



Courtesy Delaware Tourism Office

DELAWARE VITAL STATISTICS SUMMARY REPORT ■ 2002



Division of Public Health
Department of Health and Social Services

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Division of Public Health, Department of
Health & Social Services.

Winter, 2005

2002 SELECTED CHARACTERISTICS

Population			First Trimester Care		
	Number*	Percent		Number*	Percent
Delaware	807,382	100.0%	White	6,928	89.1%
Kent	131,071	16.2%	Black	2,207	81.6%
New Castle	512,358	63.5%	Delaware	9,619	86.8%
Sussex	163,953	20.3%	Kent	1,454	76.4%
			New Castle	6,648	92.8%
			Sussex	1,517	75.2%
Marriages			Reported Pregnancies		
	Number*	5-yr Rate ¹		Number*	5-yr Rate ⁵
Delaware	5,171	6.6	Delaware	14,409	82.3
Kent	1,015	7.5	Kent	2,450	83.8
New Castle	2,899	6.0	New Castle	9,461	82.0
Sussex	1,257	7.7	Sussex	2,498	81.8
Divorces			Pregnancy Outcomes		
	Number*	5-yr Rate ¹		Number*	Percent
Delaware	2,792	4.0	Live Births	11,083	76.9%
Kent	714	5.5	Fetal Deaths	65	0.5%
New Castle	1,392	3.5	Induced Terminations (ITOP)	3,261	22.6%
Sussex	686	4.2			
Live Births			ITOP by Place of Residence		
	Number*	5-yr Rate ²		Number*	Percent
Delaware	11,083	62.3	Delaware	3,261	72.7%
Kent	1,902	66.0	Kent	532	16.3%
New Castle	7,163	60.2	New Castle	2,257	69.2%
Sussex	2,018	67.1	Sussex	472	14.5%
Race			Other States	1,227	27.3%
White	7,772	61.2			
Black	2,706	68.2	Infant Mortality		
Births to Teenagers (15-19)				Number*	5-yr Rate ⁶
White	647	36.5	Delaware	96	9.2
Black	524	85.7	White	57	6.9
Delaware	1,207	48.1	Black	35	16.7
Kent	224	52.3			
New Castle	719	42.6	Mortality		
Sussex	264	64.8		Number*	Adj. Rate ⁷
Marital Status	Number*	Percent	Delaware	6,860	837.9
Married	6,583	59.4%	Kent	1,113	895.2
Single	4,500	40.6%	New Castle	3,996	828.0
Births to Single Mothers³			Sussex	1,751	832.2
White	2,449	31.5%	Race and Gender		
Black	1,902	70.3%	White Males	2,738	962.6
Low Birth Weight (<2500 gms)			White Females	2,956	705.6
All Races	1,103	10.0%	Black Males	606	1328.7
White	643	8.3%	Black Females	505	789.0
Black	407	15.0%			
Mother of Hispanic Origin⁴	1,313	11.8%	Leading Causes of Death		
				Number*	Percent
			Heart Disease	1,918	28.0%
			Cancer	1,621	23.6%
			Stroke	406	5.9%
			Chronic Lung Disease	350	5.1%
			Unintentional Injuries	290	4.2%

* Numbers are for 2002.

1. The 5-year Rate is per 1,000 population and refers to the period 1998-2002.

2. The 5-year Rate refers to total live births per 1,000 women 15-44 years of age during the period 1998-2002.

3. Percentages for births to single mothers are based on total births for the race-group.

4. Persons of Hispanic origin may be of any race. The percentage is based on total resident births for 2002.

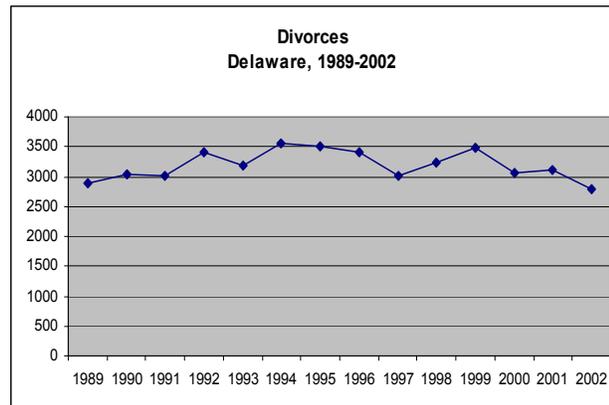
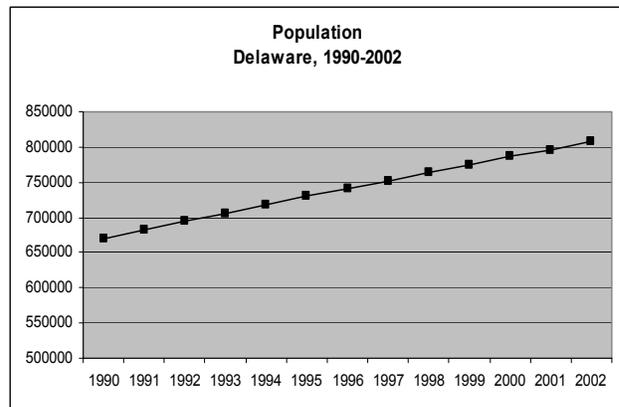
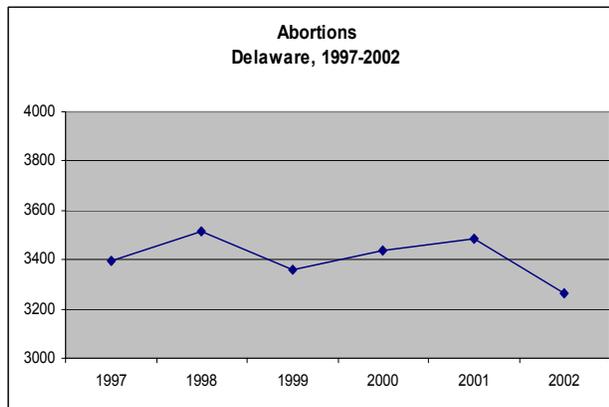
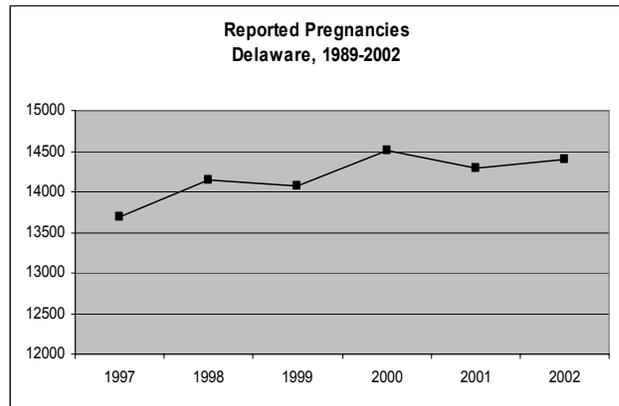
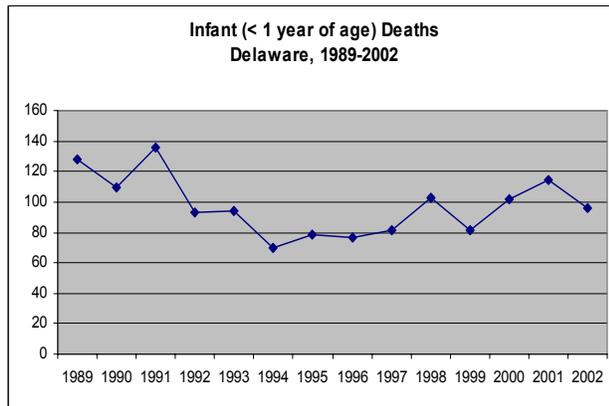
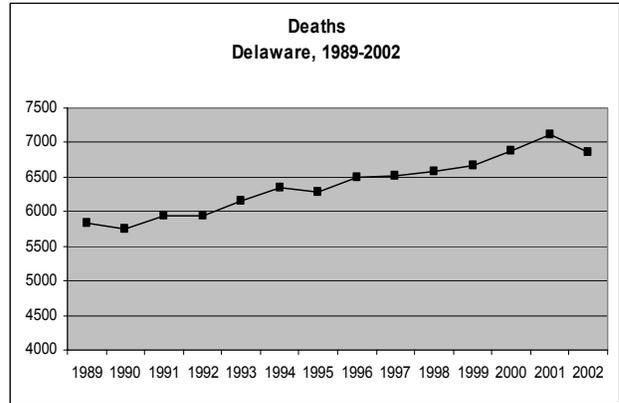
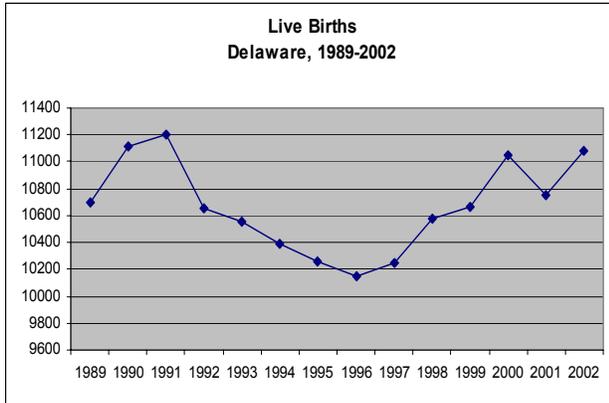
5. Pregnancy rates represent the number of reported pregnancies to women of all ages per 1,000 women 15-44 years of age for 1998-2002.

6. The 5-year (1998-2002) infant mortality rates represent the number of deaths to children under one year of age per 1,000 live births.

7. The 2002 mortality rates (deaths per 100,000 population) for Delaware and counties are age-adjusted to the 2000 U.S. population.

Source: Delaware Health Statistics Center

VITAL STATISTICS TRENDS

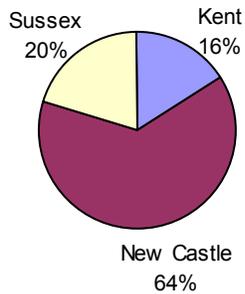


POPULATION

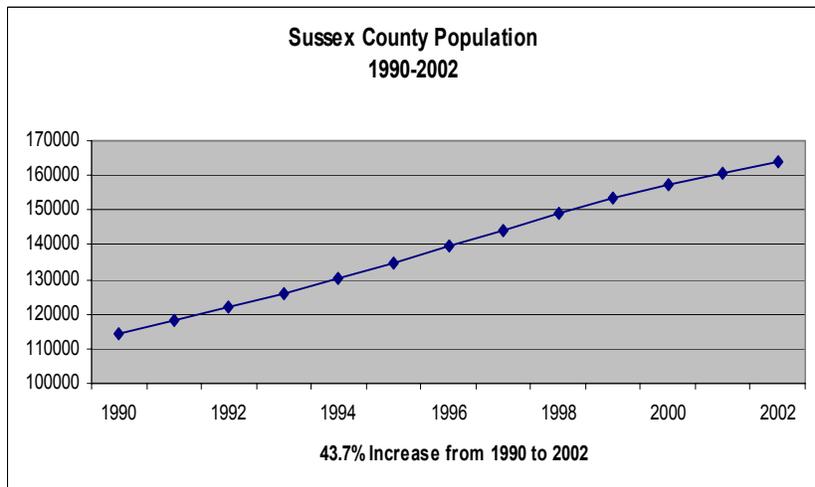
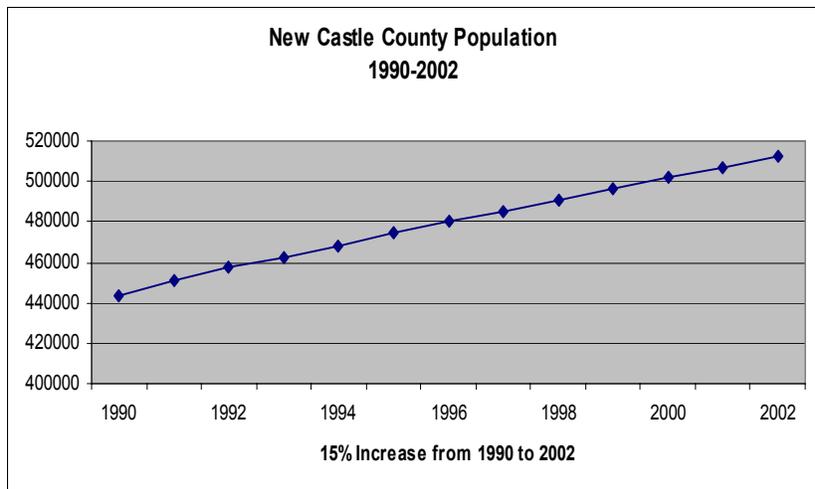
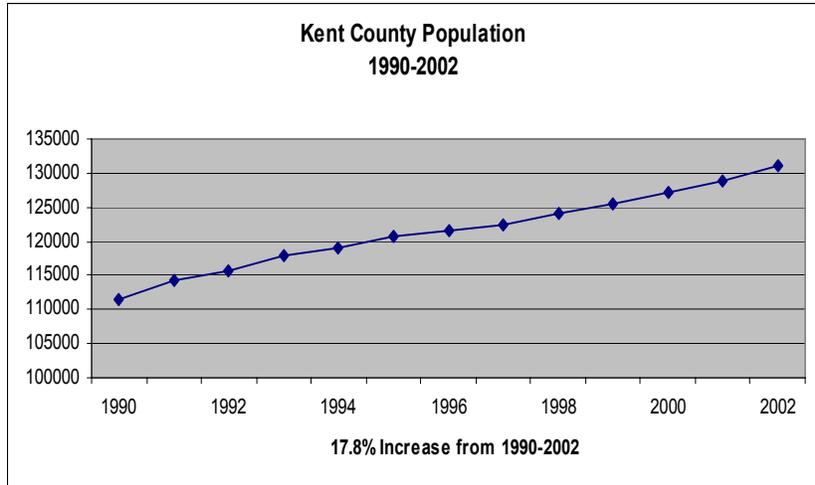
Each of Delaware's three counties continued their increasing population trend. From 1990 to 2002, Sussex County grew by 44%, followed by Kent County's 18% increase. New Castle County's population increased 15% over the same time period.

Over half of Delaware's population resides in New Castle County.

