

**California Health and Human Services Agency
California Department of Public Health
Center for Family Health
Maternal, Child and Adolescent Health Program
Title V Five Year Needs Assessment, 2010-2014**

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BACKGROUND AND METHODS

The *California 2010-2014 Title V Needs Assessment Report* documents the California MCAH Program's needs assessment process and findings, identifies the 2010-2014 MCAH Program priorities, defines indicators to measure progress towards those priorities, and establishes the foundation for the strategic planning process that will take place in 2010. As California faces an ongoing fiscal crisis that is anticipated to have continual negative effects on both the MCAH populations overall and on the MCAH Program budgets at the state and local levels, this report provides an important evidence base upon which resources allocation decisions can be made.

The California MCAH needs assessment has been a broad effort to describe and assess the large and diverse MCAH population and the multi-faceted MCAH system in place to ensure their health. Thus, the needs assessment has been guided by an emphasis on describing the diversity in populations, systems, and needs across California's local health jurisdictions through investment in an extensive local assessment process. In taking this approach, MCAH has recognized the fundamental role played by the local health jurisdictions; the expertise of local MCAH partners, staff, and Directors; and the rich assessment of the MCAH populations and system produced by this decentralized process.

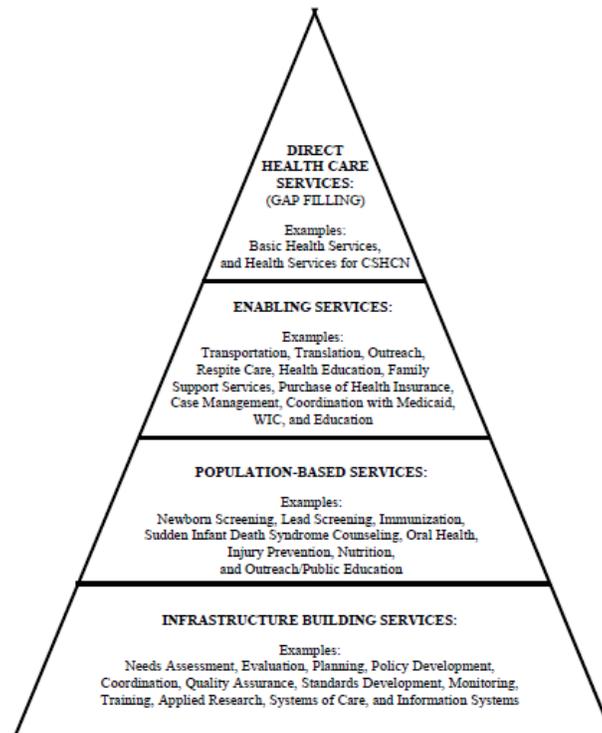
The 10 Essential Services of Public Health serve as an organizing framework for the California Department of Public Health (CDPH), and have been incorporated into the CDPH Decision Framework for evaluating internal proposals. The MCAH Program uses the 10 MCAH Essential Services to structure and describe activities implemented by the state and local MCAH programs. The 10 MCAH Essential Services were integrated into the state and local capacity assessment through the CAST-V processes and tools.

10 Essential Maternal, Child and Adolescent Health Services

1. Assess and monitor maternal and child health status to identify and address problems.
2. Diagnose and investigate health problems and health hazards affecting women, children, and youth.
3. Inform and educate the public and families about maternal and child health issues.
4. Mobilize community partnerships between policymakers, health care providers, families, the general public, and others to identify and solve maternal and child health problems.
5. Provide leadership for priority-setting, planning and policy development to support community efforts to assure the health of women, children, youth and their families.
6. Promote and enforce legal requirements that protect the health and safety of women, children, and youth, and ensure public accountability for their well-being.
7. Link women, children, and youth to health and other community and family services, and assure access to comprehensive, quality systems of care.
8. Assure the capacity and competency of the public health and personal health work force to effectively address maternal and child health needs.
9. Evaluate the effectiveness, accessibility, and quality of personal health and population-based maternal and child health services.
10. Support research and demonstrations to gain new insights and innovative solutions to maternal and child health-related problems.

The conceptual framework outlined by the Health Resources and Services Agency for the Maternal and Child Health Title V Block Grant to States is depicted in the MCH Pyramid of services. The levels include: infrastructure-building services that establish the foundation of the MCH system, population-based services universally available to MCH populations, enabling services targeting groups and individuals, particularly those experiencing barriers to services, and direct (gap-filling) services. This framework is used to organize the presentation of information throughout the report, particularly in the capacity assessment section.

**CORE PUBLIC HEALTH SERVICES
DELIVERED BY MCH AGENCIES**



MCHB/DSCH 10/20/97

The Life Course Perspective, Social Determinants of Health, and Health Equity models provided the theoretical frameworks through which the California's 2010-2014 Needs Assessment findings were interpreted and presented. These frameworks, introduced below, gained prominence nationwide as the needs assessment process evolved and evidence accumulated pointing to the need to reframe the causes of and solutions to health disparities.

The Life Course Perspective is an evolving public health paradigm^{1, 2} that has been applied extensively in MCAH in recent years. It frames health as a trajectory across the continuum of the life course, beginning with the period in utero, and some suggest stretching back to the fetal experiences of the previous generation.³ This framework explains health disparities by focusing on differential exposures and opportunities during sensitive developmental periods (in utero, early childhood, adolescence, pregnancy) that may have more powerful influences on subsequent health trajectories.^{3, 4} Further, the model considers the cumulative effects of chronic stress across the life span. As a result of social disadvantage³ or episodes of negative exposures,⁵ physiologic changes occur, such as stress hyper-reactivity and immune dysfunction that contribute to worsening health outcomes over time. The Life Course

Perspective informs the examination of MCAH outcomes, emphasizing the importance of health prior to and between pregnancies in the causal pathway for birth and maternal outcomes, as well as the life long consequences to risks and health conditions that occur during childhood, particularly during the period from birth to age five.^{6, 7, 8, 9}

Health outcomes data for the MCAH populations in this report are presented according to a life course trajectory, with linkages to preceding and subsequent developmental periods. The health needs of reproductive age women are included to illuminate important but more distal factors related to observed birth outcomes in California's populations. Assessment of the health and developmental status of children provides critical information not only about current well-being, but also in relation to the promotion of health and well-being into adulthood. Early childhood measures are of particular importance in this regard. Adolescent health receives specific attention, as improvements and negative exposures during this sensitive period may have a great potential to shift the adult health trajectory.

Implicit in the Life Course Perspective is a consideration that health results from not only genetics and health behaviors, but from the social, psychological, economic, environmental, and cultural context in which health outcomes arise.^{6,3,4,1,2} In California, as in the United States, differential access to resources in these arenas has resulted in MCAH outcome disparities for certain racial and ethnic groups, the poor, non-citizens, and other population groups.^{10 11 12}

The health equity framework emphasizes that health disparities observed among these groups derive from systematic differences based their on historically restricted access to power and resources.¹² At its foundation is the ethical commitment to prioritizing the improvement of outcomes among these disadvantaged groups.¹¹

In California, the importance of health equity and social determinants in affecting statewide health outcomes has been recognized through the integration of these concepts into the CDPH Decision Framework, the Department-wide process and tools developed to facilitate shared decision-making, improve communication, and assure responsiveness to health challenges in the 21st Century.

Data on the social determinants of health across California's population describe the context in which health risks and outcomes arise. Health status data are presented by race / ethnicity to highlight the importance of MCAH disparities in California, while the intersection of race and income will highlight the social determinants of select outcomes. In the action planning stage, the consideration of the broad set of determinants health will be integrated into the analysis of priority health problems in California, including those distal contextual factors that shape individual behavior.¹³

Leadership

The Acting Chief of the Maternal, Child, and Adolescent Health Program is the California Title V Director and has overseen the development of methods; implementation of the needs assessment process; coordination with internal and external partners; and development of the needs assessment report. The Title V Director is responsible for ensuring the ongoing nature of the needs assessment process upon completion of the needs assessment report.

The Acting Chief of the MCAH Epidemiology, Assessment, and Program Development Branch (EAPD), is the Project Director of 2010 Needs Assessment and has lead the implementation of the project from initial planning to report writing.

EAPD staff were responsible for project coordination, including planning and management, development of the local needs assessment guidelines, technical assistance and trainings to state and local MCAH staff, facilitation of steering committee meetings, and report development.

The internal steering committee was composed of branch chiefs, nurse consultants, program specialists and scientists from the MCAH Program. This committee facilitated coordination and communication among MCAH Branches; identified strategies for strengthening the local and state MCAH Programs' ability to conduct a high quality needs assessment; made recommendations regarding the needs assessment process; and assisted in determining the capacity assessment approaches at the state and local level. The steering committee also facilitated a broader understanding of California's MCAH infrastructure.

The Family Health Outcomes Project (FHOP) at the University of California, San Francisco provided capacity building training to local MCAH staff to prepare for conducting the local needs assessment, supplied local health indicator data, assisted in data interpretation, supported local capacity assessment processes, and compiled all the needs assessment reports submitted by local health jurisdictions.

Methods

Overview

The MCAH Program is responsible for ensuring the health of and providing services to mothers, infants, children, adolescents and their families; Children's Medical Services (CMS) is responsible for assuring comprehensive services for the CHCSN population. Thus, the MCAH and CMS Programs conduct separate needs assessments using methods and approaches appropriate to each Program's mission, values, organizational structure, and capacity. Throughout the process, MCAH and CMS worked together to ensure cohesion of the needs assessment processes and final report.

The MCAH Program needs assessment is composed of two complementary efforts: the local health jurisdiction MCAH assessment and the State MCAH Program assessment. The local needs assessment process was undertaken to address the tremendous variation in geography, demographics, underlying determinants of health, system capacity, and organization across California's local health jurisdictions.

In early 2008, the MCAH Program initiated its needs assessment process with the formation of a steering committee. With the oversight of the steering committee and input from local MCAH Directors and FHOP, MCAH developed standardized guidelines for conducting the local needs assessment in each of its 61 local health jurisdictions (LHJ). The guidelines are included in the appendix.* FHOP was contracted to develop and provide capacity-building training sessions

* Appendix items are not included in the public posting.

to LHJ staff, which are described in the appendix. To initiate the local needs assessment process, the MCAH Program conducted an orientation meeting to help local MCH directors understand the scope and intent of the local assessment, procedures for its implementation, and reporting requirements.

Each of California's 61 LHJs participated in the needs assessment, which involved engaging stakeholders in assessing the needs of their communities, examining community health status, identifying needs, assessing capacity, and matching needs with existing capacity and desired outcomes within the local health jurisdiction to identify MCAH priorities for the next five years. Each LHJ submitted a needs assessment report summarizing findings. Data gathered from each of the local needs assessments was then compiled and analyzed to determine common themes and patterns in needs, capacity and priorities reported across local jurisdictions in California.

While local needs assessments followed the general approach outlined in the guidelines, each local needs assessment process was unique. Differences across jurisdictions result from differences in mission, organizational structure, local MCAH systems, relationships with stakeholders, available resources, and staff capacity among other factors.

The synthesized findings from the local needs assessments were supplemented by the findings from the State MCAH Program assessment. This included analysis of statewide surveillance data over time and by racial/ethnic groups, state-level capacity assessment, and a statewide stakeholder capacity assessment survey. External stakeholder input was gathered throughout the process. Together, these findings were used to identify priority needs and state outcome and performance measures, in addition to recommending capacity-building priorities for the next five years. California will continue a strategic planning process during the second half of 2010, based on the priorities and associated measures developed as part of the current needs assessment.

Local Capacity Building and Provision of Technical Assistance

FHOP staff provided technical assistance and other capacity-building support to LHJs, including the development and dissemination of surveillance data, data analysis tools, and assistance in the local analysis process. Technical assistance was provided by phone and through local site visits, training, and other activities as needed or requested.

The FHOP website was used extensively as a tool for disseminating information about the needs assessment. A section of the website exclusively for local MCAH jurisdictions facilitated access to resources, including data, automated worksheets, links to additional data, and tools. FHOP's monthly newsletter, the *FHOP Express*, which contains training announcements, information about new products, and other resources relevant to local MCAH staff and their communities, helped to keep local MCAH staff updated about needs assessment related resources. When data or resources were added or updated on the FHOP website, an additional "Data Alert" was sent to newsletter recipients to inform them of the update.

Methods for obtaining stakeholder input

One of the core values of the California Department of Public Health (CDPH) is collaboration. CDPH fosters collaboration both internally to empower and engage staff and externally by reaching out to diverse groups and external stakeholders. Echoing our department's values,

MCAH has been committed to engaging stakeholders in the needs assessment process, from its conceptualization to the determination of resource investments. Involvement of partners in the needs assessment mirrors the approach of MCAH's extensive collaboration with its ongoing activities, an approach that is essential to addressing the tremendous and complex needs of the MCAH population within our diverse and populous state.

Stakeholder involvement in the development of the 2010-2014 Title V Needs Assessment plan and guidelines was essential to the process. The involvement of MCAH branches in developing and implementing the needs assessment has been facilitated through the steering committee, which has met regularly throughout the early phases of the process and as needed during report development. Input from additional MCAH staff was solicited during planning meetings, based on the topics being addressed. In revising and updating the local MCAH guidelines for the current needs assessment, MCAH sought input not only from internal MCAH staff but also from three local MCAH Directors and FHOP (as a long-term technical advisor to local MCAH programs, FHOP has regular contact with all MCAH Directors). External stakeholders assisted in developing a plan for the newly developed local capacity assessment component, recommended increasing training and technical assistance opportunities. Additionally, they supported the use of worksheets and tools for certain aspects of the local report to increase efficiency and reduce the burden of the process on local jurisdictions, which was particularly important in the context of recent staff reductions resulting from budget cuts.

A function of local health jurisdictions in California is to engage a broad set of partners from the local MCAH systems and communicate local health and capacity priorities to the state MCAH program. Therefore, extensive engagement of partners occurred at the local level during the needs assessment process. A full description of this input is included in the *Stakeholder* section of this report.

Stakeholder involvement at the state level included collaboration with internal staff and external partners. Extensive staff participation was involved in the state-level capacity assessment. A broad range of staff from a number of MCAH branches participated in implementing various aspects of the needs assessment, including data analysis, interpretation, development of priorities, and drafting of narrative, which ensured that a broad range of perspectives were incorporated into the process and products. External stakeholder input was incorporated at the state level through a survey of the capacity of external partners of the state MCAH program, including HRSA/MCHB funded organizations or projects in California.

Local jurisdiction MCAH status assessment

A key component of the local needs assessment process was the review of 27 standard local health indicators and measures (LHMI) in each jurisdiction. The LHMI were selected in 2003 for the 2005 needs assessment based on input provided by local MCAH Directors and the availability of the indicator data at the county level. These same LHMI were retained for the 2010 needs assessment. The final list of indicators fell into several groups, including: birth, death, prenatal/postnatal care, health, injuries, and other.

A number of "optional topics" of MCAH interest were suggested for which indicator data were limited or not available for all counties. Some of the recommended "optional" topics included perinatal substance abuse, physical activity, gestational diabetes and oral health. Jurisdictions were encouraged to use locally developed data sources and/or qualitative data for these measures.

To decrease local jurisdiction burden and ensure standardized analyses, jurisdiction-level count and rate data were compiled and posted on a FHOP password-protected website. The data were stratified by race/ethnicity to identify disparities, unless limited by small numbers. Several excel workbooks were developed by FHOP with input from CDPH to simplify comparisons of local rates with the State rate or Healthy People (HP) 2010 objectives. These workbooks automated the analysis process: multiple statewide data sets and surveys were analyzed and data provided to each LHJ. Spreadsheets were auto-generated for each LHJ which include rates, comparisons, and charts for each health indicator assessed. Additionally, a workbook was developed to report results of trend analyses conducted by FHOP, including easy-to-interpret notations related to the direction of the trend, significance, and comparisons. This workbook facilitated assessment of rate changes over time, without requiring local jurisdictions to have specialized statistical capacity.

Statewide MCAH status assessment

The state-level assessment was based on an expanded set of indicators drawn from an extensive review of HP2010 objectives (HP2020 objectives had not yet been released), the 27 LHMI, the National and State Performance Measures, Health Status Indicators, and Outcome Measures. Additional measures were drawn from topic or population specific sources, such as the California's 27 Critical Objectives for Adolescent Health and the CDC's proposed Core State Preconception Health and Health Care Indicators.

Data were compiled by the Epidemiology, Assessment, and Program Development Branch based on primary data analysis conducted internally, as well as secondary data sources. In order to identify disparities among racial / ethnic populations and among income groups, data were presented by race / ethnicity and income. If available, trend data were presented to facilitate examination of changes over time.

Data describing underlying social, economic, and environmental factors that support or constrain the health of the MCAH populations were included in the *Social Determinants of Health* section of this report.

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STAKEHOLDER INVOLVEMENT IN THE NEEDS ASSESSMENT

Several approaches have been undertaken to obtain stakeholder input in the California Needs Assessment process: extensive involvement of stakeholder input at the local level, a statewide stakeholder web-survey, and public posting and solicitation of input on the needs assessment report.

Stakeholder Involvement in Local Health Jurisdiction Assessments

The California MCAH Program leverages the relationships and systems expertise of local health jurisdictions (LHJs) in order to ensure broad and diverse stakeholder input into the needs assessment process. LHJs obtain input from other local public agencies, service providers, non-profit organizations, and families or clients in their local assessments of health status and capacity, and in establishing local priorities. This input is then communicated to the state MCAH program through each jurisdiction's comprehensive local needs assessment report, which in turn informs the selection of statewide priorities and responses.

The results of the local prioritization of health needs are presented in the priorities section of this document. The results of the local capacity assessment will be incorporated into the capacity assessment section of final needs assessment report.

Given the large geographic and population size of California, and the tremendous diversity represented across the state, this decentralized process ensures greater public and partner input into the statewide needs assessment process. Further, this process allowed each LHJ to develop a process that worked best within the capacity and organization of their local MCAH system.

In total, 2,786 stakeholders participated in the local needs assessment process among the 58 (95%) local jurisdictions reporting stakeholder participation. Stakeholder participation was not reported in 3 jurisdictions.

Stakeholders represented a broad variety of entities. Among local health jurisdictions, the most commonly reported partners included internal health department staff (56 jurisdictions), community-based organizations (55), health providers (54), other state or local agencies (53), school or academia (40), and state or nationally affiliated non-profit organization (32). Clients, community members, or family members were represented in 25 jurisdiction needs assessments, over 40% of all jurisdictions. Faith-based organizations and professional organizations also contributed in a limited number of jurisdictions.

Input was provided by stakeholders on all aspects of the needs assessment in the vast majority of local health jurisdictions. Jurisdictions obtained input from the greatest number of stakeholders during the local capacity assessment and decision-making stages of the local needs assessments. Over 1,900 stakeholders contributed to local capacity assessment in 92% of jurisdictions; over 1,300 stakeholders helped to identify local MCAH problems and needs in 85% of jurisdictions, and nearly 1,200 assisted in selecting local MCAH priorities in 85% of jurisdictions. Stakeholder input was also obtained during earlier stages of the needs assessment in the majority of jurisdictions, though jurisdictions typically worked with smaller groups of stakeholders at this point in the process. Statewide, 591 stakeholders assisted in shaping needs assessment mission statement and goals, 624 stakeholders identified health status indicators to be assessed, and 524 participated in developing the community health profile.

In addition to face-to-face meetings, which were by far the most common format for obtaining stakeholder participation in the needs assessment process, in their needs assessment narratives, LHJs described a variety of approaches to expand the breadth of input. At least 13 LHJs administered or utilized recent surveys of community members, clients, or families to inform their needs assessment processes. At least 15 LHJs implemented stakeholder surveys with partner organizations and providers. Well over 800 individuals participated in these surveys. One rural LHJ addressed quantitative health status data limitations (resulting from their very small county population) by implementing a community survey to assist in identifying needs and community priorities. Additionally, online surveys replaced stakeholder meetings by some jurisdictions to obtain capacity input based on internal funding limitations and feedback from stakeholders strained by staffing reductions resulting from funding cutbacks in their own agencies. In other LHJs, hard copy surveys among partners, key informant interviews (10 LHJs), and focus groups (10 LHJs) supplemented input obtained in meetings.

Local MCAH programs serve as leaders within their systems. Many LHJs discussed the stakeholder input process as part of their ongoing efforts to build collaboration within their local MCAH system, and all of those LHJs identified a number of ongoing coalitions within their jurisdictions to improve MCAH in general, or to respond to a particular issue facing their communities.

Statewide Stakeholder Survey

In spring 2010, California MCAH solicited direct input through a web-survey of 208 key stakeholders to assess California's capacity to carry out the ten essential public health services for the MCAH population. The extensive group of stakeholders invited to participate in the survey included: organizations collaborating with or funded by State or Local MCAH Programs, health care organizations, professional organizations, academic institutions, community organizations serving MCAH populations, HRSA MCHB funded organizations, and other organizations involved in statewide activity on MCAH issues. Each organization received one survey, sent via email to an identified organizational representative.

A total of 131 organizations participated in the survey. The organizations responding were mostly state or local health departments (50%), community-based organizations (16%), other state or local agencies, such as education or social services (9%), and schools or other academic institutions (8%). The remaining respondents were hospitals, health managed care organizations, professional associations and others. The populations served by these organizations were primarily pregnant women (86%), infants (82%), and mothers (80%). Children, adolescents and families were target populations for 73% of the organizations. Approximately half of the organizations provided services for fathers. This stakeholder survey provided an excellent opportunity to obtain direct input related to the capacity of partners within the broader MCAH system in California. The findings from the survey will be incorporated into the final needs assessment report.

