City of Berkeley

Health Status Report, 2002
Low Birth Weight

City of Berkeley
Department of Health and Human Services
Public Health Division

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Introduction

Every local health department in the State of California has the responsibility to gather health data on its residents, analyze that data, and report back to their communities on their health status. The purpose of these reports is to provide useful information to understand a population's health in order to identify health priorities, plan and improve services, and guide health policy. The Berkeley Public Health Division began publishing Health Status Reports in 1997 and continued yearly until 1999. In the past, these reports were technical documents intended for our public health partners, health care providers, researchers and policy makers. However, the interest generated by the Health Status Report for 1999 revealed that many people in the community were hungry for health data and used it to plan community initiatives to improve the health of their neighborhoods. No better use of these data could have been envisioned. To nurture that community interest, we have changed the format of our reports to make them more readable and accessible.

Three years ago, our annual data report presented information about significant differences or disparities in health status between residents living in different parts of Berkeley and specific health disparities between Whites and African Americans in Berkeley. For example, our report revealed that Berkeley had the third highest percentage of low birth weight births among African American women (for all U.S. cities of a similar size). At the same time, the percentage of low-birth weight births among White women was the lowest in the nation.

Our report also revealed a disparity in mortality for Berkeley residents based on race. African Americans in Berkeley have shorter life spans as a whole than do Whites in Berkeley. Our health data shows that African Americans in Berkeley have significantly higher death rates for preventable or manageable diseases such as heart disease, stroke and diabetes.

As a result of these findings, new programs have been developed and ongoing services have been focused on eliminating disparities. Two of these new Public Health programs directly address low birth weight births. These are: the Black Infant Health Program and the Centering Pregnancy Program. Further, Community Action Teams (CATs) in South and West Berkeley are bringing residents together to understand the root causes of these health disparities and to look at solutions proposed by the community.

Our ultimate goal, and perhaps the single most important element of our work, is to develop and implement strategies to eliminate inequities in health outcomes so that all Berkeley residents can enjoy long, healthy and productive lives.

What's Inside?

This report focuses on low birth weight as one of the largest health disparities identified in Berkeley. It accompanies the comprehensive 2002 Health Status Report: Mortality and Hospitalization that compares the health status of Berkeley population groups to those of surrounding communities in terms of major causes of death and hospitalizations. By focusing health reports on special topics, we hope to analyze our data in greater depth and to increase our understanding about these community health issues.

In this report, trends in low birth weight are discussed as well as contributing factors such as teen pregnancy, prematurity, smoking, and late prenatal care. We hope you find this report useful and that it serves as a catalyst for healthy change in your neighborhood.

Executive Summary - Low Birth Weight

This Health Status Report focuses on the issue of low birth weight and health issues associated with decreased birth weight. A low birth weight baby is a baby that weighs less than 2,500 grams or 5 1/2 pounds at birth. A goal of the Berkeley Public Health Division is to eliminate racial and ethnic disparity in low birth weight rates. We are proud to report in this 2002 Health Status Report that the disparity in low birth weight between African American and White babies has decreased since the 1999 Health Status Report and that the number of low birth weight babies born in Berkeley is decreasing as well.

Why Look at Low Birth Weight?

Low birth weight (LBW) is recognized as a sensitive predictor of development throughout life. Low birth weight infants are at greater risk for health problems throughout life, but especially in the first year of life. These problems include asthma, cerebral palsy, learning disabilities, insulin resistance syndrome, hypertension and cardiovascular disease. The social, emotional and financial impact of a low birth weight baby on families is considerable. The cost to school systems for special education is substantial and some children are labeled as "learning disabled" throughout their school years (Journal of Health and Social Behavior, 1999). Initial hospital care costs on average $50,000 per low birth weight baby (Obstetrics and Gynecology, 1995). Unfortunately, studies show that a child born of low birth weight is also more likely to have decreased job skills and increased encounters with the criminal justice system (British Journal of Psychiatry, 2001).

Studies indicate that being at risk for having a low birth weight baby is not a genetic predisposition but is due to many factors, including stress, that may be related to discrimination and racism (Maternal and Child Health Journal, Vol. 5, No. 2, 2001). Success in decreasing the percentage of low birth weight babies in Berkeley requires both focused resources and the will to change behavior of the entire community, including the medical community.

In 1999, utilizing previously unpublished data from the National Center for Health Statistics, the Berkeley Health Status Report compared low birth weight percentages in Berkeley with other cities of comparable size. For the years 1993-1995, Berkeley had the largest racial disparity gap of any city in the U.S. of comparable size.

For the three year period, 1993 through 1995, the rate of low birth weight births among White Berkeley residents was 42 per every 1,000 live births while among African Americans, the low birth weight rate was 166 per 1,000 live births. The ratio of African American to White low birth weight was 4:1. This Low Birth Weight Report shows significant improvement over a 10-year period in the disparity gap for low birth weight. In the three-year period 1999 through 2001, the ratio of African American to White low birth weight babies decreased to approximately 3:1.

Low birth weight babies are comprised of two major groups: 1) preterm infants or premature infants, and 2) intrauterine growth retarded infants. Preterm infants are those born at less than 37 weeks of gestation. Multiple birth babies (e.g. twins) are frequently born preterm and this is

noted in the analysis that follows. Intrauterine growth retarded infants are those born small for a known gestational age. This Report also shows that for all racial groups, prematurity is the main association with low birth weight; 60% of low birth weight babies born to African American and Latina women, and 63% to White women were related to preterm births. This finding is significant because it directs us to programs that address interconceptual care. Interconceptual care involves maintaining the health status of a woman from the time of delivery until conception of the next pregnancy.

Analysis of the Berkeley birth record data from 1990 – 2001 shows multiple associations of low birth weight with twins, smoking and late prenatal care. In addition, chronic, long-term conditions affecting women's health before and during pregnancy, such as hypertension and diabetes, are also associated with low birth weight.

As a Health Department, we focus on low birth weight because it is preventable. This Report provides us with local data to examine the disparity in low birth weight more closely and, in so doing, help us to better understand the causes and to design effective prevention programs that will address the problem.

Frequently Asked Questions About Low Birth Weight in Berkeley:

Is Low Birth Weight Associated with a Genetic Predisposition?

Multiple large-scale studies have shown that there are more genetic differences within major ethnic groups than between them and that all humans originate from the same genetic pool. Social scientists have cautioned against using genetics as a cause of health disparity in low birth weight because of the lack of any concrete evidence. Indeed with the recent coding of the human genome, there is no consistent gene that can be identified as the "race" gene.

Is Low Birth Weight Associated with Lack of Prenatal Care?

Many people assume that the rate of low birth weight would be improved by ensuring that all women have access to adequate and early prenatal care. In 2000, Berkeley was the only health jurisdiction in the State to meet the Healthy People 2010 standard that 90% of all women receive prenatal care in the first trimester of pregnancy. Analysis of 2001 birth records shows that 96% of White women enter prenatal care in the first three months of pregnancy and 91% of African American women do. This outstanding record indicates that current systems of care and outreach in Berkeley have been successful in assuring access to care but are not sufficient to eliminate health disparities by themselves.

Is Low Birth Weight Associated with Teen Births?

Low birth weight babies are also associated with teen pregnancy. However, Berkeley has had the lowest teen birth rate in the state since 1996 and thus, teen pregnancies are not a contributing factor in the low birth weight disparity in Berkeley. The school-based Berkeley High School Health Center, an on-site full service confidential medical and mental health care clinic at Berkeley High School, provides an effective Teen Pregnancy Prevention Program that includes

confidential family planning. In addition, for those few teens that decide to continue their pregnancy, there is an effective, comprehensive Teen Parenting Program funded through the Regional Perinatal Council that assists in assuring healthy pregnancies and healthy newborns.

Is Low Birth Weight Associated with Income or Education?

Disparity in income and/or education is associated with a small portion of low birth weight disparity in Berkeley. This analysis is done by using source of payment for delivery as a proxy for income. From 1990 through 2001, birth record data shows that 39% of all low birth weight babies born in Berkeley have Medi-Cal as the source of payment. However, African American women had the highest proportion (68.2%) and White women the lowest (8.6%). In addition, analysis of census data from 1990 through 1997 indicated a serious gap in education level between African Americans and Whites in Berkeley. Further analysis showed that income and/or education accounted for approximately 25% of the disparity in low birth weight.

Is Low Birth Weight Associated with other Medical Conditions?

An exhaustive review of 334 medical records at Alta Bates Hospital revealed that African American women who give birth to low birth weight babies are more likely to be older, poor (55% received Medi-Cal), hypertensive and diabetic. African American mothers of low birth weight babies had substantially higher rates of substance use (nicotine, illicit drugs) whereas White mothers of low birth weight babies had selective reductions (abortion of one or more fetuses of a multiple pregnancy) and multi-substance use (nicotine, alcohol, illicit drugs). Based on this review of medical records, substance abuse is a critical factor associated with low birth weight regardless of the mother's race or ethnic origin. Despite this fact, it is extremely important to note that hospitals have no consistent policy for testing mothers for substance use. In fact, this chart review found that poor women and African American women were more likely to be tested for drugs based on their insurance status (i.e. Medi-Cal).

Is Low Birth Weight Associated with Other Factors?

Eliminating racial and ethnic health disparities requires a greater understanding of the factors contributing to their development. The published literature suggests that many non-medical factors such as stress, environment, quality of health care, domestic violence and high altitude can be associated with low birth weight. The Institute of Medicine, a prestigious Washington-based medical institution, issued a special report in April 2002 indicating institutionalized racism as the main source of health disparities. Institutionalized racism refers to the incorporation of mainstream (i.e. white, middle-class) attitudes or values that work to the disadvantage of non-white ethnic groups and can result in discriminatory policies or behaviors.

