

Epidemiology

Erie County Maternal, Infant, and Child Health Report, 2009-2011

ERIE COUNTY DEPARTMENT OF HEALTH
Public Health Preparedness Division



Erie County Maternal, Infant, and Child Health Report, 2009-2011

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*"Our mission is to preserve, promote, and protect
the health, safety, and well-being of the people and the environment of Erie County."*

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Note: The primary sources of data and information for this report are the Erie County Department of Health, the Bureau of Health Statistics and Research at the Pennsylvania Department of Health, the Pennsylvania State Data Center, and the United States Census Bureau. With the exception of the Erie County Department of Health, sources are not responsible for any of the analyses, interpretations, or conclusions herein.

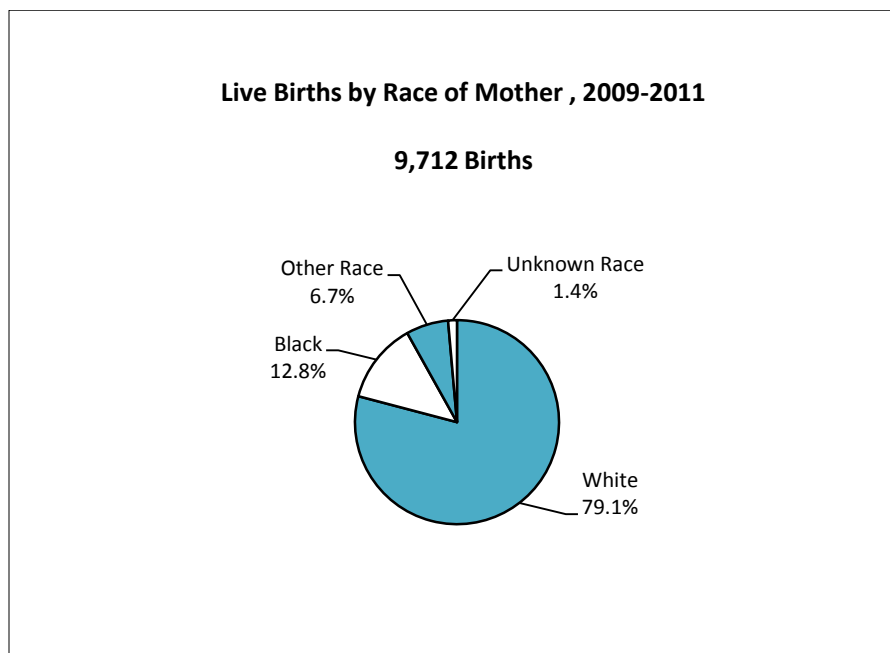
Erie County Resident Live Births

There were 9,712 resident live births reported in Erie County during the period 2009 to 2011, for a corresponding live birth rate of 11.5 births per 1,000 population. A total of 9,369 (96.5%) of these births were single births, 322 (3.3%) were twin births, and 21 (0.2%) were grouped as triplets or more births. With respect to gender, males accounted for a slight majority (51.4%) of babies.

Overall, 7,684 (79.1%) of the 9,712 resident births were to White women, 1,239 (12.8%) were to Black women, 649 (6.7%) were to women classified as Other Race, and 140 (1.4%) were to women categorized as Unknown Race (Figure 1). A total of 518 (5.3%) births were to women of Hispanic origin, of any race.

The live birth rates for the White, Black, and Hispanic populations were 10.3, 20.5, and 18.1 births per 1,000, respectively.

Figure 1. Erie County Resident Live Births by Race of Mother, 2009-2011



Erie County and Pennsylvania resident live births and age-specific birth rates for the period 2009-2011 are presented in Table 1. In both Erie County and Pennsylvania, the highest birth rate was observed for women in the 25-29 years age group (112.1 and 107.1 births per 1,000 females aged 25-29 years, respectively).

Just over three-quarters (78.5%) of all resident births during 2009-2011 occurred to women aged 20-34 years. Births to teenage mothers (under the age of 20) accounted for 10.6% of all births, compared to 14.3% of births in 1990-1992.