SOCIAL DETERMINANTS OF HEALTH IN CALIFORNIA

Background

California is a complex and multidimensional state. Its diversity in geography, social and cultural groups, and the wealth and education of its citizens has a profound influence on the health of the population and the development of public health prevention efforts and infrastructure. In the United States, and in California, certain racial and ethnic groups, the poor, non-citizens, and other population groups continue to demonstrate disparities in MCAH outcomes. The causes of these disparities are rooted in the differential distribution of access to societal resources, in addition to environmental conditions, and individual factors, such as genetics, behaviors, or practices. Individual behaviors, though, are heavily influenced by upstream factors such as living conditions and broader social norms.¹ Together, social, economic, psychological, and environmental factors that influence health are referred to as the social determinants of health.

In a recent article, the Director of the Centers for Disease Control and Prevention, suggested that interventions to address social determinants of health have the greatest potential to improve public health, though obtaining the broad social support to achieve these societal changes is an obstacle.¹ Despite the challenges, numerous efforts across California have been initiated by local health jurisdictions and other entities to reorient public health practice toward addressing these fundamental causes of health disparities. The Bay Area Regional Health Inequity Initiative has developed a health equity framework utilized in many of these efforts.² The report produced by the Alameda County Public Health Department, *Life and Death from Unnatural Causes*, provides an excellent example linking health to social inequity within a jurisdiction, and has served as an important reference to this section of the needs assessment.

Socioeconomic status is a powerful predictor of health status: those with higher socioeconomic status experience fewer adverse MCAH outcomes and risk factors, in part through their enhanced ability to access societal resources that reduce risk and protect health.³ Socioeconomic status is a combination of income, education, and social position, and is described in this report through proxy measures of poverty, income, employment, and education. All aspects of socioeconomic status are closely tied to race and ethnicity.

California's demographic composition and social landscape has been shaped by its long history of immigration. Many immigrants face unique challenges in accessing needed services due to lower income, safety net program eligibility restrictions, cultural factors, language barriers, discrimination, and difficulty navigating complex service delivery systems. These factors are particularly difficult for undocumented immigrants, who face more limited access to services and lack many protections afforded to legal immigrants and citizens. Despite a lower socioeconomic status and less access to care, MCAH outcomes among foreign-born women and their infants in some racial and ethnic groups tend to be better than their US-born counterparts.³

Multiple pathways link socioeconomic factors to negative health outcomes through neighborhood conditions.³ Due to the parallel between the income in a neighborhood and its racial and ethnic composition, the role of neighborhood conditions provides a powerful explanation of the causes of racial and ethnic MCAH disparities in California. In general, the

combination of housing, social, and environmental conditions, and resource availability in neighborhoods are referred to as living conditions.

Social Determinants Data

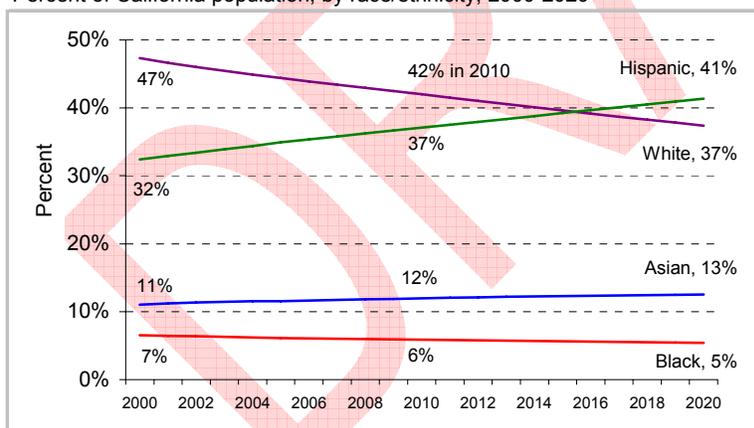
The demographic and birth statistics presented in this report describe changes to California’s population that will continue to impact the overall need, as well as the rate and burden of MCAH outcomes over the next five years. Social determinants data are presented for California overall, and for certain counties. County level data for selected indicators portray variation in the distribution of social determinants of health throughout California, and provide a glimpse of the challenges involved in providing the essential services of public health within local health jurisdictions for the MCAH population. It is important to note, though, that county-level summarizations often obscure regional or neighborhood variation within counties.

Population

In 2010, an estimated 39.1 million people resided in California, an increase from 34.1 million in 2000.⁴ California’s population growth is expected to continue over the next 10 years to reach 44.1 million by 2020.⁴ Currently, in 2010, an estimated 42% of the population is White, 37% Hispanic, 12% Asian, 6% Black, 2% multi-race, 0.6% American Indian, and 0.4% Native Hawaiian/Pacific Islander. Trends in the racial/ethnic composition of California’s population through 2020 predict a continuing decline in the White population proportion and an increase in the Hispanic population, which will become the largest racial/ethnic group in California. The proportions of other racial and ethnic groups in California will remain relatively stable through 2020 (Figure 1).

Figure 1. Population Projections

Percent of California population, by race/ethnicity, 2000-2020

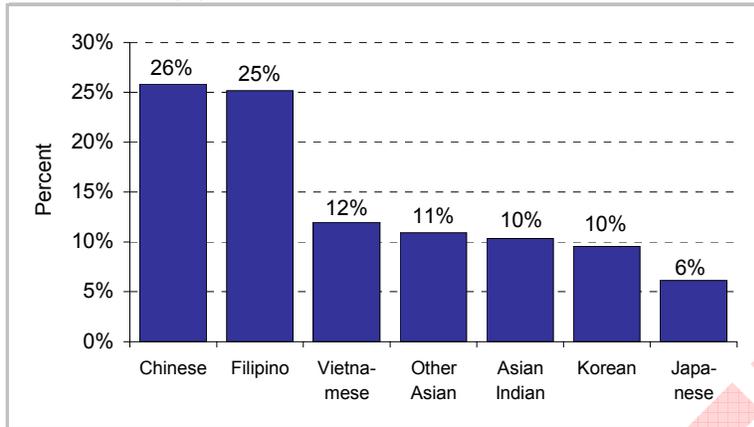


Data source: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA, July 2007.

California’s diversity is shaped by the multitude of racial and ethnic sub-groups across the state. For example, California’s Asian population, the largest in the nation, demonstrates substantial diversity (Figure 2). The largest Asian sub-groups in California are Chinese, Filipino and Vietnamese. Within each Asian group is variation in language and culture. While the largest numbers of Asians reside in the large population centers of Southern California in Los Angeles, Orange, and San Bernardino counties, counties with the largest percentage of Asian residents are in the San Francisco Bay Area.⁴

Figure 2. Asian Subgroups in California

Percent of Asian population, 2006-2008

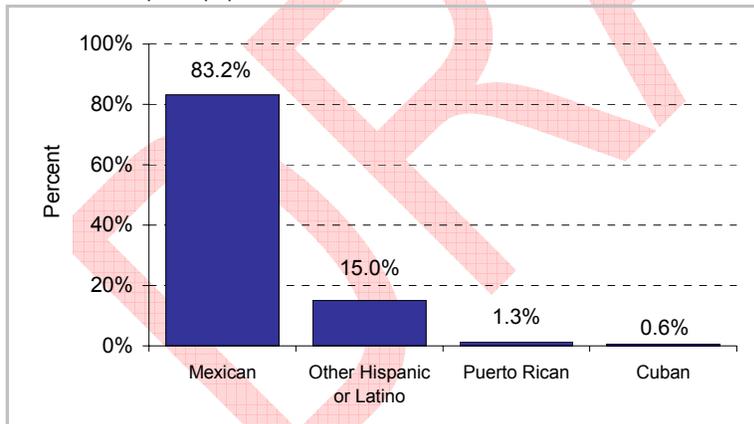


Data source: U.S. Census Bureau, 2006-2008 American Community Survey

Hispanic groups in California are predominantly Mexican (83%), followed by other Hispanic or Latino groups from Central and South America (15%). Less than 2% are Puerto Rican or Cuban (Figure 3). Due to shifts in immigration patterns, an increasing number of indigenous Mexicans have settled in California.⁵ At 77%, Imperial County has by far the largest proportion of Hispanic population in California. Other counties in which greater than 50% of the population is Hispanic are in the agricultural region of Central California, while Southern California counties have the largest numbers of Hispanic residents.⁶

Figure 3. Hispanic Subgroups in California

Percent of Hispanic population, 2006-2008



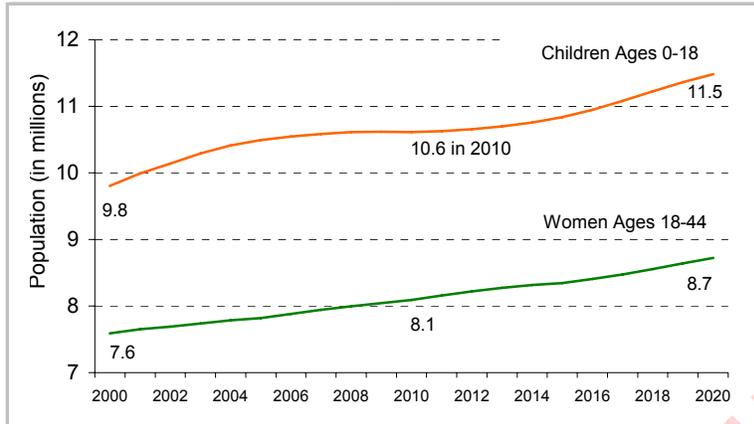
Data source: U.S. Census Bureau, 2006-2008 American Community Survey

Age Distribution

As with the overall population in California, the MCAH population will continue to grow in numbers and diversity over the next 10 years. The population of children 0-18 years of age has increased to 10.6 million in 2010 from 9.8 million in 2000, and is projected to reach 11.5 million by 2020. Similar increases are expected among women of reproductive age (18-44) (Figure 4).

Figure 4. Population Projections

Percent of California population, by age group, 2000-2020



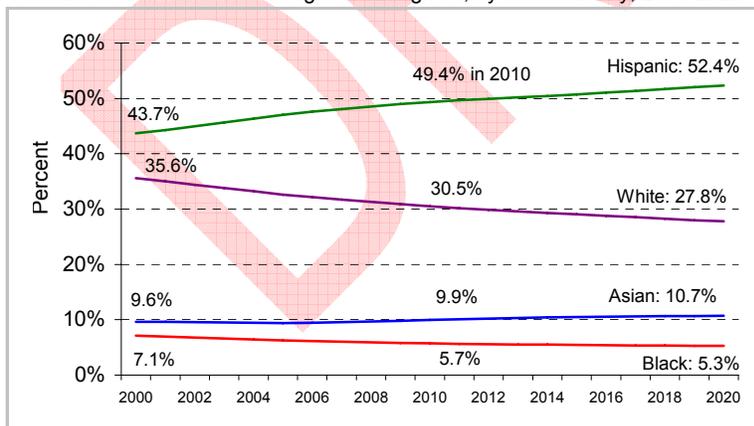
Data source: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA, July 2007

Among each of the MCAH populations, the largest racial/ethnic group in 2010 was Hispanic. Over the next 10 years, the proportion of the population that is Hispanic is expected to continue to increase for all population groups. The White population proportion will continue to decline. Other racial/ethnic groups will remain stable.

For instance, in 2010, an estimated 49.4% of the child population 0-18 years of age was Hispanic, followed by White (30.5%), Asian (9.9%), and African American (5.7%). Children identified in multiple race categories were 3.6%. American Indian (0.5%) and Pacific Islanders (0.4%) made up a small proportion of the overall child population. By 2020, over 52% of children will be Hispanic. The number and percent of Asian children will increase, though not as substantially as Hispanic children. The number and proportion of the White and African American children will decline. Other groups will remain stable (Figure 5).

Figure 5. Population Projections among Children

Percent of California children ages 0 through 18, by race/ethnicity, 2000-2020



Data source: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA, July 2007

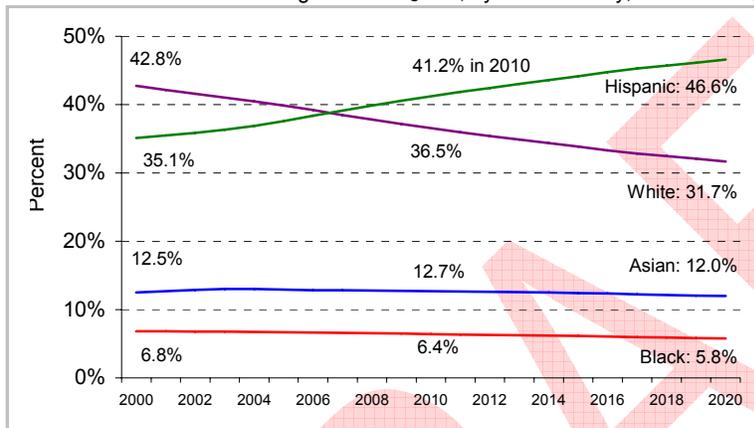
Young children 0-5 years of age are in a particularly sensitive developmental period, and experiences during this time have great influence over subsequent life course health trajectories. The population of children 0-5 years of age has increased from 3 million in 2000 to

3.3 million in 2010, and is projected to reach 3.8 million by 2020. The 2010 racial/ethnic distribution of the young child population was similar to children overall. As with the overall population, proportion of children ages 0-5 who are Hispanic will continue to increase through 2020, while the proportion that is white will continue to decline. Other racial/ethnic groups are projected to remain fairly stable through 2020.⁴

In 2010, there were 8.1 million women of reproductive age (ages 15-44) in California. The largest group was Hispanic women (41%), followed by White (37%), Asian (13%) and African American (6%). The percentage of Hispanic women will continue to increase among this age group through 2020 to 47%, and the percentage of White women will decline to 32%. Other groups will remain somewhat stable ([Figure 6](#)).

Figure 6. Population Projections among Women

Percent of California women ages 15 through 44, by race/ethnicity, 2000-2020



Data source: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA, July 2007

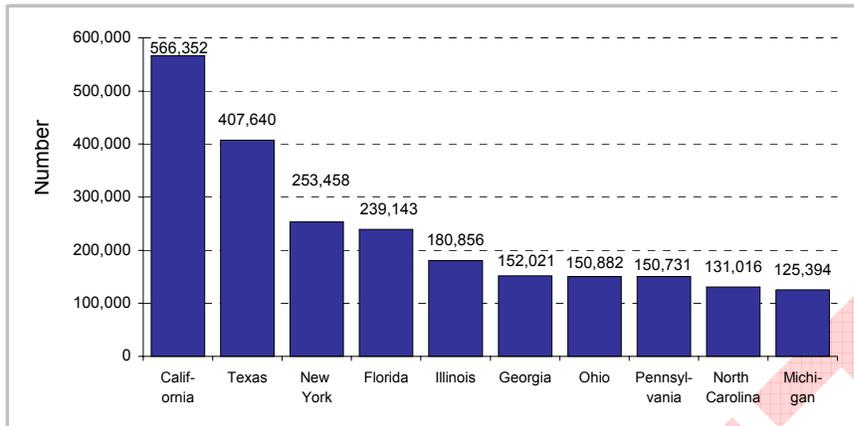
Of particular interest are the youngest women of reproductive age, who demonstrate increased risks and poorer birth outcomes compared to their older counterparts.^{7,8} In 2010, there were an estimated 1.5 million women ages 15-19 and 875,000 women ages 15-17 in California. Hispanic women were the largest racial/ethnic group among the 15-19 year olds (47%), followed by White (33%), Asian (10%), and African American (7%). Racial/ethnic distribution was similar among women ages 15-17.

Birth Statistics

Current birth data and trends are essential for understanding MCAH population needs in California. In 2007, the 551,567 births in California accounted for approximately 1 in 8 of all US births, more than any other state ([Figure 7](#)).

Figure 7. States with the Greatest Number of Births

Number of live births, 2007



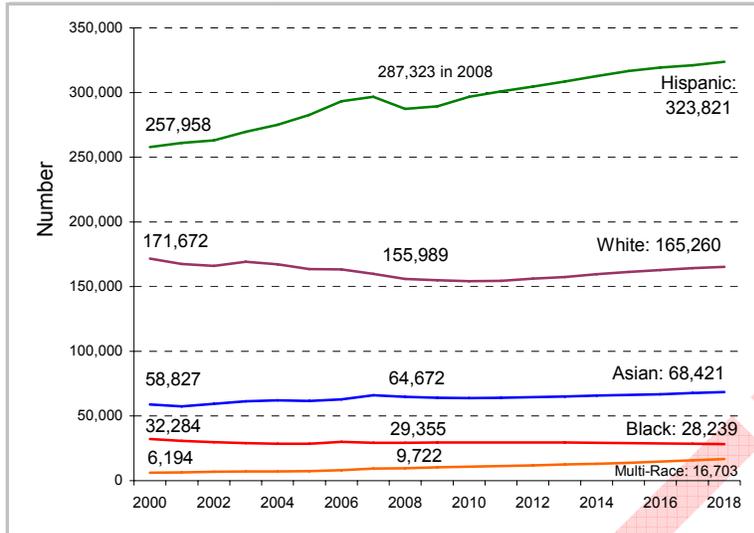
Data source: Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary data for 2007. National vital statistics reports, Web release; vol 57 no 12. Hyattsville, MD: National Center for Health Statistics. Released March 18, 2009.

During the period 2000 to 2008, the number of California births increased by 3.8%, from 531,285 to 551,567. Through 2018, the number of births is expected to increase by about 5,590 per year, on average. That is, the number of births in 2018 is projected to be 10.1% larger than in 2008, totaling 607,466.⁹

Births among Hispanic, Asian, and multi-race women showed the greatest increase from 2000 to 2008, while births to White and Black women declined ([Figure 8](#)). Over the next 10 years (2008-2018), births to women of all racial/ethnic groups will increase, with the exception of births to Black women. In detail, births to Hispanic women will increase by 12.7%. Births to multi-race women will have the largest percent increase (by 71.8%). Although not shown in the figure, births among Pacific Islanders will also increase, from 2,477 in 2008 to 2,865 in 2018, as will births among American Indian/Alaska Natives, from 2,029 to 2,156.

Figure 8. Historical and Projected Births in California

Number of live births among women ages 15-44, by race/ethnicity, 2000-2018

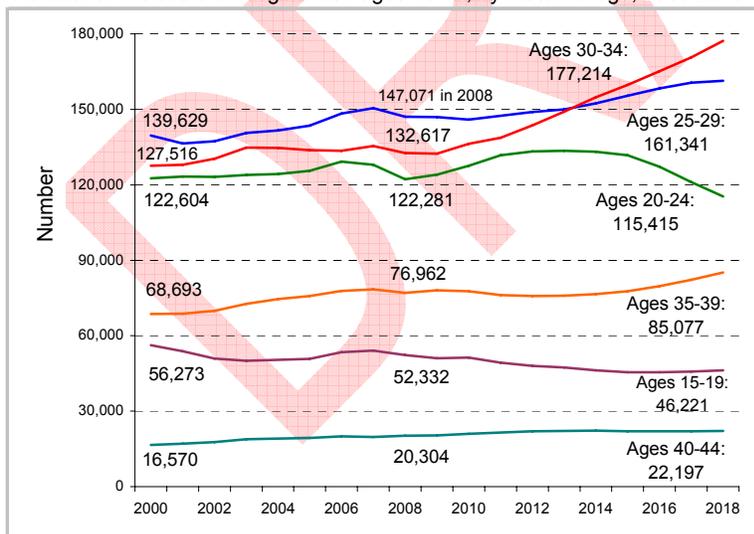


Data source: State of California, Department of Finance, Demographic Research Unit, Historical and Projected State and County Births, 1980-2018, with Actual and Projected Fertility Rates by Mother's Age and Race/Ethnicity, 2000-2018. Sacramento, California: September 2009

Over the next 10 years (2008-2018), the number of births to women under age 25 will drop, while the number births to women in each of the older cohorts are projected to increase. Births to women ages 30-34 are expected to increase (Figure 9) by 33.6% or more than 44,500. Teen birth rates are discussed in more detail later in this report.