Interventions in Berkeley

To address the issue of racial and ethnic disparities in low birth weight in Berkeley, aggressive fundraising and program development by the Berkeley Public Health Division resulted in the Berkeley Black Infant Health Program, a Centering Pregnancy prenatal care program, an Expanded WIC Breastfeeding Program, and a substance abuse training program for City staff and Berkeley providers. An overall decrease in low birth weight rates in 2000 and 2001, as well as decreases in the number of low birth weight babies in all racial groups, may be directly attributable to the effectiveness of these programs. The Berkeley Public Health Division also initiated a unique community empowerment model to build Community Action Teams in South and West Berkeley (CATs). Community Action Teams engage residents, particularly those most vulnerable for poor health outcomes, to develop strategies to promote health in their community. Utilizing the assets of the residents, CAT members share knowledge and skills to develop long-term leadership for change. It is intended that this long-term leadership will play a key role in decreasing and eventually eliminating disparity in low birth weight rates.

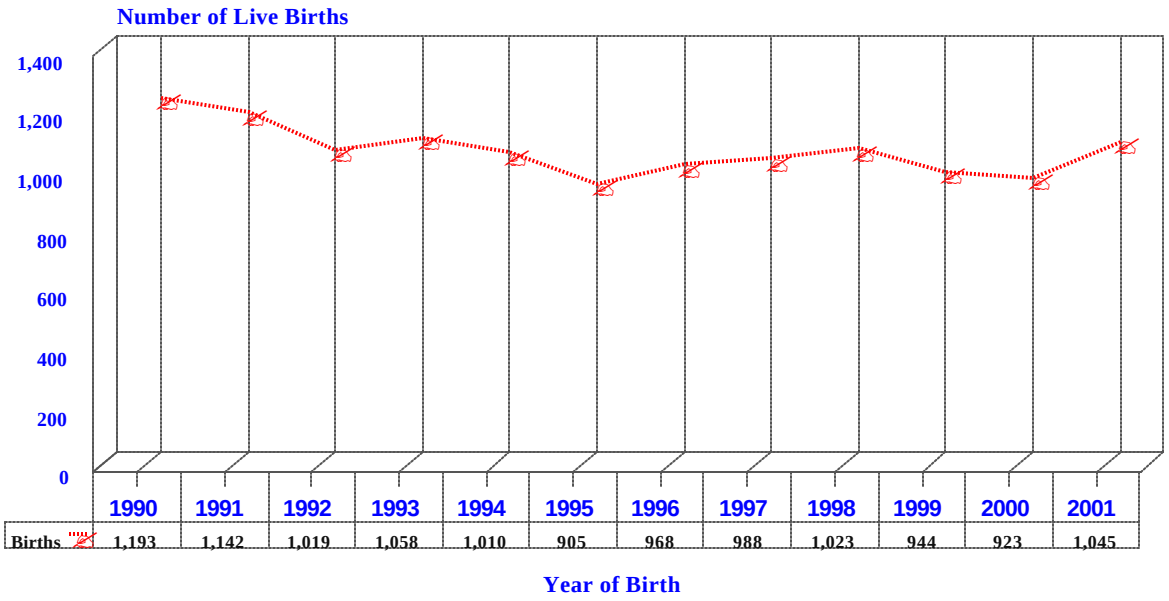
Conclusion

This report summarizes significant change in low birth weight rates in Berkeley over the past four years. While cumulative data for 1998-2001 indicate that there is still a 3:1 disparity in low birth weight between African Americans and Whites, we have registered some success in decreasing the number of low birth weight babies in all racial and ethnic groups. This success has been accomplished by instituting systems of care that directly affect individual women. Our task ahead as a community is to identify and address the root causes of systematic, institutional and individual behaviors and actions associated with low birth weight.

Section I: Birth Rates in Berkeley

Figure 1:

Number of Live Births by Year
City of Berkeley, 1990 - 2001

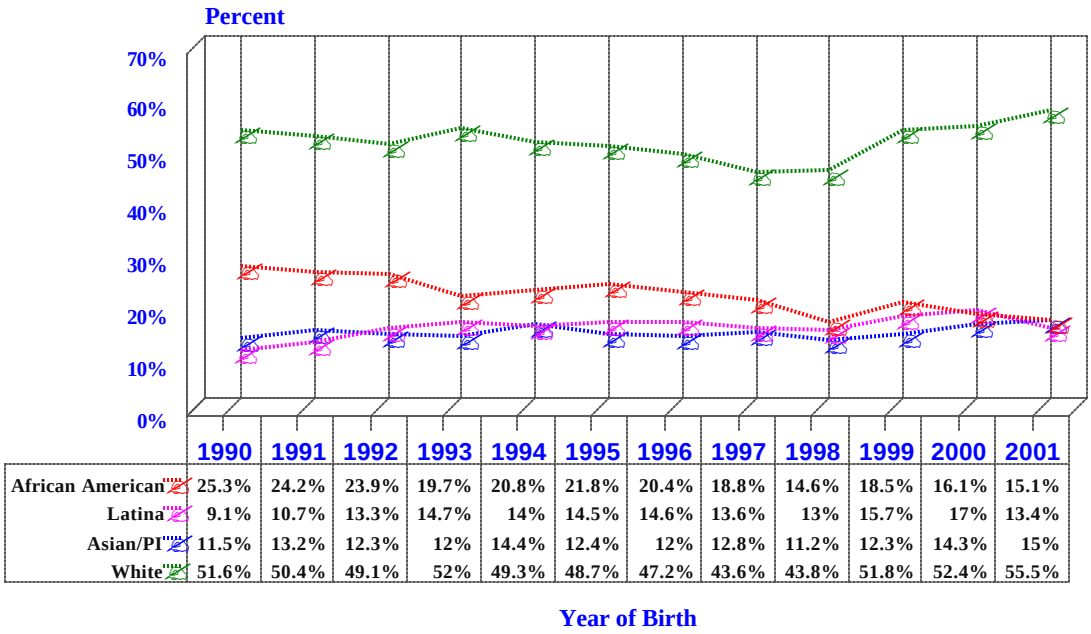


Source: Berkeley City Health Department, Epidemiology and and Health Statistics, Birth Records 1990-2001.

The number of live births to Berkeley resident mothers has remained stable during the last decade, at an average of approximately 980 births each year. The birth rate is the number of live births per 1,000 residents. In 1990 the birth rate for Berkeley was 11.6 births/1,000 residents and in the year 2001 it decreased to 10.2/1,000; not a statistically significant difference. In California, the birth rate has decreased over the same time period from 20.0/1,000 in 1990 to 15.4/1,000 in the year 2000.

Figure 2:

Proportion of Births by Race/Ethnicity
City of Berkeley, 1990 - 2001

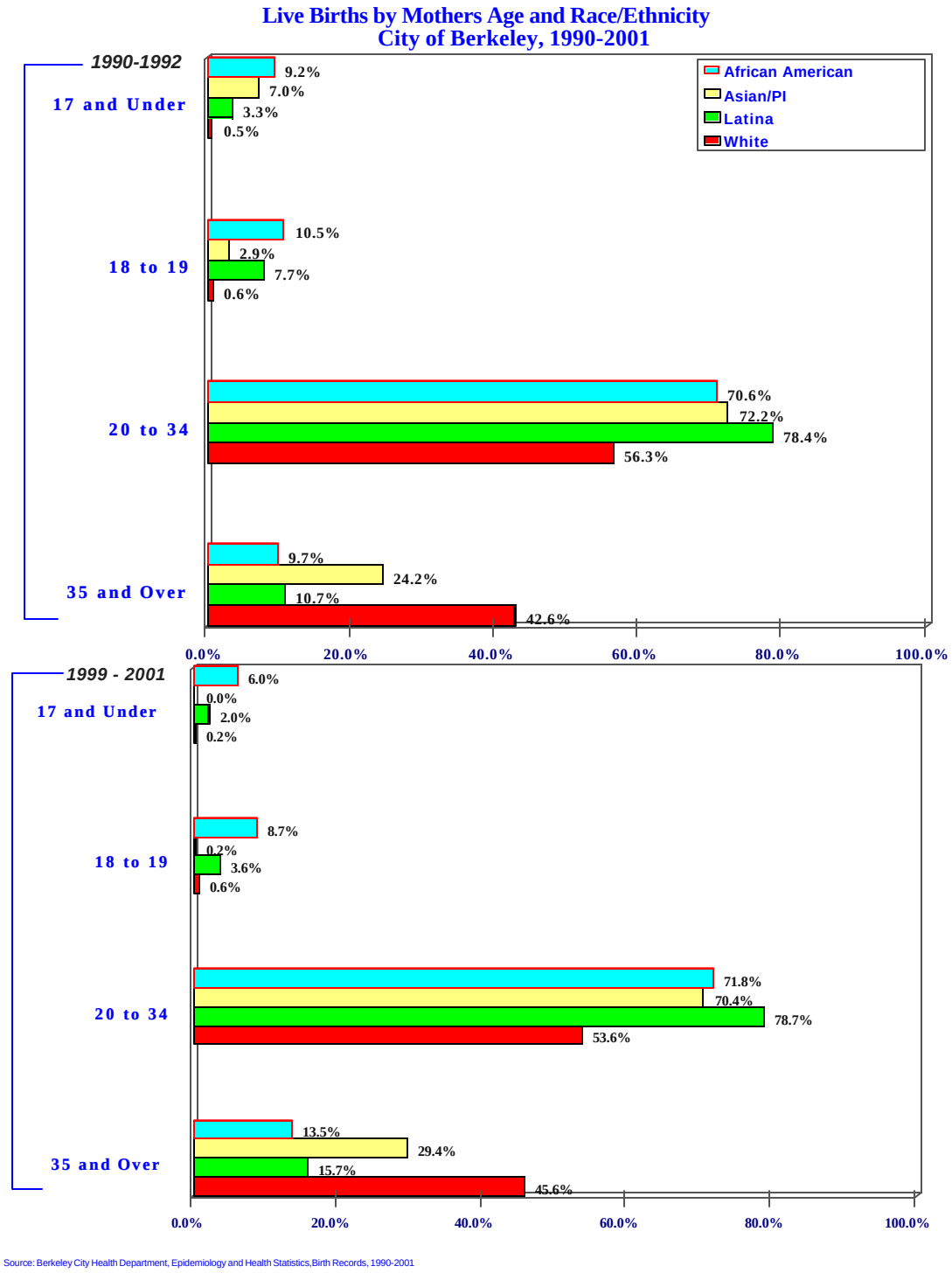


	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
African American	25.3%	24.2%	23.9%	19.7%	20.8%	21.8%	20.4%	18.8%	14.6%	18.5%	16.1%	15.1%
Latina	9.1%	10.7%	13.3%	14.7%	14%	14.5%	14.6%	13.6%	13%	15.7%	17%	13.4%
Asian/PI	11.5%	13.2%	12.3%	12%	14.4%	12.4%	12%	12.8%	11.2%	12.3%	14.3%	15%
White	51.6%	50.4%	49.1%	52%	49.3%	48.7%	47.2%	43.6%	43.8%	51.8%	52.4%	55.5%

Source: Berkeley City Health Department, Epidemiology and and Health Statistics, Birth Records 1990-2001.