Percent of Population by County Delaware 2002

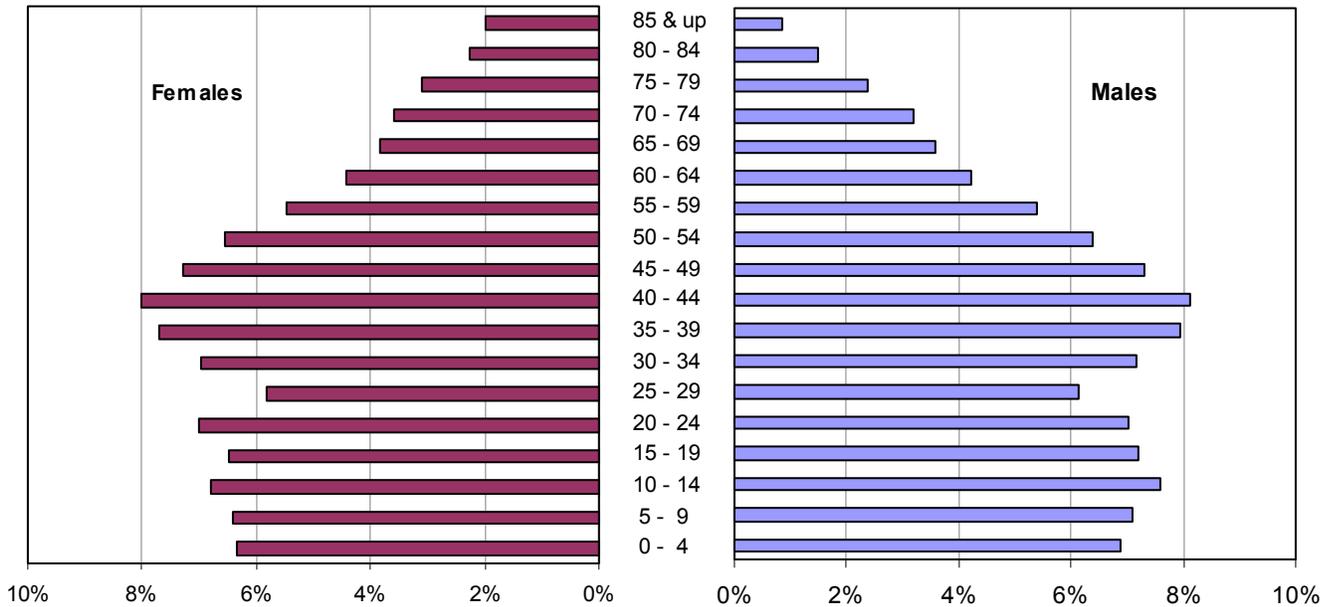


Delaware Resident Population by County, 1990-2002

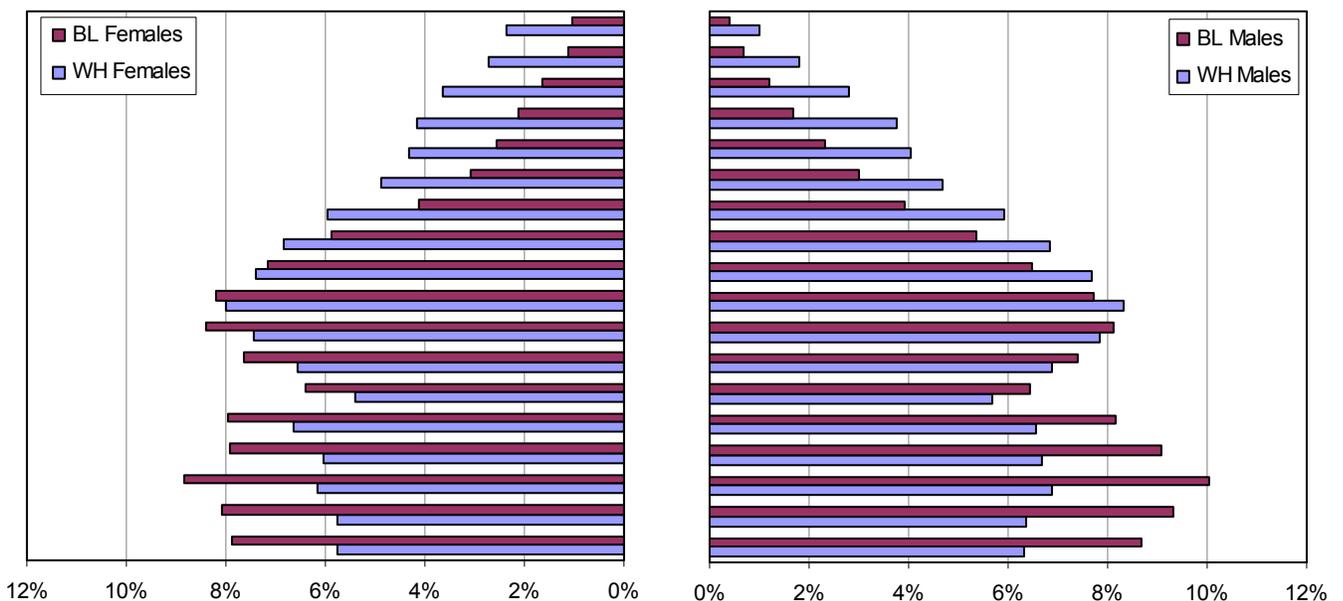


POPULATION

Just over 50% of Delaware's population is female. The age composition of males and females is very similar until you reach the older age groups, which reflect the longer female life expectancy. Delaware females born in 2002 could expect to live an average of 79.8 years, versus males, who could expect to live 74.6 years.



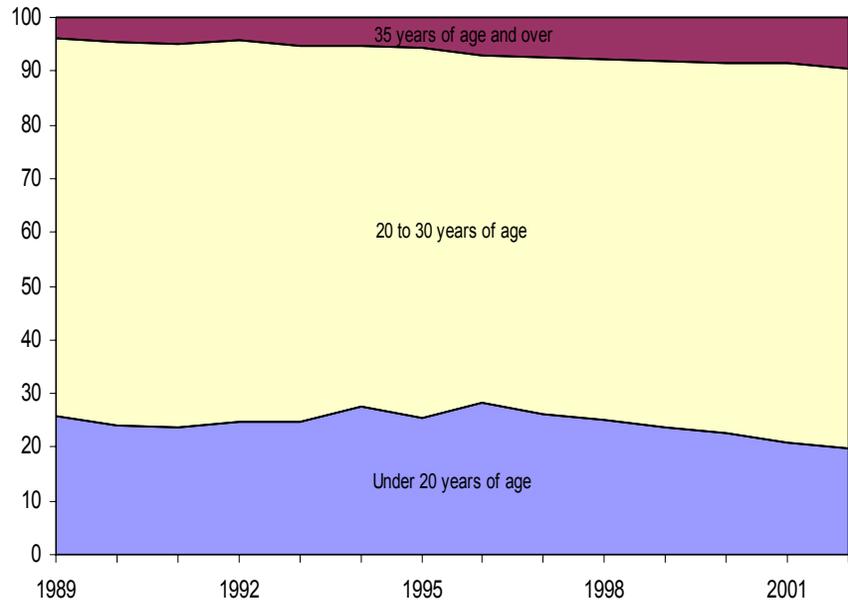
When the population is broken down by race, the higher proportion of females in the older age groups appears in the black population as well. However, both black males and females have a greater percentage of their population in the 0-39 year age range than whites; in the 40 and above age range, whites make up a greater proportion of the population.



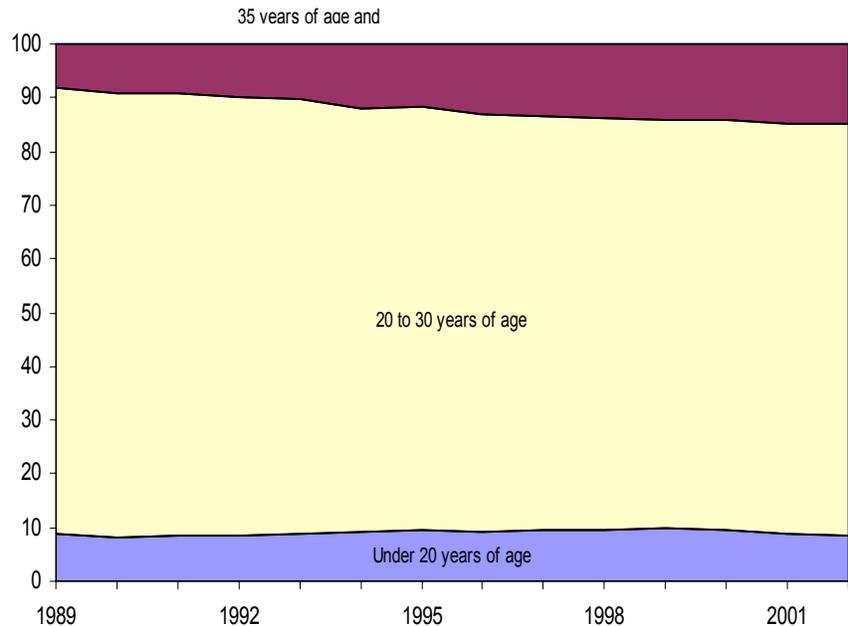
LIVE BIRTHS

In 2002, there were 11,724 births in Delaware, 10,585 were to Delaware residents and 1,139 were to non-residents. Additionally, 498 births to Delaware residents occurred out of state, for a total of 11,083 Delaware resident births, 336 more than 2001. Though Delaware's general fertility rate (for all women 15-44) increased slightly, the teen (15-19) birth rate continued its decline. Women using Medicaid as a primary source of payment increased in 2002. The percentage of Delaware mothers who used tobacco while pregnant decreased 3 percent. The percentage of births to women 35 years of age and over increased.

**Annual Percentage of Births to Black Mothers by Age
Delaware, 1989-2002**



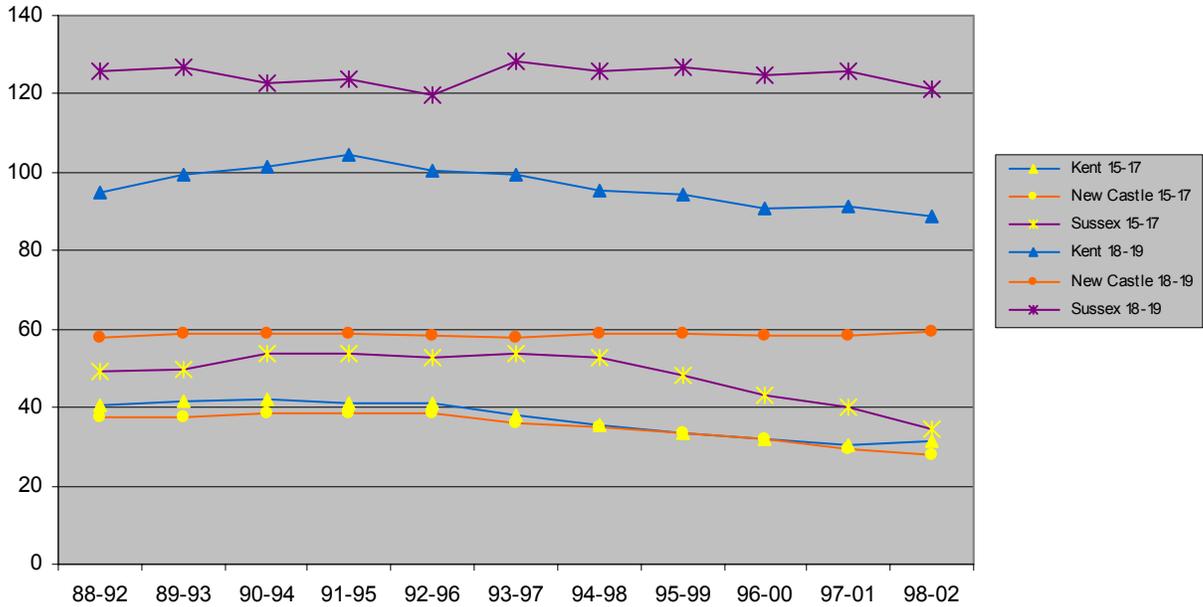
**Annual Percentage of Births to White Mothers by Age
Delaware, 1989-2002**



LIVE BIRTHS

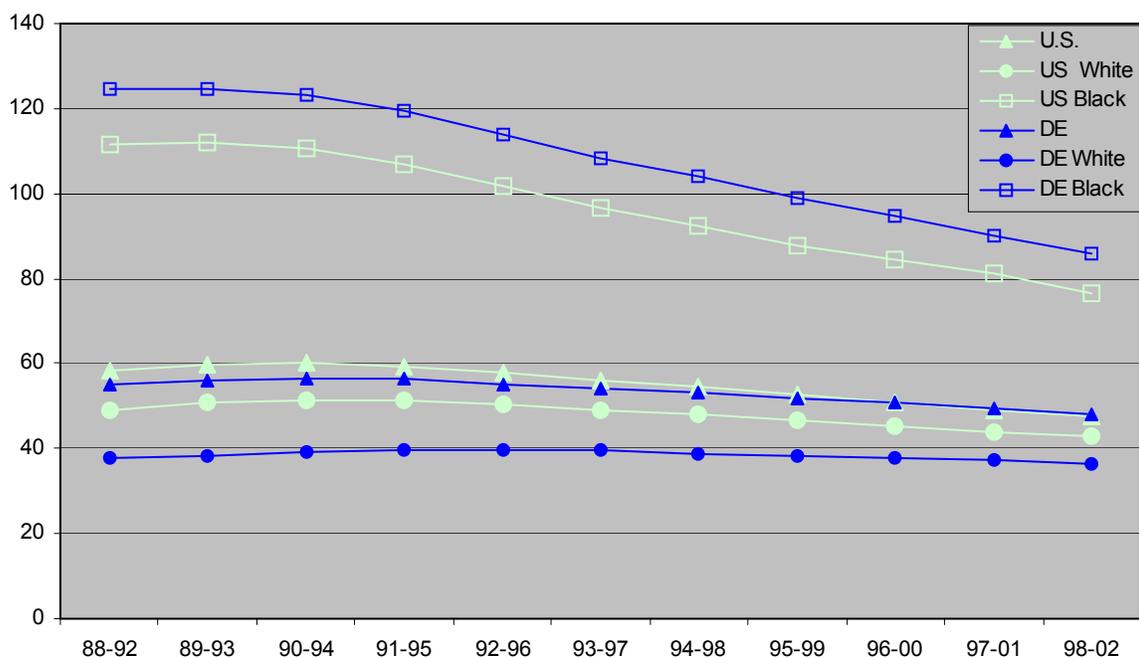
Although Sussex County's teen birth rates declined in 2002, they continue to have the highest teen births rates, with 121.4 births per 1,000 females aged 18-19, and 34.3 births per 1000 females aged 15-17.

**Five-year Teen Live Birth Rates by County and Age Group
Delaware, 1988-2002**



Delaware's teen birth (15-19) rates for all races are very similar to the national teen birth rates for all races. However, rates for white Delaware teens are lower than the white U.S. teen rates, while rates for black Delaware teens are higher than the black U.S. teen rates.

