers in 2018 smoked at least one cigarette during their pregnancy, lower than the 9.9% who smoked in 2017.
- Mothers aged 20-24 years had the largest proportion of smoking during pregnancy (16.7%), while mothers aged 40-44 years had the smallest proportion (5.2%).
- The percent of smoking during pregnancy in Allegheny County decreased from 18.1% in 2003 to 8.8% in 2018, while decreasing from 17.7% in 2003 to 10.4% in 2018 in PA.
- Mothers who identified as Multirace had the largest proportion of smoking during pregnancy (16.1%), while Hispanic mothers had the smallest proportion of smoking during that time (6.3%).
- Out of the 1,368 mothers who smoked in the three months prior to pregnancy, 253 (18.6%) women did not smoke during their pregnancy, while 1,107 (81.4%) women smoked at least one cigarette during their pregnancy.
- Mothers who smoked at least one cigarette during pregnancy were 1.8 times more likely (RR=1.77, 95% CI: (1.47, 2.15)) to experience a preterm birth compared to mothers who did not smoke during pregnancy.
- Mothers who smoked at least one cigarette during pregnancy had a higher percentage of extremely, very, and moderate to late preterm births compared to mothers who did not smoke during their pregnancy.



- Mothers aged 15-19 and 20-24 years of age had the highest proportion of smoking cessation (25.8%); they also had the highest proportion of smokers, and mothers aged 35-39 years of age had the smallest rate of cessation (15.9%).
- As educational attainment increased, the percentage of smoking cessation increased. While 7.9% of mothers with less than high school education quit smoking during pregnancy, 45.2% of college educated mothers quit.

### Breastfeeding Key Findings

- Among the 10,168 women with a live birth in Allegheny County and known breastfeeding intent, 80.9% intend to breastfeed.
- From 2003 through 2018, the percent of mothers who intend to breastfeed increased for both Allegheny County and PA (APC: 2.25% and 2.17%, respectively).
- In Allegheny County, the percent of mothers with intention to breastfeed increased from 60.1% in 2003 to 80.9% in 2018.
- From 2003 through 2018, mothers who identified as Asian/Pacific Islander consistently had the largest percentage of intention to breastfeed (96.5% in 2018), while mothers who identified as Black consistently had the smallest percentage (67.3% in 2018).
- The age group with the largest percent of intention to breastfeed was 35-39 years of age (86.3%), while the age group with the lowest percent of intention to breastfeed was 15-19 years of age (61.1%).

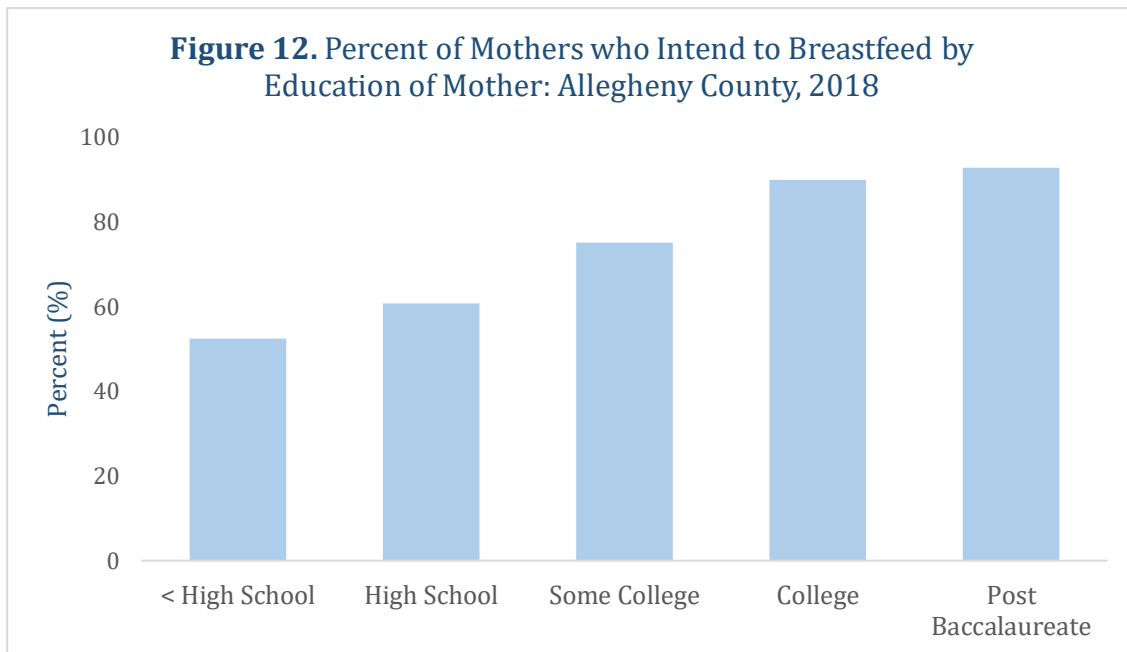
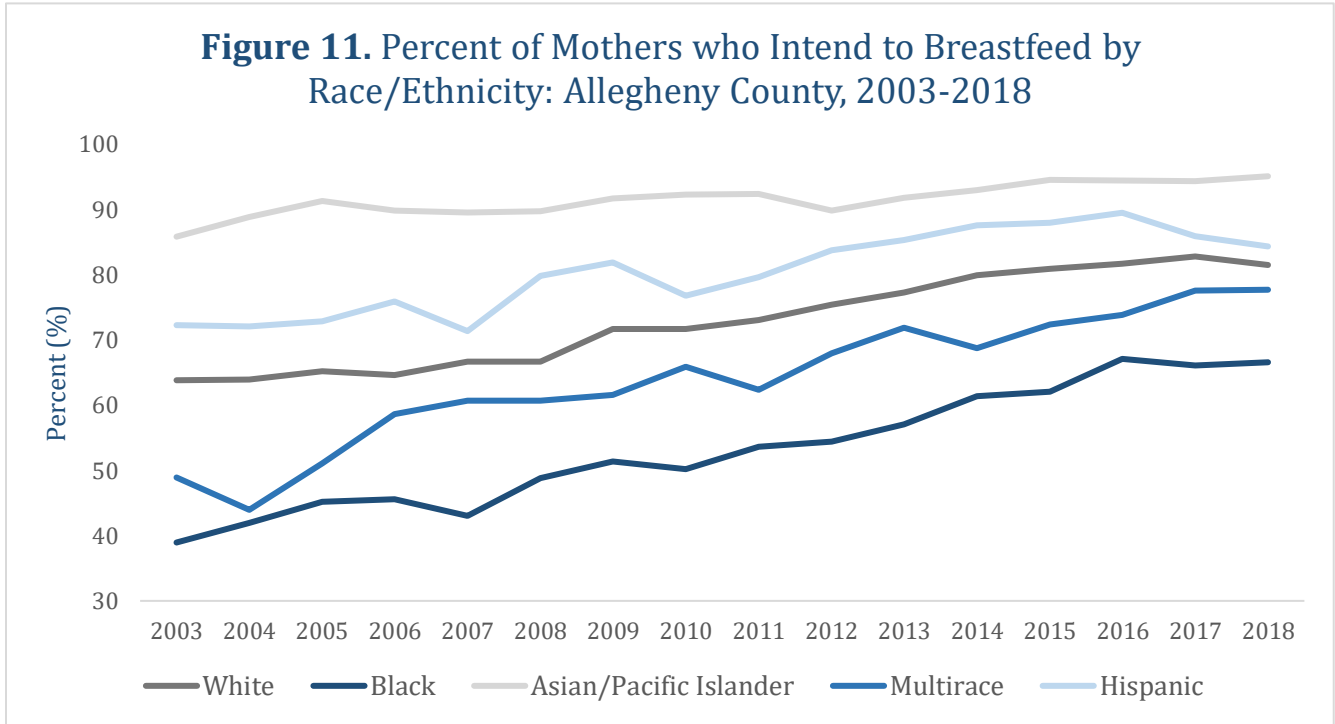




