

# Racial and Ethnic Health Disparities in Multnomah County: 1990-2002



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## Summary of Findings

Racial and ethnic health disparities in Multnomah County were examined using 17 health status indicators. Using White non-Hispanics as a comparison group, health disparities were calculated for four groups of persons of color: African Americans, Asians, American Indians, and Hispanics. We also tracked health disparities from 1990 to 2002 in order to analyze trends.

Across the 17 indicators, African Americans had the greatest number of health disparities of all racial and ethnic groups examined, though the magnitude of African American/White non-Hispanic health disparities showed improvement over time. Health disparities for the three other groups – Asians, Hispanics, and American Indians – were not as great as for African Americans. In fact, on most of the health status indicators examined, no significant health disparities were found for these three groups when compared to White non-Hispanics.

It is important to note that due to racial misclassification of American Indians, Asians, and Hispanics upon death, this report will probably underestimate health disparities for these groups. The problem is especially pronounced for American Indians and Asians, who may be misclassified by as much as 21% and 11%, respectively.

Appendix B shows graphs for each health indicator by race, from 1990 to 2002. See Appendix C for a list of some efforts by the Multnomah County Health Department to address health disparities.

Below are the key findings for the four groups of color analyzed. Health indicators for each group were compared to health indicators for White non-Hispanics.

### Progress Made

Some health disparities have been reduced in recent years. Across the 17 health indicators examined and all populations of color, 30 health disparities were identified for the 1990-1994 period. By 1998-2002, 17 of the earlier disparities had been reduced, five were eliminated, two remained unchanged, three had insufficient information to determine progress, and three increased. Two new areas of disparity were identified in the 1998-2002 period – one for Asians and one for American Indians. Specific details for each population of color are provided below.

### Areas of Concern

Although some progress has been made, 24 disparities were identified in the 1998-2002 period. Of these, 13 of the disparities were for African Americans, six were for Hispanics, three were for American Indians, and two were for Asians.

While age adjusted rates of overall mortality and deaths due to heart disease, stroke, cancers, and motor vehicle accidents were down for White non-Hispanics, these rates were up 1990-2002 for Hispanics. In five of these areas Hispanics are not experiencing disparities, but if current trends continue, disparities will emerge.



## **African American Community**

- Health disparities were found in 14 of 17 health status indicators examined in the 1990-1994 period. Health disparities persisted for 13 indicators in the 1998-2002 period;
- Health indicators improved relative to White non-Hispanics for 15 of 17 health status indicators between 1990 and 2002;
- Health disparities were at least twice the White non-Hispanic rate for 6 health measures in the 1998-2002 period: syphilis (almost 11 times higher than the White non-Hispanic rate), gonorrhea (over 10 times higher than the White non-Hispanic rate), chlamydia (almost six times higher than the White non-Hispanic rate), teen births (over twice that of White non-Hispanic), diabetes mortality (almost three times higher), and homicide (over six times higher).

## **Hispanic Community**

- Of the 10 mortality-related health indicators examined, one significant disparity was found. Homicide rates were over twice the rate of White non-Hispanics in the 1998-2002 period;
- Health disparities for seven health status indicators were found in the 1990-1994 period. Health disparities for six indicators persisted in the 1998-2002 period. The low birthweight disparity was eliminated;
- There were six significant changes in health indicators over time: three health status measures worsened (overall mortality, lack of early prenatal care, and teen births) and three improved (syphilis, gonorrhea, and chlamydia).

## **Asian Community**

- Two significant health disparities were found for the 1990-1994 period (low birthweight, lack of early prenatal care). Health disparities were found for two indicators for the 1998-2002 period (lack of early prenatal care and chlamydia);
- The low birthweight disparity declined 10% between 1990-1994 and 1998-2002, when it ceased to be a significant disparity;
- The rate of new gonorrhea cases for Asians relative to White non-Hispanics decreased significantly between 1990-1994 and 1998-2002.

## **American Indian Community**

- Health disparities were found for seven indicators in 1990-1994. Of the 13 health status measures having sufficient data, health disparities were found for three measures in 1998-2002.
- No significant changes in health disparities over time were found.



## Introduction

Despite overall improvement in the health of the population over the last 50 years, persons of color lag behind the majority population, White non-Hispanics, on many health measures. This has been especially pronounced in the African American community, which continues to have the worst health outcomes of all groups of color, compared to White non-Hispanics.

To what extent are racial and ethnic health disparities occurring in Multnomah County? Have these health disparities narrowed or grown larger over time? It is the purpose of this report to answer these questions.

### **What is a health disparity?**

The National Institutes of Health has defined a health disparity as “a population-specific difference in the presence of disease, health outcomes, or access to care.”<sup>1</sup> Health disparities are also referred to as health inequalities or inequities. Racial and ethnic health disparities identify differences in health outcomes that disproportionately affect African Americans, Hispanics, and other groups of color when compared to Whites. For example, the infant mortality rate (the rate at which babies die before age one) in the U.S. for African Americans is twice the rate for Whites.

### **What causes racial and ethnic health disparities?**

Racial and ethnic health disparities result from a variety of sources such as; inequities in the social and physical environment, differences in behavior, and differential access and quality of health care. The current health literature identifies environmental inequities as important causes of racial and ethnic health disparities. Abundant health research has shown that socioeconomic status – one important measure of the social environment – is strongly associated with health.<sup>2</sup> Those groups with higher educations and higher incomes generally have longer life expectancies, better health outcomes, and better access to high-quality health care than those with lower incomes and lower levels of education. As populations of color are disproportionately poorer and have less education, some of the reason for racial and ethnic health disparities is due to poorer socioeconomic conditions. In the view of many researchers, racism and discrimination, both current and past, are thought to be the underlying causes of such inequities in socioeconomic conditions. Discrimination may also contribute to racial health disparities by impacting a group’s current access to adequate medical care, education, housing, and jobs.<sup>3,4,5,6,7,9</sup>

Regarding physical environment, recent research has found that populations of color are more likely than whites to live in areas with poorer air quality and to live closer to toxic waste sites.<sup>8</sup> Many studies have found that the overall quality of health care for these groups is poorer than for White non-Hispanics. In addition, there is reduced access to health care.<sup>9</sup> Hispanics, for example, are less likely to have health insurance than whites.

Biological differences between races have been widely disputed, and are considered to have minimal impact on racial and ethnic health disparities.<sup>10</sup>

### **Why are racial and ethnic health disparities important to identify?**

Although there are many different kinds of health disparity – for example, based on gender, income, disability, sexual orientation – in this report we focus on racial and ethnic health disparities. Racial and ethnic health disparities are important, because, as noted above, many of the factors responsible for racial and ethnic health disparities are capable of being changed, and



are viewed as being related to past and ongoing racism and discrimination. Contrast this with health disparities based on age, which are mostly inevitable (it is indisputable that the older you get, the more health problems you have). Another reason racial and ethnic health disparities are important is due to the magnitude of the differences in health outcomes between persons of color and Whites. For example, African Americans have a 70% higher prevalence of diabetes than Whites in the U.S. Also, racial and ethnic health disparities are important to identify because the problem is growing. Demographic changes in the United States and in Multnomah County highlight the fact that people of color are becoming a larger segment of the population, and are expected to grow over the next decade. As U.S. Surgeon General David Satcher has written, these demographic changes “magnify the importance of addressing disparities in health status; groups currently experiencing poorer health status are expected to grow as a proportion of the total U.S. population. Therefore, the future health of America depends substantially on our success in improving the health of racial and ethnic minorities.”<sup>11</sup> Finally, we focus on such disparities because data based on race and ethnicity is readily available, compared to, for example, sexual orientation, which is not tracked for most health status measures. According to population data for Multnomah County, groups of color (i.e., African Americans, American Indians, Asians, and Hispanics) made up about 15% of the population in 1990. By 2002, these groups represented 23% of the population.

### **Elimination of racial and ethnic health disparities priority.**

The elimination of racial and ethnic health disparities has been a top priority at the federal, state, and local level over the past six years. The most recent push began in 1998, when then-President Clinton launched a new initiative to eliminate racial and ethnic health disparities by 2010. He focused on six areas: diabetes, cancer screening and management, cardiovascular disease, HIV/AIDS, immunizations, and infant mortality.

Perhaps in response to this, the U.S. Department of Health and Human Services intensified its focus from simply reducing health disparities to the elimination of health disparities as one of two overarching goals of Healthy People 2010.<sup>12</sup> (Healthy People 2010, a nationwide health promotion and disease prevention agenda, sets national health targets by 2010.)

The Multnomah County Health Department has also made the elimination of racial and ethnic health disparities a top priority, and has supported many community health programs and services to address this issue. The Health Department’s dedication to tracking racial and ethnic health disparities is an important step in ultimately eliminating these disparities, and in assuring a healthy community for all of the County’s residents.



## Methods

We sought to identify disparities in health status for the following racial and ethnic groups, using White non-Hispanics as the comparison population: African Americans, Asians (including Native Hawaiians and Pacific Islanders), American Indians (including Alaska Natives), and Hispanics (of all races). The report has been organized by racial and ethnic group, and will present demographic data for each group, measurements of health status, and trends in health disparities.

White non-Hispanics were used as the comparison population because they make up the majority of the population (about 77% in 2002), have one of the highest incomes of any racial group, and do not suffer discriminatory treatment relative to populations of color.

To measure health status, we followed the lead of other health disparity reports<sup>13, 14</sup> (with some modifications) and studied 17 health status indicators that are especially important in identifying racial and ethnic health disparities. Table 1 presents the health status indicators for this report.