**Five-year Average Teen (15-19) Live Birth Rates
U.S. and Delaware, 1988-2002**

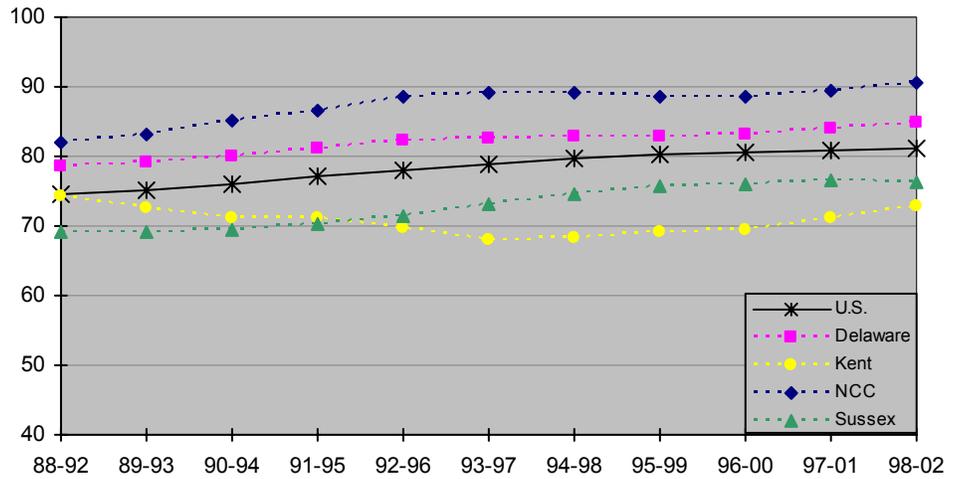


LIVE BIRTHS

Delaware has consistently increased the percentage of women receiving prenatal care in the first trimester, from 78.6% in 1988-1992 to 84.9% in 1998-2002, surpassing the U.S. average over the same time periods.

Over the same time period, Wilmington, normally an area where the maternal risk factors are the worst, showed a 25% increase in the number of women receiving prenatal care in the first trimester, from 66% to 82.8%. Wilmington's increase was apparent in births to both black and white mothers.

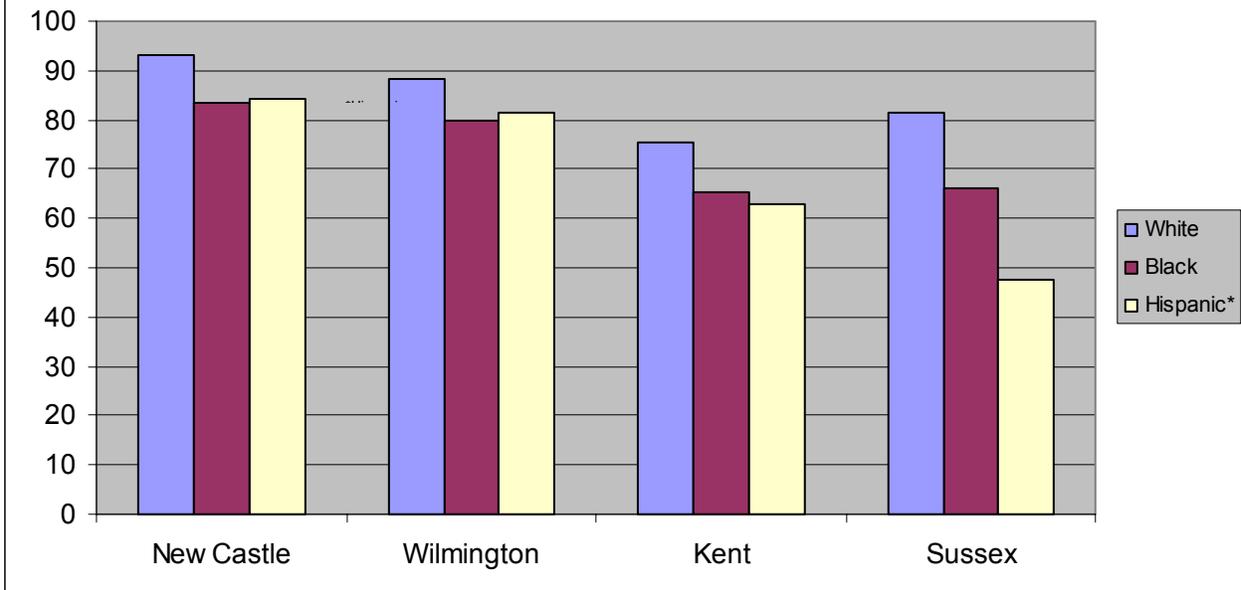
**Five-Year Average Percentage of Births to Mothers Beginning Prenatal Care in the First Trimester
U.S., Delaware and Counties, 1988-2002**



While Kent County has demonstrated a gradual upward trend in the last five time periods, it is the only county whose 1998-2002 percentage of mothers receiving prenatal care in the first trimester is lower than its 1988-1992 percentage. Kent County has the lowest percentage of white and black mothers receiving prenatal care in the first trimester, at 75.6 and 65.4 respectively. Sussex county has the lowest percentage of Hispanic mothers receiving prenatal care in the first trimester, at 47.6%.

The graph below illustrates how the percentages of prenatal care differ between racial and ethnic groups, and between the counties as well. New Castle county has the highest rates of women receiving prenatal care in the first trimester, regardless of race; isolating Wilmington produces similar results. Another observation unique to Wilmington and New Castle County is that mothers of Hispanic origin receive higher percentages of prenatal care in the first trimester than black mothers.

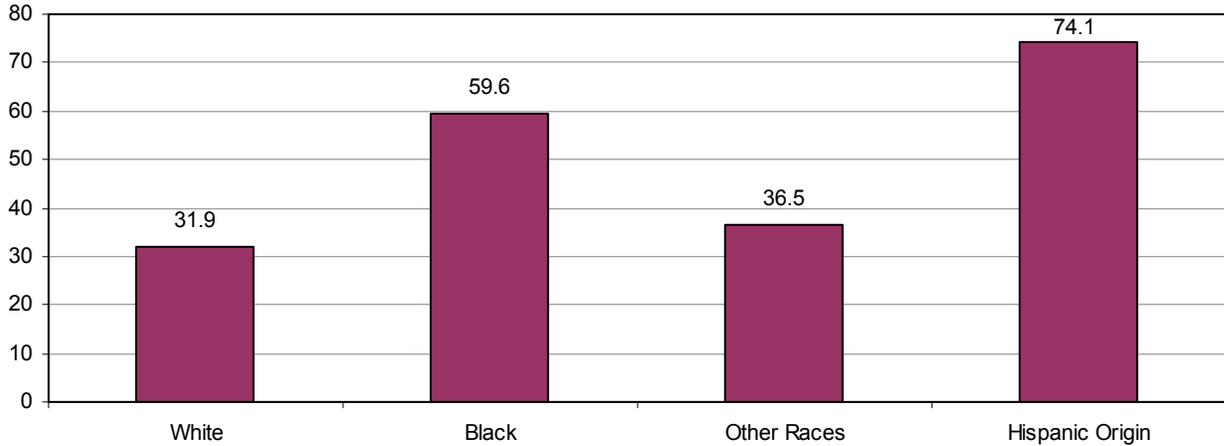
Five-Year Average Percentage of Mothers Receiving PNC in First Trimester by County and Race, Delaware 1998-2002



LIVE BIRTHS

- For mothers under 20 years of age, Medicaid was the primary source of payment, ranging from 70.1% for white mothers to 84.2% for mothers of other races.
- Over 50% of Hispanic and Black mothers used Medicaid as the primary source of payment for delivery.

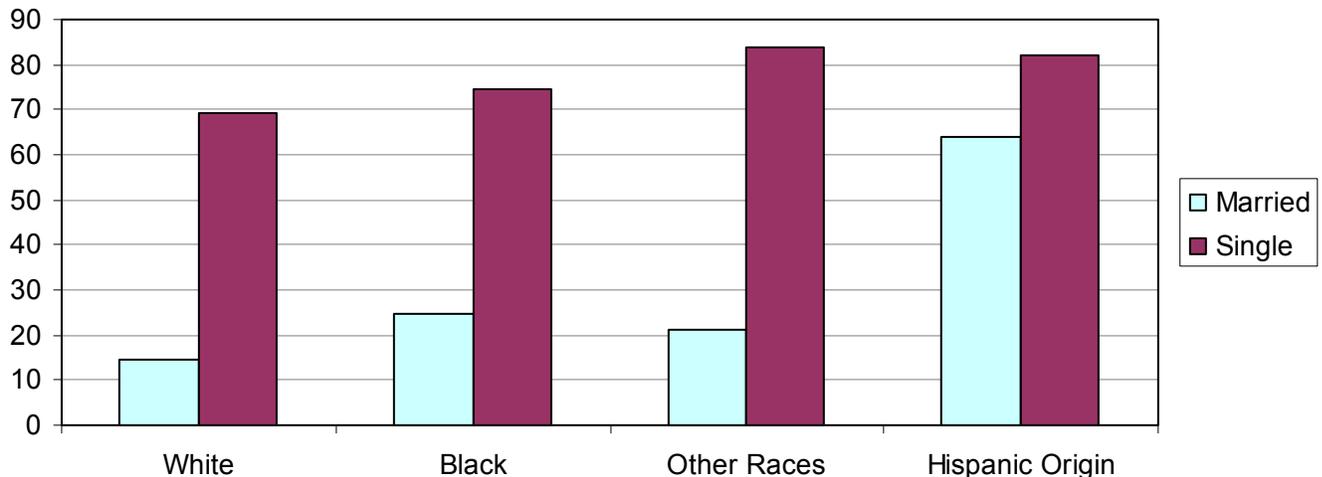
**Percent of Births by Mother's Race where Medicaid is the Primary Source of Payment
Delaware, 2002**



Marital status has a tremendous affect on the use of Medicaid as a primary source of payment for delivery:

- 14.6 % of white married women used Medicaid as their primary source of payment, but that number more than quadrupled, to 69.4%, if the mother was single.
- 24.5 % of black married women used Medicaid as their primary source of payment, but that number almost tripled, to 74.4%, if the mother was single.
- 63.8 % of Hispanic married women used Medicaid as their primary source of payment, but that number increased to 82.1%, if the mother was single.
- 21.1 % of married women of other races used Medicaid as their primary source of payment, but that number increased almost four times, to 83.9%, if the mother was single.

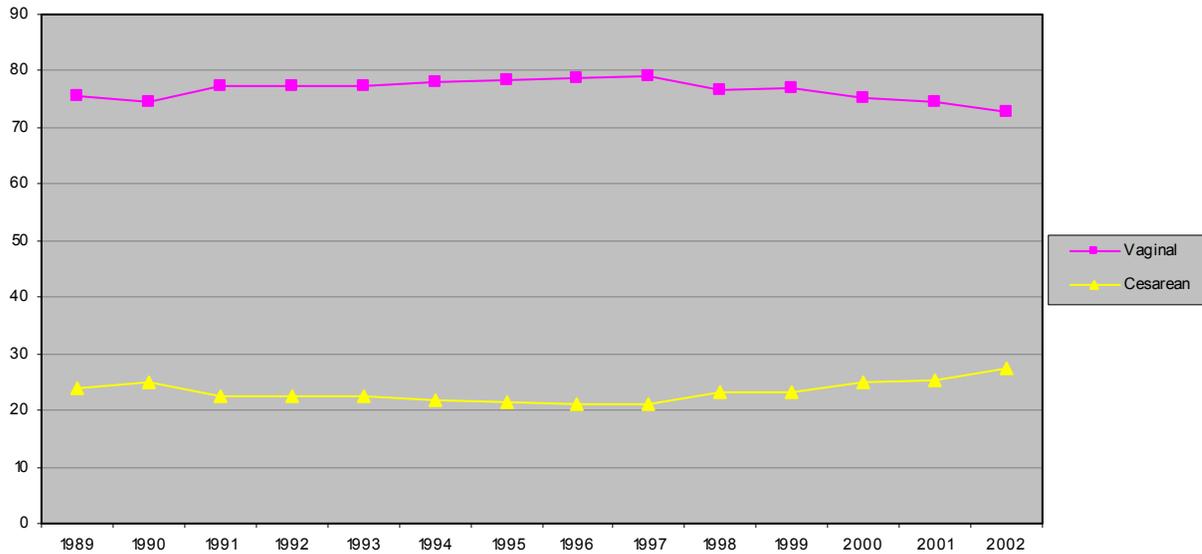
**Percent of Births by Race, Hispanic Origin, Marital Status, and Medicaid as Primary Source of
Payment
Delaware, 2002**



LIVE BIRTHS

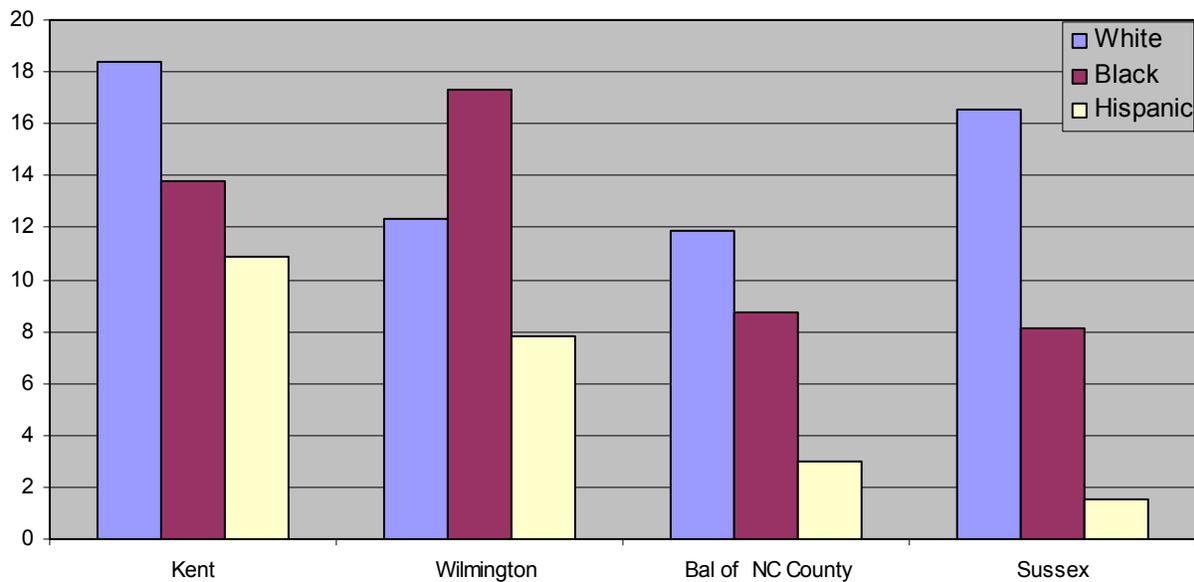
The percentage of cesarean deliveries continued its upward trend by increasing slightly from 25.5 in 2001 to 27.3 in 2002.