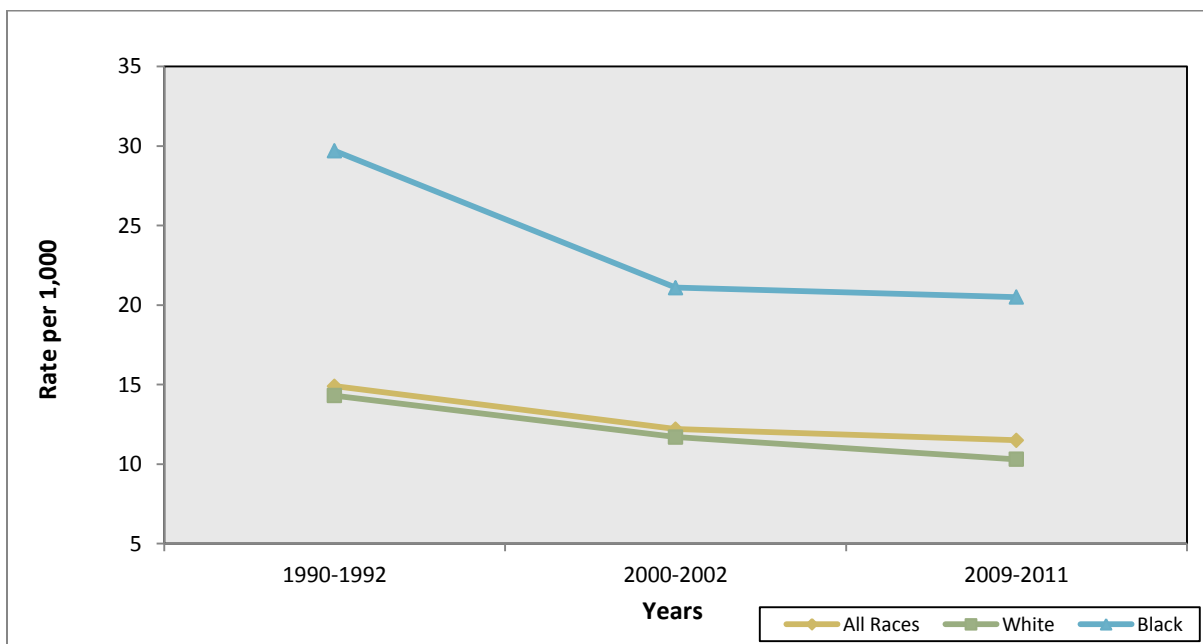
Table 1. Erie County and Pennsylvania Resident Live Births by Age of Mother, 2009-2011

<u>Age Group</u>	<u>Erie County</u>	<u>Rate</u>	<u>Pennsylvania</u>	<u>Rate</u>
All ages	9,712 (100.0%)	11.5	429,863 (100.0%)	11.3
Under 15	10 (0.1%)	0.4	438 (0.1%)	0.4
15 - 19	1023 (10.5%)	30.9	35,535 (8.3%)	26.5
15 - 17	315 (3.2%)	17.8	10,571 (2.5%)	13.9
18 - 19	708 (7.3%)	45.8	24,964 (5.8%)	42.9
20 - 24	2,614 (26.9%)	77.7	96,067 (22.5%)	73.2
25 - 29	2,865 (29.5%)	112.1	123,475 (28.7%)	107.1
30 - 34	2,144 (22.1%)	89.0	111,236 (25.9%)	100.1
35 - 39	858 (8.8%)	35.0	50,897 (11.8%)	44.2
40 - 44	184 (1.9%)	6.8	11,190 (2.6%)	8.6
45 and older	11 (0.1%)	0.4	801 (0.2%)	0.6
Unknown age	3		224	

Notes: For women of all ages, the rate is per 1,000 total population. All other rates are per 1,000 females for each specified age group.

The Erie County live birth rate dropped from 14.9 births per 1,000 in 1990-1992 to 11.5 per 1,000 in 2009-2011, a decline of 22.8%. For the White and Black populations, the rates decreased by 28.0% and 31.0%, respectively (Figure 2). For Pennsylvania, the rate declines were similar, 19.3% for the total population, 25.4% for Whites, and 32.3% for Blacks.