# 2018 Allegheny County Birth Report

August 2020

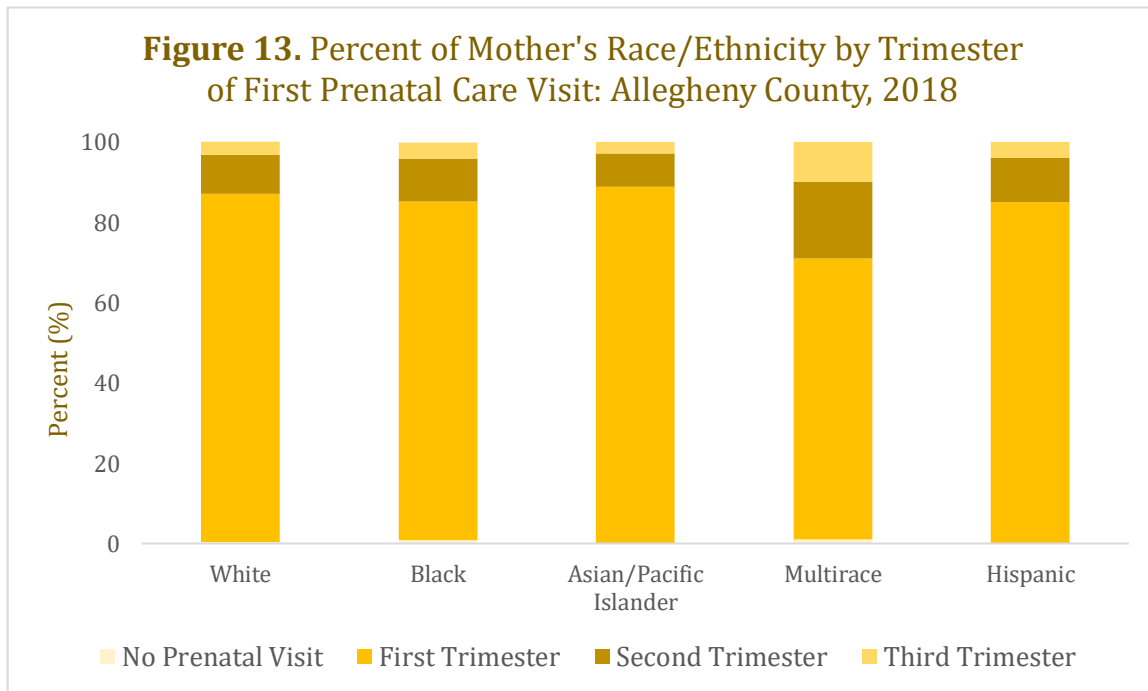
- About 54% of mothers with less than a high school education intended to breastfeed compared to 94.2% of mothers with a post baccalaureate degree.



## Health Care

### Trimester of and Prenatal Care

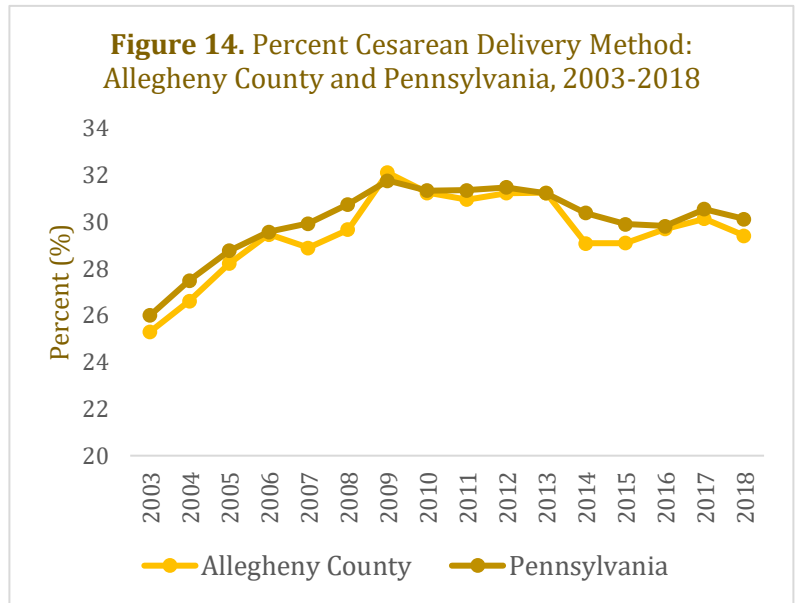
- Out of the 12,007 mothers with known trimester of first prenatal care visit, the majority (85.9%) received care in the first trimester, greater than PA's percentage of 73.9% in 2018.
- 58 (0.5%) mothers with known trimester of first prenatal care visit did not receive any prenatal care during pregnancy, which is smaller than PA's percentage (1.8%).
- Mothers aged 35- 39 years had the largest proportion of first prenatal care visits in the first trimester (88.1%), while mothers aged 15-19 years had the smallest proportion (80.9%).
- Multirace mothers had the lowest percentage of first prenatal care visits in the first trimester (70.0%), while Asian/Pacific Islander mothers had the highest percentage (88.8%).
- Prenatal care during the first trimester increased significantly with increasing education level of the mother (77.9% for less than high school, 89.7% for post baccalaureate).





