2008 DELAWARE RACIAL AND ETHNIC DISPARITIES HEALTH STATUS REPORT CARD

Acknowledgements

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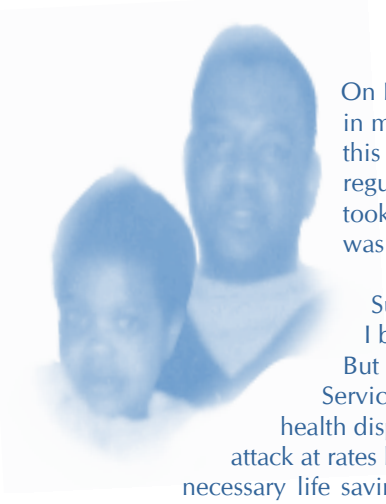
In partnership, the Delaware Department of Health and Social Services and the Delaware Department of Education developed this 2008 Delaware Racial and Ethnic Disparities Health Status Report Card, with contributions from many staff within the Division of Public Health.

Special appreciation is given to Karryl McManus, Deputy Secretary, Delaware Department of Health and Social Services, for providing leadership in establishing a document that will enable communities to visualize the enormity of Delaware's racial and ethnic health disparities status gap. We believe the release of this report card can encourage participation within communities to respond to close these gaps.

Design and layout of this product by Jennifer Wooleyhand, Delaware Division of Public Health, Office of Health and Risk Communications.

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

A note from the Deputy Secretary



On November 4, 2004, I sat grief-stricken in the hospital morgue, my father's hand in mine growing colder as his life slipped away. I just did not understand. Why did this happen? He was an intelligent man with health insurance, he saw his doctors regularly, ate a reasonable diet (except for his obsessive love of peanut butter), and took his medication regularly; he had educated and supportive family and friends, was a chemical engineer and patent holder. This should not have happened to him.

Surely this could have been prevented. I blamed the doctor, I blamed the hospital, I blamed my mother, even the store where he had his heart attack. I blamed Dad. But most of all, I blamed myself. Here I am, Deputy Secretary for Health and Social Services, with plentiful access to health and disease information and a full awareness of health disparities. I know that African American males are more likely to die from a heart attack at rates higher than whites; of the studies showing that doctors are less likely to prescribe necessary life saving procedures to African Americans than to whites. I knew all of this. And yet, because my father had access to good medical care, I assumed he was not at risk; that things were under control.

Three weeks after his death, I heard something that rocked me to my core: one of the symptoms of heart failure was a dry, persistent cough. For two years, my father carried around cough drops to quell a cough that his doctor indicated had no underlying cause. If I had known that information a month earlier, I would have pestered my father about his condition and he could still be alive today.

I tell you that story now because I realize that no one thing was really to blame for my father's death. We probably all failed. His doctor could have taken more time to explain the safety and urgency of the surgery and not assume he wouldn't understand. The hospital could have been a bit more efficient in treating heart attack victims like my dad; my mother could have been a bit more aggressive in making sure he followed through on his doctor's advice; the store where he had his heart attack could have been a bit more caring and attentive to an older black man; my dad could have faced his fears and been a bit more trusting, and finally, I could have taken my dad to see *my* doctor, as I had threatened on numerous occasions.

It is because of my personal experience that I want to thank you for reviewing this 2008 Delaware Racial and Ethnic Disparities Health Status Report Card. It is a document that reflects important health status information, but it is also intrinsically about us. People. Because whether black, white, Latino, Native American or Asian, when it comes to health status, we all have a key role to play.

When you look at the report card that follows, you may become overwhelmed. There is a lot of bad news. In many areas we are failing. However, I do believe there is good news. With just a bit more effort and interest by each of you, we can make a huge impact on health disparities. The information is out there. It's about identifying our risks and taking action to limit them. It is our hope that health providers, organizations, churches, businesses, employers and communities band together and identify their role in disparity elimination. Wishing them away will not work. Ignoring and hoping that things will get better will not work. All of us must act, and act now.

Sincerely,

Karryl H. McManus
Deputy Secretary
Delaware Health and Social Services

Introduction:

Background

The Delaware Department of Health and Social Services' Division of Public Health, in conjunction with the Delaware Department of Education, are pleased to present the first Racial and Ethnic Disparities Health Status Report Card for the State of Delaware.

Health disparities are the differences in health status and the impact of diseases on racial and ethnic populations. In a society that is becoming more culturally and ethnically diverse, it is important that we work actively to protect and enhance the lives of all people.

The Report Card

Within Delaware's 1,982 square miles exists a population comprised of 72.1 percent white, 20.7 percent black, 2.9 percent Asian or Pacific Islander and 4.3 percent other. In addition, 6.3 percent (53,836) of Delaware's population are of Hispanic origin and may be of any race.

This report card was designed to show the health disparity gaps among Delaware's racial and ethnic minorities, and to help monitor the community's and state's progress in eliminating those gaps. Leading health and related indicators for broad racial and ethnic populations are included, along with supporting data and a letter grade to rank the health status of those groups.

