
DELAWARE VITAL STATISTICS ANNUAL REPORT ■ 2012



DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

Selected Characteristics: Delaware Vital Statistics Annual Report, 2012

Population			Fetal Deaths		
	Number*	Percent		Number*	Percent
Delaware	914,621	100.0%	Delaware	62	100.0%
<i>Kent</i>	166,563	18.2%	<i>Kent</i>	4	6.5%
<i>New Castle</i>	543,049	59.4%	<i>New Castle</i>	36	58.1%
<i>Sussex</i>	205,009	22.4%	<i>Sussex</i>	22	35.5%
	Error				
Marriages			Race		
	Number*	5-yr Rate ¹		Number*	Percent
Delaware	5,314	5.4	<i>White</i>	38	61.3%
<i>Kent</i>	932	5.9	<i>Black</i>	21	33.9%
<i>New Castle</i>	2,701	4.6	<i>Hispanic Origin</i> ⁴	8	12.9%
<i>Sussex</i>	1,681	7.1			
Divorces			Infant Mortality		
	Number*	5-yr Rate ¹		Number*	5-yr Rate ⁵
Delaware	3,239	3.6	Delaware	98	8.1
<i>Kent</i>	742	4.4	<i>Kent</i>	17	6.9
<i>New Castle</i>	1,843	3.3	<i>New Castle</i>	74	9.1
<i>Sussex</i>	654	3.5	<i>Sussex</i>	7	6.2
Live Births			Race		
	Number*	5-yr Rate ²		Number*	Percent
Delaware	11,227	65.9	<i>White</i>	48	5.8
<i>Kent</i>	2,166	66.5	<i>Black</i>	38	13.8
<i>New Castle</i>	6,880	62.7	<i>Hispanic Origin</i> ⁴	11	7.7
<i>Sussex</i>	2,181	76.4			
Births to Teenagers (15-19)			Mortality		
<i>White</i>	438	31.0		Number*	Adj. Rate ⁶
<i>Black</i>	300	56.4	Delaware	7,816	709.7
Delaware	757	36.6	<i>Kent</i>	1,368	843.4
<i>Kent</i>	161	37.4	<i>New Castle</i>	4,394	716.7
<i>New Castle</i>	401	32.3	<i>Sussex</i>	2,054	634.0
<i>Sussex</i>	195	51.1			
Race			Race and Gender		
	Number*	Percent		Number*	Percent
<i>White</i>	7,510	66.9%	<i>White Males</i>	3,121	815.2
<i>Black</i>	3,084	27.5%	<i>White Females</i>	3,227	596.1
<i>Hispanic Origin</i> ⁴	1,427	12.7%	<i>Black Males</i>	666	970.1
Marital Status			<i>Black Females</i>	726	768.7
<i>Married</i>	5,823	53.0%	Decedent's Age		
<i>Single</i>	5,159	47.0%		Number*	Percent
Births to Single Mothers ³			<1	98	1.3%
<i>White</i>	2,925	38.9%	1-14	28	0.4%
<i>Black</i>	2,115	68.6%	15-24	86	1.1%
<i>Hispanic Origin</i> ⁴	866	60.7%	25-44	356	4.6%
Low Birth Weight (<2500 gms)			45-64	1579	20.2%
All Races	910	8.1%	65-74	1357	17.4%
<i>White</i>	503	6.7%	75-84	2077	26.6%
<i>Black</i>	350	11.3%	85+	2235	28.6%
<i>Hispanic Origin</i> ⁴	100	7.0%	Leading Causes of Death		
				Number*	Percent
			Malignant neoplasms	1,934	24.7%
			Diseases of heart	1,787	22.9%
			Dementia	513	6.6%
			Chronic lower respiratory diseases	423	5.4%
			Cerebrovascular diseases	403	5.2%
			Accidents (unintentional injuries)	371	4.7%

Notes:

* Numbers are for 2012.

1. The 5-year rate is per 1,000 population and refers to the period 2008-2012.

2. The 5-year rate refers to total live births per 1,000 women 15-44 years of age during the 2008-2012 period.

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

4. People of Hispanic origin may be of any race. The percentage is based on total resident births for 2012.

5. The 5-year (2008-2012) infant mortality rates represent the number of deaths to children under one year of age per 1,000 live births.

6. The 2012 mortality rates (deaths per 100,000 population) for Delaware and the counties are age-adjusted to the 2000 U.S. population.

SUMMARY

Jack Markell, Governor
State of Delaware

Rita M. Landgraf, Secretary
Delaware Health and Social Services

DELAWARE VITAL STATISTICS ANNUAL REPORT, 2012

**Division of Public Health
Delaware Health Statistics Center**

417 Federal Street
Dover, DE 19901

Telephone (302) 744-4541
FAX (302) 739-4784

Karyl Thomas Rattay, MD, MS
Director
Division of Public Health



DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

Delaware
Center **DH** Health
SC Statistics

Intentionally left blank

PREFACE

I am pleased to present the 2012 Vital Statistics Annual Report, issued by the Division of Public Health's Delaware Health Statistics Center.

