

I. HEALTH ASSESSMENT
C. HEALTH STATUS
6. MATERNAL AND CHILD HEALTH

1. WHAT IS THE HEALTH STATUS OF DELAWARE RESIDENTS WITH RESPECT TO MATERNAL AND CHILD HEALTH?

Delaware's performance is comparable to state benchmarks in four of eight maternal and child health indicators, including prenatal care, Cesarean births and smoking and alcohol use during pregnancy.

- **Delaware's fertility rates are comparable to state and national benchmarks but teenage birth rates are 30 percent to 70 percent higher than state benchmarks.**

- In 1997, Delaware females aged 15 to 44 years gave **birth** at a rate of 60.3 births per 1,000 females, approximately six percent lower than New Jersey and seven percent lower than the national rate but two percent higher than Maryland and eight percent higher than Pennsylvania¹.
- In 1997, Delaware's **teenage birth rate** (36.8 births per 1,000 females aged 15 to 17 years) was between 15 percent and 73 percent higher than all state benchmarks and the nation².
- Although above the U.S. average, Delaware's five-year average teenage birth rate decreased slightly between 1990 and 1998.

- **Delaware's infant mortality rate is higher than all state and national benchmarks with the exception of Maryland.**

- Delaware's 1997 **infant mortality** rate of 7.8 deaths per 1,000 live births was higher than that of New Jersey, Pennsylvania, Washington and the U.S. Only Maryland had a higher infant mortality rate (8.8 deaths per 1,000 live births)³.

TECHNICAL NOTE

Due to the small number of incidents of several maternal and child health indicators (i.e., infant mortality, low and very low birth weight), slight year-to-year changes can lead to substantial fluctuations in annual rates. Delaware adjusts for these fluctuations by calculating five-year average rates. The Lewin Group chose to use single year statistics instead of five-year averages in order to benchmark Delaware against other states.

Most of the data presented in the Health Assessment are 1997 data from the National Center for Health Statistics. Although Delaware has published 1998 vital statistics data, The Lewin Group used 1997 data in order to compare Delaware to other states and the nation.

¹ The general five-year average fertility rate for females aged 15 to 44 for 1993 to 1997 was 61.5

² The five-year average teenage fertility rate for females aged 15 to 17 for 1993 to 1997 was 43.8.

³ The five-year average infant mortality rate for 1993 to 1997 was 7.8.

- Although above the U.S. average, Delaware’s five-year average infant mortality rate declined between 1990 and 1998 (from 9.3 deaths per 1,000 persons to 7.9 deaths per 1,000 persons).
- Delaware did not meet the Healthy People 2000 objective of 7.0 deaths per 1,000 live births.
- **The proportion of low and very low birth weight births for Delaware are higher than all state and national benchmarks, except Maryland which was comparable.**
 - In 1997, the proportion of **low birth weight** babies born in Delaware (8.7 percent) was higher than in New Jersey (7.9 percent), Pennsylvania (7.6 percent), Washington State (5.6 percent) and the U.S. (7.5 percent). Maryland had a comparable rate to Delaware (8.8 percent)⁴.
 - The 1997 proportion of **very low birth weight babies** born in Delaware (1.8 percent) was higher than all state and national averages with the exception of Maryland, which had a comparable rate (1.9 percent)⁵.
 - The proportion of low birth weights in Delaware steadily increased between 1990 and 1998, from 7.8 to 8.3. This trend roughly mirrored increases occurring in the U.S. as a whole.
 - The proportion of low birth weight and very low birth weight births for Delaware were 74 percent and 80 percent higher than Healthy People 2000 objectives, respectively.
- **The proportion of Delaware expectant mothers receiving adequate prenatal care is comparable to all state and national benchmarks but slightly lower than the Healthy People 2000 objective.**
 - Roughly 82.5 percent of Delaware mothers received **first trimester prenatal care** in 1997, a rate similar to those in New Jersey, Pennsylvania, Washington and the U.S. but slightly lower than those in Maryland.
 - Delaware fell short of achieving the Healthy People 2000 objective of 90 percent of mothers receiving **first trimester prenatal care** in 1997.
- **Delaware experiences a Cesarean section rate comparable to the nation, within the range of benchmark states and higher than the Healthy People 2000 Objective.**⁶

⁴ The five-year average percentage of low birth weight births for 1993 to 1997 was 8.2 percent.

⁵ The five-year average percentage of very low birth weight births for 1993 to 1997 was 1.7 percent.

⁶ Data on Cesarean sections appear in two places in the Factbook: the MCH section and the Quality section. Results in these sections differ due to differences in data sources. The rate in the MCH section is calculated from nationally reported birth certificates, whereas the rate in the Quality section is derived from state-specific hospital admission data.

- In 1997, 21.0 percent of Delaware births were performed by **Cesarean section** compared to 24.9 percent in New Jersey, 19.4 percent in Pennsylvania, 17.2 percent in Washington State and 20.8 percent in the nation.
- The proportion of Cesarean section deliveries in Delaware (21 percent) was significantly higher than the Healthy People 2000 objective of 15 percent.
- **The proportion of Delaware expectant mothers using substances during pregnancy falls within the range of benchmarks.**
 - In 1996, 14.0 percent of Delaware mothers **smoked during pregnancy**, a higher rate than in Maryland (11.3 percent) and comparable to the New Jersey (12.0 percent) and the U.S. (13.6 percent), but lower than in Pennsylvania (18.1 percent) and Washington State (16.0 percent).
 - For smoking during pregnancy, Delaware did not meet the Healthy People 2000 objective of 10 percent.
 - The proportion of Delaware mothers who reported **using alcohol during pregnancy** (1.3 percent) was comparable to the U.S. and well below the Healthy People 2000 Objective.

2. HOW DOES HEALTH STATUS FOR MATERNAL AND CHILD HEALTH DIFFER BY COUNTY IN DELAWARE?

Sussex County experienced higher rates than the other two counties for fertility, teenage births and infant mortality. Women living in New Castle County are more likely to receive prenatal care in the first trimester.

- **In addition to experiencing the highest birth rates in the Area, residents of Sussex County have higher rates of teenage births, infant mortality and low birth weight babies.**
 - Of females in the three counties, those in Sussex County had the highest **birth rates** (68.3 births per 1,000 females). Females in the City of Wilmington experienced 71.2 births per 1,000 females, the highest of any region⁷.
 - **Female teens** in Sussex County gave **birth** at a rate (55.9 births per 1,000 females aged 15 to 17 years), more than 1.5 times that of Kent County (30.7 births per 1,000 females ages 15 to 17 years) and New Castle County (32.5 births per 1,000 females aged 15 to 17 years)⁸.
 - Sussex County also exhibited higher **infant mortality rates** (10.4 deaths per 1,000 live births) than Kent and New Castle Counties (8.2 deaths per 1,000 live births and 7.2 deaths per 1,000 live births, respectively). Infant mortality appeared to be highly

⁷ The five-year average fertility rates for females in Kent, Sussex and New Castle Counties were 65.4, 59.0 and 68.4, respectively.

⁸ The five-year average teenage fertility rates for females aged 15 to 17 in Kent, Sussex and New Castle Counties were 65.2, 74.8 and 51.5, respectively.

concentrated in the City of Wilmington, as it experienced an infant mortality rate of 11.8 deaths per 1,000 live births⁹.

- The City of Wilmington experienced the highest proportion of **low birth weight babies** (11.8 percent) contributing to the high proportion in New Castle County (9.1 percent), which had the highest rate of all three Delaware counties¹⁰.
- **Females in New Castle County and the City of Wilmington are the most likely to receive first trimester prenatal care.**
 - Delaware mothers were more likely to receive **first trimester prenatal care** if they lived in New Castle County (87.8 percent) and the City of Wilmington (78.6 percent). Pregnant females in Kent County were least likely to receive prenatal care. All Counties and the City of Wilmington were well under the Healthy People 2000 Objective of 90 percent.
- **Pregnant women in Delaware are less likely to report using tobacco during pregnancy if they live in Sussex County (12.4 percent) or New Castle County (13.9 percent).**

⁹ The five-year average infant mortality rates in Kent, Sussex and New Castle Counties and for the City of Wilmington were 8.2, 9.0, 7.3 and 13.6, respectively.

¹⁰ The five-year average percentage of low birth weight births in Kent, Sussex and New Castle Counties were 12.4 percent, 11.6 percent and 14.3 percent, respectively.

Exhibit I-C-68:

Overall, maternal and child health status in Delaware is worse than national and state benchmarks. However, Delaware is comparable in prenatal care, Cesarean section rates and smoking rates.