This report card will:

- Inform the public and professionals, helping to guide them as they develop strategies, plans and programs to eliminate health disparities;
- Provide data to guide services and outreach provided by community-based organizations, faith-based organizations, state agencies and organizations, legislators, businesses, health care providers and hospitals to help guide efforts to provide services and outreach that target gaps in health disparities; and
- Inform key decision makers on eliminating health disparities through policy reform and systems change.

Twenty-nine health and socioeconomic indicators were chosen for this report card to measure and describe the health status of Delaware's diverse population. These indicators were chosen based on their significance to health and health disparities and the availability of data.

Causes for Disparities

The Institute of Medicine (IOM) Report *Unequal Treatment*, released in March 2002, studied the issue of racial and ethnic disparities in health care in the United States. The report studied factors that contribute to health status outcomes, most notably:

- Social determinants - education, inadequate housing, poor access to healthy foods;
- Lack of access to care - insurance, availability of a reliable source of regular medical care, geographic location;
- Health care - patient mistrust and refusal, stereotypes, language barriers.

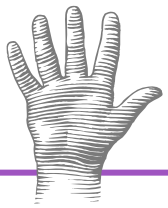
Many aspects of an individual's lifestyle can contribute to poor health. Unhealthy habits like smoking can lead to a number of diseases, such as lung, oral cavity and stomach cancer, and can amplify pre-existing maladies. High blood pressure and diabetes can be controlled with good diet and regular exercise. Complications can cause blindness and damage the heart, blood vessels, and kidneys, thus leading to heart attacks, strokes, and kidney failure. Avoiding unhealthy practices can help maintain body tissues and keep a healthy weight. With the severe effects of poor lifestyle choices and practices on health, identifying ethnic disparities within these conditions is even more pivotal in developing new strategies to reduce and eliminate health issues while promoting healthy living.

Call for Action

Unequal Treatment provides several recommendations to address racial and ethnic disparities in healthcare. Recommended interventions include a broad set of stakeholders including the healthcare system, patients and providers. Fortunately, Delaware's small size provides an ideal opportunity for successfully eliminating health disparities and improving the health for all Delawareans. Our ethnic and cultural diversity makes our state a microcosm of the nation; efforts and initiatives that prove successful in Delaware may also be successful in eliminating health disparities among minority populations nationwide. The Delaware Division of Public Health cannot eliminate health disparities as a single organization, but will require a collaborative effort from all Delawareans.

If you are interested in joining the state's efforts to eliminate health disparities in Delaware, or would like more information on health disparities and this report, please contact The Division of Public Health, Office of Minority Health at (302) 744-4701.

Grading system



UNDERSTANDING THE REPORT CARD RATIOS AND GRADES

Although data are presented by race and ethnicity to illustrate the health status gaps, race/ethnicity itself is not a cause of a particular health condition or status. The Delaware Racial and Ethnic Disparities Health Status Report Card includes data from a variety of sources. Baseline years vary according to health indicator and the availability of dependable data. Racial and ethnic groups have been identified and included for each indicator. These indicators were selected because of their connection to health status and health disparities.

Disparity Ratios and Grades

Grades were based on the ratio of the measure for a specific racial or ethnic group to the measure for the white population of Delaware. For example, the heart disease mortality rate of 284.7 for blacks was divided by the rate for whites, 227.6 (284.7/227.6 = 1.3). This ratio indicates that the heart disease mortality for blacks was 1.3 times higher than that of the white population. This method of calculation is true for all but a few health indicators for which the outcome is expressed as a positive (for example, Delaware median household income). In such cases, the ratio is calculated as white/Hispanic or white/black. A ratio of 1.0 indicates no disparity between the groups. These grades do not consider trends in the data or the ranking of Delaware related to the United States , so a grade of A or B could still mean improvement is needed.

The following guidelines were used in assigning grades:

GRADES	DISPARITY RATIO
A	Less than or equal to 1.0
B	1.1 – 1.4
C	1.5 –1.9
D	2.0 – 2.4
F	2.5 or Greater
I	Inconclusive

Note: ** Populations with less than 20 cases were too small to provide accurate information, making the grade inconclusive.

Delaware's Hispanic population

Estimates of Delaware's Hispanic population are derived from the decennial census. The U.S. Census Bureau also produces an annual Hispanic population series that is used in calculating rates and ratios in this report. Due to Delaware's relatively small Hispanic population, caution must be taken into account when referencing these statistics.

Hispanic Origin

In 1989, a specific question regarding Hispanic origin was added to birth and death certificates. This question is considered to be separate from the race question. Therefore, a person may report Hispanic origin in combination with any race category. The Hispanic question has two parts. The first simply asks whether or not the person is of Hispanic origin (YES OR NO); the second part asks for the specific origin (e.g., Cuban, Mexican, Puerto Rican, etc.).

