Populations of Color in Minnesota

Health Status Report

Fall 2004

Center for Health Statistics
Minnesota Department of Health

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In 2002 the Centers for Disease Control and Prevention's National Center for Health Statistics announced that life expectancy in the United States reached a new high of 77.4 years. [i] Health improvements have been noted in many other areas as well. In the 2003 edition of *America's Health: State Health Rankings*, Minnesota tied with New Hampshire for the healthiest state in the nation.[ii] Since the inception of this report in 1990, Minnesota has been ranked one of the two healthiest states in the nation. Yet further examination of the data indicates that Populations of Color[iii] generally experience poorer health and disproportionately higher rates of disease and premature death as compared to the overall population – this holds true at both the state and national levels.

On a national level, disparities in health status were first recognized with the release of the U.S. Department of Health and Human Services *Report of the Secretary's Task Force on Black & Minority Health* (1985). This report showed a persisting disparity in the burden of death and illness experienced by Populations of Color as compared to the nation's population as a whole.

The Minnesota Department of Health's first public recognition of the problem of racial and ethnic health disparities occurred in 1987, with the publication of *Minority Populations in Minnesota – A Health Status Report* by the Minnesota Department of Health Center for Health Statistics, which detailed for the first time the demographics and health status of the state's Populations of Color.[iv] In 1993, the Commissioner of the Minnesota Department of Health, created an Office of Minority Health (OMH)[*] to address the issue. The department patterned the organization and function of the state office after the Office of Minority Health in the U.S. Department of Health and Human Services, with a charge of reducing gaps and disparities in the health status of people of color in Minnesota and developing a legislative strategy to address these issues.

In 1994, the new Office of Minority Health and the Center for Health Statistics began working together with the Urban Coalition to produce *Populations of Color in Minnesota – A Health Status Report (1997).* This report further documented the extent of the state's health disparities and identified factors that contributed to the poor health of these communities.[v] This report also provided the groundwork for the program and policy recommendations published in OMH's January 1998 *Minority Health Legislative Report: Current Status of Information Related to Minority Health Issues* and provided the foundation for an OMH statewide conference, *Minority Health Data Collection: Implications for Improving Health Outcomes for Populations of Color*, each demonstrating the importance and utility of collecting and reporting race/ethnic and socioeconomic health data. In 2000, the report also served as the foundation for a successful legislative initiative directed at the elimination of these documented health disparities.

This current report is an update of the 1997 *Populations of Color in Minnesota – A Health Status Report.* This report includes current data on the changing demographics and growth of Minnesota's racial/ethnic communities, current data for births and birth outcomes, death, illness, disease, injury, immunization, and status of the uninsured in Minnesota. New in this update is trend data that indicates change and compares results from the previous edition of the *Health Status Report.*

[*] The office was renamed the Office of Minority and Multicultural Health or OMMH in 2001

[i] Deaths: Preliminary Data for 2002," Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS), (2002).
[ii] *America's Health: State Health Rankings 2003 Edition* is produced by the United Health Foundation in partnership with the American Public Health Association (APHA) and the Partnership for Prevention.

[iii] "Populations of Color," is a term used throughout this report and refers to individuals belonging to race categories as defined in the U.S. Census 2000.

"White" refers to people having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicated their race or races as "White" or wrote in entries such as Irish, German, Italian, Lebanese, Near Easterner, Arab, or Polish.

"Black or African American" refers to people having origins in any of the Black racial groups of Africa. It includes people who indicated their race or races as "Black, African Am., or Negro," or wrote in entries such as African American, Afro American, Nigerian, or Haitian.

"American Indian and Alaska Native" refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment. It includes people who indicated their race or races by marking this category or writing in their principal or enrolled tribe, such as Rosebud Sioux, Chippewa, or Navajo.

"Asian" refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent. It includes people who indicated their race or races as "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," or "Other Asian," or wrote in entries such as Burmese, Hmong, Pakistani, or Thai.

"Native Hawaiian and Other Pacific Islander" refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicated their race or races as "Native Hawaiian," "Guamanian or Chamorro," "Samoan," or "Other Pacific Islander," or wrote in entries such as Tahitian, Mariana Islander, or Chuukese. (For purposes of this report "Asian" includes those of "Native Hawaiian and Other Pacific Islander" descent)

"Populations of Color," also includes persons of Hispanic and non-Hispanic ethnicity using the following definition.

"Hispanic or Latino" refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin" can be used in addition to "Hispanic or Latino"

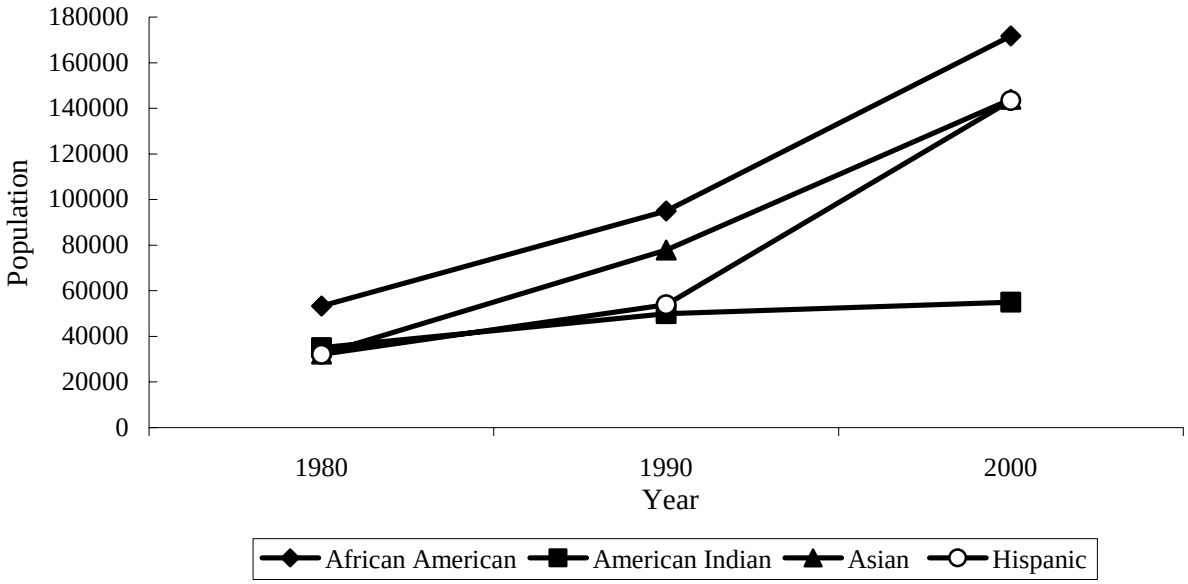
[iv] Minnesota Department of Health, 1987. *Minority Populations in Minnesota: A Health Status Report*. St. Paul, MN.
[v] Minnesota Department of Health, 1997. *Populations of Color in Minnesota: A Health Status Report*. St. Paul, MN.

Summary of Findings

Chapter I – Demographic Profile

In 2000, Populations of Color[i] represented 10.6 percent of the total population in Minnesota as compared to 5.6 percent in 1990. By 2025, it is estimated that non-White population will represent 17 percent of the State's population.

Growth Trends Among Populations of Color: Minnesota, 1980-2000



Source: Bureau of Census, Census 2000

In 1990, 63 percent of Asians and 16 percent of Hispanics in Minnesota came to the U.S. as immigrants or refugees. By 2000, 69.0 percent of Asians and 40.6 percent of Hispanics in Minnesota were identified as immigrants or refugees. More than 80 percent of Asians and 66 percent of Hispanics speak a language other than English at home.

Populations of Color remain younger than the White population. Well over one-third of each racial/ethnic group were children under the age of 18 compared to about one-fourth of the White Population. On the other hand, less than 5 percent of Populations of Color (ranging from 2.2 percent of the Hispanic population to as high as 4.1 percent of American Indians) were age 65 and older compared to 13 percent of the White population.

More African American and American Indian children lived in single-parent families in 2000 compared to a decade ago but the trend is opposite in Asian and Hispanic families. 83.8 percent of Asian children continue to live in married-couple families surpassing even White population (82.7%) by 2000.

Chapter II - Birth-related Health Indicators

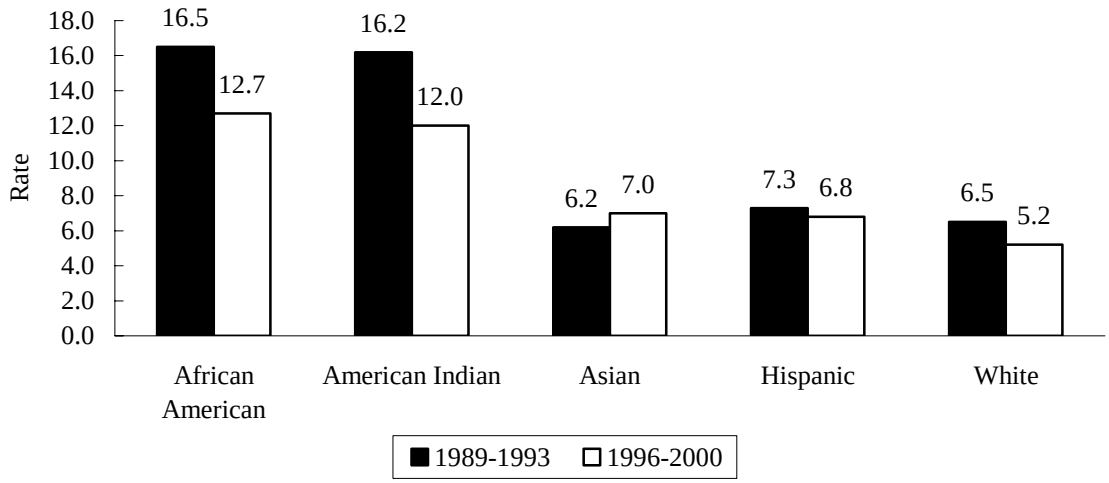
Birth Rate per 1,000 females 15-19 by Race/Ethnicity: Minnesota

	1989-1993	1997-2001	Percent Change in Rate
African American	156.9	84.5	-46.1
American Indian	131.9	91.5	-30.6
Asian	63.3	52.1	-17.7
Hispanic	93.8	92.2	-1.7
White	29.9	23.8	-20.4

Source: Minnesota Department of Health, Center for Health Statistics and the U.S. Bureau of Census

Teen births rates have decreased dramatically for all groups from 1989-1993 to 1997-2001. The African American rate decreased by 46.1 percent and the American Indian rate by 30.6 percent. Birth rates also decreased for Asian (17.7%) and Hispanic (1.7%) teens. However, Teens of Color were two to four times more likely to give birth as compared to White teens in 1997-2001.

Infant Deaths per 1,000 births in Minnesota by Race and Ethnicity: 1989-1993 and 1996-2000



Source: Minnesota Department of Health, Center for Health Statistics

Adequacy of prenatal care takes into account when prenatal care began and the number of prenatal care visits during pregnancy. Though the percent of African American, American Indian and Asian women who received adequate or intensive prenatal care has increased by over 10 percentage points and the disparity has narrowed, the percent receiving adequate or intensive prenatal care is still very low compared to Whites.

Low birth weight is often associated with poor birth outcomes including infant mortality. Overall, the disparities in low birth weight babies compared to Whites have remained small for all the racial/ethnic groups except for African Americans. From 1990 to 2000, the percent of singleton babies born low birth weight for all other racial/ethnic groups ranged from 4.6 to 8.1

percent while the percent of African American low birth weight babies was between 11.1 and 14.6 percent. Similar to national statistics, African American babies born in Minnesota are more than two times as likely to be born low birth weight than White babies.

In Minnesota, the **infant mortality rates** for African Americans and American Indians have decreased from 16.5 and 16.2 in 1989-1993 to 12.7 and 12.0 respectively in 1996-2000. There was also a slight decrease in the Hispanic infant mortality rate for the same time periods while the White rate decreased from 6.5 to 5.2. Only the Asian infant mortality rate increased from 6.2 to 7.0. The disparities between African Americans and American Indians as compared to Whites are considerable but have narrowed. Despite the decreases in the disparities in infant mortality rates, American Indian and African American infant mortality rates are still two times higher than the White rate.

Chapter III - Mortality and Causes of Death

People of Color who died during the period 1997-2001 were on average much younger than Whites who died. Data indicates that 14.8 percent of all Hispanics and 10.5 percent of all African American deaths were deaths to those under age 15 years of age. Percent of total deaths for those under 65 years of age is 2-3 times higher for each Population of Color as compared to Whites.

Overall Age-Specific Mortality Rate Comparison

	Mortality Rate		
Age Group:	1989 - 1993	1997 - 2001	% Change
1-14 Years	24.0	19.3	-19.5%
15-24 Years	75.4	60.2	-20.2%
25-44 Years	112.2	104.3	-7.0%
45-64 Years	606.8	471.1	-22.4%
65 Years or Older	4995.3	5030.1	0.7%

Mortality rate is expressed per 100,000 population.
Source: Minnesota Department of Health, Center for Health Statistics

Age-specific mortality figures indicate that in 1997-2001 for those in the 25-44 year age range, there were 190.7 African American and 352.8 American Indian deaths per 100,000 as compared to 98.1 per 100,0000 for Whites. Disparity ratios for age-specific mortality rates for African Americans and American Indians were most pronounced in the 15-24 and 25-44 year age ranges. Asian and Hispanic age-specific mortality rates were most often lower than Whites.

Leading causes of death among children 1-14 years old was unintentional injury for all racial/ethnic groups. An examination of the data by race/ethnicity indicates that unintentional injury is highest among Asians for this cause of death. Overall death rates were highest among American Indians and lowest among Whites in this age group.

Among 15-24 year olds, mortality rates were higher among American Indians, African Americans, and Hispanics as compared to Whites. The leading causes of death differed by racial/ethnic group and by gender. The leading cause of death for African American males in this age group was homicide, while the leading cause of death for males of all other racial/ethnic groups was unintentional injury.

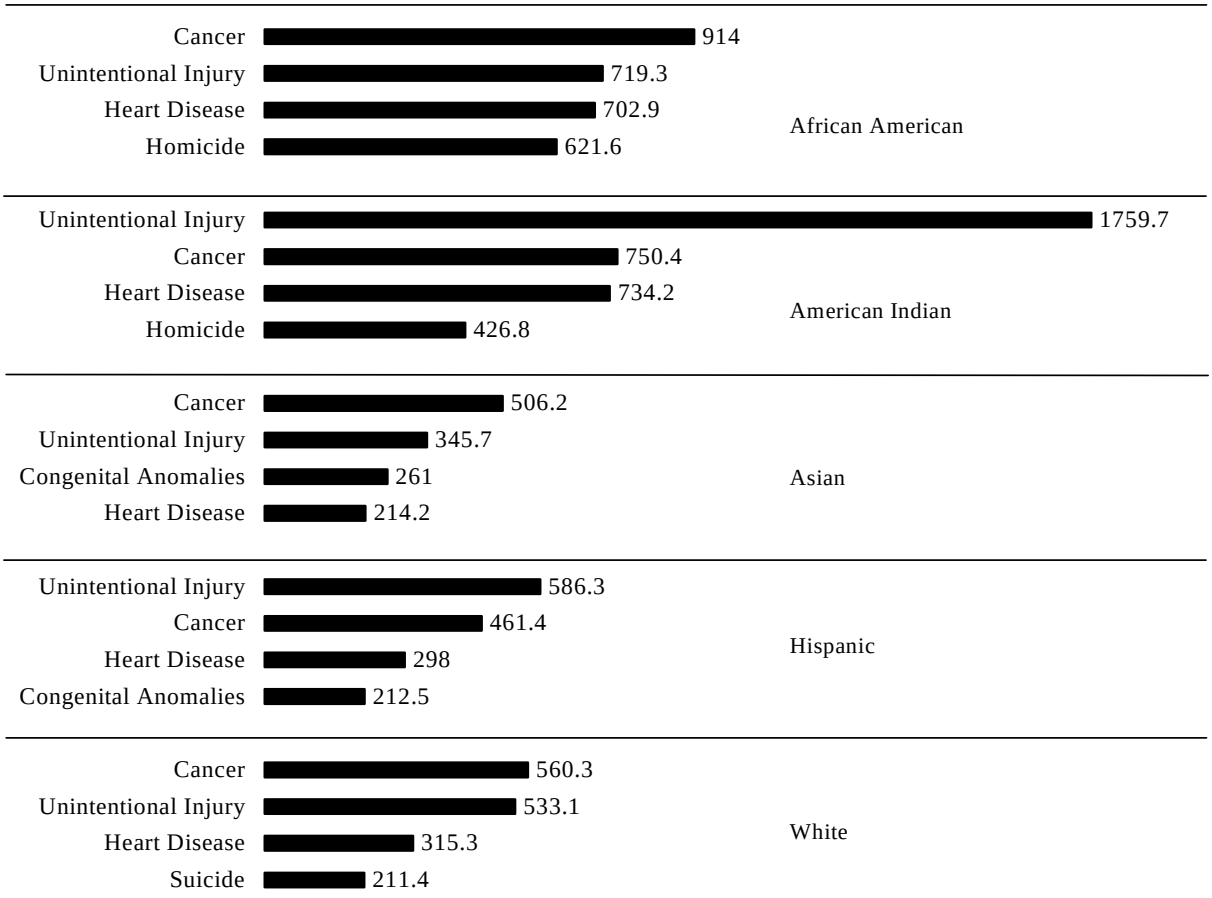
In the 25-44 year age group, mortality rates for African Americans and American Indians were higher than Whites. Compared to previous years reporting, disparities among Populations of Color and Whites have improved for all groups other than American Indians. Mortality rates in this age group also indicate that there were gender differences within racial/ethnic groups. For American Indian males, the rate of death due to unintentional injury was almost three times that of any other racial/ethnic group.

In the 45-64 year age group, mortality rates for African American and American Indians were higher than Whites. Cancer was the leading cause of death among 45-64 year-old females of all racial/ethnic groups. The rate of cancer deaths for White women in this age group was higher than that of Asians and Hispanics.

In the 65 years and older group, heart disease was the leading cause of death among American Indians, Hispanics, and Whites. Cancer was the leading cause of death for African Americans and Asians. Cancer mortality rates are higher among African Americans and American Indians. Mortality rates due to strokes are most prevalent among African Americans and Whites.

Cause specific age-adjusted mortality rates indicate some differences in the cause of death by race/ethnicity. Among the four leading causes of death (cancer, chronic obstructive pulmonary disease, heart disease, and stroke), the disparities between Populations of Color and Whites are small. Greater disparities exist between American Indians and Whites for deaths due to cirrhosis, diabetes, homicide, suicide and unintentional injury; among the African American group greater disparities exist for diabetes, homicide and AIDS/HIV; among Hispanics greater disparities exist in deaths due to cirrhosis, diabetes, homicide and AIDS/HIV. Asian rates were more consistent with White rates.

Causes of Death and Potential Life Lost (YPLL) Rate per 100,000
Minnesota, 1997-2001



Premature death rates as measured by YPLL (Years of Potential Life Lost) declined from the previous reporting period for each racial/ethnic group. Once again, disparities in premature death exist among American Indians and African Americans as compared to rates for Whites. Asians and Hispanics had premature death rates that were fairly close to that of the White population. Unintentional injury was the leading cause of premature death for American Indians and Hispanics; for African Americans, Asians and Whites it was cancer.

Chapter IV - Illness and Injury

For 1996-2000, overall *cancer incidence* rates were highest among African American males, about 28 percent higher than White men. The overall cancer incidence rate was similar between African American and White women, Asian women had the lowest overall cancer incidence rates for the years 1996-2000. Incidence rates for other cancers varied, with African American and American Indian males experiencing high rates of lung and bronchus and colorectal cancers.

Though White women experienced the greatest risk for being diagnosed with breast cancer, African American women were at greatest risk of dying from this disease.

Cancer Incidence in Minnesota, 1996-2000
Rates per 100,000 population

All Sites			
	All	Male	Female
White	459.3	538.9	407.2
African American	518.2	689.3	394.5
American Indian	398.0	528.5	309.7
Asian/Pacific Islander	275.2	302.0	259.0
All Races	464.8	547.3	410.4

Source: Minnesota Cancer Surveillance System

In 2002, Whites and African Americans (including U.S. and African born) accounted for approximately 40% of new *HIV* infections, even though African Americans account for only 4% of the general population. AIDS is a significant problem for some foreign born populations. Although AIDS cases have declined or remained stable for most racial/ethnic groups, cases have actually increased over 200% among African born persons.

Rates of *chlamydia and gonorrhea* were higher among all Populations of Color and American Indians as compared to Whites, in some cases these rates are significantly higher. Syphilis rates were also elevated among African Americans, almost 5 times that of the White population.

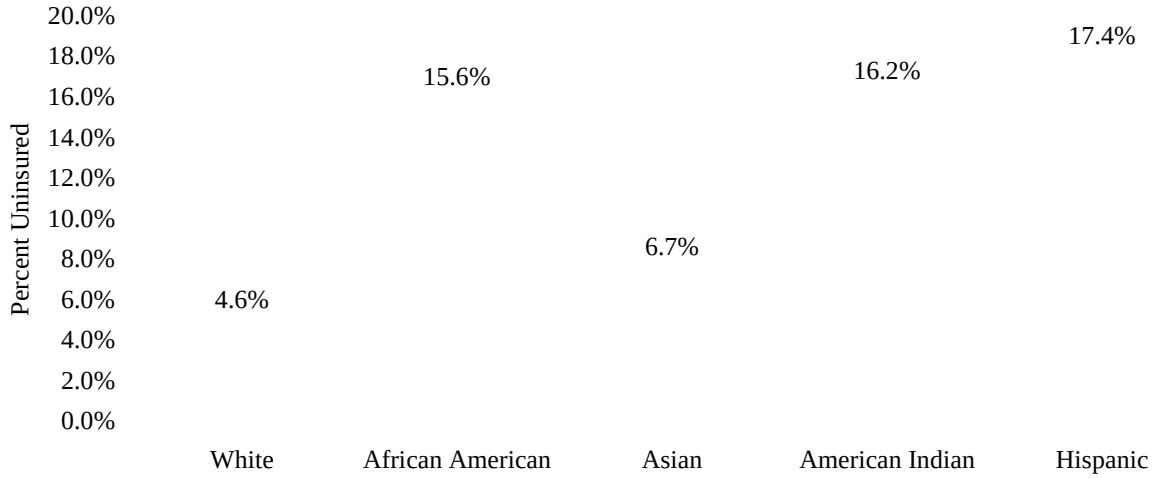
Tuberculosis rates among the foreign-born population has increased significantly and continuing disparities exist between other Populations of Color and Whites. Since 1993-1997, figures indicate that African Americans and Hispanics represent a greater percent of the total new cases than other racial/ethnic groups.

Incidence rates of *traumatic brain injuries (TBI) and spinal cord injuries (SCI)* vary among different racial groups. Current figures indicate that the rates of TBI and SCI for Populations of Color and American Indians were all higher than the White rate.

Minnesota Student Survey results were used to report both on students' propensity toward *violence* and in *violent acts* perpetrated against them by others. In 2001, the percent of boys and girls who reported hitting or beating up someone in the past 12 months had declined among all racial ethnic groups yet there were some significant differences among racial/ethnic groups. Some groups reported that they had hit or beat up someone twice as often as Whites. The percent of girls being hit declined from the previous year of reporting, but had increased greatly from 1995 figures. Figures for boys were more consistent over previous reporting years.

Students from each Population of Color were more likely to report that they had *attempted suicide,* according to the most recent Minnesota Student Survey. Thirteen percent (13.4%), of American Indian boys and 22% of American Indian girls in 6th, 9th and 12th grade reported that they had ever attempted suicide.

Percent of Uninsured by Race (All Ages): Minnesota, 2001

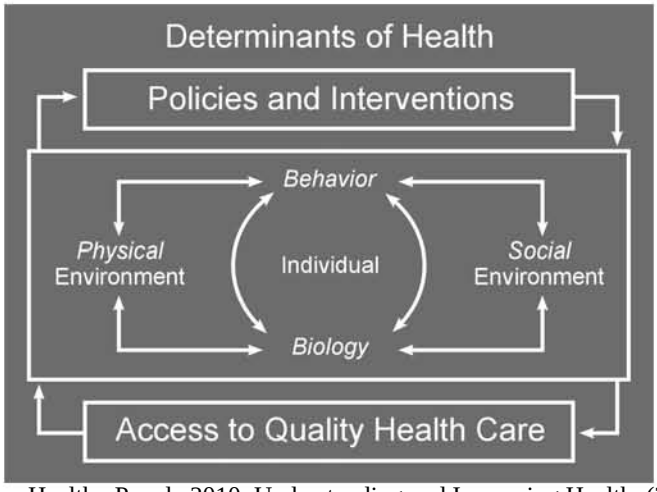


Source: 2001 MN Health Access Survey, MDH Health Economics Program

Rates of uninsured vary widely across racial and ethnic groups. African Americans, American Indians, and Hispanic/Latinos were up to four times less likely to be insured as compared to Whites. About 4.4 percent of all Minnesota children, or 57,000 children under the age of 18, lacked health insurance.

Immunization rates for 2001 indicate that compared to 1996, overall immunization had increased at each age point. Current figures indicate that this did not hold true for Populations of Color. These groups had lower immunization rates at each target age group as compared to White rates.

Chapter V – Socioeconomic Profile



Source: Healthy People 2010: Understanding and Improving Health. (2000)

Social and economic factors have an effect on the health of a population. There are many "determinants of health", including access to health care, quality of health care, physical and

social environment, and individual behaviors. Undesirable health determinants can expose individuals to lower health quality, illness, or premature death. An understanding of these determinants of health would enable us to understand the issues affecting the Populations of Color in Minnesota.

There are many signs of economic distress among Populations of Color and American Indians in Minnesota. Though poverty rates have declined from previous years reports, disparities still exist. Poverty rates for adults and children among Populations of Color and American Indians continue to be three to four times that of Whites.

Whites in Minnesota continue to earn almost twice as much income than Populations of Color and American Indians, though per capita income has increased for all groups.

Unemployment rates have declined among all racial groups from previous reports, yet unemployment rates are still higher for Populations of Color and American Indians.

Over twice as many African American, American Indian, and Asians and four times as many Hispanics reported earning less than a high school degree as compared to Whites.

Populations of Color were much less likely to own their own homes and were more likely to devote excessive portions of their income to housing. They were also more likely to have no vehicles at their disposal and to have no telephone in their home.

Chapter VI - Data Sources Overview

Several data sources were utilized for this version of the *Populations of Color Health Status Report.* These include data from Minnesota vital statistics (birth and death data), state surveillance systems, Minnesota Student Survey, Minnesota Retrospective Kindergarten Survey, and special studies. This section provides a description of these data sets as well as discussion of limitations including limitations specific to race and ethnicity.

[i] While the American Indians are included in the "Populations of Color," group throughout this report, it is important for the reader to recognize that Indian tribes hold a political and legal status that is unique from other racial/ethnic groups.

Chapter I

Demographic Profile

Introduction

U.S. Census data indicates a change in Minnesota's population landscape, now more reflective of the greater diversity that is apparent in other parts of the country. Minnesota now includes the largest Somali immigrant population and second highest Hmong population of all states. Yet, Minnesota remains predominantly White as compared to other states. In 1990, Minnesota had the 8th largest percentage of Whites as a population among all states. In 2000, Minnesota had the 12th largest percentage of Whites (89.4 percent of the population indicated White as a race in the 2000 census). This change is attributable to growing Populations of Color in the state. This chapter includes a bridging method for reporting race of the population, examines current population data, and the changing demographics in Minnesota.

In this report, "Asian" includes Asian, Native Hawaiian and other Pacific Islander population, unless otherwise noted. Similarly, "Hispanic" is used for people of Hispanic origin (any race) and "African American" includes U.S. born and foreign born African Americans. "American Indians" includes American Indians and Alaska Natives.

Census 2000 Bridging

Prior to 1997, the U.S. Census Bureau used the 1977 Federal Statistical Policy Directive 15, "Race and Ethnic Standards for Federal Statistics and Administrative Reporting" for collecting and presenting race and ethnicity data. Races were reported in four single-race categories: White, Black, American Indian or Alaska Native and Asian or Pacific Islander.

In 1997, race and ethnicity data were collected using the "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity". Based on this revision, the 2000 U.S. Census collected race and ethnicity data on five race categories: White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. This revision also enabled respondents to select multiple race classification when responding to their racial identity. The change in the reporting and addition of multiple races make comparison to previous years' population difficult. The same is true when comparing rates by race using Census data in the denominator.

In order to make rates more comparable, the National Center for Health Statistics along with the U.S. Census Bureau developed bridged resident population estimates for 2000 and 2001 based on the Census 2000 counts. Bridged resident population estimates are available at http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm. *This report is consistent with the Minnesota Department of Health Center for Health Statistics and uses these bridged population data to compute incidence and mortality rates.* Table 1-2 provides a summary of the bridged-race data for Minnesota.

Table 1-1.
Summary of Bridged-Race Data: Minnesota, 2000

Minnesota and Hispanic Origin	Single race[1]	Bridged race[2]
African American	171,731	195,026
American Indian	54,967	62,673
Asian	143,947	155,206
White	4,400,282	4,506,574

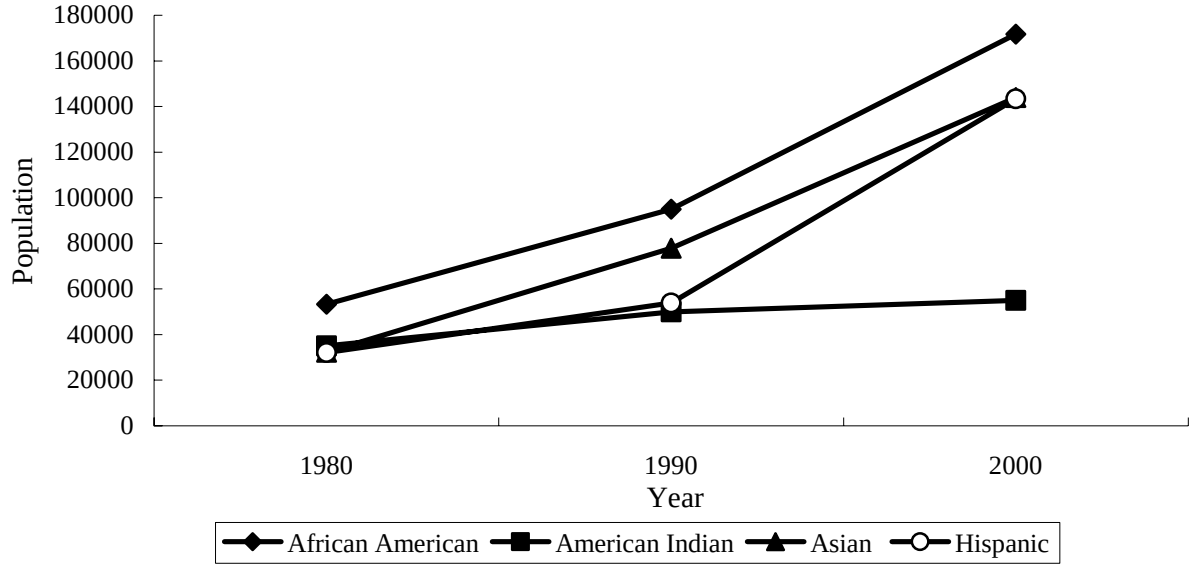
Source: U.S. Bureau of Census

[1] Number of persons in Census 2000 who reported only a single race. E.g. Number of persons in Census 2000 who reported Black or African American as their only race
[2] Bridged-race count. e.g. Black or African American bridged-race count

Population

Non-White populations in the state of Minnesota have grown rapidly in the past 20 years. By 2000, these groups represented 10.6 percent of the state population or more than 520,000 people. Between 1980-2000, Asians and Hispanics were the two fastest growing groups (Table 1-1). Hispanics were the fastest growing population between 1990-2000 (Figure 1-1). If the current trend continues, people of Hispanic origin would soon become the second largest Population of Color group in the state, surpassing Asians.

Figure 1-1. Growth Trend Among Populations Of Color: Minnesota, 1980-2000



Source: Bureau of Census, Census 2000

Table 1-2.
Minnesota Population Change: 1980-2000

Racial/Ethnic Group	1980 Census	1990 Census	2000 Census[1]	1980-2000 percent change
African American	53,344	94,944	171,731	221.9 %
American Indian	35,016	49,909	54,967	57.0 %
Asian	32,226	77,886	143,947	346.7 %
Hispanic	32,123	53,884	143,382	346.4 %
White	3,935,770	4,130,395	4,400,282	11.8 %
Total Population [2]	4,075,970	4,375,099	4,919,479	20.7 %

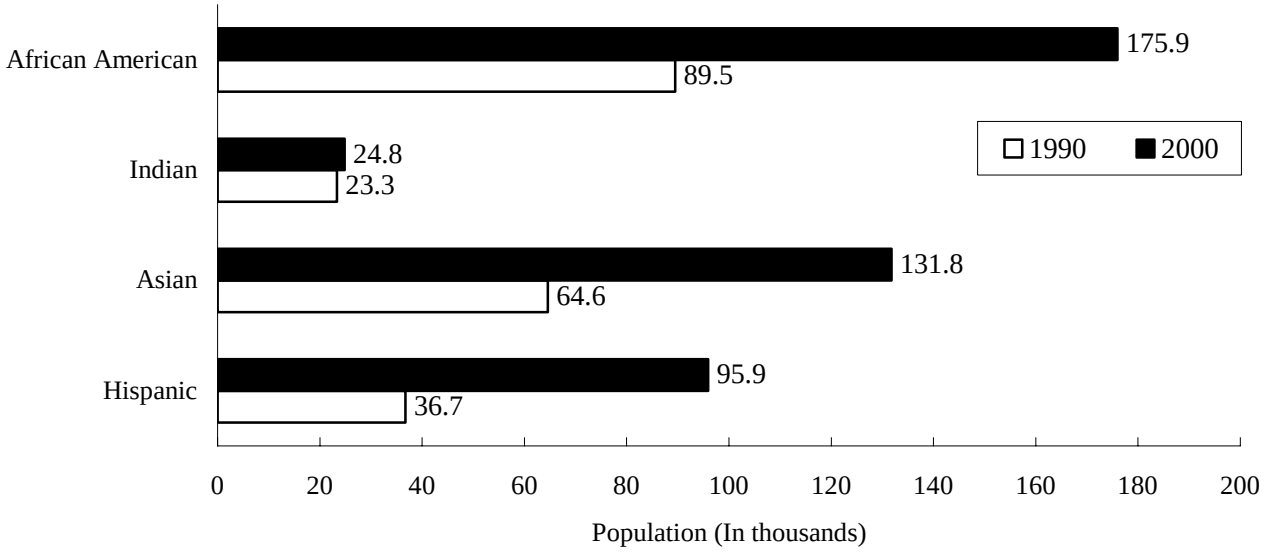
Source: U.S. Bureau of Census

[1] The population base for 2000 Census data is from Census 2000 Summary File 1 (SF 1) 100-Percent Data using the "race alone."
[2] The population count for each racial/ethnic group does not add up to "Total Population" because Hispanic, who can be of any race, are counted in the racial groups and because "Some other race alone" and "Two or more races" categories are excluded from the table.