**Table 1. Health Status Indicators for Measuring Health Disparities**

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Mortality Rates (ICD-9 Codes)

Heart Disease (390-398, 402, 404-429)

Stroke (430-438)

Cancer, All Causes (140-208)

Lung Cancer (162)

Female Breast Cancer (174)

Motor Vehicle Accidents (E810-E825)

Homicide (E960-E978)

Diabetes (250)

HIV Disease (042-044)

All Causes

Pregnancy and Birth Outcomes

Infant Mortality Rate

Percentage Low Birthweight Babies

Percentage of Women with No First Trimester Prenatal Care

Live Birth Rates for Adolescent Girls Aged 15-17 Years

Communicable Disease Incidence

Primary and Secondary Syphilis

Gonorrhea

Chlamydia

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Ratios were used as a simple measure of the disparity between a population of color when compared to White non-Hispanics. To calculate ratios, the rate for the group of color (numerator) was divided by the rate for White non-Hispanics (denominator). Ratios larger than 1.0 indicate a disparity when compared to White non-Hispanics (i.e., the population of color has worse health status than whites), while ratios of 1.0 or smaller show no disparity. In addition, percentage change in the rate ratios from the 1990-1994 period to the 1998-2002 period was also calculated to show trends for the health status indicators. A negative percentage change indicates that a disparity is improving (i.e., the health outcome is moving closer to that for White non-Hispanics), whereas a positive percentage change indicates that disparity is worsening. For more information on the methods used, see Appendix A.



# Findings

## The African American Community

*Demographics.* African Americans were an estimated seven percent of the population of Multnomah County in 2002. The African American community grew 28% between 1990 and 2002, when they were an estimated 45,000. Examination of African Americans by census tract shows that, in 2000, the majority of African Americans were concentrated in 11 contiguous census tracts in North and Northeast Portland.

African Americans are financially the poorest demographic group in Multnomah County. According to the 2000 U.S. Census, African Americans had a median annual household income of just \$27,295 in 2000, substantially below that of White non-Hispanics (\$42,947). In addition, 26% of African Americans in Multnomah County were in poverty in 2000, compared with only 10% for White non-Hispanics.

*Life Expectancy.* African Americans in Multnomah County can expect to live significantly fewer years than White Non-Hispanics. An African American at birth will live, on average, four fewer years than a White non-Hispanic in the County (Table 2).

**Table 2. Multnomah County Life Expectancy, at Birth (years)**

White non-Hispanic	African American	Difference
77	73	4*

Data Source: Mortality data, 1998-2002, Oregon Health Division Center for Health Statistics.

\* p<0.05

*Health Status Indicators.* Examination of the 17 health status indicators for African-Americans, compared to White non-Hispanics (Table 3), reveals that in the 1990-1994 period, there were statistically significant (p<0.05) health disparities – i.e., rate ratios greater than 1.0 – for 14 measures. There were significant health disparities for the following mortality measures in 1990-1994: overall mortality, heart disease, stroke, all cancers, lung cancer, homicide, and diabetes. Health disparities were also found for the following birth-related and communicable disease measures: infant mortality, low birthweight babies, lack of early prenatal care, teen births, syphilis, gonorrhea, and chlamydia. The largest health disparity in the 1990-1994 period was for gonorrhea. Table 3 shows that in 1990-1994, the rate of gonorrhea in the African American population was 1308 per 100,000, compared to only 58 per 100,000 for White non-Hispanics. Thus, the African American/White non-Hispanic rate ratio indicates that the gonorrhea rate was 23 times higher for African Americans than for White non-Hispanics in the 1990-1994 time period. This ratio is statistically significant at p<0.05 (i.e., the 95% confidence intervals, 21.2 and 24.5, do not fall below 1.0). Large disparities were also found for syphilis (12 times higher for African Americans compared to White non-Hispanics) and homicide (10 times higher for African Americans).

Analysis of the 1998-2002 period reveals that significant health disparities persisted for 13 of the 14 health disparities in the 1990-1994 period. The health disparity for lung cancer was eliminated in between the two time periods. For the 1998-2002 period, the largest disparities occurred for gonorrhea (down, but still high at 10 times the rate for White non-Hispanics), homicide mortality (down to 6.5 times higher than for White non-Hispanics) and diabetes (2.7 times the rate of White non-Hispanics).



Health indicators improved relative to White non-Hispanics for 15 of the 17 measures in 1998-2002 compared to the 1990-1994 period.

An overall trend analysis in health disparities was calculated for the 17 indicators. Analyzing the probability that 15 of 17 indicator ratios would show percent declines between 1990-1994 and 1998-2002, it was found that this overall trend was statistically significant ( $p=0.001$ ). However, when examined individually, only two health status indicators showed significant declines between the 1990-1994 and 1998-2002 time periods: gonorrhea showed a 54% decline, and lack of early prenatal care showed a 16% decline (both significant at  $p<0.05$ ) in their rate ratios between 1990-1994 and 1998-2002. Health indicators between African-Americans and White non-Hispanics grew for only two measures: diabetes and HIV deaths. Neither of these increases was statistically significant at  $p<0.05$ .

It is important to note that almost all the indicators showed declines in their rates for both races (with the exception of diabetes and chlamydia, which rose for both groups) in the two time periods examined. Thus, disparities are decreasing for African Americans (compared to White non-Hispanics) at the same time that overall health is improving for both groups.



**Table 3. Health Status Indicators and Rates, by Race and Year, With Associated African-American:White non-Hispanic Rate Ratios: Multnomah County, 1990-1994 and 1998-2002.**

Indicator	Years	African American Rate	White non-Hisp. Rate	Afr. Amer. :White Rate Ratio (95% CI)	Percentage Change in Rate Ratio
Overall Mortality <sup>a</sup>	1990-1994	1246.6	968.7	1.29* (1.22, 1.36)	
	1998-2002	1088.3	912.1	1.19* (1.13, 1.26)	-7.3
Heart Disease Mortality <sup>a</sup>	1990-1994	331.7	258.8	1.28* (1.16, 1.43)	
	1998-2002	242.4	207.4	1.17* (1.05, 1.31)	-8.8
Stroke Mortality <sup>a</sup>	1990-1994	120.8	81.2	1.49* (1.24, 1.78)	
	1998-2002	111.8	76.5	1.46* (1.24, 1.73)	-1.8
Lung Cancer Mortality <sup>a</sup>	1990-1994	87.9	71.3	1.23* (1.01, 1.50)	
	1998-2002	55.0	63.4	0.87 (0.69, 1.10)	-29.6
Female Breast Cancer Mortality <sup>b</sup>	1990-1994	34.8	33.3	1.05 (0.68, 1.61)	
	1998-2002	21.8	27.9	0.78 (0.49, 1.25)	-25.3
All Cancer Mortality <sup>a</sup>	1990-1994	279.4	236.3	1.18* (1.06, 1.32)	
	1998-2002	239.6	213.2	1.12* (1.00, 1.26)	-5.0
Motor Vehicle Accident Mortality <sup>a</sup>	1990-1994	13.0	10.7	1.22 (0.80, 1.86)	
	1998-2002	7.7	9.9	0.78 (0.46, 1.31)	-36.0
Homicide Mortality <sup>a</sup>	1990-1994	43.8	4.6	9.56* (7.27, 12.57)	
	1998-2002	17.8	2.8	6.48* (4.42, 9.51)	-32.2
Diabetes Mortality <sup>a</sup>	1990-1994	46.7	20.6	2.26* (1.70, 3.01)	
	1998-2002	75.8	28.2	2.69* (2.19, 3.31)	18.9
HIV Disease Mortality <sup>a</sup>	1990-1994	29.5	26.5	1.11 (0.84, 1.48)	
	1998-2002	7.6	5.3	1.45 (0.86, 2.46)	30.2
Infant Mortality Rate <sup>c</sup>	1990-1994	21.2	7.4	2.86* (2.23, 3.36)	
	1997-2001	8.6	5.0	1.71* (1.16, 2.53)	-40.1
Low Birthweight Babies, %	1990-1994	11.9	5.2	2.29* (2.07, 2.54)	
	1998-2002	10.7	5.5	1.94* (1.74, 2.18)	-15.2
No 1 <sup>st</sup> Trimester Prenatal Care, %	1990-1994	33.9	20.2	1.68* (1.61, 1.75)	
	1998-2002	22.9	16.3	1.41* (1.35, 1.46)	-16.4*
Birth Rate (aged 15-17 y) <sup>d</sup>	1990-1994	103.1	31.5	3.27* (2.95, 3.63)	
	1998-2002	46.6	17.6	2.65* (2.30, 3.06)	-18.9
Syphilis Case Rate <sup>e</sup>	1990-1994	66.7	5.6	11.87* (9.35, 15.08)	
	1998-2002	16.8	1.5	10.96* (7.01, 17.13)	-7.7
Gonorrhea Case Rate <sup>e</sup>	1990-1994	1307.5	58.0	22.55* (21.15, 24.05)	
	1998-2002	557.6	54.3	10.27* (9.52, 11.09)	-54.4*
Chlamydia Case Rate <sup>e</sup>	1990-1994	652.9	86.5	6.51* (6.05, 7.00)	
	1998-2002	1215.4	209.0	5.82* (5.55, 6.09)	-10.7

a Age-adjusted and expressed per 100,000 population.

b Age-adjusted and expressed per 100,000 women.

c Number of deaths among infants (in the first year of life) per 1,000 live births.

d Expressed per 1,000 adolescent girls aged 15-17 years.

e Expressed per 100,000 population (unadjusted for age).

\* Significant at p<0.05.