Figure 2. Erie County Resident Live Birth Rates by Race of Mother, 1990-1992 to 2009-2011



The 38 municipalities of Erie County are shown in Figure 3. The total number of live births and birth rates for these municipalities during the period 2009-2011 are presented in Table 3. The number of births ranged from a low of 4 babies in Elgin Borough to a high of 4,889 babies in the City of Erie.

Erie County’s four most populous municipalities - the City of Erie (population of 101,807 in 2011), Millcreek Township (53,528), Harborcreek Township (17,238), and Fairview Township (10,105) - accounted for 70.7% of all resident live births. The City of Erie alone accounted for over half (50.3%) of all births.

Birth rates ranged from a low of 4.6 births per 1,000 population in Edinboro Borough to a high of 21.7 births per 1,000 in Union City Borough.

Figure 3. The 38 Municipalities of Erie County

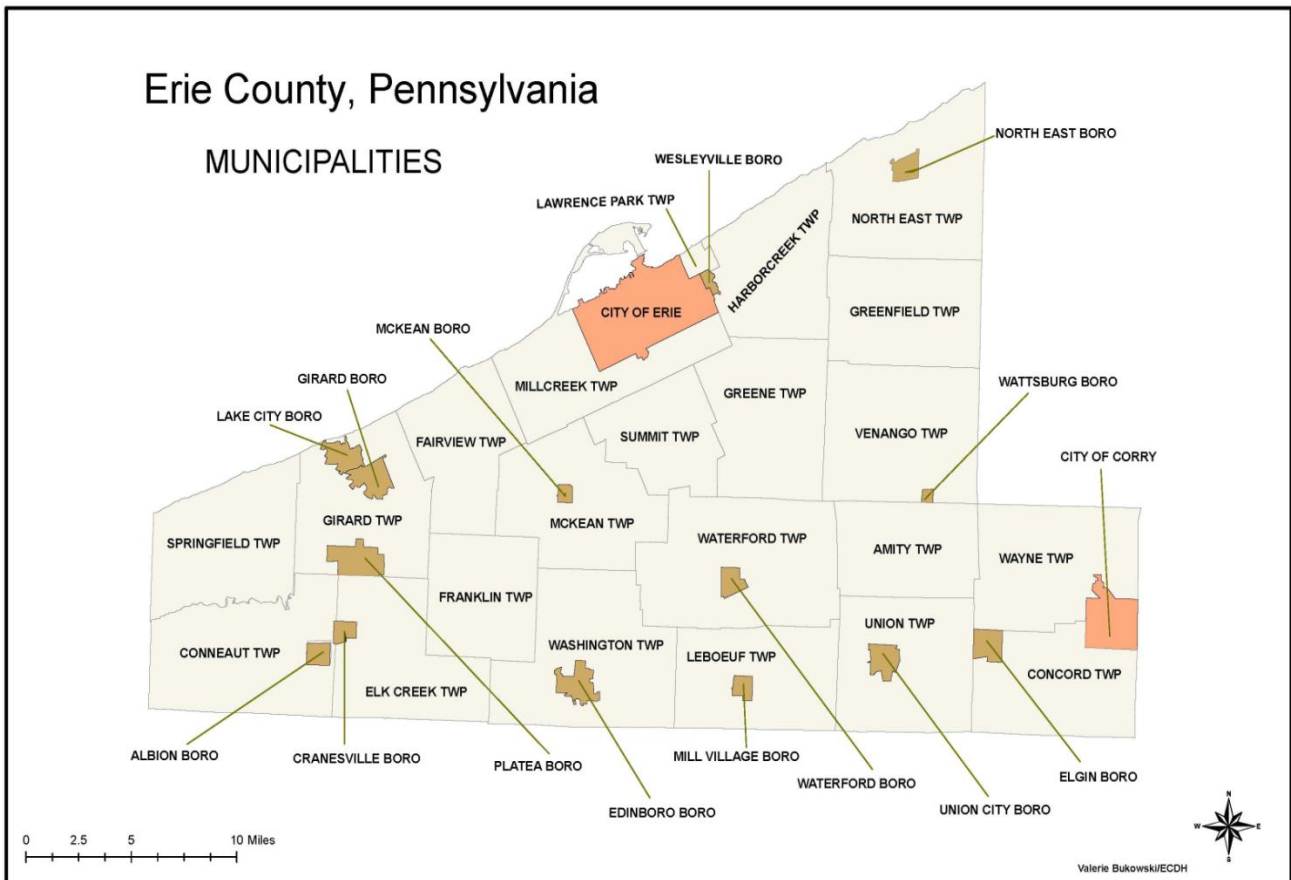


Table 3. Erie County Municipality Live Births and Birth Rates, 2009-2011

<u>Place</u>	<u>2011 Population</u>	<u>Births</u>	<u>Rate per 1,000 Population</u>
Pennsylvania	12,742,886	429,863	11.2
Erie County	280,985	9,712	11.5
Albion Borough	1,517	50	11.0
Amity Township	1,074	28	8.5
Concord Township	1,344	52	12.9
Conneaut Township	4,291	73	5.8
City of Corry	6,606	293	15.0
Cranesville Borough	639	13	7.0
Edinboro Borough	6,800	91	4.6
Elgin Borough	218	4	6.0
Elk Creek Township	1,799	48	8.9
City of Erie	101,807	4,889	15.9
Fairview Township	10,105	217	7.1