Health Status Indicators

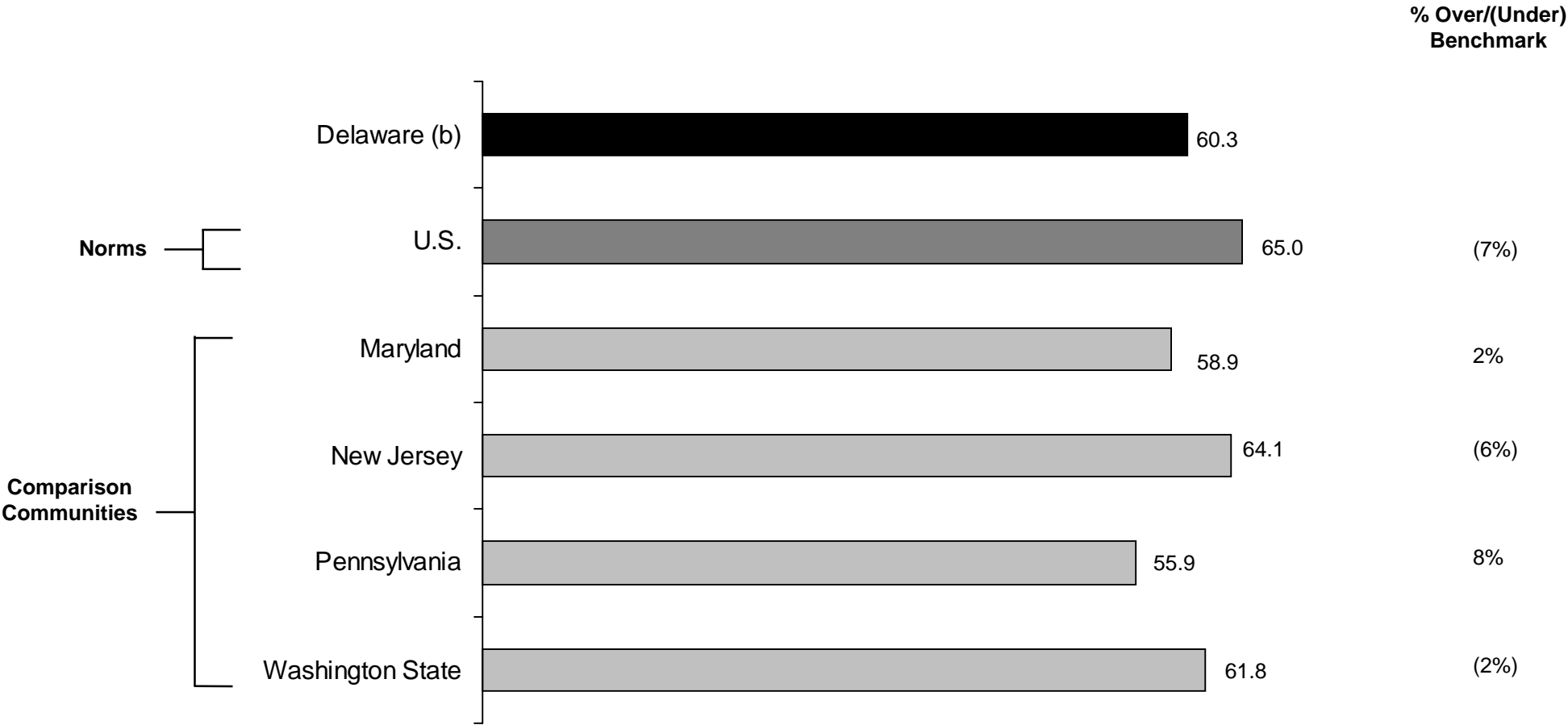
Maternal and Child Health	
Teenage Birth Rates	—
Infant Mortality	—
Low Birth Weight Babies	—
Very Low Birth Weight Babies	—
Prenatal Care	↔
Cesarean Section	↔
Smoking during Pregnancy	↔
Alcohol Use during Pregnancy	↔

Performance Relative to Benchmarks: **+** More Favorable ↔ Comparable — Less Favorable

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-69: Delaware's fertility rate was comparable to national and state norms in 1997

Fertility Rate per 1,000 Females Aged 15 to 44^(a) 1997



Sources: (1) 1997 data, U.S. National Center for Health Statistics. National Vital Statistics Reports, Volume 47, Number 18.

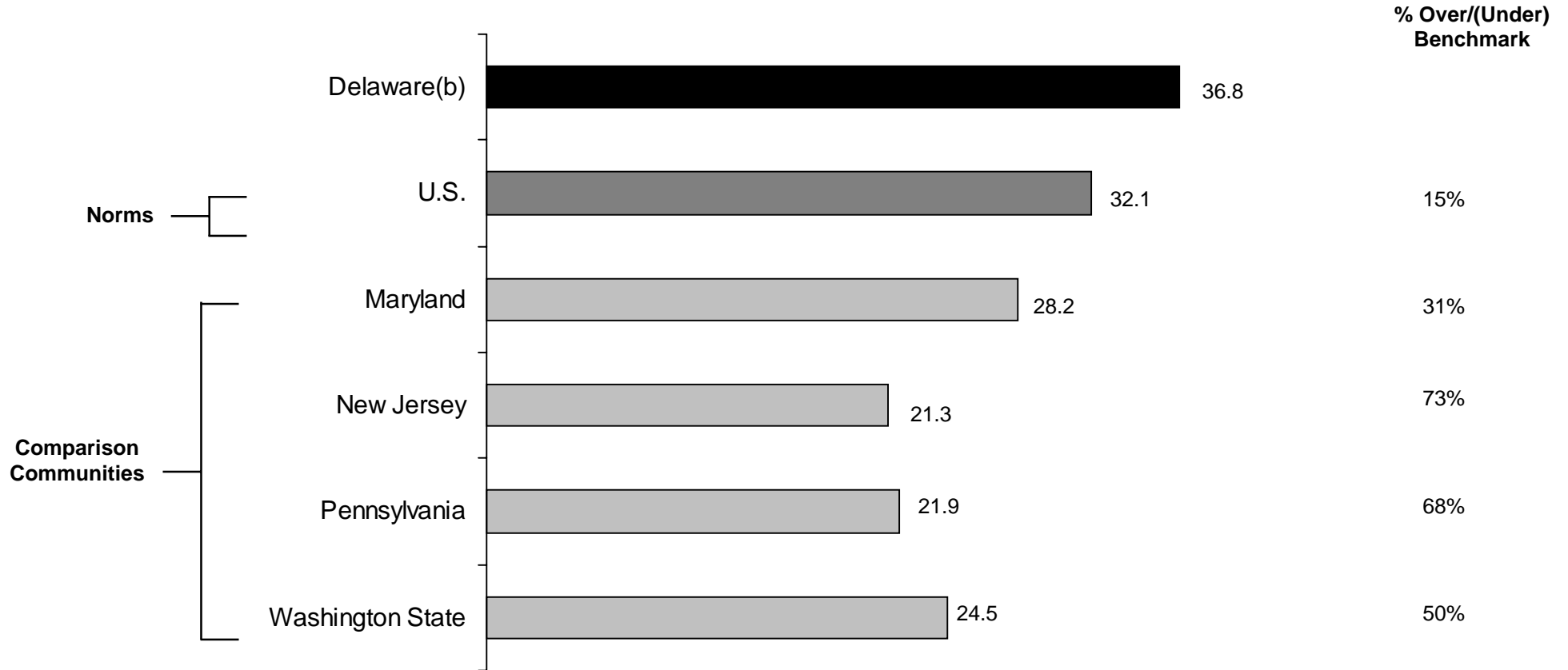
Notes: (a) Fertility rate is defined as the total number of births to females aged 15 to 44 divided by the total number of females in that age group.
 (b) Although Delaware uses five-year averages to compensate for a small sample size, one-year rates are used here so that Delaware can be compared to benchmark states. The five-year average fertility rate for females aged 15 to 44 for 1993 to 1997 was 61.5.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-70:

Delaware's teenage birth rate was higher than all state and national benchmarks.

**Teenage Birth Rates per 1,000 Females Aged 15 to 17^(a)
1997**



Sources: (1) 1997 data, U.S. National Center for Health Statistics. National Vital Statistics Reports, Volume 47, Number 18.

Notes: (a) Teenage birth rate is defined as total number of births to females aged 15 to 17 divided by total number of females in that age group.