## The Hispanic Community

*Demographics.* The Hispanic community in Multnomah County is now the largest group of color, representing almost 9% of the population in 2002. The Hispanic community has also been the fastest growing group in the County. The Hispanic population grew 78% between 1990 and 2002, when they numbered close to 59,000. Hispanics have among the lowest incomes in Multnomah County. According to the 2000 Census, Hispanics had a median annual household income of just \$32,244 in 2000, \$11,000 below that of White non-Hispanics (\$42,947). In addition, 26% of Hispanics in Multnomah County lived in poverty in 2000, compared with only 10% for White non-Hispanics. Along with African Americans, they have the highest poverty rate of all racial / ethnic groups in the County.

Despite their poverty, the Hispanic population nationally and in Multnomah County is healthier overall than the White non-Hispanic population, and does much better than White non-Hispanics on many health measures.

*Life Expectancy.* Hispanics in Multnomah County can expect to live significantly more years than White non-Hispanics. At birth, a Hispanic can expect to live, on average, 5 years longer than a White non-Hispanic in the County (Table 4).

**Table 4. Multnomah County Life Expectancy, at Birth (years)**

White non-Hispanic	Hispanic	Difference
77	82	-5*

Data Source: Mortality data, 1998-2002, Oregon Health Division Center for Health Statistics.

\* p<0.05

*Health Status Indicators.* Examination of the 17 health status indicators for Hispanics, compared to White non-Hispanics, shows that in the 1990-1994 period, statistically significant health disparities (p<0.05) were found for seven measures: homicide, low birthweight babies, lack of early prenatal care, teen births, syphilis, gonorrhea, and chlamydia (see Table 5). The largest health disparities in the 1990-1994 period were for syphilis cases (almost 14 times higher for Hispanics than for White non-Hispanics), gonorrhea (eight times the White non-Hispanic rate), and homicide (almost triple the White non-Hispanic rate).

Of the seven health disparities found in 1990-1994, significant disparities persisted for six indicators in the 1998-2002 period. The disparity for low birthweight babies disappeared in 1998-2002. For the period 1998-2002, the largest disparities occurred in the teen birth rate, which was almost five times the White non-Hispanic rate, and for syphilis, which was close to four times higher than White non-Hispanic.

Examining indicators individually, health disparities between Hispanics and White non-Hispanics significantly worsened (at p<0.05) over time for three indicators: overall mortality, early prenatal care, and teen birth rates. The highest significant increase in health disparities occurred for teen birth rates, which increased by 87% between the 1990-1994 period and 1998-2002. Disparities for overall mortality and lack of early prenatal care grew 23% and 21%, respectively. Health disparities declined for three indicators between 1990-1994 and 1998-2002. Disparities in gonorrhea rates declined 82%, syphilis rates declined 72%, and chlamydia rates fell 19% between 1990-1994 and 1998-2002 (all statistically significant at p<0.05). Examining overall trends, 10 of 16 health indicators worsened over time, a trend which was not statistically significant (p=0.23).



**Table 5. Health Status Indicators and Rates, by Race and Year, With Associated Hispanic: White non-Hispanic Rate Ratios: Multnomah County, 1990-1994 and 1998-2002.**

Indicator	Years	Hispanic	White non-Hisp.	Hispanic:White Rate Ratio (95% CIs)	Percentage Change in Rate Ratio
Overall Mortality <sup>a</sup>	1990-1994	519.2	968.7	0.54 (0.47, 0.60)	23.1*
	1998-2002	602.0	912.1	0.66 (0.60, 0.73)	
Heart Disease Mortality <sup>a</sup>	1990-1994	109.6	258.8	0.42 (0.30, 0.60)	44.7
	1998-2002	127.1	207.4	0.61 (0.47, 0.81)	
Stroke Mortality <sup>a</sup>	1990-1994	51.8	81.2	0.64 (0.39, 1.04)	47.5
	1998-2002	72.0	76.5	0.94 (0.64, 1.38)	
Lung Cancer Mortality <sup>a</sup>	1990-1994	22.9	71.3	0.32 (0.17, 0.62)	5.4
	1998-2002	21.4	63.4	0.34 (0.19, 0.60)	
Female Breast Cancer Mortality <sup>b</sup>	1990-1994	NSV	33.3	NSV	NSV
	1998-2002	NSV	27.9	NSV	
All Cancer Mortality <sup>a</sup>	1990-1994	105.2	236.3	0.45 (0.33, 0.60)	43.7
	1998-2002	136.5	213.2	0.64 (0.51, 0.81)	
Motor Vehicle Accident Mortality <sup>a</sup>	1990-1994	9.5	10.7	0.89 (0.51, 1.55)	28.4
	1998-2002	11.3	9.9	1.14 (0.77, 1.69)	
Homicide Mortality <sup>a</sup>	1990-1994	12.5	4.6	2.72* (1.63, 4.51)	-12.3
	1998-2002	6.6	2.8	2.39* (1.51, 3.75)	
Diabetes Mortality <sup>a</sup>	1990-1994	12.2	20.6	0.59 (0.25, 1.43)	31.7
	1998-2002	22.0	28.2	0.78 (0.44, 1.38)	
HIV Disease Mortality <sup>a</sup>	1990-1994	22.6	26.5	0.85 (0.57, 1.28)	-0.3
	1998-2002	4.5	5.3	0.85 (0.45, 1.61)	
Infant Mortality Rate <sup>c</sup>	1990-1994	5.6	7.4	0.75 (0.45, 1.26)	65.7
	1997-2001	6.2	5.0	1.24 (0.88, 1.76)	
Low Birthweight Babies, %	1990-1994	6.1	5.2	1.17* (1.00, 1.37)	-7.5
	1998-2002	6.0	5.5	1.08 (0.97, 1.21)	
No 1 <sup>st</sup> Trimester Prenatal Care, %	1990-1994	33.7	20.2	1.67* (1.59, 1.75)	21.2*
	1998-2002	33.0	16.3	2.03* (1.96, 2.09)	
Birth Rate (aged 15-17 y) <sup>d</sup>	1990-1994	79.8	31.5	2.53* (2.19, 2.93)	87.4*
	1998-2002	83.4	17.6	4.75* (4.22, 5.34)	
Syphilis case rate <sup>e</sup>	1990-1994	78.0	5.6	13.88* (10.67, 18.06)	-72.1*
	1998-2002	6.0	1.5	3.88* (2.14, 7.02)	
Gonorrhea case rate <sup>e</sup>	1990-1994	461.0	58.0	7.95* (7.20, 8.78)	-82.7*
	1998-2002	74.3	54.3	1.37* (1.18, 1.59)	
Chlamydia case rate <sup>e</sup>	1990-1994	320.5	86.5	3.71* (3.32, 4.13)	-19.1*
	1998-2002	626.6	209.0	3.00* (2.83, 3.17)	

Note: NSV=Not statistically valid. Total cases less than 5.

a Age-adjusted and expressed per 100,000 population.

b Age-adjusted and expressed per 100,000 women.

c Number of deaths among infants (in the first year of life) per 1,000 live births.

d Expressed per 1,000 adolescent girls aged 15-17 years.

e Expressed per 100,000 population (unadjusted for age).

\* Significant at p<0.05.



## The Asian Community

*Demographics.* The Asian community (which includes Native Hawaiians and Pacific Islanders) is the second largest group of color in Multnomah County, representing just over 7% of the population as of 2002. As with most other groups, Asians experienced significant population growth in the County: a 75% increase between 1990 and 2002, when they numbered 40,400. Asians are the most affluent group in Multnomah County. According to the 2000 U.S. Census, Asians had a median annual household income of \$43,100 in 2000, slightly above that of White non-Hispanics (\$42,900). Only 13% of Asians in Multnomah County lived in poverty in 2000, compared with 10% for White non-Hispanics. Asians have the lowest poverty rate of all non-White groups in Multnomah County.

*Life Expectancy.* Asians in Multnomah County can expect to live significantly more years than White non-Hispanics. At birth, an Asian can expect to live, on average, 5 years longer than a White non-Hispanic in the County (Table 6). As mentioned in more detail in the Discussion below, racial misclassification of Asians upon death will underestimate their death rates in Multnomah County, and hence life expectancy will appear to be higher than it really is.

**Table 6. Multnomah County Life Expectancy, at Birth (years)**

White non-Hispanic	Asian	Difference
77	82	-5*

Data Source: Mortality data, 1998-2002, Oregon Health Division Center for Health Statistics.

\* p<0.05

*Health Status Indicators.* Analysis of the 17 health status indicators for Asians compared to White non-Hispanics (see Table 7), shows that in the 1990-1994 period, statistically significant health disparities (p<0.05) existed for two measures: low birthweight babies (1.3 times higher for Asians than for White non-Hispanics) and lack of early prenatal care (1.4 times higher than White non-Hispanics).

Examination of the 1998-2002 period reveals two significant health disparities: lack of early prenatal care (which stayed at 1.4 times the rate of White non-Hispanics) and chlamydia (1.2 times higher for Asians). The disparity for low birthweight babies in the 1990-1994 period disappeared in the 1998-2002 period.

Only one of the 17 health status measures showed significant change over time for Asians relative to White non-Hispanics. The Asian rate ratio for gonorrhea, compared to the rate for White non-Hispanics, declined 50% between 1990-1994 and 1998-2002. There was no significant overall trend in health disparities between the two time periods (p=0.39). Thus, health disparities do not appear to be changing over time for this group.