This report features statistics that are essential to identify and understand the challenges facing Delaware as it strives to improve the health of its residents. Our challenges are significant, and include the reduction of infant mortality, promoting healthy lifestyles to reduce morbidity and mortality due to preventable diseases, and closing the health disparities gap that exists when comparing racial and ethnic groups. To meet these challenges, we must measure outcomes and monitor trends to learn what we can do to improve the quality of life for all Delawareans.

The 2012 Delaware Vital Statistics Annual Report presents a wide variety of data and statistics that can assist us in this endeavor. Information in this report identifies racial differences, such as the large disparity between black and white mortality rates for HIV, homicide, diabetes, kidney disease, and hypertension. It presents health indicators such as life expectancy, the leading causes of death, teen birth rates, general fertility rates, and infant mortality rates; and it provides historical data that demonstrate movement over time.

The primary sources of data used in preparing this report are certificates of marriage, divorce, live birth, death, fetal death, and reports of induced termination of pregnancy. We are indebted to the hard work and dedication of the professionals who provide these certificates.

Karyl Thomas Rattay MD, MS



Director
Delaware Division of Public Health

Intentionally left blank

ACKNOWLEDGEMENTS

This report was prepared by Maridelle Dizon, Jennifer Miles, and Marianne Letavish of the Delaware Health Statistics Center.

We gratefully acknowledge the contributions of Brenda Abele and the staff of the Office of Vital Statistics, Edward C. Ratledge and the staff of the Center for Applied Demography and Survey Research at the University of Delaware, and the Health Statistics Center staff, including: Jean Hreczan, Louise Wishart, Rosemary Zimmermann, Genelyn Viray, and Georgette Ahiamadjie. We also recognize local registrars, physicians, nurses, medical records staffs, midwives, funeral directors, and county clerks for their help in collecting and providing us with these data.

Questions or comments about this report may be directed to:

State of Delaware
Department of Health and Social Services
Division of Public Health
Health Statistics Center
417 Federal Street
Dover, Delaware 19901
(302) 744-4541
FAX (302) 739-6631

Visit our website at:

<http://www.dhss.delaware.gov/dhss/dph/hp/healthstats.html>

Suggested citation:

Delaware Vital Statistics Annual Report, 2012. Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center, 2016.

Intentionally left blank

TABLE OF CONTENTS

DELAWARE VITAL STATISTICS ANNUAL REPORT, 2012

THE DELAWARE VITAL STATISTICS SYSTEM			1
BASIC DEFINITIONS			3
RATES			9
VITAL STATISTICS TRENDS			13
A.	POPULATION		
	Population Summary		17
	Population Tables and Figures		
Table	A-1	Percent Change in Population by Sex - Delaware, Counties, City of Dover, City of Newark, and City of Wilmington, 1970-2020	19
Figure	A-1	Population Growth - Delaware and Counties, 1800-2030	20
Figure	A-2	Live Births, Deaths, and Natural Increase - Delaware, 1985-2012	21
Table	A-2	Population Estimates by Sex, Race and Age - Delaware, Counties, City of Dover, City of Newark, and City of Wilmington, 2012	22
B.	MARRIAGE AND DIVORCE		
	Marriage and Divorce Summary		25
	Marriage and Divorce Tables		
Table	B-1	Number of Marriages by Place of Ceremony - U.S., Delaware and Counties, 1989-2012	27
Table	B-2	Five-Year Average Marriage Rates per 1,000 Population by Place of Ceremony - U.S., Delaware and Counties, 1989-2012	27
Table	B-3	Number and Percent of Marriages by Race of Groom and Bride - Delaware, 2012	28
Table	B-4	Number and Percent of Marriages by Previous Marital Status and Race of Bride and Groom - Delaware, 2012	28
Table	B-5	Number and Percent of Marriages by Marriage Order, Type of Ceremony and Race of Bride and Groom - Delaware, 2012	29
Table	B-6	Median and Mean Age of Bride and Groom by Marriage Order and Race - Delaware, 2012	29
Table	B-7	Number and Percent of Marriages by Marriage Order, Age and Race of Bride and Groom - Delaware, 2012	30
Table	B-8	Number of Marriages by Marriage Order and Age of Bride by Marriage Order and Age of Groom - Delaware, 2012	31
Table	B-9	Number and Percent of Marriages by Month of Ceremony - Delaware, 2012	32
Table	B-10	Number and Percent of Marriages by Day of Week Ceremony Performed - Delaware, 2012	32
Table	B-11	Number of Divorces/Annulments* by Place of Decree - Delaware and Counties, 1989-2012	33