Maternal and Child Health

Delaware Infant Deaths per 1,000 Births (Infant Mortality Rate) (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	2.5	17.1	**F**
Hispanic	1.1	7.2	**B**
White	1.0	6.8	**Reference Group**

Note:
Black infant mortality rates are higher than white rates in all three Delaware counties.
Source: Delaware Vital Statistics Annual Report, 2005

Source: Delaware Health Statistics Center (2001-2005)

Percent of Delaware Low Birth-Weight Births (<2500 grams) (2001-2005)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.9	14.3	**C**
Hispanic	0.9	7.0	**A**
White	1.0	7.7	**Reference Group**

Note:
Birth weight and gestation are considered to be the most important predictors of infant health and mortality risk. Infants born too small are at greater risk of death than those who are normal birth weight. Source: Delaware Vital Statistics Annual Report, 2005

Source: Delaware Health Statistics Center (2001-2005)

Percent of Delaware Women With Late Or No Prenatal Care (2001-2005)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.6	5.4	**C**
Hispanic	2.7	9.1	**F**
White	1.0	3.4	**Reference Group**

Note:
Over 80 percent of women received prenatal care in the first trimester, 2001-2005. In 2001-2005, Hispanic women in Sussex County had the lowest percentage receiving prenatal care in the first trimester. The highest percentage of prenatal care was in white women in New Castle County.
Source: Delaware Vital Statistics Annual Report, 2005

Source: Delaware Health Statistics Center (2001-2005)

Maternal and Child Health

Percent of Delaware Women Who Smoked During Pregnancy (2001-2005)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	0.9	11.3	**A**
Hispanic	0.3	3.4	**A**
White	1.0	13.2	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
The best time to quit smoking is when a woman is planning to get pregnant in the near future.
Source: http://www.lungusa.org

Chronic Disease

Delaware Five-year Age - Adjusted Heart Disease Mortality Rates (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.3	284.7	**B**
Hispanic	**	**	**I**
White	1.0	227.6	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
Heart disease is the most common cause of death for blacks and whites. Death rates for blacks and whites have continued to decline since 1994, but the disparity continues. The term "heart disease" actually refers to several heart diseases and conditions, but most often, the term is used in reference to coronary heart disease.
Source: American Heart Association, Stroke and Heart Disease Statistics: http://www.americanheart.org

Delaware Five-year Age - Adjusted Stroke Mortality Rates (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.4	62.6	**B**
Hispanic	**	**	**I**
White	1.0	43.1	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
As of 2004, at a death rate of 40.5, Delaware was ranked as the sixth lowest state by the American Heart Association for stroke deaths. Over the last 10 years, the prevalence of stroke deaths has decreased 20.4 percent in Delaware. Lifestyle factors such as smoking and conditions like high blood pressure are associated with an increased chance of stroke.
Source: American Heart Association Stroke & Heart Disease Statistics: http://www.americanheart.org

Chronic Disease

Delaware Five-year Age - Adjusted Diabetes Mortality Rate, per 100,000 Population (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	2.2	49.2	**D**
Hispanic	**	**	**I**
White	1.0	22.5	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
Delaware has made great impact in reducing the black mortality rate. Between 1990-2005 the mortality rate has steadily been on a downward trend. Source: Delaware Vital Statistics Annual Report 2005 Note: Slide "Five-year Age-Adjusted Diabetes Mortality Rates by Race, Delaware, 1990-2005", page 187

Delaware Five-year Age - Adjusted Chronic Lower Respiratory Disease Mortality Rates per 100,000 (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	0.7	31.3	**A**
Hispanic	**	**	**I**
White	1.0	41.9	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
Chronic respiratory diseases are chronic diseases of the airways and other structures of the lung. Some of the most common are asthma, chronic obstructive pulmonary disease (COPD), respiratory allergies, occupational lung diseases and pulmonary hypertension. Source: http://www.who.int/respiratory/en

Delaware Five-year Age - Adjusted HIV Mortality Rate (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	14.5	33.4	**F**
Hispanic	**	**	**I**
White	1.0	2.3	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
Human immunodeficiency virus (HIV) is a major issue for minority communities. Currently in Delaware, 61.9% of HIV cases are among blacks. Location also appears to be an issue: 72 percent of HIV cases are found in New Castle County and 44.4 percent of HIV cases are in areas that tend to be linked to the city of Wilmington.
Source: www.delawarehiv.org: Monthly Surveillance Report, 6/30/2008

Chronic Disease

Delaware Five-year Age - Adjusted Prostate Cancer Mortality Rate per 100,000 Population (2000-2004)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	2.0	49.9	**D**
Hispanic	**	**	**I**
White	1.0	25.1	**Reference Group**

Source: Cancer Data from Cancer Incidence and Mortality Report (DPH,2007)

Note:
A disparity between black and white males exists at a state and national level.[1] Difference in disease treatment is a speculated reason for the divergence in death rates.[2]
Source:[1] http://www.cdc.gov/cancer/healthdisparities/statistics/men.htm
[2]Peter B. Bach, MD; Deborah Schrag, MD,MPH: Otis W. Brawley, MD; Aaron Galaznik; Sofia Yakren; Colin B. Begg, PhdD. Survival of Blacks and Whites After a Cancer Diagnosis. JAMA. 2002:287:2106-2113.