Geographic Distribution

Populations of Color tend to live in large metropolitan areas due to the availability of housing, jobs and schools. The same trend is seen here in Minnesota where most tend to live in the Twin Cities Metro Area. However, Populations of Color are also growing in other parts of the state. Figures 1-2 and 1-3 show the changing Population of Color landscape in the Twin Cities Metro Area and outside the Metro Area. Between 1990 and 2000, the Hispanic population in the Twin Cities Metro Area has increased by 161.2 percent, Asians 104.0 percent, African Americans by 96.7 percent while the American Indian population has increased by 6.3 percent.

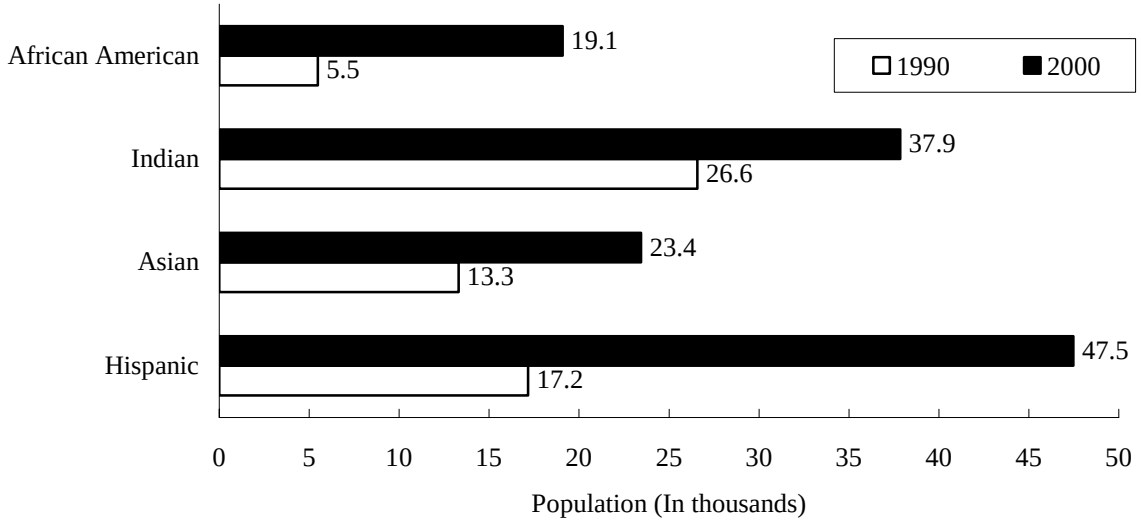
Figure 1-2. Population Change Twin Cities Metro Area: Minnesota, 1990-2000



Source: U.S. Bureau of Census, Census 1990 and 2000

Outside the metro area, African Americans increased by about 248 percent, Hispanics 177 percent, Asians by 76 percent and American Indians by 43 percent.

Figure 1-3. Population Change Outside Twin Cities Metro Area: Minnesota, 1990-2000



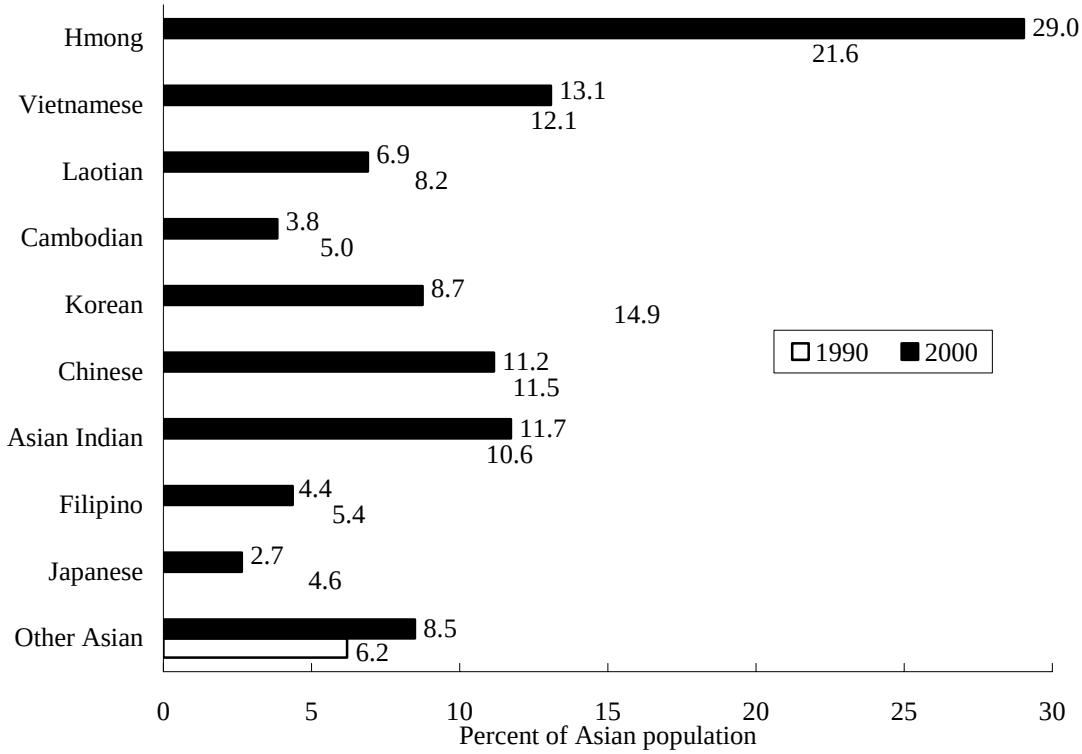
Source: U.S. Bureau of Census, Census 1990 and 2000

Cultures and Nations

Census data has provided some interesting information about the different cultural and national origins of Populations of Color in Minnesota. It should be noted that not only are there differences between the major groups (e.g. Asians and African-Americans) but there are significant differences between subpopulations (e.g. Southeast Asians and East Asians). For example, there are substantial differences in poverty rates between Southeast Asians and other Asian groups, which will be covered in Chapter 5.

The composition of the Asian population in Minnesota has changed slightly between 1990 and 2000 (Figure 1-4). The Hmong population continues to be the largest Asian population in the state representing about 29 percent of total Asian population, an increase of about 34 percent. The Vietnamese population has also increased to 13.1 percent and Asian Indians to 11.7 percent, the second and third largest Asian groups in the state. Other major Asian populations have decreased including Chinese (11.2% in 2000), Koreans (8.7%), Laotian (6.9%), Filipino (4.4%), and Japanese (2.7%). Southeast Asians (Hmong, Vietnamese, Cambodian, Laotian, Filipino) now make up more than half (57%) of the Asian population in Minnesota.

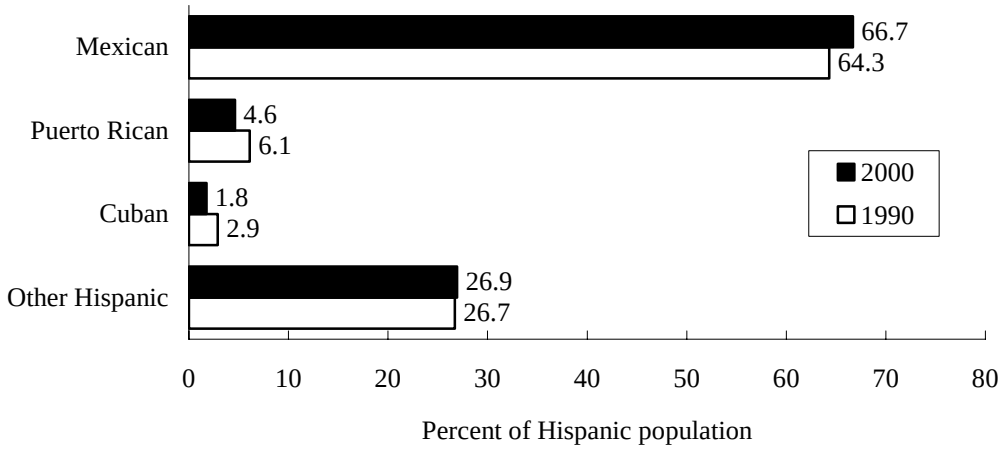
Figure 1-4. National Origins of Asians: Minnesota, 1990-2000



Source: Bureau of Census, Census 2000

The composition of the Hispanic population in Minnesota has remained stable (Figure 1-5). Census 2000 data shows that Mexicans continue to be the largest Hispanic population in the state increasing by 3.7 percent to 66.7 percent of the Hispanic population. Puerto Ricans now consist of 4.6 percent of the Hispanic population and Cubans 1.8 percent.

Figure 1-5. National Origins of Hispanics: Minnesota, 1990-2000



Source: Bureau of Census, Census 2000

Immigration and Migration

In Minnesota, about 5 percent of the state's population are born outside the United States and Puerto Rico (Table 1-3). Looking at the different racial/ethnic groups, 69.0 percent of Asians living in Minnesota in 2000 were foreign-born as were 40.6 percent of Hispanics.

Table 1-3.
Immigrants Living in Minnesota, 2000

Racial/Ethnic Group:	Population[1]	Number Foreign-born	Percent Foreign-born
African American	167,857	29,457	17.5 %
American Indian	54,568	1,529	2.8 %
Asian	140,969	97,279	69.0 %
Hispanic	141,786	57,573	40.6 %
White	4,402,124	84,883	1.9 %
Total Population[2]	4,919,479	260,463	5.3 %

Source: U.S. Bureau of Census, Census 2000

[1] The population base is extrapolated from sample data (Census 2000 SF-3) and therefore differs from the real count.
[2] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

Language

In Minnesota, more than 80 percent of Asians and 66.7 percent of Hispanics over the age of five speak a language other than English at home (Table 1-4). Among the Asian population, 44.6 percent reported speaking a language other than English and not speaking English "very well".

This is a small change from the 1990 census data where 46 percent reported speaking a language other than English at home and not speaking English "very well".

However, in 2000, census data indicates that there were more Hispanics (38.1%) who spoke a language other than English at home and did not speak English "very well" as compared to 16.5 percent in 1990.

Table 1-4.
Languages Other Than English Spoken at Home: Minnesota, 2000

		Speak language other than English at home		Speak language other than English and do not speak English "very well"	
Racial/Ethnic group	Population[1] (5 Yrs and older)	Number	Percent	Number	Percent
African American	150,905	27,507	18.2 %	12,158	8.1 %
American Indian	49,433	6,693	13.5 %	1,603	3.2 %
Asian	127,373	104,181	81.8 %	56,862	44.6 %
Hispanic	123,105	82,103	66.7 %	46,906	38.1 %
White	4,133,793	189,071	4.6 %	61,358	1.5 %
Total Population[2]	4,591,491	389,988	8.5 %	167,511	3.6 %

Source: U.S. Bureau of Census, Census 2000

[1] The population base is extrapolated from sample data (Census 2000 SF-3) and therefore differs from the real count.
[2] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

Age Distribution

Populations of Color remain younger than the White population in Minnesota (Table 1-5). For each of the racial/ethnic groups, well over one-third of the population were children under the age of 18. About one-fourth of the White population fits this category. The percentage of people over the age of 65 is also lower among the different racial/ethnic groups (lower than 5%) compared to 13.1 percent in the White population.

Table 1-5.
Age Distribution: Minnesota, 2000

		Children Under 18		Persons 65 and older	
Racial/Ethnic group	Population	Number	Percent	Number	Percent
African American	171,731	64,308	37.4%	5,560	3.2%
American Indian	54,967	20,607	37.5%	2,251	4.1%
Asian	143,947	54,397	37.8%	5,181	3.6%
Hispanic	143,382	55,640	38.8%	3,103	2.2%
White	4,400,282	1,079,278	24.5%	577,959	13.1%
Total Population[1]	4,919,479	1,286,894	26.2%	594,266	12.1%

Source: U.S. Bureau of Census, Census 2000

[1] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

Families with Children

In 2000, Asian (82.6%) and White (79.9%) families with children were more often headed by married couples as compared to African Americans (41.1%), American Indians (42.1%), and Hispanics (66.6%). From 1990 to 2000, there were mixed trends among the different racial/ethnic groups in the percentage of families with children that were headed by married couples (Table 1-6). In 2000, increases in the percent of African American (2.6%) and American Indian (1.6%) families with their own children headed by married couples increased more than Asian (0.8%) and Hispanics (0.4%). Additionally in 2000, the percent of White families with their own children headed by married couples actually decreased 3.3 percent from 1990 figures.

Table 1-6.
Changes in Married Couple Families With Children Under 18: Minnesota, 1990-2000

	Families with own children		Families with own children headed by married couple		Married-couple families as percent of families with own children		Change in percentage points
Racial/ethnic group	1990	2000	1990	2000	1990	2000	1990-2000
African American	14,652	26,975	5,644	11,093	38.5%	41.1%	2.6
American Indian	7,381	7,635	2,992	3,216	40.5%	42.1%	1.6
Asian	9,742	18,651	7,968	15,408	81.8%	82.6%	0.8
Hispanic	6,075	18,610	4,023	12,402	66.2%	66.6%	0.4
White	543,605	564,883	452,321	451,388	83.2%	79.9%	-3.3
Total Population[1]	578,281	636,324	470,811	492,419	81.4%	77.4%	-4.0

Source: U.S. Bureau of Census, Census 2000

[1] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

ENDNOTES

1. Faces of the future: Minnesota population projections 1995-2025. Minnesota planning state demographic center. Available at: http://www.demography.state.mn.us/

2. National Center for Health Statistics: Bridged-Race 2000 and 2001 Population Estimates. Available at: http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm

Chapter II

Birth-Related Health Indicators

Introduction

The birth of a baby is a major milestone for a family and community. Tracking the health of the mother and infant before and after birth is crucial to understanding and improving birth outcomes. This section provides a general description of births in Minnesota by age and race/ethnicity of mother. This section also compares sentinel birth indicators such as prenatal care and birth weight by race/ethnicity of the mother. These data are gathered from birth certificates of Minnesota residents born between 1989-1993 and 1997-2001.

Births by Race and Hispanic Origin

For some Populations of Color, the number of births has increased tremendously over the years. From 1989-1993 to1997-2001, the percent change in births was 172.8 for Hispanics, 46.8 for African Americans and 44.8 for Asians. The number of births decreased slightly for Whites and American Indians. It should be noted that the increase in Hispanic births might be partially attributed to better reporting between the two time periods.

Table 2-1.
Births by Race and Hispanic Origin in Minnesota: 1989-1993 and 1997-2001

	1989-1993		1997-2001		Percent Change
	Number	Percent	Number	Percent	
Race:					
African American	13,493	4.1	19,807	6.0	46.8
American Indian	6,368	1.9	5,941	1.8	-6.7
Asian	11,051	3.3	15,997	4.9	44.8
White	300,134	90.2	284,696	86.3	-5.1
Other/Unknown	1,703	0.5	3,278	1.0	92.5
Total	332,749	100.0	329,719	100.0	-0.9
Hispanic Origin:					
Hispanic	6,306	1.9	17,204	5.2	172.8
Non-Hispanic*	326,443	98.1	312,515	94.8	-4.3
Total	332,749	100.0	329,719	100.0	-0.9

Source: Minnesota Department of Health, Center for Health Statistics
*In Hispanic Origin the number of unknowns decreased by almost 50% between these two time periods (from 25,539 in 1989-1993 to 13,543 in 1997-2001).

The fertility rate is the total number of births in a population divided by the number of women of reproductive age (15-44 years) in the same population. Between 1989-1993 and 1997-2001, the fertility rate increased only for Hispanics. The birth rate is total births in a population over the total population. Like fertility rates, birth rates decreased for all racial and ethnic groups except Hispanics.

Table 2-2.
Fertility Rate by Race/Ethnicity: Minnesota 1989-1993 and 1997-2001

	1989-1993	1997-2001	Percent Change
African American	111.2	83.5	-24.9
American Indian	100.8	78.5	-22.1
Asian	107.2	78.7	-26.6
White	61.5	58.1	-5.5
Hispanic	91.3	100.4	9.9

Source: Minnesota Department of Health, Center for Health Statistics and the U.S. Bureau of Census

Table 2-3.
Birth Rate by Race/Ethnicity: Minnesota 1989-1993 and 1997-2001

	1989-1993	1997-2001	Percent Change
African American	27.0	20.3	-24.7
American Indian	24.4	19.0	-22.4
Asian	26.3	20.6	-21.8
White	14.3	12.6	-11.7
Hispanic	22.2	24.0	8.0

Source: Minnesota Department of Health, Center for Health Statistics and the U.S. Bureau of Census

Births to Foreign Born Mothers Increasing

Minnesota has experienced a great influx of immigrants and refugees from Africa, Asia and Latin America. There has also been a considerable increase in the number of births to foreign born mothers. The number of African American and Hispanic foreign born mothers giving birth in Minnesota has more than quadrupled from 1989-1993 to 1997-2001. In addition, the proportion of births to foreign born women among African Americans and Hispanics has increased. In 1997-2001, 31 percent of African American women and 67.4 percent of Hispanic women giving birth were foreign born an increase from 7.8 and 37.1 percent respectively in 1989-1993. Although the percent of Asian women giving birth that are foreign born has decreased slightly, foreign born Asian women make up the majority (90.0%) of Asian mothers in Minnesota.

Table 2-4.
Number of Births to Foreign Born Women By Race/Ethnicity in Minnesota: 1989-1993 and 1997-2001

	1989-1993	1997-2001	Percent Change
African American	1,048	6,103	482.3
Asian	10,610	14,353	35.3
Hispanic	2,334	11,574	395.9
White	8,895	18,123	103.7

Source: Minnesota Department of Health, Center for Health Statistics

Table 2-5.
Percent of Total Births to Foreign Born African American, Asian and Hispanic Women in Minnesota: 1989-1993 and 1997-2001

	African American	Asian	Hispanic	White
1989-1993	7.8	96.3	37.1	3.0
1997-2001	31.0	90.0	67.4	6.4

Source: Minnesota Department of Health, Center for Health Statistics

Country of Birth for Foreign Born Mothers

While most of foreign born Asian mothers are from Laos, the number of Asian mothers born in Vietnam has nearly doubled and mothers born in Thailand has increased nine-fold. Asian mothers born in India have also increased dramatically (283.8%) between the two time periods.

The composition of African American foreign born mothers has also changed. In 1989-1993 just over half of African American foreign born mothers were from Nigeria (18.7%), Ethiopia (16.5%) and Liberia (15.9%) with only twelve mothers born in Somalia. In 1997-2001, 2,843 (46.6%) of African American foreign born mothers were born in Somalia.

The number of mothers born in Mexico has increased tremendously over the two time periods. In 1989-1993, there were 1,573 Hispanic women born in Mexico who gave birth in Minnesota. In 1997-2001 that number increased almost six times the number to 9,067.

Table 2-6.
Birth Country of Mother by Race

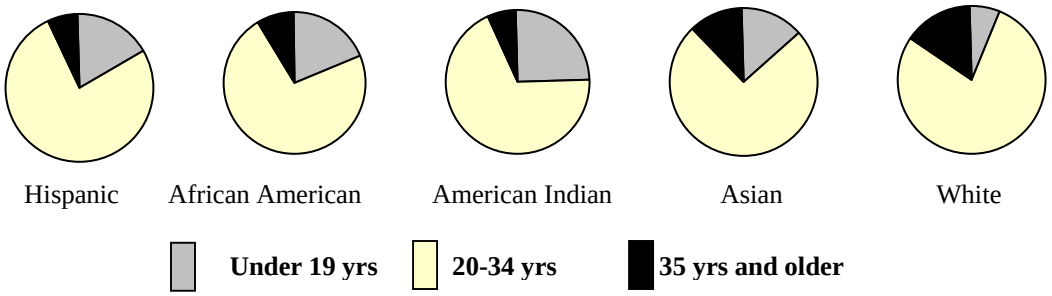
	1989-1993		1997-2001		
Country	**Births**	**Percent**	**Births**	**Percent**	**Births - Percent Change**
Race of Mother: Asian					
Laos	6,131	57.8	5,741	54.1	-6.4
Vietnam	1,050	9.9	1,848	17.4	76.0
Thailand	124	1.2	1,242	11.7	901.6
India	290	2.7	1,113	10.5	238.8
Korea	661	6.2	894	8.4	35.2
Race of Mother: African American					
Somalia	12	1.1	2,843	46.6	23,591.7
Ethiopia	173	16.5	678	11.1	291.9
Liberia	167	15.9	665	10.9	298.2
Nigeria	196	18.7	420	6.9	114.3
Other Africa*	124	11.8	460	7.5	271.0
Ethnicity of Mother: Hispanic					
Mexico	1,573	67.4	9,067	78.3	476.4
El Salvador	55	2.4	523	4.5	850.9
Ecuador	25	1.1	424	3.7	1,596.0
Guatemala	51	2.4	321	2.8	529.4
South America	156	3.7	293	2.5	87.8

Source: Minnesota Department of Health, Center for Health Statistics
*Cameroon, Gambia, Ghana, Guinea, Sierra Leon, Republic of the Congo, South Africa, Uganda, Tanzania and Other

Percent of Births by Age Group

Figure 2.1 shows the percent distribution of births by age within racial and ethnic groups. The light gray shaded areas of the pies are births to 20-34 year olds which represent the majority of births. The total distribution of births by age group is similar among African American, American Indian and Hispanic women with the under 19 year olds having the second highest number of births. For Whites, women aged 35 years and older follow the 20-34 year olds in number of births with a much smaller percentage of under 19 year olds giving birth. For Asian women the under 19 year olds and those 35 years and older have approximately the same number of births which has remained unchanged from one time period to the next.

Figure 2-1.
Percent Distribution of Births by Age and Race/Ethnicity in Minnesota: 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics

Birth Rates by Age of Mother

Overall, births rates among Populations of Color and American Indians are higher than the White population and vary by age group. In 1989-1993, African American 15-19 year olds had the highest birth rate for all ages and all racial and ethnic groups. In 1997-2001 Hispanic women ages 20-34 had the highest birth rate. Birth rates have decreased from 1989-1993 to 1997-2001 for all Asian and American Indian age groups and all African American age groups except the 35-44 year olds, which has essentially remained the same. Birth rates have increased for all 20-34 and 35-44 year old Hispanic and White women.

Very few of total births occur to females under the age of 15. In the time period 1989-1993, 475 of the 339,057 births were to girls under 15 years of age. In 1997-2001, 427 of the 329,719 births were to girls under 15. Because the number of births to girls under 15 is so small, this age group will not be discussed in depth in this publication.

Table 2-7.
Birth Rates in Minnesota by Age Group and Race/Ethnicity:
1989-1993 to 1997-2001

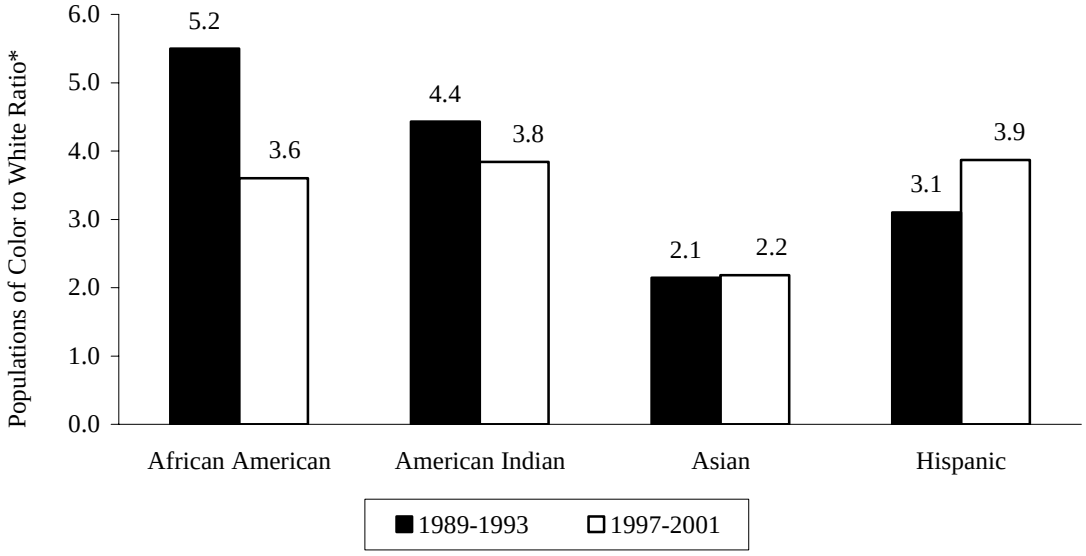
	1989-1993			1997-2001		
	15-19 yrs	20-34 yrs	35-44 yrs	15-19 yrs	20-34 yrs	35-44 yrs
African American	156.9	133.5	24.4	84.5	113.6	24.5
American Indian	131.9	130.8	20.0	91.5	114.9	15.9
Asian	63.3	147.6	54.3	52.1	104.8	38.3
Hispanic	93.8	125.4	22.7	92.2	130.5	29.0
White	29.9	97.8	18.4	23.8	101.3	23.1

Source: Minnesota Department of Health, Center for Health Statistics and the U.S. Bureau of Census

Teen Birth Rates For Populations of Color and American Indians Decreasing

In Minnesota, African American, American Indian, Asian and Hispanic teens give birth at a considerably higher rate than White teens. Figure 2-2 shows the ratio of teen birth rates by race/ethnicity as compared to the White rate. These ratios demonstrate the increased risk of teen births in Populations of Color as compared to Whites. In 1997-2001, teens of color were two to four times more likely to give birth as compared to White teens. These ratios have decreased from 1989-1993 for African Americans and American Indians and increased slightly for Asians and Hispanics.

Figure 2-2. Relative Risk of Teen Births by Race/Ethnicity: Minnesota, 1989-1993 and 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics and the U.S. Bureau of Census
*Relative Risk is teen birth rates of Populations of Color divided by the White teen birth rate

Table 2-8.
Birth Rate per 1,000 females 15-19 by Race/Ethnicity: Minnesota

	1989-1993	1997-2001	Percent Change in Rate
African American	156.9	84.5	-46.1
American Indian	131.9	91.5	-30.6
Asian	63.3	52.1	-17.7
Hispanic	93.8	92.2	-1.7
White	29.9	23.8	-20.4

Source: Minnesota Department of Health, Center for Health Statistics and the U.S. Bureau of Census

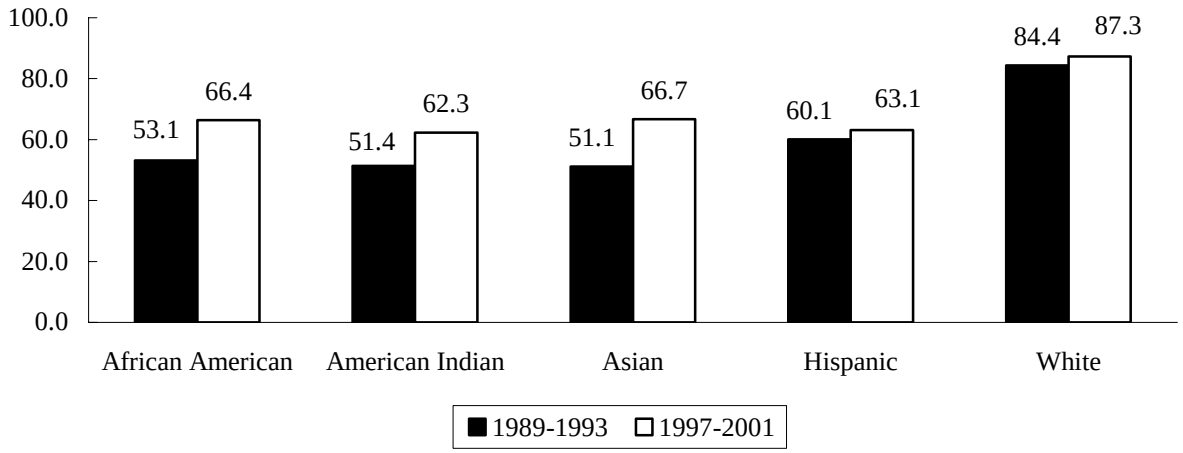
Teen births rates have decreased dramatically for all groups from 1989-1993 to 1997-2001. The African American rate decreased by 46.1 percent and the American Indian rate by 30.6 percent. Birth rates also decreased for Asian (17.7%) and Hispanic (1.7%) teens.

Prenatal Care Received by Trimester

Adequate prenatal care can improve birth outcomes. Both Healthy People 2010 and Healthy Minnesotans 2004 have set the goal for prenatal care to be that 90 percent of all pregnant women will seek prenatal care in the first trimester. While all racial/ethnic groups in Minnesota are making positive strides towards the 90 percent goal, American Indian, African American, Asian and Hispanic women remain well below the goal while the percent of White women receiving prenatal care is nearing it.

From 1989-1993 to 1997-2001, the percent of women receiving prenatal care in the first trimester increased by more than 10 percentage points for African American, Asian and American Indian women while Hispanic and White women each had a three percentage point increase. The disparities between White mothers and other racial/ethnic groups have decreased from 1989-1993 to 1997-2001. In the first time period approximately 33 percent more White women began prenatal care in the first trimester than American Indian, Asian and African American women. In 1997-2001 approximately 23 percent more White women received prenatal care in the first trimester than American Indian, Asian and African American women. The difference between Hispanic and White women who receive prenatal care in the first trimester remained at 24 percent.

Figure 2-3. Percent of Women Receiving Prenatal Care in the First Trimester by Race in Minnesota: 1989-1993 and 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics and the U.S. Bureau of Census

More Women of Color are Women Receiving Adequate Prenatal Care

Adequacy of prenatal care takes into account when prenatal care began and the number of prenatal care visits during pregnancy. Though the percent of African American, American Indian and Asian women who received adequate or intensive prenatal care has increased by over 10 percentage points and the disparity has narrowed, the percent receiving adequate or intensive prenatal care is still very low compared to Whites.

Table 2-9.
Adequacy* of Prenatal Care by Age and Race/Ethnicity in Minnesota: 1989-1993 and 1997-2001**

	1989-1993			1997-2001		
	Intensive or Adequate	Intermediate	Inadequate or No Care	Intensive or Adequate	Intermediate	Inadequate or No Care
African American	47.0	32.9	20.1	57.1	30.5	12.4
American Indian	37.3	35.5	27.2	49.2	33.4	17.4
Asian	43.1	36.3	20.6	57.0	33.2	9.8
Hispanic	51.8	33.5	14.7	54.4	34.4	11.2
White	78.4	18.3	3.3	80.0	16.8	3.2

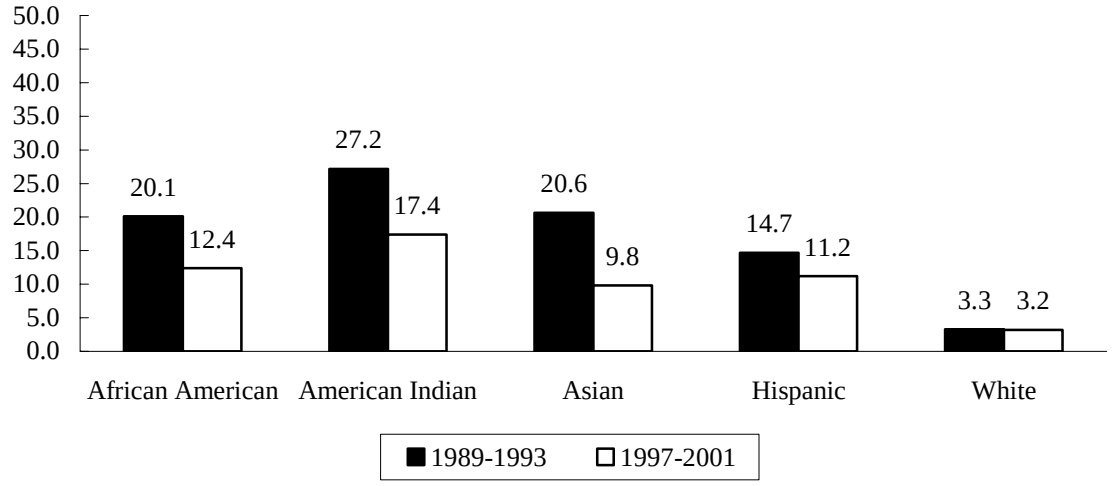
Source: Minnesota Department of Health, Center for Health Statistics

*GINDEX: An index for measuring prenatal care taking into account when prenatal care began and number of visits.

**Information on prenatal care is included on the birth certificate, although there are concerns about the accuracy of the data and about the large number of cases in which complete data is unavailable. For example, in constructing its index of adequacy of care, the Minnesota Department of Health found that data was missing for approximately 23 percent of African American and Asian births for the 1997-2001 time period.

A higher percentage of Women of Color received inadequate or no prenatal care as compared to White women. In 1997-2001, only 3.2 percent of White women giving birth had received inadequate or no prenatal care while the Women of Color figures ranged from 9.8 to 17.4 percent.