Table	B-12	Five-Year Average Divorce/Annulment* Rates per 1,000 Population by Place of Decree - Delaware and Counties, 1989-2012	33
Table	B-13	Number of Divorces/Annulments* by Race of Wife and Race of Husband - Delaware, 2012	34
Table	B-14	Mean and Median Age of Husband and Wife at Time of Divorce Decree by Number of This Marriage and Race of Husband and Wife - Delaware, 2012	34
Table	B-15	Number and Percent of Divorces/Annulments* by Marriage Order, Age of Husband and Wife at Time of Divorce Decree and Race of Husband and Wife - Delaware, 2012	35
Table	B-16	Median and Mean Duration of Marriage in Years at Time of Divorce Decree by Number of This Marriage and Race of Husband and Wife - Delaware, 2012	36
Table	B-17	Number and Percent of Divorces/Annulments* by Marriage Order, Duration of This Marriage and Race of Husband and Wife - Delaware, 2012	37
Table	B-18	Number and Percent of Divorces by Race of Husband and Wife and Number of Children under 18 - Delaware, 2012	38

C. LIVE BIRTHS

		Live Birth Summary	41
--	--	--------------------	----

Live Birth Tables and Figures

NUMBER OF LIVE BIRTHS BY AGE OF MOTHER

Table	C-1	Number of Live Births by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 2000-2012 - (All Races)	49
Table	C-2	Number of Live Births by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 2000-2012 - (White)	50
Table	C-3	Number of Live Births by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 2000-2012 - (Black)	51
Table	C-4	Number of Live Births by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 2000-2012 - (Hispanic Origin1)	52

TEEN BIRTH RATES

Table	C-5	Five-Year Average Teenage Live Birth Rates by Age and Race of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012	53
Figure	C-1	Five-Year Average Teenage (15-19) Live Birth Rates - U.S., Delaware and Counties, 1985-2012	54
Figure	C-2	Five-Year Average Percent Live Births to Teens (15-19) by Census County Division, Delaware, 2006-2012	55
Figure	C-3	Five-Year Average Teenage (15-19) Live Birth Rates by Race - U.S. and Delaware, 1985-2012	56
Figure	C-4	Five-Year Average Teenage (15-17) Live Birth Rates - U.S., Delaware and Counties, 1985-2012	57
Figure	C-5	Five-Year Average Teenage (18-19) Live Birth Rates - U.S., Delaware and Counties, 1985-2012	58

GENERAL FERTILITY AND AGE-SPECIFIC BIRTH RATES

Table	C-6	Five-Year General Fertility and Age-Specific Live Birth Rates - U.S., Delaware and Counties, 1991-2012 - (All Races)	59
Table	C-7	Five-Year General Fertility and Age-Specific Live Birth Rates - U.S., Delaware and Counties, 1991-2012 - (White)	60
Table	C-8	Five-Year General Fertility and Age-Specific Live Birth Rates - U.S., Delaware and Counties, 1991-2012 - (Black)	61
Figure	C-6	Five-Year Average General Fertility Rates - U.S., Delaware and Counties, 1985-2012	62
Figure	C-7	Five-Year Average General Fertility Rates by Race - U.S. and Delaware, 1985-2012	63
Figure	C-8	Five-Year Average Age-Specific Live Birth Rates by Race - Delaware, 2008-2012	64
Figure	C-9	Five-Year Average Age-Specific Live Birth Rates - Counties, 2008-2012	65
Table	C-9	Number of Live Births by Age, Race and Hispanic Origin of Mother - Delaware, Counties and City of Wilmington, 2012	66

NUMBER OF BIRTHS BY AGE, RACE, MARITAL STATUS, AND EDUCATION

Table	C-10	Number of Live Births to Married Mothers by Age of Mother and Age of Father - Delaware, Counties and City of Wilmington, 2012	67
Table	C-11	Number of Live Births by Education and Age of Mother - Delaware, Counties and City of Wilmington, 2012	68
Table	C-12	Number and Percent of Live Births by Education and Race and Hispanic Origin of Mother - Delaware, Counties and City of Wilmington, 2012	69
Table	C-13	Five-Year Average Percentage of Live Births to Single Mothers by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (All Races)	70
Table	C-14	Five-Year Average Percentage of Live Births to Single Mothers by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (White)	71
Table	C-15	Five-Year Average Percentage of Live Births to Single Mothers by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (Black)	72
Table	C-16	Five-Year Average Percentage of Live Births to Single Mothers by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (Hispanic Origin*)	73
Figure	C-10	Five-Year Average Percentage of Births to Single Mothers by Race and Hispanic Origin - Delaware, 1989-2012	74
Table	C-17	Number of Live Births by Age, Marital Status, Race and Hispanic Origin of Mother - Delaware, Counties and City of Wilmington, 2012	75

NUMBER OF BIRTHS BY LIVE BIRTH ORDER AND PLURALITY

Table	C-18	Number of Live Births by Live Birth Order and Age of Mother - Delaware, Counties and City of Wilmington, 2012	76
Table	C-19	Number and Percent of Live Births by Live Birth Order, Race and Hispanic Origin of Mother - Delaware, Counties and City of Wilmington, 2012	77
Table	C-20	Number of Live Births by Plurality and Age of Mother - Delaware, Counties and City of Wilmington, 2012	78
Table	C-21	Number and Percent of Live Births by Plurality, Race and Hispanic Origin of Mother - Delaware, Counties and City of Wilmington, 2012	79