The proportion of live births to African American mothers has significantly decreased during the last decade. In 1990, 25% of all births among Berkeley mothers were African Americans compared to only 15% in 2001. The proportion of live births remained statistically unchanged for Whites, and increased for Asian/Pacific Islanders and Latinas. The changes in live births parallel the overall demographic changes in Berkeley. Since 1990, there has been an outward migration of African Americans and increases in the Asian/Pacific Islander and Latino populations. These shifts are also confounded by a new category entitled "mixed race" on the birth certificate that allows mothers to identify with more than one ethnic/racial group.

Figure 3:

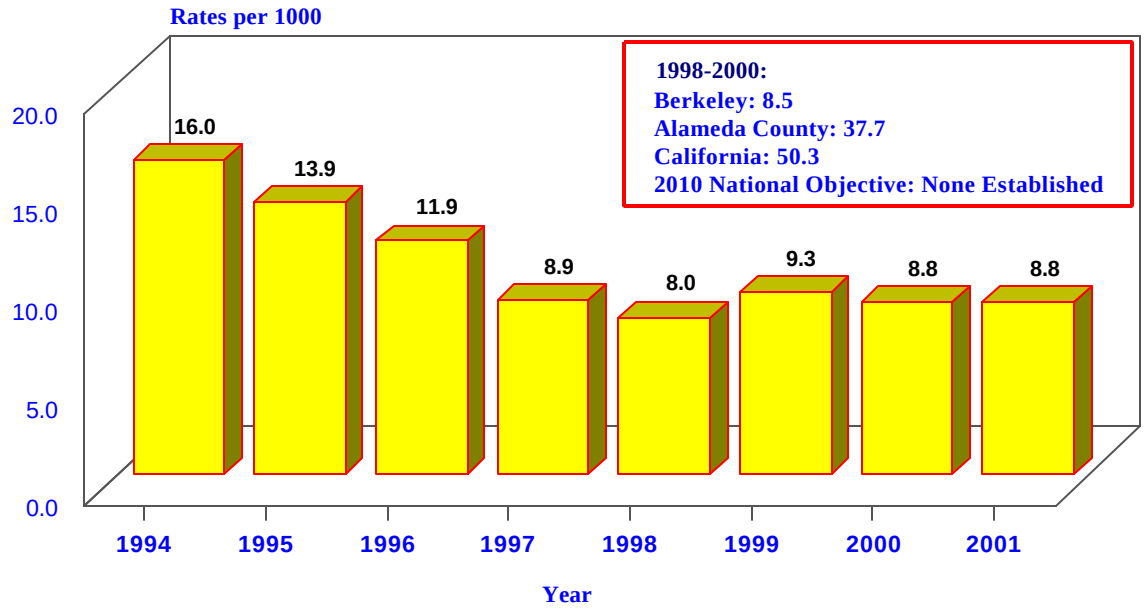


Source: Berkeley City Health Department, Epidemiology and Health Statistics,Birth Records, 1990-2001

Over the past decade, there has been a general increase in delaying pregnancy amongst all ethnicities. In particular, White and Asian/Pacific Islander women have a significantly greater number of live births over the age of 35. The percentage of live births by African American and Latina women under the age of 20 is greater than other ethnicities, but has decreased over the last decade.

Figure 4:

Birth Rates Among Adolescent Mothers, 15 to 19 Years Old
City of Berkeley, 1994 - 2001



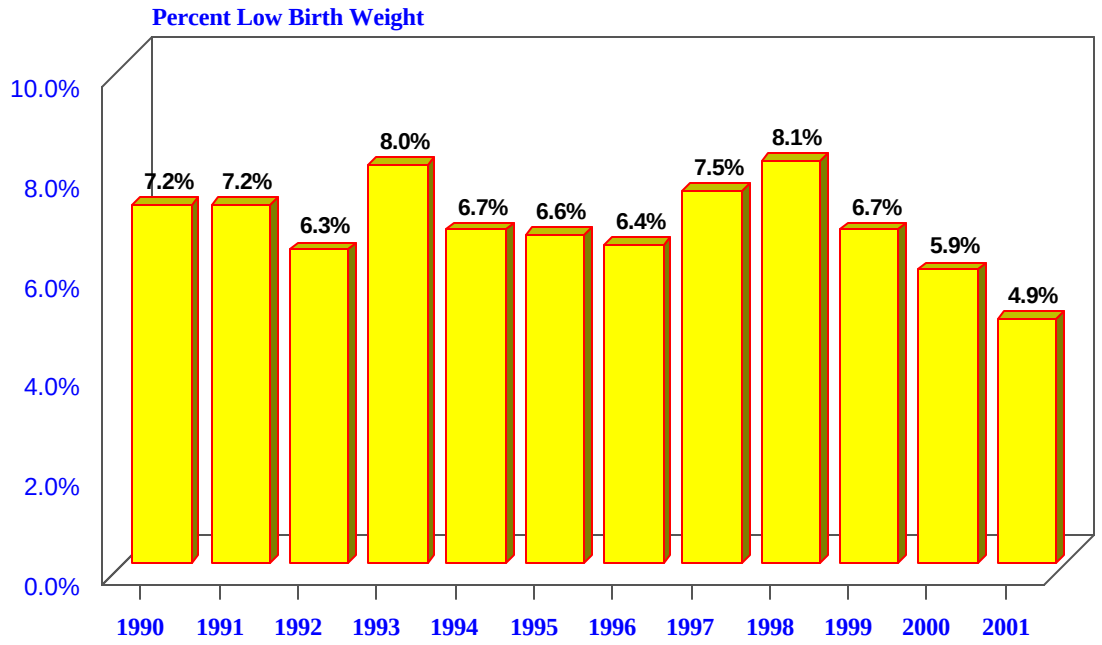
Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1994-2001.

The birth rate among adolescent mothers in Berkeley has decreased significantly over the past eight years. In 2001, the birth rate among adolescents, or the age-specific birth rate among 15 to 19 year olds, was 8.8 per 1,000 female population; approximately one birth for every 114 adolescent females aged 15 to 19. This is a 45% decrease since 1994 when the birth rate was 16 births per 1,000. With a birth rate of 8.8 per 1000, Berkeley has maintained the lowest birth rate among adolescent mothers in the state of California since 1997.

Section II: Low Birth Weight

Figure 5:

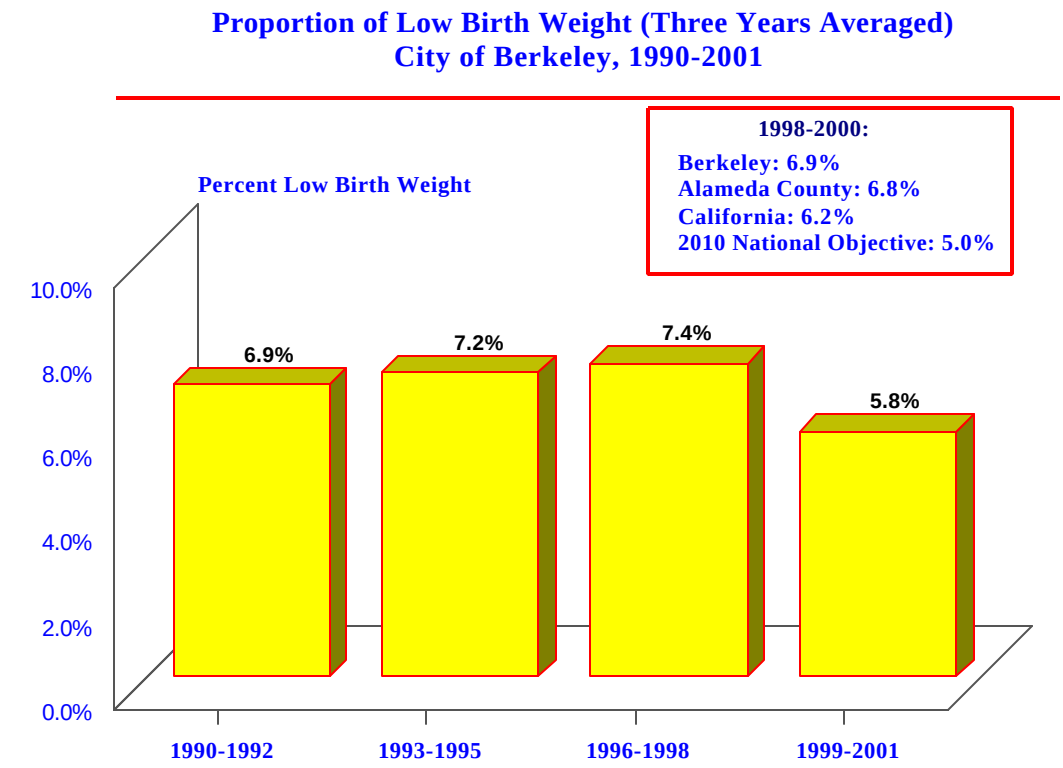
Proportion of Low Birth Weight by Year
City of Berkeley, 1990-2001



Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

Over the past ten years the overall proportion of low birth weight babies in Berkeley has fluctuated, reaching its peak in 1998 when it was 8.1% of all births. Since 1999, this proportion has steadily decreased, reaching the lowest ever recorded in 2001 (4.9% of all births). This is a 40% decrease over a three-year period.