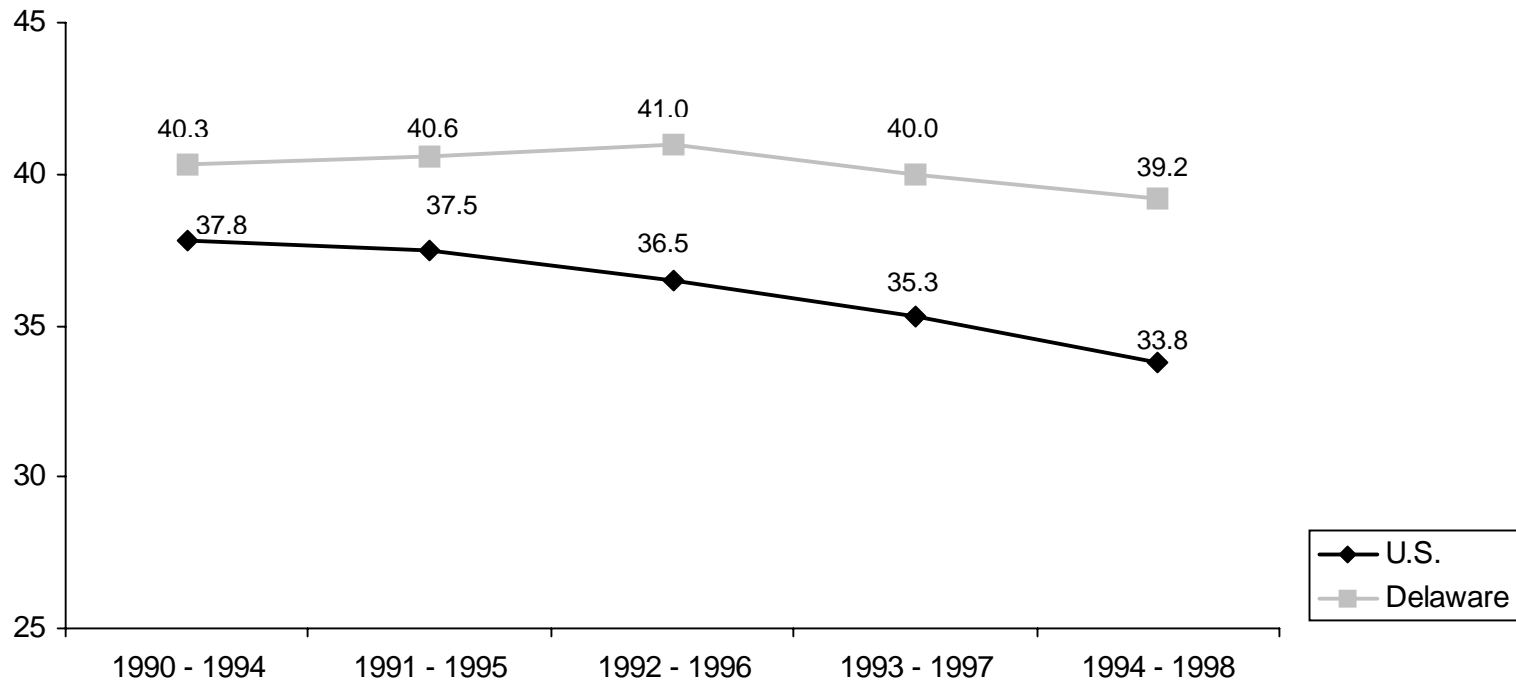
(b) Although Delaware uses five-year averages to compensate for a small sample size, one-year rates are used here so that Delaware can be compared to benchmark states. The five-year average teenage fertility rate for 1993 to 1997 was 43.8.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-71:

Delaware's teenage birth rate declined slightly between 1990 and 1998 consistent with a decline in the U.S. rate.

**Five-year Average Teenage Birth Rates per 1,000 Females Aged 15 to 17^(a)
Delaware and the U.S.**



Sources: (1) Delaware Vital Statistics Annual Report, 1998, Winter 2000.

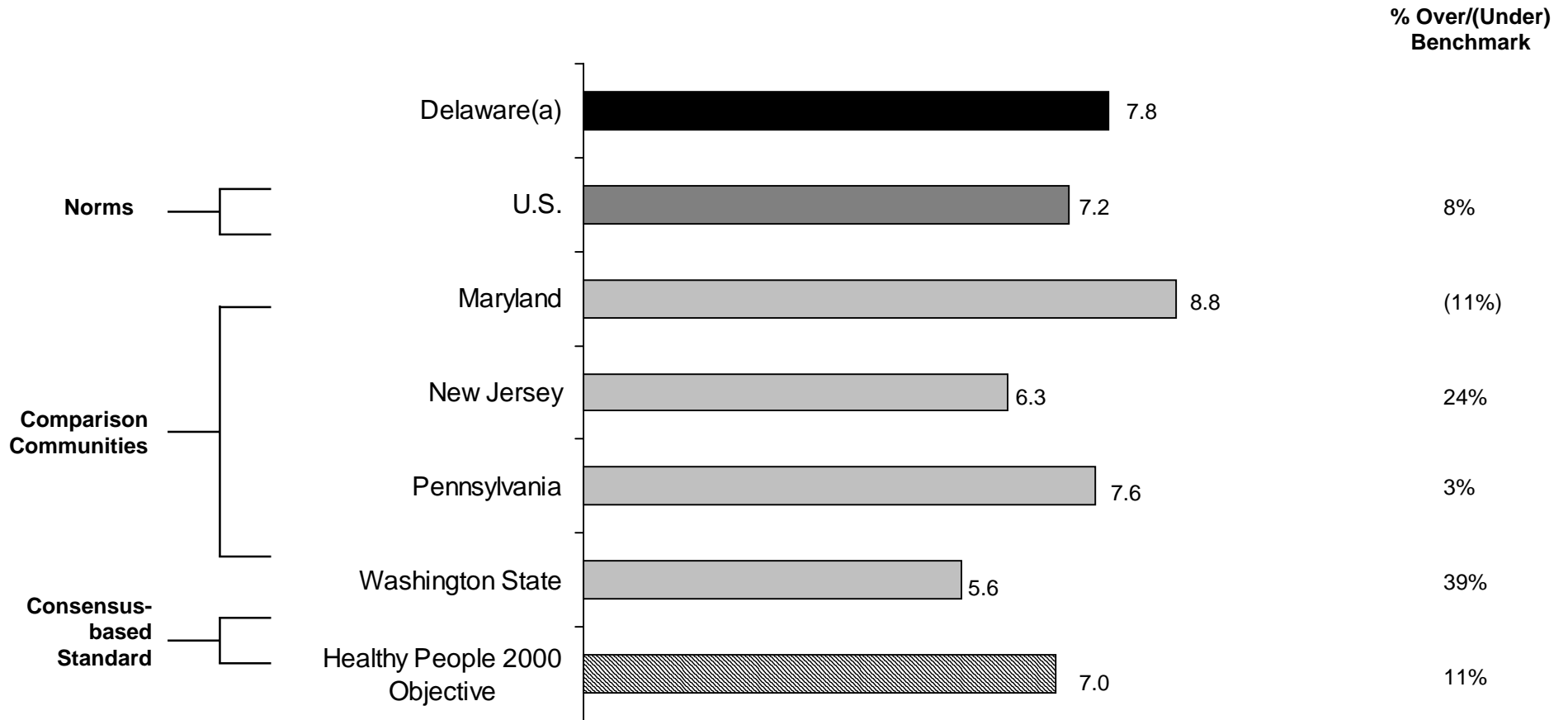
Notes: (a) Teenage birth rate is defined as total number of births to females aged 15 to 17 divided by total number of females in that age group.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-72:

With the exception of Maryland, Delaware's infant mortality rate was higher than all state and national benchmarks. Delaware did not meet the Healthy People 2000 Objective for infant mortality.

Infant Mortality Rates (IMR) per 1,000 Live Births 1997



Sources: 1-6) 1997 data, U.S. National Center for Health Statistics. National Vital Statistics Reports, Volume 47, Number 18; 7) Healthy People 2000 Objective.

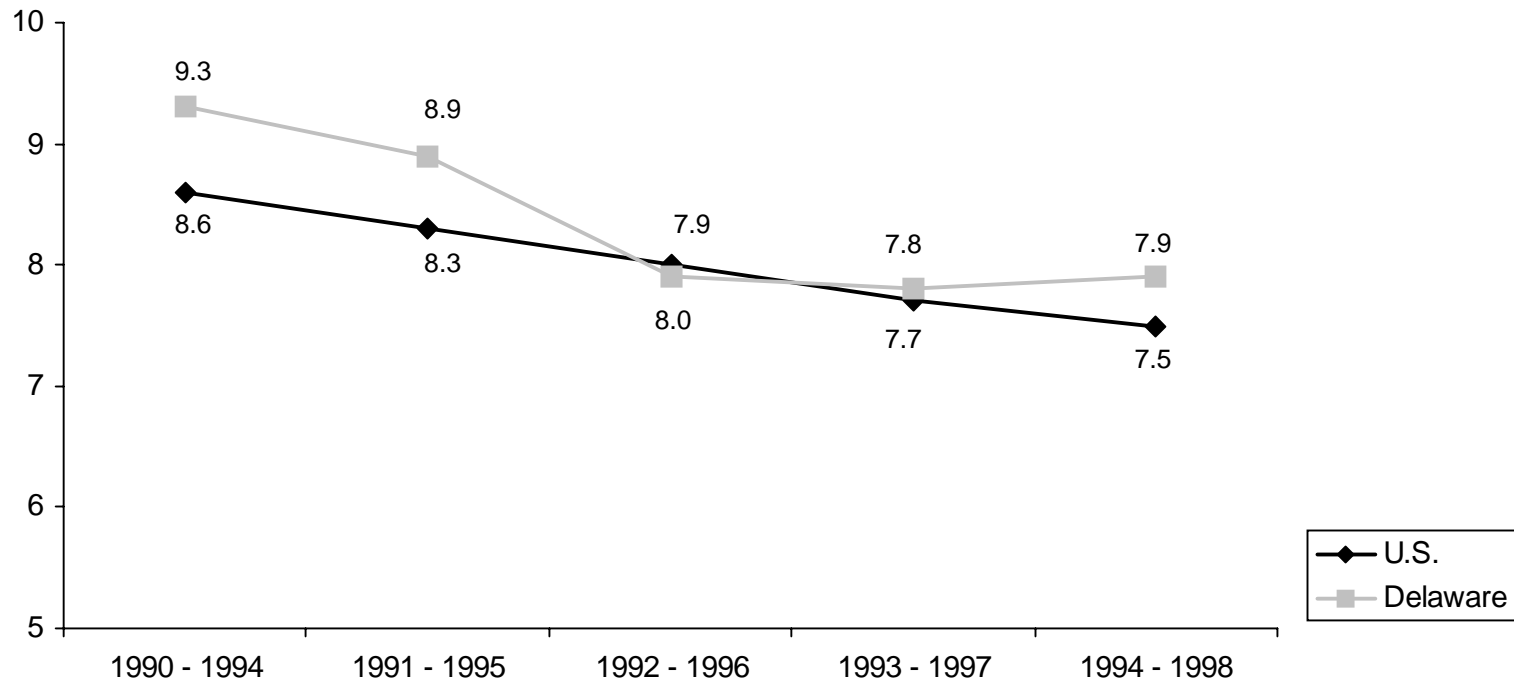
Note: (a) Although Delaware uses five-year averages to compensate for a small sample size, one-year rates are used here so that Delaware can be compared to benchmark states. The five-year average infant mortality rate for 1993 to 1997 was 7.8.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-73:

Although slightly above the U.S. average, Delaware's infant mortality rate declined between 1990 and 1998.