Delaware Five-year Age - Adjusted Colorectal Cancer Mortality Rate per 100,000 Population (2000-2004)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.5	27.4	**C**
Hispanic	**	**	**I**
White	1.0	18.5	**Reference Group**

Source: Cancer Data from Cancer Incidence and Mortality Report (DPH, 2007)

Note:
Colonoscopy screening has been increasing significantly among Delaware adults age 50 and older during the past three years, from 62.3 percent in 2004 to 75.6 percent in 2007 among whites, and from 58.4 percent to 68 percent among blacks. While there is still a disparity, colonoscopy prevalence among African Americans in Delaware is significantly higher than the national African American prevalence of 53.7 percent (2006).
Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey, 2004-2007.

Delaware Five-year Age - Adjusted Breast Cancer Mortality Rate per 100,000 Population (2000-2004)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.3	32.9	**B**
Hispanic	**	**	**I**
White	1.0	24.4	**Reference Group**

Source: Cancer Data from Cancer Incidence and Mortality Report (DPH, 2007)

Note:
There is still a racial disparity among adult Delaware women who say they have ever had a mammogram. In 2007, 72.4 percent of adult non-Hispanic white women in Delaware reported having had a mammogram, compared to 60.1 percent of adult African American women in the state.
Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey, 2007.

Chronic Disease

Delaware Five-year Age-Adjusted Lung Cancer Mortality Rates per 100,000 Population (2000-2004)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.1	65.8	**B**
Hispanic	**	**	**I**
White	1.0	59.4	**Reference Group**

Source: Cancer Data from Cancer Incidence and Mortality Report (DPH, 2007)

Note:
If not for lung cancer, the overall cancer death rate in the United States would have declined by 14% since 1950. Instead, it has increased 22%.
Source: Surveillance, Epidemiology and END Results (SEER) Program, National Cancer Institute)

Violence

Delaware Five-year Age-Adjusted Homicide Mortality Rates per 100,000 Population (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	4.3	11.1	**F**
Hispanic	**	**	**I**
White	1.0	2.6	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
The homicide rate in Delaware has historically been higher for blacks than whites. Between 2001—2005, the black rate was four times higher than the white rate.
Source: Delaware Vital Statistics Annual Report, 2005

Delaware Five-year Age-Adjusted Suicide Mortality Rates per 100,000 Population (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	0.5	5.9	**A**
Hispanic	**	**	**I**
White	1.0	12.5	**Reference Group**

Source: Delaware Health Statistics Center (2001-2005)

Note:
The suicide rate in Delaware has historically been higher for whites than blacks. Between 2001-2005, the suicide rate was 2 times higher for whites than blacks. Historically in Delaware, suicides have always outnumbered homicides.
Source: Delaware Vital Statistics Annual Report, 2005

Child and Adolescent Health

Births to Delaware Teens ages 15-19 per 1,000 Female Population (2001-2005)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	2.1	72.3	**D**
Hispanic	3.8	131.4	**F**
White	1.0	34.4	**Reference Group**

Note:
Children of teenage mothers are more likely to be born at low birth weight, experience health and developmental problems, have higher rates of infant mortality and are at increased risk of abuse or neglect.
Source: Kids Count in Delaware: Fact book 2008. p. 74

Source: Delaware Health Statistics Center (2001-2005)

Social and Economic Well-being

Percent of Delaware Adults Age 25 and Over with Less than a High School Diploma (2006)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.6	18.4	**C**
Hispanic	3.8	44.1	**F**
White	1.0	11.7	**Reference Group**

Note:
In 2006, Hispanics ages 25 and over were the least likely group to have a bachelors or graduate degree in Delaware (11.8 percent). Statewide, 28.5 percent of whites and 19.6 percent of blacks had a bachelors or graduate degree. Source: 2006 American Community Survey

Source: U.S. Census Bureau, 2006 American Community Survey—Delaware Department of Education

Social and Economic Well-being

Delaware Median Household Income (2006)

Race/Ethnicity	Disparity Ratio	Income	Grade
Black	1.3	$42,103	**B**
Hispanic	1.5	$39,199	**C**
White	1.0	$56,739	**Reference Group**

Note:
In 2006, Delaware female heads of household were more than eight times more likely to live in poverty (24 percent) than families (2.8 percent). In 2006, 11.1 percent of all Delawareans lived below the poverty level. Source: 2006 American Community Survey

Source: U.S. Census Bureau, 2006 American Community Survey—Delaware Department of Education
Disparity Ratio calculated as white/Hispanic or white/black

Delaware Unemployment Rates (2006)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.8	5.8	**C**
Hispanic	1.6	5.3	**C**
White	1.0	3.3	**Reference Group**

Note:
Nationally, people age 25 and over without a high school diploma were 61.4 percent more likely to be unemployed (7.1 percent vs. 4.4 percent) than high school graduates during 2007.
Source: U.S. Bureau of Labor Statistics

Source: U.S. Census Bureau, 2006 American Community Survey—Delaware Department of Education