Figure 6:

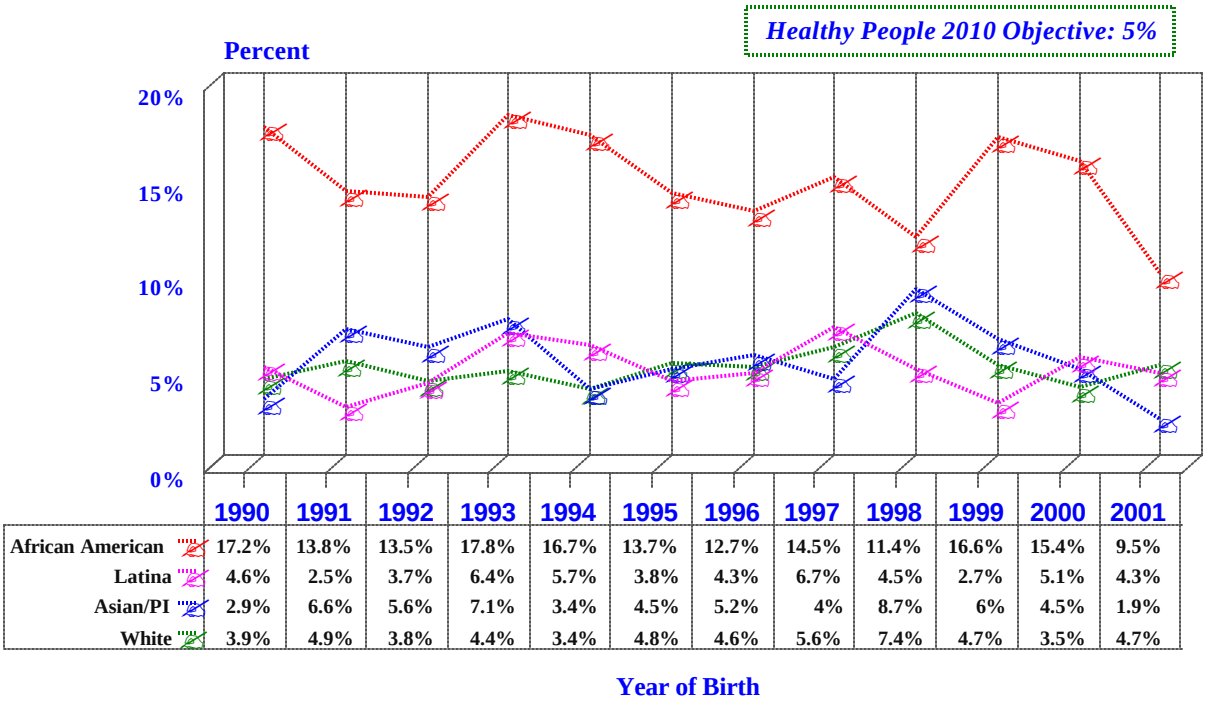


Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

Looking at the percentage of low birth weight babies averaged over three year periods eliminates possible random variation and provides a more stable trend of the changes over the last ten years. During the last ten years, the first significant decrease occurred during the period 1999-2001. A slow steady increase in low birth weight babies earlier in the decade preceded this significant drop to 5.8% for 1999-2001. This is the lowest proportion of overall low birth weight ever recorded in Berkeley.

Figure 7:

Proportion of Low Birth Weight by Race/Ethnicity
City of Berkeley, 1990 - 2001



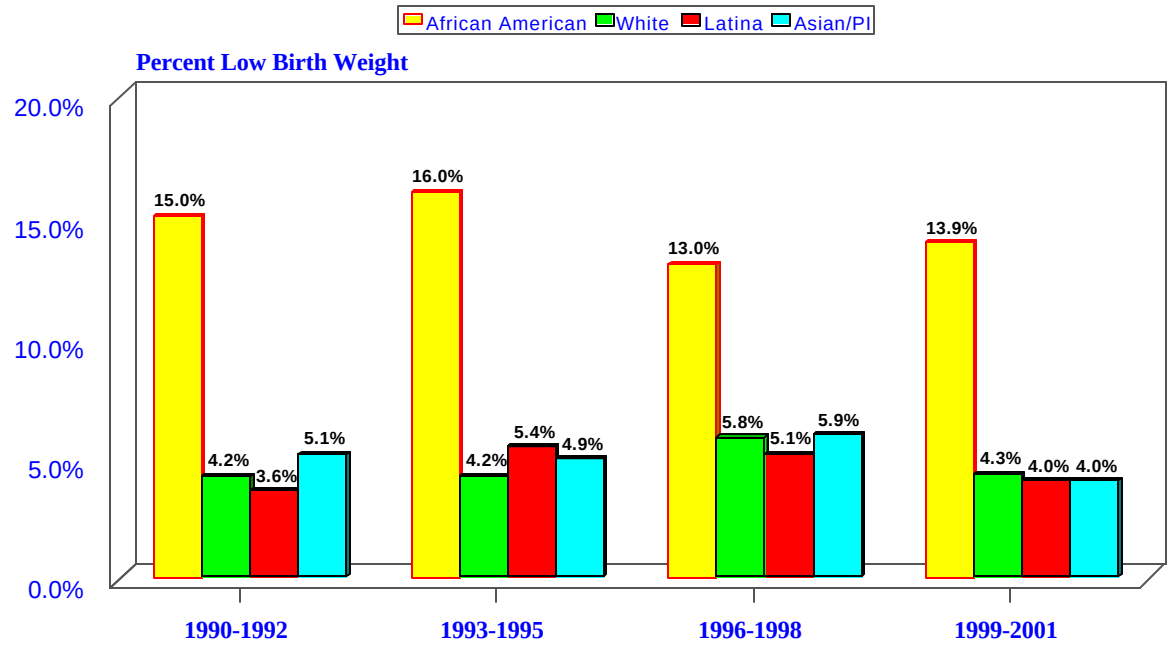
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
African American	17.2%	13.8%	13.5%	17.8%	16.7%	13.7%	12.7%	14.5%	11.4%	16.6%	15.4%	9.5%
Latina	4.6%	2.5%	3.7%	6.4%	5.7%	3.8%	4.3%	6.7%	4.5%	2.7%	5.1%	4.3%
Asian/PI	2.9%	6.6%	5.6%	7.1%	3.4%	4.5%	5.2%	4%	8.7%	6%	4.5%	1.9%
White	3.9%	4.9%	3.8%	4.4%	3.4%	4.8%	4.6%	5.6%	7.4%	4.7%	3.5%	4.7%

Source: Berkeley City Health Department, Epidemiology and and Health Statistics, Birth Records 1990-2001.

Looking at low birth weight births by ethnicity shows that the highest proportion of low birth weight is among African Americans. Although this proportion is high at 9.5% for 2001 when compared to other ethnicities, it decreased by 45% when compared to the proportion recorded for 1990 (17.2%). Analyzing the data on an annual basis shows a decreasing gap between African Americans and other ethnicities. The proportion of low birth weight for Latina women remained stable, and increased only slightly for White women. The percentage for Asian/Pacific Islander women also decreased over time and reached its lowest point in 2001 at 1.9%. All women, except African American women reached the *Healthy People 2010 Objective* of 5%.

Figure 8:

Proportion of Low Birth Weight (Three Years Averaged) by Race/Ethnicity
City of Berkeley, 1990-2001

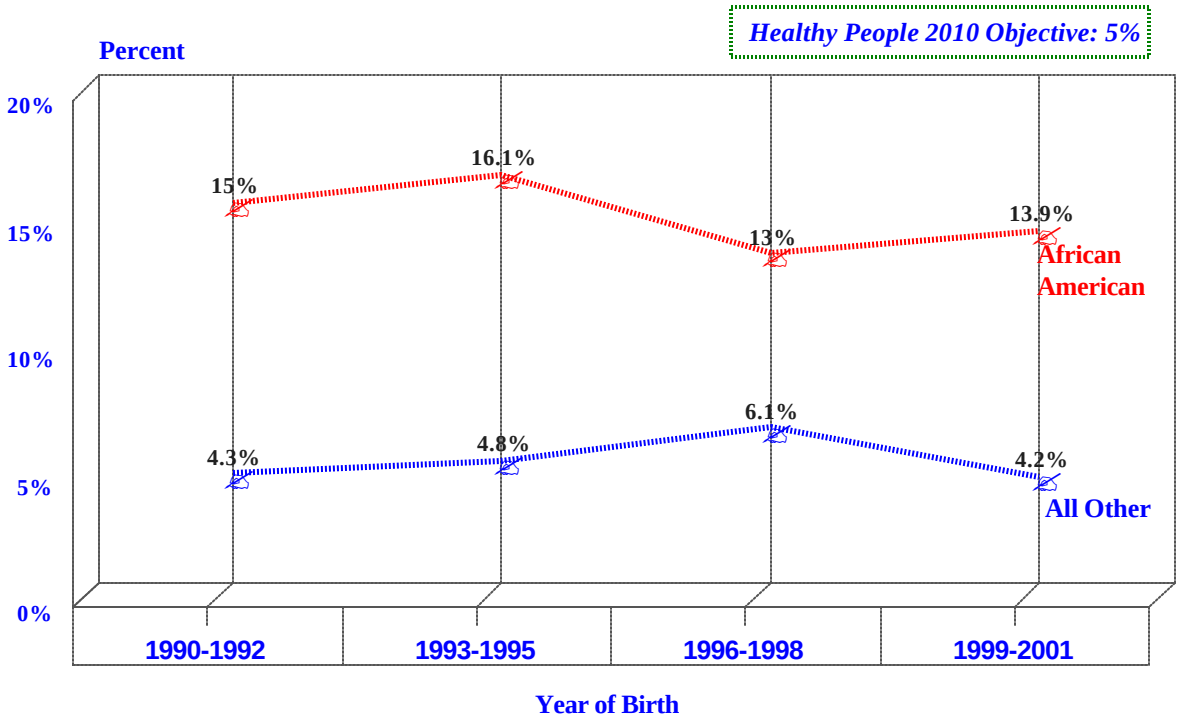


Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

Averaged over three years, the proportion of low birth weight births for Whites, Latinas, and Asian/Pacific Islanders is fairly constant with relatively no disparity between these three groups. For the period 1999-2001, Whites, Latinas and Asians/Pacific Islanders reached the lowest proportion of low birth weight births ever recorded (4.3%, 4.0% and 4.0% respectively), already meeting the 2010 National Objective of 5.0%. Although there is a declining trend in the proportion of low birth weight over time, for African Americans the low birth weight proportion is almost 3 times higher than the 2010 National Objective.