**Five-year Average Infant Mortality Rates per 1,000 Live Births
Delaware and the U.S.**



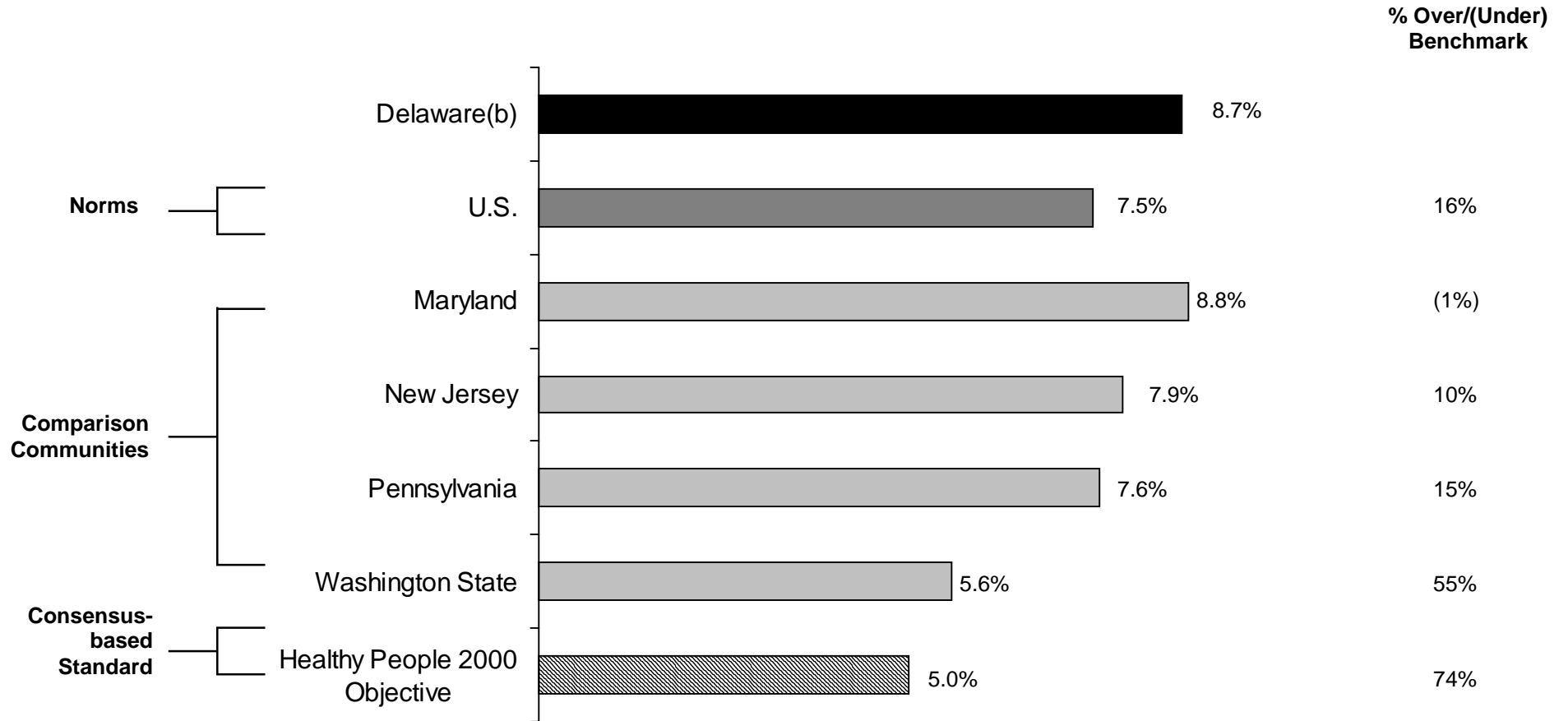
Sources: (1) Delaware Vital Statistics Annual Report, 1998, Winter 2000.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-74:

The proportion of low birth weight babies was higher in Delaware than all state and national benchmarks, with the exception of Maryland. Delaware did not meet the Healthy People 2000 Objective for low birth weight babies

Proportion of Low Birth Weight Live Births^(a) 1997



Sources: 1-6) 1997 data, U.S. National Center for Health Statistics. National Vital Statistics Reports, Volume 47, Number 18; 7) Healthy People 2000 Objective.

Note: (a) Low birth weight infants weigh under 2,500 grams.

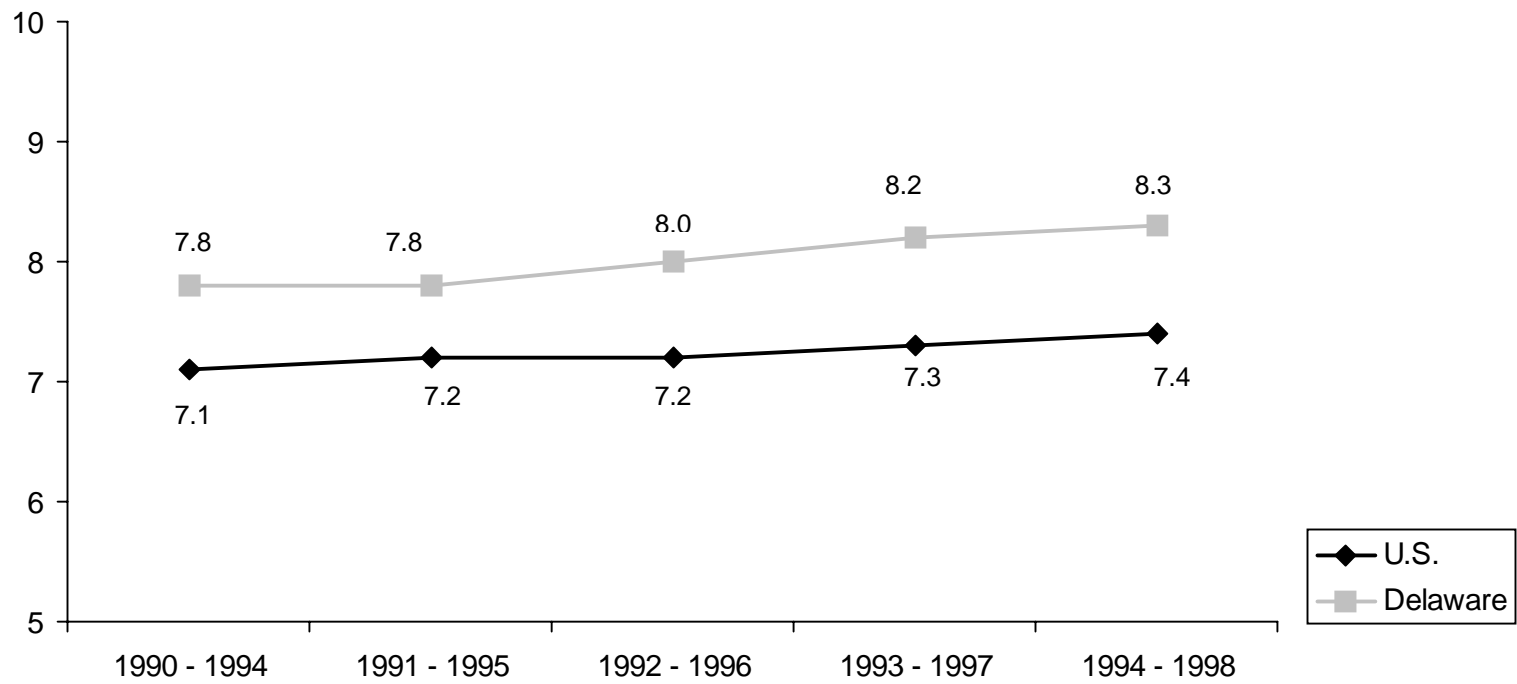
(b) Although Delaware uses five-year averages to compensate for a small sample size, one-year rates are used here so that Delaware can be compared to benchmark states. The five-year average percentage of low birth weight births for 1993 to 1997 was 8.2%.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-75:

Similar to the U.S. as a whole, Delaware's proportion of low birth weight births slightly increased between 1990 and 1998.