Figure 2-4. Percent Receiving Inadequate or No Prenatal Care* by Race and Ethnicity: Minnesota, 1989-1993 and 1997-2001



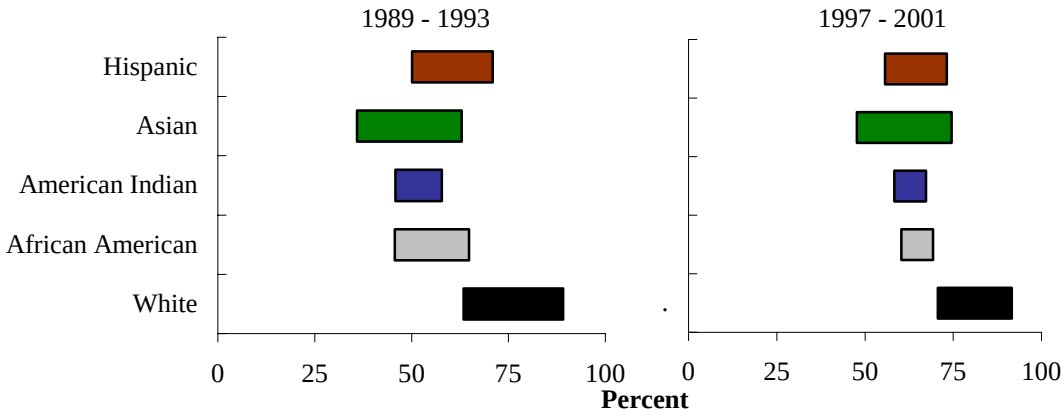
Source: Minnesota Department of Health, Center for Health Statistics
*GINDEX: An index for measuring prenatal care taking into account when prenatal care began and number of visits.

Teens Least Likely to Seek Prenatal Care within Racial and Ethnic Groups

Seeking prenatal care early varies by age. Teenagers are less likely to seek prenatal care in the first trimester than their adult counterparts. This trend does not vary within racial and ethnic groups. For both time periods, pregnant teens were least likely to seek prenatal care in the first trimester than older mothers within each racial and ethnic group. The age group most likely to seek prenatal care varies by racial and ethnic group and by time period.

What is striking is that the White 15-19 year olds are more likely to seek prenatal care than the 30-34 year old American Indian and African American women who are most likely to seek prenatal care in the first trimester within their racial group. Figure 2.5 shows the variation of prenatal care sought in the first trimester by age and racial and ethnic group. For Whites the percent that sought prenatal care in the time period 1997-2001 ranged from 70.6 (15-19 year olds) to 91.6 (30-34 years) with all other age groups in between. For African Americans and American Indians their ranges fell well below that of Whites. African Americans' ranges were 60.3 (15-19 year olds) to 69.3 percent (25-29 year olds) and American Indians' 58.3 (15-19 year olds) to 67.3 percent (30-34 year olds).

Figure 2-5. Percent Range of Women Beginning Prenatal Care in the 1st Trimester by Race and Ethnicity: Minnesota



Percent of Women Receiving Prenatal Care in the 1st Trimester: Low – High Age Range

	1989-1993			1997-2001	
Race/Ethnicity	**Low***	**High****		**Low***	**High****
Hispanic	50.1	70.9		55.7	73.2
Asian	35.9	62.9		47.7	74.5
American Indian	45.7	57.7		58.3	67.3
African American	45.8	64.9		60.3	69.3
White	63.4	89.1		70.6	91.6

Source: Minnesota Department of Health, Center for Health Statistics

* The age group 15-19 was 'Low' for all groups

**Age groups for the 'High' category are: White and Asian 30-34, American Indian 35+ and 30-34, African American 35+ and 25-29, Hispanic 35+.

Prematurity and Low Birth Weight

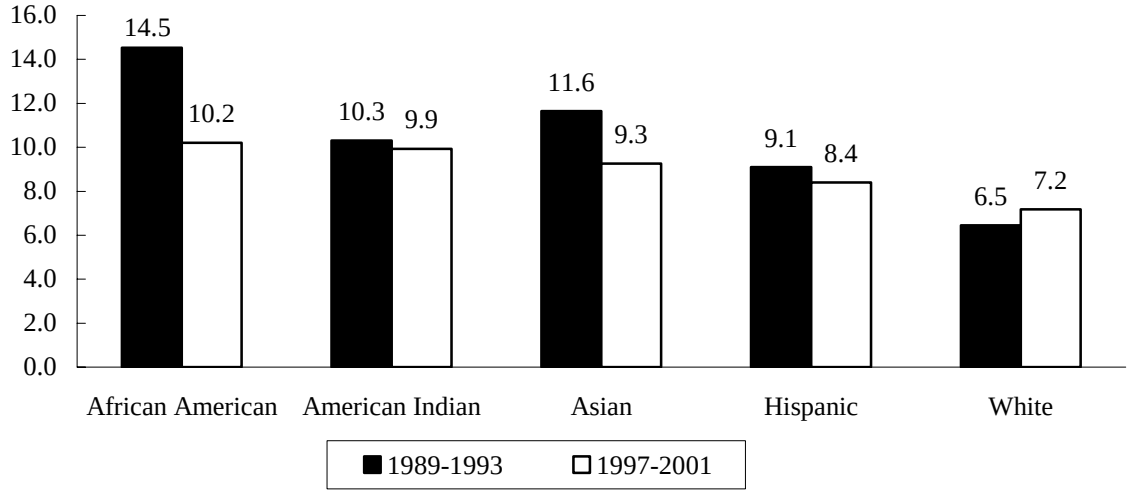
Pre-term delivery and low birth weight are closely associated with poor birth outcomes. Babies delivered too early often have not achieved normal weight and may not have completed normal fetal development. Infants delivered pre-term and/or low birth weight face a much greater likelihood of dying as infants or experiencing serious and costly medical complications leading to developmental delays and other effects for years to come.

Percent of Babies Born Premature Decreases for Populations of Color/American Indians

Between the time periods 1989-1993 and 1997-2001, the percent of premature births (born before 37 weeks of gestation) has decreased for all populations except Whites. The largest decline in premature births (4.3%) occured in African Americans while the percent of American Indian babies born premature decreased only slightly.

Because the percent of premature births decreased in all racial/ethnic groups and Whites increased, the disparity between the Whites and Populations of Color has decreased. However, approximately 1 of 10 African American, American Indian and Asian babies are born premature compared to 1 in 14 White and Hispanic babies.

Figure 2-6. Percent of Births with Gestation under 37 weeks in Minnesota - Singleton Births: 1989-1993 and 1997-2001

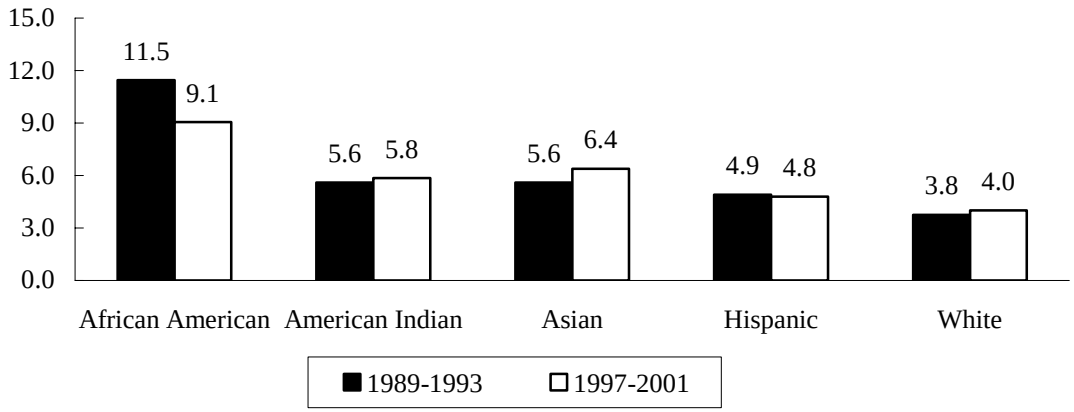


Source: Minnesota Department of Health, Center for Health Statistics

Low Birth Weight Decreases in African American Population: Little Change in Other Populations

The change in low birth weight (under 2500 grams) from 1989-1993 to 1997-2001 has been less than one percent for all racial and ethnic groups except African Americans (Figure 2.7). The percent of African American babies who are born low birth weight has decreased from 11.5 to 9.1 percent.

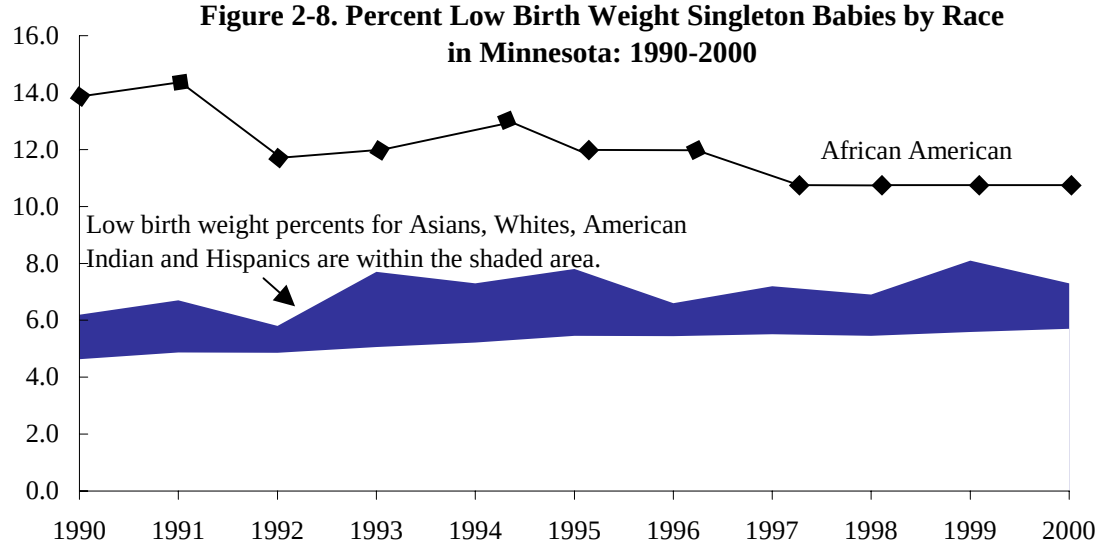
Figure 2-7. Percent Low Birth Weight by Race and Ethnicity in Minnesota - Singleton Births: 1989-1993 and 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics

Overall, the disparities in low birth weight compared to Whites have remained small for all the racial/ethnic groups except for African Americans. Figure 2-8 indicates that from 1990 to 2000, the percent of singleton babies born low birth weight for all racial/ethnic groups ranged from 4.6 to 8.1 percent while the percent of African American low birth weight babies was between 11.1 and 14.6 percent. Similar to national statistics, African American babies born in Minnesota are more than two times as likely to be born low birth weight than White babies

Figure 2-8. Percent Low Birth Weight Singleton Babies by Race in Minnesota: 1990-2000



Source: Minnesota Department of Health, Center for Health Statistics

Low Birth Weight by Age Group and Race/Ethnicity

The low birth weight incidence is highest for 15-19 year old Hispanics, Asians and Whites in both time periods. For African Americans and American Indians, women 35 years and older had the highest incidence of low birthweight in 1989-1993. In 1997-2001, the 15-19 age group had the highest low birth weight percent for African Americans while women 35 years and older remained the highest for American Indians.

There were moderate changes in low birth weight by age group between 1989-1993 and 1997-2001. Only Asians experienced no decreases in low birth weight from one time period to the next. Low birth weight incidence decreased in all age groups for African Americans, two of the American Indian and Hispanic age groups each. Though there has been a decline in low birth weight in all African American age groups, African American mothers continue to be more likely than mothers of other racial/ethnic populations to deliver at weights less than 5 1/2 pounds.

Table 2-10.
Percent Low Birth Weight Babies by Age of Mother: 1989-1993

	Age of Mother			
	15-19 yrs	20-34 yrs	35+ yrs	Total
African American	12.0	10.9	14.5	11.5
American Indian	5.9	5.2	9.8	5.6
Asian	8.4	5.2	5.0	5.6
Hispanic	6.4	4.3	6.0	4.9
White	6.5	3.5	4.3	3.8

Source: Minnesota Department of Health, Center for Health Statistics

Table 2-11.
Percent Low Birth Weight Babies by Age of Mother: 1997-2001

	Age of Mother			
	15-19 yrs	20-34 yrs	35+ yrs	Total
African American	10.9	8.3	10.7	9.1
American Indian	4.6	6.0	8.1	5.8
Asian	9.5	5.8	5.9	6.4
Hispanic	5.6	4.7	4.8	4.8
White	6.2	3.7	4.3	4.0

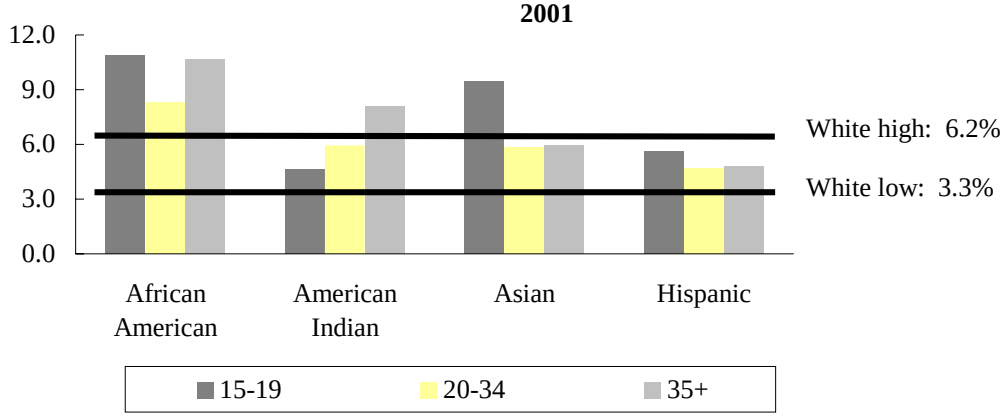
Source: Minnesota Department of Health, Center for Health Statistics

Disparities in Low Birth Weight by Age and Race/Ethnicity Decrease for African Americans but Still Large

The disparity between African Americans and Whites narrowed for all age groups from1989-1993 to 1997-2001, and increased slightly between Whites and Asians. All other age groups experienced little or no change in disparity rates. Though the disparities between Populations of Color and Whites decreased or remained unchanged, Whites of all ages are doing substantially better than their Asian, American Indian, and African American counterparts. Figure 2.9 shows that the White age group with the highest percent of low birth weight babies (15-19 year olds) is

better than all of the African American age groups. The White age group with the lowest percent low birth weight is better than all of the other racial and ethnic groups by age.

Figure 2-9. Percent Low Birth Weight in Minnesota - Singleton Births: 1997-2001

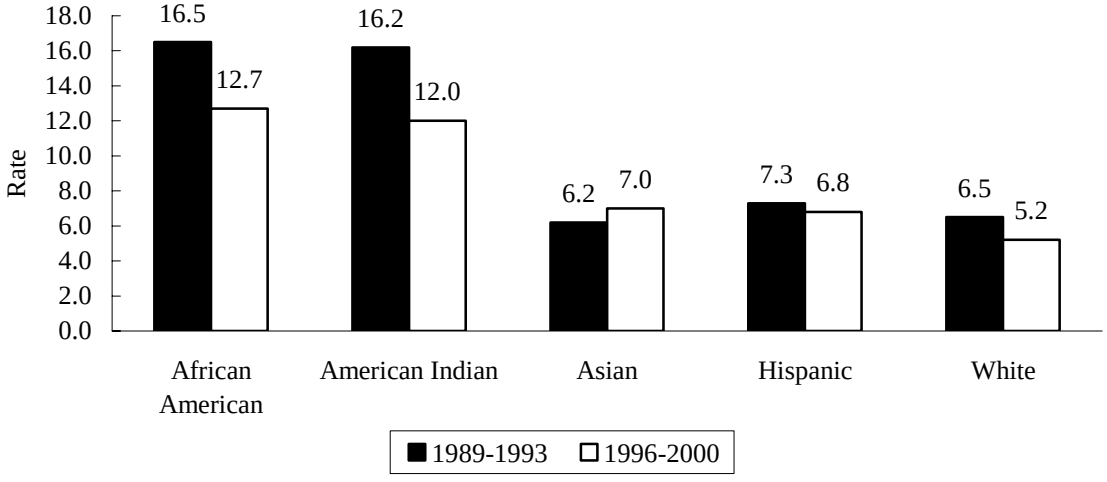


Source: Minnesota Department of Health, Center for Health Statistics

Infant Mortality

An infant death is defined as a death to an infant under one year of age. The infant mortality rate is the number of infant deaths per 1,000 births. Over the years, there have been significant reductions in the infant mortality rate. In Minnesota, the infant mortality rates for African Americans and American Indians have decreased from 16.5 and 16.2 in 1989-1993 to 12.7 and 12.0 respectively in 1996-2000. There was also a slight decrease in the Hispanic infant mortality rate for the same time periods while the White rate decreased from 6.5 to 5.2. Only the Asian infant mortality rate increased from 6.2 to 7.0. This increase brought the Asian rate above the White rate in the 1996-2000 time period.

Figure 2-10. Infant Deaths per 1,000 births in Minnesota by Race and Ethnicity: 1989-1993 and 1996-2000



Source: Minnesota Department of Health, Center for Health Statistics

The disparities between Asian and Hispanic infant mortality rates as compared to Whites are relatively small. Yet, in recent years, these disparities have widened. In contrast, the disparities between African Americans and American Indians as compared to Whites are considerable but have narrowed. Despite the decreases in the disparities in infant mortality rates, American Indian and African American infant mortality rates are still two times higher than the White rate.

Infant Death Characteristics

Well over half the infants born between 1996-2000 who died in the first year of their lives were born low birth weight. Depending on race/ethnicity, between 11.3 and 5.5 percent of all births were considered low birth weight. Between 60.8 and 39.6 percent infants who died in their first year of life were born premature compared to 12.3 to 8.7 percent of all births in 1996-2000.

Table 2-12.
Comparison of Low Birth Weight and Prematurity between Infant Deaths and Births in Minnesota by Race/Ethnicity: 1996-2000

	Low Birth Weight			Prematurity		
	Infant Deaths (%)	Births (%)	Number of Deaths*	Infant Deaths (%)	Births (%)	Number of Deaths*
African American	64.6	11.3	229	60.8	12.3	158
American Indian	55.9	6.7	68	39.6	10.5	48
Asian	61.5	7.0	104	53.5	10.0	71
Hispanic	60.6	6.0	99	51.4	9.4	102
White	57.5	5.5	1,450	55.3	8.7	1,249

Source: Minnesota Department of Health, Center for Health Statistics
*Excludes missing
Low Birth Weight: Less than 2,500 grams. Prematurity: Less than 37 weeks gestation

Infants who died before their first birthday are also less likely to have received prenatal care. However, the difference in prenatal care between births and infant deaths is not as great as the differences in low birth weight and prematurity. The range of prenatal care received in the first trimester was 50.0 to 82.0 percent for infant deaths and 62.7 and 87.0 percent for births in 1996-2000. Infants who died in their first year of life weremore likely to receive inadequate or no prenatal care than births. In 1996-2000, between 3.2 and 17.4 percent of all births received inadequate or no prenatal care compared to 6.5 to 29.4 percent of infant deaths.

Table 2-13. Percent Pregnant Women Receiving Prenatal Care in the 1st Trimester: Infants Deaths and All Births, Minnesota 1996-2000

	Trimester (%)				
	First		Third or None		
	Infant Deaths	All births	Infant Deaths	All Births	Number of Deaths
African American	68.7	66	10.3	4.5	195
American Indian	54.8	62	21	5.6	62
Asian	50	64	10.9	5.4	92
Hispanic	55.6	62.7	6.1	6.5	90
White	82	87	4.4	1.4	1,352

Source: Minnesota Department of Health, Center for Health Statistics
*Excludes missing

Table 2-14.
Percent of Pregnant Women Receiving Adequate or Intensive Prenatal Care: Infant Deaths and All Births 1997-2001, Minnesota

	Adequacy of Prenatal Care Received (%)				
	Adequate/Intensive		Inadequate/None		
	Infant Deaths	All Births	Infant Deaths	All Births	Number of Deaths*
African American	51.9	57.1	17.9	12.4	156
American Indian	31.4	49.2	29.4	17.4	51
Asian	44.9	57.0	14.5	9.8	69
Hispanic	40.8	54.4	22.5	11.2	71
White	71.8	80.0	6.5	3.2	1,200

Source: Minnesota Department of Health, Center for Health Statistics
*Excludes missing

Causes of Infant Deaths

Table 2-15.
Causes of Infant Deaths by Race/Ethnicity in Minnesota 1996-2000

	Perinatal Conditions		Congenital Anomalies		SIDS		Total*
	Number	Percent	Number	Percent	Number	Percent	Deaths
African American	110	47.4	40	17.2	17	7.3	232
American Indian	20	29.0	17	24.6	11	15.9	69
Asian	30	28.3	43	40.6	3	2.8	106
Hispanic	46	45.1	33	32.4	7	6.9	102
White	549	37.3	467	31.7	154	10.5	1,473

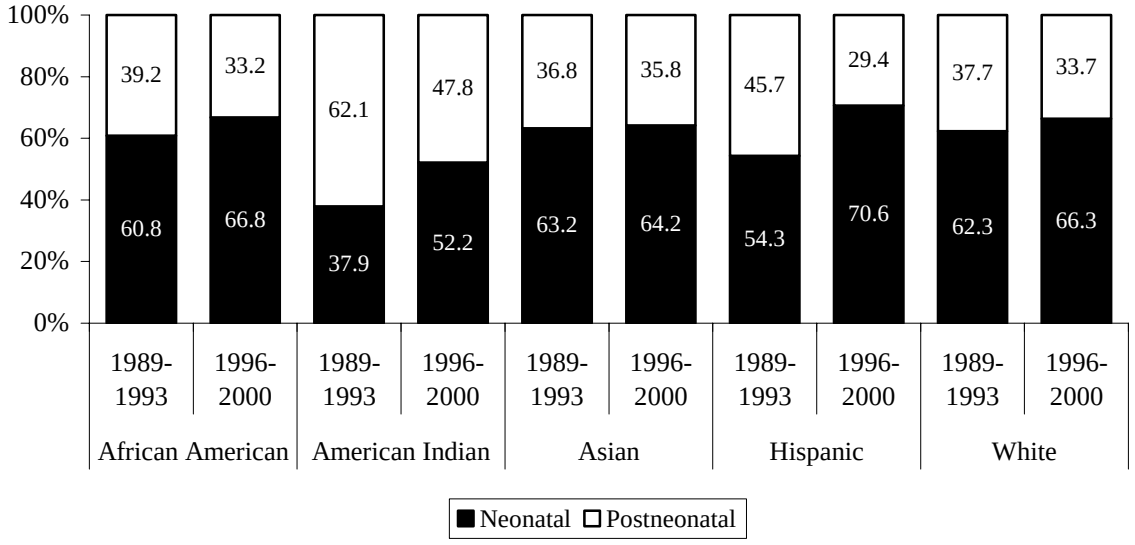
Source: Minnesota Department of Health, Center for Health Statistics
*Includes other causes of deaths and unknown causes

For all racial and ethnic groups perinatal conditions and congenital anomalies accounted for the majority of infant deaths from 1996-2000. Between 53.6 to 77.5 percent of infant deaths were due to these causes. For African Americans, American Indians, Hispanics and Whites in 1996-2000 perinatal conditions, which include pre-term delivery, low birth weight and other trauma resulting from a difficult or complicated birth, was the leading cause of infant deaths. For African Americans and Hispanics almost half of the infant deaths were caused by perinatal conditions. More Asian infants died of congenital anomalies than perinatal conditions. 40.6 percent of Asian infant deaths were due congenital anomalies (e.g. anencephaly, spina bifida and anomalies of the cardiovascular, respiratory, digestive and urinary systems) while 28.3 percent were due to perinatal conditions. SIDS was the third leading cause of death for all racial and ethnic groups in 1996-2000, the percent of deaths due to SIDS ranged from 15.9 percent for American Indians to 2.8 percent for Asians.

Neonatal and Postneonatal Deaths

In the 1989-1993 time period, the majority of infant deaths occurred in the neonatal period, deaths occurring at less than 28 days of age, except for American Indians. For American Indians 62.1 percent of the deaths occurred in the postneonatal period, 28 - 365 days. In 1996-2000, the percent of babies dying before 28 days of age increased for all racial and ethnic groups. In this time period, the number of neonatal deaths were almost twice that of post-neonatal deaths except for American Indians. Almost as many American Indian babies died in the post-neonatal time period as the neonatal time period.

Figure 2-11.
Percent of Infant Deaths by Age at Death and Race/Ethnicity: Minnesota, 1989-1993 and 1996-2000



Source: Minnesota Department of Health, Center for Health Statistics

Infant Deaths by Cause of Death and Age of Death

In 1989-1993 in the neonatal period, the leading causes of death for all groups was perinatal conditions. In the postneonatal period, Sudden Infant Death Syndrome (SIDS) was the leading cause of death for the same time period. In 1996-2000, perinatal conditions were the leading cause of death for African Americans, American Indians, Hispanics and Whites in the neonatal period. For Asians, the leading cause of death in the neonatal period was congenital anomalies, 50.0 percent of Asian infant deaths were caused by congenital anomalies. In the postneonatal period, the most frequent single cause of death for American Indians, African Americans and Whites remained SIDS. For Asians and Hispanics congenital anomalies was the most frequent single cause of death. The majority of deaths in the postneonatal period fall in the other category. The other category includes many causes of death with one or two deaths per cause.

Table 2-16.
Infant Deaths in Minnesota by Age, Race/Ethnicity and Cause of Death: 1989-1993

	Neonatal					Postneonatal				
	Perinatal Conditions		Congenital Anomalies		Total	SIDS		Congenital Anomalies		Total
	Number	Percent	Number	Percent	Deaths	Number	Percent	Number	Percent	Deaths
African American	103	76.3	22	16.3	135	34	39.1	10	11.5	87
American Indian	21	53.9	14	35.9	39	32	50.0	3	4.7	64
Asian	25	58.1	15	34.9	43	9	36.0	8	30.8	25
Hispanic	14	56.0	8	32.0	25	12	57.1	4	19.0	21
White	702	58.3	425	38.3	1,204	357	49.0	129	17.7	729

Source: Minnesota Department of Health, Center for Health Statistics

Table 2-17.
Infant Deaths in Minnesota by Age, Race/Ethnicity and Cause of Death: 1996-2000

	Neonatal					Postneonatal				
	Perinatal Conditions		Congenital Anomalies		Total	SIDS		Congenital Anomalies		Total
	Number	Percent	Number	Percent	Deaths	Number	Percent	Number	Percent	Deaths
African American	104	67.1	26	16.8	155	16	20.8	14	18.2	77
American Indian	20	55.6	9	25.0	36	9	27.3	8	24.2	33
Asian	29	42.6	34	50.0	68	3	7.9	9	23.7	38
Hispanic	44	61.1	24	33.3	72	7	23.3	9	30.0	30
White	522	53.6	357	36.7	974	148	29.9	110	22.2	495

Source: Minnesota Department of Health, Center for Health Statistics

The number of SIDS deaths has decreased for all racial and ethnic groups from 1989-1993 to 1996-2000. The percent of SIDS deaths in the postneonatal period has also decreased. In 1989-1993, between 36.0 and 57.1 percent of the postneonatal deaths were due to SIDS. In 1996-2000, 7.9 to 20.8 percent of the postneonatal deaths were caused by SIDS.

Chapter III

Mortality Rates and Causes of Death

"A single death is a tragedy. A million deaths is a statistic."

Introduction

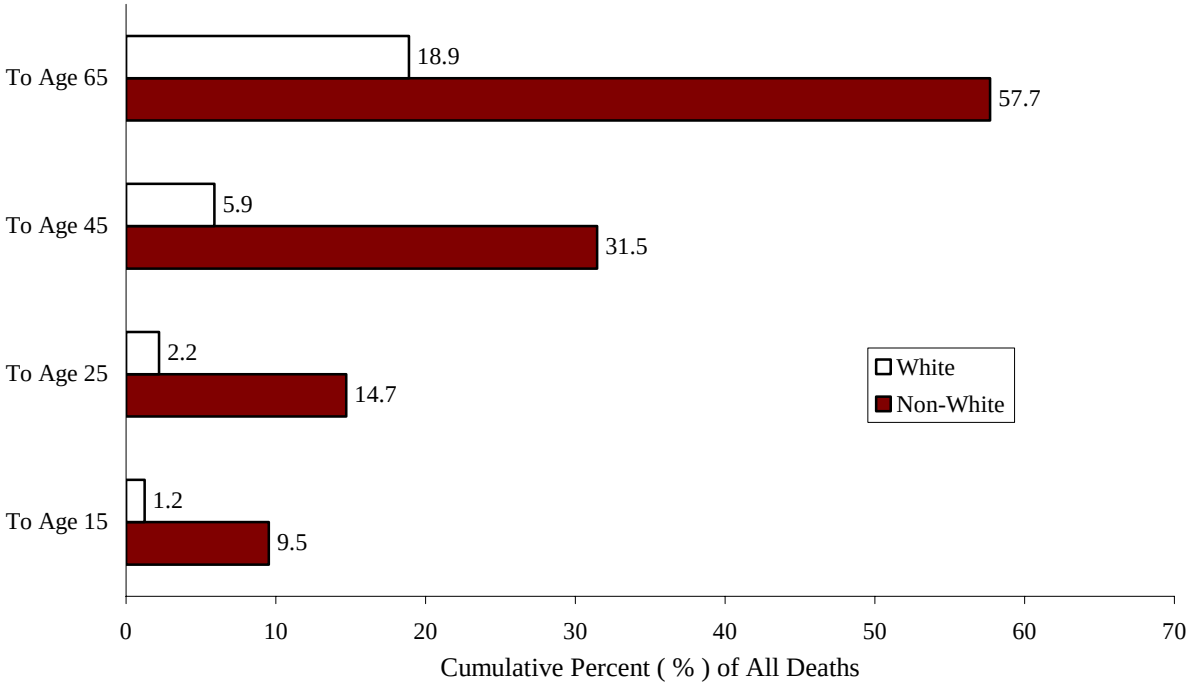
In addition to births, the most extensive information gathered on the health of the population in Minnesota comes from death certificates, universally reported to the State of Minnesota for all Minnesotans who died. The information includes characteristics of the decedent and the causes of death. The purpose of this chapter is to examine the health status of Populations of Color through information related to death. Several questions are addressed. Are mortality rates in communities of color higher than Whites? What are the major causes of death in each racial/ethnic group? How have mortality rates changed from the 1989-1993 reporting period to the reporting period, 1997-2001?

Death certificates contain information on the immediate cause of death. While the immediate cause of death can inform us about the health problems within a population, it does not depict the complete picture. Various other illnesses, injuries or behaviors may contribute to the death but are not listed as the immediate cause on the death certificate. For example, while suicide may be listed as the immediate cause of death, it may be that a prolonged illness or even severe depression were not identified as major contributing factors to the suicide. Another example would be a death attributed to lung cancer that omits the prolonged use of tobacco as a contributing factor. Throughout this chapter, cause of death refers only to those immediate causes as stated on the death certificate.

Age of Death

People of Color who died during the 1997-2001 period were much younger, on average, than Whites who died. Figure 3-1 indicates that for the total number of People of Color (African American, American Indian and Asian), who died during this time period, approximately fifteen percent (14.7%), were under 25 years of age, while only two percent (2.2%) of White persons who died were under 25 years of age. Similarly, 57.7 percent of the total number of Persons of Color who died were under 65 years old, as compared to only 18.9 percent of Whites.

Figure 3-1. White and Non-White* Age at Time of Death
Minnesota, 1997-2001



*Non-white includes African American, American Indian, and Asian only.
Source: Minnesota Department of Health, Center for Health Statistics

Table 3-1 shows age at time of death for each of the Populations of Color. This table indicates that 14.8 percent of all Hispanic deaths and 10.5 percent of all African American deaths were deaths to those under 15 years of age. The percent of total deaths for those under 65 years of age is higher for each racial/ethnic group and is 2-3 times that of Whites.

Table 3-1.
Cumulative Percent of Age at Time of Death by Race/Ethnicity:
Minnesota 1997-2001

	Race				Ethnicity
	White	African American	American Indian	Asian	Hispanic
To Age 15	1.2	10.5	6.0	11.3	14.8
To Age 25	2.2	16.1	10.9	15.8	21.9
To Age 45	5.9	33.8	30.0	27.6	38.0
To Age 65	18.9	60.2	61.1	47.8	58.4

Source: Minnesota Department of Health, Center for Health Statistics

Percent of change in overall mortality rates by age groups are presented in Table 3-2. This table indicates that from 1989-1993 mortality rates in Minnesota declined for all age groups, but increased in elderly adults, ages 65 and older. The extent and causes of infant (under 1 year of age) mortality are discussed in Chapter 2 of this report, *Birth-Related Health Indicators*.

Table 3-2.
Overall Age-Specific Mortality Rate Comparison

	Mortality Rate		
Age Group:	1989 - 1993	1997 - 2001	% Change
1-14 Years	24.0	19.3	-19.5%
15-24 Years	75.4	60.2	-20.2%
25-44 Years	112.2	104.3	-7.0%
45-64 Years	606.8	471.1	-22.4%
65 Years or Older	4995.3	5030.1	0.7%

Mortality rate is expressed per 100,000 population.
Source: Minnesota Department of Health, Center for Health Statistics

Age-Specific Mortality Rate Comparison by Race/Ethnicity

Table 3-3 shows crude mortality rates for the five age groups. Here, age-specific mortality rates are the number of deaths per 100,000 persons in each racial/ethnic and age group. In 1997-2001, for the 25-44 year age group, there were 190.7 African American and 352.8 American Indian deaths per 100,000.

The far right column of Table 3-3 displays a measure of the disparity in age-specific mortality rates between Populations of Color and Whites. This disparity measure is the ratio of age-specific mortality rate of Populations of Color to Whites, i.e. $\frac{Population\ of\ Color\ Rate}{White\ Rate}$. For example, in the 25-44 year-old age group, the age-specific mortality rate for African Americans is 1.9 times higher and the American Indian rate is 3.6 times higher than the White rate.