## Delivery Method Key Findings

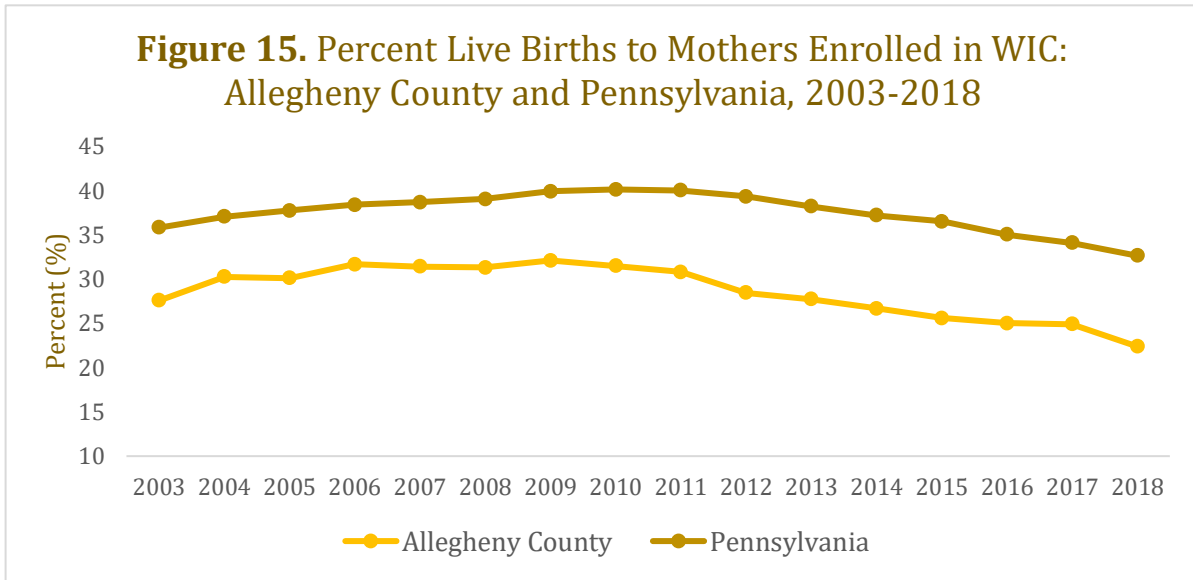
- Among births in Allegheny County in 2018, 70.6% were delivered vaginally, and 29.4% by Cesarean (29.4%), comparable to the rates in PA (69.9% and 30.1%).
- The number of Cesarean deliveries in Allegheny County increased by 0.25% since 2015.
- The percent of Cesarean delivery increased, and vaginal delivery decreased as age of mother increased for mothers in both Allegheny County and in PA.
- Delivery method did not differ significantly by race or education level of the mother.



## WIC Enrollment Key Findings

- Out of all live births in 2018, 22.4% of Allegheny County mothers were enrolled in WIC, which is less than the 32.6% of mothers in PA, and both decreased slightly from 2017.
- From 2003 through 2009, the percent of Allegheny County mothers enrolled in WIC increased from 27.6% to 32.1% but has since decreased since 2009 to 2018 (22.4%) by a significant average of 3.77% per year.
- The percent of mothers enrolled in WIC was consistently smaller for Allegheny County compared to PA from 2003 through 2018.
- Mothers aged 15-19 years had the greatest percentage of WIC enrollment (66.9%), while mothers aged 35-39 years had the smallest percentage (12.7%).
- Black mothers had the highest percentage of enrollment (50.3%), while White mothers had the lowest percentage of enrollment (14.1%).
- Among mothers with less than high school education, 56.2% were enrolled in WIC, while only 2.1% of mothers with a post baccalaureate degree were enrolled in WIC.



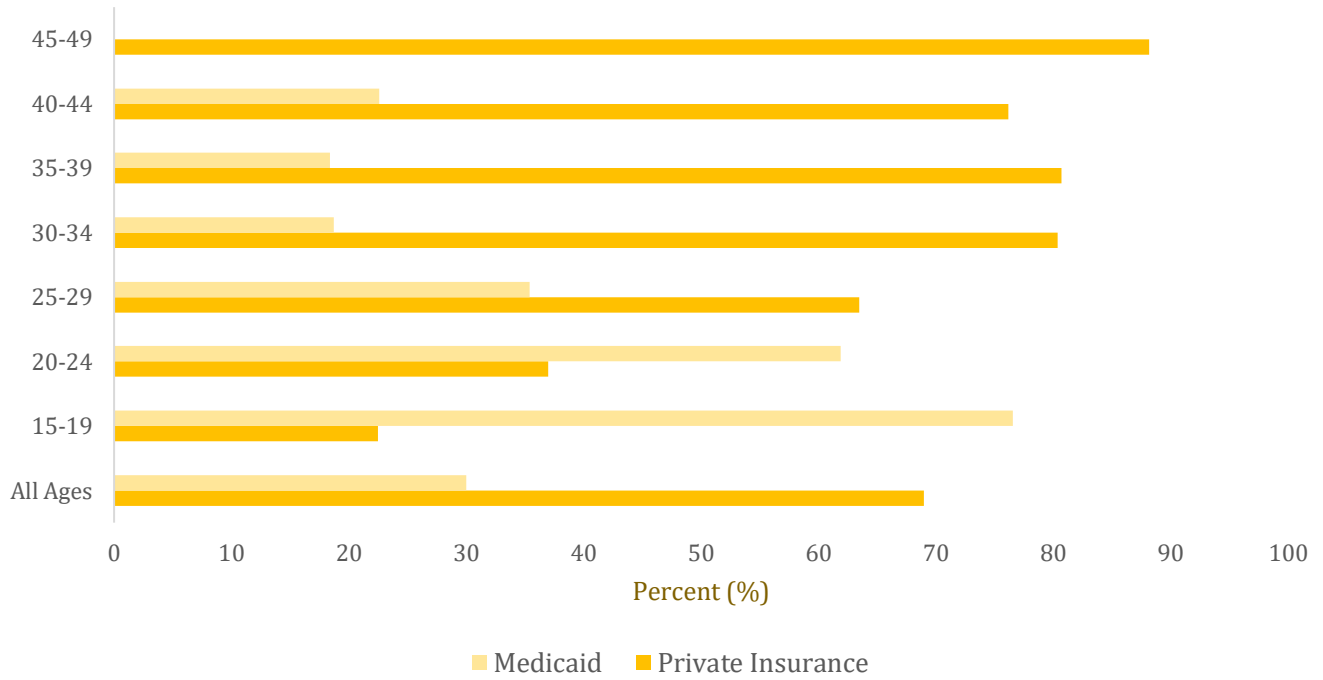


## Principal Source of Medical Care Payment Key Findings

- Out of the 12,476 resident live births with a known principal source of medical care payment, 68.7% were to mothers with private insurance, 30.4% were to mothers with Medicaid, and 1.0% were to mothers who self-paid or had other payment options.
- The percentage of mothers with Medicaid in Allegheny County increased by 1% since 2017.
- Since 2010, the number of mothers using Medicaid insurance for pregnancy care increased by 2.55%.
- As the age of the mother increased, the percent with private insurance generally increased, and the percent with Medicaid decreased.
- As mother’s education increased, the percent of mothers with private insurance increased while the percent of mothers with Medicaid decreased.