NUMBER OF BIRTHS BY FACILITY AND ATTENDANT

Table	C-22	Number and Percent of Live Births by Place of Birth, Type of Facility and Residence Status - Delaware, 2012	80
-------	------	---	----

FIVE-YEAR AVERAGE PERCENTAGE OF BIRTHS BY BIRTH WEIGHT

Table	C-23	Five-Year Average Percentage of Low Birthweight Births (<2500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (All Races)	81
Table	C-24	Five-Year Average Percentage of Low Birthweight Births (<2500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (White)	82
Table	C-25	Five-Year Average Percentage of Low Birthweight Births (<2500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (Black)	83
Table	C-26	Five-Year Average Percentage of Low Birthweight Births (<2500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (Hispanic Origin*)	84
<i>Figure</i>	C-11	Five-Year Average Percentage of Low Birthweight Births (<2500 Grams) by Race and Hispanic Origin - Delaware, 1991-2012	85
<i>Figure</i>	C-12	Five-Year Average Percentage of Low Birthweight Births (<2500 Grams) by Race and Hispanic Origin - Delaware and Counties, 2008-2012	86
Table	C-27	Five-Year Average Percentage of Very Low Birthweight Births (<1500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (All Races)	87
Table	C-28	Five-Year Average Percentage of Very Low Birthweight Births (<1500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (White)	88
Table	C-29	Five-Year Average Percentage of Very Low Birthweight Births (<1500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (Black)	89
Table	C-30	Five-Year Average Percentage of Very Low Birthweight Births (<1500 Grams) by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (Hispanic Origin*)	90
<i>Figure</i>	C-13	Five-Year Average Percentage of Very Low Birthweight Births (<1500 Grams) by Race and Hispanic Origin - Delaware, 1991-2012	91
<i>Figure</i>	C-14	Five-Year Average Percentage of Very Low Birthweight Births (<1500 Grams) by Race - Delaware and Counties, 2008-2012	92
Table	C-31	Number of Live Births by Birthweight in Grams and Age of Mother - Delaware, Counties and City of Wilmington, 2012	93

NUMBER OF BIRTHS BY GESTATION

Table	C-32	Number of Live Births by Birthweight in Grams, Race and Hispanic Origin of Mother - Delaware, Counties and City of Wilmington, 2012	94
-------	------	---	----

Table	C-33	Number of Live Births by Race and Hispanic Origin of Mother, Weeks of Gestation and Age of Mother - Delaware, 2012	95
Table	C-34	Number of Live Births by Race and Hispanic Origin of Mother, Birthweight and Weeks of Gestation - Delaware, 2012	96
PRENATAL CARE			
Table	C-35	Five-Year Average Percentage of Births to Mothers Beginning Prenatal Care in the First Trimester by Age of Mother - U.S., Delaware, Counties and City of Wilmington, 1991-2012 - (All Races)	97
SOURCE OF PAYMENT			
Table	C-36	Number and Percent of Live Births by Race, Hispanic Origin, and Marital Status of Mother, and Principal Source of Payment for Delivery - Delaware, 2012	98
Table	C-37	Number and Percent of Live Births by Trimester Prenatal Care Began and Principal Source of Payment for Delivery - Delaware, Counties and City of Wilmington, 2012	99
METHOD OF DELIVERY			
Table	C-38	Number of Live Births by Method of Delivery, Delaware, 2012	100
Table	C-39	Number and Percent of Live Births by Birthweight in Grams and Method of Delivery, Delaware, 2012	100
Table	C-40	Number and Percent of Live Births by Age of Mother and Method of Delivery, Delaware, 2012	100
Figure	C-15	Five-Year Percent Births by Cesarean Section Delivery by Race and Ethnicity, Delaware, 1989-2012	101
TOBACCO USE			
Table	C-41	Number and Percent of Live Births for Mothers Reporting Tobacco Use during Pregnancy by Race and Hispanic Origin of Mother - Delaware, Counties and City of Wilmington, 2012	102
Table	C-42	Number and Percent of Live Births by Age of Mother and Mother's Reported Use of Tobacco during Pregnancy - Delaware, 2012	103
Table	C-43	Number and Percent of Live Births by Birthweight in Grams and Mother's Reported Use of Tobacco during Pregnancy - Delaware, Counties and City of Wilmington, 2012	103
Table	C-44	Percentage of Live Births for Mothers Reporting Tobacco Use during Pregnancy by Race and Hispanic Origin - U.S. and Delaware, 1996-2012	104
TIME OF YEAR AND MOST POPULAR BIRTH NAMES			
Table	C-45	Number and Percent of Live Births by Day of the Week - Delaware, 2012	105
Table	C-46	Number and Percent of Live Births by Month - Delaware, 2012	105
Table	C-47	Most Popular Birth Names by Sex of Child - Delaware, 2008-2012	106