Table 3-3.
Age-Specific Mortality Rates by Race/Ethnicity: Minnesota, 1997-2001

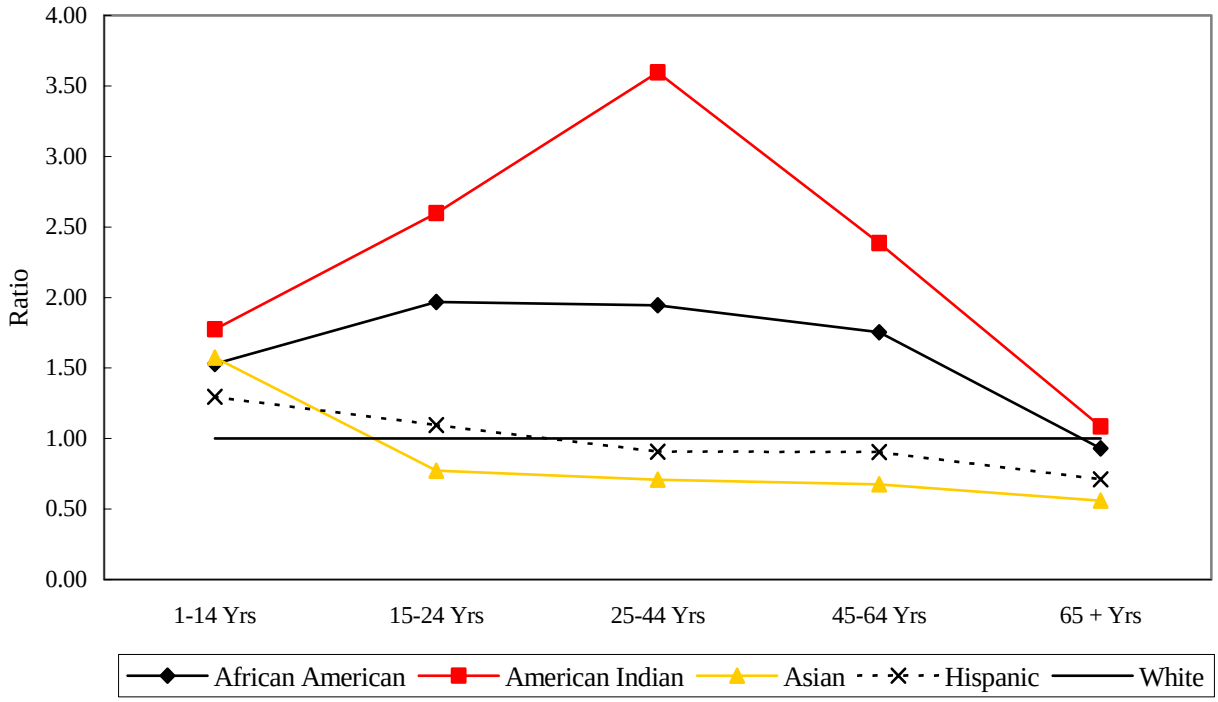
Age Group:	Population Group:	Number of Deaths	Mortality Rate per 100,000	Disparity Ratio
1-14 Years	African American	86	27.4	1.5
	American Indian	30	31.8	1.8
	Asian	66	28.2	1.6
	Hispanic	51	23.2	1.3
	White	778	17.9	
15-24 Years	African American	193	111.1	2.0
	American Indian	85	146.8	2.6
	Asian	66	43.6	0.8
	Hispanic	95	61.8	1.1
	White	1,752	56.5	
25-44 Years	African American	613	190.7	1.9
	American Indian	330	352.8	3.6
	Asian	175	69.5	0.7
	Hispanic	215	89.0	0.9
	White	6,690	98.1	
45-64 Years	African American	911	807.2	1.8
	American Indian	537	1,098.5	2.4
	Asian	301	311.1	0.7
	Hispanic	272	416.2	0.9
	White	23,466	460.6	
65 Years or Older	African American	1376	4,696.2	0.9
	American Indian	672	5,483.5	1.1
	Asian	774	2,828.4	0.6
	Hispanic	556	3,583.6	0.7
	White	146,639	5,052.3	

* Note: Ratios less than 1.0 occur when the mortality rate indicated is lower than the White rate.
Source: Minnesota Department of Health, Center for Health Statistics

Figure 3-2 shows the disparity ratio for racial/ethnic groups as compared to Whites. This measure shows how many times higher the death rate is for Populations of Color than it is for Whites within several age groupings. This graph indicates that the greatest disparities in

mortality rates occur in the age range of 25-44 years old, though disparities exist in most age groups for African Americans and American Indians.

Figure 3-2. Age Specific Disparity Ratio of Non-White to White Mortality Rates: Minnesota, Five Year Average, 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics

Mortality rates for American Indians in the 15-24, 25-44, and 45-64 year age ranges were two to three and a half times higher than mortality rates for Whites. Mortality rates for African Americans in the 15-24, 25-44, and 45-64 year age ranges were more than one and a half times higher than mortality rates for Whites. Hispanic and Asian mortality rates were most often lower than Whites for all age groups.

Crude Mortality and Leading Causes of Death

Age-specific mortality rates for each racial/ethnic group and corresponding disparity ratios for each population are two ways in which to assess the differences in the patterns of mortality rates between racial/ethnic groups. The following section analyzes mortality by comparing both the age-specific mortality rates and disparity ratios over time. This section also includes the leading causes of death among these various age groups and genders where differences occur.

As indicated in Table 3-4, in most instances, mortality rates for African Americans and American Indians were higher than Whites for the current period (1997-2001). Changes in disparity ratios were mixed, again depending on the racial/ethnic group and age group.

Table 3-4.
Age-Specific Mortality Rates by Race/Ethnicity in Minnesota - Ages 1-14, 1989-2001

	African American		American Indian		Asian		Hispanic		White
	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate
1989 to 1993	40.3	1.8	47.7	2.1	34.7	1.5	28.8	1.3	22.5
1997 to 2001	27.4	1.5	31.8	1.8	28.2	1.6	23.2	1.3	17.9
Mortality Rate Change	-31.9%		-33.3%		-18.7%		-19.3%		-20.3%

Source: Minnesota Department of Health, Center for Health Statistics

Tables 3-4 also indicates that compared to 1989-1993, mortality rates for all populations ages 1-14 years old are lower in the current reporting period of 1997-2001. The disparity ratio has also improved for all populations except for Asians and Hispanics, where little or no change has occurred. For children under the age of fifteen in the current reporting period, 1997-2001, the mortality rates for each Population of Color were higher than Whites.

Among children 1-14 years old, unintentional injury was the leading cause of death in each racial/ethnic group (Table 3.5). This cause of death is highest among Asians (9.0 per 100,000) and lowest among Whites (6.9 per 100,000). Due to low numbers, it was not possible to present many of the rates for leading causes of death. Overall mortality rate (all causes) was highest among American Indians and lowest among Whites in this age group.

Table 3-5
Leading Causes of Death for Children, 1-14 Years Old: Minnesota, 1997-2001

	1st Leading Cause		2nd Leading Cause		All Causes	
	Number	Rate	Number	Rate	Number	Rate
African American	29	8.9	9	*	86	27.4
	(Unintentional Injury)		*(Cancer)*			
American Indian	14	*	3	*	30	31.8
	(Unintentional Injury)		*(Homicide)*			
Asian	21	9.0	11	*	66	28.2
	(Unintentional Injury)		*(Homicide)*			
Hispanic	14	*	6	*	51	23.2
	(Unintentional Injury)		*(Heart Disease)*			
White	299	6.9	94	2.2	778	17.9
	(Unintentional Injury)		*(Cancer)*			

Rates are per 100,000
* Rates are not calculated for 20 or less deaths
Source: Minnesota Department of Health, Center for Health Statistics

Tables 3-6 indicates that compared to 1989-1993, mortality rates for all populations aged 15-24 years old are lower in 1997-2001. In the 15-24 age group, mortality rates in each Population of Color were higher than Whites, except for Asians. The disparity ratio has improved for American Indians, but little or no change has occurred for other Populations of Color.

Table 3-6.
Age-Specific Mortality Rates by Race/Ethnicity in Minnesota - Ages 15-24, 1989-2001

	African American		American Indian		Asian		Hispanic		White
	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate
1989 to 1993	143.5	2.0	221.9	3.1	57.2	0.8	69.1	1.0	71.5
1997 to 2001	111.1	2.0	146.8	2.6	43.6	0.8	61.8	1.1	56.5
Mortality Rate Change	-22.6%		-33.8%		-23.7%		-10.5%		-21.0%

Source: Minnesota Department of Health, Center for Health Statistics

Because of low numbers of deaths for females in the 15-24 age group, the rates for primary causes of death were not presented (Table 3-7). The rates among males in this age group, though, indicate some disparities among racial/ethnic groups (Table 3-8). The leading cause of

death for African American males was homicide (97.5 per 100,000), while the leading cause of death for males of all other racial/ethnic groups was unintentional injury. The American Indian mortality rate due to unintentional injury was twice that of Whites. While not as dramatic of a disparity, Hispanic rates were also higher than Whites. Due to small numbers, Asian rates were not reported.

Table 3-7.
Leading Causes of Death for Females, 15-24 Years Old: Minnesota, 1997-2001

	1st Leading Cause		2nd Leading Cause		3rd Leading Cause	
	Number	Rate	Number	Rate	Number	Rate
African American	10	*	6	*	4	*
	(Unintentional Injury)		*(Homicide)*		*(Cancer)*	
American Indian	13	*	5	*	1	*
	(Unintentional Injury)		*(Homicide)*		*(Stroke, Suicide)*	
Asian	6	*	5	*	3	*
	(Unintentional Injury)		*(Cancer)*		*(Homicide, Suicide)*	
Hispanic	13	*	2	*	1	*
	(Unintentional Injury)		*(Congenital anomalies)*		*(Heart Disease, Homicide)*	
White	294	19.4	56	3.7	54	3.6
	(Unintentional Injury)		*(Suicide)*		*(Cancer)*	

Rates are per 100,000
* Rates are not calculated for 20 or less deaths
Source: Minnesota Department of Health, Center for Health Statistics

Table 3-8
Leading Causes of Death for Males, 15-24 Years Old: Minnesota, 1997-2001

	1st Leading Cause		2nd Leading Cause		3rd Leading Cause	
	Number	Rate	Number	Rate	Number	Rate
African American	86	97.5	29	32.9	16	*
	(Homicide)		*(Unintentional Injury)*		*(Suicide)*	
American Indian	27	91.1	14	*	9	*
	(Unintentional Injury)		*(Suicide)*		*(Homicide)*	
Asian	15	*	11	*	10	*
	(Unintentional Injury)		*(Suicide)*		*(Homicide)*	
Hispanic	44	51.0	10	*	9	*
	(Unintentional Injury)		*(Suicide)*		*(Homicide)*	
White	639	40.3	277	17.5	69	4.3
	(Unintentional Injury)		*(Suicide)*		*(Cancer)*	

Rates are per 100,000
* Rates are not calculated for 20 or less deaths
Source: Minnesota Department of Health, Center for Health Statistics

Table 3-9 indicates that in the 25-44 age group, mortality rates for African Americans and American Indians were higher than Whites. Mortality rates for all populations are lower in 1997-2001 compared to 1989-1993, except for American Indians. The disparity ratio has improved or remained the same for Populations of Color except for American Indians, where the disparity ratio has worsened. In this age group, American Indians are more than three times likely to die than Whites.

Table 3-9.
Age-Specific Mortality Rates by Race/Ethnicity in Minnesota - Ages 25-44, 1989-2001

	African American		American Indian		Asian		Hispanic		White
	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate
1989 to 1993	274.2	2.6	337.5	3.2	87.8	0.8	103.9	1.0	106.1
1997 to 2001	190.7	1.9	352.8	3.6	69.5	0.7	89.0	0.9	98.1
Mortality Rate Change	-30.4%		4.5%		-20.8%		-14.4%		-7.5%

Source: Minnesota Department of Health, Center for Health Statistics

Table 3-10
Leading Causes of Death for Females, 25-44 Years Old: Minnesota, 1997-2001

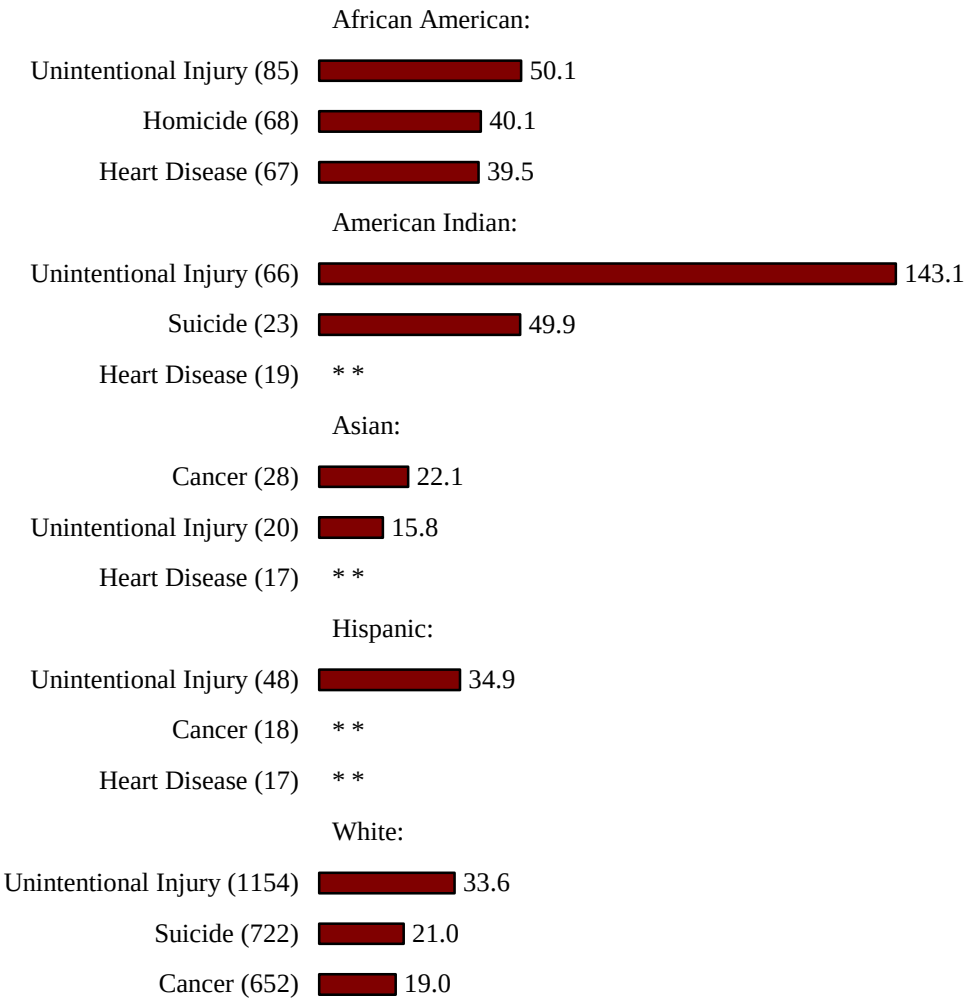
	1st Leading Cause		2nd Leading Cause		3rd Leading Cause	
	Number	Rate	Number	Rate	Number	Rate
African American	44	29.0	35	23.1	19	*
	(Cancer)		*(Heart Disease)*		*(Unintentional Injury)*	
American Indian	26	54.8	12	*	11	*
	(Unintentional Injury)		*(Cirrhosis of the Liver)*		*(Heart Disease)*	
Asian	24	19.2	10	*	5	*
	(Cancer)		*(Unintentional Injury)*		*(Stroke)*	
Hispanic	14	*	8	*	6	*
	(Cancer)		*(Unintentional Injury)*		*(Homicide)*	
White	763	22.6	351	10.4	239	7.1
	(Cancer)		*(Unintentional Injury)*		*(Heart Disease)*	

Rates are per 100,000
* Rates are not calculated for 20 or less deaths
Source: Minnesota Department of Health, Center for Health Statistics

Table 3-10 indicates that unlike other racial/ethnic groups, most often American Indian females in the 25-44 age group die as a result of unintentional injury (54.8 per 100,000). The leading

cause of death for each other racial groups was cancer. African Americans (29.0 per 100,000) die of cancer at higher rates than Whites (22.6 per 100,000). Within this age group, Asians (19.2 per 100,000) die of cancer at lower rates than Whites.

Figure 3-3. Leading Causes of Death: Males 25-44, 1997 - 2001
Rate per 100,000



( ) The actual number of deaths over five years is in parenthesis next to the cause of death.
* * Rates were not computed for less than 20 deaths.

Source: Minnesota Department of Health, Center for Health Statistics

Among males 25-44 years old, unintentional injury was the leading cause of death for most racial/ethnic groups (Figure 3.3). The highest mortality rate for all causes and racial/ethnic groups was the unintentional injury mortality rate for American Indians, which is four times higher than the White rate. The three leading causes of death for African Americans in this age group were also higher than that of Whites, with unintentional injury, homicide and heart disease listed as the three leading causes of death in this population.

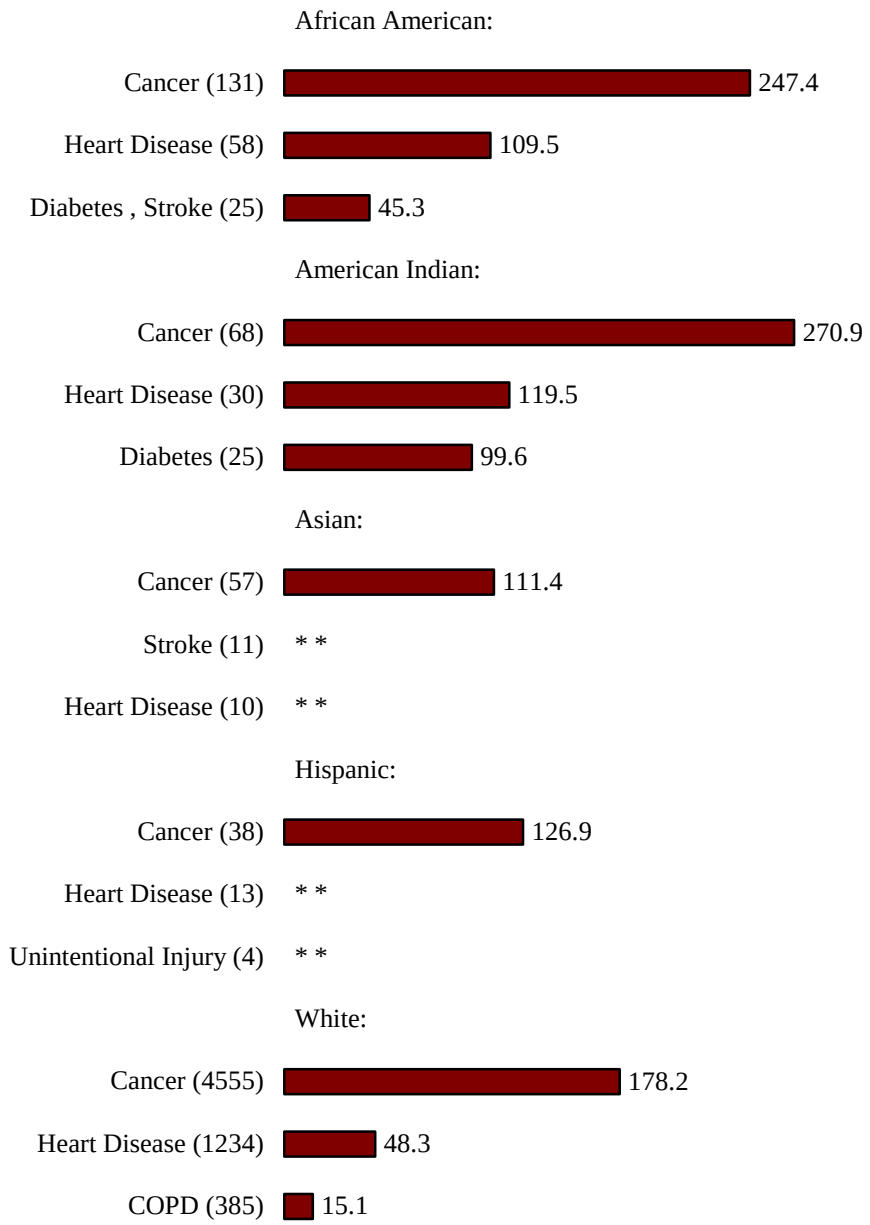
In the 45-64 age group, mortality rates for African Americans and American Indians were higher than Whites. Mortality rates for all populations are lower in 1997-2001 compared to 1989-1993 (Table 3-11). The disparity ratio has improved for African Americans and remained the same for American Indians and Asians.

Table 3-11.
Age-Specific Mortality Rates by Race/Ethnicity in Minnesota - Ages 45-64, 1989-2001

	African American		American Indian		Asian		Hispanic		White
	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate
1989 to 1993	1196.8	2.0	1362.0	2.3	387.3	0.7	427.2	0.7	595.5
1997 to 2001	807.2	1.8	1098.5	2.4	311.1	0.7	416.2	0.9	460.6
Mortality Rate Change	-32.6%		-19.3%		-19.7%		-2.6%		-22.6%

Source: Minnesota Department of Health, Center for Health Statistics

Figure 3-4
Leading Causes of Death: Females 45-64. 1997 - 2001
Rate per 100,000

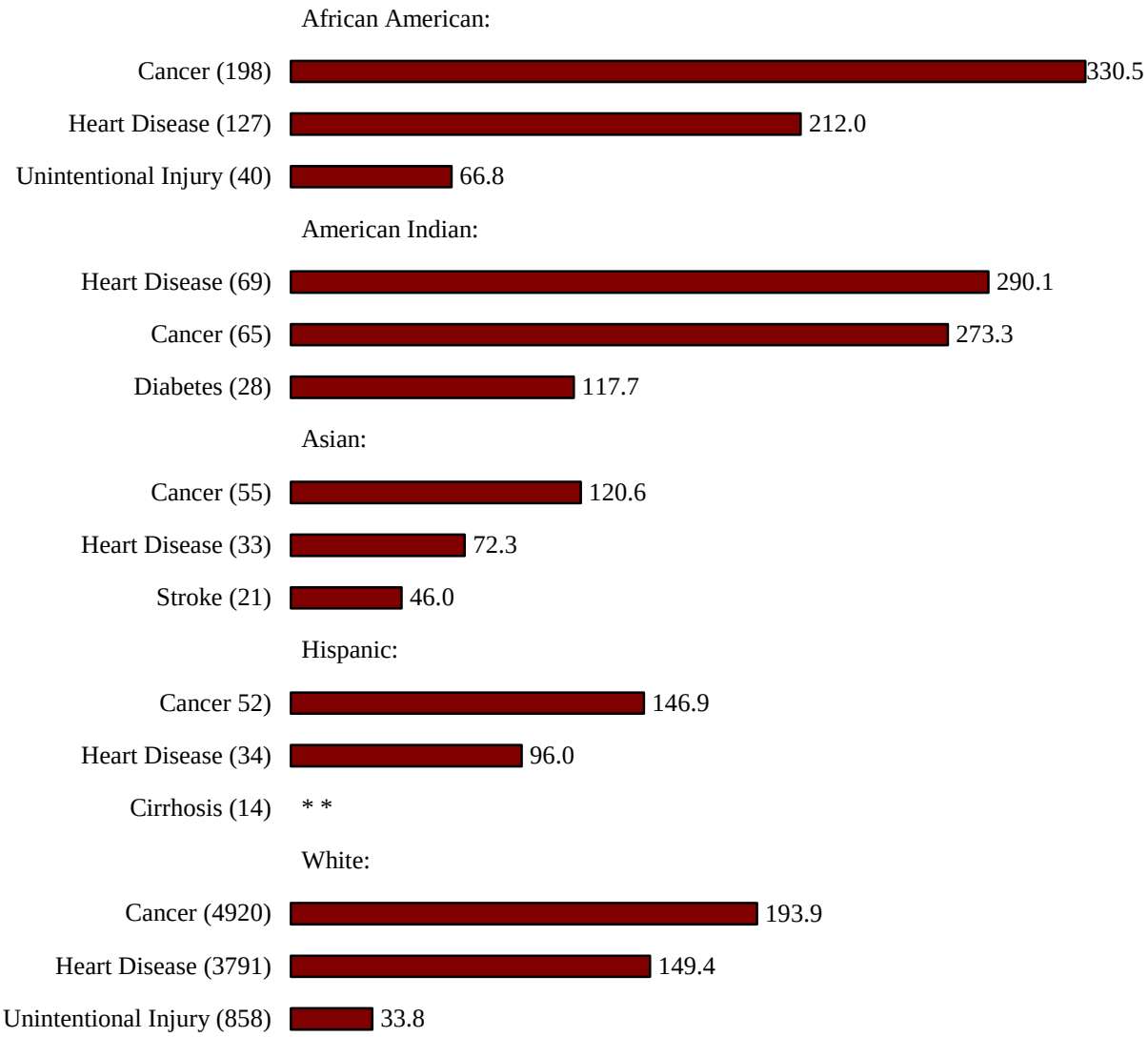


( ) The actual number of deaths over five years is in parenthesis next to cause of death.
* * Rates were not computed for less than 20 deaths.

Source: Minnesota Department of Health, Center for Health Statistics

Cancer was the leading cause of death among 45-64 year-old females of all racial ethnic groups. (Figure 3-4). The highest morality rates for cancer were in the African American (247.4 per 100,000) and American Indian (270.9 per 100,000) populations. Interestingly, the rate among White females (178.2 per 100,000) was the next highest mortality rate for cancer, higher than Asians (111.4 per 100,000) and Hispanics (126.9 per 100,000). For most racial/ethnic groups, heart disease was the second leading cause of death. Mortality rates due to heart disease were two times higher among African Americans (109.4 per 100,000) and American Indians (119.5 per 100,000), as compared to Whites (48.3 per 100,000).

Figure 3-5. Leading Causes of Death: Males 45-64, 1997 - 2001
Rate per 100,000



( ) The actual number of deaths over five years is in parenthesis next to cause of death.
* * Rates were not computed for less than 20 deaths.

Source: Minnesota Department of Health, Center for Health Statistics

Rates of deaths for males in the 45-64 year old age group are much higher than 45-64 year old females, although the leading causes of death among males and females were similar (Figure 3-5). The highest morality rates were again due to cancer for most racial/ethnic groups. African American males had the highest cancer morality rates of all racial/ethnic groups. Heart disease was the leading cause of death for American Indian males in this age group. The mortality rate for cancer among Whites (193.9 per 100,000) was higher than both Asians (120.6 per 100,000) and Hispanics (146.9 per 100,000).

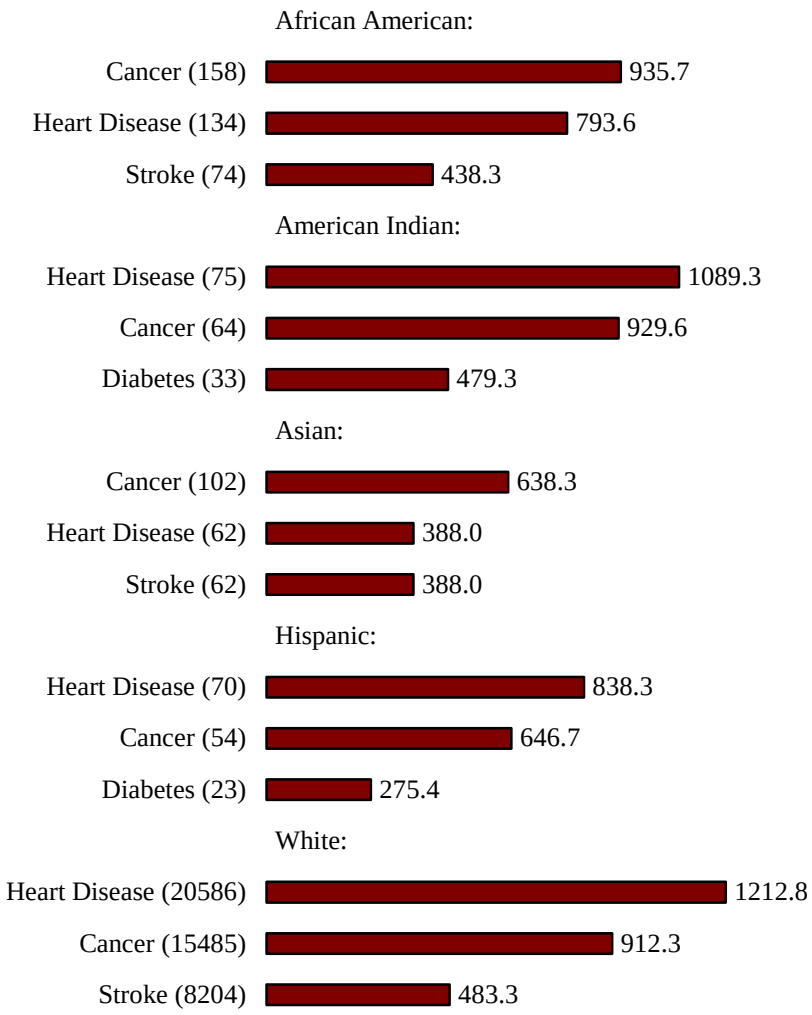
In the 65 and older group, only mortality rates for American Indians were higher than Whites. Mortality rates for all populations are lower in 1997-2001 compared to 1989-1993. The disparity ratio has improved for African Americans and American Indians. The disparity ratio for Asians and Hispanics has worsened, yet mortality rates remained lower than Whites.

Table 3-12
Age-Specific Mortality Rates by Race/Ethnicity in Minnesota - Ages 65 and Older, 1989-2001

	African American		American Indian		Asian		Hispanic		White
	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate	Disparity Ratio	Mortality Rate
1989 to 1993	5618.5	1.1	5961.1	1.2	2306.1	0.5	2205.7	0.4	4999.4
1997 to 2001	4696.2	0.9	5483.5	1.1	2828.4	0.6	3583.6	0.7	5052.3
Mortality Rate Change	-16.4%		-8.0%		22.6%		62.5%		1.1%

Source: Minnesota Department of Health, Center for Health Statistics

Figure 3-6. Leading Causes of Death: Females 65 and Older, 1997 - 2001
Rate per 100,000

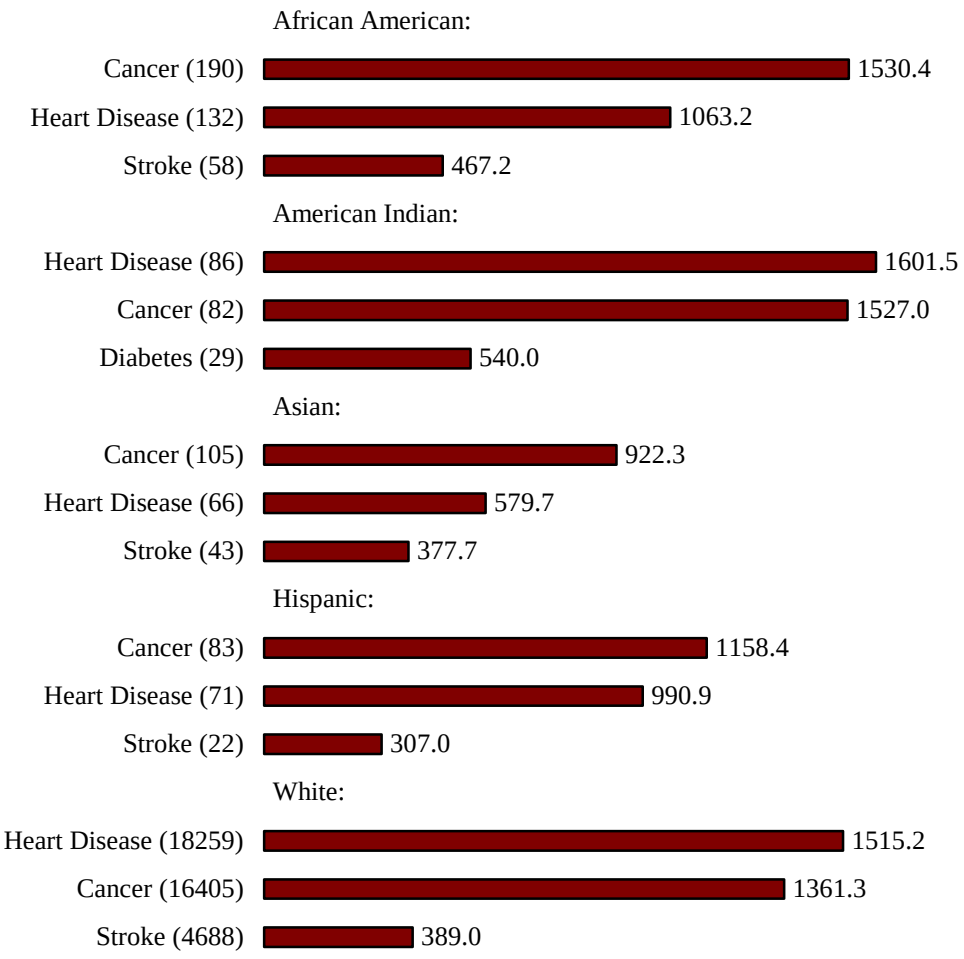


( ) The actual number of deaths over five years is in parenthesis next to cause of death.

Source: Minnesota Department of Health, Center for Health Statistics

Figure 3-6 indicates that for females 65 years of age and older, heart disease was the leading cause of death among American Indians (1089.3 per 100,000), Hispanics (838.3 per 100,000), and Whites (1212.8 per 100,000). Cancer was the leading cause of death for African Americans (935.7 per 100,000) and Asians (638.3 per 100,000) for this group. Diabetes also appears as one of three leading causes of death among American Indian (479.3 per 100,000) and Hispanic (275.4 per 100,000) women in this age range. Mortality rates due to stroke were included in the leading three causes of death among African Americans (438.3 per 100,000), Asians (388.0 per 100,000), and Whites (483.3 per 100,000).

Figure 3-7. Leading Causes of Death: Males 65 and Older, 1997 - 2001 Rate per 100,000



( ) The actual number of deaths over five years is in parenthesis next to cause of death.

Source: Minnesota Department of Health, Center for Health Statistics

Rates for leading causes of death among males 65 years and older were again higher than their female counterparts (Figure 3-7). Cancer, heart disease and stroke are the leading causes of death for males in this age group. Mortality rates for cancer are highest among African Americans (1530.4 per 100,000) and American Indians (1527.0 per 100,000). Deaths due to stroke are most prevalent among African Americans (467.2 per 100,000), and Whites (389.0 per 100,000). Overall, mortality rates for the leading causes of death are higher for males than females of the same age.