**Five-year Average Low Birth Weight Births per 1,000 Persons
Delaware and the U.S.**



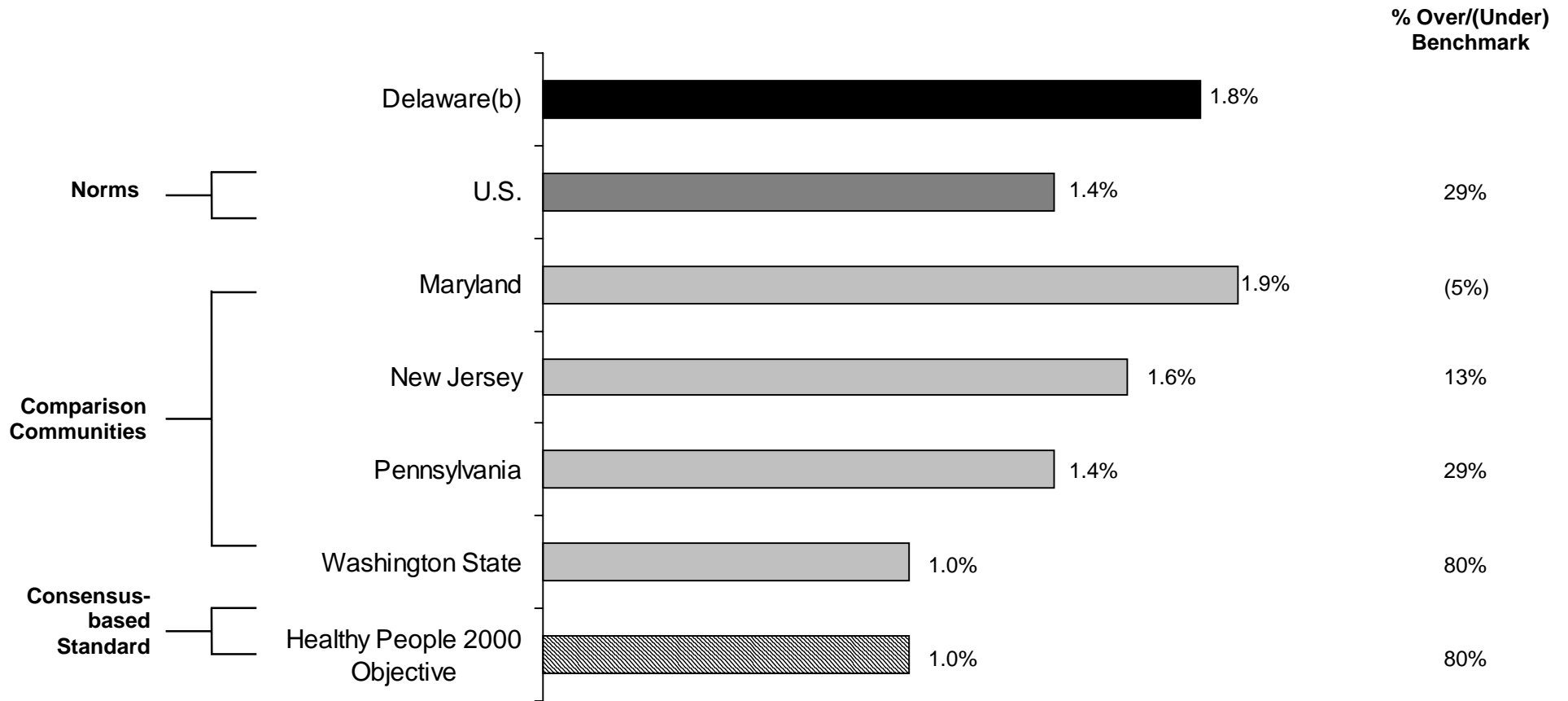
Sources: (1) Delaware Vital Statistics Annual Report, 1998, Winter 2000.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-76:

The proportion of very low birth weight babies born in Delaware was higher than all state and national benchmarks except Maryland and 80 percent higher than the Healthy People 2000 Objective.

**Proportion of Very Low Birth Weight Live Births^(a)
1997**



Sources: 1-6) 1997 data, U.S. National Center for Health Statistics. National Vital Statistics Reports, Volume 47, Number 18; 7) Healthy People 2000 Objective.

Note: (a) Low birth weight infants weigh under 1,500 grams.

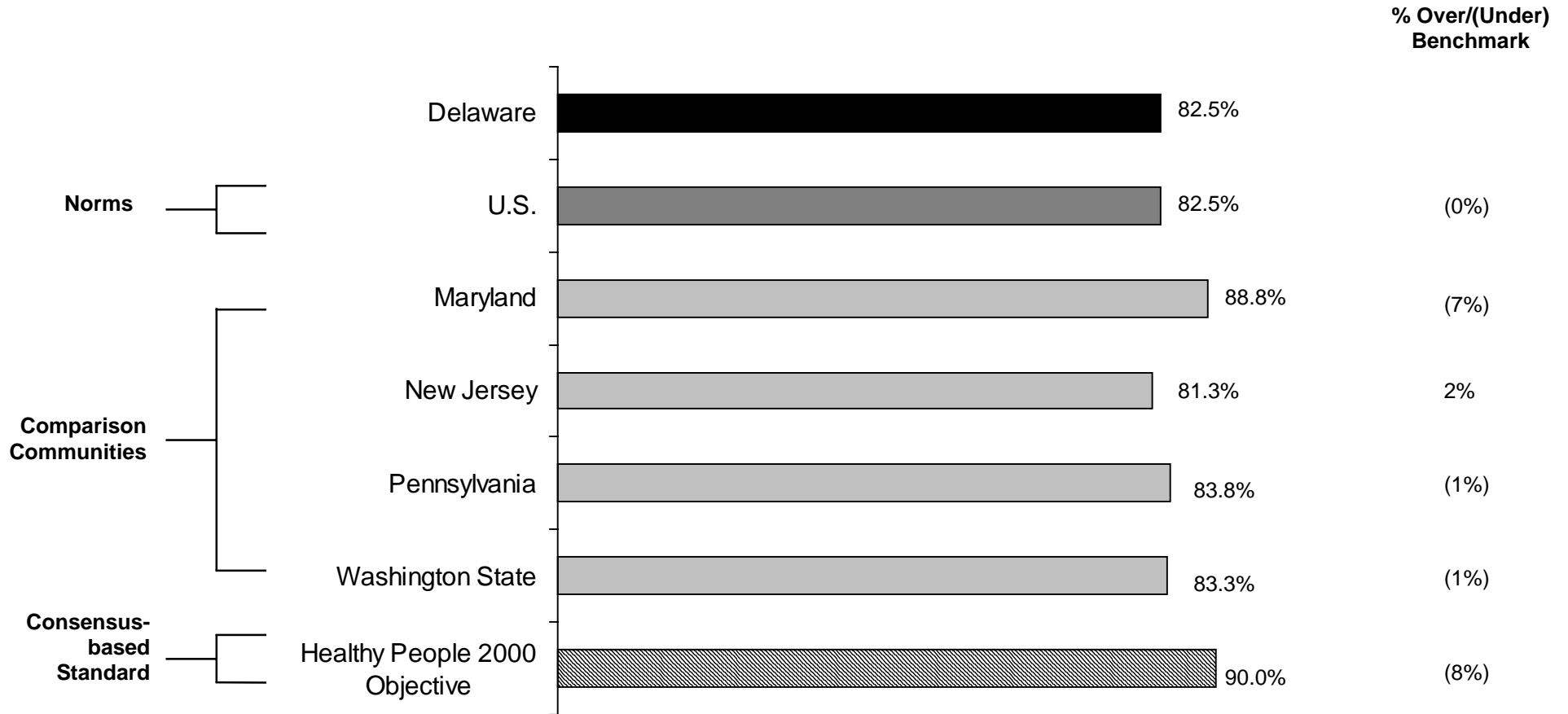
(b) Although Delaware uses five-year averages to compensate for a small sample size, one-year rates are used here so that Delaware can be compared to benchmark states. The five-year average percentage of very low birth weight births for 1993 to 1997 was 1.7%.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-77:

The proportion of Delaware females receiving first trimester prenatal care was comparable to national and state experiences. However, Delaware does not meet the Healthy People 2000 Objective for prenatal care.