Delaware Homeownership Rates (2006)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.5	55.2	**C**
Hispanic	1.8	44.9	**C**
White	1.0	81.6	**Reference Group**

Note:
In 2006, the median home value in Delaware was $227,100 with median monthly owner costs including mortgage of $1,371. The median gross rent was $830. Source: 2006 American Community Survey

Source: U.S. Census Bureau, 2006 American Community Survey—Delaware Department of Education.
Disparity ratio calculated as white/Hispanic or white/black

Social and Economic Well-being

Percent of Delaware Students Graduating From High School (2006—2007)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.2	71.1	**B**
Hispanic	1.3	65.1	**B**
White	1.0	82.4	**Reference Group**

Note:
The graduation rate is calculated by dividing the number of on-time graduates in a given year by the number of first-time ninth graders four years earlier. Graduates are those receiving a high school diploma, not a GED. The denominator can be adjusted for transfers in and out of the system.
Source: Delaware Department of Education (2006-2007)

Source: Delaware Department of Education (2006-2007)
Notes: Calculated using the National Governors Association definition. Disparity ratio calculated as white/Hispanic or white/black.

Percent of Delaware Students Proficient or Above in Math (2006-2007)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.5	52.0	**C**
Hispanic	1.3	62.9	**B**
White	1.0	79.4	**Reference Group**

Note:
Proficiency is based on the Delaware Student Testing Program for grades 2-10.
Source: Delaware Department of Education (2006-2007)

Source: Delaware Department of Education (2006 - 2007)
Disparity ratio calculated as white/Hispanic or white/black.

Percent of Delaware Students Proficient or Above in Reading (2006-2007)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.3	68.3	**B**
Hispanic	1.2	75.7	**B**
White	1.0	87.9	**Reference Group**

Note:
Proficiency is based on the Delaware Student Testing Program for grades 2-10.
Source: Delaware Department of Education (2006-2007)

Source: Delaware Department of Education (2006 - 2007)
Disparity ratio calculated as white/Hispanic or white/black.

Major Behavioral Risk Factors Among Adult Delawareans, by Race

Delaware Adult Cigarette Smoking (2003 - 2006)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.0	21.9	**A**
Hispanic	1.1	23.4	**B**
White	1.0	22.0	**Reference Group**

Note:
In order to obtain a sample size large enough to provide valid estimates for Delaware's Hispanic population, Behavioral Risk Factor Survey data were aggregated from four years. Although the difference is not statistically significant, the Hispanic smoking prevalence appears to be slightly higher than that of non-Hispanic whites.
Source: BRFS (2003-2006)

Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey (2003-2006)

Delaware Adults With No Leisure Time Physical Activity (2003 - 2006)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.5	32.6	**C**
Hispanic	1.3	29.1	**B**
White	1.0	21.1	**Reference Group**

Note:
Only one question, dealing with lack of leisure-time physical activity, was available for all four years of the aggregated data. This question does not include activity at work. More in-depth information about physical activity is available from the BRFS in odd-numbered years.
Source: BRFS (2003-2006)

Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey (2003-2006)

Delaware Adults Binge Drinking (2003 - 2006)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	0.6	11.0	**A**
Hispanic	1.1	20.2	**B**
White	1.0	19.1	**Reference Group**

Note:
Acute, or "binge" drinking is defined by the BRFS as males who have five or more drinks on one occasions or females who have four or more drinks on one occasion.
Source: BRFS (2003-2006)

Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey (2003-2006)

Major Behavioral Risk Factors Among Adult Delawareans, by Race

Delaware Adults Who Have Asthma (2003 - 2006)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.2	10.0	**B**
Hispanic	1.2	9.9	**B**
White	1.0	8.6	**Reference Group**

Note:
The measure used in this aggregation is for adults who have been told by a doctor they have asthma, and currently have asthma symptoms. Source: BRFS.

Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey (2007)

Delaware Adults Who Are Overweight or Obese (2003 - 2006)

Race/Ethnicity	Disparity Ratio	Percent	Grade
Black	1.2	68.5	**B**
Hispanic	1.0	60.2	**A**
White	1.0	58.2	**Reference Group**

Note:
"Overweight" is defined as a Body Mass Index (BMI) of 30 or greater; "obesity" as a BMI of 25-29.9. Obesity among Delaware adults has doubled since 1990. Obesity is a major risk factor for type 2 diabetes, heart disease, cancer, and several other health problems. Obesity is significantly more prevalent among African American adults.
Source: BRFS.

Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey (2007)

Delaware Adults With Fair or Poor Health Status (2003 - 2006)

Race/Ethnicity	Disparity Ratio	Rate	Grade
Black	1.1	14.3	**B**
Hispanic	0.9	12.1	**A**
White	1.0	12.9	**Reference Group**

Note:
Self-reported health status has been demonstrated to correlate well with other tests of health status. Self-rated health is a powerful predictor of mortality and morbidity. Large variations in fair or poor health suggest differences in the underlying burden of chronic diseases, health-care coverage, and health behaviors. Source: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5604a1.htm

Source: Delaware Health and Social Services, Division of Public Health, Behavioral Risk Factor Survey(2007)

Glossary

AGE-ADJUSTED MORTALITY RATE (Direct Method) is a statistical method used to eliminate differences caused by variations in age within a population. This allows 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.