Figure 9. Historical and Projected Births in California

Number of live births among women ages 15-44, by maternal age, 2000-2018



Data source: State of California, Department of Finance, Demographic Research Unit, Historical and Projected State and County Births, 1980-2018, with Actual and Projected Fertility Rates by Mother's Age and Race/Ethnicity, 2000-2018. Sacramento, California: September 2009

Immigration

California is home to 9.9 million immigrants, the largest number and percentage of foreign born residents in the United States.¹⁰ International immigration has accounted for 40% of California's population growth since 2000. Further, since 44.5% of California births are to women born outside the U.S.,¹¹ the well-being of this population has a strong influence on overall MCAH status in California. Most of California's immigrants are from Latin America (56%) or Asia (34%). The leading countries of origin for immigrants are Mexico (4.4 million), the Philippines (750,000) and China (659,000).¹¹

Immigration status is related to poverty among children in California, which in turn is a strong predictor of health outcomes. Overall, 48% of California's children have immigrant parents: 34% have at least one legal immigrant parent and an estimated 14% had at least one undocumented immigrant parent. Among these children, 24% of children with legal immigrant parents are poor and 38% of children with undocumented immigrant parents are poor.¹²

California has the largest number and proportion of undocumented immigrants of any state.¹³ Many undocumented immigrants in California experience difficulty in meeting basic needs and accessing services, while facing additional health risks related to low wage jobs that lack protections and benefits. In 2008, approximately 2.7 million undocumented immigrants lived in California, an increase from 1.5 million in 1990.¹³ In 2004, approximately 41% of California's undocumented immigrants resided in Los Angeles County.¹²

Languages Spoken

Limited English proficiency (being able to speak English less than 'very well') poses challenges for educational achievement, employment, and accessing services, and results in lower quality care for immigrant communities—each of which influences MCAH outcomes. Among California's population over 5 years of age, 14.3 million speak a language other than English at home and 6.7 million have limited English proficiency.¹⁰

California's linguistic diversity requires the MCAH system to develop linguistic competence in multiple languages. Among youth in California's public schools, one in four is an English Language Learner (ELL) who is not proficient in English. These 1.5 million students speak 56 different languages, but over 1.2 million of ELL students are Spanish speakers. Other common languages are Vietnamese, Filipino, Cantonese, and Hmong. ELL students reside in every county in California, and in 14 counties in California's Southern, Central Valley, and San Francisco Bay areas, ELL students make up over 25% of the student population.¹⁶

Socioeconomic Status

Socioeconomic status (SES), the combination of income, education, and social position, impacts health outcomes by determining access to societal resources. Those with higher SES experience fewer adverse MCAH outcomes and risk factors.¹⁵ California shows a stepwise gradient in many MCAH risks and outcomes according to income, with the best outcomes observed among the highest earners. Socioeconomic status and race/ethnicity are closely related, with certain racial or ethnic groups experiencing high poverty rates. The influence of parental income on the education and income of their children provides some insight on the persistence of MCAH racial disparities over time. Proxy measures of socioeconomic status are presented below: poverty, income sufficiency, employment, and education.

Poverty

According to the most recent census data, over 4.6 million Californians, 13% of the population, have incomes below the federal poverty level (100% FPL). African Americans, Hispanics, and American Indians have the highest rates of poverty in California.¹⁷ Among children under age 18 the rate is higher: 16% of the population is in poverty, or approximately 1.6 million children.¹⁸ Projections of child poverty rates through 2012 anticipate that child poverty in California will increase as a result of the recession, peaking at 27% in 2010 before declining slightly to 24% in 2012. In Los Angeles County, home to 25% of California's children, one in three children is projected to be in poverty in 2010.¹⁹

California child poverty varies tremendously by region. Counties with the highest child poverty rates are in the Central Valley, Northern Mountain, or border regions of California: Tulare (31%), Lake (28%), Fresno (28%), Del Norte (28%), and Imperial (27%). Counties with the lowest rates of child poverty (below 10%) are in the San Francisco Bay Area, Wine Country, and the Lake Tahoe/mountain recreational area.¹⁸

The high cost of living in California obscures the struggles faced by many families when looking only at those below the federal poverty level. An alternate measure of poverty is the self-sufficiency standard, a measure of the income required to meet basic needs (housing, child care, transportation, health care, food, applicable taxes and tax credits and other miscellaneous expenses) that accounts for family composition and regional differences in the cost of living. While 1.4 million (11.3%) of California *households* are below the FPL,²⁰ an additional 1.5 million households in California lack adequate income to meet basic needs.²¹

Income insufficiency is highest among households with children. Among households with children, 36% of married couple households, 47% of single father households, and 64% of single mother households have insufficient income to meet basic needs. Households headed by single mothers in some racial/ethnic groups have even higher rates of income insufficiency. Nearly 8 out of 10 Hispanic single mother households and fully 7 out of 10 African American single mother households experience income insufficiency. The major financial stresses for households with children are housing and child care; many of these families struggle to meet the most basic needs, cannot afford quality child care, and have limited financial resources to address crises.²¹

These data demonstrate that a much larger group of Californians are unable to meet their families' financial needs than those whose incomes are below 100% FPL. Thus, the safety net programs that are designed to protect families from the worst effects of poverty, such as food insecurity, sub-standard housing, and lack of health care or early childhood development services, are not extended to many needy families in California with incomes above the poverty line.

In the proposed FY 2009-2010 budget, some safety net programs have been identified for elimination, including Cal-WORKS (California's TANF program) or for reduction, including California Food Assistance Program (California's food stamp program). If approved, these reductions in the safety net for California's neediest families will result in greater burdens on the public MCAH system, particularly at the local jurisdiction level.

Among workers in California, income is not evenly distributed, and data indicate that inequality is growing. For many measures, including overall health status, low birth weight, and preterm

birth, outcomes improve as income increases, indicating that even middle income groups suffer worse outcomes than those with the highest income.

Before the recent recession that began in 2008, income inequality in California was already growing.²² Between 1979 and 2008, the inflation-adjusted hourly wage of low-wage workers declined by 6% and the typical middle-income worker's wage increased by only 3.7%, while the highest paid workers hourly wage increased by 21%, resulting in a widening gap between rich and poor in California.²³ These and other data show that the benefits of economic growth in recent pre-recession years have failed to trickle down to most Californians.²³

Employment

Employment is associated with income, insurance status, working conditions, and stress; therefore it impacts a host of MCAH health outcomes through direct and indirect pathways. The relationship between employment and health also includes the impact of elevated rates of unemployment on community well-being by weakening social networks and neighborhood engagement, factors that have been shown to influence MCAH outcomes. Particularly among youth, inability to find paid work can result in turning to the street economy to make money through selling drugs or sex work, among other activities.³

The current recession has had a major impact on the California job market. Between July 2007 and July 2009, California lost nearly 1 million non-farm jobs, many more than were gained in the prior 4 years. In July 2009, employment levels were at their lowest point since 1977. All sectors were impacted, but construction was the hardest hit. Further, Latinos, who are most likely to work in sectors impacted by the recession, saw the greatest increase in unemployment during this period.²³ In the second quarter of 2009, the overall unemployment rate rose to 11.4%, from 5.8% at the start of the recession in 2007. Unemployment for African Americans during the same period was 15.3% and for Hispanics was 15.7%.²⁴ In some counties, overall unemployment exceeds 25%.²⁵

Education

Health is intimately connected with education in multiple ways across the life course. Education influences health through its impact on employment, and therefore income and insurance status. With increased education, opportunities for better paying employment improve. Further, increased educational achievement has been found to improve MCAH outcomes through its impact on health knowledge and behaviors, as well as sense of control, social standing and social support. Importantly, early childhood health and developmental status before a child even enters kindergarten have been shown to impact measures of success in school, such as high school graduation, that impact subsequent health outcomes for mothers and their children.³

In California, one in five individuals over the age of 25 has not completed high school and nearly 10% has not completed 9th grade. Further, measures of educational attainment show that while graduation rates have declined slightly from 69.6% in 2000 to 68.5% in 2008, drop out rates have risen sharply from 10.8% in 2000 to 18.9% in 2008.²⁶

Educational attainment varies greatly by race/ethnicity and gender. The 2007-08 drop out rate was higher than the state average for African Americans (32.9%), American Indian/Alaska Natives (24.1%), Hispanics (23.8%), and Pacific Islanders (21.3%), and was lower than the state average for Whites (11.7%), Filipinos (8.6%) and Asians (7.9%).²⁷

California's graduation rate for African Americans (59.4%) and Hispanics (60.3%) was substantially lower than for Whites (79.7%) and Asians (91.7%). The graduation rate for females (75.8%) is higher than for males (67.3%) overall, and for each racial/ethnic group.²⁸

California's school system has already seen substantial budget cuts in recent years, but in upcoming years when federal stimulus money is no longer available to fill budget gaps, further reductions of essential services are anticipated, despite the growing population of children.²⁹ Despite surging demand, severe reductions in funding for the University of California, California State University, and California Community College systems has resulted in reduced admissions, increased fees, and services cut backs for students in California.³⁰

Housing

California's high housing costs create a burden for families, resulting in less income available for other resources needed to maintain health.³ Lack of affordable housing also forces families to live in conditions that negatively impact MCAH outcomes: overcrowded or substandard housing increases exposure to toxins such as mold and lead, as well as increased stress and respiratory infections.³

In 2010, the fair market rent in California ranged from \$672 in Tulare County to \$1,760 in San Francisco Bay Area counties.³¹ Even for working families, the high cost of fair market rent is out of reach. In California, on average, one wage earner working at minimum wage would have to work 120 hours per week, 52 weeks per year in order to afford a two-bedroom apartment at fair market rent.³²

The current foreclosure crisis has greatly impacted California home-owner families. In 2008 and 2009 combined, there were over 425,000 residential foreclosures in California.³³ Foreclosure can force families into lower quality homes and neighborhoods, lead to great financial and emotional stress, and disrupt social relationships and educational continuity.

Inability to access affordable housing leads to homelessness for families. More than 292,624 children are homeless each year in California, which is ranked 48th in the percent of child homelessness in the United States.³⁴ Homelessness in children has been linked to behavioral health problems,³ and negatively impacts educational progress.³⁴

Neighborhood Factors

Individual health behaviors are shaped in part by the presence or absence of neighborhood resources such as recreational facilities, grocery stores, employment opportunities, pharmacies and service providers. Together with factors such as crime, social support, and the presence of role models, these neighborhood conditions influence the levels of stress and anxiety among residents. Poverty is concentrated in some neighborhoods, and in these poor neighborhoods resources are scarce while prevalence of negative conditions is high. Thus, a variety of pathways link neighborhood poverty to the poor health outcomes of community members.³

Research has shown that as the number of alcohol outlets increases, so do levels of crime and violence. Excluding counties in the wine producing regions of California, those with the highest number of liquor stores compared to population are both rural and urban: Del Norte (in the northwest corner of the state), San Francisco, and Alameda (Oakland).³⁵

Easy access to healthy foods improves the likelihood that food choices will be healthy, and is associated with healthy weight.³⁶ Access to healthy foods in a county is measured by the number of county zip codes with a grocery store, or produce or farmer's market, divided by the total number of county zip codes. Counties with healthy food outlets in fewer than 25% of their zip codes are those with large areas of low population and mountainous geographies or desert climates, such as Alpine, Sierra, and Trinity.³⁵

Factors such as the concentration of poverty, high rates of unemployment, and crime can strain social relationships in communities. Further, while many rural communities are known to pull together in mutual support, long distances and a lack of social gathering locations can increase social isolation. Counties with the highest prevalence of adults reporting lack of social-emotional support were Tulare, Los Angeles, San Joaquin, Kern, and Yolo. Counties with the highest violent crime rate were both rural and urban: Alpine, San Joaquin, San Francisco, Alameda, and Tehama.³⁵

Poor communities are typically more reliant on public transportation. Difficulty in accessing transportation can impact the ability to maintain employment, access shopping districts for nutritious foods, and attend health and other service appointments necessary for maintaining health. These factors are particularly acute among the rural poor, who live in areas with limited or no public transportation and live long distances from even the most basic services.³⁷

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HEALTH STATUS OF THE MCAH POPULATION

Introduction

In the 2010 Needs Assessment, the health status of California's large and diverse MCAH population has been assessed at the state and local levels through the local health jurisdiction Needs Assessment.* This section presents statewide results from quantitative analysis and the compilation of secondary data from multiple datasets.

The Life Course Perspective frames health as a trajectory across the life course. It focuses on the cumulative biological effects of stress resulting from social inequities, and the impact of differential social, environmental, and psychological exposures during sensitive developmental periods (pregnancy, infancy, early childhood, adolescence) to explain subsequent health disparities. Further, the Life Course Perspective emphasizes the importance of health prior to and between pregnancies in explaining maternal and birth outcomes.

California MCAH uses the Life Course Perspective as the framework for organizing and interpreting the data presented for each of the MCAH developmental populations: women of reproductive age, pregnant/postpartum women and infants, children, and adolescents. (The health status of children with special health care needs is presented in the companion report completed by CMS.)

For each MCAH population group, data are presented by racial/ethnic group for the most recent year to highlight disparities. Confidence intervals are presented to identify differences. Overall trend data are presented to demonstrate improvement or decline in health status over time. Healthy People 2010 targets or national rates serve as benchmarks for comparison.

Measures related to insurance status and access to and utilization of care, including prenatal care, are presented in a separate section following the health status measures.

Women of Reproductive Age

In order to improve overall maternal and infant health, and to address racial and ethnic disparities, attention must be extended from the prenatal period to include women's health prior to entering pregnancy. Since the most critical period of fetal development occurs in the first weeks after conception, before many women even know they are pregnant, interventions during pregnancy do not start early enough to confer full benefits to the fetus. Further, many interventions required to improve maternal health take too long to achieve sufficient improvements in health status or behaviors during pregnancy, regardless of trimester of prenatal care initiation. Data for women of reproductive age describe indicators of women's health prior to pregnancy, which have been related to subsequent maternal and infant outcomes.

Populations with higher socioeconomic status experience fewer adverse MCAH outcomes and risk factors.¹ Nearly all the health risks and outcomes that will be described below vary by income, with the best outcomes observed among the highest earners. Socioeconomic status

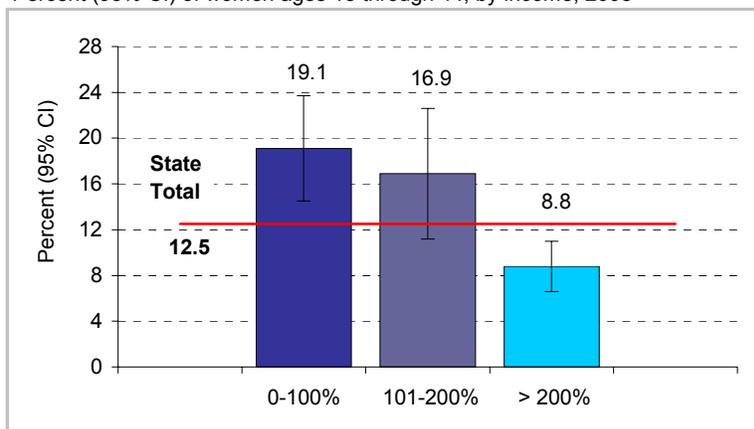
* Findings and interpretation from local health jurisdiction assessment of quantitative and qualitative data were included in each jurisdiction's needs assessment report to the state MCAH program. The resulting priorities are presented in the California 2010-2014 Title V Priorities section.

and race/ethnicity are closely related, and certain racial or ethnic groups are overrepresented among low-income populations. According to the California Health Interview Survey (CHIS), 39.4% of women ages 18-44 were living at < 200% of the FPL in 2007. This is a slight increase from 37.7% in 2005, but still less than 41.8% in 2003. The percent of women living at < 200% of the FPL was highest among Hispanic (60.4%) and Black (50.4%) women, compared with Asian (26.2%) and White (20.1%) women.

Depression at any time in a woman's life is devastating mentally and physically.^{2,3} When it occurs before pregnancy, a woman is more likely to experience depression during and after pregnancy.⁴ Untreated depression during pregnancy is associated with pregnancy complications. Maternal depression can also affect a mother's physical health, well-being, parenting behavior, and social functioning, and it can also lead to maladaptive social, emotional, and cognitive development in children. Indeed, it has been shown that children's associated conditions improve when their mother's depression improves.^{3,5,6,7} In California, the prevalence of depression among women of reproductive age (18-44) was 12.5% in 2008.⁸ Depression did not differ according to race/ethnicity; however, it was more common among low-income groups. Among women with incomes ≤ 100% of the FPL, 19.1% screened positive for depression, compared with 8.8% among women with incomes > 200% of the FPL ([Figure 1](#)).

Figure 1. Current Depression*

Percent (95% CI) of women ages 18 through 44, by income, 2008



*PHQ-8 score of 10 or more defined as current depression

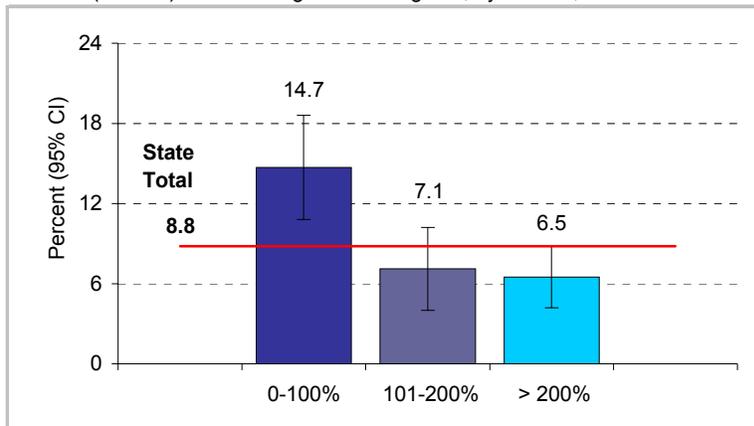
Data source: California Women's Health Survey (CWHS)

Notes: Income shown as a percent of the federal poverty level (FPL)

Like depression, intimate partner violence is often debilitating, both mentally and physically. Not only does IPV include physical abuse, it is characterized by a much larger pattern of efforts to exert power and control over an intimate partner, which often entail financial control, coercion, and threats.⁹ This climate undoubtedly inhibits contraceptive use and family planning and has a significant impact on sexual and reproductive health. Women who experience IPV are at greater risk of contracting sexually transmitted infections (STI) and having an unintended pregnancy.^{10,11,12} In California, among women of reproductive age, those reporting physical or psychological IPV in the past 12 months declined between 2001 and 2008 from 13.1% to 8.8%. Although the sample size was not large enough to detect statistically significant differences between racial/ethnic groups, in 2008 the prevalence of IPV was lower among White women (7.5%) than among Black and Hispanic women (nearly 11%). Any reported IPV was also more common among women with incomes ≤ 100% of the FPL (14.7%), compared with 6.5% among women with incomes > 200% of the FPL ([Figure 2](#)).

Figure 2. IPV* in Past Year

Percent (95% CI) of women ages 18 through 44, by income, 2008



*Includes any physical or psychological abuse

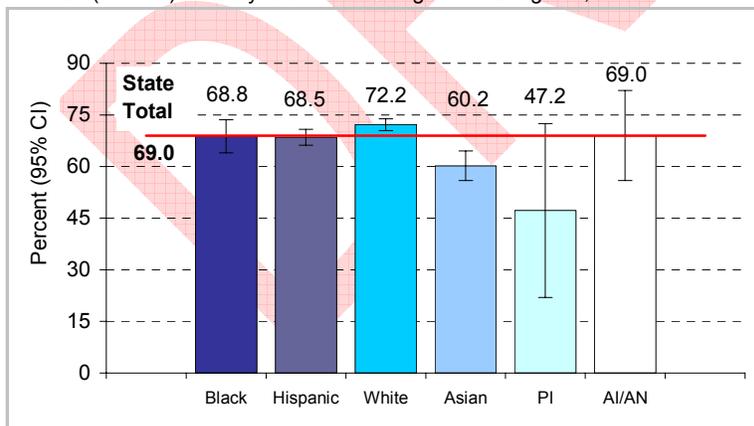
Data source: California Women's Health Survey (CWHS)

Notes: Income shown as a percent of the federal poverty level (FPL); IPV = intimate partner violence

In California in 2003, 69.0% of sexually active women ages 18-44 were using contraception to prevent pregnancy (Figure 3). Conversely, approximately one-third of women were at risk of becoming pregnant, many of whom engage in health risk behaviors that could affect a future pregnancy. For instance, in the U.S. in 2003, 55% of women at risk of getting pregnant consumed alcohol, a risk factor for fetal alcohol syndrome.¹³ It is recommended that family planning visits integrate preconception counseling, and that providers ask patients about their intent to become pregnant and offer counseling on contraceptive use.¹⁴ In California, contraceptive use varied by race/ethnicity. Rates were lower among Hispanic (68.5%) and Asian (60.2%) women, compared with White women (72.2%).

Figure 3. Contraceptive Use to Prevent Pregnancy

Percent (95% CI) sexually active women ages 18 through 44, 2003



Data source: California Health Interview Survey (CHIS)

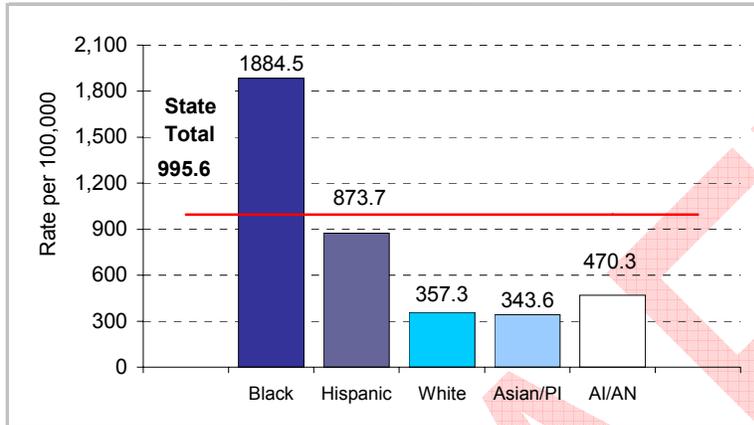
Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

Women who do not use barrier methods of contraception are at risk for sexually transmitted infections (STIs). STIs, such as Chlamydia and Gonorrhea, often go undiagnosed in women and can have long-term consequences, leading to pelvic inflammatory disease, ectopic pregnancy, and infertility.^{15,16} STIs among pregnant women are also associated with adverse

outcomes among infants.¹⁷ In 2009, the rate of Chlamydia among California women ages 20-44 was 995.6 per 100,000 population (Figure 4a). The rate of Gonorrhea was 94.9 (Figure 4b) and the rate of Syphilis was 0.9. The rate of Chlamydia was lowest among White (357.3) and Asian/PI (343.6) women and highest among Blacks (1884.5), Hispanics (873.7), and American Indian/Alaska Natives (AI/AN) (470.3). The same trends by race/ethnicity were observed for Gonorrhea. Because of small numbers, rates of syphilis by race/ethnicity are not shown. However, Black women did appear to have higher rates of syphilis than other groups.