Franklin Township	1,633	42	8.5
Girard Borough	3,105	98	10.7
Girard Township	5,104	108	7.0
Greene Township	4,707	107	7.6
Greenfield Township	1,935	49	8.4
Harborcreek Township	17,238	314	6.1
Lake City Borough	3,030	124	13.8
Lawrence Park Township	3,982	142	12.2
LeBoeuf Township	1,697	54	10.7
McKean Borough	387	20	17.2
McKean Township	4,409	105	7.9
Millcreek Township	53,528	1,450	9.1
Mill Village Borough	411	8	6.6
North East Borough	4,295	163	12.7
North East Township	6,317	171	8.9
Platea Borough	429	9	6.9
Springfield Township	3,425	88	8.7
Summit Township	6,604	175	9.0
Union Township	1,654	42	8.5
Union City Borough	3,321	161	16.2
Venango Township	2,298	50	7.3
Washington Township	4,433	107	8.0
Waterford Borough	1,516	59	13.2
Waterford Township	3,920	120	10.2
Wattsburg Borough	402	25	21.7
Wayne Township	1,661	54	10.6
Wesleyville Borough	3,342	109	10.9

Births to Teens

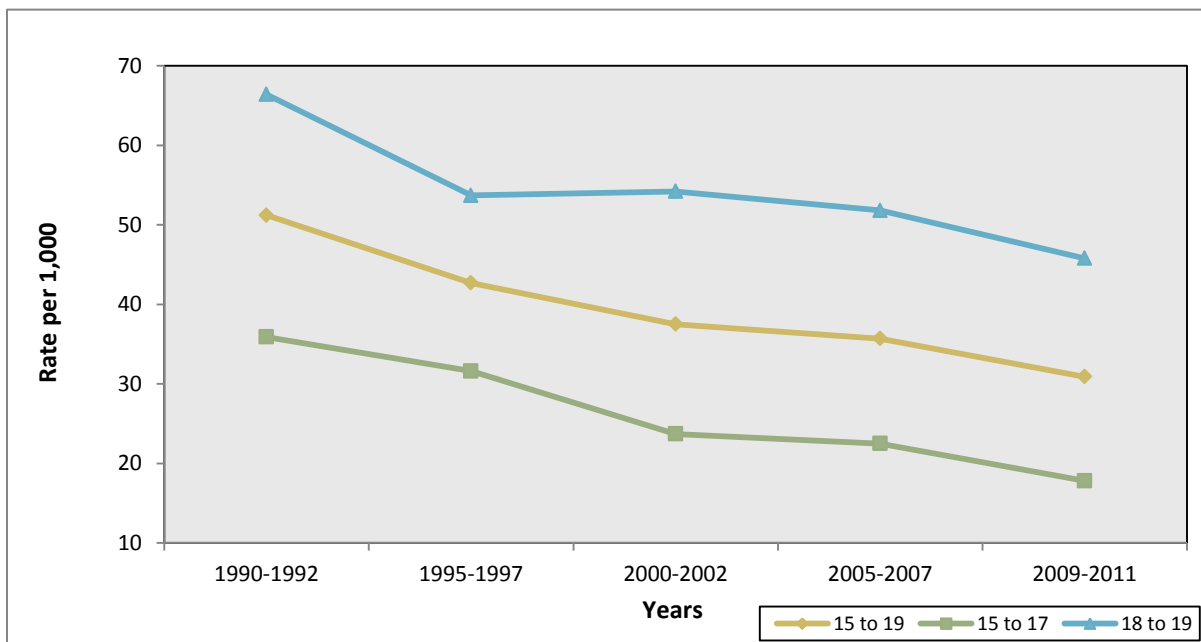
From 1990-1992 to 2009-2011, the Erie County live birth rate for female residents 15 to 19 years of age fell by nearly forty percent (39.6%), from 51.2 to 30.9 births per 1,000 females 15-19 years (Table 4, Figure 4). Overall, the rate for younger teenagers aged 15-17 years fell by 50.4%, while the rate for older teenagers 18-19 years dropped by 31.0%. Historically, the lowest three-year total number of births to Erie County female residents 15-19, 15-17, and 18-19 years of age were recorded during the most recent period of 2009-2011. These totals were 1,023, 315, and 708 births, respectively.