Age Adjusted Mortality Rates

While age-specific or crude mortality rates provide an estimate of the causes of death in a population, they may not be the best indicator of mortality because of age differences within populations. Age adjusted mortality rates provide unbiased comparisons that are not influenced by differences in age distribution in populations. The common base used to adjust the mortality rates is the 2000 United States standard population. The age adjusted mortality rates for all causes of death are displayed in Table 3-13 for racial/ethnic population groups in Minnesota. From 1989-1993 to 1997-2001, the age adjusted mortality rates have decreased slightly for African Americans, American Indians, Asians and Whites. Despite the decrease in 1997-2001, American Indian and African American rates are higher than that of Whites, Asians and Hispanics. Table 3-13 also shows the disparity ratio for each Population of Color. A disparity ratio above one indicates a disparity in the age adjusted rate between that population and Whites. The ratios have changed very little between the time periods. Disparities in the age adjusted mortality rates exist for African Americans and American Indians as compared to White mortality. Asian and Hispanic ratios are less than one for both time periods, meaning that the age adjusted deaths rates were actually lower than that of Whites.

Table 3-13
Age Adjusted All-Cause Mortality Rates and Disparity Ratios* by Race/Ethnicity
Minnesota, 1989-1993 and 1997-2001

	1989-1993		1997-2001	
	Age Adjusted Rate	**Rate Ratio ***	**Age Adjusted Rate**	**Rate Ratio ***
African American	1,194.3	1.5	953.8	1.3
American Indian	1,297.6	1.6	1,186.0	1.6
Asian	545.0	0.7	532.3	0.7
Hispanic	455.5	0.6	648.5	0.9
White	813.1	1.0	750.8	1.0

*Population of Color Rate/White Rate
Age adjusted to the 2000 Standard US Population
Source: Minnesota Department of Health, Center for Health Statistics

Age Adjusted Mortality Rates by Cause of Death

Table 3-14 ranks the causes of death for each racial/ethnic population using cause specific age adjusted mortality rates. The causes with the highest age adjusted rates are similar across the populations and mirror state as a whole. In 1997-2001, the leading causes of death for Minnesota were cancer, heart disease, stroke and chronic obstructive pulmonary disease

(COPD). Cancer and heart disease were the first or second leading cause of death for all racial/ethnic populations. Stroke was the third leading cause of death for all populations except American Indians, which was diabetes. The fourth leading cause of death varied by population. Only Whites mirrored the state with COPD as its fourth leading cause, while it was diabetes for African Americans and Hispanics and for unintentional injuries for American Indians and Asians.

Table 3-14. Ranking* of Cause Specific Age Adjusted Mortality Rates by Race/Ethnicity in Minnesota, 1997-2001

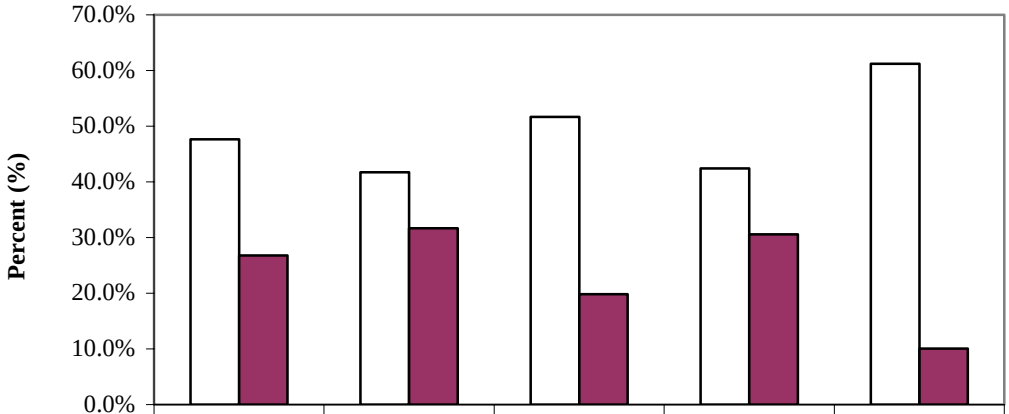
Rank	White	African American	American Indian	Asian	Hispanic
1	Cancer	Cancer	Heart Disease	Cancer	Cancer
2	Heart Disease	Heart Disease	Cancer	Heart Disease	Heart Disease
3	Stroke	Stroke	Diabetes	Stroke	Stroke
4		Diabetes	Unintentional Injuries	Unintentional Injuries	Diabetes
5	Unintentional Injuries	Unintentional Injuries		Diabetes	Unintentional Injuries
6	Diabetes		Stroke	Nephritis	
7	Influenza, Pneumonia	Influenza, Pneumonia	Cirrhosis		Nephritis
8	Alzheimer's Disease	Hypertension	Influenza, Pneumonia	Influenza, Pneumonia	Influenza, Pneumonia
9	Nephritis	Nephritis	Nephritis	Hypertension	Cirrhosis
10	Suicide	Homicide	Suicide	Suicide	Suicide
11	Hypertension	Alzheimer's Disease	Homicide	Congenital Anomalies	AIDS/HIV
12	Cirrhosis	AIDS/HIV	Perinatal Conditions	Homicide	Homicide
13	Congenital Anomalies	Suicide	**	Perinatal Conditions	Perinatal Conditions
14	Perinatal Conditions	Perinatal Conditions	**	**	Congenital Anomalies
15	Homicide	Cirrhosis	**	**	**

*For the actual age adjusted mortality rates, see Table 4.16
**Rates are not-calculated for under 20 events
Source: Minnesota Department of Health, Center for Health Statistics

Table 3-14 provides insight into causes of death for Populations of Color in Minnesota. Though comparing these rankings are important, it is also important to look at the magnitude causes of death have on each population and disparities that exist between Populations of Color and Whites. As expected cancer, heart disease, stroke and COPD make up the majority causes of deaths in the state. For the White and Asian populations more than half (61.2% and 51.7%) of all deaths were due to these causes (Figure 3-8). The percentages were slightly lower for African Americans (47.7%), Hispanics (42.4%) and American Indians (41.7%). Figure 3-8 shows the percent of deaths attributed to the causes of death that had the greatest disparities between

Populations of Color and Whites. These causes were AIDS/HIV, cirrhosis, diabetes, homicide, suicide and unintentional injury. Only 10% of White deaths were due to these causes compared to 19.6% for Asians, 26.8% for African Americans, 30.6% for Hispanics and 31.7% for American Indians.

Figure 3-8
Percent of all Deaths by Race/Ethnicity and Causes of Death



	African American	American Indian	Asian	Hispanic	White
Leading Causes	47.7%	41.7%	51.7%	42.4%	61.2%
Greatest Disparities	26.8%	31.7%	19.8%	30.6%	10.0%

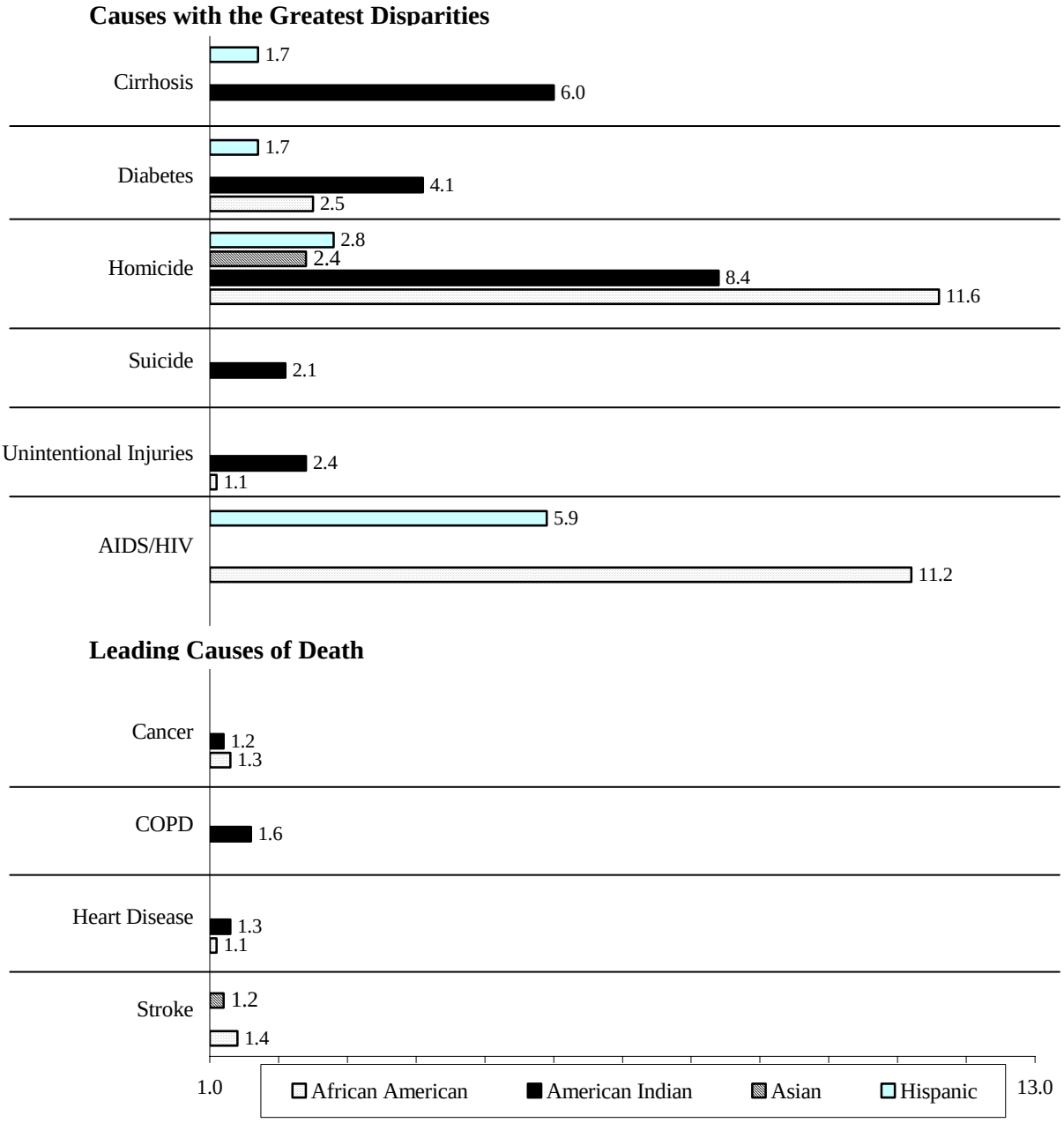
Leading Causes (Cancer, Chronic Obstructive Pulmonary Disease, Heart Disease, Stroke)

Causes with Greatest Disparities (AIDS/HIV, Cirrhosis, Diabetes, Homicide, Suicide, Unintentional Injury)

Source: Minnesota Department of Health, Center for Health Statistics

Figure 3-9 provides the age adjusted mortality rates ratios for the four leading causes of death and the six causes of death with the greatest disparities between Populations of Color and Whites. Among the leading causes of death, the disparities between Populations of Color are relatively low. The highest disparity ratio among all racial/ethnic groups in the four leading causes of death is 1.6 for chronic obstructive pulmonary disease for American Indians compared to Whites. In the greatest disparities category, the disparity ratio peaks at 11.6 (African Americans homicide). African Americans are 11 times more likely than Whites to die of homicide and AIDS/HIV and almost three times more likely to die from diabetes. American Indians are six to eight times more likely to die from cirrhosis and homicide, four times more likely to die from diabetes and twice as likely to die from homicide and suicide than Whites. Hispanics are six times more likely to die from AIDS/HIV and three times more likely to die from homicide than Whites.

Figure 3-9
Age-Adjusted Disparity Ratios^ for Populations of Color*
Compared to Whites in Minnesota, 1997-2001
By Leading Causes of Death and Causes with the Greatest Disparities**



COPD: Chronic Obstructive Pulmonary Disease
^Age-adjusted disparity ratios = Population of Color rate/White rate
* If a racial/ethnic group had a rate lower than or equal to the White rate, it was not included in the graph.
** in age adjusted rates between Populations of Color/American Indians and Whites.
Source: Minnesota Department of Health, Center for Health Statistics

Table 3-15, Frequency of Disparity by Race/Ethnicity, provides a summary of the number of times that a disparity occurs for each of the Populations of Color as compared to Whites for the "Leading" and "Greatest Disparities" causes of death. This table shows the total number of times in which the age adjusted rate ratio between Populations of Color and Whites is greater than one. For American Indians there was a disparity in nine of the 10 causes of death. Thus, in all but one of these causes of death the age adjusted mortality rate for American Indians was higher than the White rate. For African Americans the age adjusted death rate was higher in six of the 10 causes of death.

Table 3-15.
Frequency of Disparity by Race/Ethnicity

	Leading Causes	Selected Causes	Total	Disparity Percentage
African American	2	4	6	60%
American Indian	3	6	9	90%
Asian	1	1	2	20%
Hispanic	0	4	4	40%

Source: Minnesota Department of Health, Center for Health Statistics

Premature Death and Years of Potential Life Lost

It could be argued that it is the age of death, not the fact of death, that is the health indicator (since we all must die some time). So the need is for an indicator of the social burden of mortality – that is, the prematurity of death – rather than simply the rate or risk of mortality experienced by the group.
– Author Unknown

Years of Potential Life Lost (YPLL) is a measure of premature mortality within a population group that takes into account the age at which people die. YPLL is calculated by taking the number of years between age at time of death and an arbitrary cutoff point, often 65 years of age. Thus, a child who dies at 10 would be considered, for the purpose of this measurement, to have lost 55 years of potential life. YPLL draws attention to deaths, and to the causes of death, that occur early in life and which may therefore be more preventable.

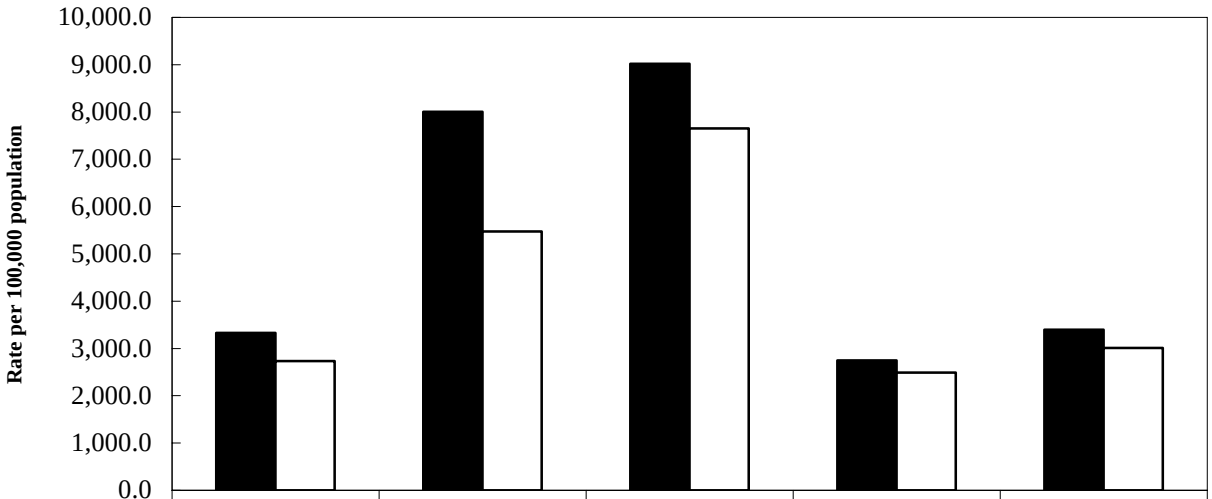
There are many ways to derive YPLL, both with varying lower and upper age limits. The most common method in the past has been to calculate lost years after excluding infant deaths and before age 65. The upper limit of 65 years has been raised by the Center for Disease Control (CDC) in their recent YPLL publications because of increases in life expectancy that occurred in the United States since the early 1980's. This report will measure YPLL under the traditional approach, with the upper age limit of 65 years based upon the percentage (60%) of deaths that occur to Populations of Color before age 65. (See Table 3-1, Age at Time of Death by Race/Ethnicity.)

The *number* of years of potential life lost prematurely does not show the relative impact of those years. A more effective way of comparing the years of potential life lost among different groups is to present the YPLL as a rate which is based upon the size for populations of interest. Figure 3-10 provides the YPLL rates for the five major racial/ethnic groups in Minnesota for the time

periods, 1989-1993 and 1997-2001. This figure shows that the highest rate of years of potential life lost occurs among American Indians. The age adjusted YPLL rate for American Indians was 7,654.2 per 100,000 compared to 1,730.8 for Whites.

The findings for YPLL are similar to the pattern seen for some of the age adjusted mortality rates. Even after adjusting for age, American Indians and African Americans had YPLL rates that are more than two times higher than for Whites. Asians and Hispanics, on the other hand, had YPLL rates that were fairly close to those of the White population. YPLL rates for each of the racial ethnic groups has declined, yet disparities continue to exist among these groups and the White population.

Figure 3-10
Years of Potential Life Lost Rate by Race/Ethnicity in Minnesota
1989-1993 vs 1997-2001
(Using 2000 Standard)



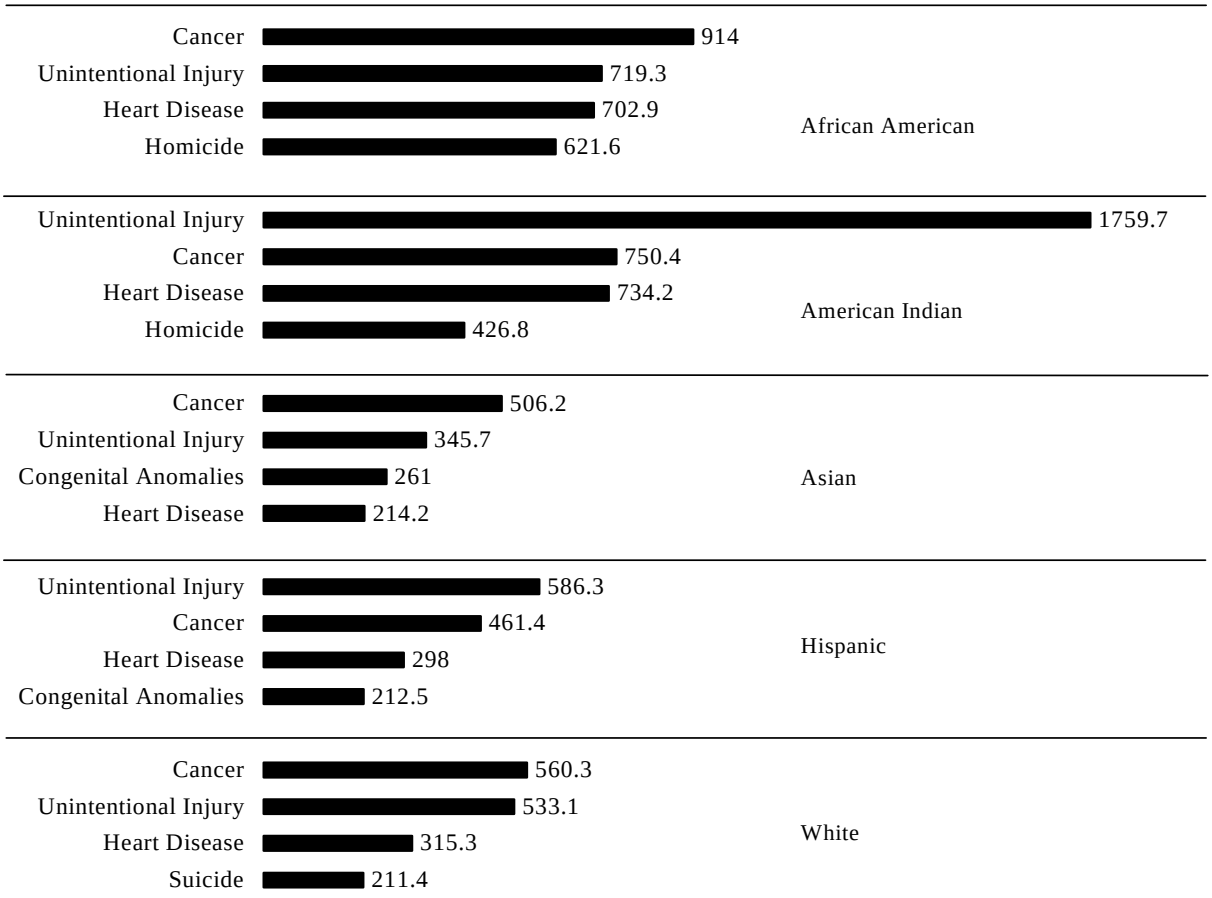
	White	African American	American Indian	Asian	Hispanic
■ 1989-1993	3,329.6	8,001.3	9,021.5	2,749.1	3,397.3
□ 1997-2001	2,730.8	5,474.8	7,654.2	2,493.0	3,007.8

Source: Minnesota Department of Health, Center for Health Statistics

Years of Potential Life Lost and Cause of Death

Figure 3-11 presents the four leading causes of YPLL for each racial/ethnic group. This figure indicates that cancer and unintentional injury are the first or second leading causes of premature death among all racial/ethnic groups. Heart disease is also one of the leading causes of death for all groups. The YPLL rate for unintentional injury is considerably higher among American Indians as compared to other leading causes including those leading causes of other groups. Among the African American, Asian and White populations, cancer is the leading cause of death contributing to higher YPLL rates.

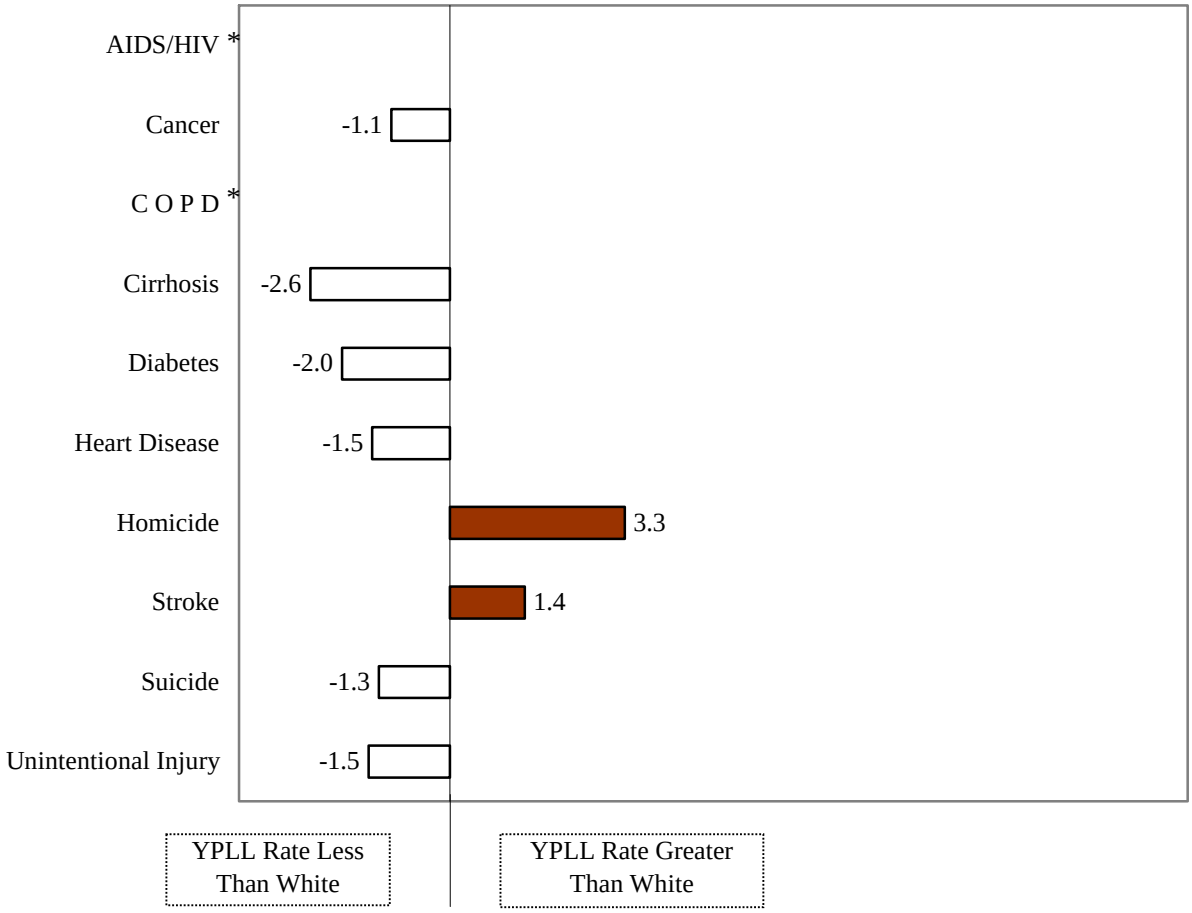
Figure 3-11. Causes of Death and Potential Life Lost (YPLL) Rate per 100,000 Minnesota, 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics

Figure 3-12 to 3-15 provide the disparity ratio of YPLL rates for the four leading causes of death and the six causes of death with the greatest disparities between Populations of Color and Whites. White bars on the left indicate those mortality causes and cause specific YPLL rates where the rates are lower than White rates. Bars on the right indicate where the cause specific YPLL rates are greater than the rate for Whites.

Figure 3-12. Disparity Ratio of Asian to White YPLL Rates by Leading and Selected Causes of Death: Minnesota, 1997-2001

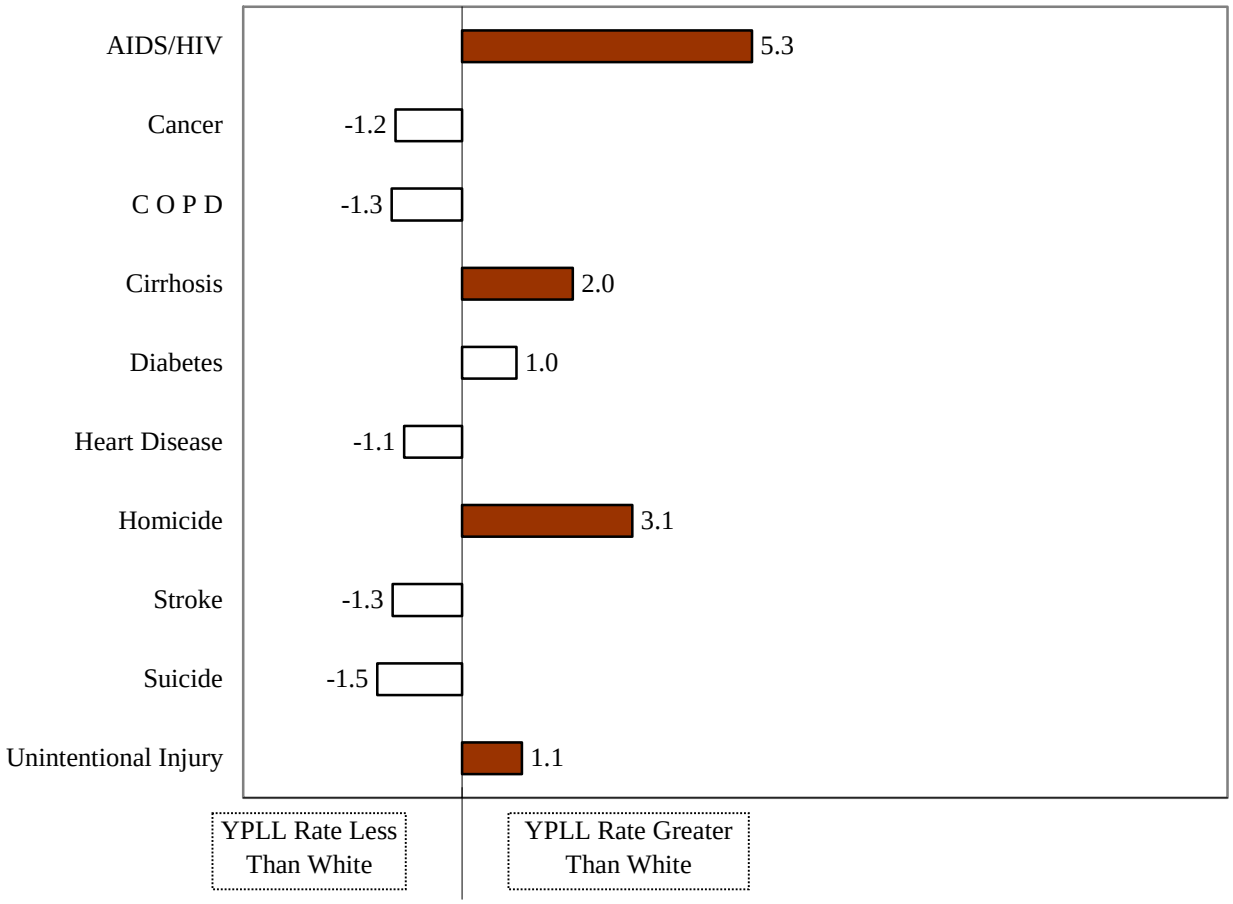


* Ratio not calculated for 20 or less events

Source: Minnesota Department of Health, Center for Health Statistics

The ratio of Asian to White YPLL graph indicates that the YPLL rate for Asians is actually lower than that of Whites for almost all of the specified causes of death. The greatest disparities in YPLL rates for this population are deaths due to homicide where the YPLL rate for Asians is 3.3 times higher than the rate for Whites and stroke where the YPLL rate is only slightly higher (1.4 times) than Whites.

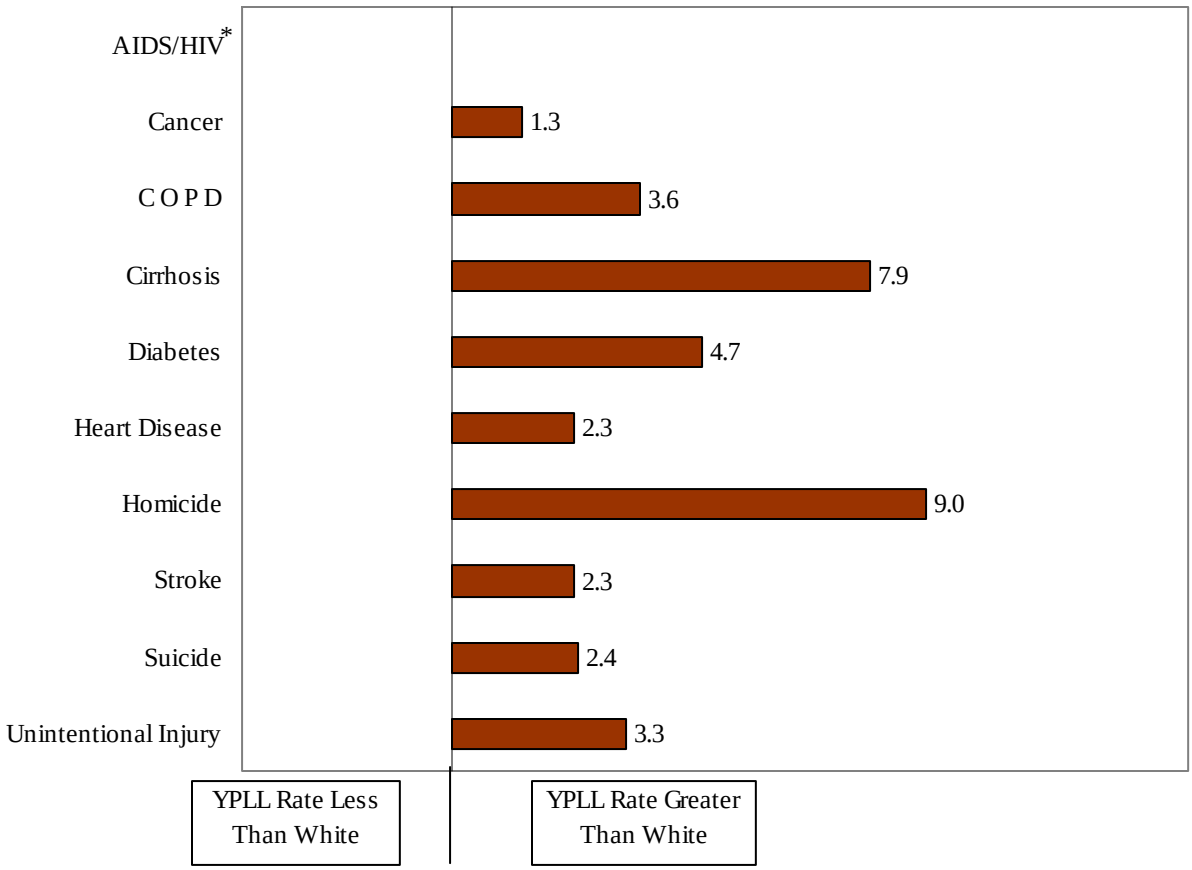
Figure 3-13. Disparity Ratio of Hispanic to White YPLL Rates by Leading and Selected Causes of Death: Minnesota, 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics

The ratio of Hispanic to White YPLL graph indicates that the YPLL rate for Hispanics is actually lower than Whites for cancer, chronic obstructive pulmonary disease, heart disease and stroke. The greatest disparities in YPLL rates for this population are deaths due to AIDS/HIV where the YPLL rate for Hispanics is 5.3 times higher than the rate for Whites and homicide where the YPLL rate is 3.1 times that of Whites.