Figure 4a. Chlamydia Infection

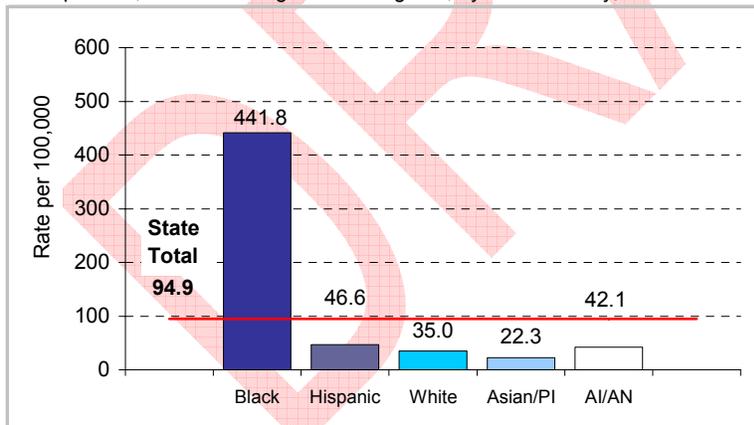
Rate per 100,000 females ages 20 through 44, by race/ethnicity, 2009



Data sources: STD Control Branch, California Department of Public Health <http://www.cdph.ca.gov/data/statistics/Pages/STDDDataTables.aspx> Accessed 6/3/10; State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000-2050*. Sacramento, California, July 2007

Figure 4b. Gonorrhea Infection

Rate per 100,000 females ages 20 through 44, by race/ethnicity, 2009



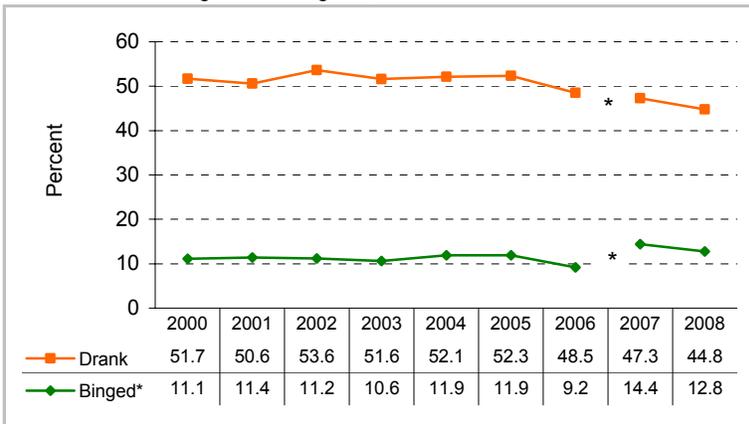
Data sources: STD Control Branch, California Department of Public Health <http://www.cdph.ca.gov/data/statistics/Pages/STDDDataTables.aspx> Accessed 6/3/10; State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000-2050*. Sacramento, California, July 2007

It is important that women limit consumption of alcohol and other substances in preparation for pregnancy, because they may not know they are pregnant until after a critical period of early fetal development, when defects or disabilities are at greatest risk of occurring.¹⁸ Because approximately half of all pregnancies in the U.S. and in California are unintended, many women do not change their behavior in preparation for pregnancy—therefore, it is important

that efforts increase awareness about the harmful effects of alcohol use among all women of reproductive age, regardless of pregnancy intent, in order to improve maternal and infant health, as well as to improve women’s health in general.¹⁹ In 2008, the percent of women ages 18-44 who reported drinking alcohol in the past month was 44.8%. Reported drinking has decreased, especially in recent years—the prevalence in 2008 was 16% lower than it was in 2002 (53.6%) (Figure 5a). White women were more likely to report drinking in the past month (61.1%) compared with Blacks (44.4%) and Hispanics (27.7%) (Figure 5b). Whereas low-income women often report more risk behaviors and poorer health outcomes than women with higher incomes, alcohol use was least common among low-income women (25.4% among ≤ 100% FPL vs. 60.4% among >200% FPL) (Figure 5c).

Figure 5a. Any and Binge Drinking* in Past Month

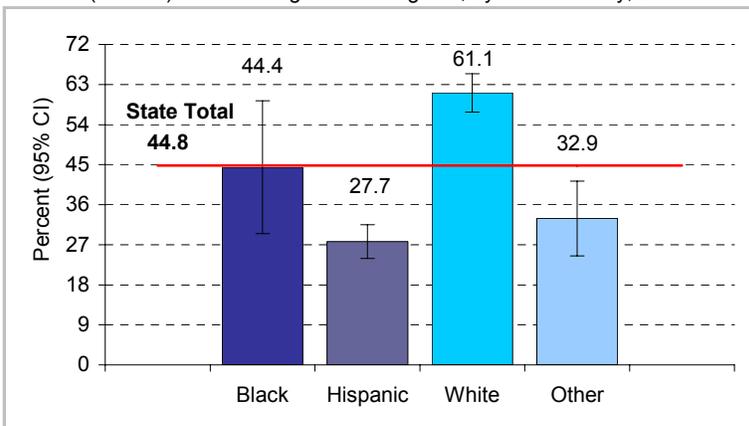
Percent of women ages 18 through 44, 2000-2008



*Defined as 5 or more drinks on one occasion through 2006, 4 or more in 2007-2008
Data source: California Women’s Health Survey (CWHS)

Figure 5b. Drank Alcohol in Past Month

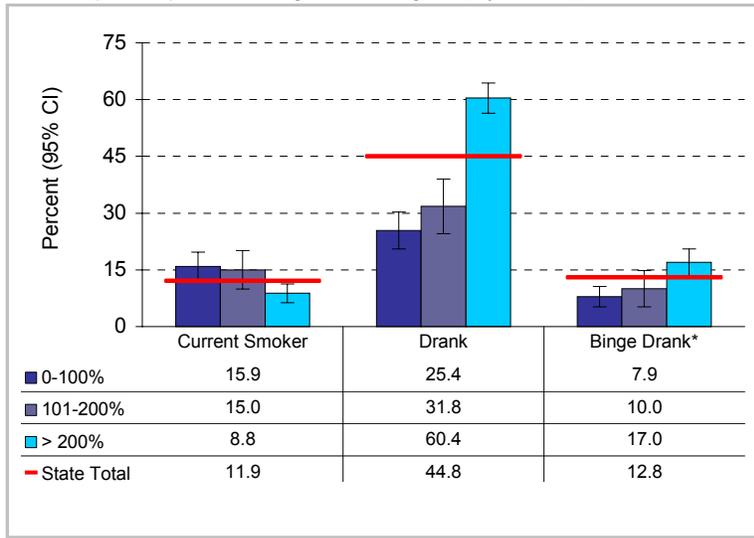
Percent (95% CI) of women ages 18 through 44, by race/ethnicity, 2008



Data source: California Women’s Health Survey (CWHS)

Figure 5c. Smoking and Alcohol Use in Past Month

Percent (95% CI) of women ages 18 through 44, by income, 2008



*Defined as 4 or more drinks

Data source: California Women's Health Survey (CWHS)

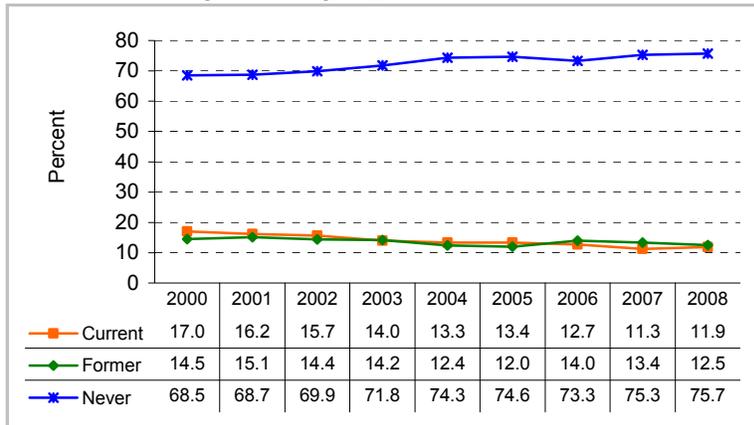
Notes: Income shown as a percent of the federal poverty level (FPL)

Excessive consumption of alcohol and binge drinking are of particular concern. The prevalence of binge drinking, defined as having 4 or more drinks on one occasion, among women ages 18-44 was 12.8% in 2008 (Figure 5a). The sample size was not large enough to examine all racial/ethnic groups. However, White women were more likely to report binge drinking than Hispanic women (16.1% vs. 9.9%), as were women with incomes > 200% of the FPL (17.0%), compared with incomes ≤ 100% of the FPL (7.9%) (Figure 5c).

Exposure to cigarette smoke is a preventable cause of disease among women of reproductive age and a preventable cause of adverse pregnancy outcomes. Smoking during pregnancy increases the likelihood of preterm birth, low birth weight, stillbirth, SIDS, and infant mortality.²⁰ The percent of reproductive aged women who reported they currently smoke steadily decreased from 17.0% in 2000 to 11.3% in 2007, but increased slightly in 2008 (11.9%) (Figure 5d). The sample size was not large enough to examine all racial/ethnic groups. However, similar to drinking, White women were more likely to smoke—in 2008, 17.3% reported they currently smoked, compared with 6.5% of Hispanic women. Women with incomes > 200% of the FPL were the least likely to report smoking (8.8%), while the most likely were women with incomes ≤ 100% of the FPL (15.9%) (Figure 5c).

Figure 5d. Smoking Status

Percent of women ages 18 through 44, 2000-2008

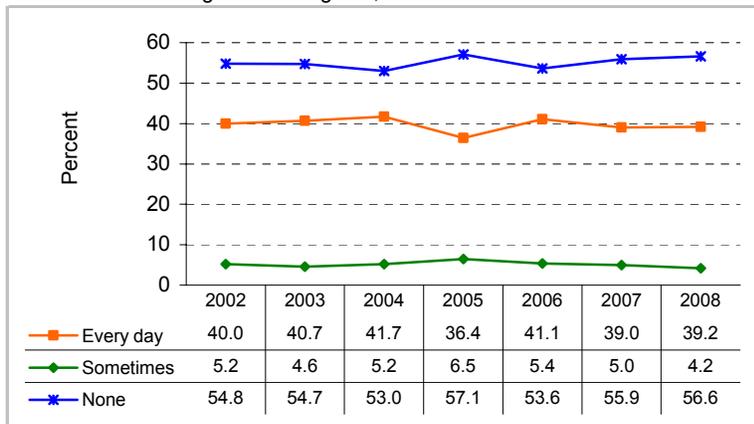


Data source: California Women's Health Survey (CWHS)

Similar to avoiding tobacco and alcohol, it is recommended that women take folic acid before conception.²¹ Neural tube defects (NTDs) (e.g. spina bifida, anencephaly) affect 1 in every 1,480 pregnancies in California, and consuming 400 µg of folic acid daily prior to conception has been found to reduce the risk of NTDs by as much as 80%.^{22,23} The HP 2010 objective is to increase the proportion of women ages 15-44 who take folic acid daily to 80%. In California, the prevalence of daily folic acid use among women ages 18-44 was 40.0% in 2000, and showed little change through 2008 (39.2%) (Figure 6a). Daily use was most common among White women (46.4%) and Asian/other races/ethnicities (44.1%), compared with Blacks (24.4%) and Hispanics (31.1%) (Figure 6b). Daily intake increased as income increased (28.6% among ≤100%, 36.3% among 101-200%, and 47.7% among > 200% of the FPL) (Figure 6c).

Figure 6a. Current Folic Acid Use

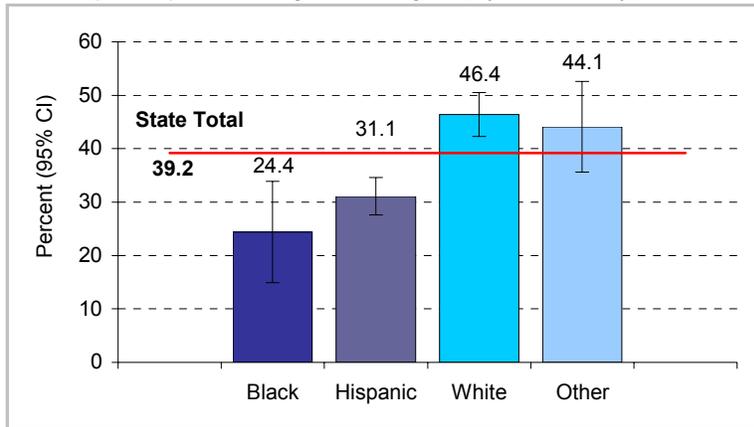
Percent of women ages 18 through 44, 2002-2008



Data source: California Women's Health Survey (CWHS)

Figure 6b. Daily Folic Acid Use

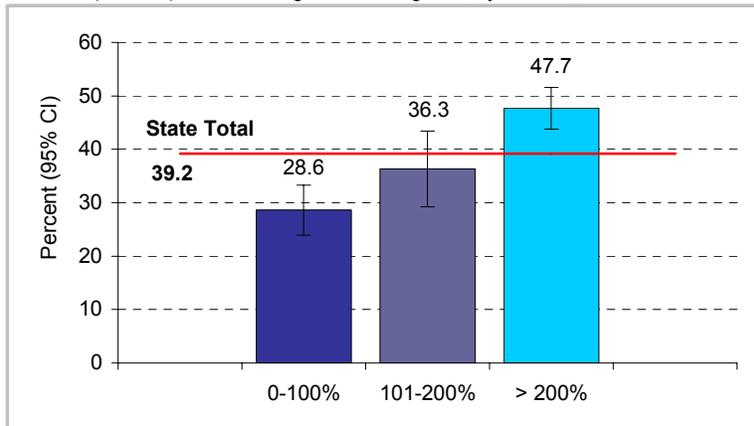
Percent (95% CI) of women ages 18 through 44, by race/ethnicity, 2008



Data source: California Women's Health Survey (CWHS)

Figure 6c. Daily Folic Acid Use

Percent (95% CI) of women ages 18 through 44, by income, 2008



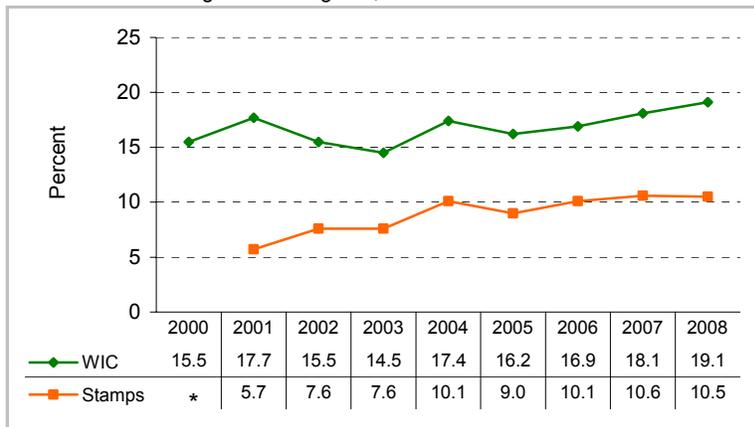
Data source: California Women's Health Survey (CWHS)

Notes: Income shown as a percent of the federal poverty level (FPL)

Given that nearly half of women of reproductive age in California fall at or under 200% of the FPL, many women may not have access to affordable healthy foods. Since foods high in added sugars and fats are cheaper, women with low incomes may be less likely to follow recommendations to achieve an optimal weight and adopt a healthy diet before becoming pregnant. Depending on income, family, and household characteristics, some women of reproductive age qualify for assistance programs, such as food stamps or the Women, Infants and Children (WIC) Supplemental Food Program. Both programs have seen a substantial increase in participants over the last decade. In 2008, 10.5% of women ages 18-44 were on food stamps during the past year, which was nearly double the prevalence in 2001 (5.7%) (Figure 7). The prevalence of women who reported they were on WIC in the past 12 months also increased, from 15.5% in 2000 to 19.1% in 2008. Food stamps were most common among Black (28.9%) and Hispanic (16.1%) women, compared with White women (5.4%). Additionally, WIC was most common among Hispanic women—41% reported they were on WIC in the past year, compared with 16.7% of Blacks, 6.0% of Whites, and 7.6% of other races/ethnicities.

Figure 7. WIC and Food Stamps in Past Year

Percent of women ages 18 through 44, 2000-2008



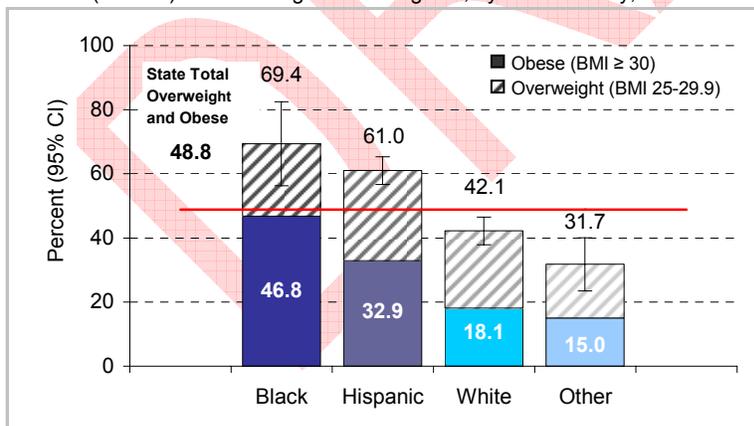
*Data not available

Data source: California Women's Health Survey (CWHS)

Women who are overweight or obese before conception have an increased likelihood of multiple pregnancy and delivery complications, including gestational diabetes, pregnancy-induced hypertension, fetal macrosomia, cesarean delivery, and delivering a low birth weight infant, which pose severe health risks to both pregnant women and their infants.²⁴ In 2008, 24.2% of women ages 18-44 were overweight. Another 24.6% were obese, which was a 22% increase from the prevalence in 2005 (20.1%). Black and Hispanic women were more likely to have a Body Mass Index (BMI) above normal (69.4% and 61.0%, respectively), compared with White women (42.1%) and other races/ethnicities (31.7%). Furthermore, nearly half of all Black women were not just overweight, but obese. In comparison, non-Black women with a BMI above the normal range were more likely to be overweight than obese ([Figure 8](#)). Overweight and obesity were also more common among women with lower incomes.

Figure 8. Overweight and Obesity

Percent (95% CI) of women ages 18 through 44, by race/ethnicity, 2008



Data source: California Women's Health Survey (CWHS)

Notes: BMI = Body Mass Index

Pregnant and Postpartum Women and Infants

The roots of pregnancy outcomes for mothers and infants can be found in the earlier life stages of women and in their overall health status prior to pregnancy. Unfortunately, too many women in California enter pregnancy in poor health. For all women, pregnancy presents opportunities for positive change, but for some, pregnancy can also be a period of vulnerability. Health conditions arising from individual, social, environmental and other factors during pregnancy can have powerful impacts not only on short term outcomes for the mother, but on her health during subsequent pregnancies and her overall life course health trajectory.

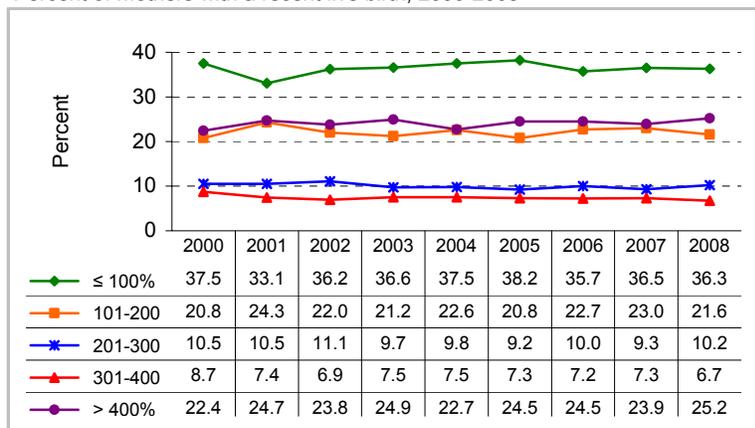
For the infant, in utero experiences relate not only to birth outcomes, but set the stage for life long health status, impacting child development, chronic disease status in adulthood, and reproductive outcomes for females. Optimization of this critical developmental stage through support for healthy pregnancies can help to ensure that infants get a healthy start to life. Conversely, lost opportunities may contribute to poor birth outcomes for infants, such as low birth weight and preterm birth, which lead to great burdens on families, communities, and society.

Maternal health: pregnancy

In 2008, over half (57.9%) of women with a live birth in California had incomes \leq 200% of the FPL ([Figure 9a](#)). Poverty differed widely according to race/ethnicity: 72.7% of Black women and 81.9% of Hispanic women with a recent live birth had incomes \leq 200% of the FPL, compared with 31.6% of White and 28.7% of Asian/Pacific Islander (PI) women ([Figure 9b](#)). Despite the current recession and increases in unemployment, the number of recent mothers with incomes \leq 200% of the FPL in 2008 was similar to the prevalence in 2000 (58.3%); although, the affects of the current economic situation may not yet be seen in the data.