**Table 7. Health Status Indicators and Rates, by Race and Year, With Associated Asian: White non-Hispanic Rate Ratios: Multnomah County, 1990-1994 and 1998-2002.**

Indicator	Years	Asian	White non-Hisp.	Asian:White Rate Ratio (95% CIs)	Percentage Change in Rate Ratio
Overall Mortality <sup>a</sup>	1990-1994	633.4	968.7	0.65 (0.60, 0.71)	0.1
	1998-2002	597.2	912.1	0.65 (0.61, 0.70)	
Heart Disease Mortality <sup>a</sup>	1990-1994	162.3	258.8	0.63 (0.52, 0.75)	-6.8
	1998-2002	121.2	207.4	0.58 (0.50, 0.69)	
Stroke Mortality <sup>a</sup>	1990-1994	65.8	81.2	0.81 (0.61, 1.08)	7.7
	1998-2002	66.8	76.5	0.87 (0.70, 1.09)	
Lung Cancer Mortality <sup>a</sup>	1990-1994	27.4	71.3	0.38 (0.26, 0.56)	10.8
	1998-2002	27.0	63.4	0.42 (0.30, 0.59)	
Female Breast Cancer Mortality <sup>b</sup>	1990-1994	NSV	33.3	NSV	NSV
	1998-2002	23.1	27.9	0.83 (0.54, 1.27)	
All Cancer Mortality <sup>a</sup>	1990-1994	157.9	236.3	0.67 (0.57, 0.79)	11.2
	1998-2002	158.4	213.2	0.74 (0.64, 0.85)	
Motor Vehicle Accident Mortality <sup>a</sup>	1990-1994	16.2	10.7	1.52 (0.97, 2.36)	-45.0
	1998-2002	8.3	9.9	0.83 (0.51, 1.36)	
Homicide Mortality <sup>a</sup>	1990-1994	5.6	4.6	1.23 (0.66, 2.28)	26.0
	1998-2002	4.3	2.8	1.55 (0.79, 3.00)	
Diabetes Mortality <sup>a</sup>	1990-1994	19.0	20.6	0.92 (0.54, 1.56)	11.2
	1998-2002	28.9	28.2	1.02 (0.73, 1.43)	
HIV Disease Mortality <sup>a</sup>	1990-1994	NSV	26.5	NSV	NSV
	1998-2002	NSV	5.3	NSV	
Infant Mortality Rate <sup>c</sup>	1990-1994	7.1	7.4	0.95 (0.61, 1.49)	-11.2
	1997-2001	4.2	5.0	0.85 (0.51, 1.40)	
Low Birthweight Babies, %	1990-1994	6.5	5.2	1.26* (1.00, 1.37)	-9.7
	1998-2002	6.3	5.5	1.13 (0.99, 1.29)	
No 1 <sup>st</sup> Trimester Prenatal Care, %	1990-1994	27.7	20.2	1.37* (1.31, 1.44)	-0.6
	1998-2002	22.2	16.3	1.37* (1.31, 1.42)	
Birth Rate (aged 15-17 y) <sup>d</sup>	1990-1994	24.4	31.5	0.77 (0.63, 0.96)	43.8
	1998-2002	19.6	17.6	1.11 (0.90, 1.38)	
Syphilis case rate <sup>e</sup>	1990-1994	3.81	5.6	0.68 (0.30, 1.54)	NSV
	1998-2002	NSV	1.5	NSV	
Gonorrhea case rate <sup>e</sup>	1990-1994	47.0	58.0	0.81 (0.64, 1.02)	-50.0*
	1998-2002	22.0	54.3	0.41 (0.31, 0.54)	
Chlamydia case rate <sup>e</sup>	1990-1994	90.9	86.5	1.05 (0.88, 1.24)	16.5
	1998-2002	255.8	209.0	1.22* (1.12, 1.33)	

Note: NSV=Not statistically valid. Total cases less than 5.

a Age-adjusted and expressed per 100,000 population.

b Age-adjusted and expressed per 100,000 women.

c Number of deaths among infants (in the first year of life) per 1,000 live births.

d Expressed per 1,000 adolescent girls aged 15-17 years.

e Expressed per 100,000 population (unadjusted for age).

\* - Significant at p<0.05.



## The American Indian Community

*Demographics.* The American Indian community in Multnomah County is the smallest group of color, representing only 1% of the population in 2002. American Indians grew only slightly between 1990 and 2002, when they numbered approximately 9,200. American Indians are the second poorest group in Multnomah County. According to the 2000 U.S. Census, American Indians had a median annual household income of only \$31,244 in 2000, \$12,000 below that of White Non-Hispanics (\$42,947). In addition, 1 in 5 American Indians in Multnomah County lived in poverty in 2000, compared with only 1 in 10 for White non-Hispanics.

*Life Expectancy.* Despite having a higher poverty rate, and lower median income, American Indians in Multnomah County can expect to live about the same number of years as White Non-Hispanics. Table 8 shows that, at birth, an American Indian can expect to live to age 76, the same as for White non-Hispanics.\* As mentioned in more detail in the Discussion below, racial misclassification of American Indians upon death underestimates their death rates in Multnomah County, and hence life expectancy will appear to be higher than it really is.

**Table 8. Multnomah County Life Expectancy, at Birth (years)**

White non-Hispanic	American Indian	Difference
76	76	0

Data Source: Mortality data, 1990-2002, Oregon Health Division, Center for Health Statistics.

*Health Status Indicators.* Examination of the 17 health status indicators for American Indians, compared to White non-Hispanics, shows that in the 1990-1994 period, statistically significant health disparities ( $p < 0.05$ ) existed for seven measures (see Table 9). The largest health disparities in the 1990-1994 period were for syphilis cases (four times higher for American Indians than for White non-Hispanics) and homicide (triple the White non-Hispanic rate). Disparities were also present for motor vehicle accident mortality, lack of early prenatal care, teen births, gonorrhea, and chlamydia.

Examination of the 1998-2002 period reveals that there were three significant health disparities: teen births (1.8 times higher than White non-Hispanics), lack of early prenatal care (1.8 times higher), and infant mortality (2.5 times higher).

There were no significant changes in health disparities for any of the 17 indicators between 1990-1994 and 1998-2002. Nor was there a significant overall trend in health disparities. Thus, health disparities do not appear to be changing over time for this group.

\* Due to small numbers for the American Indian population, mortality data for 1990-2002 were used to calculate the life expectancies in Table 8. Note that 1998-2002 mortality data were used for the other life expectancy calculations shown in this report.



**Table 9. Health Status Indicators and Rates, by Race and Year, With Associated American Indian: White non-Hispanic Rate Ratios: Multnomah County, 1990-1994 and 1998-2002.**

Indicator	Years	American Indian	White non-Hisp.	Amer.Indian:White Rate Ratio	Percentage Change in Rate Ratio
Overall Mortality <sup>a</sup>	1990-1994	796.5	968.7	0.82 (0.71, 0.96)	15.2
	1998-2002	864.3	912.1	0.94 (0.82, 1.09)	
Heart Disease Mortality <sup>a</sup>	1990-1994	162.6	258.8	0.63 (0.42, 0.93)	44.7
	1998-2002	188.6	207.4	0.91 (0.64, 1.28)	
Stroke Mortality <sup>a</sup>	1990-1994	60.7	81.2	0.75 (0.39, 1.44)	-23.2
	1998-2002	43.9	76.5	0.57 (0.27, 1.21)	
Lung Cancer Mortality <sup>a</sup>	1990-1994	67.3	71.3	0.94 (0.47, 1.89)	5.5
	1998-2002	63.2	63.4	1.00 (0.55, 1.80)	
Female Breast Cancer Mortality <sup>b</sup>	1990-1994	NSV	33.3	NSV	NSV
	1998-2002	NSV	27.9	NSV	
All Cancer Mortality <sup>a</sup>	1990-1994	170.8	236.3	0.72 (0.50, 1.04)	3.3
	1998-2002	159.2	213.2	0.75 (0.52, 1.06)	
Motor Vehicle Accident Mortality <sup>a</sup>	1990-1994	21.8	10.7	2.04* (1.04, 3.95)	NSV
	1998-2002	NSV	9.9	NSV	
Homicide Mortality <sup>a</sup>	1990-1994	15.0	4.6	3.28* (1.61, 6.72)	NSV
	1998-2002	NSV	2.8	NSV	
Diabetes Mortality <sup>a</sup>	1990-1994	33.5	20.6	1.63 (0.67, 3.92)	-42.4
	1998-2002	26.4	28.2	0.94 (0.45, 1.97)	
HIV Disease Mortality <sup>a</sup>	1990-1994	13.2	26.5	0.50 (0.21, 1.20)	294
	1998-2002	10.3	5.3	1.96 (0.80, 4.77)	
Infant Mortality Rate <sup>c</sup>	1990-1994	14.2	7.4	1.91 (0.98, 3.72)	28.1
	1997-2001	12.3	5.0	2.45* (1.15, 5.23)	
Low Birthweight Babies, %	1990-1994	6.5	5.2	1.24 (0.91, 1.70)	-3.3
	1998-2002	6.6	5.5	1.20 (0.87, 1.67)	
No 1 <sup>st</sup> Trimester Prenatal Care, %	1990-1994	37.0	20.2	1.84* (1.66, 2.03)	-3.8
	1998-2002	28.8	16.3	1.77* (1.60, 1.95)	
Birth Rate (aged 15-17 y) <sup>d</sup>	1990-1994	57.6	31.5	1.83* (1.39, 2.40)	0.6
	1998-2002	32.3	17.6	1.84* (1.30, 2.61)	
Syphilis case rate <sup>e</sup>	1990-1994	23.8	5.6	4.23* (2.16, 8.30)	NSV
	1998-2002	NSV	1.5	NSV	
Gonorrhea case rate <sup>e</sup>	1990-1994	113.7	58.0	1.96* (1.42, 2.72)	-49.9
	1998-2002	53.3	54.3	0.98 (0.65, 1.47)	
Chlamydia case rate <sup>e</sup>	1990-1994	129.5	86.5	1.50* (1.13, 1.99)	-26.2
	1998-2002	231.2	209.0	1.10 (0.91, 1.34)	

Note: NSV=Not statistically valid. Total cases less than 5.

a Age-adjusted and expressed per 100,000 population.

b Age-adjusted and expressed per 100,000 women.

c Number of deaths among infants (in the first year of life) per 1,000 live births.

d Expressed per 1,000 adolescent girls aged 15-17 years.

e Expressed per 100,000 population (unadjusted for age).