Percentage of Females Receiving First Trimester Prenatal Care 1997



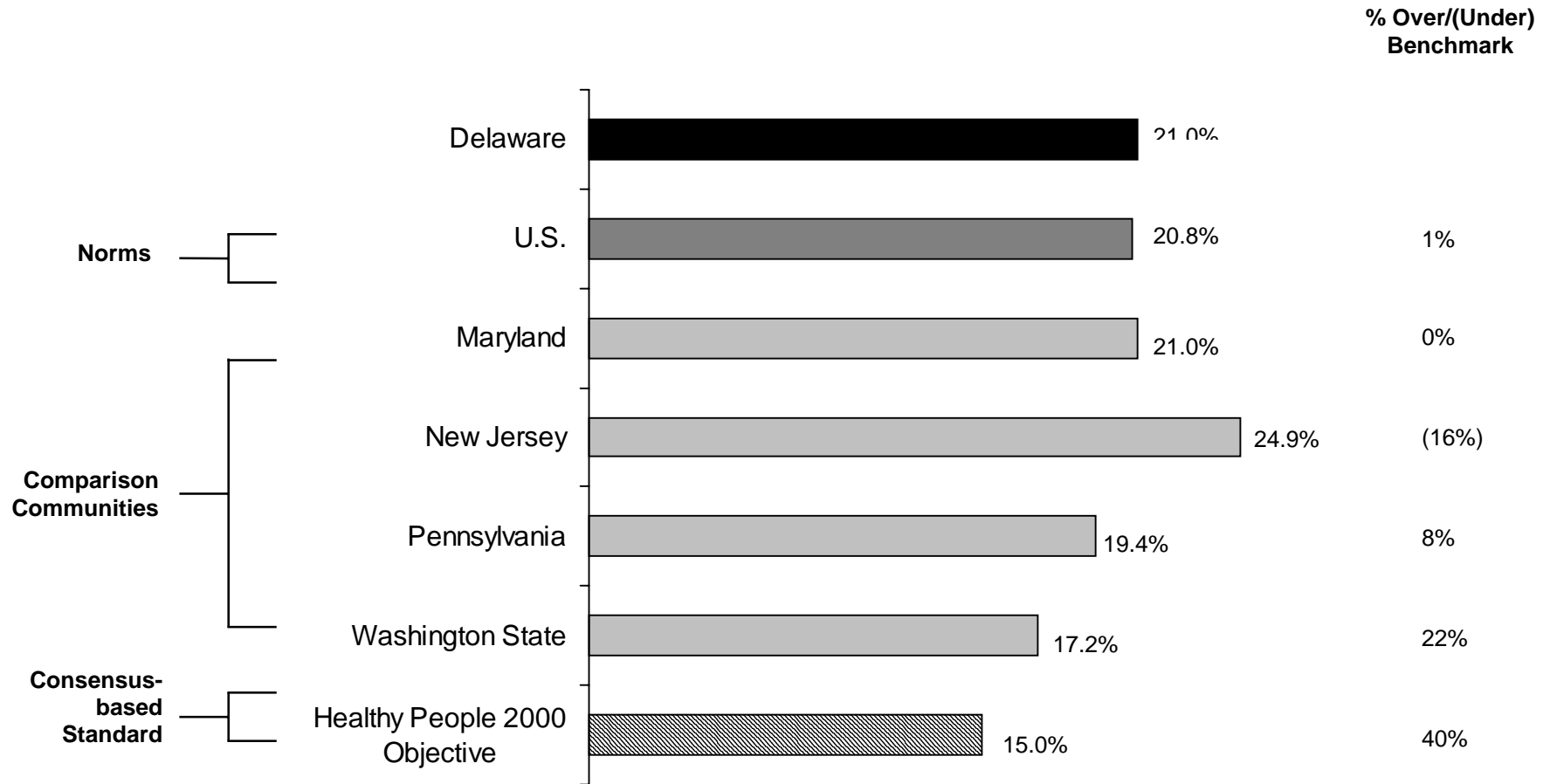
Sources: 1-6) 1997 data, U.S. National Center for Health Statistics. National Vital Statistics Reports, Volume 47, Number 18; 7) Healthy People 2000 Objective.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-78:

Delaware's Cesarean section rate was comparable to state and national norms but was 40 percent higher than the Healthy People 2000 Objective.

Proportion of Birth Delivered by Cesarean Section 1997



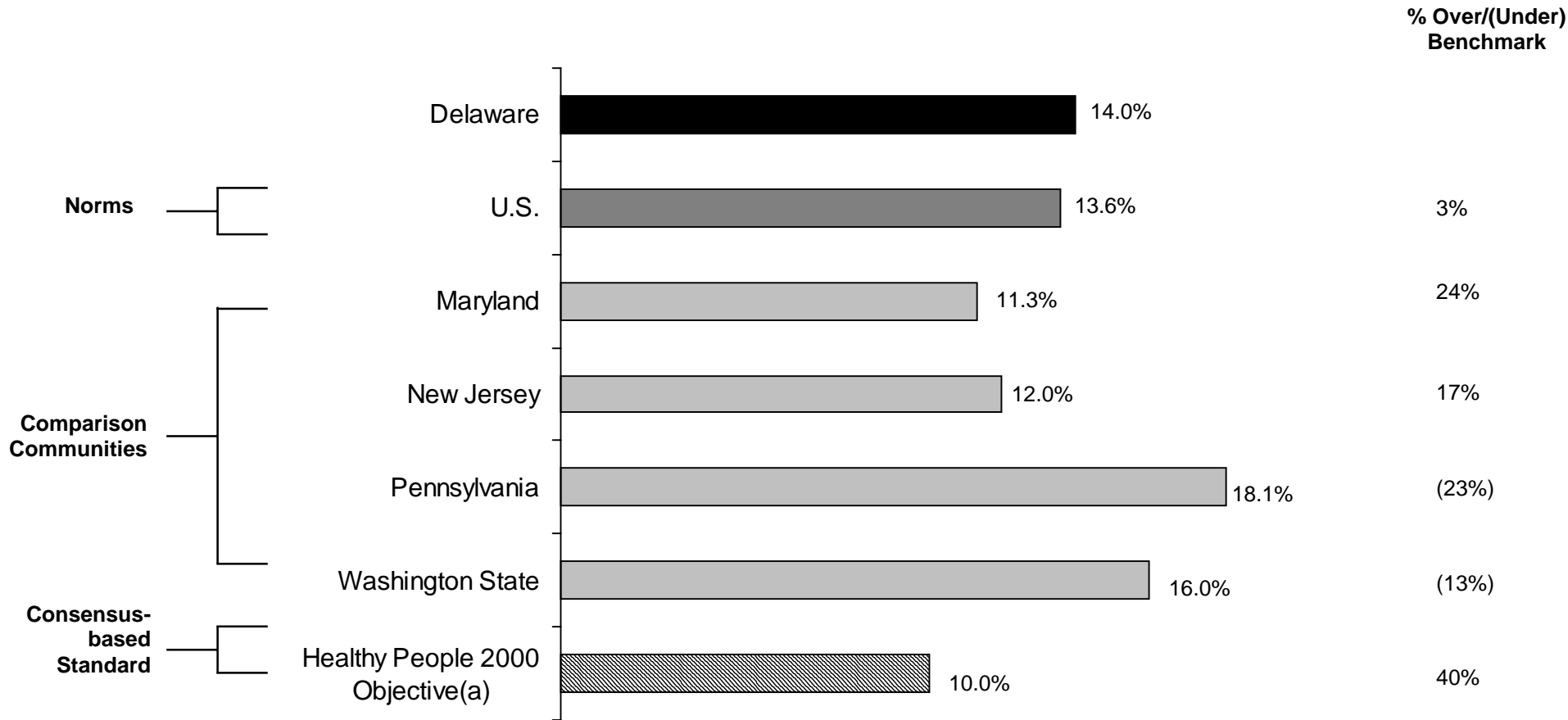
Sources: 1-6) 1997 data, U.S. National Center for Health Statistics. National Vital Statistics Reports, Volume 47, Number 18; 7) Healthy People 2000 Objective.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-79:

Pregnant women in Delaware were more likely than their Maryland and New Jersey counterparts to smoke during pregnancy but less likely than females in Pennsylvania and Washington State.

Proportion of Females Reporting Tobacco Use during Pregnancy 1996



Sources: 1-6) 1996 Kids Count Data; 7) Healthy People 2000 Objective.

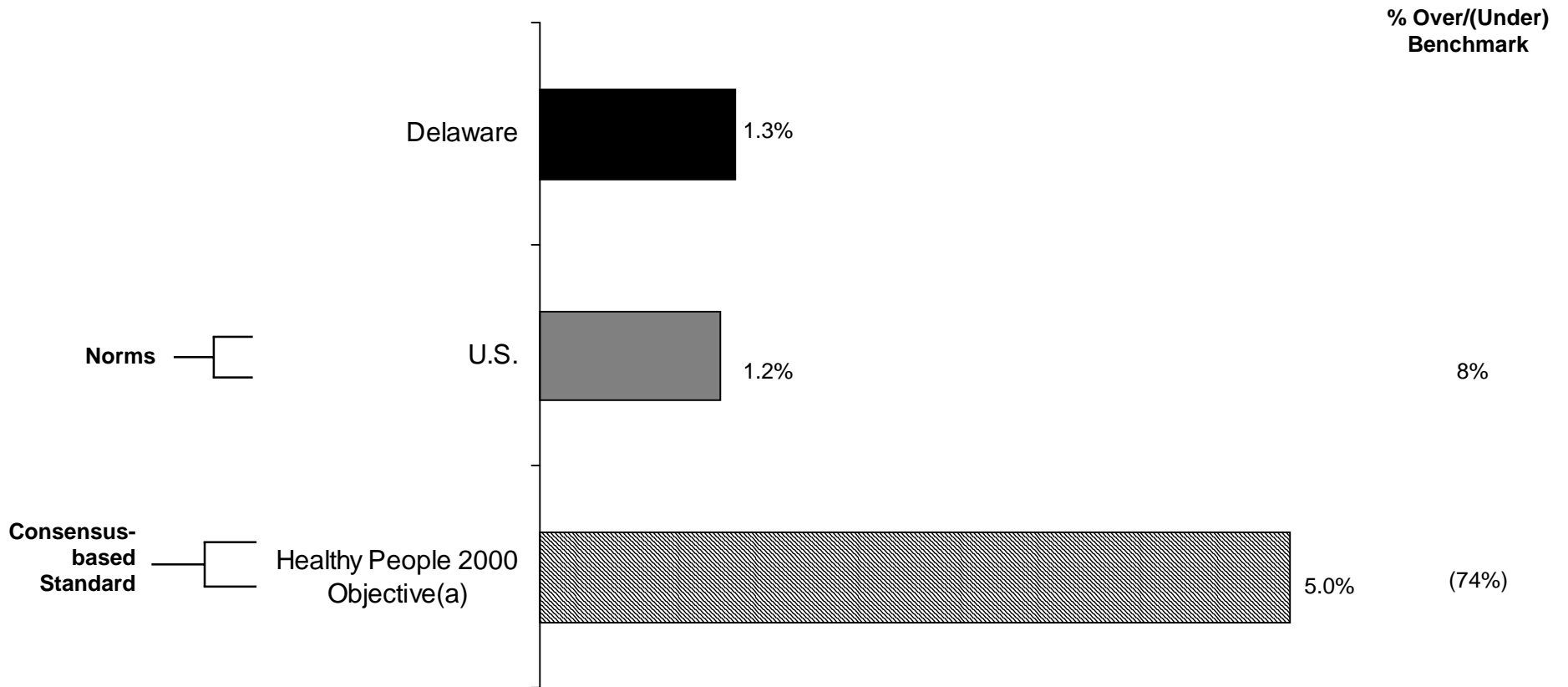
Notes: (a) The Healthy People 2000 objective is to increase abstinence from tobacco during pregnancy to at least 90%.
 (b) Kids Count data were used because state-level data was unavailable from the National Center for Health Statistics for 1997.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-80:

Expectant mothers in Delaware were less likely to report alcohol use during pregnancy than the national benchmark. Delaware met the Healthy People 2000 Objective for alcohol use during pregnancy.