Figure 9a. Income as a Percent of the FPL

Percent of mothers with a recent live birth, 2000-2008

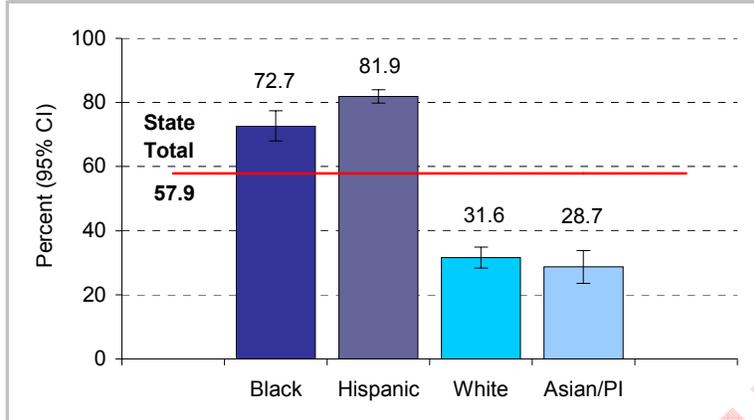


Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: FPL = federal poverty level

Figure 9b. Income \leq 200% of the federal poverty level

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: PI = Pacific Islander

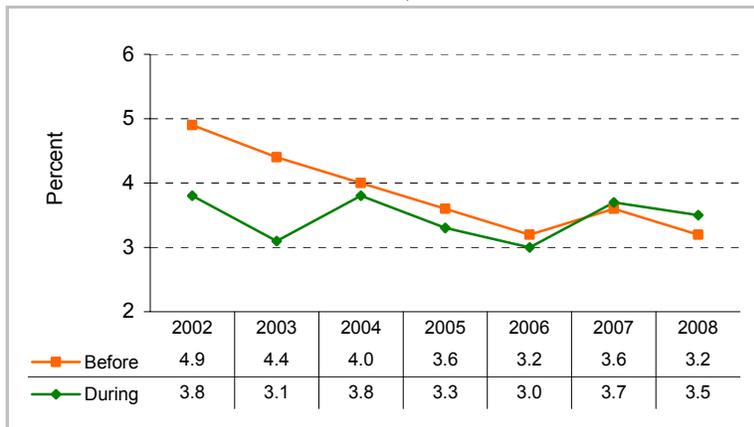
Still, the extent to which poverty and other hardships affect recent mothers paints a disturbing picture of the pregnancy experiences of many women in California. During the years 2002-2006, 43% of all California women with a live birth experienced at least one of 11 measured hardships during pregnancy, including inability to pay bills, job loss or partner's job loss, food insecurity, and lack of emotional support. Lower-income groups reported more hardships; however, even among women with incomes $>$ 400% of the FPL, 13% experienced at least one hardship during pregnancy. Common hardships were not being able to pay bills (26% among \leq 200% FPL), job loss (14% among \leq 100% FPL and 11% among 101-200% FPL), partner job loss (16% among \leq 100% FPL and 11% among 101-200% FPL), and homelessness (7% among \leq 100% FPL and 3% among 101-200% FPL).²⁵

In addition to economic hardship, many women suffer from lack of emotional support and stressful, even dangerous, relationships with their partners. During the years 2002-2006, many women, particularly low-income women reported that during pregnancy they had no one to turn to for comfort (15% among \leq 100% FPL and 9% among 101-200% FPL). In these income brackets, respectively, 22% and 16% of women reported having no practical support, like having someone to turn to for a ride or help with shopping or cooking a meal. Furthermore, 13% and 7% of women in these respective groups reported separation or divorce during pregnancy.²⁵

Unfortunately, some women also experience abuse by their partner during pregnancy, which is associated with delayed entry into prenatal care, miscarriage, and various pregnancy complications, as well as harm to the fetus from physical abuse and mental stress and depression of the mother.^{10, 11, 12} In California, physical IPV in the 12 months before pregnancy declined from 4.9% in 2002 to 3.2% in 2008. The prevalence of physical IPV during pregnancy did not follow the same downward trend; it remained relatively unchanged from 2002 (3.8%) through 2008 (3.5%) (Figure 10a). Reported psychological abuse (alone) was more common than any physical abuse (6.3% vs. 3.5%, respectively, in 2008). Black and Hispanic women reported IPV during pregnancy (physical or psychological) more frequently (16.9% and 12.5%, respectively) than did White and Asian/PI women (5.3% and 7.6%, respectively) (Figure 10b). IPV was also more common among women with lower incomes (16.3% among \leq 100% FPL vs. 2.5% among $>$ 400% FPL) (Figure 10c).

Figure 10a. Physical IPV Before and During Pregnancy

Percent of mothers with a recent live birth, 2002-2008

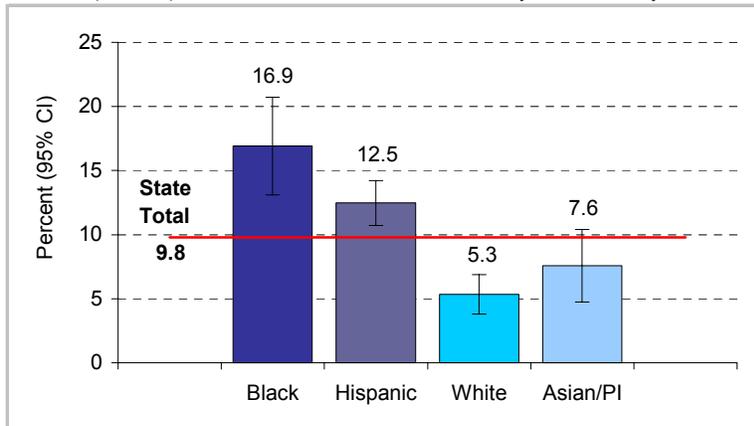


Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: IPV = intimate partner violence

Figure 10b. IPV* During Pregnancy

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



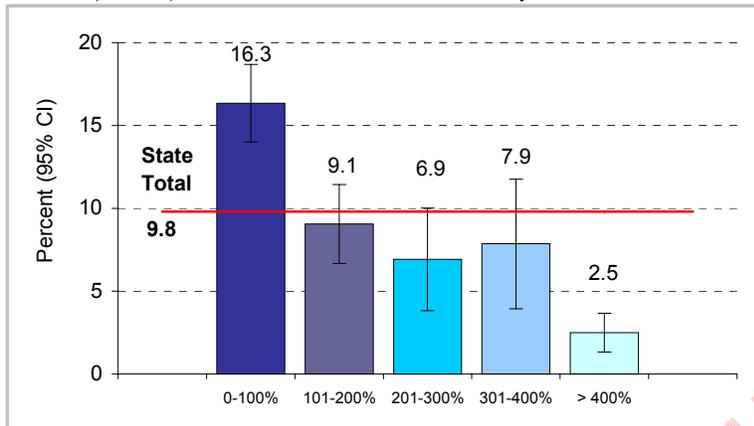
*Includes any physical or psychological abuse

Data source: Maternal and Infant Health Assessment Survey (MIHA)

Note: IPV = intimate partner violence; PI = Pacific Islander

Figure 10c. IPV* During Pregnancy

Percent (95% CI) of mothers with a recent live birth, by income, 2008



*Includes any physical or psychological abuse

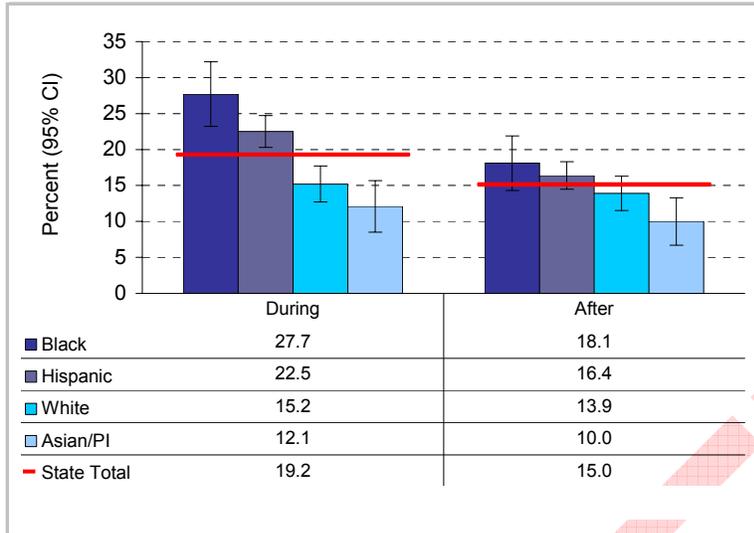
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: Income shown as a percent of the federal poverty level (FPL); IPV = intimate partner violence

As the previous section indicated, about 12% of women of reproductive age suffer from current depression. Women who suffer from depression before pregnancy are more likely to have depression during and after pregnancy, which is of concern in terms of maternal well-being and also associated with maternal health risk behaviors, such as poor nutrition and substance use, and problems for children.^{3,5,6,7} In 2008 in California, recent mothers were asked about two of the nine DSM-IV symptoms used in diagnosing major depressive disorder—a depressed mood and markedly less interest or pleasure in nearly all activities. Overall, 19.2% reported they had both symptoms most of the day, for two weeks or longer, during their pregnancy. The percent of women reporting depression dropped in the post-partum period (15.0%). Depression during pregnancy was most common among Blacks and Hispanics (27.7% and 22.5%, respectively), compared with White and Asian/PI women (15.2% and 12.1%, respectively) (Figure 11a). Although postpartum depression followed a similar pattern within racial/ethnic groups as depression during pregnancy, differences by race/ethnicity were not statistically significant. Reported depression during and after pregnancy decreased as income increased (Figure 11b).

Figure 11a. Depression* During and After Pregnancy

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



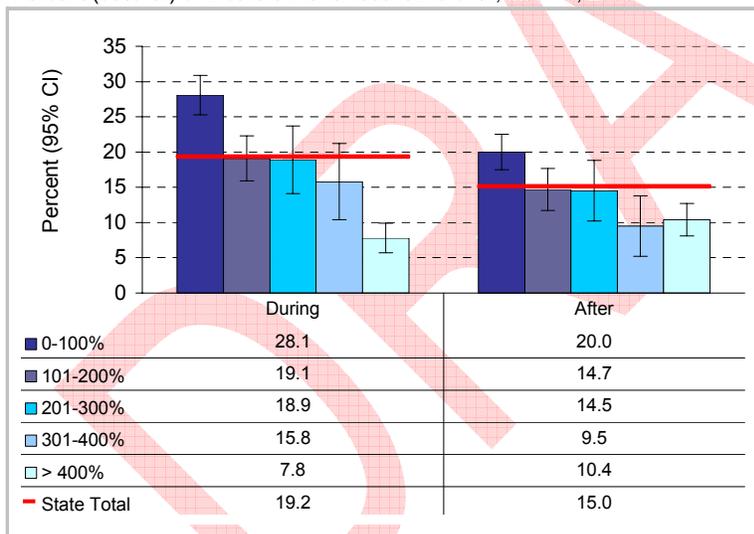
*Depressed and lost interest in things usually enjoyed, 2 weeks or longer

Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: PI = Pacific Islander

Figure 11b. Depression* During and After Pregnancy

Percent (95% CI) of mothers with a recent live birth, income, 2008



*Depressed and lost interest in things usually enjoyed, 2 weeks or longer

Data source: Maternal and Infant Health Assessment Survey (MIHA)

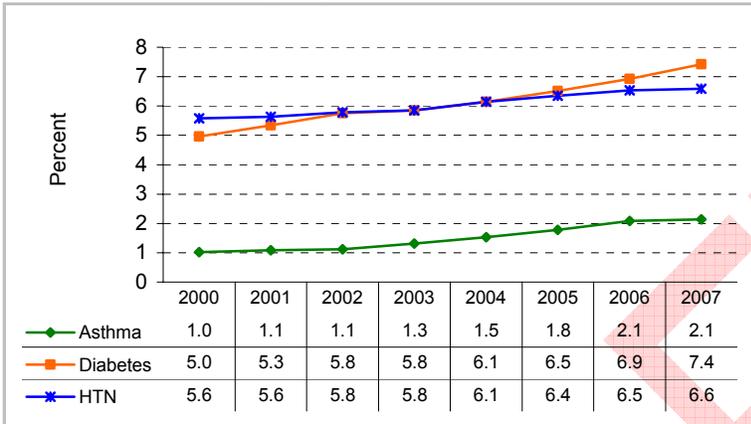
Notes: Income shown as a percent of the federal poverty level (FPL)

The cumulative affects of economic and social hardships and mental health problems on physical well-being include chronic health conditions. Among women giving birth in California, the prevalence of conditions like diabetes, hypertension, and asthma at the time of labor and delivery has steadily increased over the past decade. In 2000, 5.6% of women had an ICD9-CM code for hypertension at the time of labor and delivery. Since then, the number of women with hypertension has steadily increased to 6.6% in 2007. Gestational or pre-existing diabetes at delivery has also increased, from 5.0% in 2000 to 7.4% in 2007. Additionally, in 2000, 1.0% of women had a diagnosis code for asthma at the time of labor and delivery. Since then,

asthma has also steadily increased to 2.1% in 2007 (Figure 12a). Asthma and hypertension were more common among Black (5.3% and 11.2%, respectively) and White (2.9% and 7.0%) women, compared with Hispanic (1.5% and 6.2%, respectively) and Asian/PI women (1.4% and 5.1%, respectively). In contrast, diabetes was more common among Hispanic (8.0%) and Asian/PI (10.8%) women, compared with Black (5.3%) and White (5.6%) women (Figure 12b).

Figure 12a. Chronic Health Conditions at Delivery

Percent of labor and delivery hospitalizations, 2000-2007

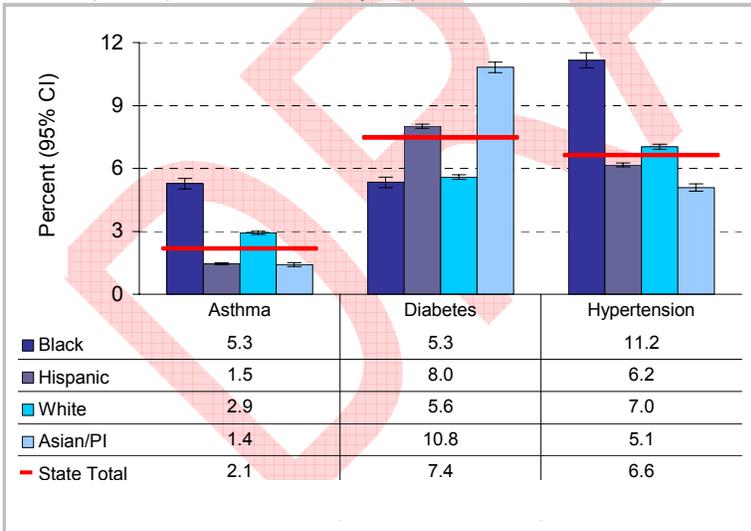


Data source: Office of Statewide Health Planning and Development (OSHPD) Patient Discharge Data

Notes: HTN stands for hypertension; ICD9-CM codes 493 (asthma); 250, 775.1, 648.0, 648.8 (diabetes); 401.0, 401.1, 401.9, 402–405, 437.2, 642 (hypertension)

Figure 12b. Chronic Health Conditions at Delivery

Percent (95% CI) of labor and delivery hospitalizations, 2007



Data source: Office of Statewide Health Planning and Development (OSHPD) Patient Discharge Data

Notes: ICD9-CM codes 493 (asthma); 250, 775.1, 648.0, 648.8 (diabetes); 401.0, 401.1, 401.9, 402–405, 437.2, 642 (hypertension)

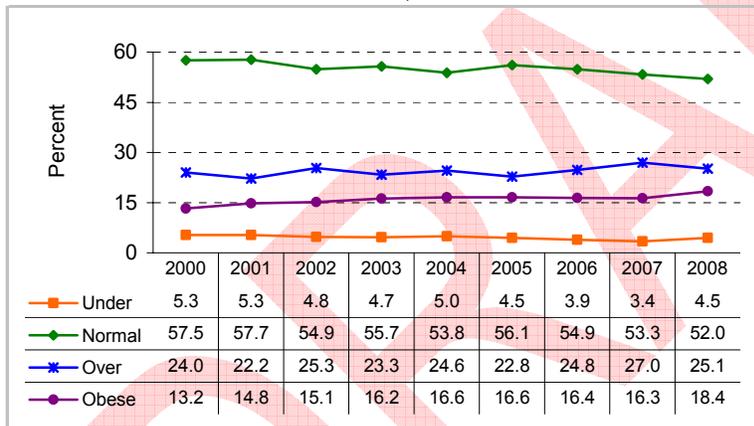
Poor oral health and oral infections during pregnancy increase risk of adverse birth outcomes, including low birth weight and preterm birth.²⁶ Moreover, infections, such as dental caries, are transmissible from mother to infant after birth.²⁷ In California during the period 2002-2007, two thirds of all women with a live birth reported receiving no dental care during pregnancy, and

62% of women who reported dental problems during pregnancy did not receive care. Visiting the dentist varied by maternal characteristics, overall and among women with a dental problem. Even though women who are typically considered disadvantaged (e.g. less educated, on Medi-Cal, low-income, unmarried, non-English-speaking) were the least likely to receive dental care, over 40% of women in the highest income category also reported lack of dental care during pregnancy.²⁸

Obesity is a major contributor to increases in chronic health conditions, and California has seen a rise in pre-pregnancy obesity. In 2000, 24.0% of women were overweight and 13.2% were obese, prior to pregnancy. In 2008, the prevalence of overweight remained about the same (25.1%), but the prevalence of obesity rose to 18.4% (Figure 13a). Blacks (55.7%) and Hispanics (53.0%) had the highest prevalence of pre-pregnancy overweight and obesity, followed by Whites (37.9%) and Asian/PIs (19.8%). Furthermore, a greater proportion of Blacks and Hispanics who had a BMI above the normal range were obese, whereas most White and Asian/PI women with a BMI above normal were overweight (Figure 13b). Overweight and obesity were also more common among women with the lowest incomes, compared to women with the highest incomes (50.4% among ≤ 100% FPL vs. 31.2% among > 400% FPL).

Figure 13a. Pre-Pregnancy Weight*

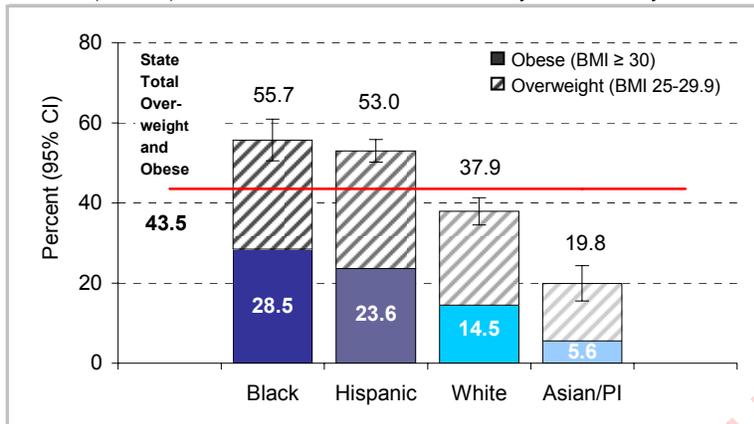
Percent of mothers with a recent live birth, 2000-2008



*Body Mass Index <18.5=underweight; 18.5-24.9=normal; 25-29.9=over; ≥30=obese
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Figure 13b. Pre-Pregnancy Overweight and Obesity

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008

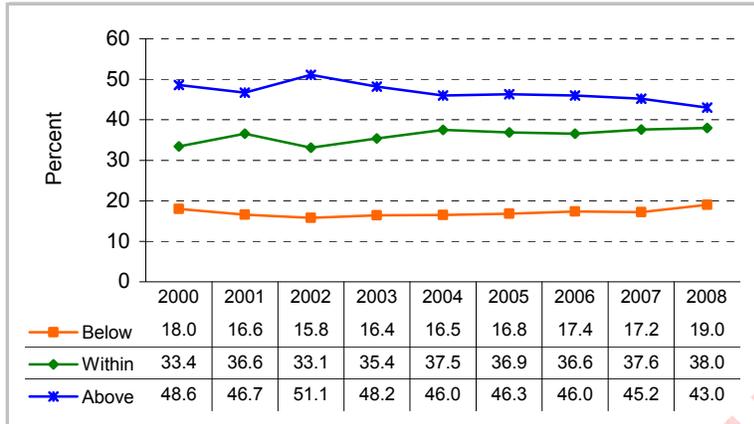


Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: BMI = Body Mass Index; PI = Pacific Islander

It is important to enter pregnancy at a healthy weight because women who enter pregnancy above the normal BMI are more likely to gain excessive weight during pregnancy, which is associated with cesarean delivery, large-for-gestational-age (a marker of neonatal morbidity), childhood obesity later in life, and postpartum weight retention. It is recommended that women return to a healthy weight after pregnancy because overweight and obesity can contribute to subsequent chronic health problems among mothers, as well as pregnancy complications and adverse birth outcomes in subsequent pregnancies.²⁹ Although the percent of women who gain within the Institute of Medicine (IOM) recommended ranges during pregnancy has increased in recent years, from 33.4% in 2000 to 38.0% in 2008, nearly half (43.0%) of all women gained weight above the recommended range for pregnant women (Figure 14a). Black (52.3%) and White (51.6%) women had the highest prevalence of excessive gain. In comparison, only 38.2% of Hispanics gained above the recommended range during pregnancy, despite the fact that Hispanic women had a prevalence of pre-pregnancy overweight/obesity that was higher than other groups. Furthermore, Hispanic women were more likely to gain below the recommended ranges (23.3%), compared with Black (15.6%) and White (13.2%) women (Figure 14b). Women with incomes ≤ 100% of the FPL were also more likely to report inadequate weight gain during pregnancy (23.9%, which was above the state average of 19.0%) (Figure 14c).