\* - Significant at p<0.05.



## Discussion

Using 17 health status indicators – 10 mortality indicators, four pregnancy and birth indicators, and three infectious disease indicators – we sought to document the extent of health disparities between groups of color in Multnomah County, compared to White non-Hispanics. Disparities were examined from 1990 to 2002 to analyze trends. See Appendix B for graphs of the 17 health status indicators. We found that African Americans had the largest health disparities, compared to White non-Hispanics, of all groups examined. Furthermore, these health disparities persisted over the 12-year study period. Health disparities for 76% of the health status indicators (13 out of 17) were found in the 1998-2002 period compared to 82% (14 out of 17) in the 1990-1994 period. This mirrors disparities for African Americans nationally, and in other local communities. On a positive note, health disparities between African Americans and White non-Hispanics appear to be improving over time. Between 1990-1994 and 1998-2002, there were improvements in 88% (15 of 17) of the health status indicators, an overall trend which was statistically significant ( $p=0.001$ ). This trend mirrors health disparity improvement trends for African Americans nationally. If these gains continue, many health disparities for African Americans, compared to White non-Hispanics, could be eliminated by 2010.

Fewer health disparities were found for the other groups of color that we examined. The Asian community had the fewest health disparities, and for many measures their health was better than for White non-Hispanics. Only two Asian health disparities were found for the 1998-2002 period. Two factors may explain the lack of health disparities in Asians compared to White non-Hispanics. First, Asians are the most affluent racial group in the County and have the highest incomes and lowest poverty rates of all racial groups. As health disparities are associated with income, this factor may provide one explanation for their good health status. Second, it has recently been documented that Asians are undercounted on death certificates. According to a recent study by the National Center for Health Statistics (NCHS), this undercounting due to racial misclassification may be as high as 11%.<sup>15</sup> This results in artificially lower mortality rates, which in turn results in the misleading conclusion that health disparities do not exist for this group.

American Indians had far fewer health disparities, compared to White non-Hispanics, than would be expected of a group with high poverty rates and low median income. Of 13 health status indicators for which data was available in the 1998-2002 period, health disparities were found for only three indicators. It is important to note that incorrect identification of the race of American Indians at death results in significant undercounting of American Indians, which may lead to the mistaken conclusion that the health of this group is good relative to others. The same NCHS study mentioned above estimates that American Indians are vastly undercounted at death, with 21 of 100 American Indians mistakenly coded as another race (most likely white).

The Hispanic community also had fewer health disparities than would be expected of a group with the one of the highest poverty rate in the County. Health disparities were found for only six out of 16 health status indicators studied. It has been recognized in other studies that Hispanics have better health outcomes than the majority White population in the U.S, despite their high rates of poverty. This is known as the Hispanic Health Paradox.<sup>16</sup> It is also possible that undercounting of Hispanic deaths will artificially lower mortality rates. NCHS found that 2 out of every 100 Hispanic deaths were incorrectly coded another race.<sup>15</sup>



## Appendix A: Methods

Pregnancy and birth, communicable disease, and mortality data for the years 1990 to 2002 were obtained from the Oregon Department of Human Services Center for Health Statistics. The 10 mortality indicators were coded using the *International Classification of Diseases* (Ninth and Tenth Revisions) and were calculated as rates per 100,000, age-adjusted to the 2000 standard population. To adjust for the conversion of causes of death from ICD-9 to ICD-10, comparability ratios were applied to all death data before 1999. The infant mortality rate is expressed as the number of deaths per 1,000 live births. Both low birthweight and teen births were calculated as percentages. Syphilis, gonorrhea, and chlamydia rates are shown as cases per 100,000 population, unadjusted for age.

Life expectancy, or the average length of time that a person of a particular age in a population is expected to live, was calculated for all racial and ethnic and racial groups examined. All life expectancy numbers show the average years of life from birth.

To ensure that the number of cases for each indicator was large enough for meaningful analysis, indicators were calculated in 5-year periods, beginning with the combined years 1990-1994 and ending with the years 1998-2002. Indicator measures that were below five cases were considered unreliable and rates were not calculated.

Confidence intervals for the rate ratios were calculated using a standard formula.<sup>17</sup> 95% confidence intervals were used to determine significant disparities, and to identify statistically significant changes in health disparities over time. Confidence intervals below 1.0 are not considered significant disparities. Health disparity ratios for a health status indicator that do not overlap in their confidence intervals in the two time periods are considered significantly different ratios, at  $p < 0.05$ .

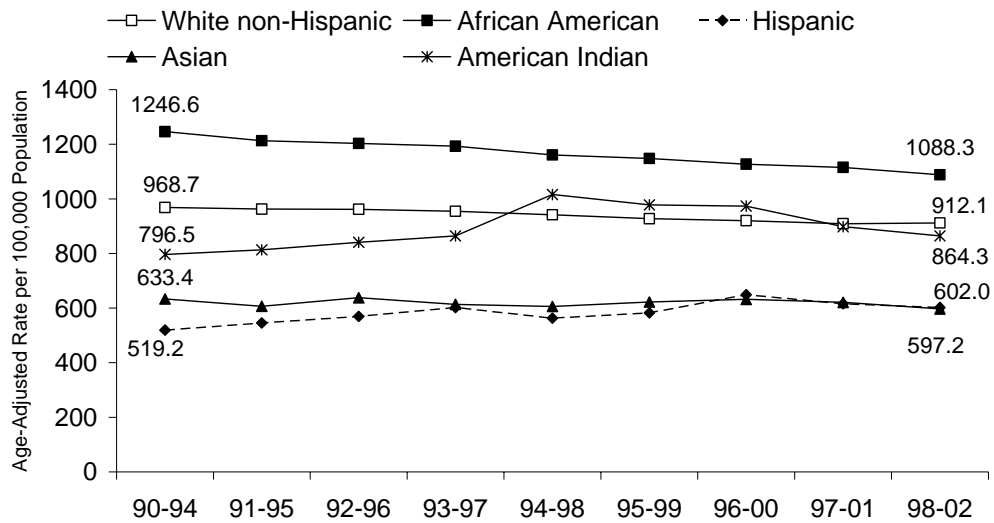
To test the overall trend in the 17 health status indicators, a binomial probability was calculated to test the significance of the percentage changes in the indicators from 1990-1994 to 1998-2002.<sup>14</sup>

Life expectancy numbers, and the 17 health status indicators, were calculated by the Multnomah County Health Department using VistaPHw, a standardized community health assessment tool developed by the Public Health department in Seattle-King County, Washington.



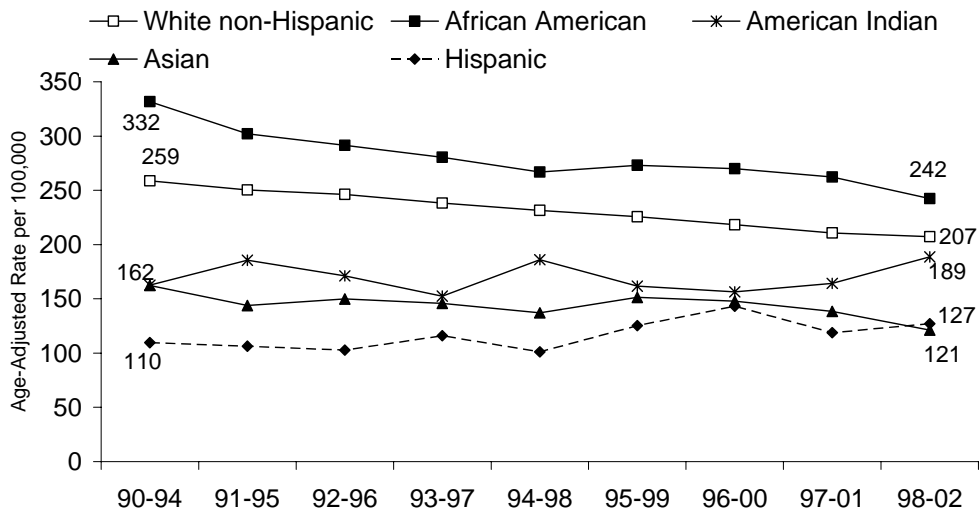
## Appendix B: Graphs

### Overall Mortality, Multnomah County



Source: Oregon Department of Human Services, Center for Health Statistics

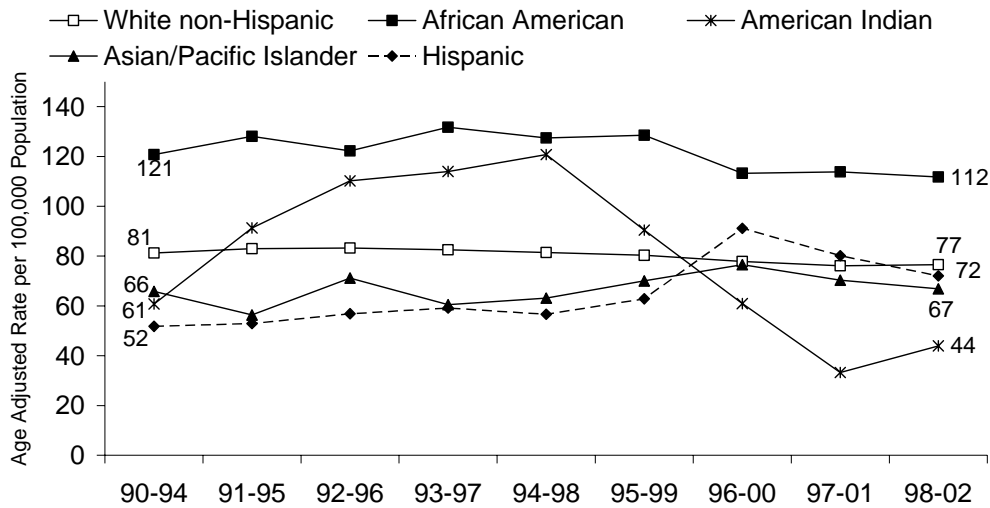
### Heart Disease Mortality, Multnomah County