Proportion of Females Reporting Alcohol Use during Pregnancy 1997



Sources: 1) 1997 data, U.S. National Center for Health Statistics.

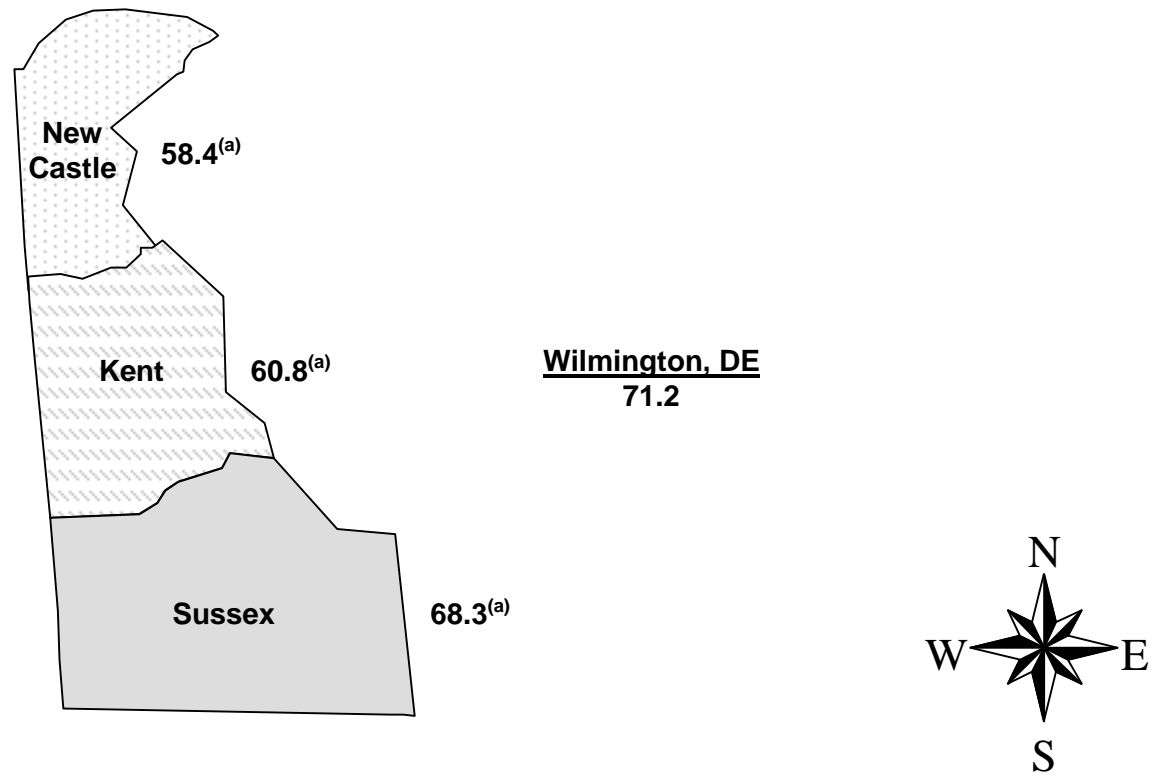
Notes: (a) The Healthy People 2000 objective is to increase abstinence from alcohol during pregnancy to at least 95%.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-81:

In 1997, Sussex County had the highest fertility rate, while New Castle County had the lowest rate.

Fertility Rate per 1,000 Females Aged 15 to 44 1997



Sources: 1997 data, Delaware Vital Statistics Annual Report 1997.

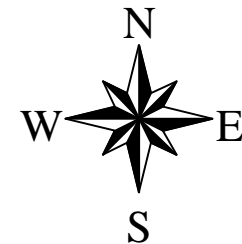
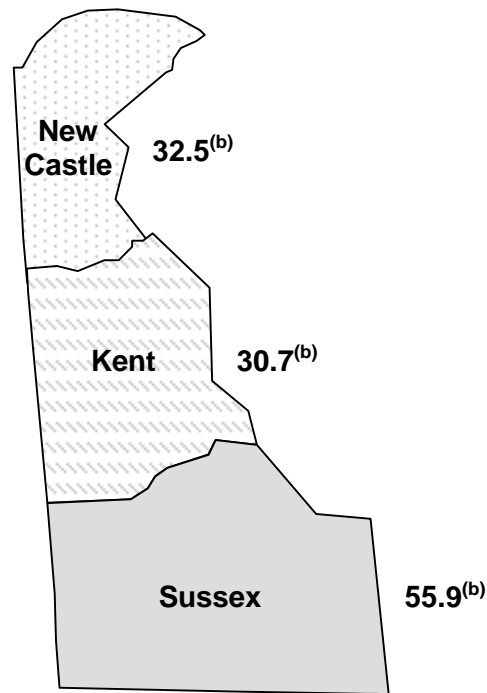
Note: (a) The five-year average fertility rate for 1993 to 1997 for females in Kent, Sussex and New Castle Counties was 65.4, 59.0 and 68.4.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-82:

Teenage birth rates varied widely among the three counties, with Sussex County experiencing the highest rate and Kent County the lowest.

Teenage Birth Rates per 1,000 Females Aged 15 to 19^(a) 1997



Sources: 1997 data, Delaware Vital Statistics Annual Report 1997.

Note: (a) Wilmington data were unavailable for the 15 to 17 year old population.

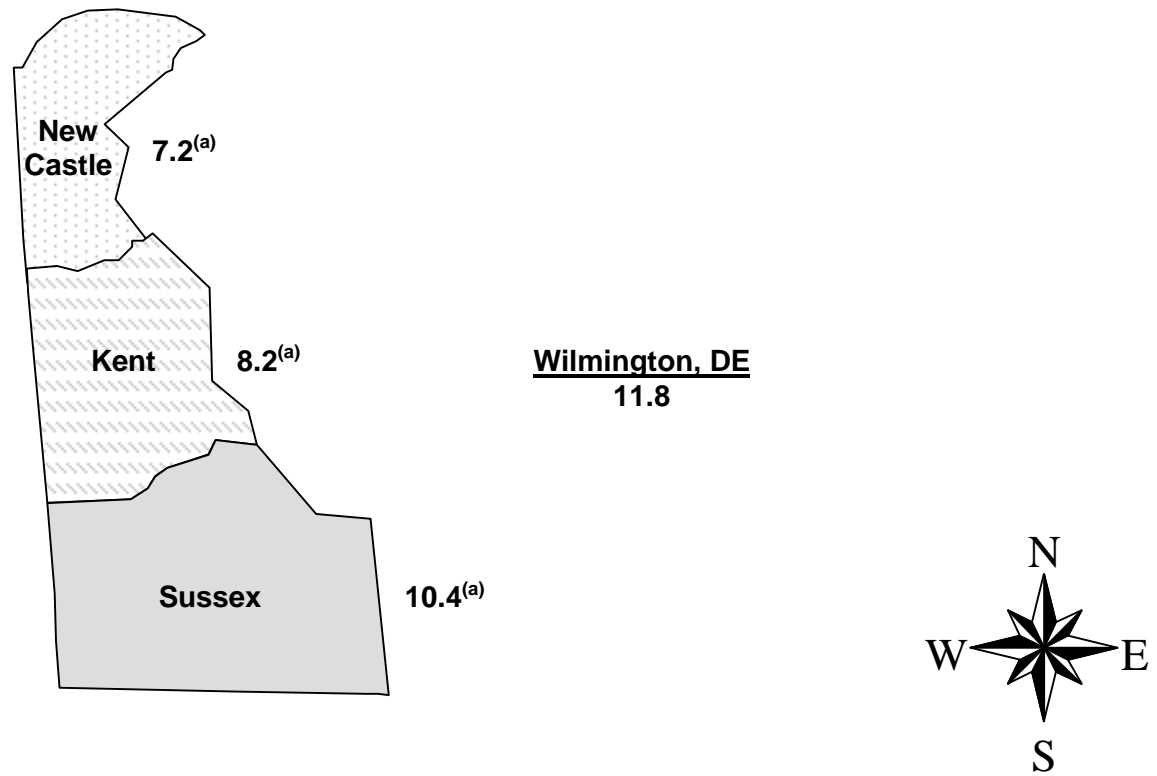
(b) The five-year average teenage fertility rates for females aged 15 to 19 for 1993 to 1997 for Kent, Sussex and New Castle Counties were 65.2, 74.8 and 51.5.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-83:

In 1997, Sussex County had the highest infant mortality rate while New Castle County had the lowest. The City of Wilmington had an even higher rate of infant mortality at 11.8 per 1,000 live births.