**Percent of Births by Method of Delivery
Delaware, 1989-2002**



In 2002, the percentage of Delaware mothers who used tobacco while pregnant decreased 3 percent to 12.8% , with the highest percentage in Kent County (16.8 %). White Delaware mothers were more likely to smoke while pregnant (13.9%) than Black mothers (12%), with Kent county having the highest percentage of white mothers who smoke (18.4%). The one exception to this racial trend was Wilmington, where more Black mothers smoked (17.3%) than white mothers (12.3%).

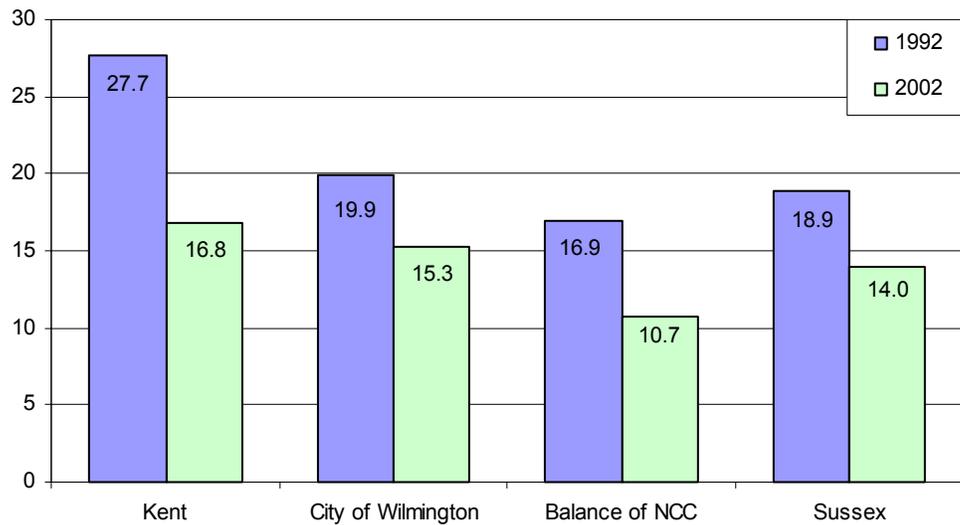
**Percent of Mothers who Smoked while Pregnant by Race and Hispanic Status
Delaware Counties and City of Wilmington, 2002**



LIVE BIRTHS

Although Delaware's rates were higher than the national rate (11.4%), smoking among Delaware mothers decreased 21.5% from 1992 to 2002, following a U.S. decrease of 32.5% during the same time period.

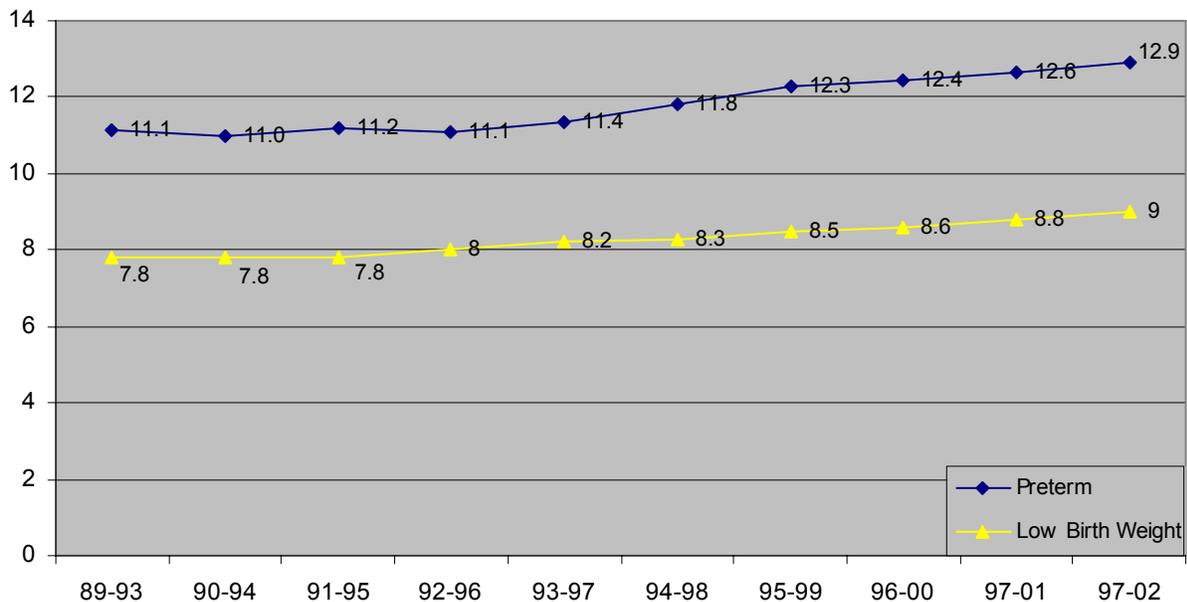
**Percent of Mothers who Smoked while Pregnant
Delaware Counties and City of Wilmington, 1992 and 2002**



14.2% of Delaware women who smoked while pregnant gave birth to low birth weight babies (< 2500 grams), versus the significantly lower percentage (9.3%) of non-smokers who gave birth to low birth weight babies.

Since 1993-1997, the five-year percentages of both preterm and low birth weight births have increased 13.2% and 9.8% respectively.

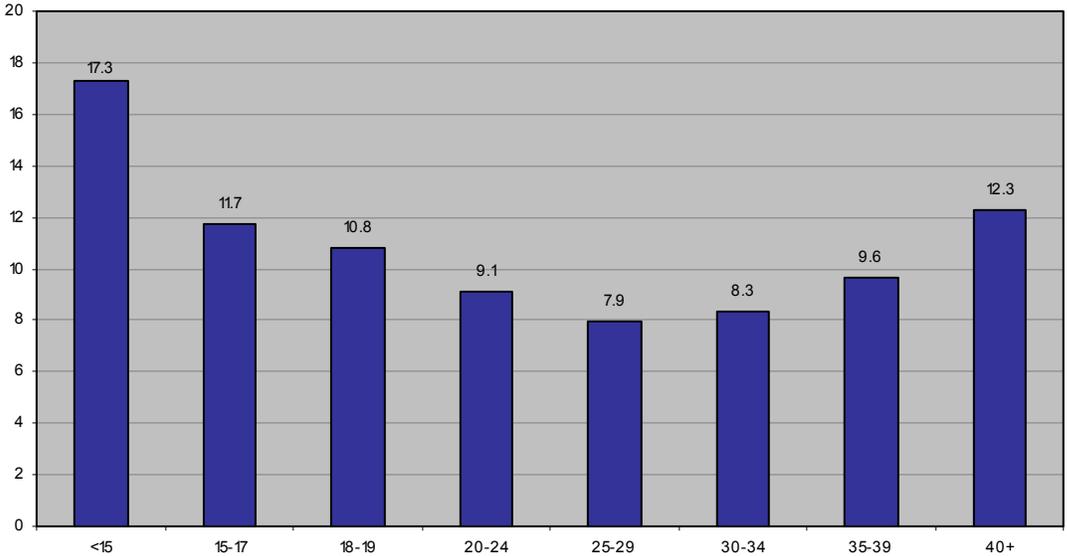
**Five-year Average Percentage of Preterm and Low Birth Weight Births
Delaware, 1989-2002**



LIVE BIRTHS

The five-year average percentage of low birth weight births (<2500 grams) continued its upward trend during the last four time periods, very low birth weight (<1500 grams) births have remained relatively stable. Percentages of LBW births were greatest for the under 15 (17.3%) and 40 plus (12.3%) age groups.

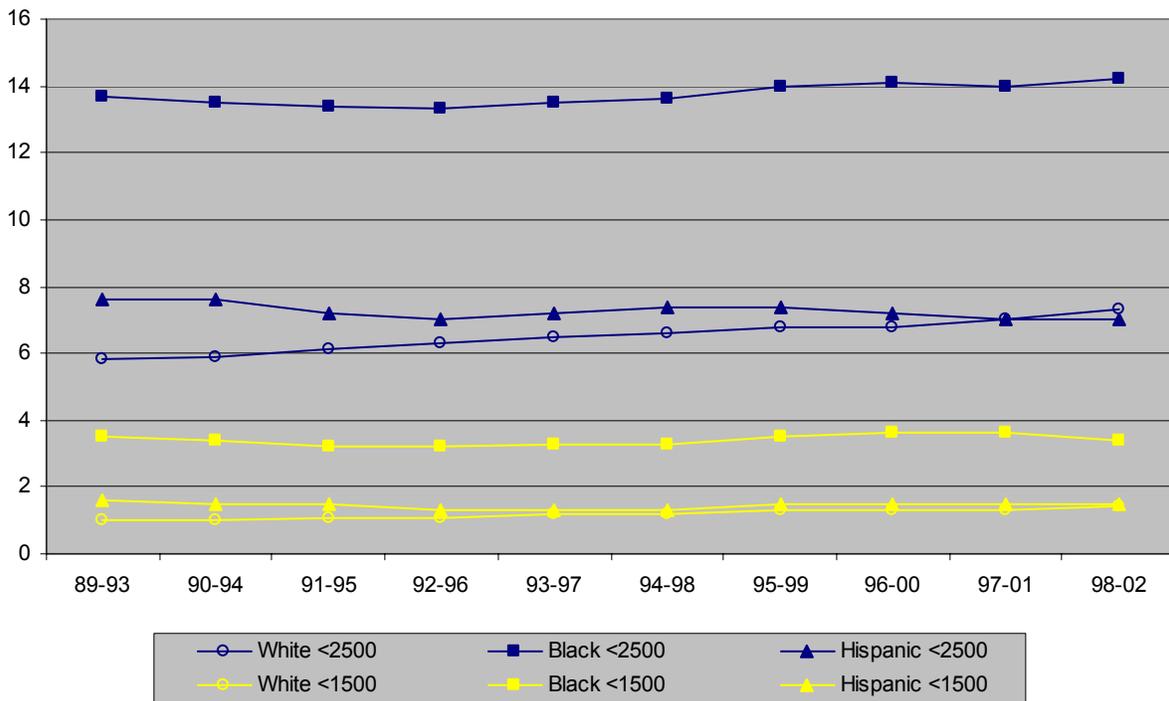
Five-year Average Percent of Infants Born Under 2500 Grams by Mother's Age Delaware, 1998-2002



In the 40 plus group, black women have higher percentages of LBW births (18.3% versus 11.7% of white women), but in the under 15 group, white women have higher percentages of LBW births (20.7% versus 16% of black women).

Among mothers of all ages, black mothers had the highest percentage of LBW and VLBW births, at 14.2% and 3.4% respectively.

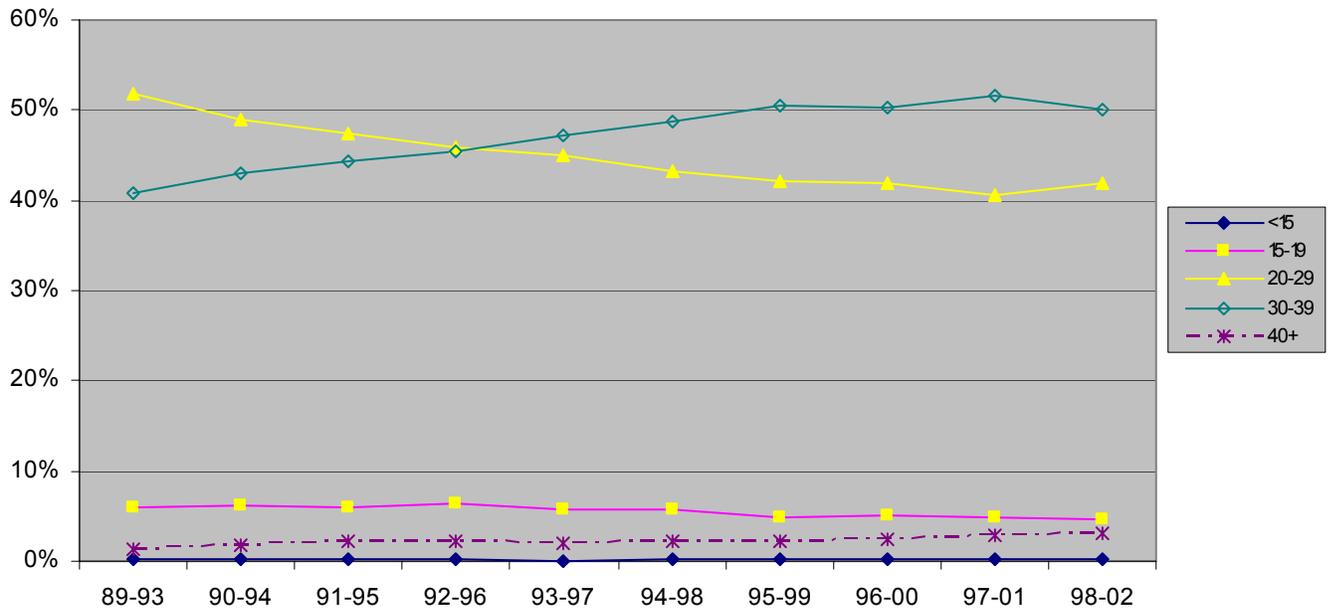
Five-year Average Percent of Low and Very Low Birth Weight Births by Race and Hispanic Origin, Delaware, 1989-2002



LIVE BIRTHS

As women wait longer to have their children, the distribution of both single and plural births has shifted toward older mothers. For instance, in 1989-1993, 51.8% of the total plural births were to women ages 20-29. In the 1998-2002 period that number had decreased to 41.9% of total plural births, and mothers ages 30-39 and 40+ absorbed the difference, increasing from 40.8 to 50.1% and 1.3 to 3.2% respectively.