Source: Oregon Department of Human Services, Center for Health Statistics

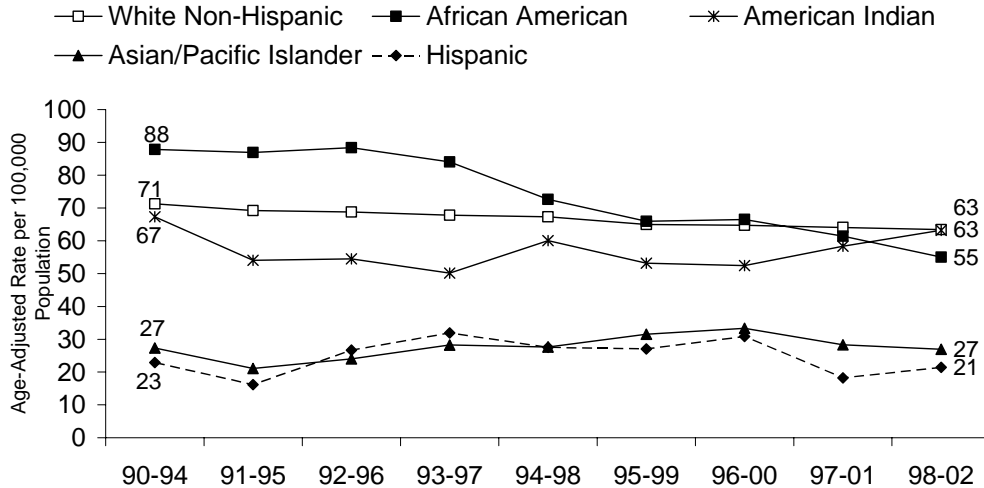


## Stroke Mortality Rate by Race/Ethnicity Multnomah County, 1990-2002



Source: Oregon Department of Human Services, Center for Health Statistics

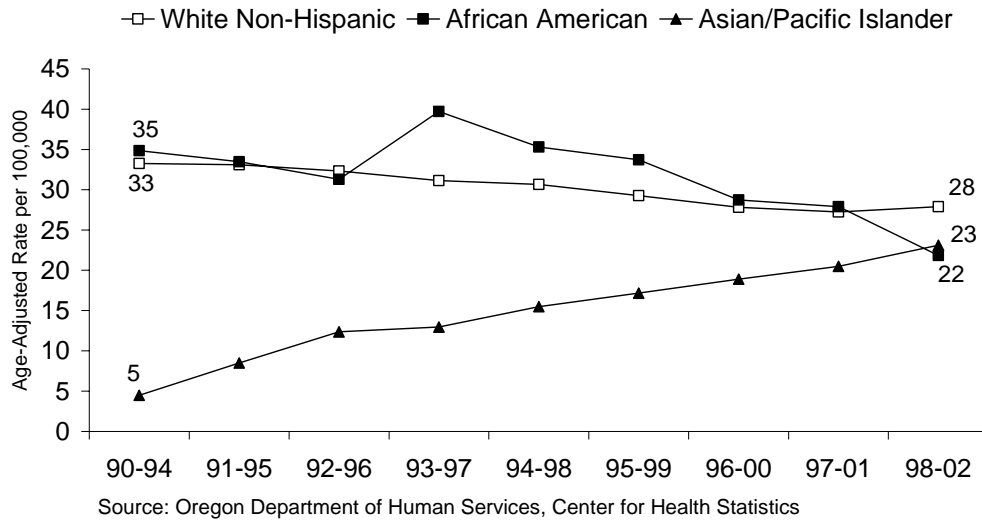
## Lung Cancer Mortality by Race/Ethnicity, Multnomah County 1990-2002



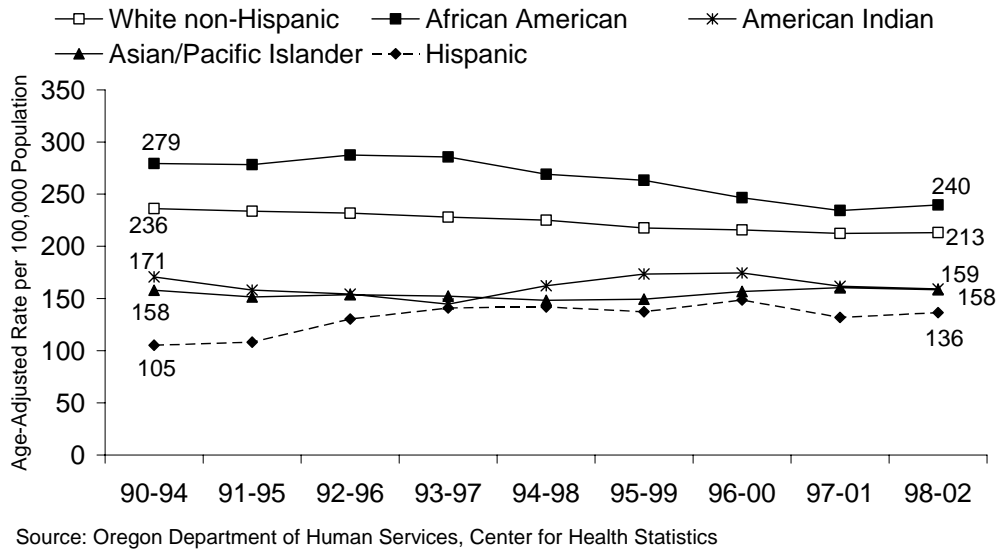
Source: Oregon Department of Human Services, Center for Health Statistics



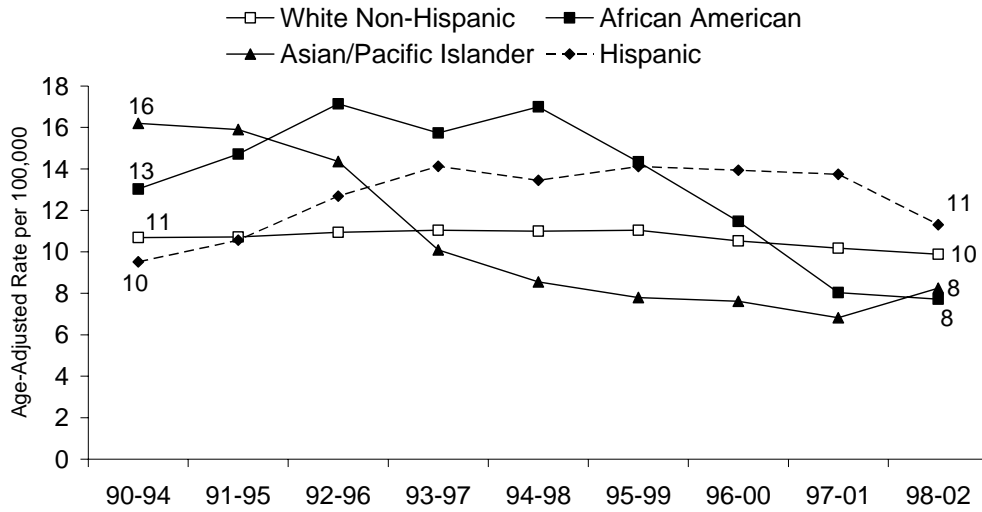
## Female Breast Cancer Mortality by Race/Ethnicity, Multnomah County 1990-2002