BIRTH WEIGHT 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.

THE BEHAVIORAL RISK FACTOR SURVEY (BRFS) is a telephone interview survey. Prevalence rates are based on a random sample of 16,188 non-institutionalized Delaware residents age 18 and older, and reported at a 95% confidence level. The sample is from BRFS data aggregated from the years 2003-2006, which provides a large enough Hispanic sample for valid estimates.

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

CONFIDENCE INTERVAL is a statistical range with a specified probability that a given parameter lies within the range.

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

EDUCATION is the highest level of formal education completed.

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).

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 that numbers of infant deaths and live births are available.

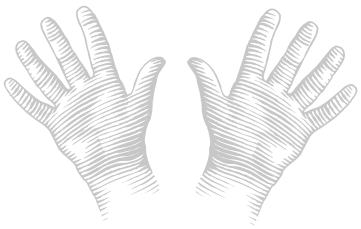
LOW BIRTH WEIGHT BIRTH refers to a newborn weighing less than 2,500 grams (5 pounds, 8 ounces).

PRENATAL CARE ATTAINMENT refers to the timing of prenatal care, specifically by trimester (first, second, or third) the care began. Late or no prenatal care refers to mothers who obtained care after the first trimester or received no care.

Continued

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.

VITAL STATISTICS disseminates birth, death, fetal death, marriage, divorce, and induced termination of pregnancy data. As steward of the data, the Bureau is responsible to ensure the data is used appropriately and that the confidentiality and privacy of individuals are protected and maintained without exception. The Bureau of Health Statistics is comprised of two major parts: the Delaware Health Statistics Center and the Office of Vital Statistics. The Delaware Health Statistics Center (DHSC) is responsible for the data collection, validation, statistical analysis and maintenance of a comprehensive collection of health statistics. Delaware's vital events (births, deaths, fetal deaths, marriages and divorces) are registered and filed at the Office of Vital Statistics.



Recommended reading

Anderson, R.N. and Rosenberg, H.M. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. *National Vital Statistics Reports*. Vol. 47(3). Hyattsville, MD: National Center for Health Statistics, 1998.

Anderson, R.N., Minino, A.M., Hoyert, D.L., Rosenberg, H.M. Comparability of Cause of Death Between ICD-9 and ICD-10: Preliminary estimates. *National Vital Statistics Reports*. Vol 49(2). Hyattsville, Maryland: National Center for Health Statistics. 2001.

Callaghan, W.M., MacDorman, M.F., Rasmussen, S., Cheng, Q., Lackritz, E. The Contribution of Preterm Birth to Infant Mortality Rates in the United States. *Pediatrics*. 2006; 118: 1566-1573.

Hamilton, B.E,, Martin, J.A., Ventura, S.J. Births: Preliminary data for 2005. *National Vital Statistics Reports*. Vol 55. Hyattsville, MD: National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/products/pubs/pubd/hestats/prelimbirths05/prelimbirths05.htm.

Institute of Medicine. 2002. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, DC: National Academy Press.

International Classification of Diseases and Related Health Problems. Tenth Revision, Volume 1. Geneva, World Health Organization, 1992.

London Health Observatory. Calculating Life Expectancy and Infant Mortality Rates – Mapping Health Inequalities Across London – technical supplement. September, 2001. Available at http://www.lho.org.uk/Health_Inequalities/Attachments/PDF_Files/tech_supp.pdf.

Munson ML, Sutton PD. Births, marriages, divorces, and deaths: Provisional data for 2005. *National Vital Statistics Reports*. Vol. 54 (20). Hyattsville, MD: National Center for Health Statistics. 2006.

National Center for Health Statistics. Instruction Manual, Part 11: Computer Edits for Mortality Data, Including Separate Section for Fetal Deaths, Effective 2005. National Center for Health Statistics, Hyattsville, MD. October 2004.

National Center for Health Statistics. Instruction Manual, Part 12: Computer Edits for Natality Data, Effective 1993. National Center for Health Statistics, Hyattsville, MD. March 1995.

National Hispanic Health Data—National Center for Health Statistics (NCHS): National Health of Hispanic/Latino Population http://www.cdc.gov/nchs/FASTATS/hispanic_health.htm

National Office of Vital Statistics, C.L. Chiang. Standard Error of the Age-Adjusted Death Rate. *Vital Statistics-Special Reports*. Vol. 47, No. 9. Public Health Service. Washington, D.C., Aug. 1961.

Supplemental

Delaware Racial and Ethnic Disparities Health Status Report Card

Purpose

This document provides information on how the report card was developed and how to interpret it.

About The Grading System

For simplicity, the report card assigns a letter grade to depict the extent of the disparity for various health related conditions. It is important to emphasize that the grades evaluate the extent of the disparity, not the extent of the health condition.