Table 4. Erie County Teen Live Births and Birth Rates, 2009-2011

Years	Ages 15 to 19			Ages 15 to 17			Ages 18 to 19		
	Number	Rate	PA Rate	Number	Rate	PA Rate	Number	Rate	PA Rate
1990-1992	1,735	51.2	43.5	606	35.9	27.9	1,129	66.4	63.3
1995-1997	1,501	42.7	37.2	551	31.6	24.1	950	53.7	55.0
2000-2002	1,252	37.5	31.6	437	23.7	17.7	815	54.2	51.1
2005-2007	1,230	35.7	29.3	427	22.5	15.9	803	51.8	48.2
2009-2011	1,023	30.9	26.5	315	17.8	13.9	708	45.8	42.9

Note: Rates are per 1,000 females for each specified age group.

Figure 4. Erie County Teen Live Births Rates, 1990-1992 to 2009-2011



Selected Summary Statistics

Selected summary statistics for Erie County resident live births and infant deaths for the period 2009-2011 are included in Table 5. Brief summaries for some of the major topics follow Table 5.

Table 5. Selected Summary Statistics for Erie County Resident Births and Infant Deaths, 2009-2011

Subject	All Races (9,712 Births)			White (7,684 Births)			Black (1,239 Births)			Hispanic (518 Births)		
	Count	Erie County	PA	Count	Erie County	PA	Count	Erie County	PA	Count	Erie County	PA
Percent Low Birth Weight (< 2,500 grams or 5 lbs. 9 ozs.)	873	9.0	8.3	595	7.7	7.1	189	15.3	13.4	56	10.8	8.8
(Unknown)	6			3			1			0		
Percent Prenatal Care in First Trimester	7,091	73.8	71.3	5,844	76.7	76.5	1,214	62.1	55.5	348	68.1	55.9
(Unknown)	101			67			25			7		
Percent Unmarried	4,771	49.4	41.3	3,358	44.0	31.7	1,019	82.8	79.5	364	70.4	66.8
(Unknown)	56			48			8			1		
Percent Cesarean Section	3,634	37.4	31.5	2,867	37.3	31.7	448	36.2	31.1	217	41.9	30.4
(Unknown)	5			3			1			0		
Percent Non-Smoking Mother During Pregnancy	7,215	74.5	84.1	5,668	73.9	82.2	910	73.8	85.9	403	78.1	90.2
(Unknown)	27			17			6			2		
Percent Receiving WIC Food During Pregnancy	4,722	49.2	40.0	3,332	43.8	30.7	879	72.0	67.5	376	73.4	73.1
(Unknown)	121			79			19			6		
Percent Medicaid as Source of Payment	3,809	39.4	32.8	2,680	35.0	25.4	694	56.3	58.1	296	57.3	54.8
(Unknown)	34			24			7			1		
Infant Mortality Rate (deaths per 1,000 live births)	75	7.7	7.0	46	6.0	6.1	26	21.0	14.9	2	3.9	4.7
Neonatal Mortality Rate (deaths per 1,000 live births)	53	5.5	4.9	32	4.2	4.3	19	15.3	9.9	2	3.9	4.7

Note: Unknowns excluded from calculations.