## Cancer Death Rate by Race/Ethnicity, Multnomah County 1990-2002

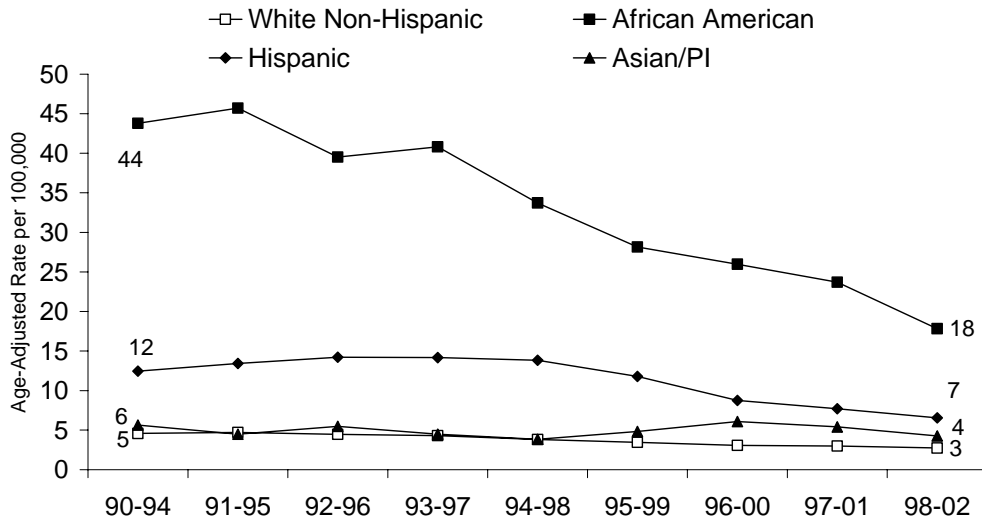


## Motor Vehicle Accident Mortality by Race/Ethnicity, Multnomah County 1990-2002



Source: Oregon Department of Human Services, Center for Health Statistics

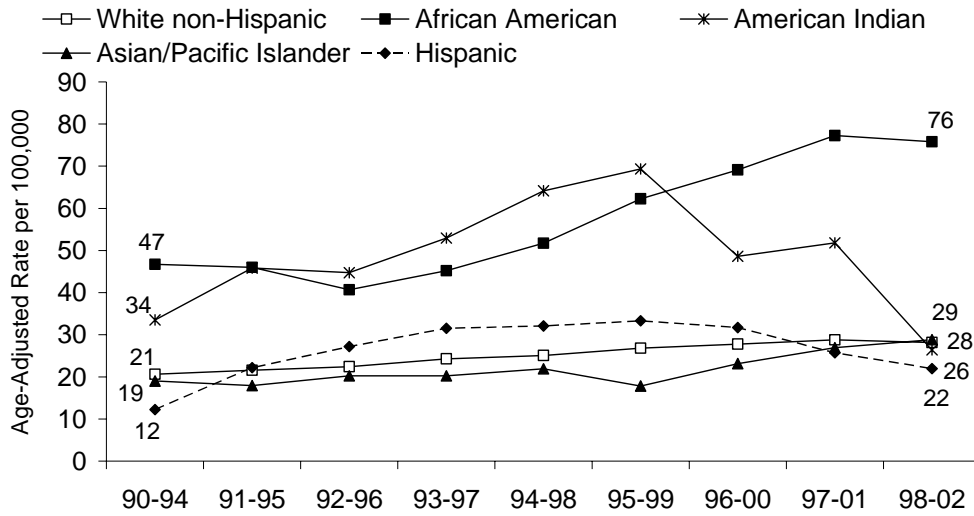
## Homicide Rate by Race/Ethnicity Multnomah County



Source: Oregon Department of Human Services, Center for Health Statistics

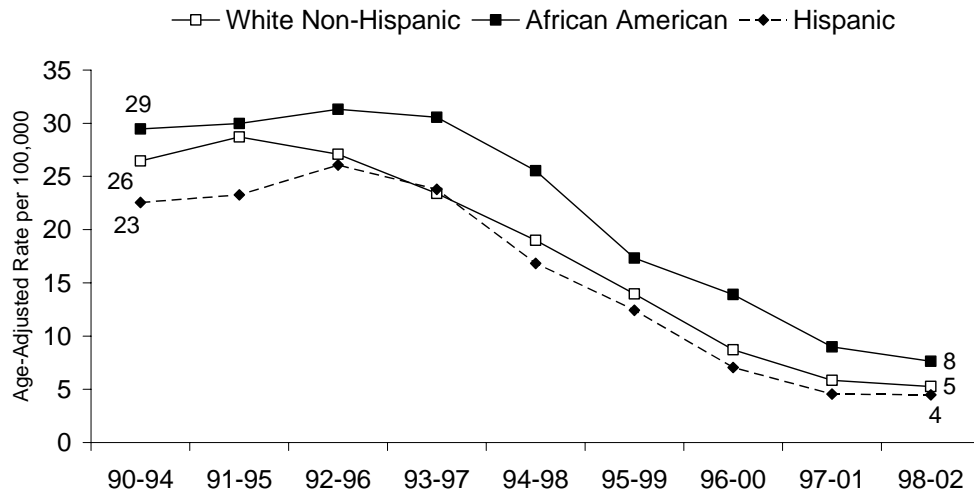


## Diabetes Mortality Rate by Race/Ethnicity Multnomah County, 1990-2002



Source: Oregon Department of Human Services, Center for Health Statistics

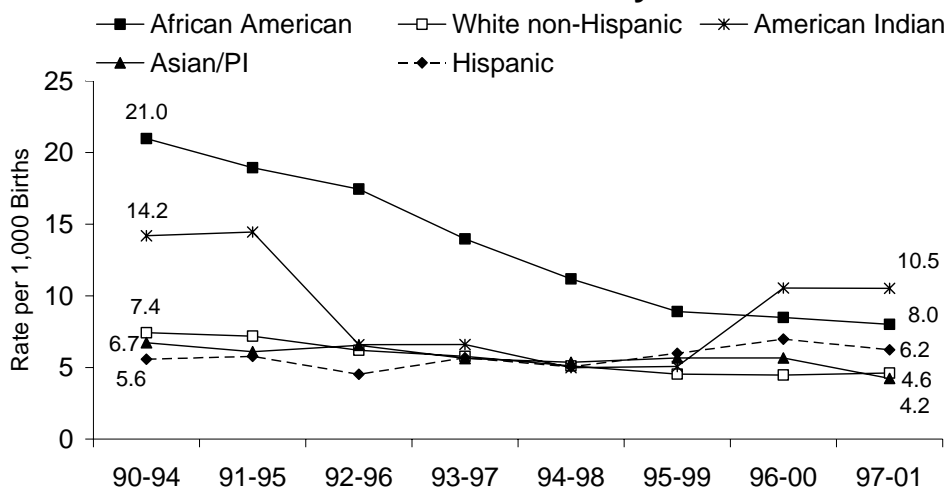
## HIV Mortality by Race/Ethnicity, Multnomah County 1990-2002



Source: Oregon Department of Human Services, Center for Health Statistics

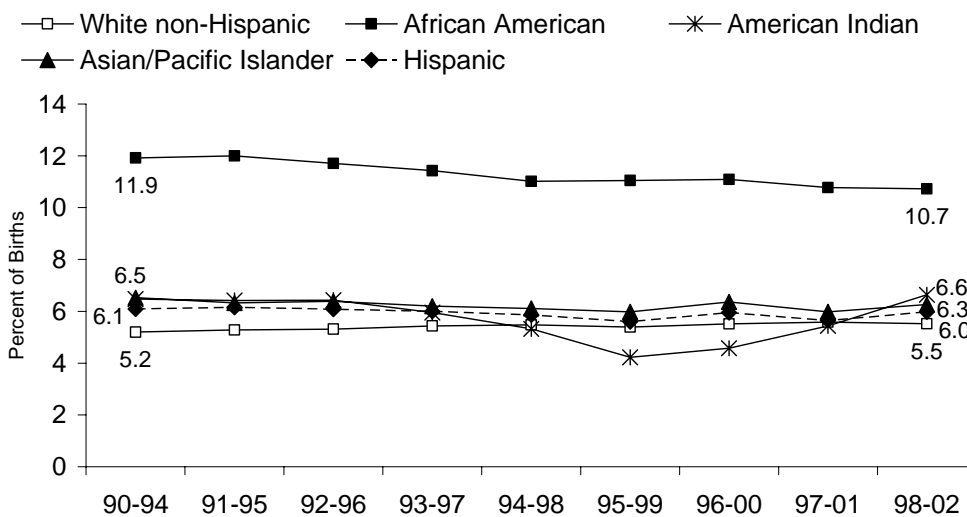


## Infant Mortality Rate by Race/Ethnicity\* Multnomah County



\*Matched Infant Birth/Death File  
Source: Oregon Department of Human Services, Center for Health Statistics

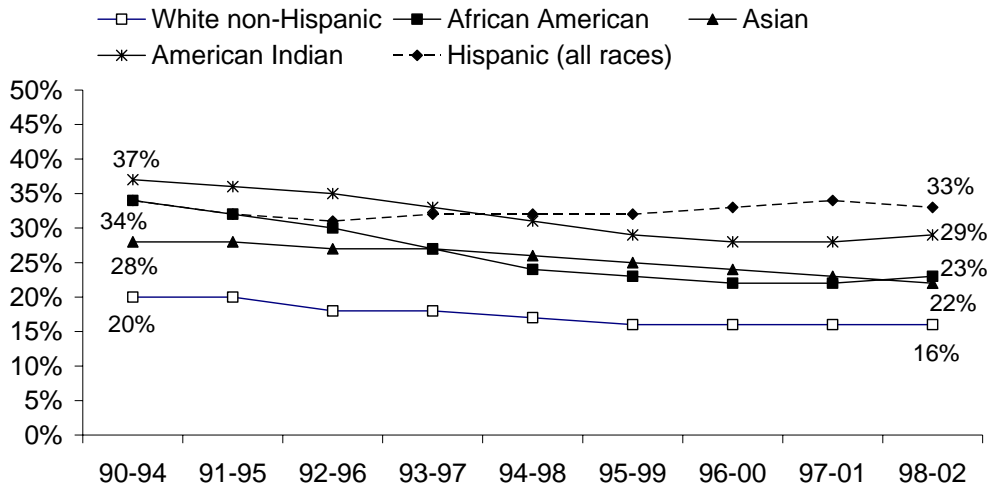
## Low Birthweight (<2500g), Multnomah County