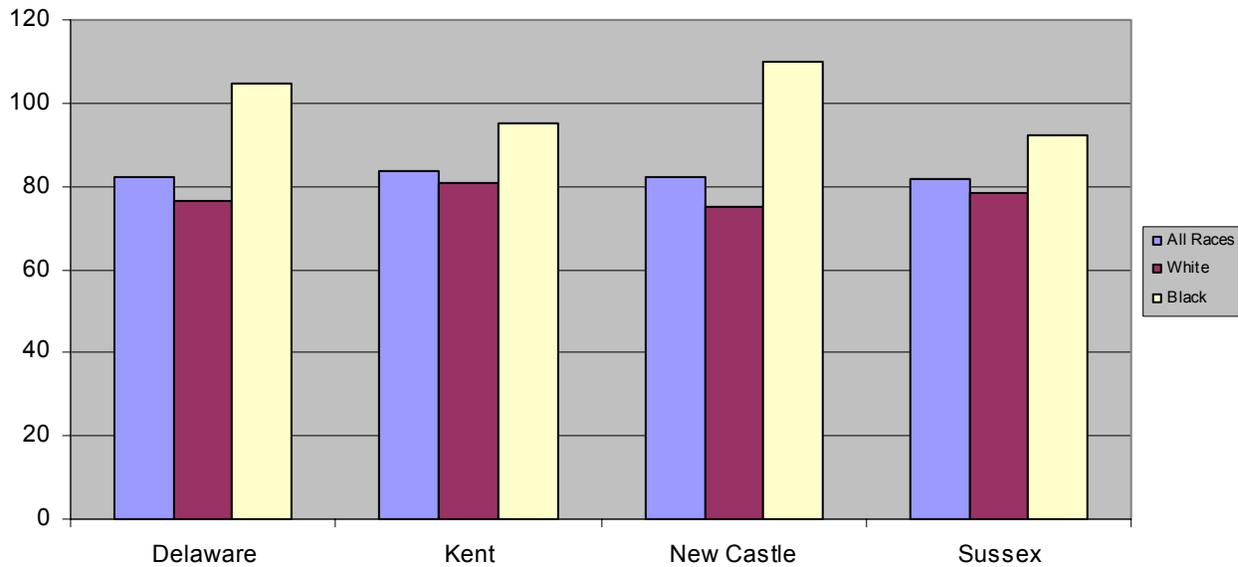
**Five-year Average Percent of Plural Births by Mother's Age Group
Delaware, 1989-2002**



REPORTED PREGNANCIES

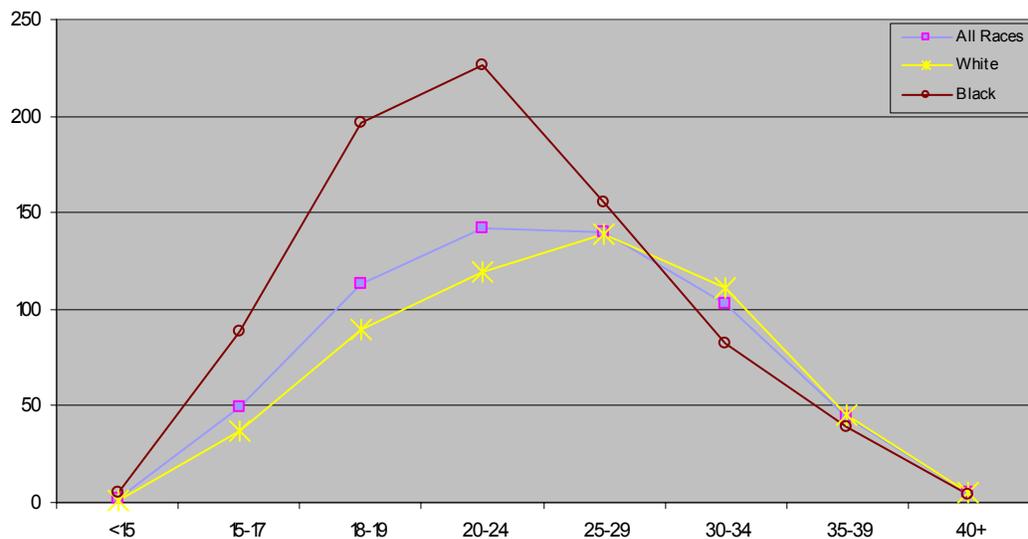
From the 1997-2001 to 1998-2002 time period, the five-year average rate of reported pregnancies increased by 5.6% to 82.3 reported pregnancies per 1,000 women ages 15–44. Although pregnancy rates of black mothers were significantly higher than those of white mothers in every county, New Castle County's difference between white (74.9) and black (110.2) was the largest among all the counties.

**Five-year Average Rate of Reported Pregnancies by Race
Delaware and Counties, 1998-2002**



**Five-year Average Rate of Reported Pregnancies
by Age and Race of Woman
Delaware, 1998-2002**

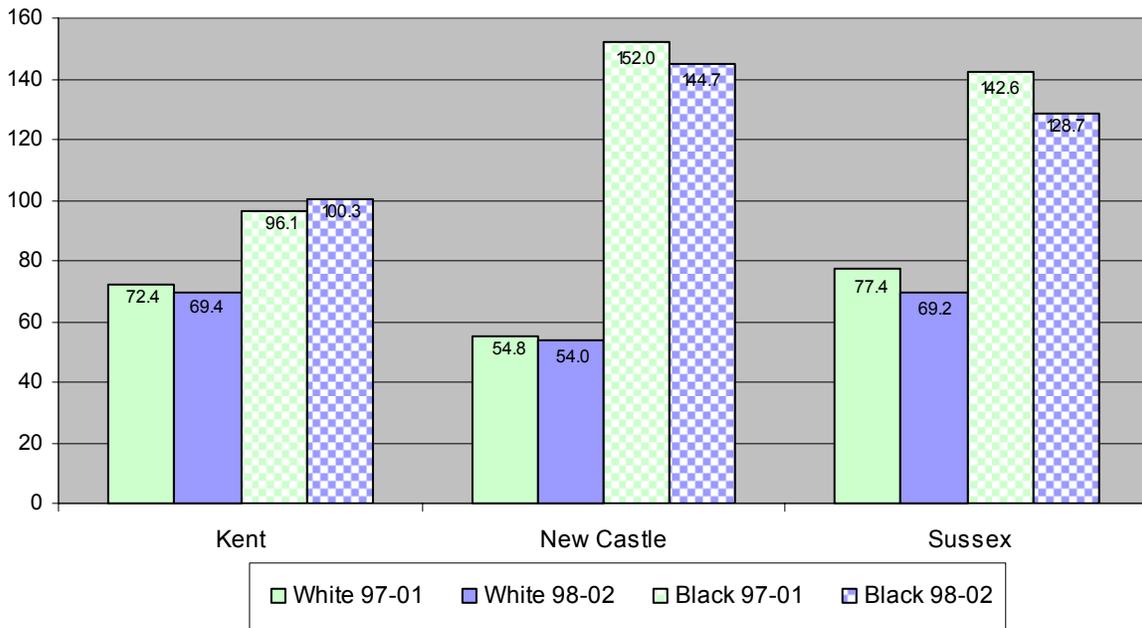
For all races, the 20-24 year age group had the highest pregnancy rate, with 142 pregnancies per 1,000 women in 1998-2002.



REPORTED PREGNANCIES

With the exception of black teen mothers living in Kent county, teen (15-19) pregnancy rates for each race and county group declined between 1.5% (New Castle White) and 10.6% (Sussex White) from 1997-2001 to 1998-2002.

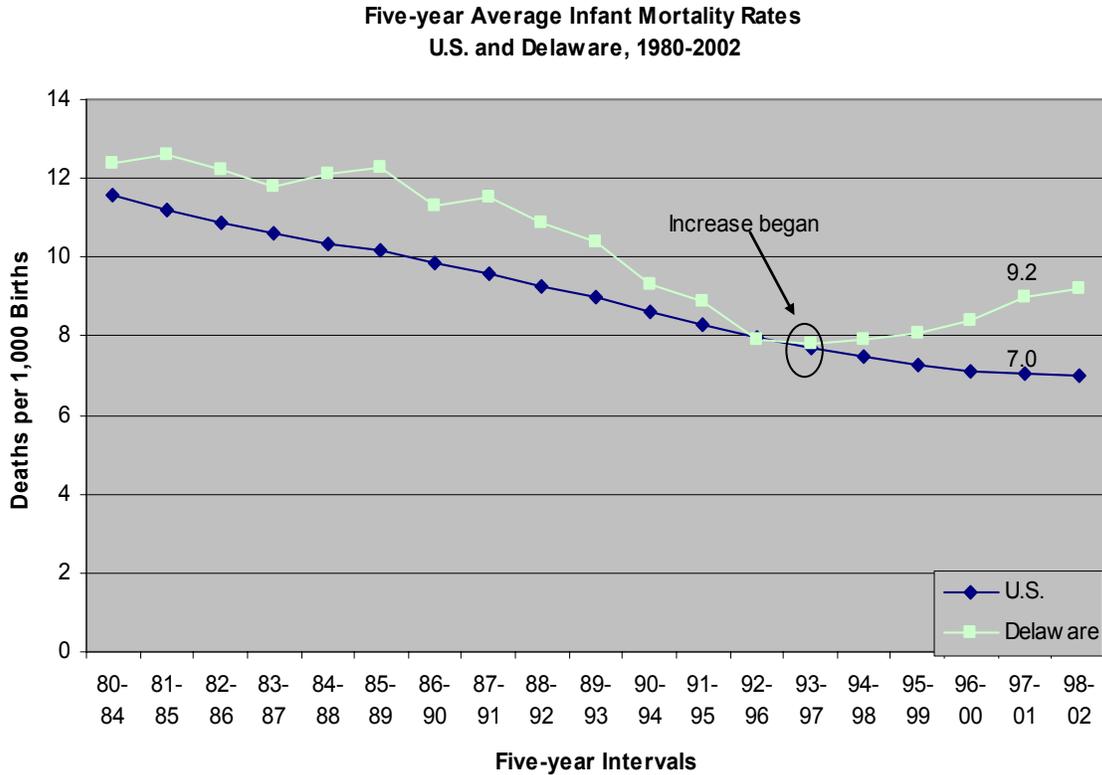
**Five-year Average Teenage (15-19) Pregnancy Rates by County and Race
Delaware, 1997-2002**



- In 2002, there were 4488 abortions performed in Delaware, 3261 to Delaware residents and 1227 to non-residents.
- Over half of all pregnancies to females under 15 ended in termination.
- 65.2% of pregnancies to white mothers under 15, and 44.8% of pregnancies to black mothers under 15 ended in terminations.
- 5.4% of pregnancies to white married women ended in termination and 11.7% of pregnancies to black married women ended in termination. When the mothers were unmarried, these numbers increased to 37.5 and 39.3% respectively.
- There were 65 fetal deaths of Delaware residents in 2002.
- There were 11083 live births to Delaware residents in 2002.

INFANT MORTALITY

Although Delaware's infant mortality rate was significantly higher than national rate throughout most of the 1980s, Delaware followed the nation's downward trend to a point where the U.S. and Delaware rates were very similar. The 1994-1998 time period signaled a reversal of this trend and Delaware's rates have risen every five-year interval since then, with the most recent period, 1998-2002, showing a rate of 9.2 infant deaths per 1,000 births, significantly higher than the U.S. rate.

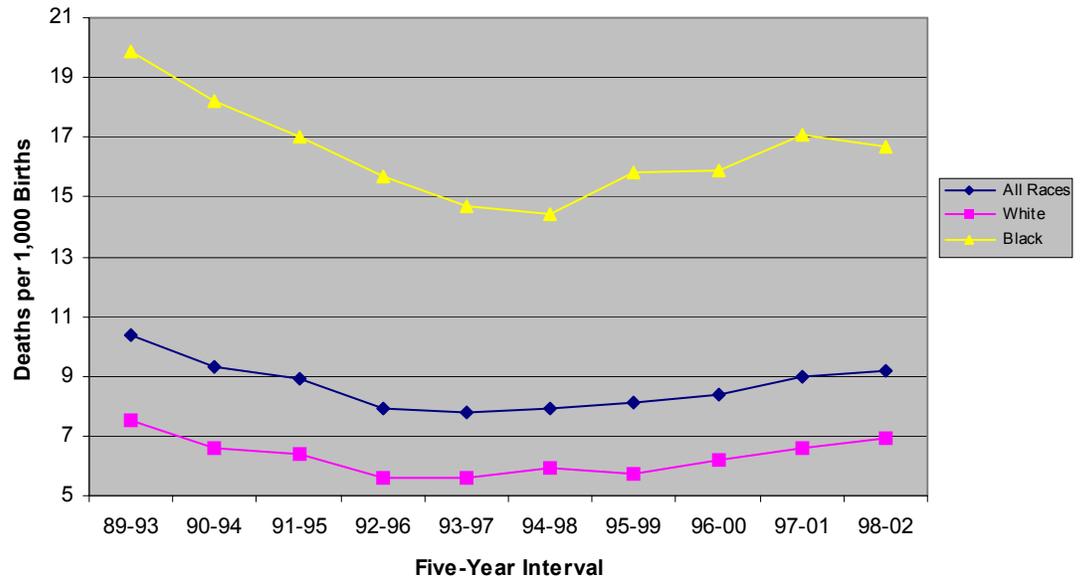


Two key risk factors for infant death, very low birth weight (less than 1500 grams) births and very preterm (less than 32 weeks gestation) births, have risen in conjunction with the Delaware's infant mortality rate (IMR). Since 1993-1997, the percent of very low birth weight (VLBW) births has risen 3% for blacks and 16.7% for whites, while the infant mortality rates of black VLBW infants rose 19.7% and the infant mortality rates of white VLBW infants rose 32% during the same time period.

INFANT MORTALITY

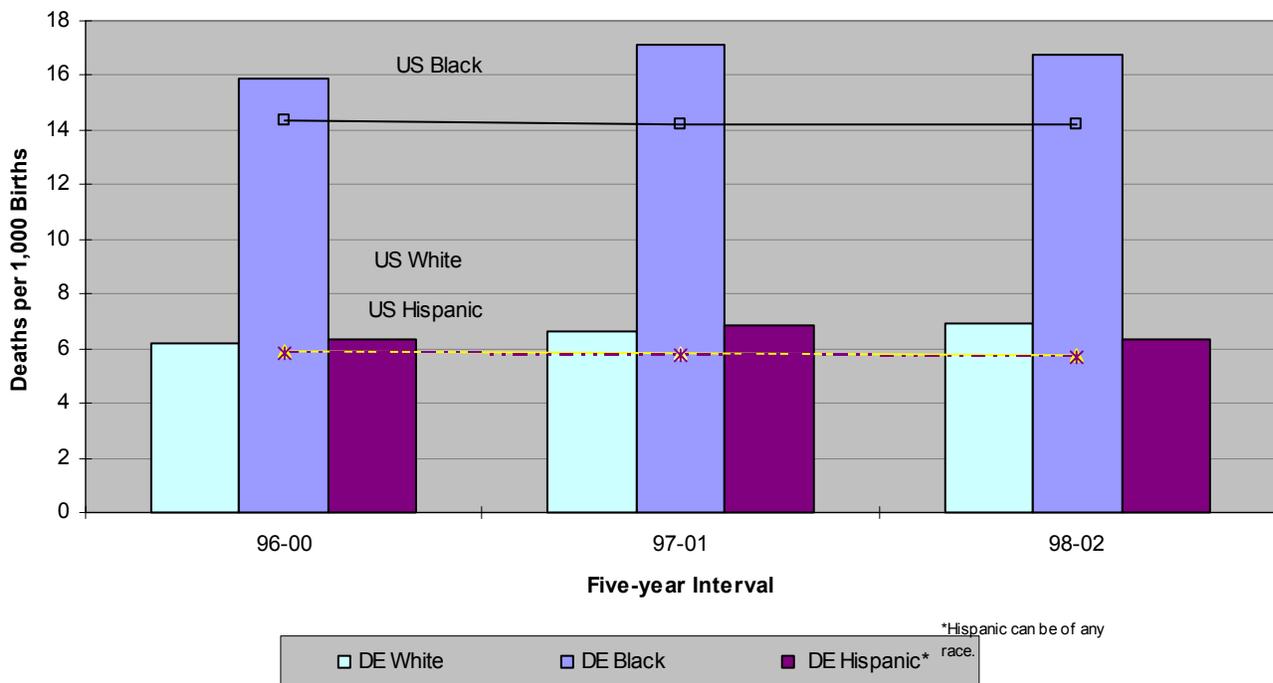
Although the number of infant deaths was lower in 2002, the 5-yr infant mortality rate (IMR) for 1998-2002 is higher for all races (9.2) and white (6.9 - a 4.5% increase), but lower for black (16.7 - a 2.3% decrease).