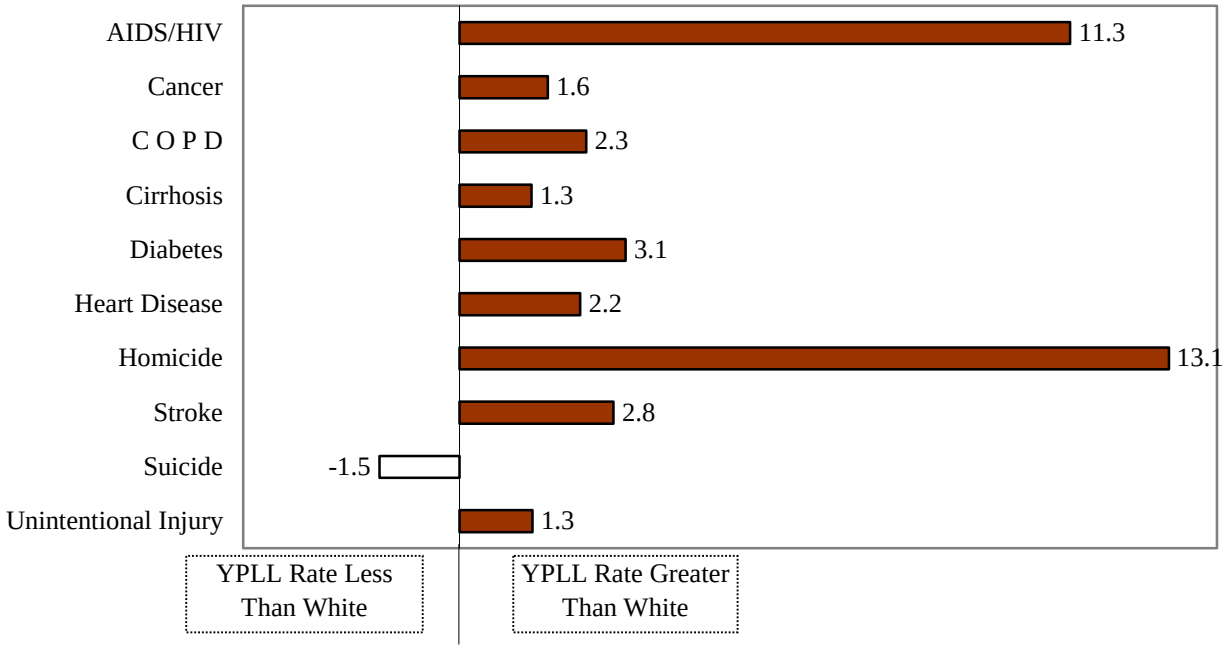
Figure 3-14. Disparity Ratio of American Indian to White YPLL Rates by Leading and Selected Causes of Death: Minnesota, 1997-2001



*Ratio not calculated for 20 or less events
Source: Minnesota Department of Health, Center for Health Statistics

The ratio of American Indian to White YPLL graph indicates that the YPLL rate for American Indians is greater than Whites in all of the ten causes of death indicated. The YPLL rate for American Indian homicide is 9 times the rate of Whites. The YPLL rate for cirrhosis is 7.9 times and AIDS/HIV is 6.6 times that of Whites.

Figure 3-15. Ratio of African American to White YPLL Rates by Leading and Selected Causes of Death: Minnesota, 1997-2001



Source: Minnesota Department of Health, Center for Health Statistics

The YPLL rate ratios of African Americans to Whites are similar to American Indian ratios. Even more drastic of a disparity, the YPLL rate for homicide is 13.1 times that of Whites and the YPPL rate for AIDS/HIV is 11.3 times that of Whites.

Overall these ratios portray a troubling picture, especially for African Americans and American Indians. Even while rates are generally better for Asians and Hispanics as a group, it is possible that disparities may be appearing among more recent immigrant populations.

Conclusion

The analysis of mortality data leads to an immediate and overarching conclusion—from adolescence through adulthood, Populations of Color (African American, Asian, Hispanic) and American Indians die younger and at higher rates than other racial/ethnic groups in Minnesota. The disparities between these populations and other racial/ethnic groups are most evident among African American and American Indian groups. In the course of this analysis, Asian and Hispanic populations sometimes appeared to have fewer or less extreme disparities as compared to Whites. However, there is a possibility that new health difficulties may emerge as immigrant populations adapt to living in the U.S. and Minnesota. It is also likely that some sub-populations of these groups (e.g. Southeast Asian, Hmong, Vietnamese, Somali), may be experiencing greater health difficulties that are not measured and monitored by existing data mechanisms.

This section indicates that disparities in death rates and causes of death differ among populations in Minnesota. In order to improve the health of all Minnesotans then, there must be concerted effort among policy-makers, practitioners, and researchers to identify the sources and solutions for each of these groups.

Endnotes

Table 3-16. Age Adjusted Mortality Rates per 100,000 population by Race and Ethnicity: Minnesota, 1997-2001

Cause	White	African American	American Indian	Asian	Hispanic
AIDS/HIV	0.9	10.2	5.7	0.6	5.3
Alzheimer's Disease	16.8	12.8	18.1	6.5	0.0
Cancer	184.6	244.6	228.7	137.8	153.0
Chronic Obstructive Pulmonary Disease	37.7	33.5	58.7	19.1	14.8
Cirrhosis	6.4	6.6	38.4	4.1	11.3
Congenital Anomalies	4.0	4.5	3.7	4.5	3.8
Diabetes	23.0	57.7	94.4	20.1	39.9
Heart Disease	183.9	181.1	246.2	81.5	153.0
Hypertension	7.5	21.2	6.7	11.5	3.1
Homicide	1.6	18.9	13.8	4.0	4.6
Influenza, Pneumonia	21.0	22.5	26.9	12.4	12.6
Nephritis	11.6	19.5	26.3	20.0	14.6
Perinatal Conditions	2.7	6.8	5.5	3.2	4.0
SIDS	0.7	1.5	2.8	0.2	0.9
Stroke	56.0	76.7	57.3	66.6	44.2
Suicide	9.1	7.2	19.1	9.2	7.4
Unintentional injuries	33.9	38.7	81.7	23.0	30.0

Source: Minnesota Department of Health, Center for Health Statistics

Chapter IV

Illness and Injury

Introduction

A major concern of public health surveillance activities across the nation continues to be a lack of comprehensive information about illnesses and injuries. While our vital records (births and deaths) are comprehensive and reliable, there are few data sets available that help monitor and assess the health status, disease rates, and healthy behaviors of the population over the lifespan. This is an issue for public health agencies in general and more specifically an issue that affects the availability of data for Populations of Color in Minnesota and elsewhere. Since the last *Populations of Color Health Status Report*, there has been some progress in the collection and dissemination of illness, injury, and health behavior data, yet from this chapter it is evident that data gaps continue to exist.

Some disease conditions are tracked in a comprehensive and rigorous manner. Communicable disease including HIV/AIDS and tuberculosis are collected with solid race/ethnicity data. Cancer incidence by race/ethnicity from the Minnesota Cancer Surveillance System (MCSS) is a new addition to the current version of the *Populations of Color, Health Status Report.* For the first time, incidence rates are available by race/ethnicity for most types of cancer. In another area, solid race ethnicity data on the uninsured in Minnesota is also included in this report, the result of a recent U.S. Department of Health and Human Services funded study.

Several efforts are also underway to improve the collection and dissemination of race/ethnicity data related to illness and disease. The Minnesota Department of Health has recently received funds for a Pregnancy Risk Assessment Monitoring System (PRAMS), looking at maternal behaviors during pregnancy. Also, programs such as brain injuries and childhood lead surveillance are developing higher levels of rigor in data collection in general and collecting race/ethnicity information in particular. As these data collection activities are further developed, information will also be made available for future reports.

There continue to be other health conditions for which information on Minnesota Populations of Color are currently unavailable. For example, a major survey of health status and health behaviors, called the Behavioral Risk Factor Surveillance System survey, is conducted with random sample of 4000 adults in Minnesota each year. Unfortunately, the number of People of Color in the random sample is not large enough to generate reliable health status and behavior estimates for participants by racial/ethnic groups. A future priority will be to undertake special sampling methods to generate reliable data on Populations of Color through health surveys.

Cancer Incidence

The Minnesota Cancer Surveillance System (MCSS) is the state's cancer registry. The MCSS systematically collects demographic and diagnostic information on all Minnesota residents with newly diagnosed cancers. The MCSS monitors the occurrence of cancer in Minnesota and describes the risks of developing cancer, informs health professionals and educates citizens regarding specific cancer risk. A recent report of the MCSS indicates that racial/ethnic disparities do exist in the incidence rates of some cancers in Minnesota.

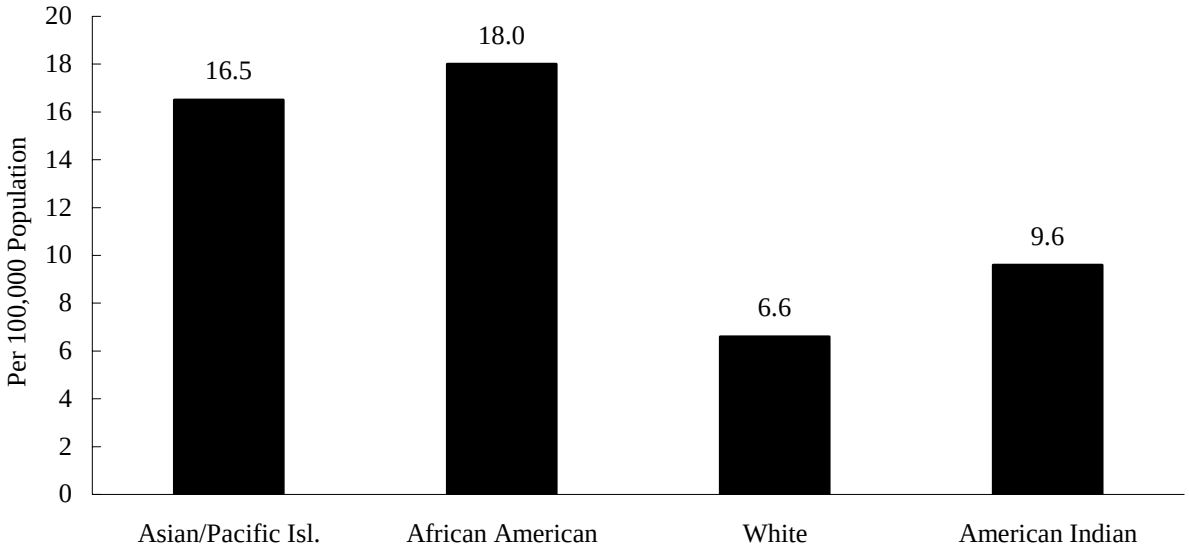
For the five-year period 1996-2000, the overall cancer incidence rates are highest among African American males, which are about 28 percent higher than that of White men. African American and American Indian males have the highest incidence rates of cancers of the lung and bronchus when compared to White men. The risk of African American and American Indian men dying of lung and bronchus cancer is nearly twice that of White men. American Indian and African American men also have the highest incidence rates of colorectal cancer. Their risk of being diagnosed with colorectal cancer is 35 or more percent higher than for White men. African American males have the highest incidence rate of prostate cancer and their risk of dying from prostate cancer is more than two and half times that of White men.

Cancer incidence varies among racial/ethnic groups.

The overall cancer incidence rate is similar between African American and White women while Asian/Pacific Islander women have the lowest overall cancer incidence rate for the years 1996-2000. White women are at the greatest risk for being diagnosed with breast cancer. However, African American women are at the greatest risk of dying of this disease. The breast cancer mortality rate among African American women is 30 percent higher than among White women, despite the fact that their incidence rate is 25 percent lower. Cervical cancer incidence rates are also higher among some Populations of Color. This risk of being diagnosed with cervical cancer among African American and Asian/Pacific Islander women in Minnesota is over twice as high as that of White women.

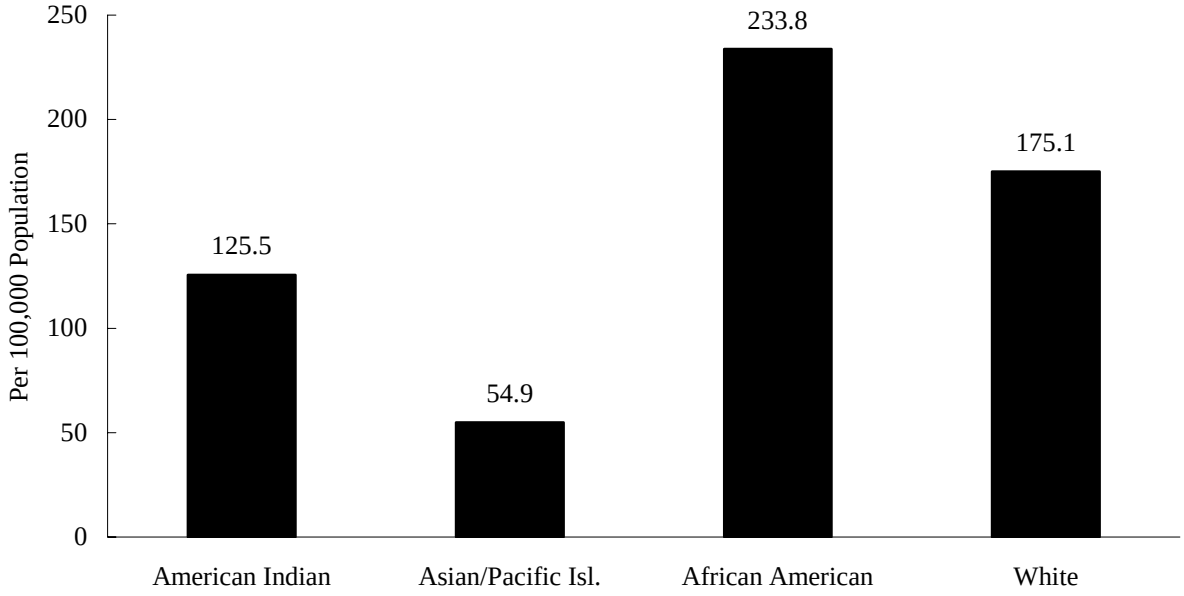
The Minnesota Cancer Surveillance System provides race/ethnicity data for cancer mortality and incidence. Ethnicity (Hispanic origin) is difficult to collect and report accurately in Minnesota. Even when medical records are viewed, usually no mention is made of whether or not a person is of Hispanic origin. Exploratory analyses of the available data indicate that the Minnesota Cancer Surveillance System does not have complete enough data to provide meaningful information on cancer incidence among Minnesota's Hispanic population at this time. As a result, this report does not include data for the Hispanic population. Further work, including examining the usefulness of matching with Hispanic surname lists, as is done in other states, is planned so that information can be available on cancer incidence in this growing population in Minnesota.

Figure 4-1. Cervical Cancer Incidence by Race and Ethnicity: Minnesota 1996-2000



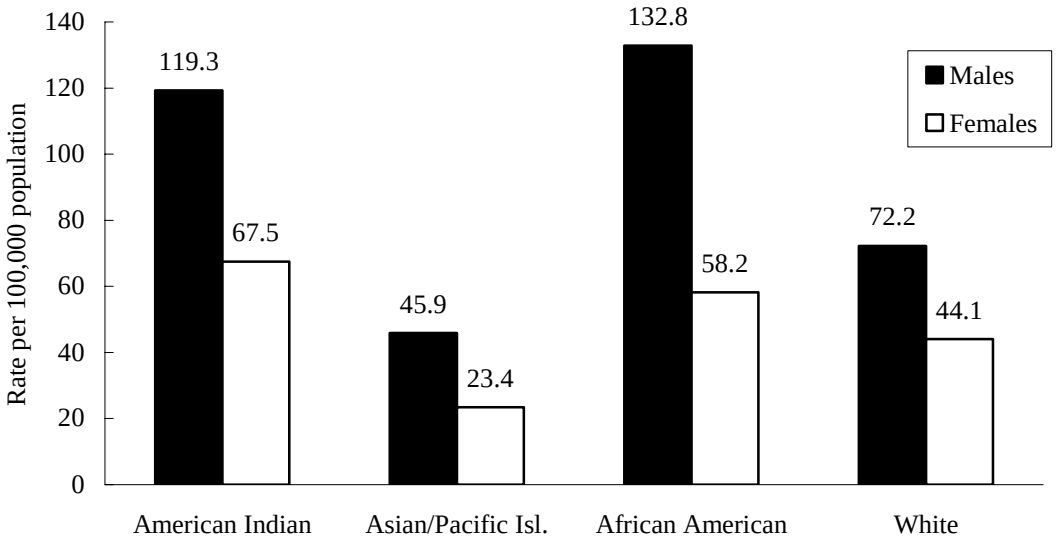
Source: MCSS. Rates are per 100,000 population and age-adjusted to the 2000 population. Rates are not reported where less than 10 cases have occurred or where a statistic could not be calculated.

Figure 4-2. Prostate Cancer Incidence by Race and Ethnicity: Minnesota, 1996-2000



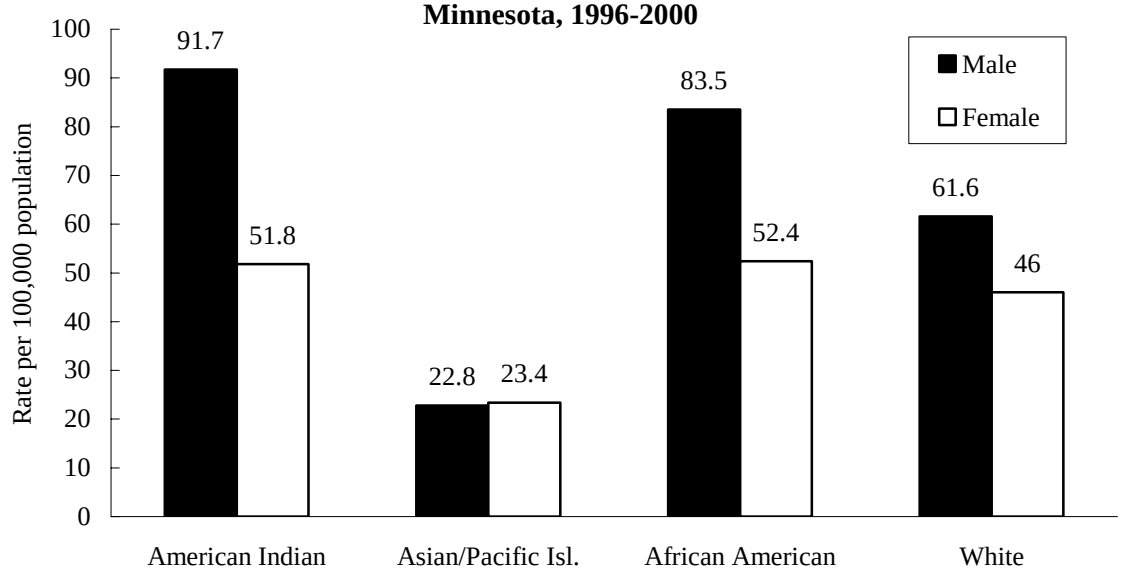
Source: MCSS. Rates are per 100,000 population and age-adjusted to the 2000 population. Rates are not reported where less than 10 cases have occurred or where a statistic could not be calculated.

Figure 4-3. Lung and Bronchus Cancer Incidence by Race and Gender: Minnesota, 1996-2000



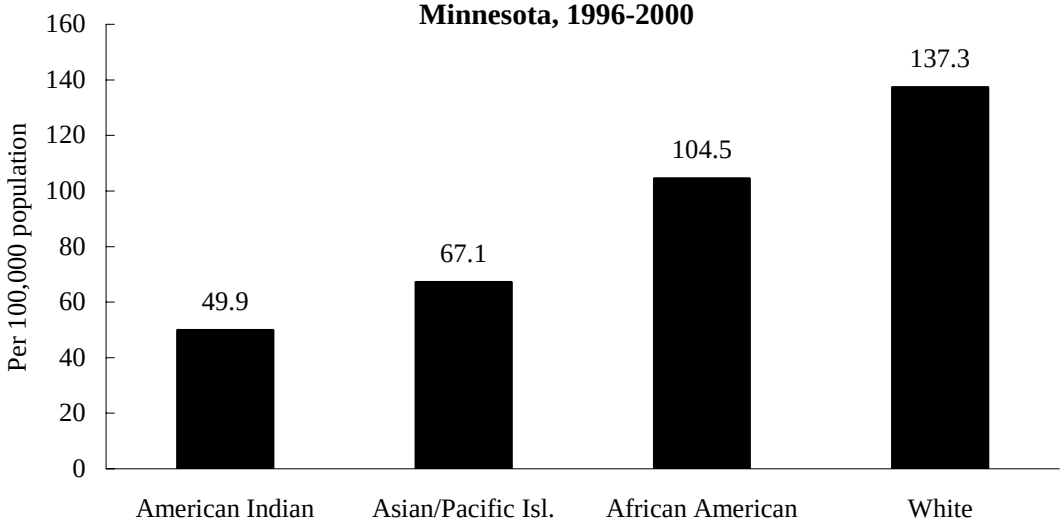
Source: MCSS. Rates are age-adjusted to the 2000 population. Rates are not reported where less than 10 cases have occurred or where a statistics could not be calculated.

Figure 4-4. Colorectal Cancer Incidence by Race and Gender: Minnesota, 1996-2000



Source: MCSS. Rates are per 100,000 population and age-adjusted to the 2000 population. Rates are not reported where less than 10 cases have occurred or where a statistics could not be calculated.

Figure 4-5. Female Breast Cancer Incidence by Race and Ethnicity: Minnesota, 1996-2000



Source: MCSS. Rates are age-adjusted to the 2000 population. Rates are not reported where less than 10 cases have occurred or where a statistic could not be calculated.

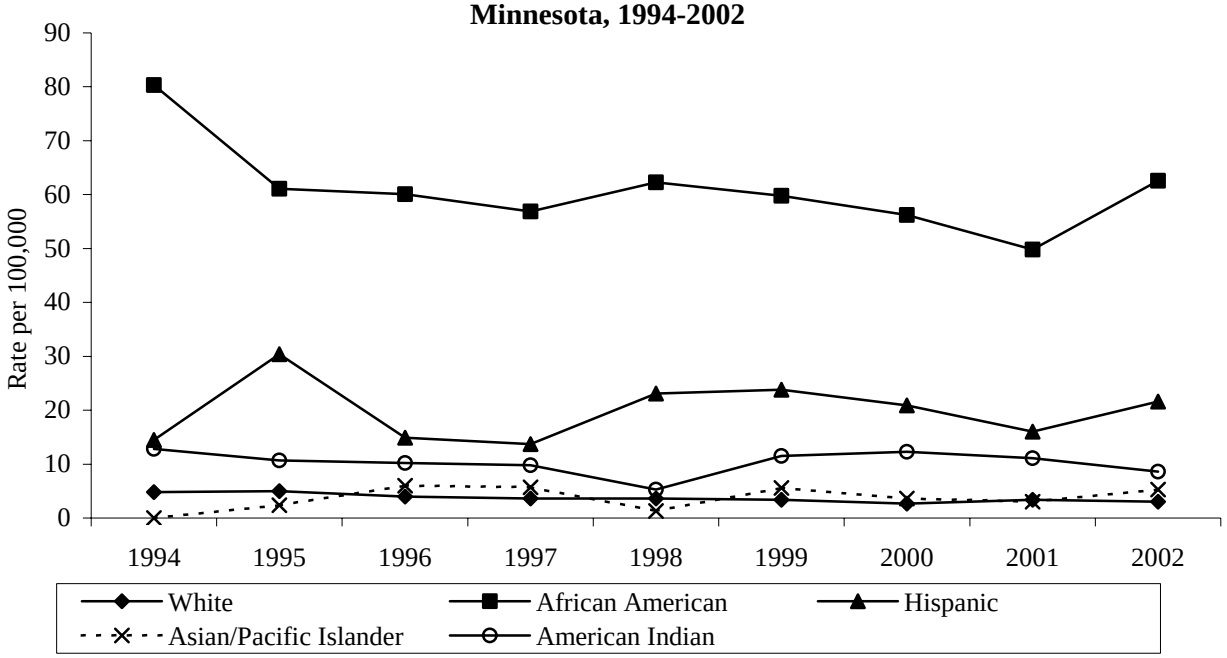
AIDS/HIV

MDH collects case reports of HIV and AIDS through passive and active surveillance systems, relying on physicians and laboratories to report cases in compliance with state law. Factors that affect completeness and accuracy include case reporting, timeliness of case reporting, test-seeking behaviors of HIV-infected individuals, and the availability and targeting of testing services. Certain events have also impacted trends in HIV/AIDS surveillance data. For example changes over time in the surveillance case definition (most notably the 1993 expansion of the case definition for adults and adolescents) have resulted in artificial jumps in AIDS case counts at the time the new definition went into effect or in the preceding year because changes in case definition allowed for retrospective diagnosis.

African Americans experience high rates of HIV infections.

Minnesota HIV infections and rates include all new cases of HIV (both HIV, non-AIDS) and AIDS at first diagnosis). In 2002, Whites accounted for 42 percent of new HIV infections and African Americans (including both U.S. and foreign born) accounted for 41 percent of new infections, even though African Americans account for only 4 percent of the general population. These factors are indicated in the elevated rates among these groups.

Figure 4-6. New HIV Infections* By Race/Ethnicity (Rate per 100,000): Minnesota, 1994-2002



Source: Minnesota Department of Health HIV/AIDS Surveillance System
* HIV or AIDS at first diagnosis

New AIDS cases have declined or remained stable for most racial/ethnic groups. However, cases have increased among African born persons, from 8 cases in 1996 to 29 cases in 2002, over a 200 percent increase.

Table 4-1.
Numbers of New AIDS Cases by Racial Ethnic Group 1996-2002

Racial/Ethnic Group	1996	1997	1998	1999	2000	2001	2002
White	172	117	100	81	73	57	68
African American	58	46	52	38	44	28	33
African-born	8	12	16	13	18	21	29
Hispanic	12	12	19	20	18	11	16
Asian/Pacific Islander	4	4	2	5	2	3	0
American Indian	8	6	8	6	7	7	5
Total	262	197	197	163	162	127	151

Source: Minnesota Department of Health HIV/AIDS Surveillance System

Table 4-2.
HIV Infections* and rates per 100,000 by Racial/Ethnic Group: Minnesota, 1996 and 2002

	1996			2002		
Racial/Ethnic Group	Number	Percent	Rate	Number	Percent	Rate
Black, African American	84	28.5%	52.6	62	20.5%	37.0
Black, African-born	12	4.1%	**	65	21.4%	130-185**
American Indian	7	2.4%	10.2	7	2.3%	8.6
Asian	8	2.7%	6.1	9	3.0%	5.3
Hispanic	16	5.4%	14.9	31	10.2%	21.6
White	168	56.9%	4.0	129	42.6%	3.0
Total	295	100.0%	6.3	303	100.0%	6.2

Source: Minnesota Department of Health HIV/AIDS Surveillance System
* HIV Infection includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis among Minnesota residents in the years indicated.
** Accurate population estimates for Black, African-born persons living in Minnesota are unavailable – no U.S. Census estimate was available for 1996; anecdotal (50,000) and 2000 U.S. Census data (35,188)) were used to create the range of rates reported for African-born persons in 2002. The 2002 population estimate for Black, African-American persons (167,784) was calculated by subtracting the U.S. Census estimate for African-born persons (35,188) from the total Black population (202,972). Note that this assumes that all African-born persons are Black (as opposed to another race)..5

In 2002, among White adults and adolescents living with AIDS, over 74 percent were men who contracted the disease through unprotected sex with other men. Approximately one-third of African Americans, American Indians, and Asians contracted the disease in this way. Among these Populations of Color, exposure to AIDS occurred more frequently through heterosexual contact or by other means including receipt of blood/blood products or organ transplants, mother to child exposure, or unspecified causes.

Table 4-3.
Percent of Persons Living with HIV/AIDS by Exposure Category and Racial/Ethnic Group: Minnesota, 1996 and 2002

	African American		American Indian		Asian		Hispanic		White		African	
Exposure Category	1996	2002	1996	2002	1996	2002	1996	2002	1996	2002	1996	2002
Men who have sex with men (MSM)	39	35	32	36	45	33	46	46	72	72	3	3
Injecting drug use (IDU)	21	17	27	22	5	2	26	13	7	5	0	0
MSM and IDU	7	5	13	8	0	2	6	3	7	6	0	0
Heterosexual contact	14	18	17	22	10	14	11	18	7	8	13	13
Other/unspecified***	19	25	11	12	40	49	11	20	8	9	84	84
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Minnesota Department of Health HIV/AIDS Surveillance System
*** Other = Cases of HIV/AIDS due to receipt of blood/blood products or organ transplant, mother to child transmission. Unspecified = Cases who did not acknowledge other risk factors or could not be, have not yet been, or refused to be interviewed.

Sexually Transmitted Diseases

Laboratory-confirmed infections of chlamydia, gonorrhea, and syphilis are also monitored by MDH through a passive combined physician and laboratory-based surveillance system. State law requires both physicians and laboratories to report cases of sexually transmitted diseases. Factors that impact the completeness and accuracy of the available data on STDs include the level of screening; accuracy of diagnostic tests; and compliance with case reporting.

In 2002, the data indicate disparities in the incidence of sexually transmitted diseases (STD's) among racial/ethnic groups in Minnesota. The rates of chlamydia and gonorrhea are higher among all Populations of Color as compared to Whites. Rate ratios indicate that African Americans case rates for chlamydia are almost 15 times that of Whites. Other racial groups are 2.5 to 6 times that of Whites. Rate ratios for gonorrhea indicate that the rate for African Americans is over 39 times that of Whites. Syphilis rates are also elevated among African Americans, almost 5 times that of the White population.

Table 4-4.
Number of Cases, Rates (per 100,000 population) and Rate Ratio of Sexually Transmitted Diseases by Race/Ethnicity: Minnesota, 1996 & 2002

	1996*			2002**			
Race/Ethnicity	Cases	Rate	Rate Ratio+	Cases	Rate	Rate Ratio	Percent Rate Change
Chlamydia:							
White	2,480	59.0	1.0	4,335	97.0	1.0	64.4%
African American	1,779	1391.0	23.6	2,931	1444.0	14.9	3.8%
American Indian	220	376.0	6.4	304	375.0	3.9	-0.3%
Asian	174	164.0	2.8	412	245.0	2.5	49.4%
Hispanic	340	490.0	8.3	838	584.0	6.0	19.2%
Gonorrhea:							
White	600	14.0	1.0	857.0	19.0	1.0	35.7%
African American	1,594	1253.0	89.5	1512.0	745.0	39.2	-40.7%
American Indian	60	103.0	7.4	71.0	88.0	4.6	-14.6%
Asian	23	22.0	1.6	49.0	29.0	1.5	3.2%
Hispanic	83	120.0	8.6	131.0	91.0	4.8	-24.2%
Syphilis:							
White	8	0	***	42	0.9	1.0	***
African American	37	29.0	***	9	4.4	4.9	-84.8%
American Indian	0	0	***	0	0.0	0.0	0.0%
Asian	2	2.0	***	0	0.0	0.0	-100.0%
Hispanic	0	0	***	4	2.8	3.1	***

Source: Minnesota Department of Health STD Surveillance System

* Cases per 100,000 persons based on 1995 population estimates and/or 1996 population projections by race/ethnicity. 1996 cases and rates are based on the number of reports of STDs, 2002 data includes numbers and rates based on STD diagnoses. 1996 race categories are mutually exclusive.

** Race categories include persons by race alone or in combination with one or more races. Persons of Hispanic ethnicity may be of any race. Number of cases does not include "unknown" or "other" race. In addition to the cases above, there were 2,125 chlamydia, 560 gonorrhea, and 8 cases of syphilis of unknown or other race groups. Totals for the state include 10,107 cases of chlamydia, 2,039 cases of gonorrhea, and 59 cases of syphilis.

*** Not computed since 1996 rate equal to zero.

+ Rate Ratio = Group rate/White Rate

Chlamydia rates in Minnesota have not changed significantly among African Americans and American Indians between 1996 and 2002, however rates among Asians, Hispanics, and Whites have increased sharply in the same time period. Gonorrhea rates for African Americans, American Indians and Hispanics have declined but increased greatly among Whites in Minnesota. Syphilis rates among African Americans and Asians have declined significantly from 1996 figures.

Tuberculosis

Since initiating public health surveillance for tuberculosis (TB) disease in 1953, the CDC has documented a significant decline in the incidence of TB. In 2002, the national TB incidence rate was 5.2 cases per 100,000 population, which is 7 percent below the rate of 5.6 cases per 100,000 reported in 2001 and a fraction of the 53 cases per 100,000 reported in 1953.

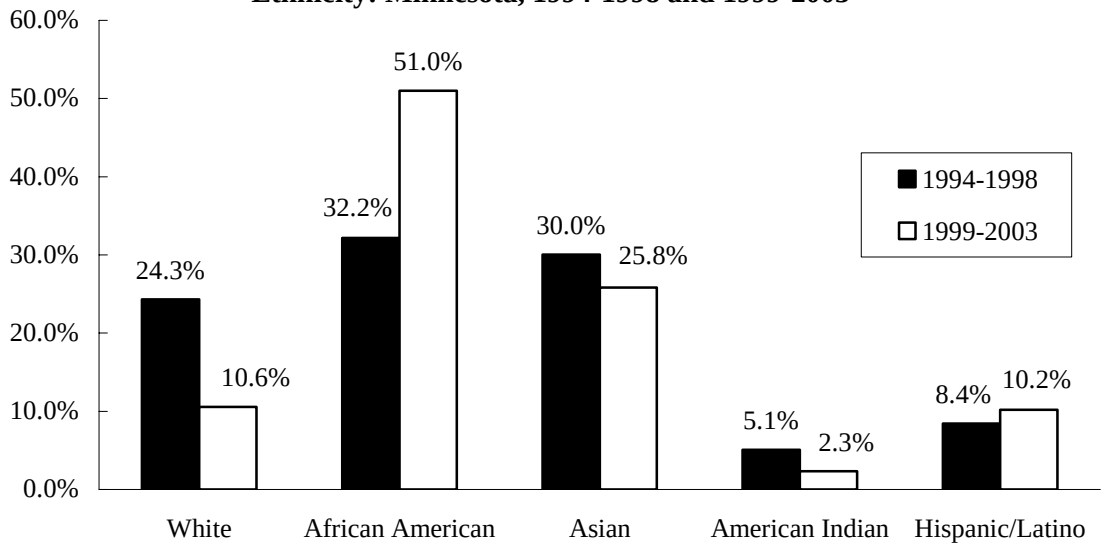
Despite this encouraging decline in the incidence of TB, of great concern are recent trends that highlight the growing proportion of TB cases occurring among the foreign-born population and continuing disparities in the burden of TB among Populations of Color and Whites. The proportion of TB cases that occur among foreign-born populations in the U.S. has increased significantly. In 2002, 51 percent of TB cases reported in the U.S. occurred among the foreign-born, compared to 27 percent of cases in 1992. TB incidence rates further illustrate the disparities that exist between the U.S. born and foreign-born populations; in 2002, the U.S.-born TB rate was 2.9 cases per 100,000, compared to the foreign-born rate of 23.1 cases per 100,000.

Racial/ethnic groups within the U.S. also experience great disparities in rates of TB. Among all race and ethnic groups in the U.S. in 2002, TB incidence rates among Asian/Pacific Islanders were the highest (27.8 cases per 100,000) and were more than 18 times that of Whites (1.5 per 100,000). TB incidence rates for African Americans, Hispanics, and American Indians were approximately five to eight times greater than Whites in the U.S.