**Figure 16. Percent Live Births by Principal Source of Payment and Age of Mother: Allegheny County, 2018**





# Tables

The tables presented in this report exclude missing values from calculations and reported totals. Additionally, race categories include both Hispanic and non-Hispanic ethnicity. Therefore, the column totals do not reflect the total sum of race in the county. ‘Other’ was not included in total race counts. Birthweight categories are also not mutually exclusive, as VLBW is a subset of LBW. Observations with less than 10 events are not statistically reliable and are therefore censored.

**Table 2. Resident live births, crude birth rate, and general fertility rate: Allegheny County and Pennsylvania, 2003-2018**

Year	Allegheny County					Pennsylvania				
	Number Live Births	Resident Population	Crude Birth Rate <sup>a,c</sup>	15-44 Population	General Fertility Rate <sup>b,c</sup>	Number Live Births	Resident Population	Crude Birth Rate <sup>a,c</sup>	15-44 Population	General Fertility Rate <sup>b,c</sup>
2003	13,561	1,261,303	10.8	252,627	53.7	145,485	12,365,455	11.8	2,517,212	57.8
2004	13,203	1,250,867	10.6	248,702	53.1	144,194	12,406,292	11.6	2,510,986	57.4
2005	13,002	1,235,841	10.5	242,234	53.7	145,033	12,429,616	11.7	2,501,821	58.0
2006	12,774	1,223,411	10.4	241,208	53.0	148,706	12,440,621	12.0	2,499,979	59.5
2007	13,368	1,219,210	11.0	239,102	55.9	150,322	12,432,792	12.1	2,480,627	60.6
2008	13,140	1,215,103	10.8	237,344	55.4	148,934	12,448,279	12.0	2,468,086	60.3
2009	13,100	1,218,494	10.8	237,041	55.3	145,472	12,604,767	11.5	2,488,188	58.5
2010	12,881	1,223,348	10.5	236,721	54.4	142,370	12,702,379	11.2	2,442,538	58.3
2011	13,098	1,227,066	10.7	237,007	55.3	142,021	12,742,886	11.1	2,433,256	58.4
2012	13,089	1,229,338	10.6	237,924	55.0	140,873	12,763,536	11.0	2,425,630	58.1
2013	13,291	1,231,527	10.8	238,711	55.7	140,424	12,773,801	11.0	2,414,538	58.2
2014	13,289	1,231,255	10.8	238,534	55.7	142,113	12,787,209	11.1	2,407,045	59.0
2015	13,308	1,230,459	10.8	237,807	56.0	140,727	12,802,503	11.0	2,400,883	58.6
2016	13,222	1,225,365	10.8	236,463	55.9	139,536	12,784,227	10.9	2,383,505	58.5
2017	12,958	1,223,048	10.6	236,792	54.7	137,771	12,805,534	10.8	2,383,721	57.8
2018	12,816	1,218,452	10.5	236,920	54.1	135,677	12,807,060	10.6	2,383,378	56.9

<sup>a</sup>Crude birth rate is per 1,000 population

<sup>b</sup>General fertility rate is per 1,000 women aged 15 through 44 years

<sup>c</sup>See Technical Notes for calculations of crude birth rate and general fertility rate



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**Table 3. Resident live births by birthweight category and maternal age and maternal race/ethnicity: Allegheny County, 2018**

	Total Births	Birthweight								Missing Birthweight <sup>e</sup>
		VLBW <sup>a</sup>		LBW <sup>b</sup>		Normal <sup>c</sup>		High <sup>d</sup>		
		Number	% <sup>e</sup>	Number	%	Number	%	Number	%	
<b>Age of Mother</b>										
All Ages <sup>f</sup>	12,613	176	1.4	1,083	8.6	10,551	83.7	979	8.3	203
10-14	1	ND <sup>g</sup>	ND	ND	ND	ND	ND	ND	ND	0
15-19	339	ND	1.5	41	12.1	285	84.1	13	3.8	9
20-24	1,597	31	1.9	160	10.0	1,359	85.1	78	4.9	23
25-29	3,426	55	1.6	320	9.3	2,880	84.1	226	6.6	46
30-34	4,643	47	1.0	330	7.1	3,891	83.8	422	9.1	81
35-39	2,237	30	1.3	187	8.4	1,837	82.1	213	9.5	38
40-44	347	ND	ND	40	11.5	281	81.0	26	7.5	4
45-49	17	ND	ND	ND	ND	14	82.4	ND	ND	0
50 & Over	6	ND	ND	ND	ND	ND	ND	ND	ND	0
<b>Race/Ethnicity<sup>h</sup></b>										
White	8,679	80	0.9	590	6.8	7,279	83.9	810	9.3	132
Black	2,517	74	2.9	373	14.8	2,052	81.5	92	3.7	48
Asian/PI <sup>i</sup>	818	12	1.5	67	8.2	715	87.4	36	4.4	15
Multirace	320	ND	ND	25	7.8	271	84.7	24	7.5	1
Hispanic <sup>j</sup>	219	ND	ND	23	7.9	248	84.6	22	7.5	3

<sup>a</sup>VLBW, very low birthweight, is defined as birthweight < 1,500 grams

<sup>b</sup>LBW, low birthweight, is defined as birthweight < 2,500 grams

<sup>c</sup>2,500 grams ≤ Normal birthweight < 4,000 grams

<sup>d</sup>High birthweight is defined as ≥ 4,000 grams

<sup>e</sup>Missing records excluded from calculations

<sup>f</sup>There are 2 missing observations for age of mother

<sup>g</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>h</sup>'Other' not included in total race counts

<sup>i</sup>Asian/PI = Asian/Pacific Islander

<sup>j</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race

\*Note: LBW is defined as any birth with a birthweight less than 2500g, therefore VLBW births are included among LBW counts



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**Table 4. Resident live births to teen mothers (15-19 years) and non-teen mothers (20 years and older) by maternal race/ethnicity and smoking during pregnancy: Allegheny County, 2018**