For example, the high school graduation rate from 2006 — 2007 was 65.1 percent for Hispanics and 82.4 percent for whites. The ratio of these percentages, 1.3, yielded a "B" grade in the report. However, it is clear that these graduation rates are more deserving of attention, especially among Hispanics, than a "B" would imply. However the "B" reflects only the extent of the problem relative to whites.

While there is more than one method to evaluate the racial or health disparity, the report calculates a ratio by dividing one measure by another. For example, the heart disease death rate in blacks is 1.3 times higher than in whites (death rates of 284.7 and 227.6 per 100,000 respectively). Compare this to the homicide death disparity ratio of 4.3 (death rates of 11.1 and 2.6 per 100,000 respectively). Based on this information alone, one might conclude that the disparity burden is much more severe for homicide.

However, another way to evaluate the disparity burden is by comparing the absolute difference in rates. For heart disease, the absolute difference in the rates is 57.1 deaths per 100,000 (284.7 - 227.6). Compare this to the difference in the homicide death rate, which is 8.5 (11.1 - 2.6). Based on this information, one might conclude that the disparity burden is much more severe for heart disease.

Neither method is wrong; it is just two ways of looking at the question. The ratio tells us how many more times one group is impacted as compared to the other. The absolute difference tells us how many lives would be saved (or how much less disease there would be) if the burden of disease was the same in both groups.

For simplicity, the Report Card is based on the ratio method. For interested readers, the absolute differences are presented in Table 1 below.

Table 1. Relative and Absolute Differences in Selected Health-indicators, Delaware.

Indicator*	White Measure	Black Measure	Hispanic Measure	Relative Difference		Absolute Difference	
				Black	Hispanic	Black	Hispanic
Infant Death Rate	6.8	17.1	7.2	2.5	1.1	10.3	0.4
Low Birth Weight	7.7	14.3	7.0	1.9	0.9	6.6	-0.7
Late Prenatal Care	3.4	5.4	9.1	1.6	2.7	2.0	5.7
Diabetes Mortality	22.5	49.2	**	2.2	**	26.7	**
Chronic Respiratory Mortality	41.9	31.3	**	0.7	**	-10.6	**
HIV Mortality	2.3	33.4	**	14.5	**	31.1	**
Smoking during Pregnancy	13.2	11.3	3.4	0.9	0.3	-1.9	-9.8
Heart Disease Mortality	227.6	284.7	**	1.3	**	57.1	**
Stroke Mortality	43.1	62.6	**	1.4	**	19.5	**
Prostate Cancer Mortality	25.1	49.9	**	2.0	**	24.8	**
Colorectal Cancer Mortality	18.5	27.4	**	1.5	**	8.9	**
Breast Cancer Mortality	24.4	32.9	**	1.3	**	8.5	**
Lung Cancer Mortality	59.4	65.8	**	1.1	**	6.4	**
Homicide	2.6	11.1	**	4.3	**	8.5	**
Suicide	12.5	5.9	**	0.5	**	-6.6	**
Teen Births	34.4	72.3	131.4	2.1	3.8	37.9	97.0
Less than High School	11.7	18.4	44.1	1.6	3.8	6.7	32.4
Median Income	56, 739	42,103	39,199	1.3	1.5	14,636	17,540
Unemployment Rate	3.3	5.8	3.5	5.8	3.5	2.5	0.2
Home Ownership	81.6	55.2	44.9	1.5	1.8	26.4	36.7
High School Graduation	82.4	71.1	65.1	1.2	1.3	11.3	17.3
Math Proficiency	79.4	52.0	62.9	1.5	1.3	27.4	16.5
Reading Proficiency	87.9	68.3	75.7	1.3	1.2	19.6	12.2
Smoking	22.0	21.9	23.4	1.0	1.1	-0.1	1.4
No Physical Activity	21.1	32.6	29.1	1.5	1.3	11.5	8.0
Binge Drinking	19.1	11.0	20.2	0.6	1.1	-8.1	1.1
Asthma	8.6	10.0	9.9	1.2	1.2	1.4	1.3
Overweight/Obese	58.2	68.5	60.2	1.2	1.0	10.3	2.0
Fair/Poor Health	12.9	14.3	12.1	1.1	0.9	1.4	-0.8

*See the Report Card for more information about the indicator.
** Populations with less than 20 cases were too small to provide accurate information

Statistical Confidence and Omission of Data

The rate of a disease in a population provides a snapshot of the impact of that disease for a specific time period. Because Delaware is a small state, we have a special problem when we try to interpret this snapshot. In a group with a small population, such as Hispanics in Delaware, with a few cases of a disease compared to larger groups, the snapshot changes significantly from year to year. These big fluctuations do not typically occur in larger populations. Thus, If two groups are compared in a given year, say Hispanics and whites, and one (or both) of the group's disease rate is based on a small number of cases, it would not be unusual to find the comparison different, perhaps even reversed, the following year. This is similar to comparing the preferences of likely voters for one of two candidates. We would have much more confidence in the accuracy of a survey of 1,000 people than we would of 10 people.