Tuberculosis trends in Minnesota are consistent with national trends.

Since the previous 5-year reporting period of 1994-1998, current figures for 1999-2003 show that the percentages of TB cases in Minnesota that occur among African Americans and, less markedly, among Hispanics have increased. The largest proportion of TB cases in Minnesota currently occurs among African Americans.

Figure 4-7. Percent of Total New Tuberculosis Cases by Race and Ethnicity: Minnesota, 1994-1998 and 1999-2003



Since 1999, the number of new TB cases reported in Minnesota has fluctuated from a low of 178 in 2000 to a high of 239 in 2001 (214 new cases were reported in 2003). TB rates for all non-White racial/ethnic groups are significantly higher than among the White population in Minnesota. In 2003, the TB incidence rate for African Americans was 208 times that of Whites, the Asian rate was 153 times that of Whites, the American Indian rate was 36 times that of Whites, and the Hispanic rate was 46 times that of Whites.

Table 4-5.
Tuberculosis Cases by Race/Ethnicity: Minnesota, 1999-2003

Race/Ethnicity	1999	2000	2001	2002	2003	Total
White	25	22	21	30	15	113
African American	95	91	132	120	107	545
Asian	55	32	63	61	65	276
American Indian	7	3	6	3	6	25
Hispanic	19	30	17	23	20	109
Multi-racial*	0	0	0	0	1	1
Total	201	178	239	237	214	1,069

* Data collection for Multi-Racial category began in 2003.

Traumatic Brain Injury and Spinal Cord Injury

Traumatic brain injuries (TBI) and spinal cord injuries (SCI) can be catastrophic for both individuals and families and result in enormous economic and human costs. These injuries can result in death, disability, or injuries that can have lifelong effects. TBI is the leading cause of death and disability for young people in our country.

In Minnesota, the state legislature directed the Minnesota Department of Health (MDH) to examine the causes, occurrence, and prevention of TBI and SCI in Minnesota. The MDH maintains a registry of traumatic brain injuries and spinal cord injuries. Injuries are reported to the registry by medical trauma centers, hospitals in the state, and some out-of-state hospitals. Coverage is 89 percent of all injury hospitalizations to Minnesota residents.

Incidence rates often vary among different racial groups. However many reports to the TBI/SCI Registry do not always include the race of the individual. Because of the incompleteness of this and other key variables in the MDH TBI/SCI Registry, MDH has worked closely with the CDC to use all of the TBI/SCI cases in the Registry to abstract an annual, representative sample of approximately 1000 TBI and all SCI cases for 1996-1999. Race data has been abstracted as part of the sample, and is the most accurate and most representative race data available for TBI and SCI in Minnesota.

TBI and SCI rates for each racial/ethnic group higher than Whites

While the actual number of traumatic brain and spinal cord injuries is greatest among Whites, the incidence rates are greater in each of the racial groups (the incidence rate of TBI is lower for those of Hispanic ethnicity). Results indicate that American Indian TBI rates are over three times that of Whites; African American rates are over twice as high. Results for SCI indicate a similar pattern among the Populations of Color, American Indians, and Whites. Rates were age-adjusted to reflect differing age structures across populations.

These disparities show up despite the fact that racial/ethnic background was not recorded in the medical record of 26.6 percent of all patients with TBI and 31.6 percent of all patients with SCI: even supposing that all of the cases missing race/ethnicity data were White, incident rates for American Indians and African Americans would still exceed that of Whites.

Table 4-6.
Traumatic Brain Injury and Spinal Cord Injury by Race and Ethnicity, MN 1999

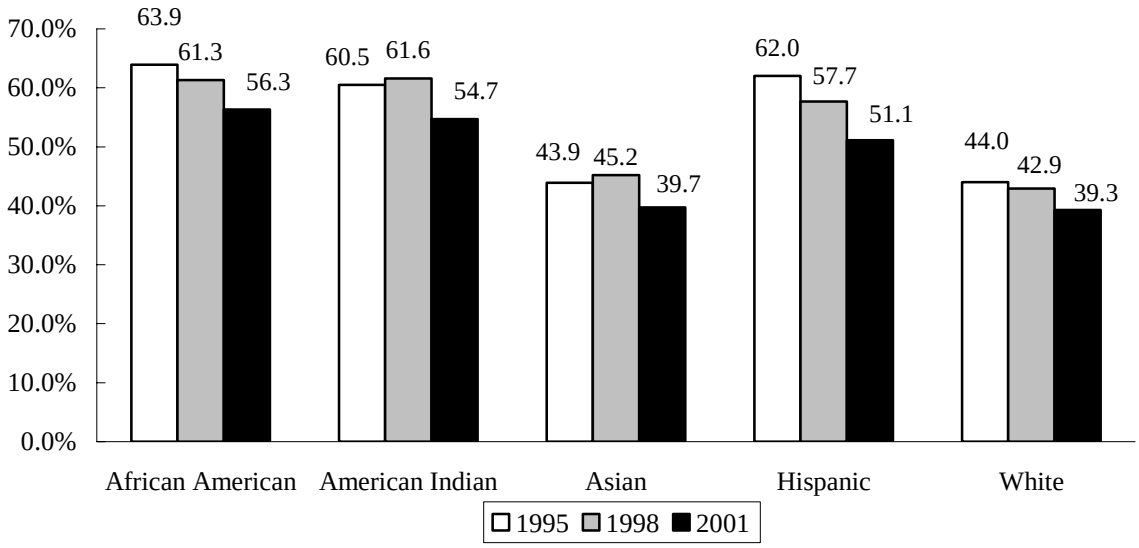
Race	Population 1999	TBI 1999 (Sample)			SCI 1999	
		n	n*weight	Rate	N	Rate
Hispanic (any race)	173,402	20	74	37.12	4	3.11
White	4,437,800	753	2758	60.91	126	2.83
Black or African American	148,596	45	165	143.68	12	9.66
American Indian and Alaska Native	58,575	27	100	223.70	5	13.58
Asian	130,537	22	80	68.93	4	3.87
Unknown		306	1121		68	
Percent Unknown		26.5%	26.6%		31.6%	
Total	4,775,508	1153	4223	87.82	215	4.51

Rates per 100,000 population are age-adjusted to the U.S. 2000 Standard Population.
Population estimates are from the U.S. Census Bureau.
Race and ethnicity were reabstracted for a stratified random sample of TBI cases.
Weight = N/n = 4222/1153. Total weighted N of 4223 is due to rounding error.

Violent Acts Among Minnesota Youth

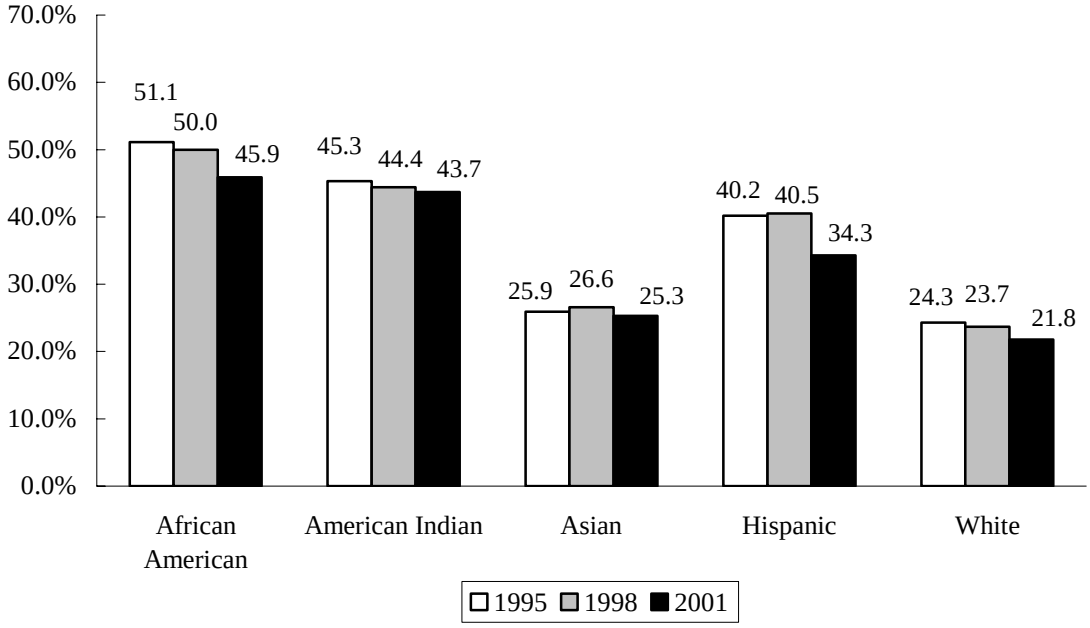
According to the most recent results of the Minnesota Student Survey (MSS), students are reporting both a reduction in their propensity toward violence and in violent acts perpetrated against them by adult household members. In 2001, the percent of 6^{th}, 9^{th}, and 12^{th} grade girls who reported hitting or beating up someone in the past 12 months had declined among all racial/ethnic groups. There were still significant differences among racial/ethnic groups, African American and American Indian girls reporting that they had hit or beat up someone twice as often as Whites. While the percent of Hispanic girls who reported hitting or beating someone up has declined, the percent is still higher than Whites. Among boys of the same grade levels, similar patterns emerged though not to the extent that these patterns occurred among girls. African American, American Indian, and Hispanic boys were more likely to report these behaviors as compared to Whites and Asians. The percent of boys in each of these groups reporting hitting or beating someone up in the last 12 months also decreased for each of the racial/ethnic groups.

Figure 4-8. Percent of Boys Reporting Hitting or Beating Up Someone (In the Past 12 Months): 6th, 9th, and 12th Graders



Source: Minnesota Student Survey

Figure 4-9. Percent of Girls Reporting Hitting or Beating Up Someone (In the Past 12 Months): 6th, 9th, and 12th Graders



Source: Minnesota Student Survey

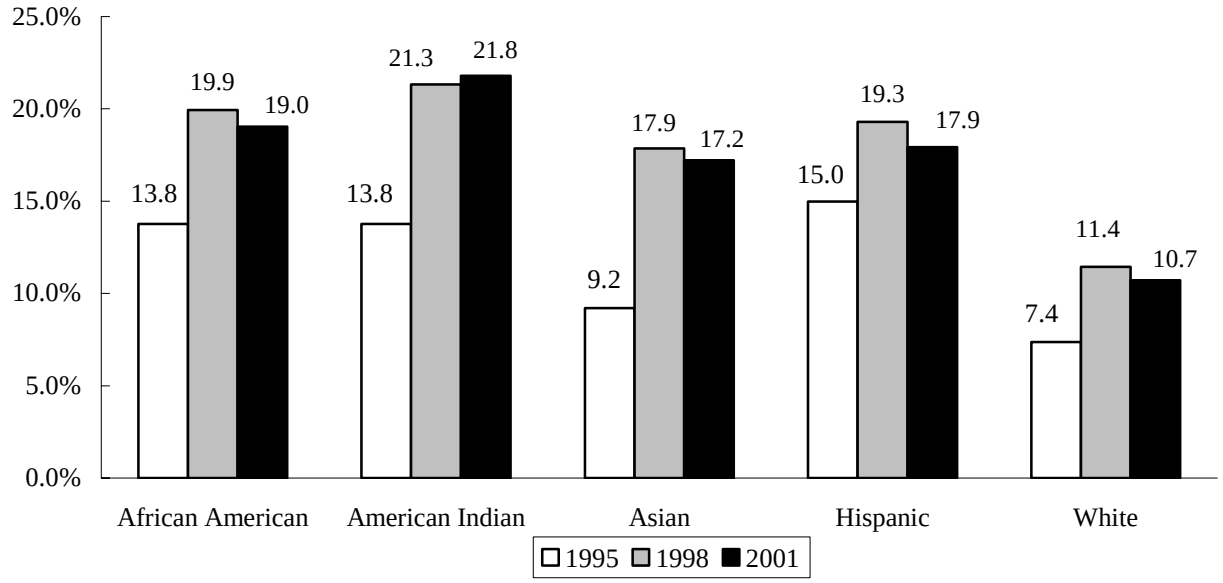
Violence Perpetrated Against Minnesota Youth

Most recent data indicates that the percent of girls reporting being hit by an adult in the household (hard enough to leave marks or made them afraid) increased from 1998 figures among American Indians.

In 2001 among girls, the figures for all other racial groups had declined as compared to the previous year of reporting. What is more alarming is that among girls, in some cases these figures have increased greatly from 1995. For example in 2001, among Asian 6th, 9th, and 12th graders, the percent of girls reporting being hit by an adult in the household was nearly twice as high as the 1995 survey.

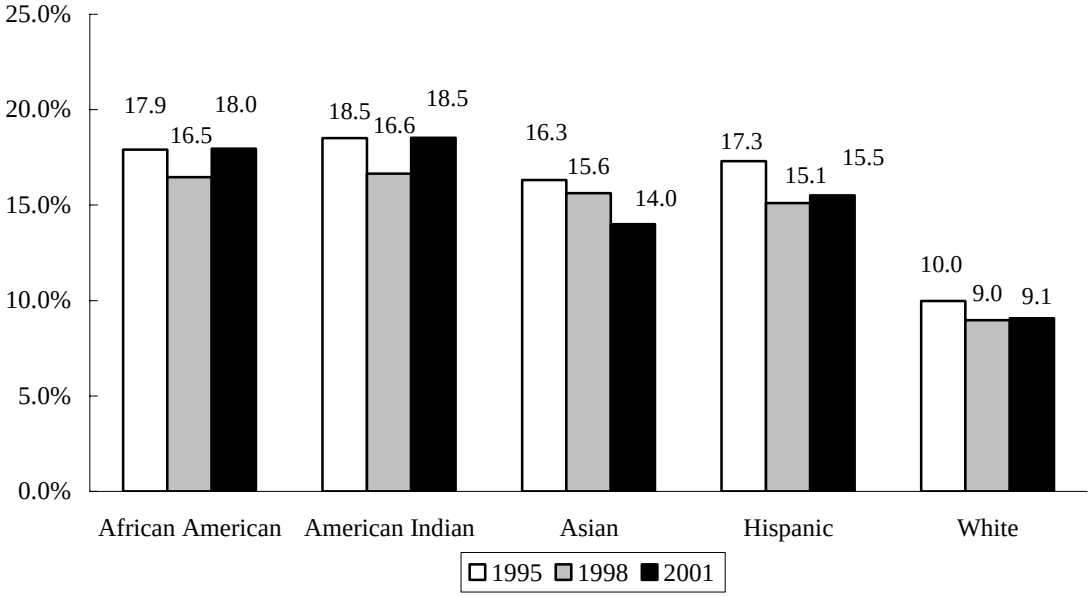
In 2001, the percentage of 6th, 9th, and 12th grade boys reporting being hit was lower than girls for all racial/ethnic groups. The percent of boys reporting being hit is more consistent over previous year's report. In 2001, there were slight increases in the percent of boys reporting being hit. This hold true for all ethnic/racial groups except for Asians where there was a slight decline from the 1998 report.

Figure 4-10. Percent of Girls Reporting Being Hit By An Adult in Household Leaving Marks or Were Afraid: (6th, 9th, and 12th Graders)



Source: Minnesota Student Survey

Figure 4-11. Percent of Boys Reporting Being Hit By An Adult in Household Leaving Marks or Were Afraid (6th, 9th, and 12th Graders)



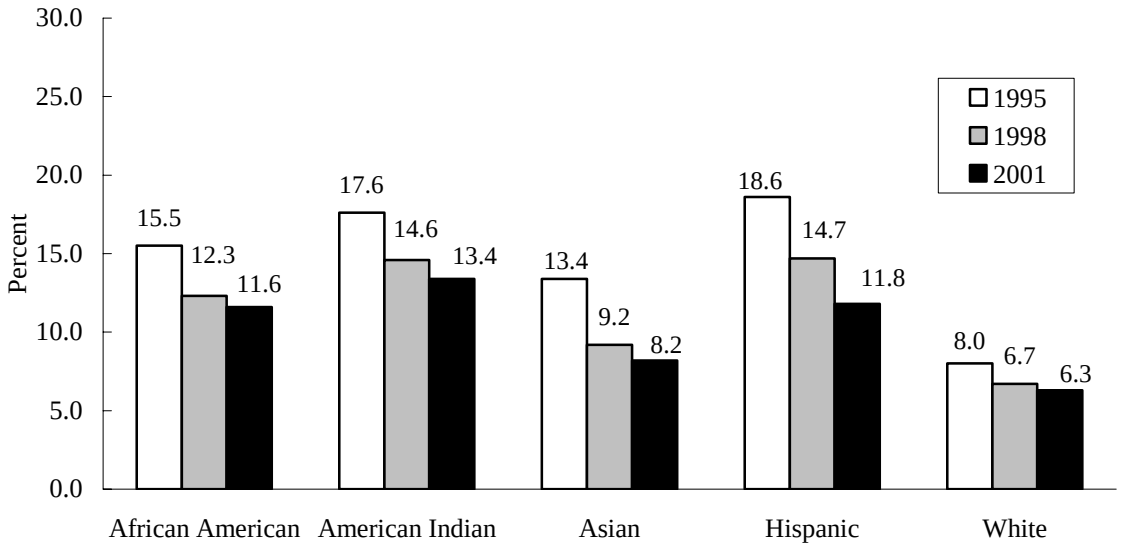
Source: Minnesota Student Survey

Adolescent Suicide Attempts

A recent MDH study indicates that for the years 1990-99, suicide was the second leading cause of injury-related mortality among all 15-24 and 25-34 year age groups. The Minnesota Student Survey explored this topic further. For every death by suicide, it appears that there are many more young people who have actually made an attempt to kill themselves. Results from the survey indicate that significant numbers of those responding to the survey had attempted suicide during the last year that the question was asked or had *ever* made an attempt on their life. There were some race and gender differences as well.

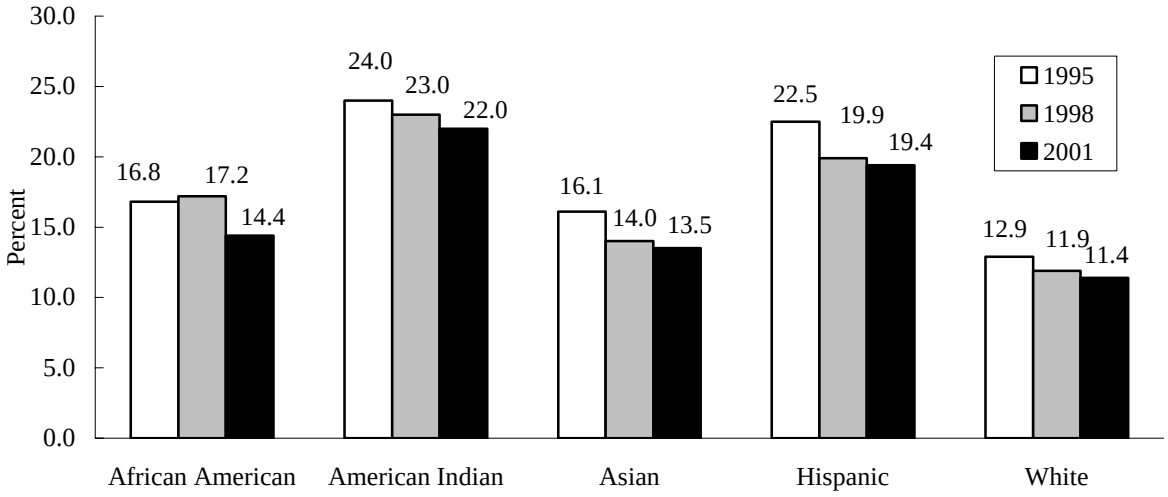
Most recent results indicate that among 6^{th}, 9^{th} and 12^{th} grade boys, American Indians and African Americans most often reported ever attempting suicide. Among girls of the same grade levels, American Indians and Hispanics most often reported a suicide attempt.

Figure 4-12. Percent of Boys Ever Attempting Suicide (during the last year or more than a year ago): 6th, 9th and 12th Graders



Source: Minnesota Student Survey

Figure 4-13. Percent Girls Ever Attempting Suicide (during the last year or more than a year ago): 6th, 9th and 12th Graders

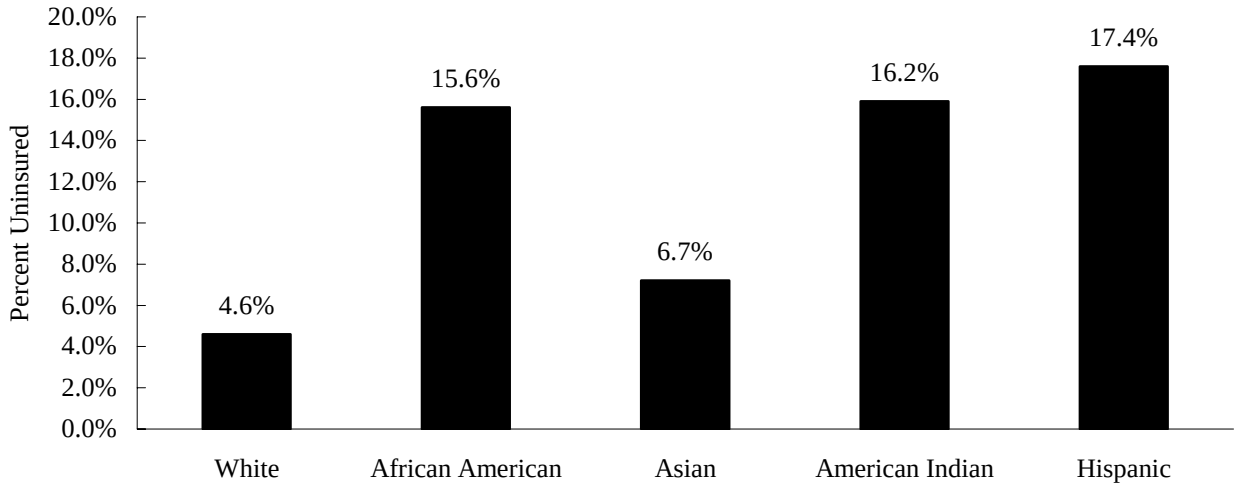


Source: Minnesota Student Survey

Health Insurance

In 2001, the Health Economics Program of the Minnesota Department of Health conducted an in-depth study of Minnesota's uninsured population.* According to these study findings, 5.4 percent of Minnesotans (approximately 266,000 people) were uninsured. However, rates of uninsured varied widely across racial and ethnic groups. Because this study allowed the selection of multiple races, the race/ethnicity definitions include anyone who reported a single race or a single race and any other race/ethnicity (e.g., those included in "White", include those who reported White only and those who reported White and any other race/ethnicity.) As the following graph indicates, the results of the study indicate that African Americans, American Indians, and Hispanics were at least two times more likely to be insured as compared to Whites.

Figure 4-14. Percent of Uninsured by Race (All Ages): Minnesota, 2001



Source: 2001 MN Health Access Survey, MDH Health Economics Program

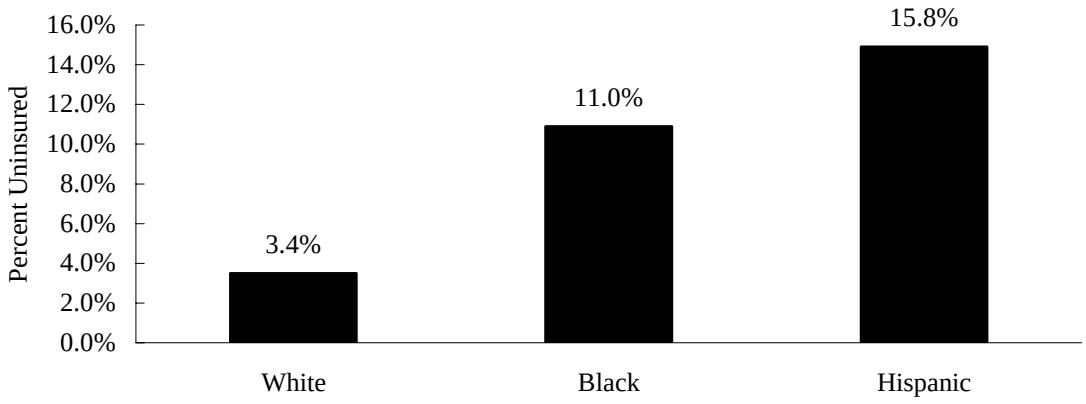
Uninsured Children

Another significant finding of the study is that the number of uninsured children is larger overall, than had previously been thought. About 4.4 percent of all Minnesota children, or 57,000 children under the age of 18, lack health insurance.

Among those Populations of Color that the study was able to report, African American children were over three times and Hispanic children were over four times less likely to be covered by health insurance.

* Data Source: 2001 MN Health Access Survey, MDH Health Economics Program. Please contact the Health Economics Program at 651-282-6367 for more information on the results of the study.

Figure 4-15. Uninsured Children by Race: Minnesota, 2001

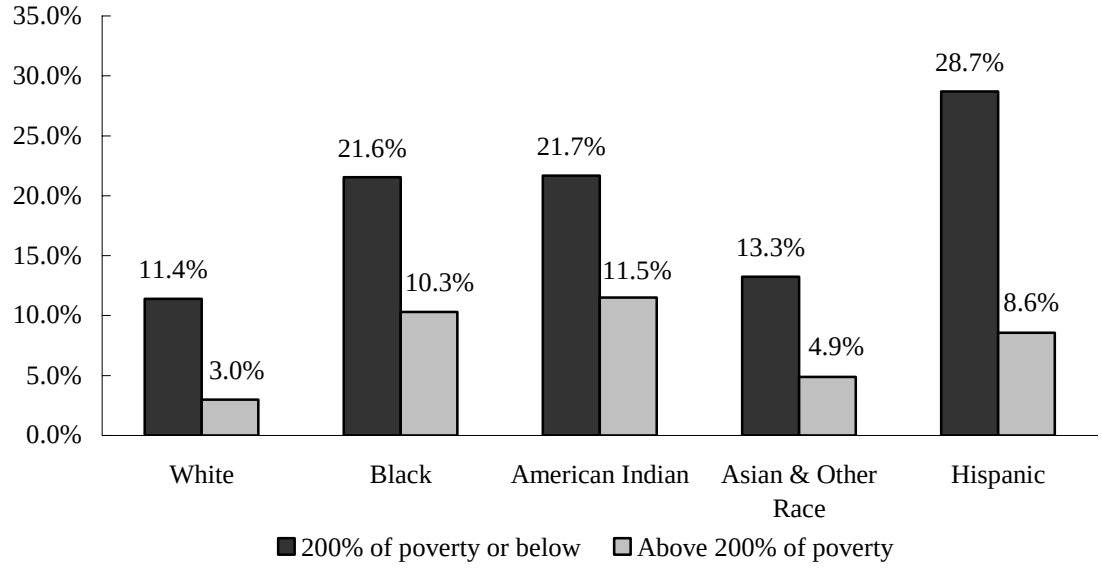


Source: 2001 MN Health Access Survey, MDH Health Economics Program.

Uninsured by Race and Income

One possible reason why uninsurance rates are disproportionately high for Populations of Color and American Indians is that people in these groups have lower incomes on average than the White population. Uninsurance rates for people with incomes less than 200 percent of the poverty level are higher than the uninsurance rates for people with higher incomes, regardless of race. However, within the population that has income above 200 percent of the poverty level, non-White Minnesotans are more likely to be uninsured than White Minnesotans.

Figure 4-16. Uninsurance Rates by Race/Ethnicity and Income: Minnesota, 2001

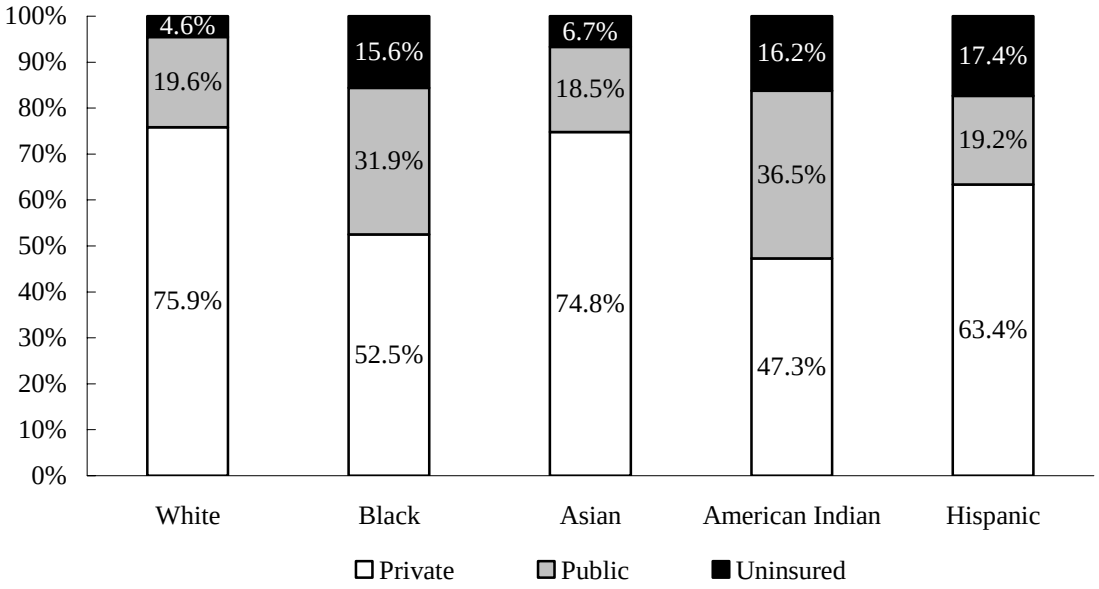


Source: 2001 MN Health Access Survey, MDH Health Economics Program

Uninsured by Type of Insurance Coverage

Additional study results indicate disparities in the type of insurance coverage identified by study participants. Whites were more often covered by group insurance, generally through their own or a family member's employer. More African Americans and American Indians than Whites reported coverage through public health insurance which included Medicaid, MinnesotaCare, GAMC, MCHA, CHIP, CHAMPUS, Veterans Affairs or Military Health Care, Railroad Retirement Plan, or Medicare.

Figure 4-17. Sources of Insurance Coverage by Race/Ethnicity: Minnesota, 2001



Source: 2001 MN Health Access Survey, MDH Health Economics Program

Immunization

Protection of children from communicable disease is recognized as an important public health goal. Public health officials have identified target ages for use in assessing immunization levels. These target ages correspond to ages of routine childhood immunization. The target immunizations are:

- By 4 months – 1st DPaT (diphtheria, tetanus, and pertussis), 1st polio;
- By 6 months – 2nd DPaT and 2nd polio;
- By 8 months – 3rd DPaT and 2nd polio;
- By 17 months – 3rd DPaT, 2nd polio, and MMR (measles, mumps, rubella);
- By 20 months – 4th DPaT, 3rd polio, and MMR

Retrospective Kindergarten Study Monitors Public Health Goal Progress

In 1992, in response to a measles outbreak in the U.S., the Minnesota Department of Health conducted the first Retrospective Kindergarten survey. The survey reviewed the school records of 69,115 kindergarteners who entered school during the 1992-93 school year. This survey has since been conducted on two occasions, during the 1996-97 and 2001-02 school years. In 2001, the most recent such study was conducted to measure progress in meeting the Minnesota 2010 immunization goal to ensure that 90 percent of children are up to date with their immunizations when assessed within two months of the date on which they were to be vaccinated.

Table 4-7.
Immunization Levels By Race/Ethnicity and Age
Retrospective Kindergarten Survey 2001-2002 School Year

	White*	American Indian	Asian	Hispanic	African American*
Age	**n=48371**	**n=1072**	**n=3331**	**n=3,079**	**n=4,599**
4 Mo	95%	91%	91%	87%	78%
6 Mo	91%	80%	80%	79%	68%
8 Mo	86%	67%	67%	70%	58%
17 Mo	81%	71%	71%	66%	61%
20 Mo	80%	65%	65%	58%	61%
24 Mo	85%	73%	73%	65%	62%

*non-Hispanic

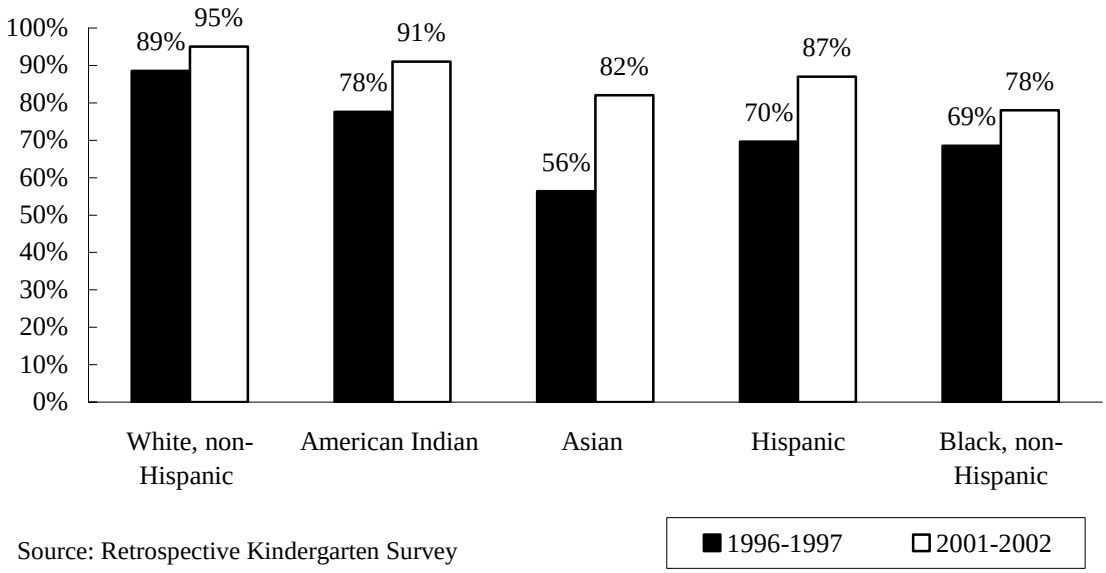
Note: Race of children was identified by parent or school staff and was selected from predetermined categories as reported.

Figures for 2001 indicate that compared to 1996, overall immunization rates had increased at each age point. The percent of children up-to-date with immunizations increased a minimum of three percent (at 4 months) to twenty percent (at 20 months).