Infant Mortality per 1,000 Live Births 1997



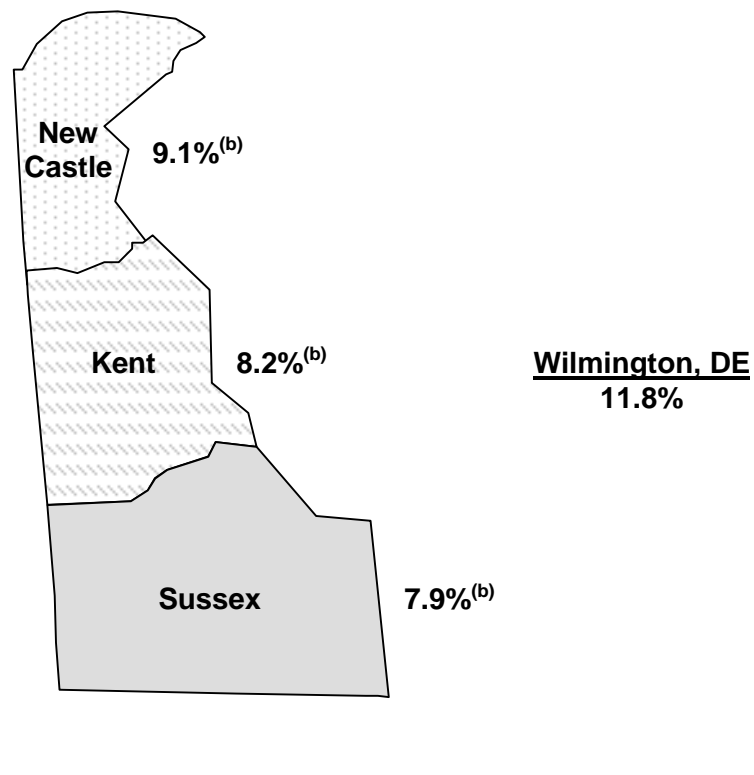
Sources: 1997 data, Delaware Vital Statistics Annual Report 1997.

Note: (a) The five-year average infant mortality rates for 1993 to 1997 for Kent, Sussex and New Castle Counties and for the City of Wilmington were 8.2, 9.0, 7.3 and 13.6.

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-84: In 1997, Wilmington experienced the highest proportion of low birth weight babies.

Proportion of Low Birth Weight^(a) Live Births 1997



Sources: 1997 data, Delaware Vital Statistics Annual Report 1997.

Note: (a) Low birth weight infants weigh under 2,500 grams.

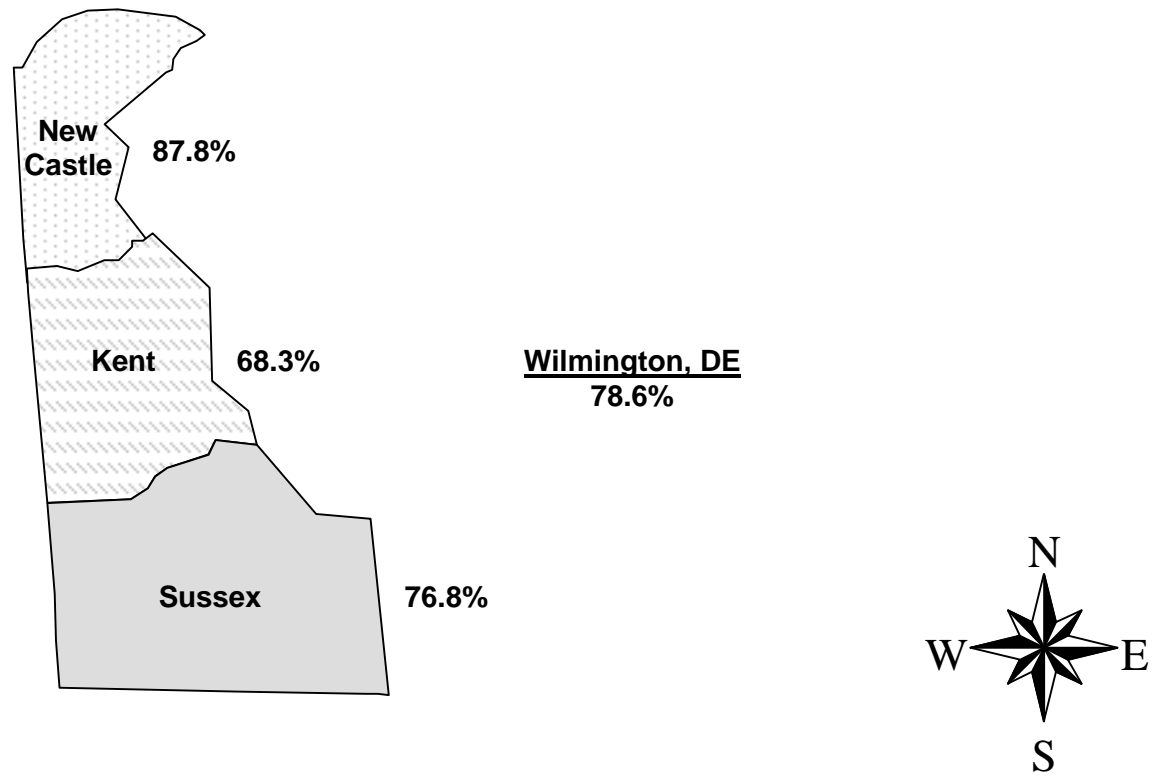
(b) The five-year average percentage of low birth weight births for 1993 to 1997 for Kent, Sussex and New Castle Counties were 12.4 percent, 11.6 percent and 14.3 percent,

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-85:

New Castle County experienced the highest proportion of mother's receiving first trimester prenatal care, while Kent County experienced the lowest proportion.

Percent of Females Receiving First Trimester Prenatal Care 1997



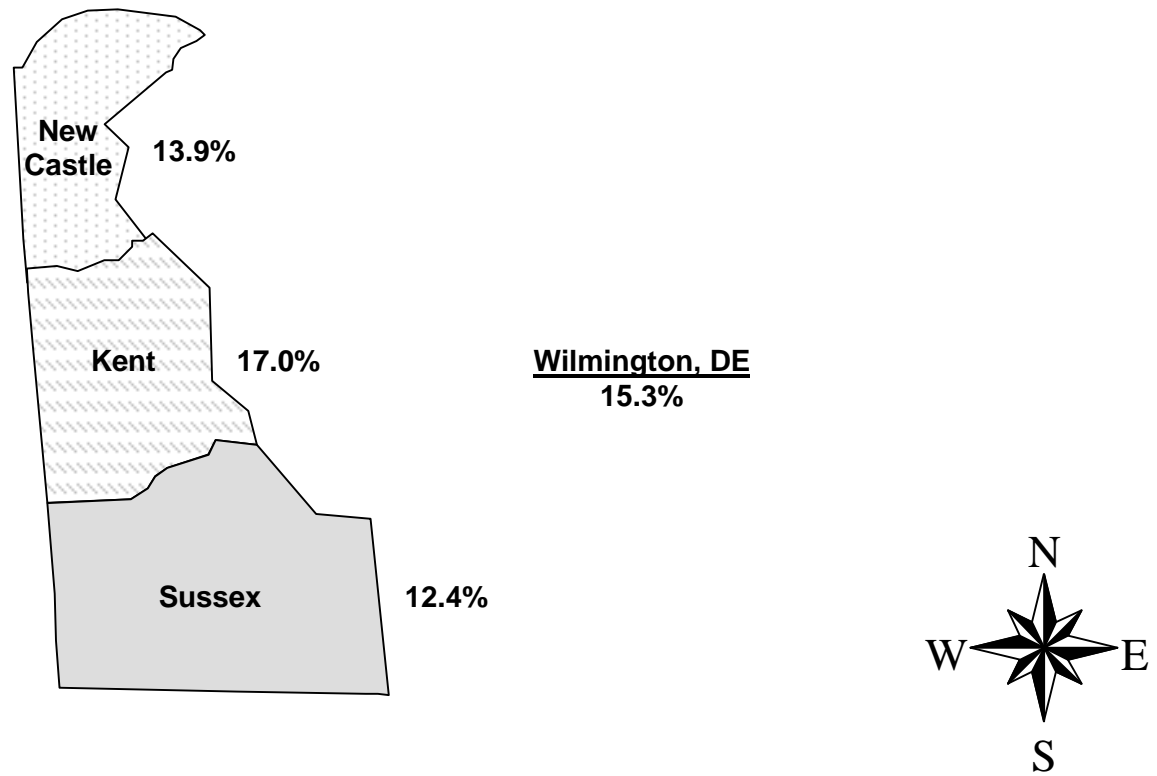
Sources: 1997 data, Delaware Vital Statistics Annual Report

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status

Exhibit I-C-86:

In 1997, Kent County experienced the highest proportion of females reporting tobacco use during pregnancy, while Sussex County had the lowest proportion.

Proportion of Females Reporting Tobacco Use during Pregnancy 1997



Sources: 1997 data, Delaware Vital Statistics Annual Report

HEALTH	RESOURCE	VALUE
Demographic	Socioeconomic	Health Status