Low Birth Weight Infants

Overall, 9.0% of Erie County live births were classified as low birth weight (less than 2,500 grams or 5 pounds and 9 ounces) in 2009-2011. The percentage of low birth weight babies born to Black mothers (15.3%) was considerably higher than the percentages for White (7.7%) and Hispanic (10.8%) mothers. The percentage of low birth weight babies in Erie County gradually increased from 6.6% in 1990-1992 to 9.0% in 2009-2011. For Pennsylvania, the percentage rose from 7.2% to 8.3%. During 2009-2011, 1.5% of Erie County live births were classified as very low birth weight (less than 1,500 grams or 3 pounds and 5 ounces) and 6.7% were classified as high birth weight (greater than 4,000 grams or 8 pounds and 13 ounces). For Pennsylvania, the corresponding percentages were 1.6% and 8.6%, respectively.

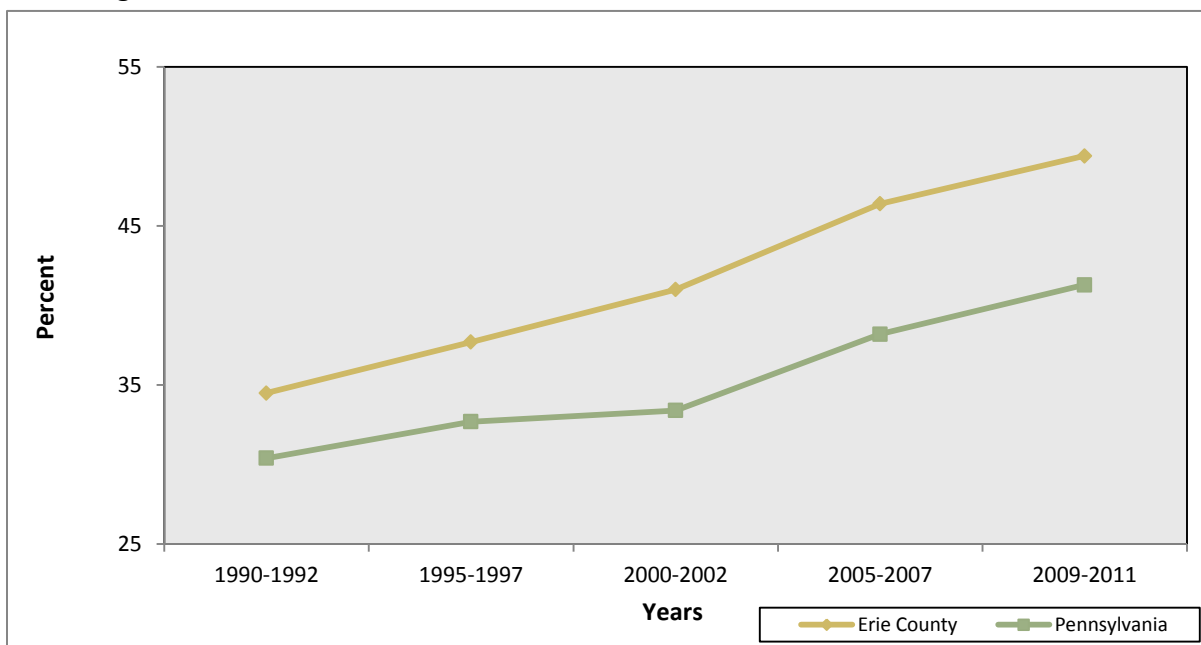
Prenatal Care

From 2009-2011, 73.8% of Erie County live births were to mothers who had received prenatal care during the first trimester of pregnancy and 1.1% were to mothers who had no prenatal care at all. For Pennsylvania, the corresponding figures were 71.3% and 1.7%, respectively.

Marital Status of Mother

From 2009-2011, nearly half (49.4%) of Erie County live births were to unmarried mothers. The percentages among White, Black, and Hispanic mothers were 44.0%, 82.8%, and 70.4%, respectively. The percentage of unmarried mothers in Erie County rose from 34.5% in 1990-1992 to 49.4% in 2009-2011 (Figure 5). For Pennsylvania, the percentage rose from 32.9% to 41.3%.