Figure 14a. Weight Gain* During Pregnancy

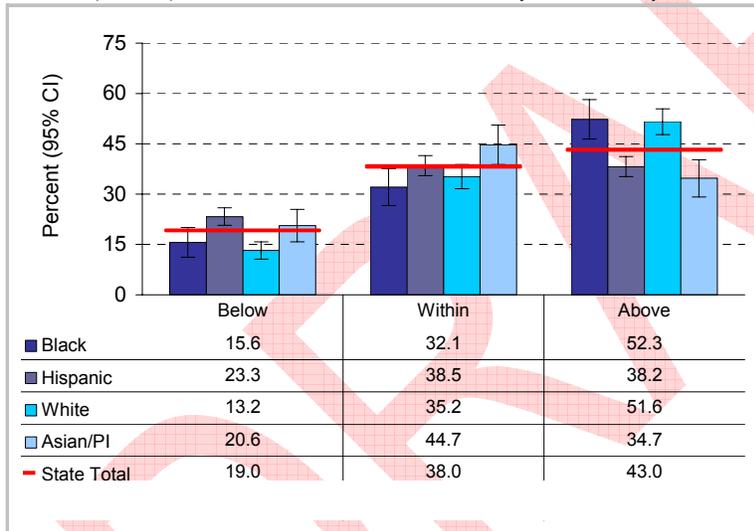
Percent of mothers with a recent live birth, 1999-2008



*Gain below, within, or above ranges recommended by the Institute of Medicine (IOM)
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Figure 14b. Weight Gain* During Pregnancy

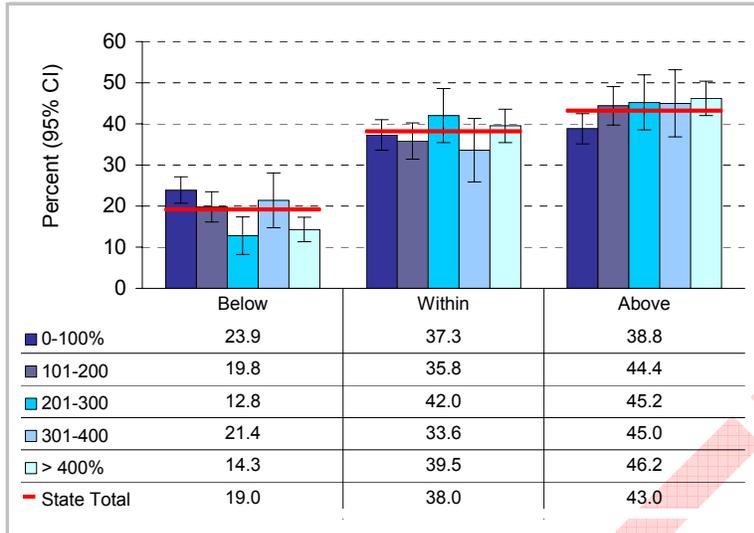
Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



*Gain below, within, or above ranges recommended by the Institute of Medicine (IOM)
Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: PI = Pacific Islander

Figure 14c. Weight Gain* During Pregnancy

Percent (95% CI) of mothers with a recent live birth, by income, 2008



*Gain below, within, or above ranges recommended by the Institute of Medicine (IOM)

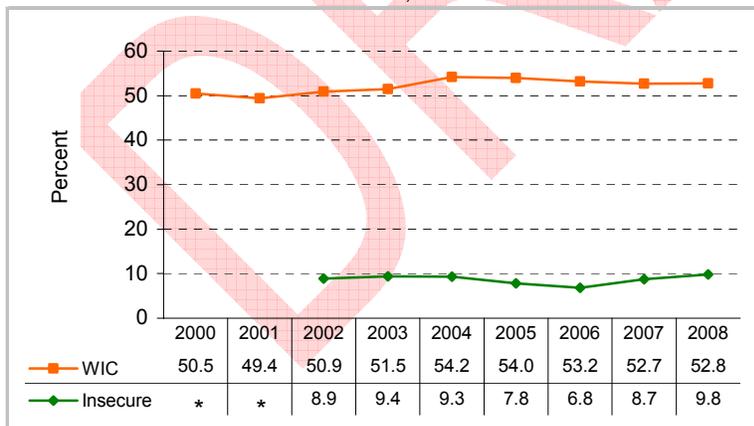
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: Income shown as a percent of the federal poverty level (FPL)

Over half of all women with a live birth in California fall at or under 200% of the FPL, making many women eligible for WIC and/or food stamps during pregnancy. It is therefore not surprising that in 2008, 52.8% of women reported that they were on WIC during pregnancy, an increase from 50.5% in 2000 (Figure 15a). Overall, 9.7% of women reported food insecurity. In 2008, 14.4% of women were on food stamps. Black and Hispanic women were more likely to be on WIC, receive food stamps, and report food insecurity than White and Asian/PI women (Figure 15b).

Figure 15a. WIC and Food Insecurity During Pregnancy

Percent of mothers with a recent live birth, 2000-2008



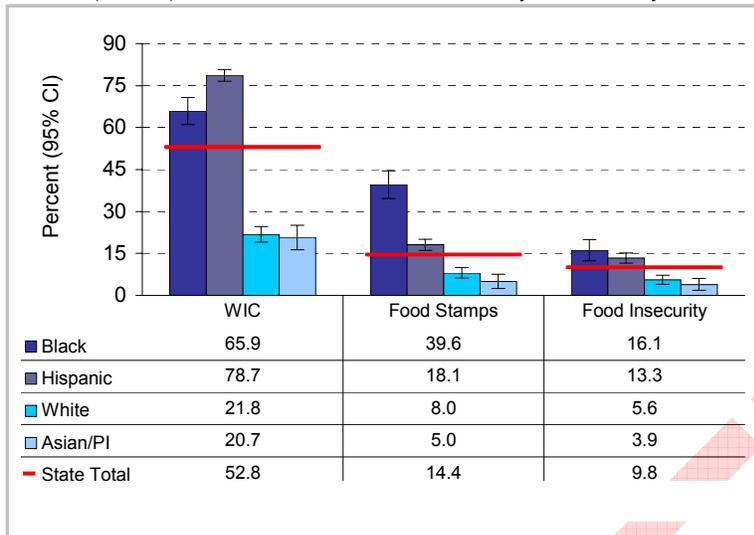
*Data not available

Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: Food insecurity measured using a 6-item scale developed by the U.S. Department of Agriculture (USDA), where scores 3-6 represent food insecurity

Figure 15b. WIC and Food Insecurity During Pregnancy

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: Food insecurity measured using a 6-item scale developed by the U.S. Department of Agriculture (USDA), where scores 3-6 represent food insecurity;

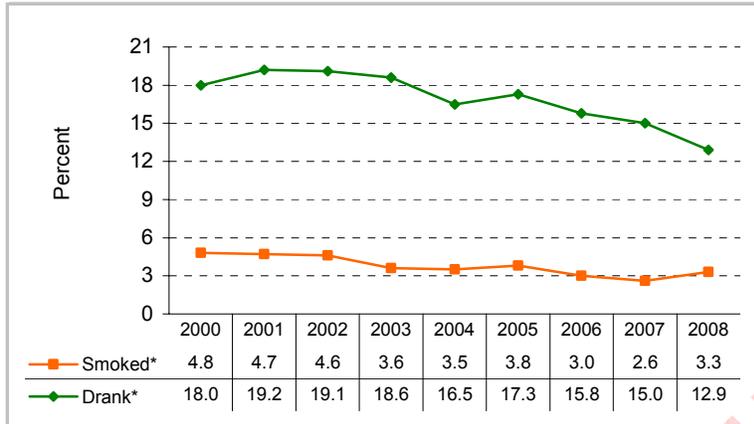
PI = Pacific Islander

The paragraphs above have described physical and mental health outcomes among California women during pregnancy and surrounding social and economic contexts that contribute to poor prenatal health. Although many women enter pregnancy in less than optimal health, pregnancy also presents opportunities to practice more healthy behaviors that lead to improved maternal and infant outcomes. However, some women engage in risk behaviors shortly before and during pregnancy. Prenatal exposure to alcohol is one of the leading preventable causes of birth defects and developmental disabilities in the U.S.³⁰ Therefore, the U.S. Surgeon General recommends abstinence from alcohol among women who are pregnant or are planning to become pregnant and states there is no known amount or timing of alcohol that is considered safe to consume during pregnancy.

In 2008, the percent of women who reported drinking alcohol in the first or third trimester was 12.9%, a 33% decrease from the high of 19.2% in 2001 ([Figure 16a](#)). Almost 25% of White women reported drinking during pregnancy in 2008. Blacks and Hispanics were less likely to report drinking (16.8% and 7.3%, respectively) ([Figure 16b](#)). Alcohol consumption during the 1st or 3rd trimester increased as reported income increased— women with incomes > 400% of the FPL were the most likely to report drinking (21.1%), compared with 8.6% among women with incomes ≤ 100% of the FPL ([Figure 16c](#)).

Figure 16a. Smoking and Drinking During Pregnancy

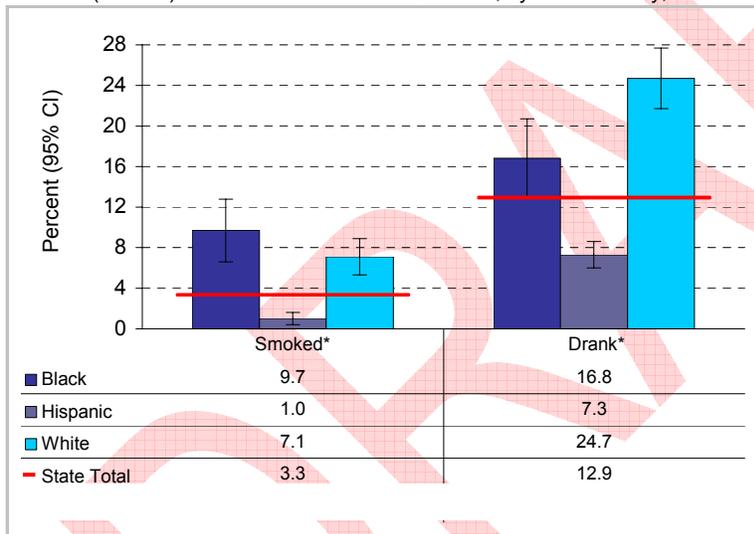
Percent of mothers with a recent live birth, 2000-2008



*Smoked during the 3rd trimester; drank during the 1st or 3rd trimester
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Figure 16b. Smoking and Drinking During Pregnancy

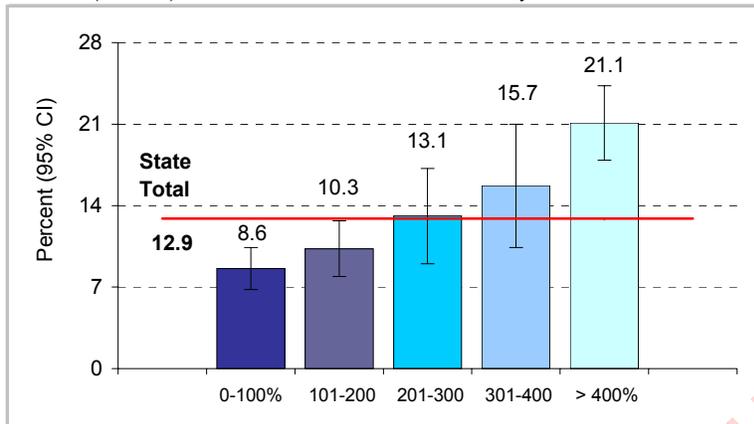
Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



*Smoked during the 3rd trimester; drank during the 1st or 3rd trimester
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Figure 16c. Drinking* During Pregnancy

Percent (95% CI) of mothers with a recent live birth, by income, 2008



*Drank during the 1st or 3rd trimester

Data source: Maternal and Infant Health Assessment Survey (MIHA)

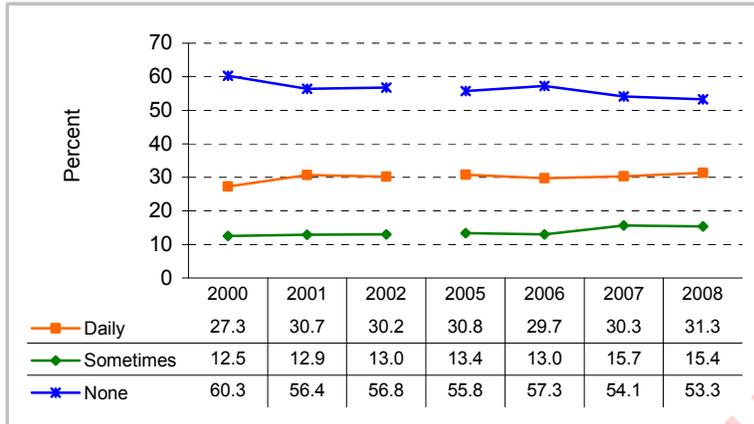
Notes: Income shown as a percent of the federal poverty level (FPL)

The effects of smoking during pregnancy are well documented and were described above. The HP 2010 objective is to reduce the prevalence of prenatal smoking to 1%. In the Pregnancy Risk Assessment Monitoring System (PRAMS) in 2007 the site-specific prevalence of smoking during the third trimester ranged from 4.7% (New York City) to 30.0% (West Virginia). In comparison, in 2008 in California, the percent of women who reported smoking cigarettes in the 3rd trimester was 3.3%, up slightly from 2.6% in 2007. Before this year's increase, the percent of women who reported smoking in their last trimester had decreased from 4.8% in 2000 to 2.6% in 2007 ([Figure 16a](#)). In 2008, the prevalence of smoking during the 3rd trimester was higher among Black (9.7%) and White (7.1%) women, compared with Hispanic women (1.0%) ([Figure 16b](#)). Smoking was also more common among women with incomes ≤ 100% of the FPL (5.6%) compared with women with incomes > 100% of the FPL (2.5%).

Even among high risk populations, daily folic acid consumption prior to conception may successfully decrease NTD-affected pregnancies.³¹ Less than one third of women delivering a live birth in California reported daily intake of supplements containing folic acid prior to pregnancy between 2000 (27.3%) and 2008 (31.3%) ([Figure 17a](#)). Nearly half (47.5%) of White women reported daily use compared with only 38.2% of Asian/PI, 23.4% of Black, and 20.3% of Hispanic women ([Figure 17b](#)). The prevalence of daily use increased as income increased ([Figure 17c](#)).

Figure 17a. Folic Acid Use Just Before Pregnancy

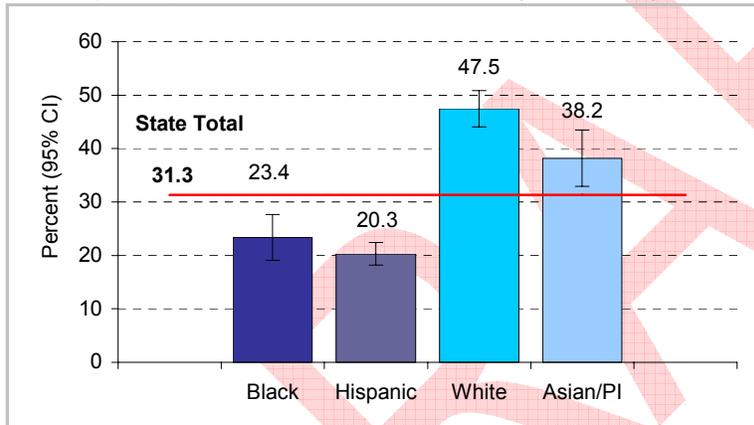
Percent of mothers with a recent live birth, 2000-2002, 2005-2008



Data source: Maternal and Infant Health Assessment Survey (MIHA)

Figure 17b. Daily Folic Acid Use Just Before Pregnancy

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008

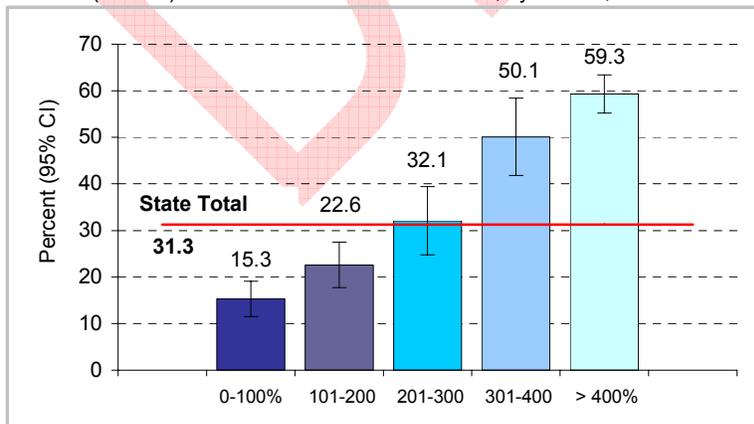


Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: PI = Pacific Islander

Figure 17c. Daily Folic Acid Use Just Before Pregnancy

Percent (95% CI) of mothers with a recent live birth, by income, 2008



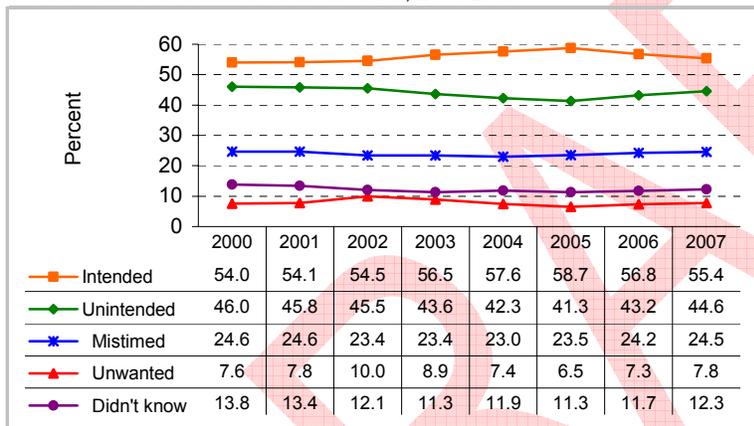
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: Income shown as a percent of the federal poverty level (FPL)

Because risk behaviors affect fetal development during the early weeks of pregnancy, often before a woman knows she is pregnant, pregnancy planning is important. Women who plan their pregnancies are more likely to take folic acid and to abstain from using tobacco and alcohol during pregnancy.³² For these reasons, efforts aimed at promoting healthy preconception and prenatal behaviors have encouraged women to establish a reproductive life plan, which is a set of goals about when and whether to have children and how this fits into one's life course.^{21,33} In California, there is a continued need for these efforts, as nearly half of all women with a live birth in 2007 reported their pregnancy was unintended (44.6%), which has changed little since 2000 (46.0%) (Figure 18a). Unintended pregnancy was more common among Black and Hispanic women (64.8% and 49.4%, respectively) than among White and Asian/PI women (37.1% and 33.0%, respectively) (Figure 18b). The prevalence of unintended pregnancy also differed widely by income level. It was most common among women with incomes \leq 100% of the FPL (59.4%), and the prevalence decreased as income increased.

Figure 18a. Pregnancy Intent*

Percent of mothers with a recent live birth, 2000-2007

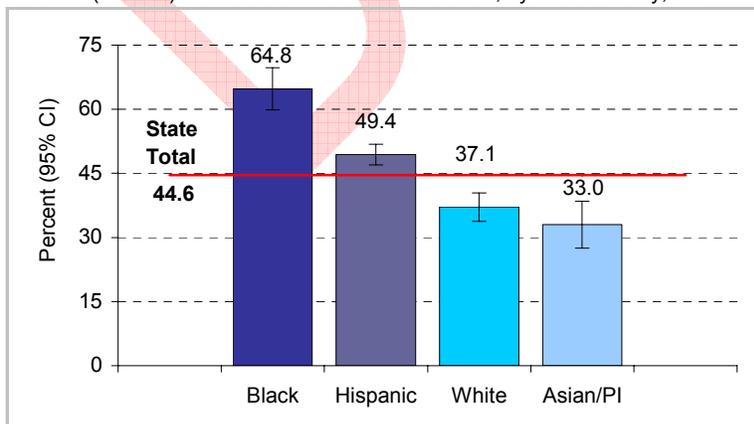


*Intended pregnancies were defined as wanted at that time; unintended pregnancies were defined as 1) mistimed (wanted but later), 2) unwanted (at that time or in the future), or 3) the woman did not know what she wanted

Data source: Maternal and Infant Health Assessment Survey (MIHA)

Figure 18b. Unintended Pregnancy

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2007



Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: PI = Pacific Islander

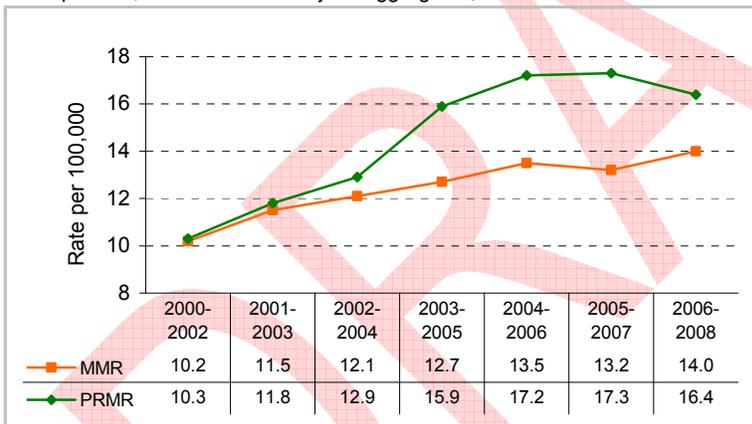
Maternal Health: Morbidity and Mortality

Maternal mortality, defined as deaths within 42 days postpartum, is an indicator of the overall health status of communities and countries. Although relatively rare in the U.S., maternal mortality is thought to be the “tip of the iceberg,” meaning that for every woman who dies from complications relating to childbirth, many more women suffer from severe and debilitating morbidity. Indeed, rising rates of maternal mortality in California reflect rising rates of chronic health conditions, such as hypertension and diabetes, which were described above, as well as complications at the time of labor, such as blood clotting problems and bleeding during delivery.