Figure 9:

Low Birth Weight for African Americans and All Other Races/Ethnicies
City of Berkeley, 1990 - 2001



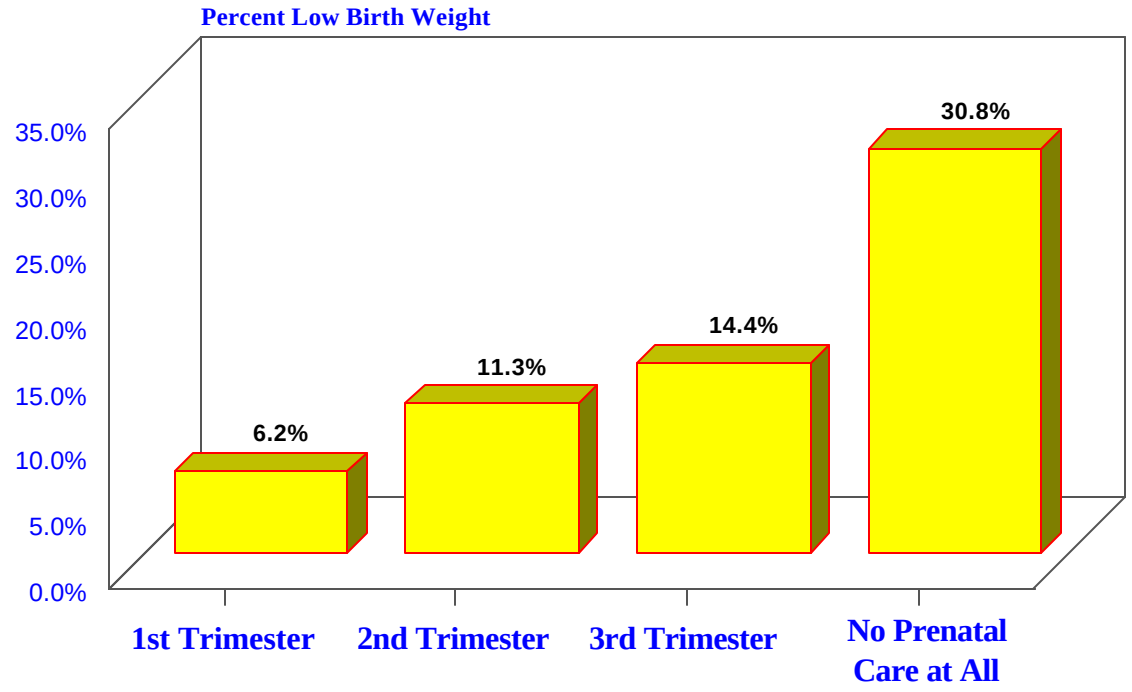
Source: Berkeley City Health Department, Epidemiology and and Health Statistics, Birth Records 1990-2001.

This figure shows the proportion of low birth weight births for African American mothers, averaged for three years and the combined proportion of low birth weight births for all other races. Even though the proportion of low birth weight among African Americans has decreased, the disparity still remains high. There is a relative proportion of approximately 3 low birth weight African American babies for every one low birth weight baby of any other race in Berkeley.

Section III: Low Birth Weight and Access to Prenatal Care

Figure 10:

Low Birth Weight by Trimester Prenatal Care Began
City of Berkeley, 1990-2001



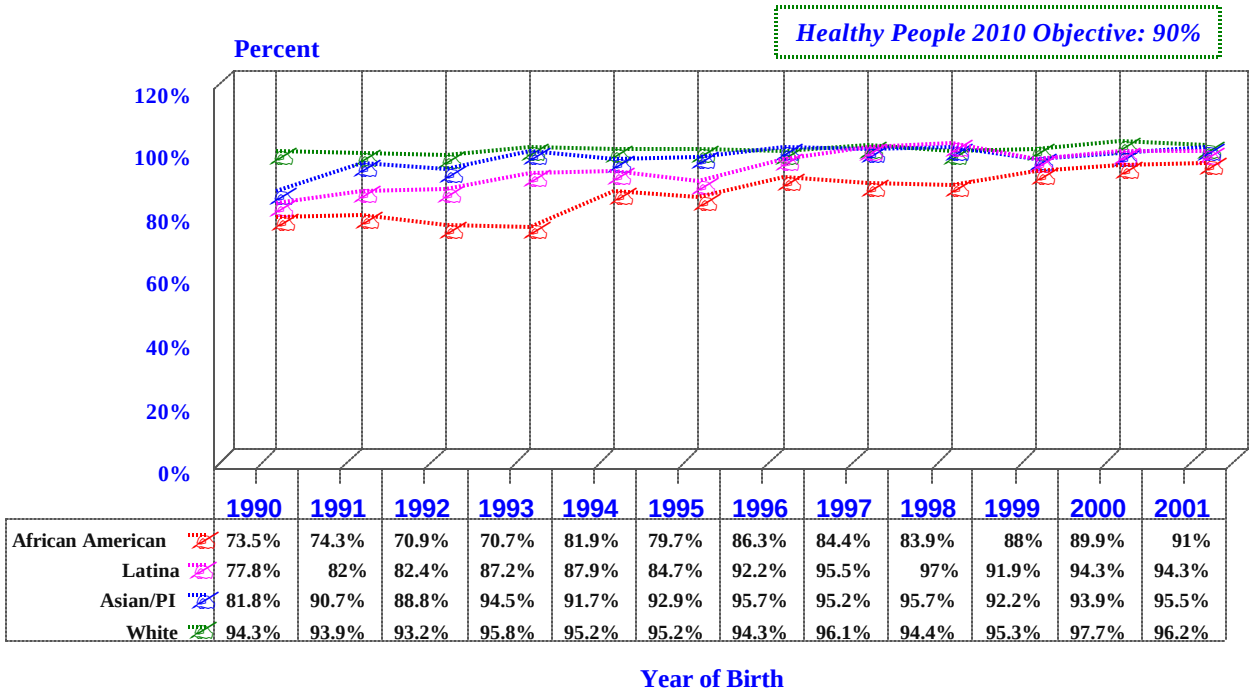
Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

The importance of early and adequate prenatal care in reducing low birth weight is clear; the percentage of low birth weight decreases the earlier in the pregnancy the mother receives prenatal care. Approximately 30% of women who received no prenatal care at all during their pregnancy had a low birth weight birth, compared to only 6% of those who received care in their first trimester.

For all births (normal and low birth weight) in the period 1990-1992, African American mothers were 4.5 times more likely to receive untimely prenatal care as compared to Whites. During the last three years (1999-2001), this disparity gap has decreased significantly so that African American mothers are now 2.5 times more likely to receive untimely prenatal care as compared to Whites. This accomplishment is due to concerted outreach to African American women through the Black Infant Health and Centering Pregnancy programs. Interventions such as this are focused on changing the culture of acceptance for prenatal care as a right and with the goal of having a healthy baby. The benefits of such interventions are both immediate and long term.

Figure 11:

Prenatal Care in the First Trimester of Pregnancy by Race/Ethnicity
City of Berkeley, 1990 - 2001

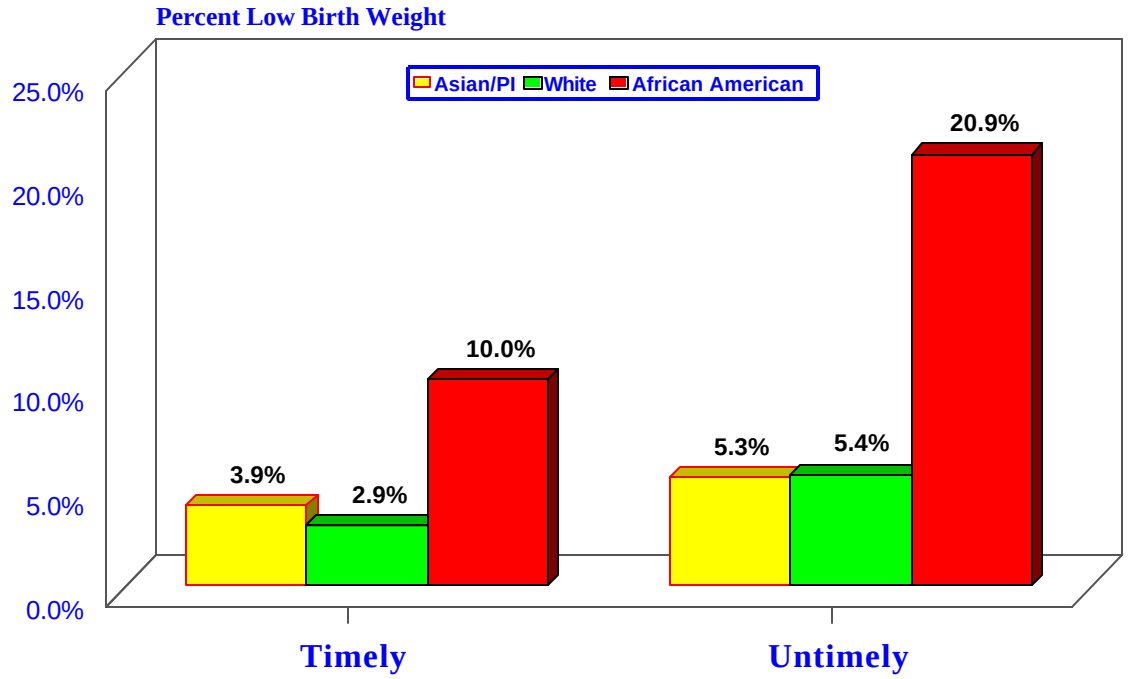


Source: Berkeley City Health Department, Epidemiology and Health Statistics, Birth Records 1990-2001.