	Total Births	Teen Mothers		Non-Teen Mothers		Missing <sup>a</sup>
		Number	% <sup>a</sup>	Number	%	Number
<b>County, total</b>	12,814	348	2.7	12,466	97.3	2
<b>PA, total</b>	135,677	5,574	4.1	130,103	95.9	NP <sup>b</sup>
<b>Race/Ethnicity<sup>d</sup></b>						
<b>White</b>	8,810	119	1.4	8,691	98.6	1
<b>Black</b>	2,565	201	7.8	2,364	92.2	0
<b>Asian/Pacific Islander</b>	833	ND <sup>c</sup>	ND	830	99.6	0
<b>Multirace</b>	321	18	5.6	303	94.4	0
<b>Hispanic<sup>e</sup></b>	296	12	4.1	284	95.9	0
<b>Smoking During Pregnancy</b>						
<b>Yes</b>	1,115	29	2.6	1,086	97.4	0
<b>No</b>	11,560	308	2.7	11,252	97.3	0
<b>Unknown</b>	140	11	7.6	129	92.4	1

<sup>a</sup>Missing records for teen births excluded from calculations

<sup>b</sup>NP = Not provided information

<sup>c</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>d</sup>'Other' not included in total race counts

<sup>e</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race



## 2018 Allegheny County Birth Report

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**Table 5. Resident live births by preterm birth status (< 37 weeks gestation) and maternal age, maternal race/ethnicity, and smoking status during pregnancy: Allegheny County, 2018**

	Preterm Birth (<37 weeks gestation)			
	Total Births	Number	% <sup>a</sup>	Missing Gestation
<b>County, total</b>	12,697	1,236	9.7	119
<b>PA, total</b>	135,147	12,896	9.5	NP <sup>b</sup>
<b>Age of Mother<sup>c</sup></b>				
10-14	1	ND <sup>d</sup>	ND	0
15-19	344	41	11.9	4
20-24	1,604	160	10.0	16
25-29	3,438	336	9.8	34
30-34	4,689	425	9.1	35
35-39	2,249	218	9.7	26
40-44	347	50	14.4	4
45-49	17	ND	ND	0
50 & Over	6	ND	ND	0
<b>Race/Ethnicity<sup>e</sup></b>				
White	8,755	740	8.5	56
Black	2,528	382	15.1	37
Asian/ Pacific Islander	816	57	7.0	17
Multirace	320	30	9.4	1
Hispanic <sup>f</sup>	294	27	9.2	2
<b>Smoking During Pregnancy</b>				
Yes	1,115	172	15.4	10
No	11,560	1,045	9.0	105
Unknown	137	0	ND	4

<sup>a</sup>Missing gestation records excluded from calculations

<sup>b</sup>NP = Not provided information

<sup>c</sup>There are 2 missing observations for age of mother

<sup>d</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>e</sup>'Other' not included in total race counts

<sup>f</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race





## 2018 Allegheny County Birth Report

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**Table 6. Resident live births by gestational age group and maternal age, maternal race/ethnicity, and smoking status during pregnancy: Allegheny County, 2018**

	Total Births	Preterm Birth								
		Extremely Preterm ( < 28 weeks)		Very Preterm (28 to < 32 weeks)		Moderate to Late Preterm (32 to < 37 weeks)		Full-Term (>=37 weeks)		Missing Gestation <sup>a</sup>
		Number	% <sup>a</sup>	Number	%	Number	%	Number	%	Number
<b>County, total</b>	12,697	85	0.7	115	0.9	1,036	8.2	11,461	90.3	119
<b>Age of Mother<sup>b</sup></b>										
<b>10-14</b>	1	ND <sup>c</sup>	ND	ND	ND	ND	ND	Nd	ND	0
<b>15-19</b>	344	ND	ND	ND	ND	34	9.9	303	88.1	4
<b>20-24</b>	1,604	17	1.1	18	1.1	125	7.8	1,444	90.0	16
<b>25-29</b>	3,438	30	0.9	26	0.8	280	8.1	3,102	90.2	34
<b>30-34</b>	4,689	21	0.5	39	0.8	365	7.8	4,264	90.9	35
<b>35-39</b>	2,249	12	0.5	22	1.0	184	8.2	2,031	90.3	26
<b>40-44</b>	347	ND	ND	ND	ND	42	12.1	297	85.6	4
<b>45-49</b>	17	ND	ND	ND	ND	ND	ND	14	82.4	0
<b>50 &amp; Over</b>	6	ND	ND	ND	ND	ND	ND	ND	ND	0
<b>Race/Ethnicity<sup>d</sup></b>										
<b>White</b>	8,755	36	0.4	63	0.7	641	7.3	8,015	91.6	56
<b>Black</b>	2,528	42	1.7	41	1.6	299	11.8	2,146	84.9	37
<b>Asian/PI<sup>e</sup></b>	816	ND	ND	ND	ND	49	6.0	759	93.0	17
<b>Multirace</b>	320	ND	ND	ND	ND	26	8.1	290	90.6	1
<b>Hispanic<sup>f</sup></b>	294	ND	ND	ND	ND	21	7.1	267	90.8	2
<b>Smoking During Pregnancy</b>										
<b>Yes</b>	1,115	14	1.3	14	1.3	144	13.0	933	84.4	10
<b>No</b>	11,560	65	0.6	99	0.9	881	7.7	10,410	90.9	105
<b>Unknown</b>	137	ND	ND	ND	ND	20	13.8	120	82.8	4

<sup>a</sup>Missing gestation records excluded from calculations

<sup>b</sup>There are 2 missing observations for age of mother

<sup>c</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>d</sup>'Other' not included in total race counts

<sup>e</sup>Asian/PI = Asian/Pacific Islander

<sup>f</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race



## 2018 Allegheny County Birth Report

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**Table 7: Resident live births by smoking status, maternal age, maternal race/ethnicity and maternal education: Allegheny County, 2018**

Age of Mother	Total Births	Smoking Status During Pregnancy <sup>a</sup>				
		Yes		No		Missing Smoking <sup>b</sup>
		Number	% <sup>b</sup>	Number	%	
<b>All Ages<sup>c</sup></b>	12,674	1,115	8.8	11,559	91.2	140
<b>10-14</b>	1	ND	ND <sup>d</sup>	ND	ND	0
<b>15-19</b>	337	29	8.6	308	91.4	11
<b>20-24</b>	1,594	243	15.2	1,351	84.8	26
<b>25-29</b>	3,428	371	10.8	3,057	89.2	44
<b>30-34</b>	4,694	303	6.5	4,391	93.5	30
<b>35-39</b>	2,250	145	6.4	2,105	93.6	25
<b>40-44</b>	347	23	6.6	324	93.4	4
<b>45-49</b>	17	ND	ND	17	100.0	0
<b>50 &amp; Over</b>	6	ND	ND	ND	ND	0
<b>Race/Ethnicity<sup>e</sup></b>						
<b>White</b>	8,755	742	8.5	8,013	89.7	56
<b>Black</b>	2,505	313	12.5	2,192	87.5	60
<b>Asian/Pacific Islander</b>	830	ND	ND	827	99.6	3
<b>Multirace</b>	312	47	15.0	266	85.0	8
<b>Hispanic<sup>f</sup></b>	290	14	4.8	276	95.2	6
<b>Education of Mother<sup>g</sup></b>						
<b>&lt; High School</b>	601	176	29.3	425	70.7	21
<b>High School</b>	2,404	488	20.3	1,916	79.7	36
<b>Some College</b>	2,917	378	13.0	2,539	87.0	50
<b>College</b>	3,619	51	1.4	3,568	98.6	9
<b>Post Baccalaureate</b>	2,968	12	0.4	2,956	99.6	6