RANKINGS AND MAPS

Table	C-48	Ranking of Percentage of Low Birthweight (<2500 Grams) - U.S., 50 States and District of Columbia, 2012	107
Table	C-49	Ranking of Percentage of Live Births by Cesarean Delivery and Percentage of Births to Single Mothers - U.S., 50 States and District of Columbia, 2012	108
D.	FETAL DEATHS		
		Fetal Death Summary	111
		Fetal Death Tables	
Table	D-1	Number of Fetal Deaths by Race, Hispanic Origin, and Age of Woman - Delaware and Counties, 2012	113
Table	D-2	Number Fetal Deaths by Race, Hispanic Origin, and Education of Woman - Delaware, 2012	114
Table	D-3	Number of Fetal Deaths by Race, Hispanic Origin, and Marital Status of Woman - Delaware and Counties, 2012	114
Table	D-4	Number of Fetal Deaths by Weight of Fetus in Grams and Race of Woman - Delaware and Counties, 2012	115
Table	D-5	Number of Fetal Deaths by Weeks of Gestation and Race of Woman - Delaware and Counties, 2012	116
Table	D-6	Five-Year Average Perinatal Mortality Rates by Race - Delaware and Counties, 1991-2012	117
<i>Figure</i>	D-1	Five-Year Average Perinatal Mortality Rates by Race - Delaware, 1989-2012	118
E.	INFANT MORTALITY		
		Infant Mortality Summary	121
		Infant Mortality Tables and Figures	
Table	E-1	Number of Infant Deaths by Race - U.S., Delaware, Counties and City of Wilmington, 1992-2012	131
Table	E-2	Number of Neonatal Deaths by Race - U.S., Delaware, Counties and City of Wilmington, 1992-2012	132
Table	E-3	Number of Postneonatal Deaths by Race - U.S., Delaware, Counties and City of Wilmington, 1992-2012	133
Table	E-4	Five-Year Average Infant Mortality Rates by Race - U.S., Delaware, Counties and City of Wilmington, 1989-2012	144
<i>Figure</i>	E-1	Five-Year Average Infant Mortality Rates by Race - Delaware, 1988-2012	135
<i>Figure</i>	E-2	Five-Year Average Infant Mortality Rates by Race - Delaware, Counties and the City of Wilmington, 2008-2012	136
Table	E-5	Five-Year Average Neonatal Mortality Rates by Race - U.S., Delaware, Counties and City of Wilmington, 1989-2012	137

<i>Figure</i>	E-3	Five-Year Average Neonatal Mortality Rates by Race - Delaware, 1988-2012	138
Table	E-6	Five-Year Average Postneonatal Mortality Rates by Race - U.S., Delaware, Counties and City of Wilmington, 1989-2012	139
<i>Figure</i>	E-4	Five-Year Average Postneonatal Mortality Rates by Race - Delaware, 1988-2012	140
Table	E-7	Five-Year Average Infant Mortality Rates by Selected Risk Markers and Race of Mother - Delaware, 2007-2011 Live Birth Cohort	141
Table	E-8	Leading Causes of Infant Death by Gestational Age Category - Delaware, 2007-2011 Live Birth Cohort	142
Table	E-9	Five-Year Average Infant Mortality Rates by Race and Selected Risk Markers - Delaware Live Birth Cohort, 1989-2011	143
<i>Figure</i>	E-5	Five-Year Average Infant Mortality Rates by Race and Plurality - Delaware, 1994-2011 Live Birth Cohort	145
<i>Figure</i>	E-6	Five-Year Average Infant Mortality Rates by Race of Mothers Who Smoked during Pregnancy Versus All Non-Smoking Mothers - Delaware, 1989-2011 Live Birth Cohort	146
<i>Figure</i>	E-7	Five-Year Average Infant Mortality Rates by Race and Source of Payment for Delivery Delaware, 1991-2011 Live Birth Cohort	147
Table	E-10	Number of Infant Deaths by Plurality, Birth Weight in Grams, Race of Mother and Sex of Child - Delaware, 2007-2011 Live Birth Cohort	148
Table	E-11	Number of Neonatal Deaths by Plurality, Birth Weight in Grams, Race of Mother and Sex of Child - Delaware, 2007-2011 Live Birth Cohort	149
F.	MORTALITY		
	Mortality Summary		153
	Mortality Tables and Figures		
Table	F-1	Number of Deaths by Race - U.S., Delaware, Counties and City of Wilmington, 1996-2012	163
Table	F-2	Number of Deaths by Age, Race, and Hispanic Origin - Delaware, Counties and City of Wilmington, 2012	164
Table	F-3	Number of Deaths by Age and Race - Delaware, Counties and City of Wilmington, 2012 - (Both Sexes)	165
Table	F-4	Number of Deaths by Age and Race - Delaware, Counties and City of Wilmington, 2012 - (Males)	166
Table	F-5	Number of Deaths by Age and Race - Delaware, Counties and City of Wilmington, 2012 - (Females)	167
Table	F-6	Mortality Trends by Race, Ethnicity, Gender, and Age - Delaware, 1999-2012	168