Five-year Average Infant Mortality Rates by Race
Delaware, 1989-2002



In the 1998-2002 time period, the black infant mortality rate (16.7) was more than double the white (6.9) and Hispanic (6.3) infant mortality rates. The U.S. infant mortality rates demonstrate a similar racial disparity between black and white infants, though Delaware has significantly higher rates for each racial and ethnic group.

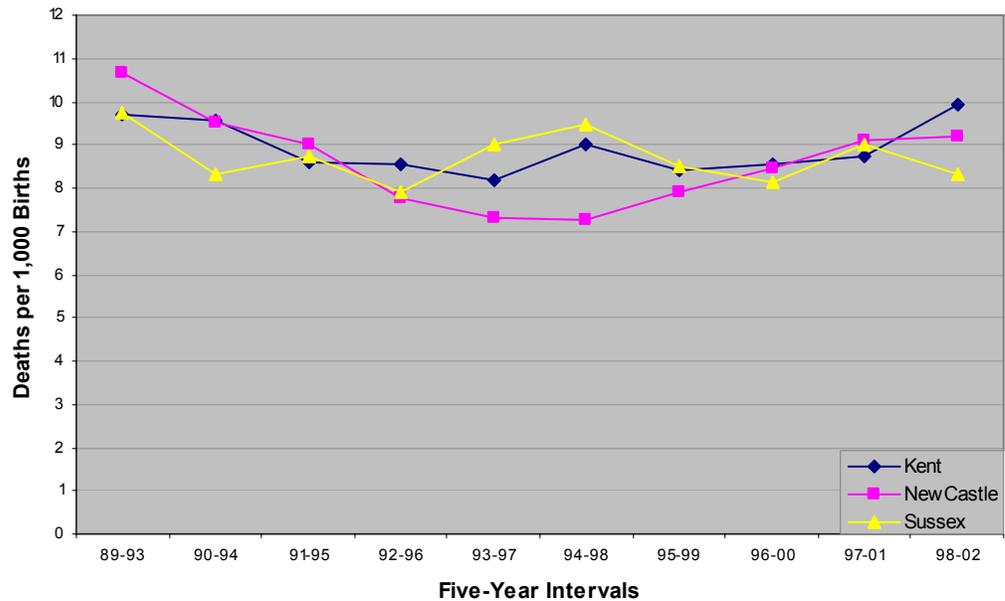
Five-year Average Infant Mortality Rates by Race and Hispanic Origin
U.S. and Delaware, 1996-2002



INFANT MORTALITY

Most recently, Sussex County's IMR decreased, making it the county with the lowest IMR (8.3) for 1998-2002. New Castle County's rate increased very slightly (9.1 to 9.2); not only did Kent County's IMR rise to 9.9 in 1998-2002, making it the highest of the three counties, but the increase also made it the only county whose current IMR is above its 1989-1993 IMR (9.7).

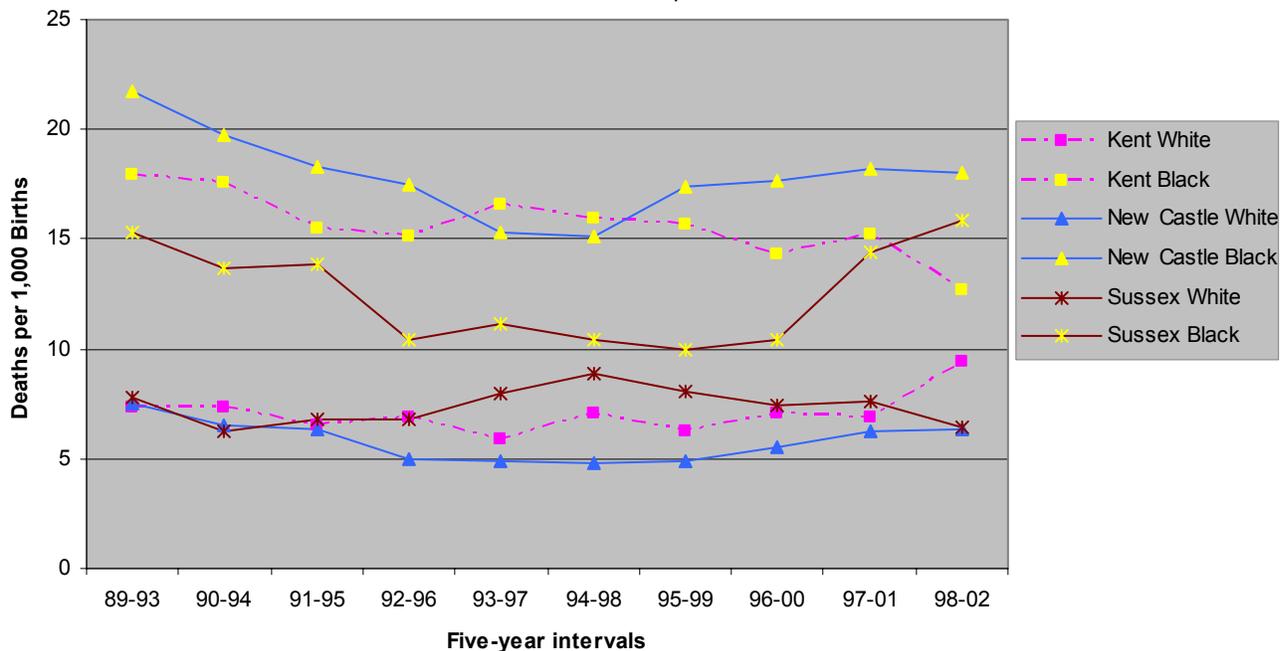
**Five-year Average Infant Mortality Rates by County
Delaware, 1989-2002**



The graph below shows that Kent County's overall rate increased due to a 38% increase in the white IMR, not the black IMR, which declined 16% from 97-01 to 98-02. New Castle IMRs moved in the same manner, though the increase seen in the white rate and the decrease seen in the black rates were much smaller, at 4.8 and 1% respectively.

Despite Sussex County's climbing black infant mortality rate, which increased by 10% from 97-01 to 98-02, their overall infant mortality rate was lower in 1998-2002, due to a 14.5% decrease in white infant mortality rates.

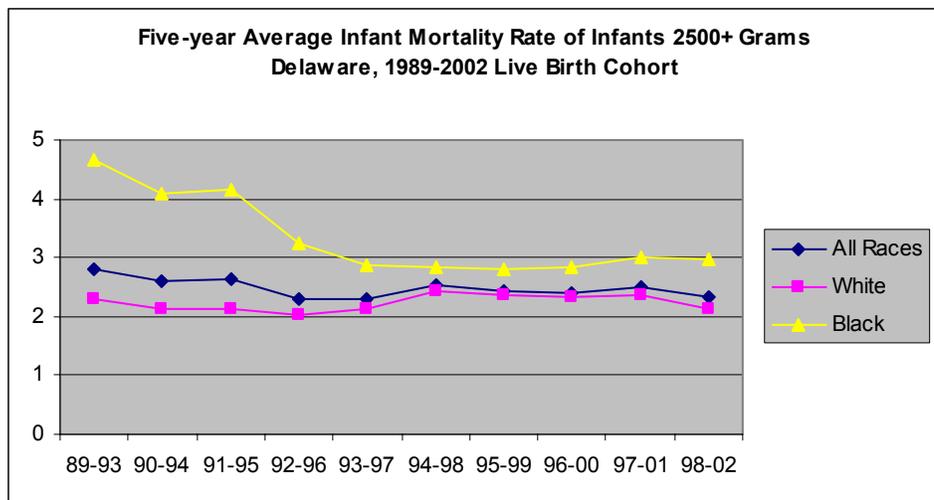
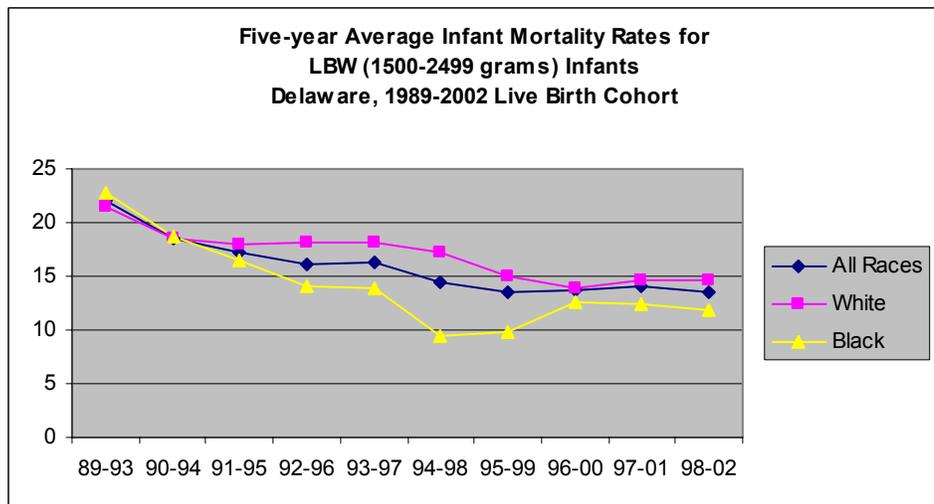
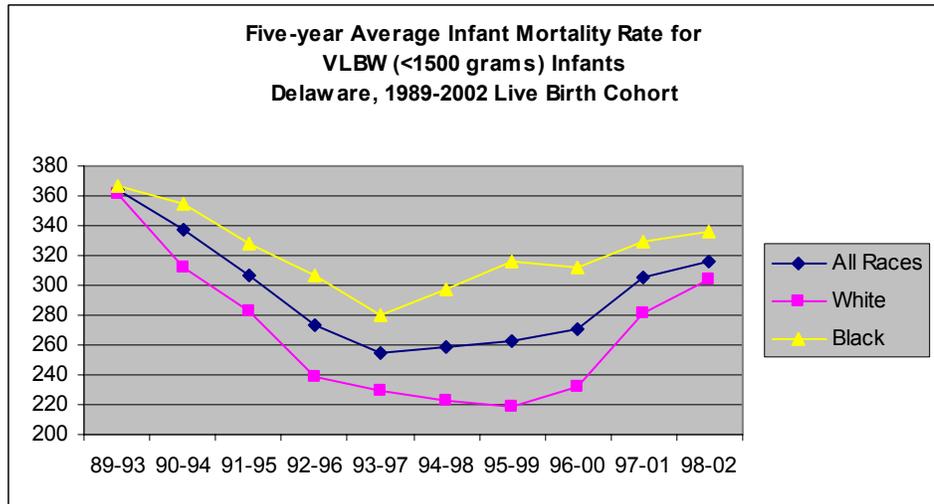
**Five-year Average Infant Mortality Rates by County and Race
Delaware Counties, 1989-2002**



INFANT MORTALITY

The rise in infant mortality rates is being driven by the infant mortality rate of very low birth weight (<1500 grams) infants. These same infants have IMRs roughly 25 times that of moderately low birth weight infants (1500-2499), and approximately 128 times that of normal birthweight infants.

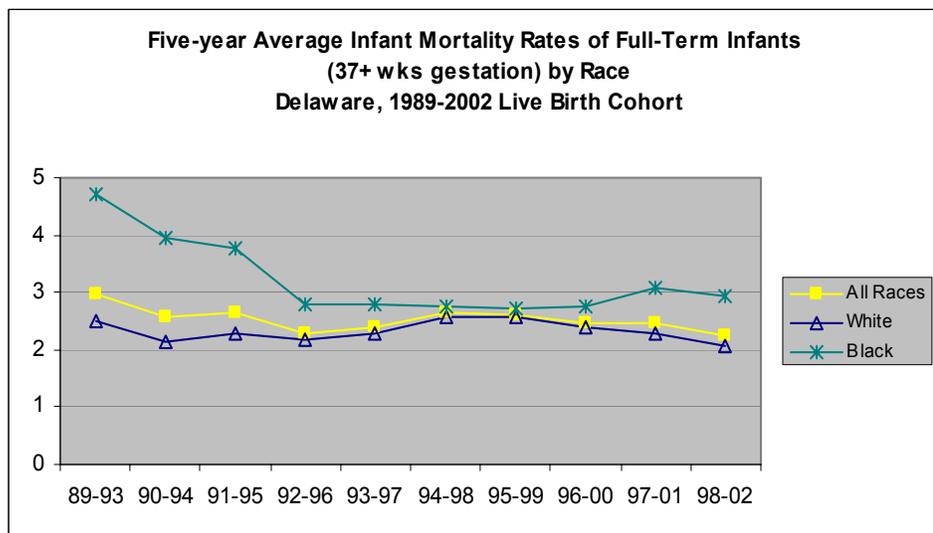
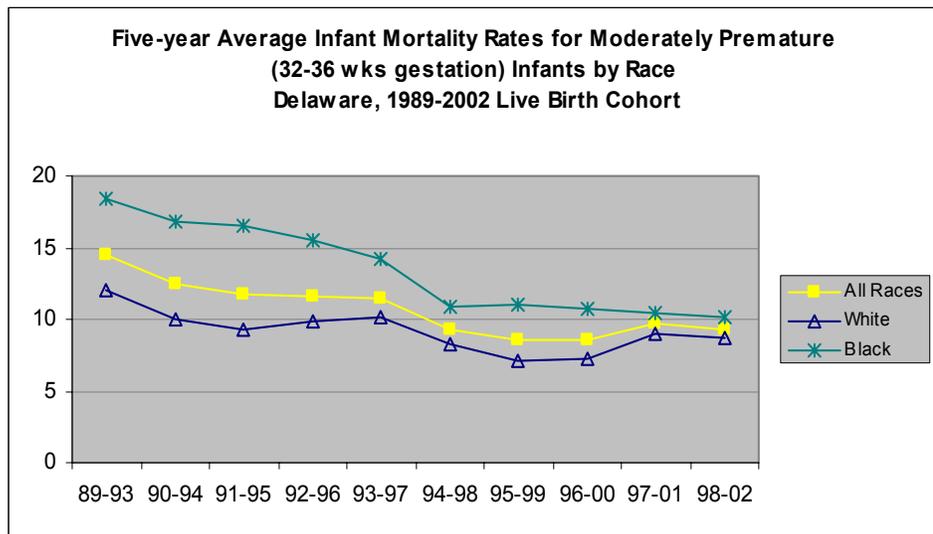
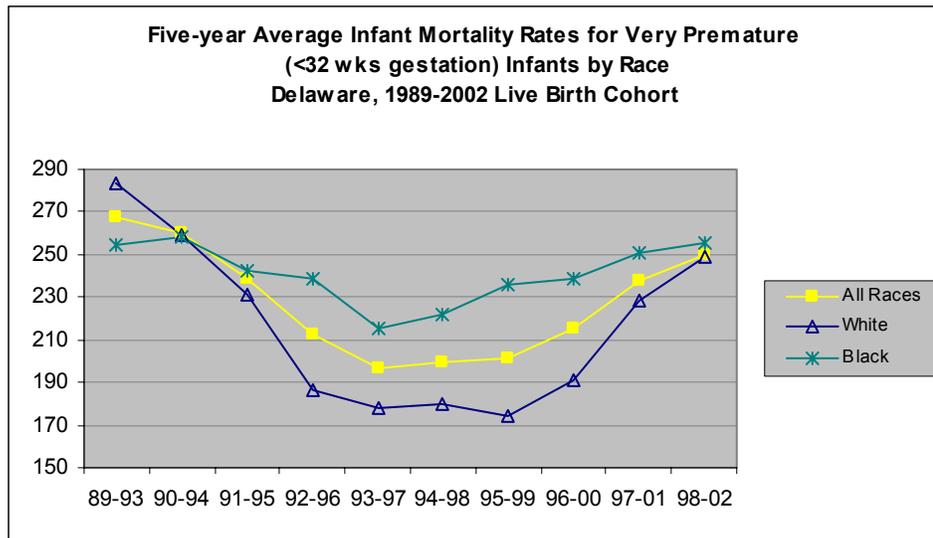
While the IMRs of very low birth weight infants has risen 24% since 93-97, the IMR of low birth weight babies (1500-2499 grams) has declined 18%, and the IMR of babies 2500 grams and over has remained fairly steady since 1993-1997.