<sup>a</sup>Smoking status is defined as smoking at least one cigarette in the first, second, or last trimester of pregnancy

<sup>b</sup>Missing smoking status records excluded from calculations

<sup>c</sup>There are 2 missing observations for age of mother

<sup>d</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>e</sup>'Other' not included in total race counts

<sup>f</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race

<sup>g</sup>There are 185 missing observations for education of mother



## 2018 Allegheny County Birth Report

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**Table 8: Resident live births by smoking cessation and maternal age, maternal race/ethnicity, and maternal education: Allegheny County, 2018**

Age of Mother	Total Births <sup>c</sup>	Smoking Cessation <sup>a</sup>				Missing Cessation <sup>b</sup> Number
		Yes		No		
		Number	% <sup>c</sup>	Number	%	
<b>All Ages<sup>d</sup></b>	1,360	253	18.6	1,107	81.4	8
<b>10-14</b>	0	0	ND <sup>e</sup>	0	ND	0
<b>15-19</b>	36	8	22.2	28	77.8	0
<b>20-24</b>	310	67	21.6	243	78.4	2
<b>25-29</b>	462	94	20.4	368	79.6	4
<b>30-34</b>	356	56	15.7	300	84.3	2
<b>35-39</b>	167	23	13.8	144	86.2	0
<b>40-44</b>	28	5	ND	23	82.1	0
<b>45-49</b>	0	0	ND	0	ND	0
<b>50 &amp; Over</b>	1	0	ND	1	ND	0
<b>Race/Ethnicity<sup>f</sup></b>						
<b>White</b>	924	184	19.9	740	80.1	3
<b>Black</b>	348	41	11.8	307	88.2	3
<b>Asian/Pacific Islander</b>	5	ND	ND	ND	ND	0
<b>Multirace</b>	72	25	34.7	47	65.3	2
<b>Hispanic<sup>g</sup></b>	21	ND	ND	14	66.7	1
<b>Education of Mother<sup>h</sup></b>						
<b>&lt; High School</b>	190	15	7.9	175	92.1	2
<b>High School</b>	570	86	15.1	484	84.9	2
<b>Some college</b>	473	98	20.7	375	79.3	4
<b>College</b>	93	42	45.2	51	54.8	0
<b>Post Baccalaureate</b>	24	12	50.0	12	50.0	0

<sup>a</sup>Smoking cessation is defined as when a woman changed from reporting smoking at least one cigarette in the three months prior to pregnancy to reporting never smoking during their pregnancy

<sup>b</sup>Missing cessation records were excluded from calculations

<sup>c</sup>1,368 is the number of women who smoked at least one cigarette in the three months prior to pregnancy

<sup>d</sup>There are 2 missing observations for age of mother

<sup>e</sup>ND = Not Displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>f</sup>'Other' not included in total race counts

<sup>g</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race

<sup>h</sup>There are 185 missing observations for education of mother



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**Table 9: Resident live births by intent to breastfeed and maternal age, maternal race/ethnicity, and maternal education: Allegheny County, 2018**

Age of Mother	Total Births	Intend to Breastfeed				Unknown Breastfeeding <sup>a</sup>
		Yes		No		
		Number	% <sup>a</sup>	Number	%	
<b>All Ages<sup>b</sup></b>	12,563	10,168	80.9	2,395	19.1	250
<b>10-14</b>	1	ND	ND <sup>c</sup>	ND	ND	0
<b>15-19</b>	342	209	61.1	133	38.9	6
<b>20-24</b>	1,587	1,088	68.6	499	31.4	33
<b>25-29</b>	3,414	2,680	78.5	734	21.5	57
<b>30-34</b>	4,621	3,955	85.6	666	14.4	103
<b>35-39</b>	2,231	1,926	86.3	305	13.7	44
<b>40-44</b>	344	293	85.2	51	14.8	7
<b>45-49</b>	17	13	76.5	ND	ND	0
<b>50 &amp; Over</b>	6	ND	ND	ND	ND	0
<b>Race/Ethnicity<sup>d</sup></b>						
<b>White</b>	8,618	7,177	83.3	1,441	16.7	193
<b>Black</b>	2,535	1,707	67.3	828	32.7	29
<b>Asian/Pacific Islander</b>	821	792	96.5	29	3.5	12
<b>Multirace</b>	314	244	77.7	70	22.3	7
<b>Hispanic<sup>e</sup></b>	287	242	84.3	45	15.7	9
<b>Education of Mother<sup>f</sup></b>						
<b>&lt; High School</b>	606	325	53.6	281	46.4	16
<b>High School</b>	2,392	1,478	61.8	914	38.2	47
<b>Some college</b>	2,904	2,221	76.5	683	23.5	63
<b>College</b>	3,560	3,253	91.4	307	8.6	68
<b>Post Baccalaureate</b>	2,924	2,755	94.2	169	5.8	50

<sup>a</sup>Unknown breastfeeding records excluded from calculations. There is 1 missing breastfeeding observation

<sup>b</sup>There are 2 missing observations for age of mother

<sup>c</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>d</sup>'Other' not included in total race counts

<sup>e</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race

<sup>f</sup>There are 185 missing observations for education of mother



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**Table 10: Resident live births by trimester of first prenatal visit and age of mother: Allegheny County, 2018**