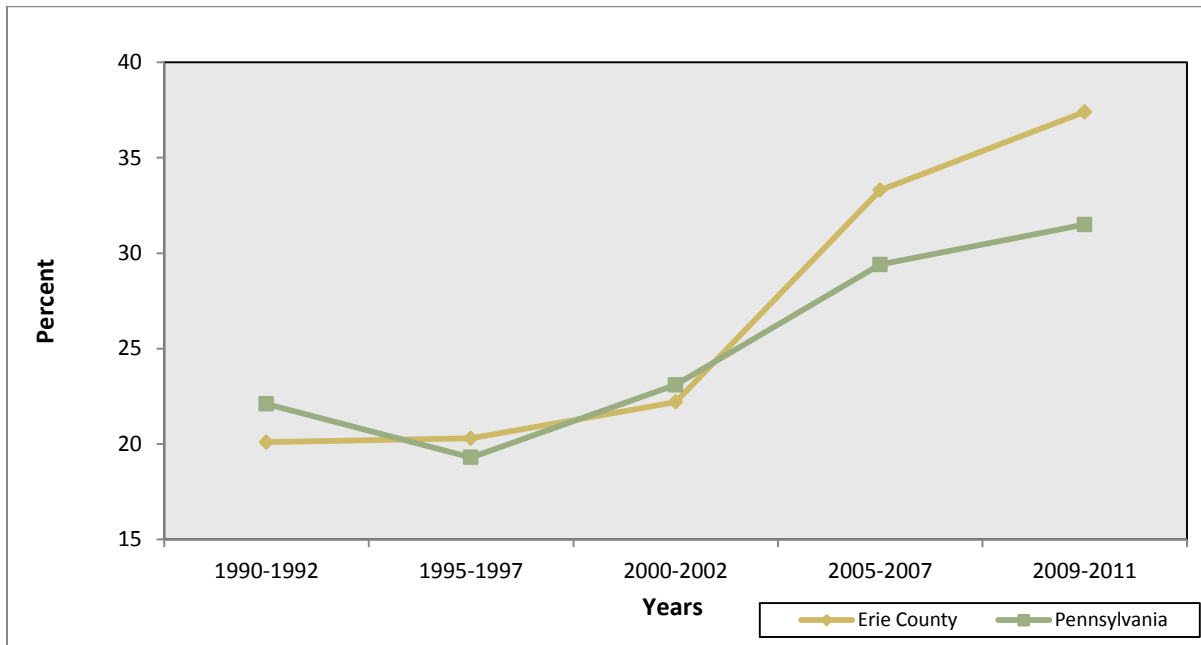
Figure 5. Percent of Live Births to Unmarried Mothers, 1990-1992 to 2009-2011



Cesarean Section Deliveries

From 2009-2011, over one-third (37.4%) of Erie County live births were cesarean section deliveries. The percentage of cesarean section deliveries in Erie County has nearly doubled from 20.1% in 1990-1992 to 37.4% in 2009-2011 (Figure 6). For Pennsylvania, the percentage rose from 22.1% to 31.5%.

Figure 6. Percent of Live Births Delivered by Cesarean Section, 1990-1992 to 2009-2011



Smoking During Pregnancy

From 2009-2011, 74.5% of Erie County live births were to mothers who did not smoke during pregnancy. The percentage of non-smoking mothers in Erie County has remained essentially unchanged since 1990-1992, when the percentage equaled 73.7%. For Pennsylvania, the percentage of non-smoking mothers rose from 79.2% in 1990-1992 to 84.1% in 2009-2011.

Infant Mortality

Infant mortality is defined as the death of an infant less than one year of age. From 2009-2011, there were a total of 75 resident infant deaths in Erie County, with a corresponding infant mortality rate of 7.7 deaths per 1,000 live births. Although Whites accounted for the majority (61.3%) of infant deaths, the mortality rate among Blacks (21.0 deaths per 1,000 live births) was over three times higher than the rate for Whites (6.0). A total of 53 (70.7%) of the 75 Erie County resident infant deaths during 2009-2011 occurred during the neonatal period (the first 27 days of life), with a corresponding neonatal mortality rate of 5.5 deaths per 1,000 live births. The mortality rates among Whites and Blacks were 4.2 and 15.3, respectively.