The HP 2010 objective is to reduce the number of maternal deaths to 4.3 per 100,000 live births. In California, the maternal mortality rate continues to rise, from 10.2 deaths per 100,000 live births during the years 2000-2002 to 14.0 during the years 2006-2008. The pregnancy-related mortality rate, defined as the number of obstetric-related deaths within one year postpartum per live births,³⁴ also rose from 10.3 to 16.4 during the same time period (Figure 19a). Black women have the highest maternal mortality rate (Figure 19b). In 2008, the maternal mortality rate for Blacks was 30.6, compared with White women who had the lowest rate of 10.9.

Figure 19a. Maternal and Pregnancy-Related Mortality

Rate per 100,000 live births in 3 year aggregates, 2000-2008



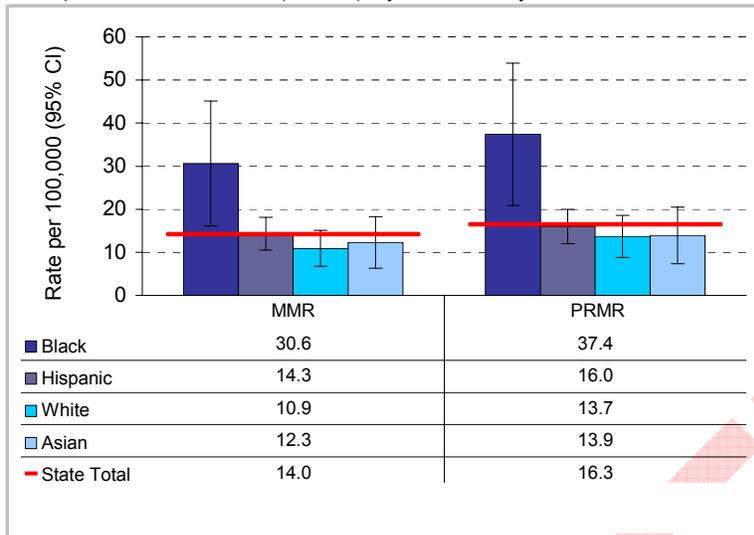
Data sources: Birth and Death Statistical Master Files (BSMF/DSMF)

Note: MMR = maternal mortality rate (deaths within 42 days postpartum);

PRMR = pregnancy-related mortality rate (deaths within 1 year postpartum)

Figure 19b. Maternal and Pregnancy-Related Mortality

Rate per 100,000 live births (95% CI), by race/ethnicity, 2008



Data sources: Birth and Death Statistical Master Files (BSMF/DSMF)

Note: MMR = maternal mortality rate (deaths within 42 days postpartum);

PRMR = pregnancy-related mortality rate (deaths within 1 year postpartum)

Race and ethnicity are not risk factors in themselves but may be markers of social, economic, cultural, healthcare access, quality of care and other interrelated factors that increase risk of death among pregnant women. When researchers examined mortality in the U.S. due to the five major complications of pregnancy (hemorrhage, eclampsia, preeclampsia, abruptio placentae, placenta previa), they found these complications did not occur at higher rates among Black women, but that Black women were two to three times more likely to die from these complications than White women.³⁵

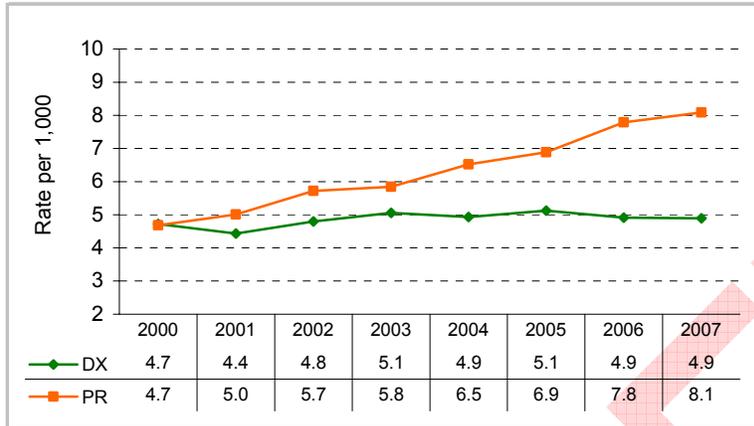
If maternal deaths are the tip of the iceberg, then there is a large pool of surviving women who have experienced complications related to pregnancy and childbirth, resulting in inpatient care while pregnant, extended hospitalization before delivery, complications during labor, and additional outpatient care. Whereas there were 90 pregnancy-related deaths in California in 2008, an even greater number of women experienced complications at the time of labor and delivery that, although not fatal, were severe. “Near miss” complications at delivery were assessed using the WHO method of disease-based and management-based groups.³⁶ The disease-based group (a “near miss” diagnosis) consisted of severe anesthesia complications, renal failure, heart failure, puerperal cerebrovascular disorders, obstetric pulmonary embolism, pulmonary edema, adult respiratory syndrome, deep venous thrombosis, disseminated intravascular coagulation, sepsis, and shock. The procedure-based group (a “near miss” procedure) included hysterectomy, blood transfusions, and ventilation.

In 2007, 4.9 out of every 1,000 delivery hospitalizations had a “near miss” diagnosis, which has remained relatively stable since 2000. However, during this same time period, the number of “near miss” procedures performed increased from 4.7 to 8.1 per 1,000 delivery hospitalizations ([Figure 20a](#)). Black women were more likely to have severe complications of delivery than other racial/ethnic groups. In 2008, the rate of “near miss” diagnoses was 8.5 among Blacks compared with the rate among Hispanic (4.5), White (5.0), and Asian/PI (4.7) women. The rate of “near miss” procedures was higher among Blacks (12.5) than among Hispanics (8.2), which were both higher than the rate observed among White women (6.9)

([Figure 20b](#)). Although the rate of “near miss” procedures increased among all racial/ethnic groups, the rate increased the most (by 112%) among Black women, from 5.9 in 2000 to 12.5 in 2007 ([Figure 20c](#)).

Figure 20a. Severe "Near Miss" Complications at Delivery

Rate per 1,000 delivery hospitalizations, 2000-2007

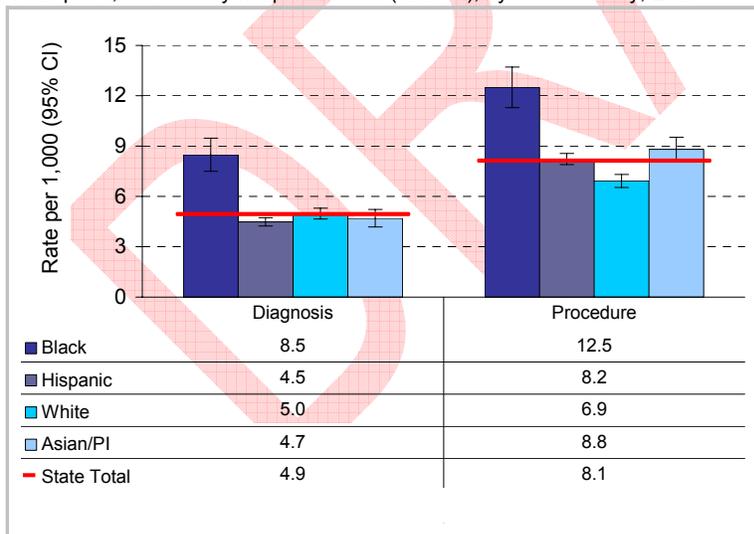


Data source: Office of Statewide Health Planning and Development (OSHPD) Patient Discharge Data

Notes: DX stands for diagnosis and includes deliveries with an ICD9-CM diagnosis code for anesthesia complications, renal or heart failure, puerperal cerebrovascular disorders, obstetric pulmonary embolism, pulmonary edema, adult respiratory syndrome, deep venous thrombosis, disseminated intravascular coagulation, sepsis, or shock; PR stands for procedure and includes deliveries with an ICD9-CM procedure code for hysterectomy, blood transfusions, or ventilation

Figure 20b. Severe "Near Miss" Complications at Delivery

Rate per 1,000 delivery hospitalizations (95% CI), by race/ethnicity, 2007

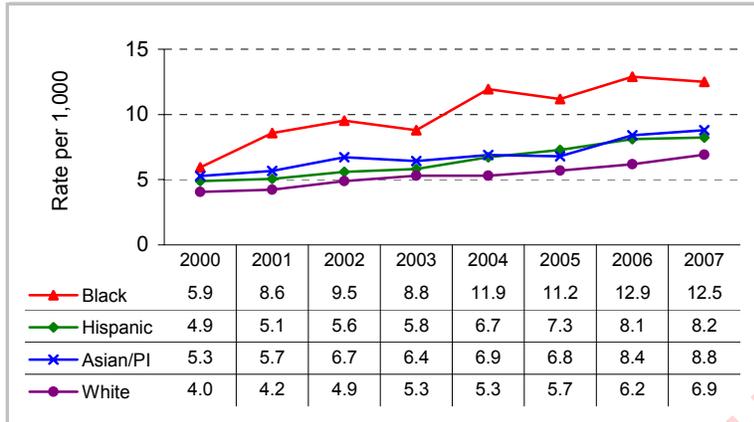


Data source: Office of Statewide Health Planning and Development (OSHPD) Patient Discharge Data

Notes: Diagnosis includes deliveries with an ICD9-CM diagnosis code for anesthesia complications, renal or heart failure, puerperal cerebrovascular disorders, obstetric pulmonary embolism, pulmonary edema, adult respiratory syndrome, deep venous thrombosis, disseminated intravascular coagulation, sepsis, or shock; procedure includes deliveries with an ICD9-CM procedure code for hysterectomy, blood transfusions, or ventilation; PI = Pacific Islander

Figure 20c. Severe "Near Miss" Procedures at Delivery

Rate per 1,000 delivery hospitalizations, by race/ethnicity, 2000-2007



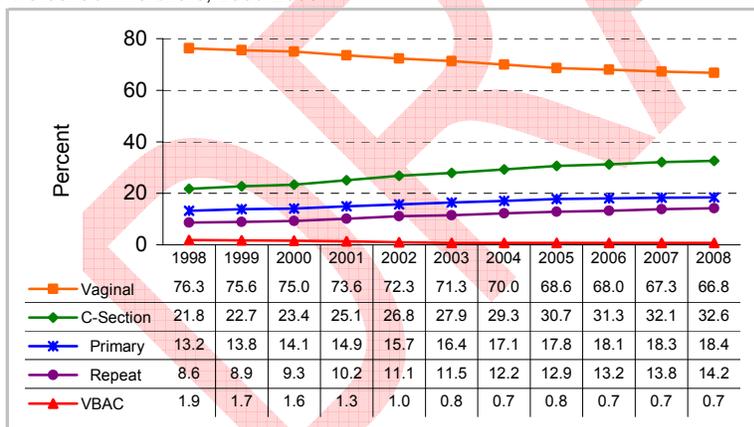
Data source: Office of Statewide Health Planning and Development (OSHPD) Patient Discharge Data

Notes: "Near miss" procedures include deliveries with an ICD9-CM procedure code for hysterectomy, blood transfusions, or ventilation; PI = Pacific Islander

Rising rates of cesarean sections (c-sections) in recent years are thought to contribute to the rising rates of maternal morbidity described above. In the U.S., the c-section rate increased by 50%, from 20.7% in 1996 to 31.1% in 2006.³⁷ Similarly, in California, there was a 39.3% increase, from 23.4% in 2000 to 32.6% in 2008 (Figure 21a). Black women had the highest prevalence of c-section (37.3%), compared with Hispanic (32.0%), White (32.6%), Asian (32.4%), PI (32.5%), and AI/AN (32.4%) women (Figure 21b).

Figure 21a. Delivery Method

Percent of live births, 2000-2008

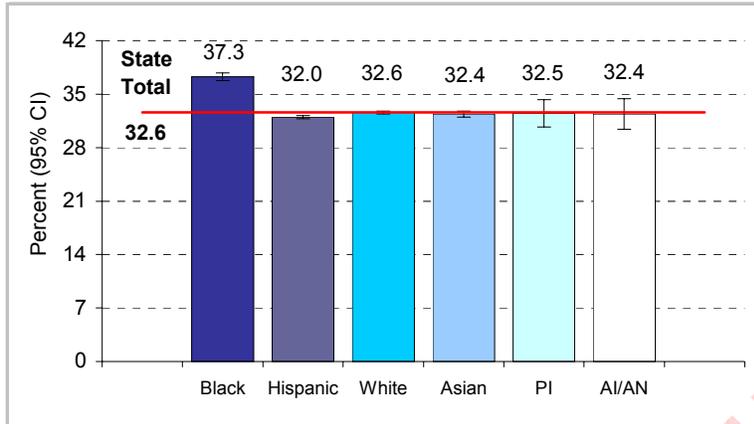


Data source: Birth Statistical Master File (BSMF)

Notes: VBAC = vaginal birth after cesarean section

Figure 21b. Cesarean Sections

Percent (95% CI) of live births, by race/ethnicity, 2008



Data source: Birth Statistical Master File (BSMF)

Note: PI = Pacific Islander; AI/AN = American Indian/Alaskan Native

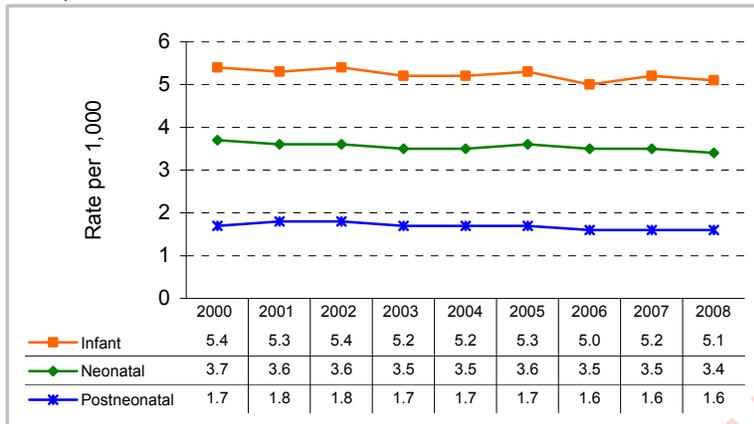
Although some c-sections are medically necessary (e.g. due to maternal health conditions, such as eclampsia), public health efforts have focused on identifying and preventing elective c-sections. For instance, research has found that rising trends in c-sections in California are independent of maternal age and other demographic characteristics previously associated with increased risk of c-section. Additionally, not attempting labor has been used as a marker for electing c-section.³⁸ In California from 1999 through 2005 there was a 33% increase in primary c-sections without labor (“elective” primary) and a 69% increase in repeat c-sections without labor (“elective” repeat). Because certain circumstances increase risk of c-section (e.g. multiple births, prior c-section, breech presentation), the rate among nulliparous, term, singleton, and vertex (NTSV) births is also used as a marker of c-sections among relatively low-risk births. California has seen an increase in c-sections among NTSV births, from 24.4% in 2005 to 26.3% in 2008.

Infant Health: Morbidity and Mortality

Infant death is a critical indicator of the health of a population. It reflects the overall state of maternal health as well as the quality and accessibility of primary health care available to pregnant women and infants. The Healthy People 2010 objective is to reduce the rate of infant deaths to 4.5 per 1,000 live births, the rate of neonatal deaths (among infants < 28 days) to 2.9, and the rate of postneonatal deaths (among infants 28 days to 1 year) to 1.2. California has not met any of these objectives. However, from 2000 to 2008, the infant mortality rate decreased from 5.4 per 1,000 live births to 5.1, the neonatal mortality rate decreased from 3.7 to 3.4, and the postneonatal mortality rate remained relatively the same ([Figure 22a](#)).

Figure 22a. Infant Mortality

Rate per 1,000 live births, 2000-2008



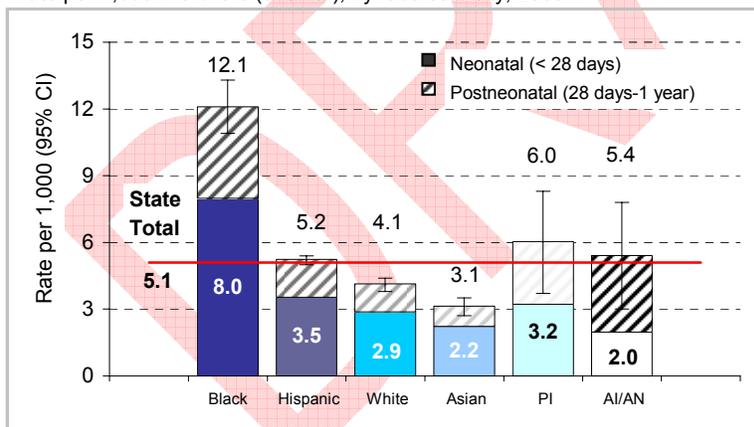
Data sources: Birth and Death Statistical Master Files (BSMF/DSMF)

Notes: Infant deaths < 1 year; neonatal < 28 days; postneonatal 28 days - 1 year

Although infant mortality rates have decreased among all racial/ethnic groups overtime, disparities among select populations still exist. In 2008, infant mortality rates were lowest among Asian women (3.1) and highest among Black women (12.1). The infant mortality rate among Black women was three times the rate among White women (4.1) (Figure 22b). Although the disparity in the infant mortality rate primarily affects Black women and infants, the burden in California is largely experienced by Hispanics because of the size of the Hispanic birthing population (Figure 22c). Acknowledging disparities in both rates and frequencies is important for public health program planning in California.

Figure 22b. Infant Mortality

Rate per 1,000 live births (95% CI), by race/ethnicity, 2008

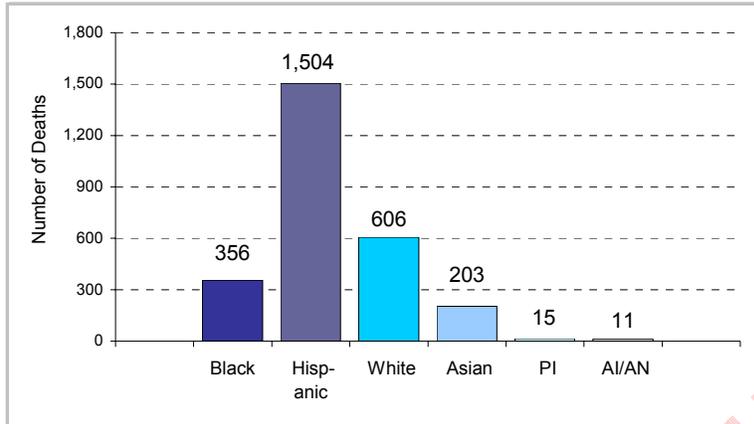


Data sources: Birth and Death Statistical Master Files (BSMF/DSMF)

Notes: PI = Pacific Islander, AI/AN = American Indian/Alaska Native

Figure 22c. Burden of Infant Mortality

Number of deaths, by race/ethnicity, 2008

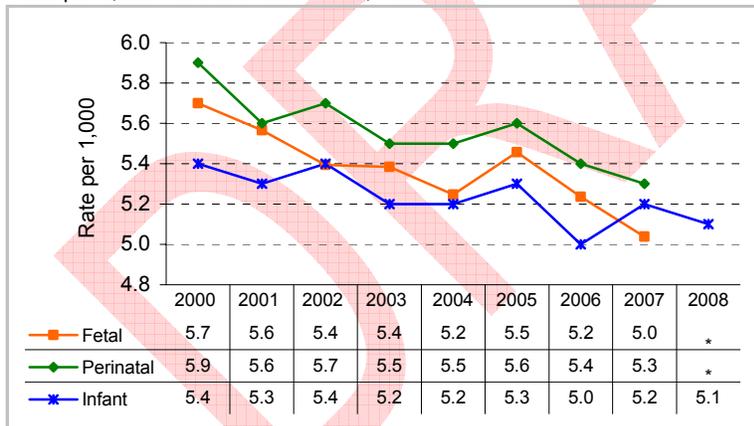


Data sources: Birth and Death Statistical Master Files (BSMF/DSMF)
Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

Since only live births are counted in infant mortality rates, taking into account perinatal and fetal deaths provides a more complete picture of perinatal health. The perinatal mortality rate includes both deaths of live-born infants through the first 7 days of life and fetal deaths after 28 weeks of gestation. In California, the perinatal mortality rate decreased from 5.9 to 5.3 per 1,000 live births plus fetal deaths from 2000 to 2007 (Figure 23a). This rate is still higher than the HP 2010 objective of 4.5. In 2007, the perinatal mortality rate was lowest among Asian women (3.7) and highest among Black women (10.6) (Figure 23b).