Age of Mother	Total Births	Trimester in Pregnancy <sup>a</sup>						No Prenatal Visits	Missing Trimester <sup>b</sup>	
		First Trimester		Second Trimester		Third Trimester				
		Number	% <sup>b</sup>	Number	%	Number	%			Number
<b>All Ages<sup>c</sup></b>	12,007	10,312	85.9	1,204	10.3	433	3.6	58	0.5	807
<b>10-14</b>	0	ND	ND <sup>d</sup>	ND	ND	ND	ND	ND	ND	1
<b>15-19</b>	325	263	80.9	40	12.3	17	5.2	5	ND	23
<b>20-24</b>	1,514	1,250	82.6	172	11.4	86	5.7	6	ND	106
<b>25-29</b>	3,257	2,745	84.3	369	11.3	129	4.0	14	0.4	215
<b>30-34</b>	4,427	3,878	87.6	400	9.0	126	2.9	23	0.5	297
<b>35-39</b>	2,133	1,879	88.1	187	8.8	59	2.8	8	ND	142
<b>40-44</b>	330	282	85.5	33	10.0	13	3.9	2	ND	21
<b>45-49</b>	15	13	86.7	ND	ND	ND	ND	ND	ND	2
<b>50 &amp; Over</b>	6	ND	ND	ND	ND	ND	ND	ND	ND	0
<b>Race/Ethnicity<sup>e</sup></b>										
<b>White</b>	8,286	7,182	86.7	800	9.7	273	3.3	31	0.4	525
<b>Black</b>	2,395	2,022	84.4	257	10.7	96	4.0	20	0.8	170
<b>Asian/Pacific Islander</b>	760	675	88.8	63	8.3	21	2.8	ND	ND <sup>d</sup>	73
<b>Multirace</b>	303	212	70.0	58	19.1	30	9.9	ND	ND	18
<b>Hispanic<sup>f</sup></b>	274	233	85.0	30	11.0	11	4.0	ND	ND	19
<b>Education of Mother<sup>g</sup></b>										
<b>&lt; High School</b>	565	440	77.9	75	13.3	39	6.9	11	2.0	57
<b>High School</b>	2,299	1,919	83.5	257	11.2	105	4.6	18	0.8	141
<b>Some college</b>	2,800	2,343	83.7	333	11.9	109	3.9	15	0.5	167
<b>College</b>	3,426	2,995	87.4	322	9.4	103	3.0	ND	ND	202
<b>Post Baccalaureate</b>	2,788	2,502	89.7	212	7.6	72	2.6	ND	ND	186

<sup>a</sup>See Technical Notes for explanation on trimester in pregnancy calculation

<sup>b</sup>Missing trimester records excluded from calculations

<sup>c</sup>There are 2 missing observations for age of mother

<sup>d</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>e</sup>'Other' not included in total race counts

<sup>f</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race

<sup>g</sup>There are 185 missing observations for education of mother



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**Table 11: Resident live births by delivery method and age of mother: Allegheny County, 2018**

	Total Births	Method of Delivery			
		Vaginal		Cesarean	
		Total Number	%	Total Number	%
<b>County, total</b>	12,814	9,046	70.6	3,768	29.4
<b>PA, total</b>	135,635	94,795	69.9	40,840	30.1
<b>Age of Mother<sup>a</sup></b>					
<b>10-14</b>	1	0	ND <sup>b</sup>	1	ND
<b>15-19</b>	348	290	83.3	58	16.7
<b>20-24</b>	1,620	1,220	75.3	400	24.7
<b>25-29</b>	3,472	2,509	72.3	963	27.7
<b>30-34</b>	4,724	3,308	70.0	1,416	30.0
<b>35-39</b>	2,275	1,508	66.3	767	33.7
<b>40-44</b>	351	200	57.0	151	43.0
<b>45-49</b>	17	9	ND	8	ND
<b>50 &amp; Over</b>	6	2	ND	4	ND

<sup>a</sup>There are 2 missing observations for age of mother

<sup>b</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored



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**Table 12. Resident live births to mothers enrolled in WIC by maternal age, maternal race/ethnicity, and maternal education: Allegheny County, 2018**

	WIC Enrollment					
	Yes			No		Missing WIC <sup>a</sup>
	Total Births	Number	% <sup>a</sup>	Number	%	Number
<b>County, total</b>	12,534	2,806	22.4	9,728	77.6	282
<b>PA, total</b>	132,232	43,152	32.6	NP <sup>b</sup>	NP	NP
<b>Age of Mother</b>						
<b>All Ages<sup>c</sup></b>						
<b>10-14</b>	1	ND	ND <sup>d</sup>	ND	ND	0
<b>15-19</b>	341	228	66.9	113	33.1	7
<b>20-24</b>	1,575	774	49.1	801	50.9	45
<b>25-29</b>	3,393	867	25.6	2,526	74.4	79
<b>30-34</b>	4,627	598	12.9	4,029	87.1	97
<b>35-39</b>	2,229	284	12.7	1,945	87.3	46
<b>40-44</b>	346	54	15.6	292	84.4	5
<b>45-49</b>	15	ND	ND	14	93.3	2
<b>50 &amp; Over</b>	6	ND	ND	ND	ND	0
<b>Race/Ethnicity<sup>e</sup></b>						
<b>White</b>	8,659	1,217	14.1	7,442	85.9	152
<b>Black</b>	2,514	1,265	50.3	1,249	49.7	51
<b>Asian/Pacific Islander</b>	786	118	15.0	668	85.0	47
<b>Multirace</b>	308	131	42.5	177	57.5	13
<b>Hispanic<sup>f</sup></b>	289	76	26.3	213	73.7	7
<b>Education of Mother<sup>g</sup></b>						
<b>&lt; High School</b>	603	339	56.2	264	43.8	19
<b>High School</b>	2,381	1,160	48.7	1,221	51.3	59
<b>Some college</b>	2,917	998	34.2	1,919	65.8	50
<b>College</b>	3,559	209	5.9	3,350	94.1	69
<b>Post Baccalaureate</b>	2,926	60	2.1	2,866	97.9	48

<sup>a</sup> Missing WIC Enrollment records excluded from calculations

<sup>b</sup>NP = Not provided information

<sup>c</sup>There are 2 missing observations for age of mother

<sup>d</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored

<sup>e</sup>'Other' not included in total race counts

<sup>f</sup>Hispanic ethnicity includes any race and is therefore separate from total counts by race

<sup>g</sup>There are 185 missing observations for education of mother





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**Table 13. Resident live births by principal source of payment and age of mother: Allegheny County, 2018**

Age of Mother	Principal Source of Payment							
	Total Births	Private Insurance		Medicaid		Self-Pay and Other		Missing Payment <sup>a</sup>
		Number	% <sup>a</sup>	Number	%	Number	%	Number
<b>All Ages<sup>b</sup></b>	12,475	8,567	68.7	3,786	30.4	123	1.0	339
<b>10-14</b>	1	ND	ND	ND	ND	ND	ND	0
<b>15-19</b>	338	76	22.5	259	76.6	3	ND	10
<b>20-24</b>	1,591	588	37.0	985	61.9	18	1.1	29
<b>25-29</b>	3,371	2,140	63.5	1,192	35.4	39	1.2	101
<b>30-34</b>	4,604	3,703	80.4	863	18.7	38	0.8	120
<b>35-39</b>	2,213	1,785	80.7	407	18.4	21	1.2	62
<b>40-44</b>	336	256	76.2	76	22.6	ND	ND	15
<b>45-49</b>	17	15	88.2	ND	ND	ND	ND	0
<b>50 &amp; Over</b>	4	ND	ND <sup>c</sup>	ND	ND	ND	ND	2

<sup>a</sup>Missing source of payment records were excluded from calculations

<sup>b</sup>There are 2 missing observations for age of mother

<sup>c</sup>ND = not displayed; Observations with less than 10 events are not statistically reliable so are censored



## TECHNICAL NOTES

### A. SOURCES OF DATA

#### BIRTH RECORDS

The registration of birth records is the responsibility of the Pennsylvania Department of Health. Birth record information is shared with the Allegheny County Health Department through a cooperative agreement which requires the following disclaimer: "These data were supplied by the State Health Data Center, Pennsylvania Department of health, Harrisburg, Pennsylvania. The Pennsylvania Department of Health specifically disclaims responsibility for any analyses, interpretations or conclusions."