Source: Oregon Department of Human Services, Center for Health Statistics

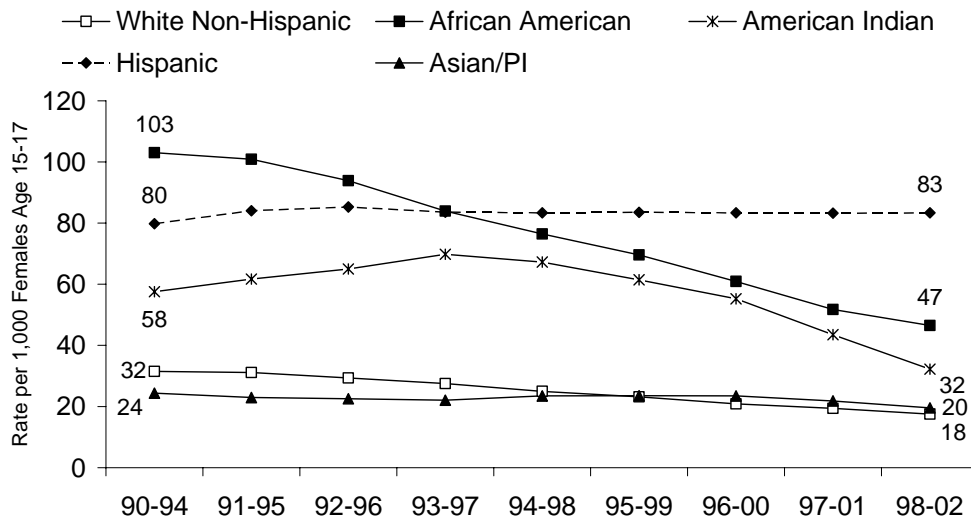


## No First Trimester Prenatal Care Multnomah County



Source: Oregon Department of Human Services, Center for Health Statistics

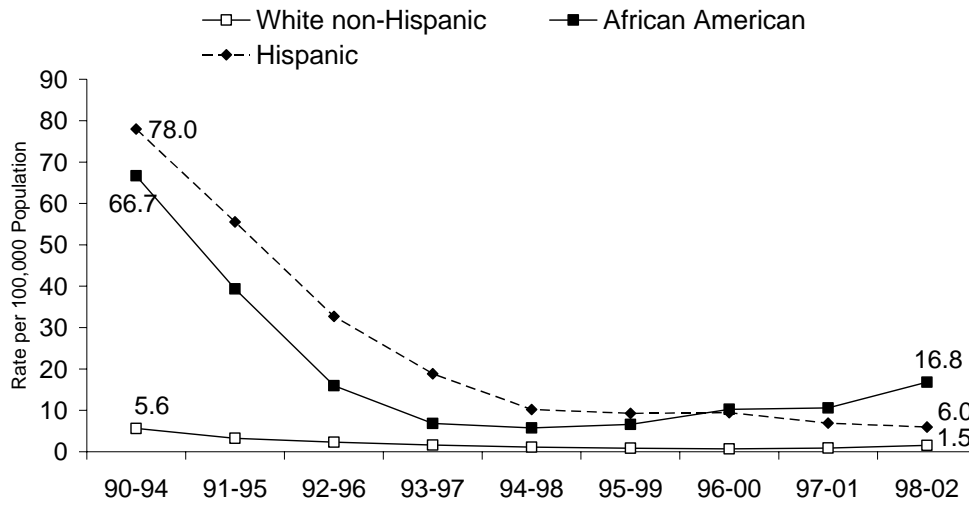
## Teen Birth Rate 15-17 year olds, Multnomah County



Source: Oregon Department of Human Services, Center for Health Statistics

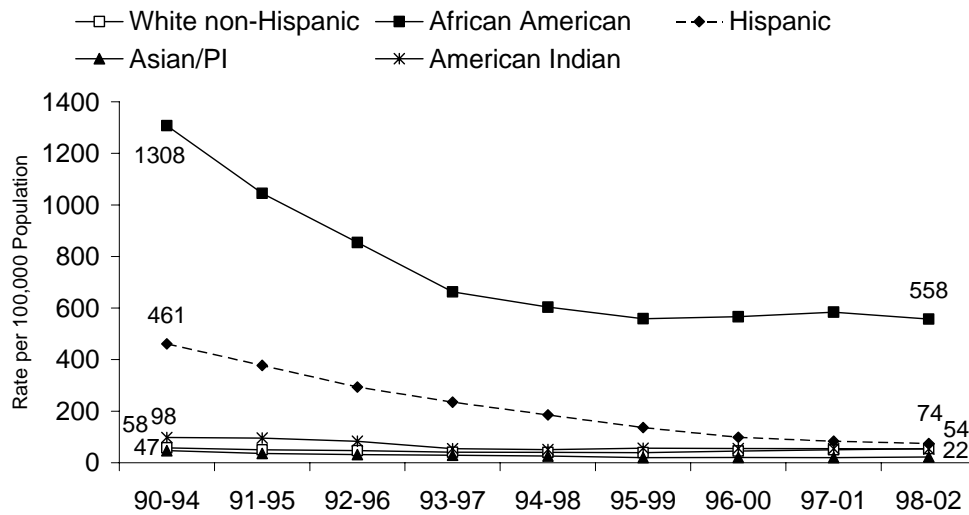


## Syphilis, Multnomah County



Source: Oregon Department of Human Services, Acute and Communicable Disease

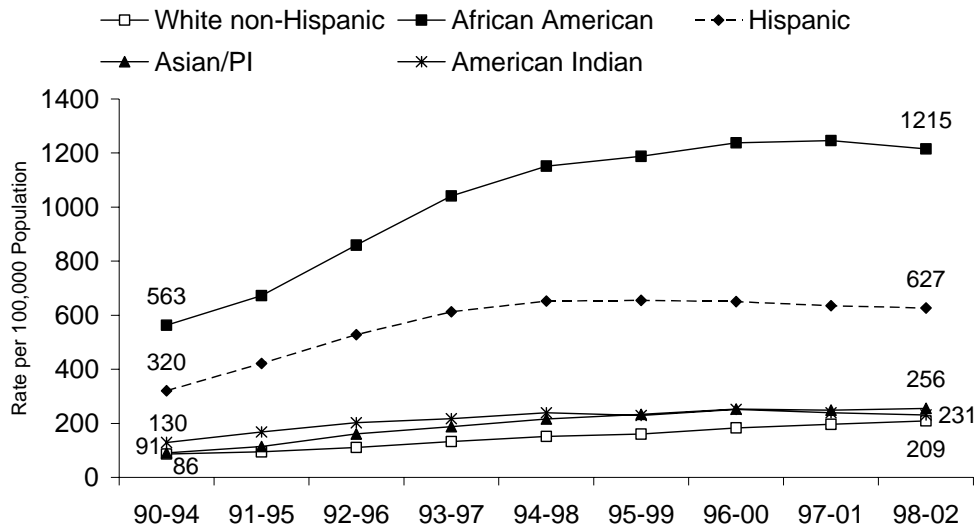
## Gonorrhea Rates, Multnomah County



Source: Oregon Department of Human Services, Acute and Communicable Disease



## Chlamydia Rates, Multnomah County



Source: Oregon Department of Human Services, Acute and Communicable Disease



## Appendix C: MCHD Disparity Activities

### Multnomah County Health Department's Diversity and Quality Team recently identified programs and activities which address health disparities:

- The Healthy Birth Initiative provides services to Latina and African American communities to promote healthy births and families in Northeast Portland.
- The Healthy Birth Initiative Program's Men Enriching Neighborhoods Conference focuses on communities of color.
- *Poder es Salud*/Power for Health aims to decrease health disparities in the Latino and African American communities by strengthening the ability of community members to identify and address health issues. The project works in three African American faith communities, one Latino faith community, and one Latino neighborhood.
- The Homeless Children's Project ensure availability and access to preventive and primary health care for children and their families who are at risk of being homeless, with a focus on Latino children and their families.
- The Capacitation Center (CCC) seeks to improve the health of underserved communities in the county through the training and support of Community Health Workers (CHW's) and other community members.
- Promoting cultural competence, through recently acquired HRSA funding, in the area of family violence prevention among Health Department staff and community groups.
- Provide consultation and data analysis for the *Tri-County Health Needs Assessment of Four Asian Pacific Islander Communities* conducted by the Asian Family Center.
- Assist community partners (such as the Asian Health & Service Center, African American Health Coalition, Latino Network, SMG Foundation, MHAAO, and Urban League) to access data related to health disparities.
- Food handlers' training and testing materials provided in seven languages. Implementation of touch screen technology for food handlers training and testing in five languages in process.
- Immunization Program is conducting focus groups to determine strategies for enhancing immunization rates in the African-American community as well as working with churches in Northeast to enhance immunization rates in this part of the City.
- Tuberculosis Program works with refugee communities to address TB.
- STD/HIV/Hep C programs address issues of health disparities in African American and Black communities.
- Community connectors with the Program for Assessing Community Excellence in Environmental Health (PACE-EH) project engage community input to set priorities.
- Chronic disease collaborative in Primary Care Clinics expanded to all clinic sites.



- In Primary Care Clinics, reductions in disparities are evidenced by a substantial increase in diabetic retinal exams, well child exam rates, increase in early entry to prenatal care, asthma management, high rates of childhood immunizations, and identification and referral of clients to tobacco cessation counseling.
- Provide targeted outreach to and screening for African Americans, Hispanics, Asians and males through Breast & Cervical Cancer Programs (BCCP).
- Dental Access Program (DAP) recruits volunteer dentists to serve low income, uninsured clients for urgent care. The East County Evening Clinic uses volunteer dentists, staff (including staff interpreter) to deliver dental services.
- Dental Clinics serve Hispanic, Russian, Vietnamese and other groups with disparate oral disease incidence and access to care.
- The Rockwood Dental Van and “Baby Day” programs focus on Hispanic clients who have higher levels of oral disease coupled with access problems.
- Secure funding in collaboration with community partners for projects to address specific health disparities: Mental Health Services Project, Refugee Preventive Health, Family Violence Prevention, Environmental Health Assessment, Community Health Worker Participatory Research, Healthy Birth Initiative, Health Systems Approach to Addressing Family Violence, Juntos Aprender en Rigler, HIV/AIDS Prevention and Outreach, and Black Midwives Conference.



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