Access to care or prenatal care initiated during the first trimester of pregnancy is one of the leading health indicators for Healthy People 2010. A review of the percentage of women who received prenatal care during their first trimester by race/ethnicity demonstrates that the percentage for African American mothers has markedly increased during the last ten years. In 1990, 73.5% of pregnant African American mothers received care in the first trimester, compared to 91% in 2001 (a 24% increase). However, although the percentage has increased, it still remains the lowest when compared to other ethnicities. In 1990, 78% of Latina women in Berkeley received prenatal care during the first trimester compared to 94.3% in 2001. During the same period, the percentage of Asian/Pacific Islander women seeking prenatal care increased by 17%. White women remain the group with the highest proportion of women receiving prenatal care in the first trimester throughout the decade. Viewing the progress over this decade in assuring access to care for pregnant women, all races and ethnicities in Berkeley reached the Healthy People 2010 Objective of 90% receiving prenatal care in the first trimester of pregnancy. No other health jurisdiction in California has achieved that standing.

Figure 12:

Low Birth Weight and Prenatal Care by Race/Ethnicity
City of Berkeley, 1990-2001



Timely Prenatal Care Prenatal Care that began during the first trimester of preganancy.

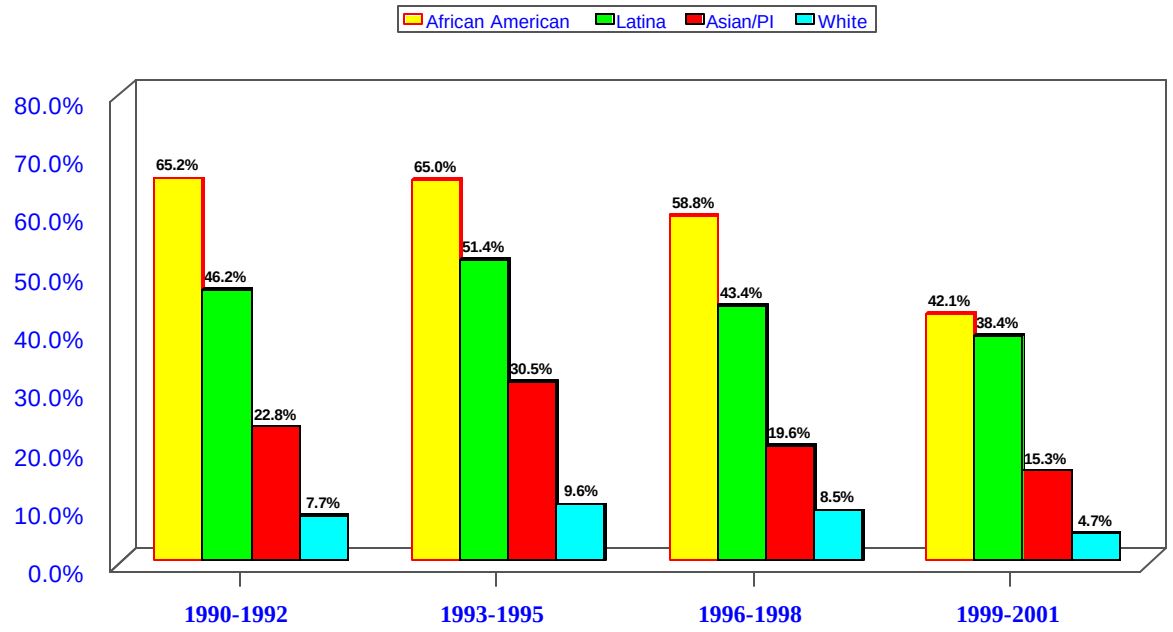
Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

There is a direct correlation between prenatal care and low birth weight. Twenty-one percent of African American mothers who initiated prenatal care after their first trimester of pregnancy (untimely/late prenatal care) or who received no prenatal care at all had a low birth weight baby. This number is significantly lower for White (5.4%) and Asian/Pacific Islander mothers (5.3%). The analysis for Latina women is not available because it is statistically unreliable due to small numbers in the total population.

When all racial and ethnic groups are combined, mothers who did not receive prenatal care during their first trimester (untimely or late prenatal care) were 9 times as likely to have a low birth weight baby compared to those who did receive prenatal care in the first trimester.

Figure 13:

Medi-Cal as Source of Payment for Delivery (Three Years Averaged) by Race/Ethnicity
City of Berkeley, 1990-2001



Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

The proportion of women who utilized Medi-Cal as a primary source of payment for delivery of their baby declined significantly over the last decade among all races and ethnic groups in Berkeley. During the early 1990's, 65% of all African American births were covered by Medi-Cal compared to 42% in 1999-2001, a 35% decrease. A similar decrease was found for Asian/Pacific Islander (33% decrease). Latina women show a 17% decrease in this time period. White mothers have the largest decrease in Medi-Cal utilization (39%) over this ten-year period.

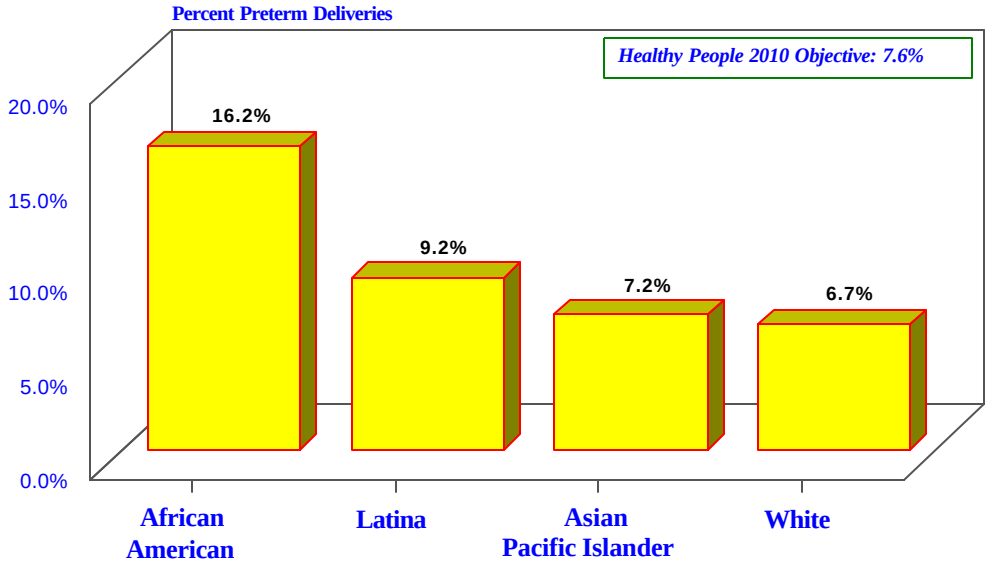
The decrease in utilization of Medi-Cal as a primary source of payment for delivery is directly correlated with income trends in Berkeley. According to Census data, from 1990 to 2000 the median household income increased by 33% ($29,737 to $44,485) while the number of households receiving public assistance declined by 70% (3,404 to 1,034).

Section IV: Preterm Deliveries and Multiple Births

Low birth weight babies are comprised of two major groups – preterm infants (or premature infants) and intrauterine growth retarded infants (IUGR). Preterm infants are those born at less than 37 weeks of gestation. IUGR infants are those born gestationally at full-term (greater than or equal to 37 weeks) but weighing less than 2,500 grams or 5 ½ pounds. IUGR is more frequently associated with alcohol use, tobacco use, hypertension, congenital malformations and nutritional deficiencies. Historically, in developing countries, most low birth weight is related to IUGR, whereas in developed countries, most low birth weight is related to preterm birth. This Report shows that for all racial groups, prematurity is the main association with low birth weight in Berkeley; 60% of low birth weight babies born to African American and Latina women, and 63% to White women were related to preterm births.