INFANT MORTALITY

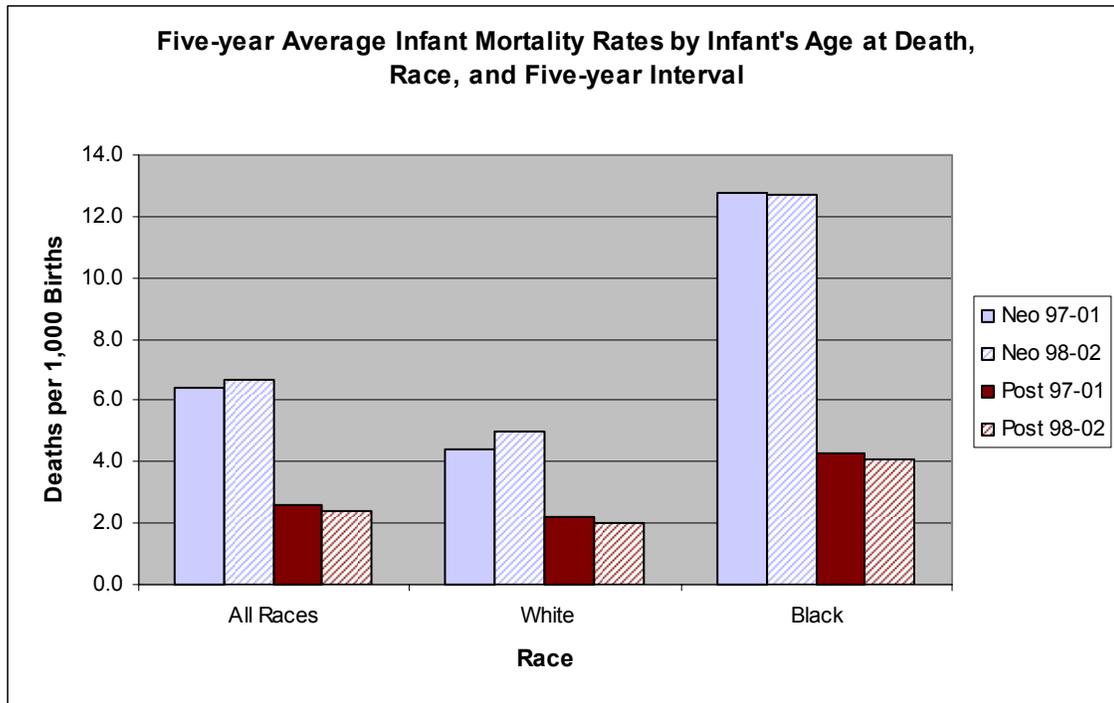
IMRs for full-term births (37+ weeks gestation) declined from 97-01 to 98-02. In 98-02 both black and white IMRS fell below 3.0 deaths per 1,000 births. IMRs for moderately premature births also declined over that same period, though their IMRs range from 8.7 for whites, to 10.2 for blacks.

Conversely, IMRs for very premature births continued to increase for the 3rd year in a row, and ranged from 247.7 for whites, to 253.7 for blacks, roughly 25 times that of moderately premature infants, and 83 times that of full term infants.



INFANT MORTALITY

Postneonatal rates for all racial groups have decreased since 97-01, while neonatal IMRs continued their increasing trend, with white neonatal IMRs displaying the steadiest rise in rates.



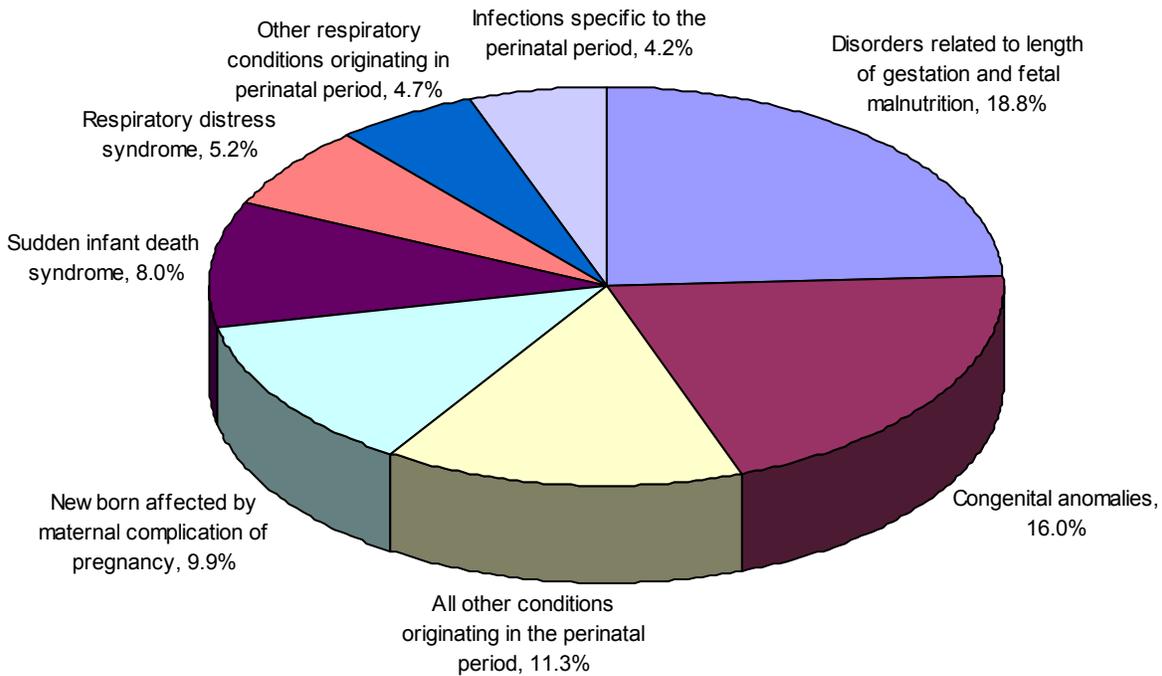
Postneonatal IMRs have been relatively flat, versus neonatal IMRs, which have been increasing since 94-98 for blacks, and since 96-00 for whites. Neonatal IMRs are the primary contributor to Delaware's high IMRs and neonatal deaths account for approximately 70% of all infant deaths.

Leading Causes of Infant Death

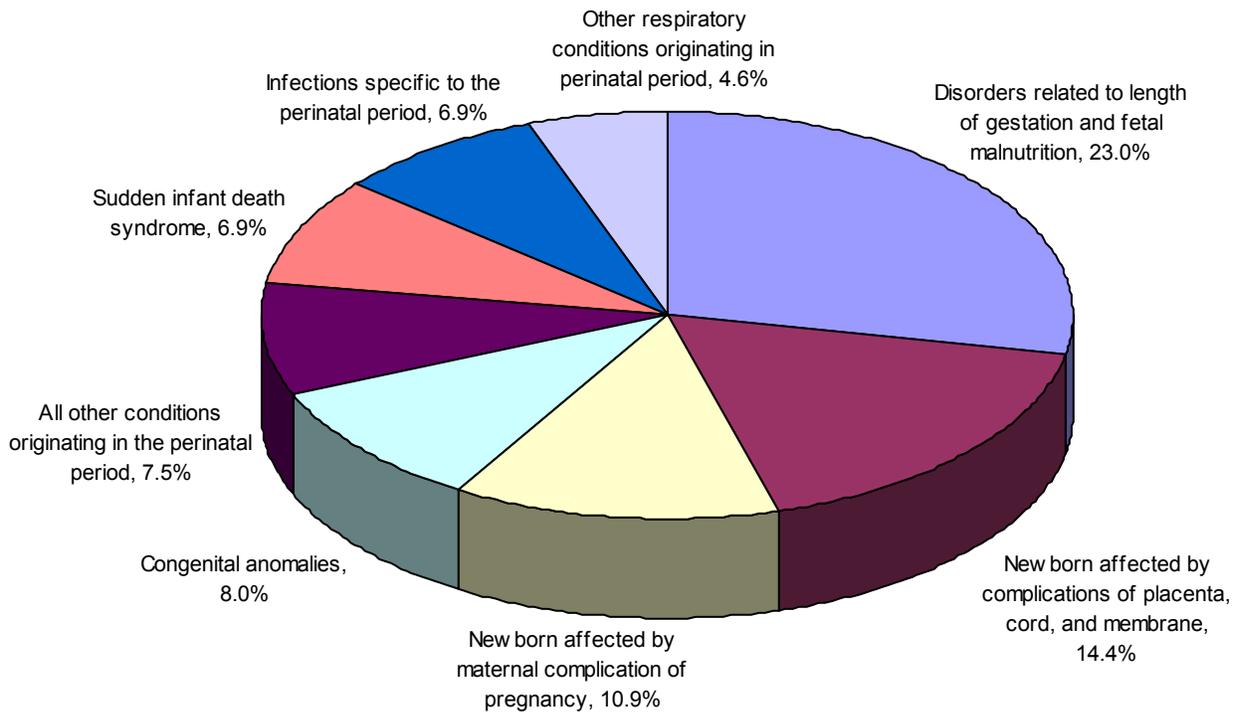
From 1999-2002 disorders related to length of gestation and fetal malnutrition, congenital anomalies, and maternal complications of pregnancy were the three leading causes of infant death, comprising 20%, 13%, and 10%, respectively, of the total infant deaths. While disorders related to length of gestation and fetal malnutrition was the top cause of death for both black and white infants, the number 2 and 3 spots varied by race. Birth defects was the second leading cause of death for whites, while complications of the cord and membranes was the second leading cause for black infants. All other conditions originating in the perinatal period was the third leading cause of death for white infants, while maternal complications of pregnancy was the third leading cause of death for black infants.

INFANT MORTALITY

1999-2002 Leading Causes of White Infant Death



1999-2002 Leading Causes of Black Infant Death



MORTALITY

Fewer Delaware residents died in 2002 than in 2001. A total of 6860 residents died, 96 of which were children under the age of 1. Heart disease and cancer continued to be the leading and second leading causes of death, accounting for 52% of all deaths in 2002.

- 6914 people died in Delaware in 2002, 6352 were Delaware residents and 562 were non-residents. 508 Delaware residents died in a state other than Delaware.
- In 2002, the ten leading causes of death for residents of all ages were almost identical to the top 10 in 2001. The exceptions were septicemia and Alzheimer's disease reversing order, and nephritis, nephrotic syndrome, and nephrosis knocking suicide out of the top 10.

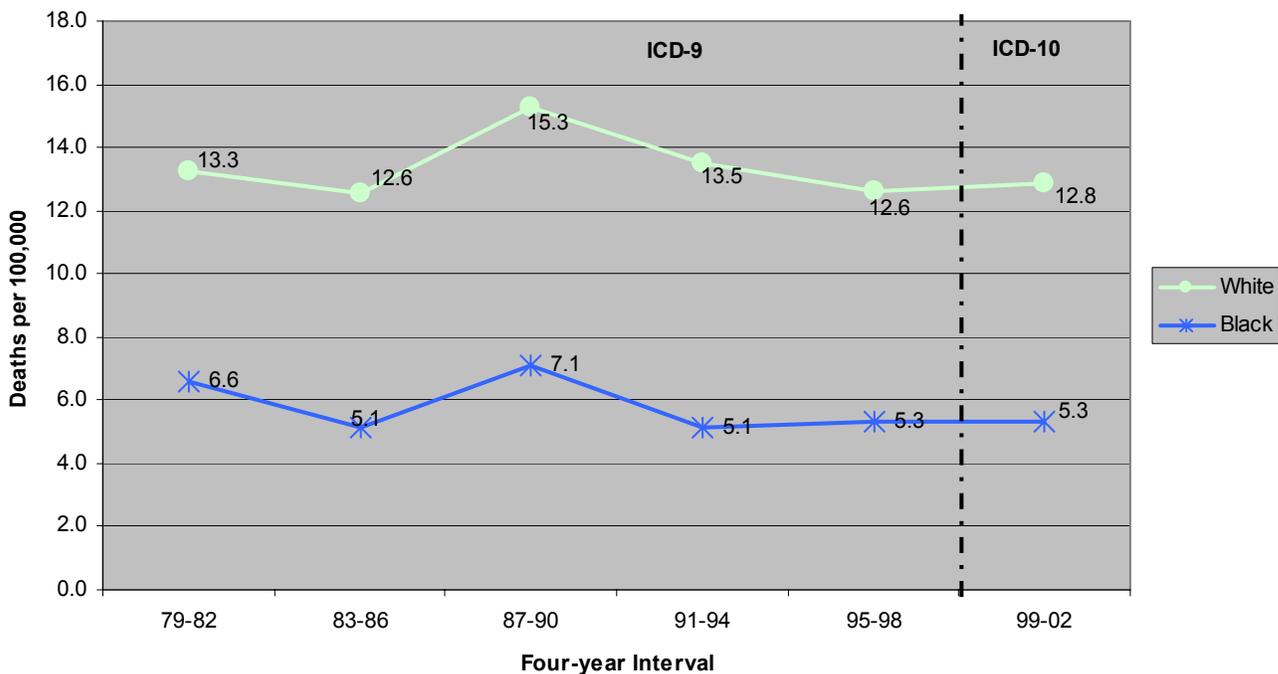
Rank	Leading Cause of Death	Deaths
1	Diseases of the heart	1918
2	Malignant neoplasms	1621
3	Cerebrovascular diseases	406
4	Chronic Lower Respiratory Diseases	350
5	Accidents (unintentional injuries)	290
6	Diabetes mellitus	214
7	Influenza and pneumonia	167
8	Septicemia	133
9	Alzheimer's Disease	128
10	Nephritis, nephrotic syndrome, and nephrosis	117

- One quarter of the Delawareans who died in 2002 were 85 or older. Deaths to those 75 and older accounted for more than half of all Delaware deaths.
- 51% of Delaware deaths were females and 49% were males.
- Cancer, heart disease, and accidents accounted for 51% of the total years of potential life lost due to premature death (prior to age 75).
- There were 290 deaths due to unintentional injuries in 2002; 41% of which were due to motor vehicle accidents and 57% of which were due to nontransport accidents. Of the 165 nontransport accidents, 41% were caused by unintentional poisonings, primarily drug overdoses and adverse reactions.
- A Delaware resident born in 2002 could expect to live an average of 77.3 years.
- Life expectancy at birth differs by race and sex; females have higher life expectancy (79.8) than males (74.6), and whites (77.8) have a higher life expectancy than blacks (73.8). As a result, white females have the highest life expectancy (80.1) and black males have the lowest (69.5).
- Once a Delawarean reaches 70, his or her future life expectancy ranges from 11.6 for black males to 16.2 for black females.