Table	F-7	Number of Deaths and Median Age at Death by Sex for Twenty Leading Causes, Alcohol-Induced Deaths, and Drug-Induced Deaths - Delaware, 2012	169
<i>Figure</i>	F-1	Leading Causes of Death - Delaware, 2012	170
<i>Figure</i>	F-2	Five-Year Age-Adjusted Drug- and Alcohol-Induced Mortality Rates by Sex - Delaware, 1990-2012	171
Table	F-8	Leading Causes of Death - Counties and City of Wilmington, 2008-2012	172
Table	F-9	Ten Leading Causes of Death by Sex and Race Group - Delaware, 2008-2012	173
Table	F-10	Ten Leading Causes of Death by Race-Sex Group - Delaware, 2008-2012	174
Table	F-11	Ten Leading Causes of Death by Age - Delaware, 2008-2012	175
Table	F-12	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (All Races, Both Sexes)	176
Table	F-13	Number of Deaths by Age for Selected Leading Causes of Death - Kent, 2012 - (All Races, Both Sexes)	178
Table	F-14	Number of Deaths by Age for Selected Leading Causes of Death - New Castle, 2012 - (All Races, Both Sexes)	180
Table	F-15	Number of Deaths by Age for Selected Leading Causes of Death - City of Wilmington, 2012 - (All Races, Both Sexes)	182
Table	F-16	Number of Deaths by Age for Selected Leading Causes of Death - Sussex, 2012 - (All Races, Both Sexes)	184
Table	F-17	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (All Races, Males)	186
Table	F-18	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (All Races, Females)	188
Table	F-19	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (White, Both Sexes)	190
Table	F-20	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (White Males)	192
Table	F-21	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (White Females)	194
Table	F-22	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (Black, Both Sexes)	196
Table	F-23	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (Black Males)	198
Table	F-24	Number of Deaths by Age for Selected Leading Causes of Death - Delaware, 2012 - (Black Females)	200
Table	F-25	HIV Infection/AIDS1 Deaths by County, Race, Hispanic2 Origin and Sex - U.S., Delaware, and Counties, 1995-2012	202
<i>Figure</i>	F-3	Number of HIV Deaths by Race and Sex - Delaware, 1987-2012	203
Table	F-26	Number and Percent of Deaths by Method of Disposition and Race - Delaware, Counties and City of Wilmington, 2012	204

Table	F-27	Life Expectancy at Birth* by Race and Sex - Delaware, 1989-2012	205
Table	F-28	Average Remaining Years of Life* by Age, Race, and Sex - Delaware, 2012	205
Table	F-29	Maternal Deaths - Delaware and Counties, 1984-2012	206
Table	F-30	Five-Year Age-Adjusted Mortality Rates for Selected Causes of Death - Delaware and Counties, 2008-2012	207
Table	F-31	Five-Year Age-Adjusted Mortality Rates for Selected Leading Causes of Death - Delaware and Counties, 1989-2012	208
Table	F-32	Five-Year Age-Adjusted Mortality Rates for Selected Leading Causes of Death by Race and Sex - Delaware, 1989-2012	211
TECHNICAL NOTES			217
APPENDICES			
APPENDIX A		Random Variation	227
APPENDIX B		Methods for Adjustment and Statistical Analysis of Five-Year Average Mortality Rates	228
APPENDIX C		Creation of a Live Birth Cohort File	230
APPENDIX D		Comparable Category Codes for Selected Causes of Infant Death	231
APPENDIX E		Comparable Category Codes for Selected Causes of Death	233
APPENDIX F		State of Delaware Certificate of Live Birth	235
APPENDIX G		State of Delaware Certificate of Death	237
APPENDIX H		State of Delaware Certificate of Fetal Death	239
APPENDIX I		State of Delaware Certificate of Marriage	243
APPENDIX J		State of Delaware Certificate of Divorce or Annulment	244
APPENDIX K		State of Delaware Report of Induced Termination of Pregnancy	245
REFERENCES			247

THE DELAWARE VITAL STATISTICS SYSTEM

Statewide vital registration began in Delaware during 1861 as the result of a statute enacted in 1860 by the Delaware General Assembly. This statute authorized the Recorder of Deeds to record births and deaths in the three counties. However, the vital record registration statute was repealed in 1863 and not re-enacted until 1881. When re-enacted, vital records were once again filed with the Recorder of Deeds. This changed on July 1, 1913 with the establishment of the Bureau of Vital Statistics. Since 1913, birth, death, and marriage records have been filed with the Bureau of Vital Statistics (now the Office of Vital Statistics). In 1928, stillbirth records (fetal deaths) were added to the Delaware system and divorce records were added in 1936. Most recently, reports of induced termination of pregnancy were added to the system on January 1, 1997. The information contained on vital records and in this report serves as an important tool for health professionals by providing a picture of the general health of Delaware's population.

The current Delaware vital statistics system includes six types of vital events: births, deaths, marriages, divorces, fetal deaths, and induced terminations of pregnancy. Each type of record follows a different path before being filed with the State.