Figure 14:

Preterm Deliveries (Less than 37 Weeks of Gestation) by Race/Ethnicity
City of Berkeley, 1990-2001

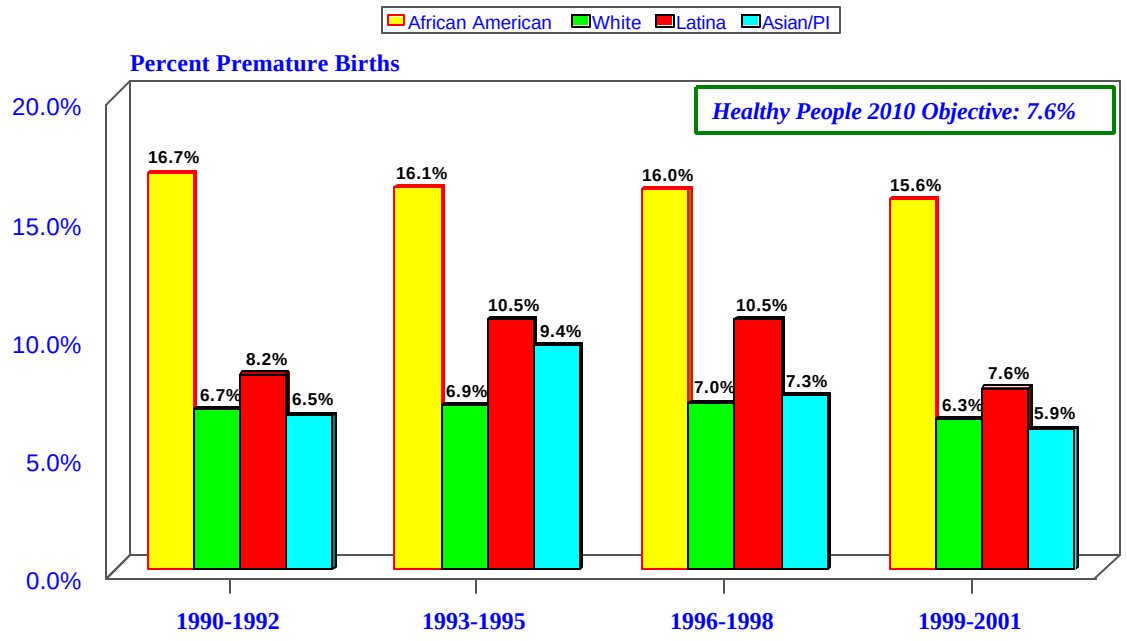


Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

Premature babies are far more likely to weigh less than full term babies regardless of race or ethnicity. The estimated risk of any mother having a low birth weight baby if the baby is born premature is 26 times greater than a full term pregnancy. In 1990-2001, African Americans gave birth to a significantly greater percentage of preterm babies when compared to other ethnicities (16.2%). This is almost twice the percentage of preterm deliveries for Latina women (9.2%). Asian/Pacific Islander and White women deliver slightly fewer preterm babies, at 7.2% and 6.7% respectively.

Figure 15:

Proportion of Premature Births (Three Years Averaged) by Race/Ethnicity
City of Berkeley, 1990-2001

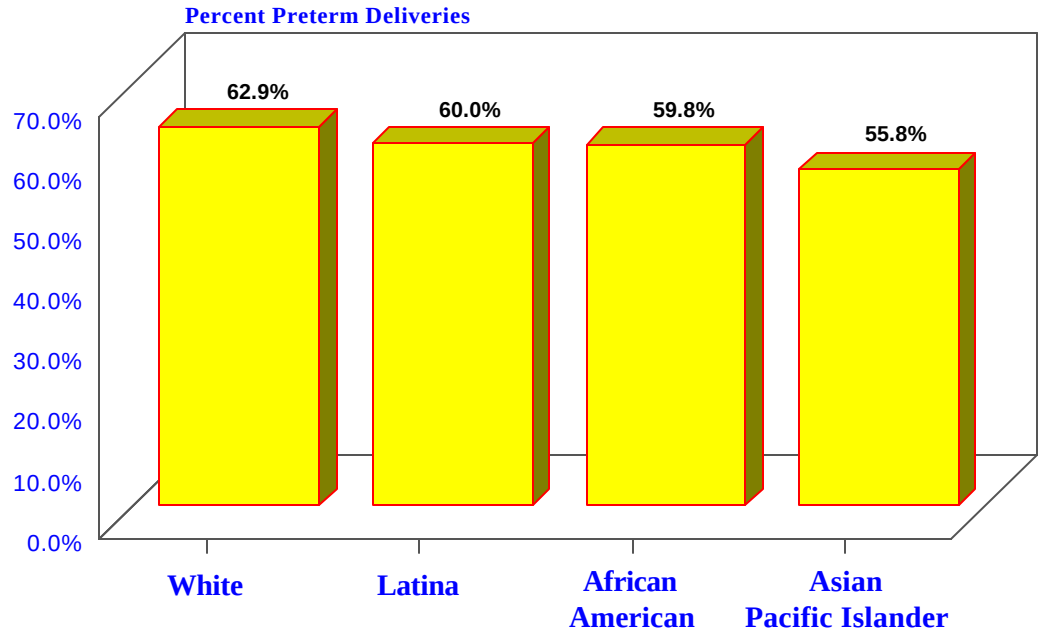


Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

The proportion of premature deliveries in Berkeley has decreased over the last decade in almost all racial and ethnic groups, however none of these changes are statistically significant. African American mothers continue to have the highest proportion of premature deliveries at a rate of almost 1 premature baby per every 6 deliveries.

Figure 16:

Proportion of Preterm Deliveries (Less than 37 Weeks of Gestation) Among Low Birth Weight Babies by Race/Ethnicity City of Berkeley, 1990-2001

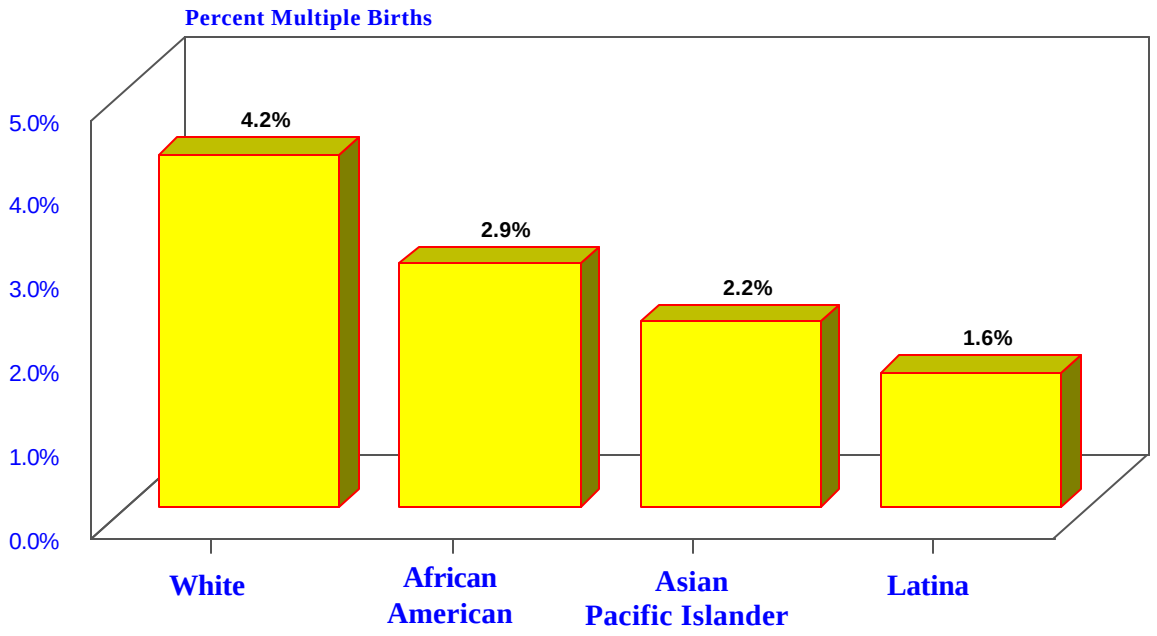


Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

A significant proportion of low birth weight babies are born preterm. Preterm infants are those born at less than 37 weeks of gestation, and often are low birth weight due to a shortened period of intrauterine growth. The proportion of preterm low birth weight babies born to White women is 62.9%; for Latina women 60.0% and for African American women it is 59.8%. There is no statistical significance in the proportion of preterm low birth weight babies by race.

Figure 17:

Proportion of Multiple Births by Race/Ethnicity
City of Berkeley, 1990-2001



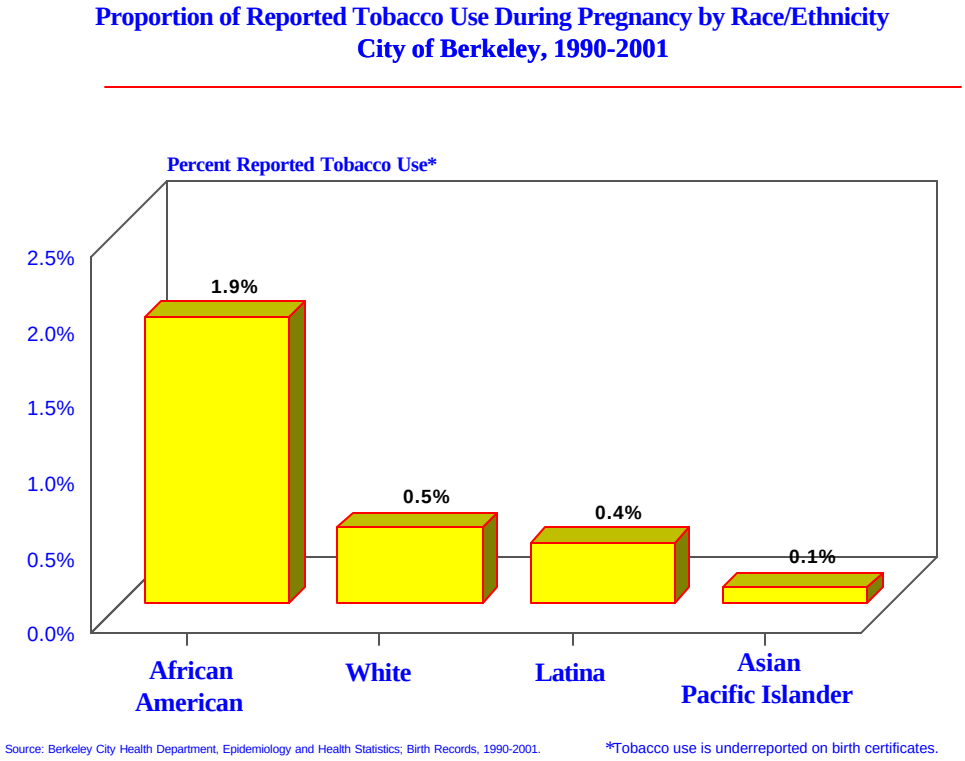
Source: Berkeley City Health Department, Epidemiology and Health Statistics; Birth Records, 1990-2001.