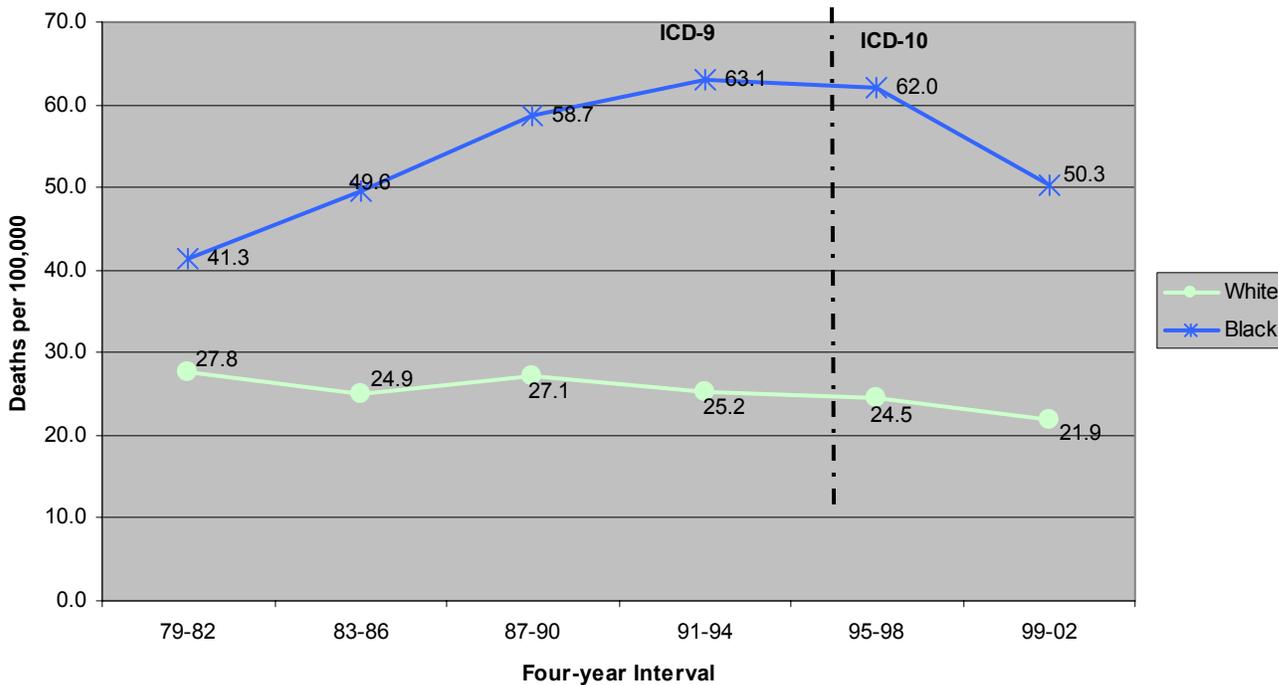
Looking at the last four years of data, from 1999-2002:

- When broken down by sex, the top three leading causes of death were different; for males, accidents replaced cerebrovascular disease as the third leading cause of death.
- Accidents were the leading cause of death for Delawareans of both sexes, 1 to 44 years of age.
- Racial disparities between black and white Delawareans were evident in several causes of death, such as Suicide, Diabetes, and Homicide, though HIV rates demonstrated the largest disparity.

Four-year Age-adjusted Mortality Rates for Suicide by Race
Delaware, 1979-2002

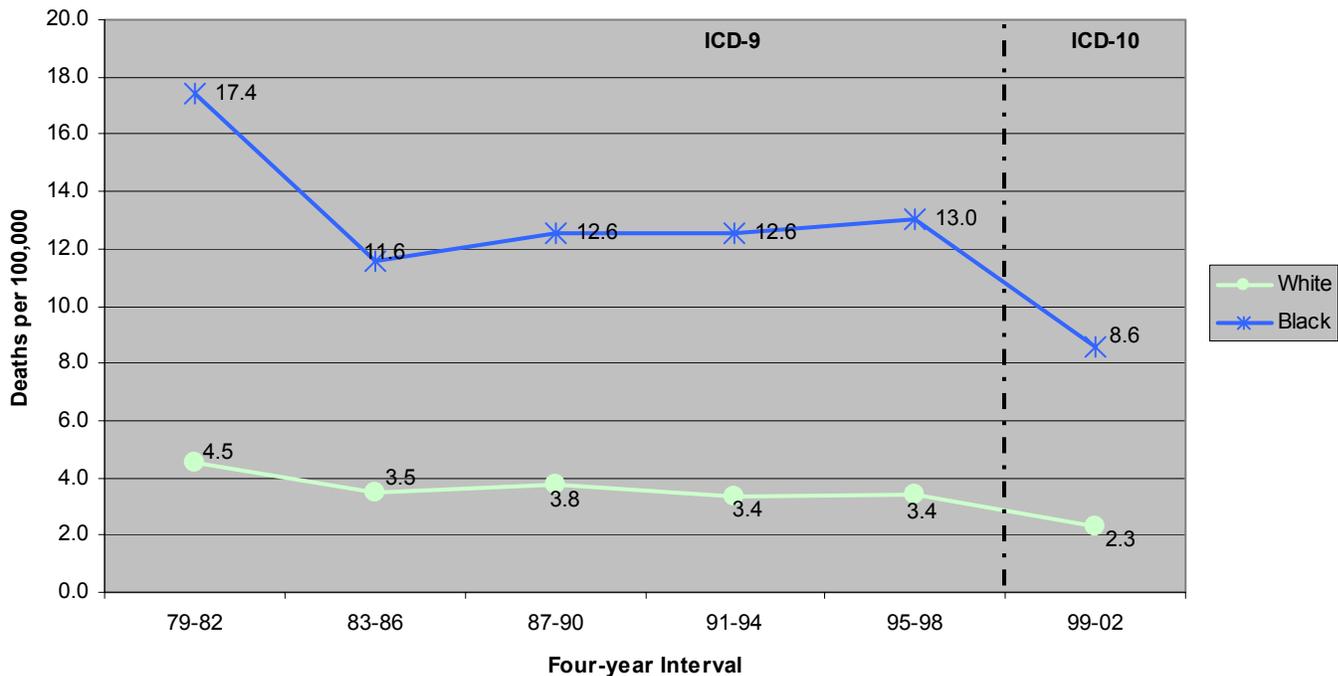


Four-year Age-adjusted Diabetes Mortality Rates by Race
Delaware, 1979-2002

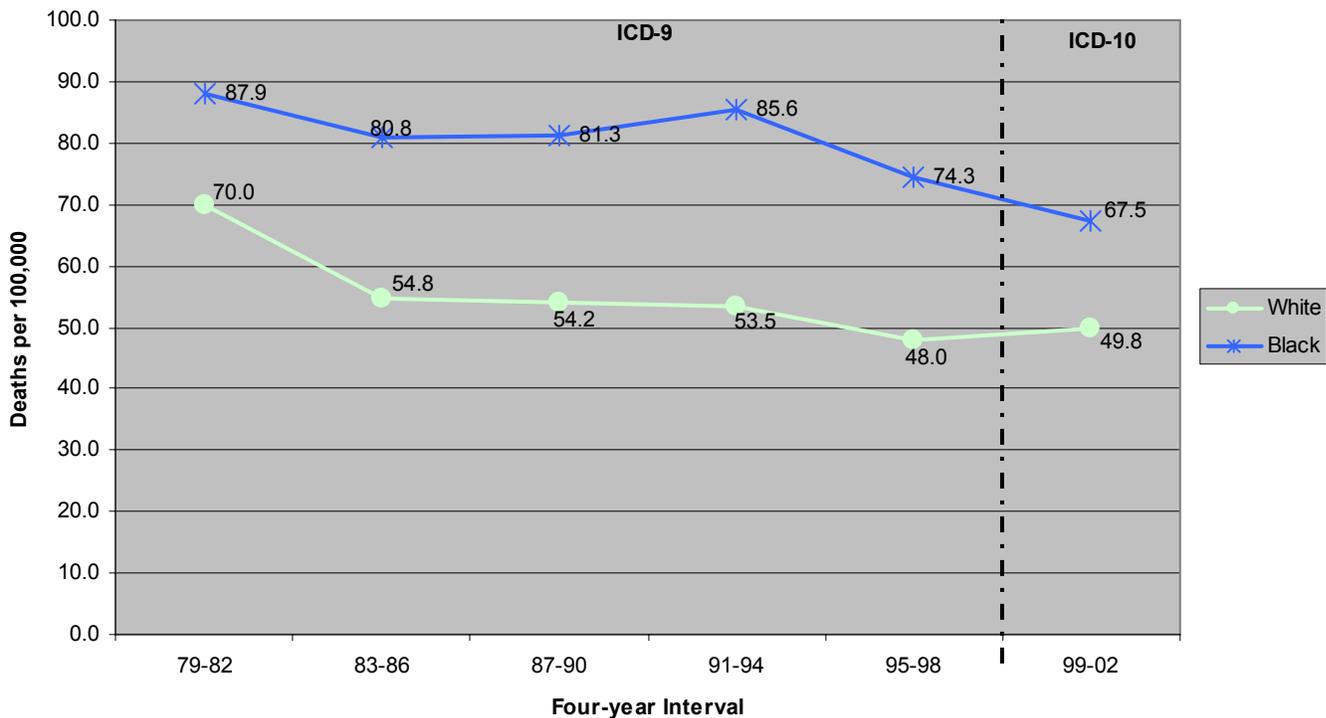


MORTALITY

**Four-year Age-adjusted Homicide Mortality Rates by Race
Delaware, 1979-2002**

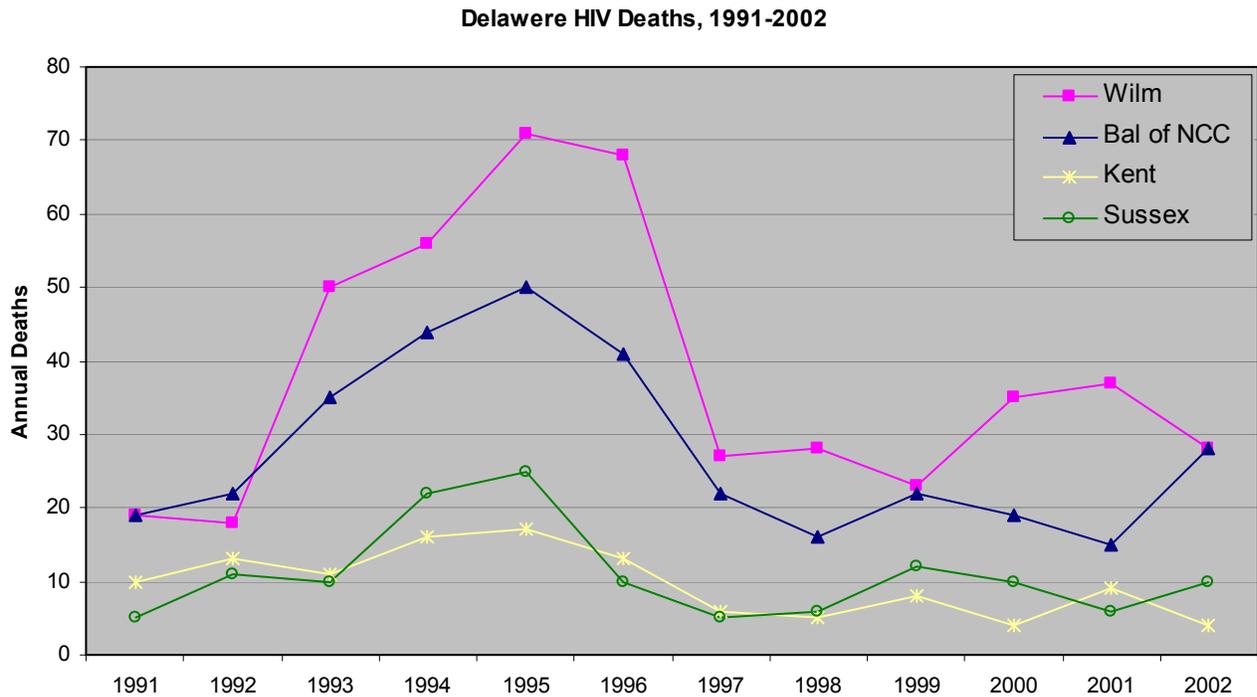


**Four-year Age-adjusted Mortality Rates for Stroke by Race
Delaware, 1979-2002**



MORTALITY

No HIV deaths were identified in Delaware prior to 1986, at which time total deaths numbered less than five. In the early 1990's HIV mortality increased sharply to its 1995 peak.



Although the city of Wilmington represented 9.6% of Delaware's total population from 1992-2002, it accounted for 44.6% of Delaware's total HIV deaths that occurred during the same time.

HIV mortality rates varied greatly by geography and race; the four-year average mortality rates for 1999-2002 were highest for Wilmington residents (44.6) and Black Delawareans (35.4).

**Four-year Age-adjusted HIV Mortality Rates by Race
Delaware, 1983-2002**