One way to allow for better understanding of the rates among populations where a small number of cases occurs is to combine several years worth of data, which is why we often publish 5-year rates in Delaware. However, this method has limitations; sometimes the number of cases is so small that even using five years of data makes interpreting the snapshot difficult. A useful rule is that any rate based on fewer than 20 cases of a disease will cause significant variation in the rates when those numbers are increased or decreased slightly. The report card uses this rule of thumb. Measures based on less than 20 cases are not provided and the grade is "I" for inconclusive.

A measure of the confidence in our "snapshot" is the confidence interval. In our example of likely voters, the pollster might call this the margin of error. A 95 percent confidence interval is the range of values within which we are 95 percent sure that our "snapshot" actually occurs.

If we want to determine if two rates are statistically different, we can compare the confidence intervals. If they overlap, then we say that the two rates are not statistically different. If they do not overlap, then we can say that we are 95 percent sure that the actual rates are different.

The report card did not include the confidence intervals of the different measures. Readers who want to determine if the rate for a racial/ethnic minority is statistically different than that rate for whites, can review the information in Table 2 (next page).

Table 2. 95 Percent Confidence Intervals for Selected Health-indicators, Delaware.

Indicator*	White		Black		Hispanic	
	Measure	Confidence Interval	Measure	Confidence Interval	Measure	Confidence Interval
Infant Death Rate	6.8	6.0 - 7.6	17.1	**14.9 - 19.3****	7.2	5.3 - 9.5
Low Birth Weight	7.7	7.4 - 8.0	14.3	**13.7 - 14.9**	7.0	6.4 - 7.6
Late Prenatal Care	3.4	3.2 - 3.6	5.4	**5.1 - 5.8**	9.1	**8.4 - 9.8**
Diabetes Mortality	22.5	21.0 - 24.1	49.2	**43.2 - 55.3**	***	***
Chronic Respiratory Mortality	41.9	39.9 - 44.0	31.3	**26.4 - 36.1**	***	***
HIV Mortality	2.3	1.8 - 2.9	33.4	**29.3 - 37.4**	***	***
Smoking during Pregnancy	13.2	12.8 - 13.5	11.3	10.8 - 11.8	***	***
Heart Disease Mortality	227.6	222.8 - 232.6	284.7	**270.0 - 299.3**	***	***
Stroke Mortality	43.1	41.0 - 45.2	62.6	**55.6 - 69.6**	***	***
Prostate Cancer Mortality	25.1	22.4 - 27.9	49.9	**39.0 - 60.8**	***	***
Colorectal Cancer Mortality	18.5	17.1 - 19.9	27.4	**22.8 - 32.0**	***	***
Breast Cancer Mortality	24.4	22.5 - 27.0	32.9	**28.7 - 41.6**	***	***
Lung Cancer Mortality	59.4	56.9 - 61.9	65.8	58.8 - 72.7	***	***
Homicide	2.6	2.0 - 3.2	11.1	**8.9 - 13.2**	***	***
Suicide	12.5	11.2 - 13.7	5.9	**4.3 - 7.9**	***	***
Teen Births	34.4	33.2 - 35.6	72.3	**69.5 - 75.1**	131.4	**128.9 - 134.6**
Less than High School	11.7	10.7-12.7	18.4	15.8 - 21.0	44.1	36.8 - 51.4
Median Income	56, 739	55,151- 58,327	42,103	39,647- 44,559	39,199	33,187–45,211
Unemployment Rate	3.3	2.9 -3.7	5.8	4.5 - 7.1	5.3	0 -14.0
Home Ownership	81.6	80.3-82.9	55.2	52.1-58.3	44.9	37.6-52.2
High School Grad	82.4	81.4-83.4	71.1	69.4 -72.8	65.1	61.3-68.9
Math Proficiency	79.4	79.0 - 79.8	52.0	51.4-52.6	62.9	61.7- 64.1
Reading Proficiency	87.9	87.6 - 88.2	68.3	67.7-68.9	75.7	74.6 - 76.8
Smoking	22.0	21.1 - 22.9	21.9	19.8 - 24.0	23.4	9.5 - 28.4
No Physical Activity	21.1	20.2 -22.0	32.6	**29.7 - 36.5**	29.1	**23.2-35.7**
Binge Drinking	19.1	18.1 - 20.2	11.0	9.0 - 13.4	20.2	14.3-27.8
Asthma	8.6	7.9 - 17.1	10.0	8.3 - 11.7	9.9	6.3-13.5
Overweight/Obese	58.2	57.0 - 59.4	68.5	**65.5 - 71.4**	60.2	53.2-66.9
Fair/Poor Health	12.9	12.1-13.6	14.3	12.4 - 16.3	12.1	8.5-17.0

* See the report card for more information about the indicator.
** Bolded Confidence Intervals are significantly different than the white measure
*** Populations with less than 20 cases were too small to provide accurate information

Delaware Health and Social Services
Division of Public Health
2008 Delaware Racial and Ethnic Disparities Health Status Report Card
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DELAWARE HEALTH AND SOCIAL SERVICES

Division of Public Health