Multiple births are another important predictor for low birth weight in all races and ethnicities combined. Twins or triplets usually weigh less than single babies. Multiple births are almost 11 times more likely to be low birth weight compared to single births.

As seen in the graph above, the percent of multiple births by racial groups varies. Multiple births are a significant predictor of low birth weight for White babies. African American mothers in Berkeley have fewer multiple births than White mothers. While African Americans have a higher rate of low birth weight births, this rate is not attributable to multiple births.

Section V: Tobacco Use

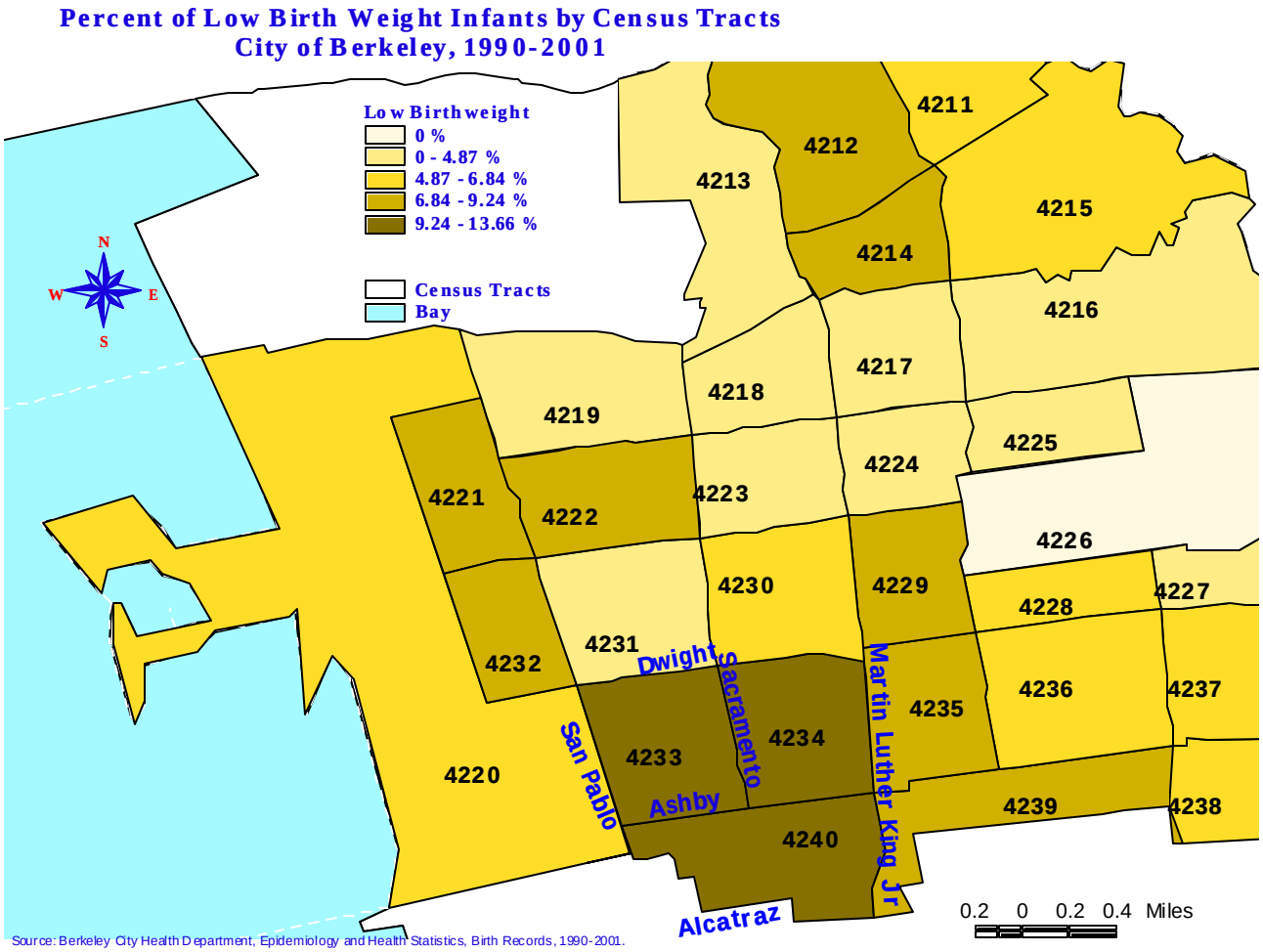
Figure 18:



Tobacco use during pregnancy is an important known contributing factor to low birth weight. African American women are 3.7 times as likely as White women to use tobacco during pregnancy and African American women who used tobacco during pregnancy are 4.5 times more likely to have a low birth weight baby than African American women who did not use tobacco during pregnancy. It is important to note that reported tobacco use on birth certificates is often underreported when compared to medical records, and, therefore, related data should be interpreted with caution.

In Berkeley, the prevalence of tobacco use during pregnancy is significantly lower than national rates by race/ethnicity. According to the National Center for Health Statistics, birth certificate data, in 1995 the rates of tobacco use during pregnancy were 9.9% for African American women, 16.6% for White women, and 3.9% for Latina women. No data was available for Asian/Pacific Islander women. The reported usage of tobacco as shown above may be the result of effective programs offered by Berkeley Public Health such as the WIC Smoking Cessation Program and our Tobacco Prevention and Control Program. In addition, Berkeley has innovative and progressive policies and laws in place that protect families, youth and workers from the effects of tobacco smoke.

Figure 19:



According to the geographic distribution of low birth weight, approximately one out of seven mothers who give birth to a low birth weight baby lives in a South Berkeley census tract where the greatest proportion of African Americans reside.

Conclusion

This report demonstrates an overall positive change in low birth weight rates for all racial and ethnic groups in Berkeley concentrated in the past three years. Berkeley's specific accomplishments related to improvements in this health indicator are:

- ?? The lowest birth rate among adolescent mothers in the state of California since 1997;
- ?? Over 90% of all women in Berkeley receive prenatal care during the first trimester of pregnancy;
- ?? A 40% decrease in percent of low birth weight babies delivered from 1998 to 2001.

Much of this success can be attributed to specialized outreach programs that address racial and ethnic disparities in low birth weight in Berkeley. Programs such as Black Infant Health, Centering Pregnancy, Expanded WIC Breastfeeding and a substance abuse training program for City staff and Berkeley providers are examples of specific programs created to improve the health of mothers and increase the number of healthy babies born. These programs, which were created in the past three years, focus on changing the cultural views of prenatal care, creating strong social support networks within their communities and maintaining healthy mothers and babies after delivery.

This report summarizes significant change in low birth weight rates in Berkeley. However, there is still more to be done. African American women have not yet reached the Healthy People 2010 objective of only 5% of total births being of low birth weight. For all births, African American women are 2.5 times more likely not to receive prenatal care during the first trimester as compared to White women. While cumulative data for 1999-2001 indicate that there is still a 3:1 disparity in low birth weight between African Americans and Whites, we have registered some success in decreasing the number of low birth weight babies in all racial and ethnic groups. This has been accomplished through targeted programs addressing African American women and the institution of systems of care that directly affect individual women. Our task ahead as a community is to continue to identify and address the root causes of systematic, institutionalized forms of discrimination and to develop systems of care addressing the interconceptual health (the health of women between pregnancies) in African American women.

Our charge for the next decade is to eliminate racial and ethnic disparities in low birth weight and to continue to address the root causes of all health disparities. Berkeley has a strong history of initiating programs and combining the forces of many community groups to improve the health of residents. Through collaborations between city government, the private sector and community groups, together, we will create a healthier Berkeley for all.

Technical Notes:

DATA SOURCES

Berkeley Public Health Division, Office of Epidemiology and Health Statistics, Automated Vital Statistics System (AVSS) was the source for the birth data used in this report. Low birth weight proportions were calculated using birth records from 1990 through 2001 for resident mothers of the city of Berkeley only, regardless of the place of birth. Birth records are based on complete counts.

The California Department of Finance, Demographic Research Unit and the US Census Bureau, were the source of population data. Estimates from 1994 and 1999 were used to calculate birth rates.

DEFINITIONS

Birth Rate (or Crude Birth Rate): Number of live births in a given year divided by average total population of the same year.

Birth Rates to Adolescents 15 to 19: The number of births born to mothers ages 15 to 19 years divided by the female population of the same age group. Measures the probability or risk that the event occurs during a specific period of time in the population.

Intrauterine Growth Retardation (IUGR): Refers to infants that are delivered at 37 weeks of gestation or later and weigh less than 2,500 grams or 5.5 pounds.

Low Birth Weight*:* A live birth weighing less than 2,500 grams or 5.5 pounds.

Preterm or Premature Infants: Infants born at less than 37 weeks of gestation and weighing less than 2,500 grams or 5.5 pounds.

Timely Prenatal Care: Care that begins during the first trimester of pregnancy. It is a proxy to measure of access to health care in the population of women of childbearing age.

Untimely Prenatal Care: No prenatal care or care that begins after the first trimester of pregnancy.

RACE/ETHNICITY

The following race/ethnic groups and their definitions are used in this report:

Asian/Pacific Islander: Includes Chinese, Japanese, Vietnamese, Cambodian, Thai, Laotian, Asian Indian, Filipino, Asian Unspecified, Hawaiian, Guamanian, Samoan, and other Pacific Islander-of non Hispanic Origin.

African-American: Includes Blacks, non-Hispanics.

Latina: Includes Mexican/Mexican-American/Chicano, Puerto Rican, Cuban, Central/South American, other Spanish/Hispanic (born outside U.S.), other Spanish/Hispanic (born in the U.S) of any race.

Native-American: Includes American Indian, Eskimo, and Aleut.

White: Includes Whites, non-Hispanics.

Other/Unknown: Includes unspecified or unknown race/ethnicity.