Populations of Color and American Indians Have Lower Immunization Rates

Race/ethnicity was identified for 92 percent of the students in the 2001 survey. Among those with complete race/ethnicity information, 80 percent were White, two percent were American Indian/Alaskan Native, five percent were Asian/Pacific Islander, five percent were Hispanic, and eight percent were African American. Comparisons between 1996-97 and 2001-02 at four months and twenty-four months indicate improved immunization levels for all racial/ethnic groups. However, at each target age group, the immunization levels for Populations of Color and American Indians were lower than that of Whites.

Figure 4-18. Immunization Levels By Race/Ethnicity at 4 Months
Retrospective Kindergarten Survey, 1996-97 and 2001-02



Source: Retrospective Kindergarten Survey

Table 4-8. Immunization Levels By Race/Ethnicity and Age
Retrospective Kindergarten Survey 2001-2002 School Year

Race* (Number of children)	4 Mo	6 Mo	8 Mo	17 Mo	20 Mo	24 Mo
White, non-Hispanic (48,371)	95%	91%	86%	81%	80%	85%
All non-White (12,081)	83%	72%	62%	64%	57%	65%
American Indian (1,072)	91%	80%	67%	71%	65%	73%
Asian (3,331)	82%	69%	59%	65%	58%	66%
Hispanic (3,079)	87%	79%	70%	66%	58%	65%
Black, non-Hispanic (4,599)	78%	68%	58%	61%	61%	62%
All students (65,653)	93%	87%	81%	78%	75%	81%

* non-Hispanic
Note: Race of children was identified by parent or school staff and was selected from predetermined categories as reported.

These tables indicate that at 4 months, 95 percent of White children began their immunizations as recommended. African American (78%) and Asian/Pacific Islander (82%) children are among those with the lowest level of up-to-date immunizations. At 24 months, African American (62%), Asian/Pacific Islander (66%), and Hispanic (65%) children have the lowest levels of immunizations. For each of these age points, the most recent data indicate that at 4 months, Whites and American Indians are the only groups that meet the 90 percent immunization goal for 2010. At 24 months, none of the groups including Whites meet this goal and only about two thirds of overall non-White groups are up-to-date with their immunizations.

Chapter V

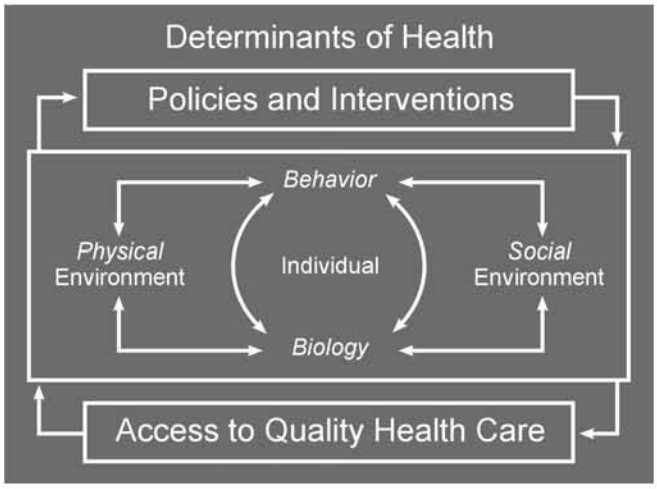
Social Conditions and Health

Introduction

Health involves more than birth, death, illnesses and injuries. It also includes how we interact with others and with our surroundings, the impact of policies on our lives, and at times, our own genetic predisposition. The Healthy People 2010 Initiative called these factors determinants of health and identified several factors that are critical to the health of individuals and communities (Figure 5-1). Examples of these factors include access to quality health care, biology, behavior, policies and interventions, and the physical and social environment. All of these factors have an effect on the health of an individual.

Poor or undesirable indicators for any of these factors expose an individual to lower health quality and possibly, sickness. A better understanding of these determinants of health would enable us to understand the issues affecting the Populations of Color here in Minnesota as a first step to eliminating health disparities.

Figure 5-1. Determinants of Health



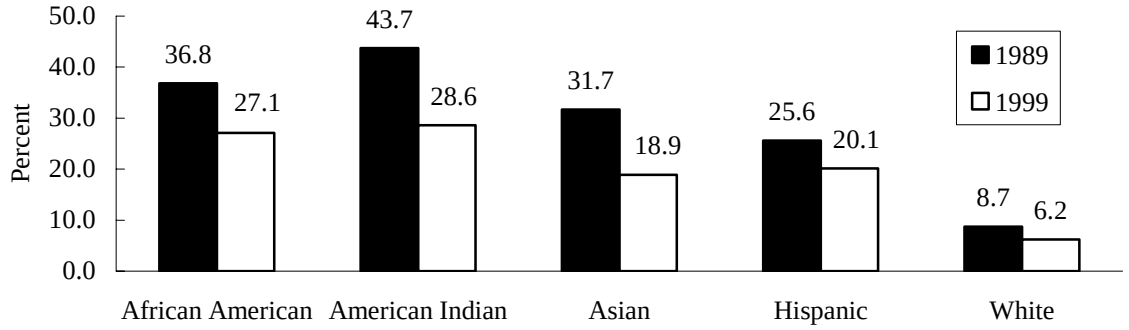
Source: Healthy People 2010: Understanding and Improving Health. (2000)

It has been long noted that Populations of Color and American Indians tend to have different health determinants than White people. It is seen through differing access to health care, physical or even social environment. This chapter will look at recent Census data, including information on income and poverty, employment status, education, and housing to provide insight into the dynamics in which Populations of Color and American Indians live in Minnesota.

Income and Poverty

The poverty rates for all racial/ethnic groups declined between 1989 and 1999 (Figure 5-2). In 1999, a family of three with a cash income of under $13,290 was considered to be poor. In 1999, poverty rates for each racial/ethnic group was three to four times that of Whites. Yet a decade ago, these disparities in income were much greater. The greatest decrease in poverty rates was seen among the Asian population where the percentage of Asians with income below poverty level dropped to 18.9 percent. The percentage of Hispanics below poverty level dropped to 20.1 percent, African Americans to 27.1 percent and American Indians to 28.6 percent.

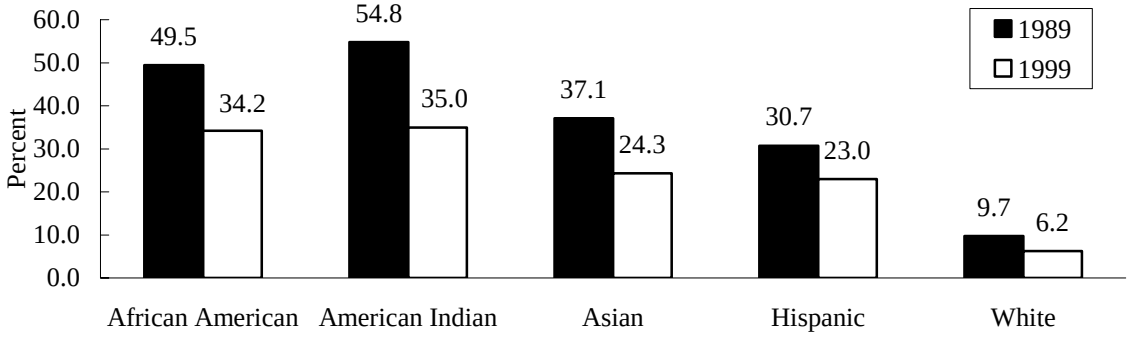
Figure 5-2. Poverty Rates: Minnesota, 1989-1999



Source: U.S. Bureau of Census, Census 1990 and 2000

For all racial/ethnic groups, the percent of children under the age of 19 living in poverty also decreased between 1989-1999, yet these figures are still three to five times higher than that of Whites (Figure 5-3). In 1999, poverty rates for American Indians and African American children were the highest of any group with 35 percent and 34.2 percent respectively (down from 54.8% and 49.5% in 1989). The percentage of Asian and Hispanic children living in poverty was 24.3 percent and 23 percent respectively.

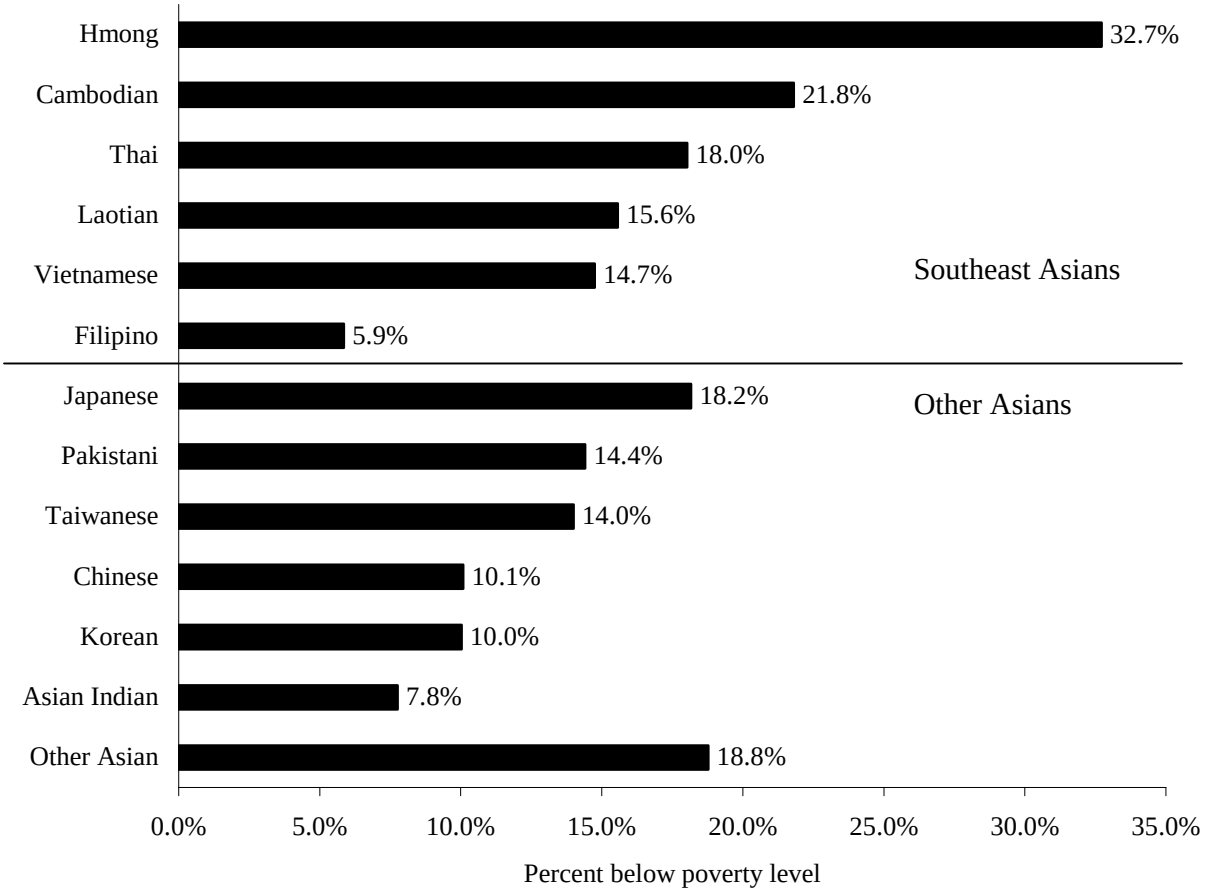
Figure 5-3. Poverty Rates for Children: Minnesota, 1989 - 1999



Source: U.S. Bureau of Census, Census 1990 and 2000

Poverty rates for Southeast Asians (24.1%) were generally higher compared to persons from other parts of Asia (10.2%) as shown in Figure 5-4. The Hmong population has the highest percentage in poverty rates among Asians at 32.7 percent. Hmongs account for over half the Asian population who are in poverty but make up just under one-third of the total Asian population.

Figure 5-4. Poverty Rates for Asians: Minnesota, 2000



Source: U.S. Bureau Of Census, Census 2000

Another cause of concern is the gap in income per capita between Populations of Color and the White population. On average, Whites earns almost twice as much income than Populations of Color (Table 5-1). However, this data indicates that per capita income for all racial/ethnic groups increased between 1989 and 1999.

Table 5-1.
Change in Real Per Capita and Median Household Income: Minnesota, 1989-1999 (In 1999 Constant Dollars)

Racial/Ethnic group	1989[1]	1999	Change
Per Capita Income:			
African American	11,708	13,741	2,033
American Indian	9,045	13,040	3,995
Asian [2]	10,825	15,389	
Hawaiian/Pacific Islander		16,948	
Hispanic	10,752	12,215	1,463
White	19,837	24,351	4,514
Total	19,332	23,198	3,866
Median Household income:			
African American	25,364	28,926	3,562
American Indian	20,736	28,533	7,797
Asian [2]	30,478	45,520	
Hawaiian/Pacific Islander		48,214	
Hispanic	33,985	35,933	1,948
White	42,083	48,288	6,205
Total	41,528	47,111	5,583

Source: U.S. Bureau of Census, Census 2000

[1] 1989 incomes adjusted to 1999 dollars by multiplying by the change in the Consumer Price Index (1.3435)
[2] 1989 Asian incomes include both the incomes from the Asian population as well as the Hawaiian/Pacific Islander population. However, the 2000 Census (1999 data) separated the Asian and the Hawaiian/Pacific Islander population into two groups.

Employment

In general, between 1990-2000, unemployment rates have declined among all racial/ethnic groups (Table 5-2). Although unemployment rates for Populations of Color were still higher than Whites, there were some improvements. The percentage of unemployed American Indian males dropped to 15.7 percent from 24.2 percent in 1990 while unemployed African American males dropped to 11.7 percent from 15.5 percent. In 2000, the percent of unemployed Asian and Hispanic males was 7.5 and 5.3 percent.

The unemployment rate among females has also improved. The percentage of unemployed female African Americans and American Indians dropped to 12 percent and 14 percent respectively while the percentage of female Asians and Hispanics remain below 10 percent in 2000.

Even though workers of color were less likely than Whites to have full-time steady work, the percentage of full-time workers of color has risen in this period for both males and females (Table 5-3).

Table 5-2.
Change in Unemployment Rate: Minnesota, 1990-2000 (Persons 16 years and Over)

	Number or Persons in Civilian Labor Force		Number unemployed		Percent Unemployed		Change in percentage points
Racial/Ethnic Group	1990	2000	1990	2000	1990	2000	1990-2000
Men:							
African American	22,139	38,737	3,423	4,515	15.5 %	11.7 %	-3.8
American Indian	9,845	11,357	2,385	1,780	24.2 %	15.7 %	-8.6
Asian	15,473	32,506	1,002	1,726	6.5 %	5.3 %	-1.2
Hispanic	12,040	38,539	1,329	2,953	11.0 %	7.7 %	-3.4
White	1,186,912	1,294,932	66,626	54,066	5.6 %	4.2 %	-1.4
Total population[1]	1,239,787	1,414,025	74,110	65,103	6.0 %	4.6 %	-1.4
Women:							
African American	17,244	35,364	2,466	4,244	14.3 %	12.0 %	-2.3
American Indian	8,420	11,667	1,258	1,630	14.9 %	14.0 %	-1.0
Asian	12,681	28,960	858	1,568	6.8 %	5.4 %	-1.4
Hispanic	9,435	25,632	823	2,241	8.7 %	8.7 %	0.0
White	1,029,656	1,171,591	39,888	34,347	3.9 %	2.9 %	-0.9
Total population[1]	1,071,549	1,275,090	44,809	43,966	4.2 %	3.4 %	-0.7

Source: U.S. Bureau of Census, Census 2000

[1] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

Table 5-3.
Full-time Year-round Work: Minnesota, 2000 (Persons 16 years and over who worked in 1999)

Racial/Ethnic Group	Number working in 1999	Number working full-time and year-round	Percent working full-time and year-round
Men:			
African American	43,593	22,768	52.2 %
American Indian	13,068	6,674	51.1 %
Asian	36,097	21,066	58.4 %
Hispanic	42,156	22,388	53.1 %
White	1,397,525	939,011	67.2 %
Total Population[1]	1,529,794	1,010,477	66.1 %
Women:			
African American	38,726	18,150	46.9 %
American Indian	12,890	5,799	45.0 %
Asian	32,355	15,081	46.6 %
Hispanic	28,956	12,263	42.4 %
White	1,271,178	627,382	49.4 %
Total Population[1]	1,385,697	679,423	49.0 %

Source: U.S. Bureau of Census, Census 2000

[1] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

Table 5-4.
Median Income of Full-time Year-round Workers: Minnesota, 1989-1999

Racial/Ethnic Group	1989[1]	1999	Change
Men:			
African American	29,694	30,399	705
American Indian	28,862	27,356	-1,506
Asian [2]	34,360	35,671	
Hawaiian/Pacific Islander		32,227	
Hispanic	31,838	25,057	-6,781
White	39,929	40,140	211
Total Population [3]	39,601	39,364	-237
Women:			
African American	26,063	26,448	385
American Indian	23,132	23,425	293
Asian [2]	23,847	26,448	
Hawaiian/Pacific Islander		22,169	
Hispanic	25,705	21,780	-3,925
White	26,614	29,074	2,460
Total Population [3]	26,543	28,708	2,165

Source: U.S. Bureau of Census, Census 1990 and 2000

[1] 1989 incomes adjusted to 1999 dollars by multiplying by the change in the Consumer Price Index (1.3435)
[2] 1989 Asian incomes include both the incomes from the Asian population as well as the Hawaiian/Pacific Islander population. However, the 2000 Census (1999 data) separated the Asian and the Hawaiian/Pacific Islander population into two groups.
[3] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

Education

Data indicates more African Americans, American Indians and Asians completed high school and have a bachelor's or advanced degree in 2000 compared to ten years ago. Even so, over two times as many African American, American Indian, and Asians and four times as many Hispanics reported earning less than a high school degree as compared to Whites (Table 5-5). Lower percentages of African American, American Indian, and Hispanics also reported attaining a bachelor's or advanced degree as compared to Whites. Asians reported higher percentages of degree completion.

Table 5-5.
Education Attainment: Minnesota, 2000

		Less than high school		Bachelor's or Advanced Degree	
Racial/Ethnic group	Population 25+ Yrs. Old	Number	Percent	Number	Percent
African American	84,577	17,757	21.0 %	15,813	18.7 %
American Indian	28,185	7,195	25.5 %	2483	8.8 %
Asian	69,999	20,145	28.8 %	25,253	36.1 %
Hispanic	64,386	26,980	41.9 %	9,028	14.0 %
White	2,919,051	315,381	10.8 %	814,827	27.9 %
Total Population [1]	3,164,345	381,345	12.1 %	868,082	27.4 %

Source: U.S. Bureau of Census, Census 2000

[1] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

Housing

Home ownership among Populations of Color, with the exception of Hispanics, improved between 1990 and 2000 (Table 5-6). Hispanics, who used to have the highest percentage of home ownership among Populations of Color, dropped to 42.9 percent. In 2000, each of the racial/ethnic groups reported lower percentages of home ownership as compared to Whites.

Table 5-6. Changes in Home Ownership: Minnesota, 1990-2000

	Number of occupied housing units		Number occupied by owner		Percent occupied by owner		Change in percentage points
Racial/Ethnic group	1990	2000	1990	2000	1990	2000	1990-2000
African American	30,447	54,818	9,159	17,517	30.1 %	32.0 %	1.9
American Indian	13,926	16,318	5,970	8,015	42.9 %	49.1 %	6.2
Asian	16,664	35,753	6,788	18,703	40.7 %	52.3 %	11.6
Hispanic	12,173	33,868	5,738	14,528	47.1 %	42.9 %	-4.2
White	1,581,589	1,752,217	1,159,766	1,353,088	73.3 %	77.2 %	3.9
Total Population[1]	1,647,853	1,895,127	1,183,738	1,412,724	71.8 %	74.5 %	2.7

Source: U.S. Bureau of Census, Census 2000

[1] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

The percentage of income spent on housing is another indicator of the housing environment among Populations of Color. Housing costs have to be balanced against other types of costs such as food, health care and other basic needs. Census 2000 data indicates that Populations of Color still spent a significant amount of their income for housing costs even though these figures are less than those indicated in the previous census (Table 5-7).

Almost half (45.3%) of African Americans spent over 30 percent of their income on housing costs and about one of five African Americans spent over 50 percent of their income on housing costs. About a third of American Indians (37.4%), Asians (31.8%), and Hispanics (34%) spend 30 percent of their income on housing.

Table 5-7. Affordability of Housing: Minnesota, 2000

		Paying over 30% of income for housing		Paying over 50% of income for housing	
Racial/Ethnic Group	Number of households	Number	Percent	Number	Percent
African American	37,205	16,848	45.3 %	8,421	22.6 %
American Indian	8,170	3,056	37.4 %	1,541	18.9 %
Asian	17,016	5,413	31.8 %	2,552	15.0 %
Hispanic	19,210	6,523	34.0 %	2,897	15.1 %
White	388,585	132,209	34.0 %	56,687	14.6 %
Total Population[1]	471,466	165,107	35.0 %	72,644	15.4 %

Source: U.S. Bureau of Census, Census 2000

[1] The added value of each population group does not add up to "Total Population" because Hispanics, who can be of any race, are not counted in the total and because "Other Race" is excluded from the table.

ENDNOTES

1. Healthy People 2010: Understanding and improving health (2000). Available at: http://www.healthypeople.gov/Publications/

Chapter VI

Data Sources Overview

Populations of Color Health Data

Demographic data (e.g. age, gender, race and ethnicity) are of critical importance in any discussion that pertains to health status or risk factors of Minnesotans. While Minnesota boasts their status as one of the healthiest states in the nation, further examination of health data by demographics paint a much different picture. High quality data sets with these demographic characteristics are of critical importance for monitoring the health status of Populations of Color and identifying health disparities. Health status data that describes the well-being or ill-health of a population can also be used to develop interventions for disease prevention and control and for measuring the impact that these interventions have on a population. Data that describes health status include vital statistics (births and deaths), morbidity data and risk factor data such as socioeconomic (e.g. poverty) or sociocultural factors (e.g. racism). Health status data come from a variety of different sources and as a result, issues of data availability and data gaps vary considerably depending on the source. Since the last version of the *Populations of Color Health Status Report*, released in 1997, there have been several improvements in data collection efforts, yet significant data gaps remain. Data gaps result from limitations in the collection, analysis, or dissemination of public health data contained in this report.

Several data sources were utilized for this version of the *Populations of Color Health Status Report.* The principal data source is state vital records (birth and death certificates). State vital records is a standardized population-based data source of high quality and reliability. Several other data sources that are used in this report are also of high quality, yet many include some limitations for their use in reporting race/ethnicity data.

Most data limitations are an unintended result of the nature and complexity of reporting race/ethnicity data. Limitations for the data sources identified in this chapter are variations on the following themes as identified in previous reports.

- Race and ethnicity populations are small. (Events or incidence of deaths for specific diseases occur infrequently).
- Small populations and small number of events cause large fluctuations in rates.
- Population estimates for some groups (African American, American Indian, Hispanic, Asian), which are used to calculate rates are sometimes undercounted or inaccurate.
- Some race/ethnicity data is not gathered systematically or at all, resulting in an inability to report data at the state level or compare at the national level.
- There is a lack of resources for collecting race/ethnicity data.
- There is a lack of interest in reporting race/ethnicity data. Groups may be disregarded because of their small numbers and representation in the population.
- The inconsistency in the use of the race/ethnicity definitions and categories present a dilemma for the analysis and reporting by race/ethnicity.
- Quantitative and some qualitative approaches to data collection fail to recognize the uniqueness of the each Population of Color.

In the last section of this chapter, several data sources are described that are not used in this report because race/ethnicity data is not available. However, these data sources may be used for future reporting because they offer useful insight into the health status of Populations of Color.

Data Sources and Their Limitations

U.S. Census

Vital Statistics

AIDS/HIV/STDs (surveillance)

Tuberculosis (surveillance)

Immunization (surveillance)

Student Survey (survey)

TBI/SCI (registry)

Cancer (surveillance)

Uninsured (survey/study)

U.S. Census. The U.S. Census is a population-based survey to enumerate the population every ten years. Census data is used to calculate rates for prevalence of births, deaths and disease among different race/ethnic groups. *Limitations*. Census 2000 data uses the 1997 OMB race categories. Bridged data sets merges the 2000 multiple race categories to the single race categories (White, Black, American Indian or Alaska Native and Asian or Pacific Islander).

Minnesota Vital Statistics (mortality and natality) records are the principal source of data for this issue of the "*Populations of Color in Minnesota Health Status Report*." *Mortality/death* data is population-based and includes all deaths occurring in Minnesota as well as deaths occurring out-of-state to Minnesota residents. The death records contain a variety of data from demographic information to conditions at death including race and ethnicity, cause of death, age and gender. The *Natality/ birth* data set is population-based and includes all births occurring in Minnesota as well as births occurring out-of-state to Minnesota residents. The birth records contain a variety of data from demographic information to conditions at birth including data by race and ethnicity, age of mother, education of mother, low birth weight of baby, prematurity, obstetric care, and infant deaths. *Limitations.* Race/ethnicity is not always accurate due to the lack of self-reporting or misinterpretation of the race categories.

HIV/STD. MDH collects case reports of STDs through passive and active surveillance systems, relying on physicians and laboratories to report cases in compliance with state law. *Limitations.* Factors that effect completeness and accuracy include case reporting, timeliness of case

reporting, test-seeking behaviors of HIV-infected individuals, and the availability and targeting of testing services. Certain events have also impacted trends in HIV/AIDS surveillance data. For example changes over time in the surveillance case definition (most notably the 1993 expansion of the case definition for adults and adolescents) have resulted in artificial jumps in AIDS case counts at the time the new definition went into effect or in the preceding year because changes in case definition allowed for retrospective diagnosis.

Tuberculosis. The MDH TB Prevention and Control Program prepares quarterly and annual reports summarizing demographic and clinical characteristics of the cases of active TB disease reported in Minnesota. These reports describe the epidemiology of TB in Minnesota, including the incidence of TB disease by county, age, race/ethnicity, country of origin, drug susceptibility patterns, and other factors. *Limitations.* Factors that affect completeness and accuracy of this data include the possible failure to report a case of clinically-diagnosed (i.e., culture-negative) active TB disease or failure of an out-of-state lab to send TB isolates to the MDH laboratory as stipulated in the MN Disease Reporting Rule. In addition, reporters might report their perceptions of race, ethnicity and country-of-origin data without asking the patient. Language differences between the health care provider and the patient could also compromise the accuracy of data. Trends in TB surveillance data reflect the changing demographics of Minnesota's population, specifically immigration for refugees and persons in other visa categories.

Immunization (Retrospective Kindergarten Survey, 2001). Retrospective kindergarten immunization surveys use child immunization records provided by parents to analyze immunization coverage during the first two years of life. The 2001-02 survey is the third comprehensive statewide study to be conducted in Minnesota. The purpose of the survey is to measure statewide progress toward Minnesota's 2010 immunization goal which is to create a system that ensures that all geographic areas, racial and ethnic groups and socio-economic strata receive age-appropriate immunizations such that 90 percent of children are up to date when assessed within two months of the date that they were vaccinated. The current study was conducted with 65,653 students enrolled in kindergarten during the 2001-2002. To collect the data, MDH compiled a complete list of schools and collaborated with local public health agencies and local school nurses to obtain immunization dates for every kindergartner in the state. Data were either submitted on paper or electronically through special software called CASA or from existing school computer systems. Each students initials, date of birth, zip code of residence, immunization exemption status, race/ethnicity, and immunization history were collected. *Limitation.* Limitations might include incomplete parent records and the lack of an approach to verify the parents' records. There are few other limitations to this survey because the survey population includes all children who were enrolled in a kindergarten program during the school year.

Minnesota Student Survey (MSS), Minnesota Department of Education 2001. The MSS is a fully enumerated survey administered to 6^{th} 9^{th}, and 12^{th} grade students in Minnesota public schools. The survey covers a variety of topics including family, school activities, health and risk behaviors (e.g. drug, alcohol, and tobacco use). *Limitations*. State data from the MSS can be presented by race and ethnicity; it is not usually available by county or school district. As a broad-based survey that covers many subjects, it cannot provide great depth or detail about any

particular topic. The survey fails to include some adolescents, and historically has had much lower participation rates for 12th grade students. There are also several reasons why some enrolled students are not surveyed. A few districts do not participate at all. Young people who have dropped out of school or are absent from school on the survey date cannot participate. In addition, students enrolled in alternative schools or area learning centers, or who are living in juvenile correctional facilities or residential treatment centers are not included in survey counts. Instead, they are given the survey separately and those data are reported separately. Finally, charter schools historically have not participated in the survey, although their students are counted as public school students. Another limitation is the higher non-response rate for questions near the end of the survey. Some students do not complete the survey in the allotted time, or decide to stop prior to completion. The questions most affected are questions about alcohol and drug use, and sexual activity.

Traumatic Brain Injury/Spinal Cord Injury Registry. MDH maintains a registry of traumatic brain injuries and spinal cord injuries. Injuries are reported to the registry by medical trauma centers, hospitals in the state, and some out-of-state hospitals. Coverage is 89 percent of all injury hospitalizations to Minnesota residents. MDH works closely with CDC to abstract a representative sample of cases by race/ethnicity. *Limitations*. There is incomplete reporting of race/ethnicity and other key variables to the TBI/SCI registry.

Minnesota Cancer Surveillance System (MCSS). The Minnesota Cancer Surveillance System (MCSS) is the state's cancer registry. The MCSS systematically collects demographic and diagnostic information on all Minnesota residents with newly-diagnosed cancers. The Cancer in Minnesota Report, 1988-1999 is the first report that MDH has been able to report race/ethnicity data. *Limitations*. The methods by which data gathered by the MCSS have some limitations. Race and ethnicity is an important variable for cancer surveillance but is not always reported on data submitted to the MCSS. Prior to the 1997 diagnosis year, the MCSS did not have the resources to perform active follow-up to find the missing information. Funds for the enhancement of the MCSS (allowing follow-up for missing data including race), became available in 1994 through the National Program of Cancer Registries (NPCR), which is administered by the U.S. Centers for Disease Control and Prevention (CDC). NPCR funding began in October 1994 and is scheduled to continue at least through June 2007.

Minnesota's Uninsured: Findings From the 2001 Health Access Survey. The Minnesota Department of Health was awarded a $1.6 million grant from HRSA of the U.S. Department of Health and Human Services to study the issue of the uninsured in Minnesota. Under the grant, the Department conducted a number of studies on health insurance status and barriers to accessing medical care and obtaining health insurance in Minnesota. The 2001 MN Health Access Survey was the largest and most comprehensive survey on health insurance conducted in Minnesota to date. During the course of this survey, over 27,000 Minnesotans were contacted to participate. *Limitations.* The primary limitation of the 2001 Minnesota Health Access Survey is that some populations may have been excluded from participating in the survey. First, the survey was conducted by telephone, so people without telephone service would not have been eligible to participate. Approximately 2% of Minnesotans do not have telephone service. Second, the survey was conducted in English, Spanish, and Hmong. A household would not

have been able to participate in the survey if someone in the household did not speak one of these three languages. Results from the 2001 Minnesota Health Access Survey are only representative of the non-institutionalized population in Minnesota. People living in nursing homes, prisons, etc. were not eligible for participation in the survey.

Potential Data Sources

Pregnancy Risk Assessment Monitoring System (PRAMS)

Behavioral Risk Factor Surveillance System (BRFSS)

Diabetes prevalence

Administrative Billing data

Health Professions Data

There are many factors that effect the implementation of race/ethnicity data collection initiatives including cost, availability, and priorities in data collection. Yet, it is evident that the collection of data by race/ethnicity is critical to monitor health and create programs that address the health care needs of all Minnesotans. Aside from births and deaths, statewide data on illness, injuries and overall health status of populations remain sketchy. The following are prospective sources of data at varying stages of development and implementation or are sources that with modification could provide data on Populations of Color in Minnesota.

PRAMS (Pregnancy Risk Assessment Monitoring System.) PRAMS is an on-going population-based surveillance system designed to identify and monitor selected maternal behaviors and experiences before, during, and after pregnancy. PRAMS collects information on topics such as attitudes and feelings about pregnancy, barriers to and satisfaction with prenatal care, psychosocial support and stress, use of alcohol and tobacco before and during pregnancy, infant's early development, breastfeeding, and health insurance. The state is currently in its third year of data collection. It is anticipated that reporting of the data including some race/ethnicity data will begin in the fall of 2004.

Behavioral Risk Factor Surveillance System (BRFSS). MDH, Minnesota Center for Health Statistics--BRFSS is an annual telephone survey sponsored by the Centers for Disease Control and Prevention where data pertaining to the health status and behaviors of Minnesota adults aged 18 and older are collected. Currently, the sample size for Populations of Color is inadequate to produce reliable estimates at the state, county, or regional levels of the health status and health behaviors for these populations.

Diabetes Prevalence. The Minnesota Diabetes program currently uses estimates for the number of people with diabetes in the state. Estimates for obtaining diabetes prevalence rates for Minnesota use three data sources, BRFSS, NHIS, and NHANES. Prevalence rates from these three surveys are applied to Minnesota population data from the U.S. Census. The *Minnesota*

Diabetes Plan 2010 does include the goals of improving the collection, quality, and scope of Minnesota's population-based diabetes data, generating support and action for collecting diabetes data through advocacy, communication and marketing, and effectively sharing, communicating and using diabetes data.

Administrative Billing. Administrative billing data includes hospital discharge data collected by the Minnesota Hospital and Healthcare Partnership, enrollment and claims encounter data collected by health plan and surveys of HMO member satisfaction conducted by the Minnesota Health Data Institute. Race and ethnicity data could help to further identify health disparities among American Indians and Populations of Color and Whites in Minnesota. MDH recently withdrew its proposed rules for using health care billing records to evaluate the quality and effectiveness of Minnesota's health care system. MDH continues to study the issue seeking a balance to protect public health and to protect patient privacy.

Health Professions data. Since 1993, the Office of Rural Health & Primary Care (ORHPC), has been collecting practice data on a number of health professionals in Minnesota. In recognition of a need to understand more about representation of American Indians and Populations of Color in Minnesota's health professional community, ORHPC began a special race/ethnicity survey of dentists in 2002. This was followed by a decision in 2003 to include a question on race/ethnicity in all of its licensing data collection forms. This change will be incorporated into each professional licensing cycle beginning in 2004.