When a birth occurs, the physician, midwife, or other birth attendant is required to complete a birth certificate and submit it to the central Office of Vital Statistics in Dover within 10 days, where it is registered and permanently filed. For hospital births, the medical records staff generally completes the birth certificate. The physician, attendant at birth, or hospital administrator signs the completed form before it is forwarded to the Office of Vital Statistics.

Although the physician is responsible for completing the cause of death section on the death certificate, the funeral director completes the remaining sections. It is the funeral director's responsibility to file the certificate with one of the county Office of Vital Statistics within 72 hours of the death.

Fetal death certificates are required to be filed for any fetus which weighs at least 350 grams or, if the weight is unknown, reached at least 20 weeks of gestation. These certificates are handled in much the same way as death certificates, with the physician completing the cause of death section and the funeral director completing the remaining sections. These certificates are then filed with one of the county Office of Vital Statistics.

When a couple decides to marry in Delaware, they provide one of the three county Clerks of Peace with the information needed to complete a marriage license. The couple then takes the license to an officiant. After performing the marriage, the officiant signs and dates the license and returns it to the Clerk of the Peace who forwards a copy to the Office of Vital Statistics.

The Family Court handles divorce and annulment certificates in Delaware. The Office of Vital Statistics in Dover receives copies of these certificates that are used for statistical purposes only. Copies of divorce decrees must be obtained from the Family Court in the county where the divorce was granted.

When an induced termination of pregnancy is performed in Delaware, a report is filed directly to the Delaware Health Statistics Center. Unlike most vital records, these reports contain no personal identifiers. The Center then codes the records and creates an electronic data file. The reports are filed for statistical purposes only and are shredded and discarded when all reports for the data year have been coded.

Copies of all marriage, divorce, and death records are sent to the Office of Vital Statistics in Dover for coding and entry in electronic format. Beginning in 2006, all in-state birth and fetal death records are entered directly into the Electronic Vital Records System (EVRS) by the healthcare provider. Out-of-state and home delivery records are sent to the Office of Vital Statistics for coding and entry. Records with unknown or unlikely data are verified when possible by querying the original data provider. Querying is conducted by the Office of Vital Statistics and the Health Statistics Center. Computer files containing statistical data are maintained and used by the Health Statistics Center to produce reports such as this one. Copies of these files are also sent to the National Center for Health Statistics to become part of a national database.

Since most analyses of vital events are based upon place of residence, rather than place of occurrence, the Office of Vital Statistics also receives copies of certificates for all Delaware resident births and deaths occurring in other states.

BASIC DEFINITIONS

The following definitions apply throughout this report:

AGE-ADJUSTED MORTALITY RATE (Direct Method) is a method used to eliminate differences caused by variations in age composition, to allow comparisons between populations and over time. More specifically, age-adjustment involves weighting age-specific death rates by standard population weights. The standard population used in this report is the 2000 U.S. population.

AGE-SPECIFIC MORTALITY RATE is the number of deaths for a specified age group per 100,000 population in the same age group.

AGE-SPECIFIC FERTILITY RATE is the number of resident live births to women in a specific age group (e.g., 20-24 years) per 1,000 women in the same age group.

ANNULMENT is the invalidation or voiding of a marriage that confers on the parties the status of never having been married to each other.

BIRTH COHORT consists of all children born during a specific period of time.

BIRTHWEIGHT is the first weight of the fetus or newborn obtained after birth. This weight should be measured within the first hour of life before significant postnatal weight loss has occurred.

CAUSE OF DEATH refers to deaths classified by cause according to the International Classification of Diseases, Ninth & Tenth Revisions, of the World Health Organization.

CENSUS COUNTY DIVISION (CCD) represent the 2000 census delineations of county subdivisions. The boundaries of CCDs coincide with census tracts and county boundaries, with the result that census tracts fit within county subdivisions, which fit within counties. CCDs are sometimes used in place of census tract or zip code data because they represent the smallest level of geography that can be consistently defined and used to generate reliable statistics.

CRUDE BIRTH RATE is the total number of resident live births per 1,000 total population. It is generally used as a measure of population growth due to childbirth. Crude birth rates are not measures of fertility. When fertility is the topic of interest, general or age-specific fertility rates are more appropriate.

CRUDE MORTALITY RATE is expressed as the total number of deaths per 100,000 population. The crude rate is misleading if one wants to make comparisons between different populations when the age-race-sex distributions of the populations are not similar.

DEATH is the permanent disappearance of any evidence of life at any time after live birth.

DIVORCE is the final legal dissolution of a marriage.

ELECTRONIC VITAL RECORDS SYSTEM (EVRS) is a web-based system for entering and maintaining vital record events.

EDUCATION is the highest level of formal education completed.

FETAL DEATH is a death prior to the complete expulsion or extraction from the mother of a product of conception, which weighs at least 350 grams or if weight is unknown, reached at least 20 weeks of gestation; the death is indicated by the fact that, after such expulsion or extraction, the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respiratory efforts or gasps.

FIVE-YEAR AVERAGE RATE is the number of vital events (births, infant deaths, etc.) that took place during a particular five-year period per 1,000 or 100,000 population (or other appropriate denominator).