The latest revision of the U.S. Standard Certificate of Live Birth was implemented by Pennsylvania in 2003. The following indicates which items were changed to the 2003 birth certificate that are pertinent to this 2018 Allegheny County Birth Report:

*Race of the mother and the father.* These race items were changed from an open-ended question to a check box format that allows multiple races to be reported. The certificate used by Pennsylvania was also revised to collect self-designated single race data. This report used the multiple race data. Birth records prior to 2003 utilized write-ins of Hispanic for race and were coded as white. Beginning in 2003, these records were coded as other.

*Prenatal care visits.* Beginning in 2003, exact dates of first and last prenatal visit replaced only the reported month of pregnancy in which the mother began prenatal care. Since 2003, the month prenatal care began is being calculated from the last normal menses date and the date of the first prenatal care visit.

*Tobacco use.* Prior to 2003, a yes/no question and average number of cigarettes smoked per day were asked. Since 2003, this item was revised to collect the average number of cigarettes smoked per day during the three months before pregnancy and by trimester (first three months, second three months, and last three months) during pregnancy.

*Method of delivery.* Beginning in 2003, this section was revised so that the provider reports only the final route and method of delivery. Before 2003, several questions were asked including the fetal presentation at birth, whether a delivery with forceps or vacuum extraction was attempted but unsuccessful, and whether a trial of labor was attempted.

*Education.* The education item was changed from the mother being asked to report the highest grade completed to having a series of check boxes to report the highest level of education completed at the time of delivery. These check boxes include degrees completed rather than years of schooling.



*New data items.* Other new data items include infant being breastfed, principal source of payment for delivery, and WIC food received.

### Allegheny County Residence

The Pennsylvania Department of Health provides all birth certificates containing addresses to determine maternal residence. To determine whether the residence is within Allegheny County, ACHD uses a composite geocoder, which uses a multi-step algorithm based on the street address, city, state, and zip code provided in the birth file. The process of geocoding accounts for missing or less accurate data than those provided in the birth certificate. All geocoding was done using ArcGIS Pro 2.3.2 software.

## POPULATION DATA

Population estimates for the state and county were provided by the Division of Health Informatics, Pennsylvania Department of Health. These data were used to compute rates and were produced jointly by the United States Bureau of the census and the Pennsylvania State Data Center of the Pennsylvania State University at Harrisburg under the Federal-State Cooperative Program for Local Population Estimates.

Pennsylvania birth data used throughout the report were obtained from the Enterprise Data Dissemination Informatics Exchange (EDDIE)<sup>8</sup>, which is a health statistics query system that can provide data at various levels of geography and topics. Pennsylvania 2018 data were used for comparison to Allegheny County in this report.

## B. DEFINITIONS OF TERMS

**LIVE BIRTH:** According to Pennsylvania law, is the expulsion or extraction from its mother of a product of conception, irrespective of the period of gestations, which shows any evidence of life at any moment after such expulsion or extraction.

**BIRTHWEIGHT:** The first weight of the fetus or newborn after birth.

**VERY LOW BIRTHWEIGHT (VLBW):** Birthweight is under 1,500 grams.

**LOW BIRTHWEIGHT (LBW):** Birthweight is under 2,500 grams.

**NORMAL BIRTHWEIGHT:** Birthweight is greater than 2,499 and less than 4,000 grams.

**HIGH BIRTHWEIGHT (HBW):** Birthweight is 4,000 grams or greater.

**PRETERM:** A birth that occurred at less than 37 completed weeks of obstetric gestation.

**FULL TERM:** A birth that occurred at over 36 weeks obstetric gestation.

**MEDIAN AGE:** The age that falls exactly in the middle of the entire range of ages ranked in order from low to high such that 50% of the ages fall above it and 50% fall below it.



**RACE:** All data in this report are based on the race of the mother, as recommended by the National Center for Health Statistics.

**ASIAN/Pacific Islander:** Mothers and fathers were considered Asian/Pacific Islander if she or he identified as any combination of Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian or as any combination of Native Hawaiian, Guamanian or Chamorro, Samoan, or Other Pacific Islander.

**MULTIRACE:** Mothers and fathers were considered multirace if she or he identified as any combination of White, Black or African American, American Indian and Alaskan Native, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian, Native Hawaiian, Guamanian or Chamorro, Samoan, or Other Pacific Islander that would not have her or him fall into another race category.

**HISPANIC:** Mothers and fathers were considered Hispanic if she or he identified as Mexican, Mexican American, Chicana, Puerto Rican, Cuban, or Other Hispanic.

**SMOKING:** Smoking status was defined as cigarette use. A mother was considered as having smoked if she smoked at least one cigarette during any trimester of her pregnancy.

**SMOKING CESSATION:** Smoking cessation occurred when the mother reported smoking at least one cigarette in the three months prior to pregnancy to reporting smoking zero cigarettes during the length of her pregnancy.

## C. RATES/METHODS

Rates are used to make comparisons between different groups, locations, or times. Rates are calculated by converting the absolute number of events to a relative number. This conversion is made by relating the actual count of events to the population at risk in a particular area at a specific time. All rates defined in this report are computed for a one-year period.

All trend analyses were conducted using Joinpoint<sup>9</sup> software, which tests for significant trends over time. It also identifies points in time where changes in trends have occurred.

References to differences or trends being statistically significant are at the p<0.05 level. Chi-square tests were used to determine statistically significant differences. These analyses, along with summary statistics, were performed in SAS 9.4.

## FORMULAS

$$\text{Crude Birth Rate} = \frac{\text{Number of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$$

$$\text{General Fertility Rate} = \frac{\text{Number of Resident Live Births}}{\text{Total Female Resident Population Aged 15-44 Years}} \times 1,000$$

$$\text{Age-Specific Birth Rate} = \frac{\text{Number of Resident Live Births to Mothers in a Specific Age Group}}{\text{Total Female Population in Specific Age Group}} \times 1,000$$



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