GENERAL FERTILITY RATE is the total number of resident live births per 1,000 women of childbearing age (i.e., 15-44 years).

INTERNATIONAL CLASSIFICATION OF DISEASES, TENTH REVISION (ICD-10) is an internationally recognized system of processing, classifying, and presenting mortality statistics, implemented in 1999.

INDUCED TERMINATION OF PREGNANCY means the purposeful interruption of an intrauterine pregnancy with the intention other than to produce a live-born infant, and which does not result in a live birth. This definition excludes management of prolonged retention of products of conception following fetal death.

INFANT DEATH is the death of a live-born infant occurring during the first year of life.

INFANT MORTALITY RATE measures the risk of death during the first year of life. It relates the number of deaths under one year of age to the number of live births during the same time period. It is expressed as the number of infant deaths per 1,000 live births. Since it is not dependent on a population census or estimate, it can be computed for any area and time period for which the numbers of infant deaths and live births are available.

LIVE BIRTH is the complete expulsion or extraction from the mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles whether or not the umbilical cord has been cut or the placenta is attached. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respiratory efforts or gasps.

LIVE BIRTH ORDER indicates the numeric relationship of a newborn child to other children born alive to the mother during previous deliveries.

LIVE BIRTH ORDER FERTILITY RATE is the number of resident live births of a specific live birth order (i.e., first born, second born, etc.) per 1,000 women 15-44 years of age.

LOW BIRTHWEIGHT BIRTH refers to a newborn weighing less than 2,500 grams (5 pounds, 8 ounces).

MARRIAGE is the legal union of two people of opposite sex.

MEAN is one of three statistics commonly used to describe the average score in a large data set (the other two are the median and mode). The mean is obtained by summing the scores in a data set and dividing the result by the total number of scores. It is the statistic typically chosen when scores tend to cluster toward the middle of a distribution of scores ranked in order from low to high.

MEDIAN is one of three statistics commonly used to describe the average score in a large data set (the other two are the mean and mode). It is the score that falls exactly in the middle of the entire distribution of scores ranked in order from low to high such that 50 percent of the scores fall above it and 50 percent of the scores fall below it. If the number of scores is even, a value halfway between the two scores nearest the middle is used. It is the statistic typically chosen when scores tend to cluster toward one end of the ranked distribution. For example, median age at death is often reported because there tends to be clustering in the older age groups in mortality data.

MODE is one of three statistics commonly used to describe the average score in a large data set (the other two are the median and mean). It is the most frequently occurring score or category in a data set. It is the statistic typically chosen when scores tend to cluster in more than one part of a distribution of scores ranked in order from low to high. It is also used for nominal variables (i.e., variables with categories that have no numerical meaning or specific logical order) such as cause-of-death. For example, the most frequent cause-of-death (i.e., the mode for the cause-of-death) is heart disease.

NEONATAL DEATH is the death of a live-born infant before the infant becomes 28 days old (up to and including 27 days, 23 hours, 59 minutes from the moment of birth).

NEONATAL MORTALITY RATE measures the risk of death before reaching 28 days of life. This rate relates the number of deaths to infants less than 28 days of age to the total number of live births. It is expressed as the number of neonatal deaths per 1,000 live births.

OCCURRENCE DATA refer to vital events reported by the place where the event actually occurred. When occurrence data are reported for Delaware, the numbers include only those events that took place in Delaware, regardless of the place of residence of the individuals involved. Marriages, divorces, annulments, and abortions are reported as occurrence data.

PLURALITY represents the number of siblings born as the result of a single pregnancy.

POSTNEONATAL DEATH is the death of a live-born infant of 28 days to 364 days of age.

POSTNEONATAL MORTALITY RATE measures the risk of death during the period from 28 to 364 days of age. It is expressed as the number of postneonatal deaths per 1,000 live births.

RESIDENCE DATA refer to vital events reported by the usual place of residence for the people to whom the events took place. When residence data are reported for Delaware, the numbers include events taking place to Delaware residents in and outside of Delaware. For births and fetal deaths, residence is defined as the mother's usual place of residence. For deaths, residence is defined as the decedent's usual place of residence. Unless otherwise noted, the numbers in all tables and figures provided in this report are residence data.

TEENAGE FERTILITY RATE is the number of resident live births to women 15-19 years of age per 1,000 women 15-19 years of age.

UNDERLYING CAUSE OF DEATH is either the disease or injury that initiated a chain of events leading directly to death or the circumstances of an accident or violence, which produced a fatal injury.

VERY LOW BIRTHWEIGHT BIRTH refers to a newborn weighing less than 1,500 grams (3 pounds, 5 ounces).

WEEKS OF GESTATION are the number of weeks elapsed between the first day of the last normal menstrual period (LMP) and the date of birth. When the date of the LMP is incompletely reported or the length of gestation as computed from the LMP is inconsistent with the reported birth weight, the "clinical estimate of gestation" is used. Gestations of fewer than 17 weeks or more than 47 weeks are coded as unknown. For more information, see the Technical Notes section of this report.