Figure 23a. Fetal, Perinatal, and Infant Deaths

Rate per 1,000 live births/fetal deaths, 2000-2008



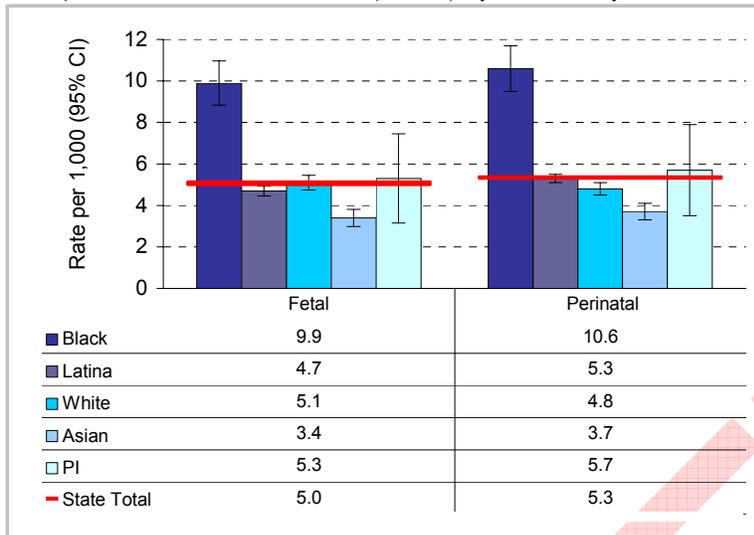
*Data not available

Data sources: Fetal Death, Birth and Death Statistical Master Files (BSMF/DSMF)

Notes: Fetal (≥20 wks gestation) and perinatal (28 wks gestation-7 days postpartum) deaths per 1,000 live births + fetal deaths; infant death (<1 year) per 1,000 live births

Figure 23b. Fetal and Perinatal Deaths

Rate per 1,000 live births/fetal deaths (95% CI), by race/ethnicity, 2007



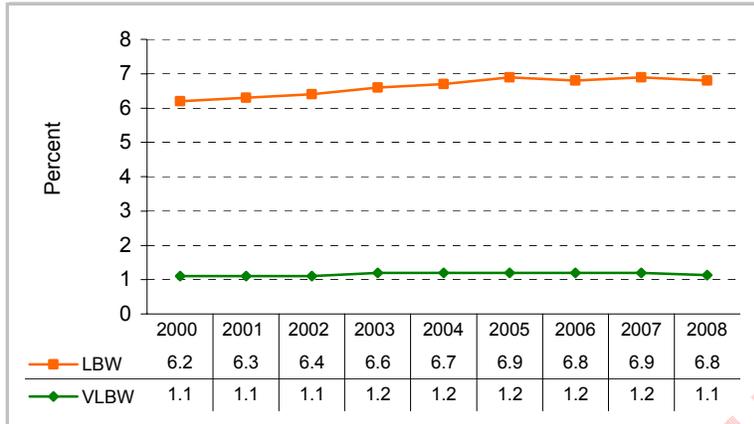
Data sources: Fetal Death, Birth and Death Statistical Master Files (BSMF/DSMF)

Notes: Fetal (≥ 20 wks gestation) and perinatal (28 wks gestation-7 days postpartum) deaths per 1,000 live births + fetal deaths; PI = Pacific Islander

Factors driving high rates of infant, fetal, and perinatal mortality among Blacks are multiple and complex. Low birth weight (LBW) and preterm birth are strong predictors of infant mortality. The Healthy People 2010 objective is to reduce the proportion of LBW births to no more than 5.0%. California has not currently met this objective. The percent of LBW births increased from 6.2% in 2000 to 6.9% in 2005, and remained relatively unchanged from 2005 through 2008 ([Figure 24a](#)). Even though California reports lower rates of LBW births compared with the U.S. population (8.2% in 2007),³⁹ because of the size of the birthing population in California, the burden of LBW is still large. There were nearly 37,580 LBW births in 2008 and nearly half were among Hispanic women ([Figure 24b](#)). The percent of LBW births among Black women (12.4%) is over double the percent among Hispanics (6.1%). At 6.4% and 7.8%, respectively, White and Asian women also have higher rates of LBW compared with Hispanics ([Figure 24c](#)).

Infants who weigh less than 1,500 grams, or who are born very low birth weight (VLBW), have the greatest risk of dying in the first year of life. The HP 2010 objective is to reduce the proportion of VLBW births to no more than 0.9%. Since 2000, the percent of VLBW births has been stable in California, hovering around 1.2% ([Figure 24a](#)). Compared with Whites, Hispanics, and Asians, the percent of Black VLBW births was about 3.5 times higher (2.7% vs. 1.0%) ([Figure 24c](#)).

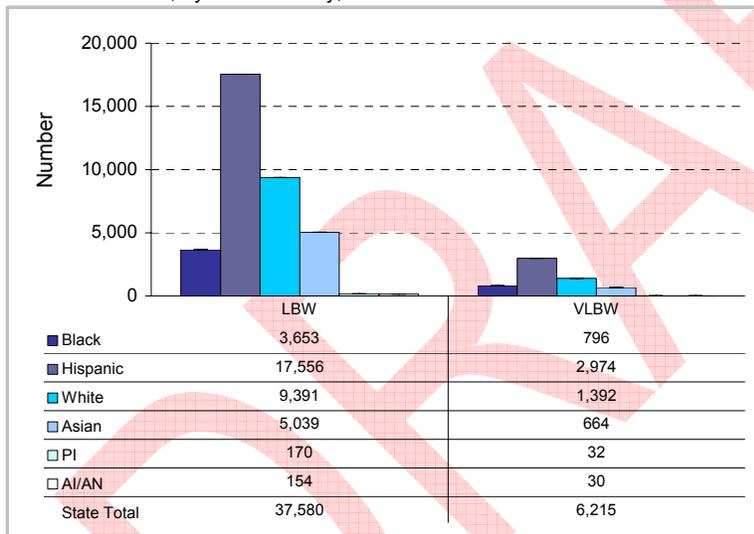
Figure 24a. Low Birth Weight and Very Low Birth Weight
Percent of live births, 2000-2008



Data source: Birth Statistical Master File (BSMF)

Notes: LBW = low birth weight (<2,500 grams); VLBW = very low birth weight (<1,500 grams); births weighing <227 grams or >8165 grams were excluded from the analysis

Figure 24b. Burden of Low Birth Weight
Number of births, by race/ethnicity, 2008

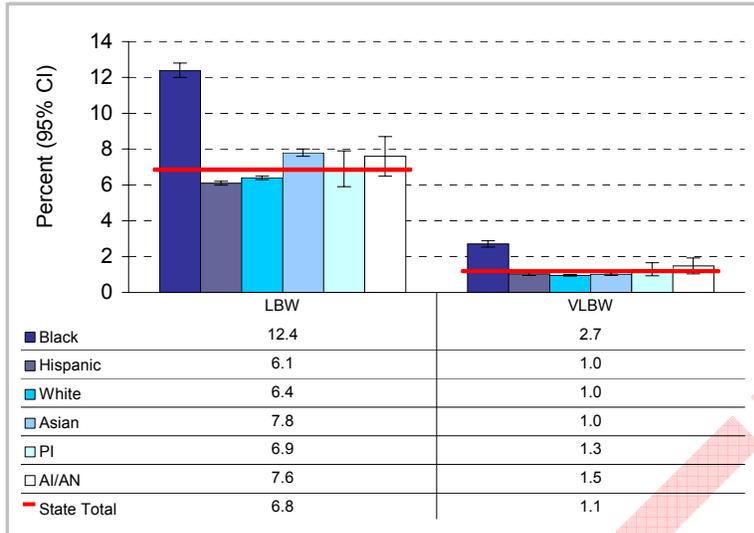


Data source: Birth Statistical Master File (BSMF)

Notes: LBW = low birth weight (<2,500 grams); VLBW = very low birth weight (<1,500 grams); births weighing <227 grams or >8165 grams were excluded from the analysis; PI = Pacific Islander; AI/AN = American Indian/Alaska Native

Figure 24c. Low Birth Weight and Very Low Birth Weight

Percent (95% CI) of all live births, by race/ethnicity, 2008



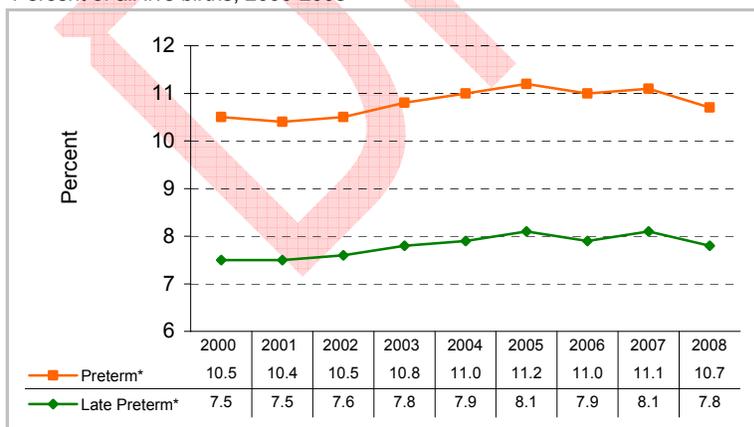
Data source: Birth Statistical Master File (BSMF)

Notes: LBW = low birth weight (<2,500 grams); VLBW = very low birth weight (<1,500 grams); births weighing <227 grams or >8165 grams were excluded from the analysis; PI = Pacific Islander; AI/AN = American Indian/Alaska Native

It is recommended that births occur no earlier than 37 weeks gestation, yet approximately 1 in 10 babies in California is born preterm. The preterm birth rate has not improved since 2000, and through 2005, showed small increases. In 2008 the prevalence of preterm birth was 10.7% (Figure 25a). Because multiple births are more likely to have a short gestation, the percent of preterm births among singletons was slightly lower (9.2%). The Healthy People 2010 objective is to reduce the proportion of preterm births among all live births to no more than 7.6%. In 2008, Black women had preterm birth rates (15.4%) that were higher than the HP 2010 objective and than Whites (9.7%). Preterm births were also high among PI (12.8%) and AI/AN (13.1%) women (Figure 25b).

Figure 25a. Preterm Births

Percent of all live births, 2000-2008

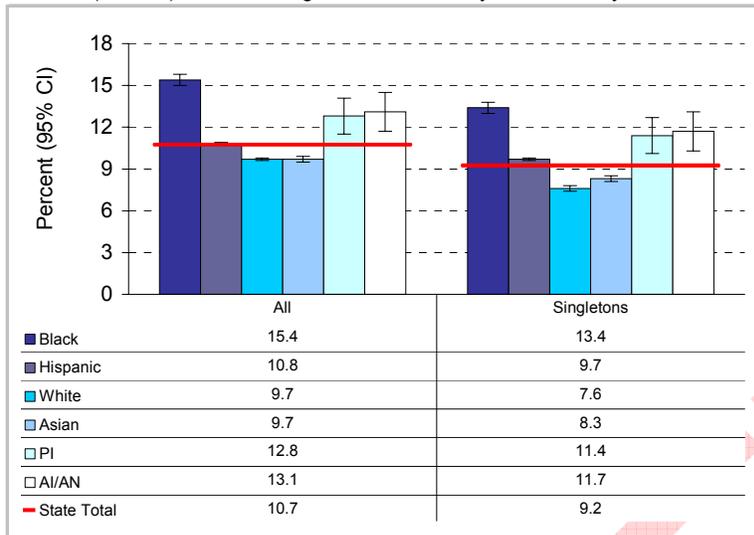


*Preterm births = < 37 weeks gestation; late preterm = 34-36 weeks gestation

Data source: Birth Statistical Master File (BSMF)

Figure 25b. Preterm Births

Percent (95% CI) of all and singleton live births, by race/ethnicity, 2008



Data source: Birth Statistical Master File (BSMF)

Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

Late preterm births, at 34-36 weeks gestation, represent over 70% of all preterm births in California and in the U.S.⁴⁰ They also continue to make up a greater proportion of preterm births—71.7% in 2000 and 73.2% in 2008 in California. Late preterm birth is associated with infant morbidity and mortality. As a group, late preterm births can shed light on increasing morbidities among the pregnant population because many deliveries before 37 weeks gestation are medically indicated due to fetal or maternal conditions, like placental abruption and eclampsia. It is also thought that some late preterm deliveries are elective and reflect non-medical issues, such as scheduling considerations.⁴⁰ This is particularly concerning because scheduled or elective inductions can increase risk of c-section.⁴¹ Elective late preterm births that are brought to term may improve infant and maternal outcomes.

Social conditions such as poverty, lack of social support, racial discrimination, and other sources of stress also play an important role in birth outcomes, and may occur not only during pregnancy but also across a woman’s entire lifespan, potentially affecting subsequent generations. Nevertheless, there is no definitive scientific evidence about how to decrease racial disparities in birth outcomes and the known causes of poor birth outcomes, such as smoking, alcohol, drugs, and chronic medical conditions, do not completely explain disparities in infant mortality.⁴² However, it is known that birth outcomes and infant health are closely connected to maternal health. Therefore, special attention is paid to maternal health and factors related to preterm birth, which offer the greatest possibility for decreasing deaths during the perinatal period. The Perinatal Periods of Risk (PPOR) methodology has been used to map perinatal health into four periods of fetal-infant risk and their associated causes: maternal health and prematurity, maternal care, newborn care, and infant health (CityMatCH methodology).

Figure A shows the PPOR map for all of California based on birth cohort data from 2006 ([Figure 26a](#)). The total California fetal-infant mortality rate was 7.2 fetal and infant deaths per 1,000 live births and fetal deaths. The largest proportion of deaths occurred within the “Maternal Health/Prematurity” cell. About 42% of the statewide rate was contributed by factors related to maternal health and prematurity (3.0 of 7.2).

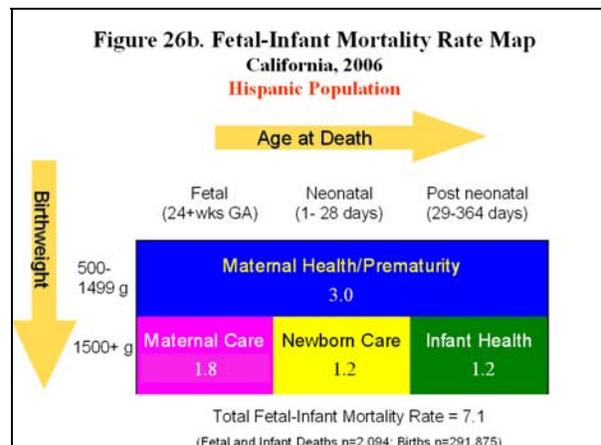
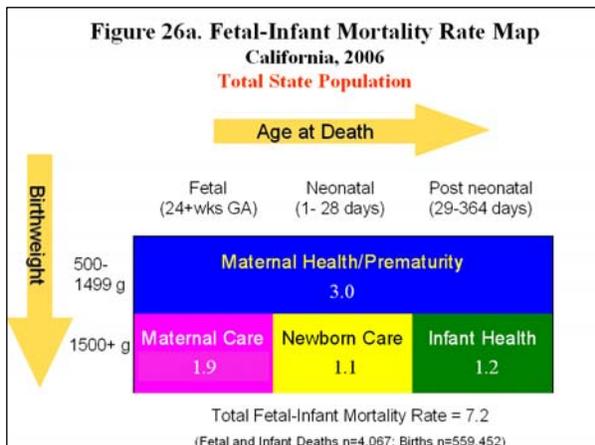


Figure B shows the PPOR map for California’s Hispanic population based on birth cohort data from 2006 (Figure 26b). The fetal-infant mortality rate among Hispanics was 7.1. The largest proportion of deaths occurred within the “Maternal Health/Prematurity” cell. About 42% of the rate was contributed by factors related to maternal health and prematurity (3.0 of 7.1).

Figure C shows the PPOR map for California’s White population based on birth cohort data from 2006 (Figure 26c). The fetal-infant mortality rate among Whites was 6.9. The largest proportion of deaths also occurred within the “Maternal Health/Prematurity” cell. About 38% of the rate was contributed by factors related to maternal health and prematurity (2.6 of 6.9).

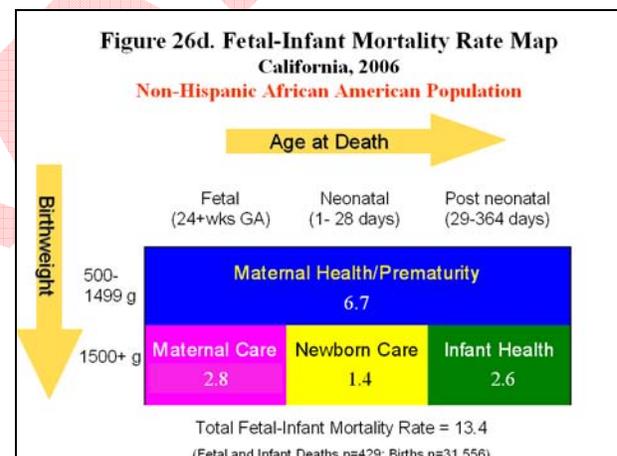
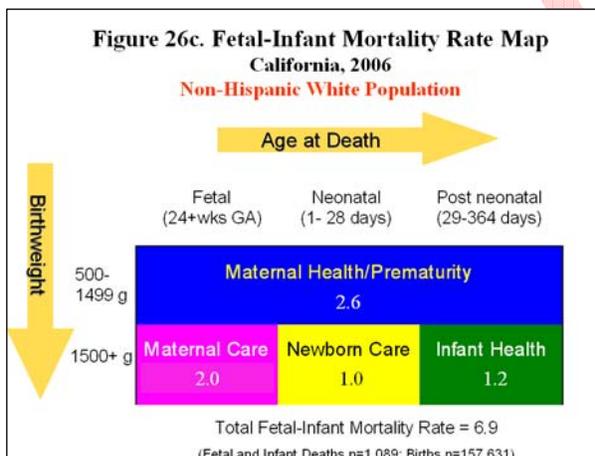


Figure D shows that the Black fetal-infant mortality rate is almost double the statewide rate at 13.4 (Figure 26d). For Blacks, the PPOR map indicates that about 50% of the rate is contributed by deaths related to maternal health and prematurity (6.7 of 13.4). These data point to the important role of programs like the Black Infant Health program and maternal mortality review for addressing perinatal health in California.

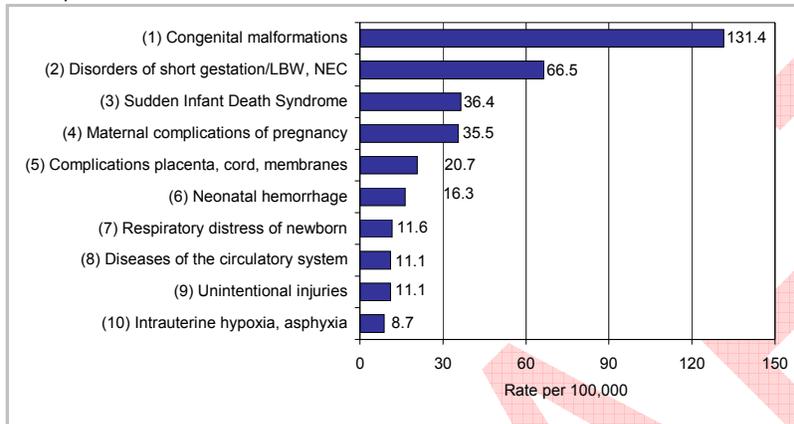
Each of the four PPOR cells for Blacks shows a disparity in fetal-infant mortality when compared with the White population. Overall fetal-infant mortality is twice as high; the maternal health and prematurity cell is 2.5 times greater; the infant health cell is 2.1 times

greater; the maternal care cell is 1.4 times greater; and the newborn care cell is 1.3 times greater.

The leading cause of infant death in 2008 was congenital malformations, deformations, and chromosomal abnormalities (congenital malformations), which accounted for one-fourth of all infant deaths. Disorders related to short gestation and low birth weight, not elsewhere classified, was ranked 2nd accounting for 13.1% of all infant deaths, followed by Sudden Infant Death Syndrome (SIDS) (7.2%) ([Figure 27](#)).

Figure 27. Leading Causes of Infant Death

Rate per 100,000 live births, 2008



Data Sources: Birth and Death Statistical Master Files (BSMF/DSMF)

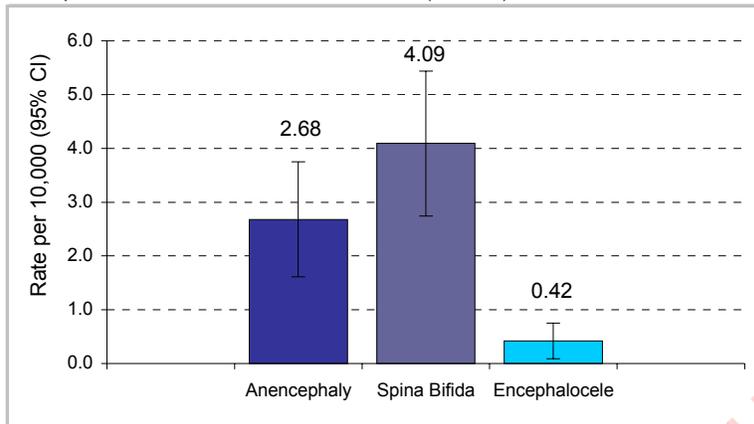
Notes: LBW = low birth weight; NEC = not elsewhere classified;

ICD-10 codes: (1) Q00-Q99, (2) P07, (3) R95, (4) P01, (5) P02, (6) P50-52, P54, (7) P22, (8) I00-I99, (9) V01-X59, (10) P201-21

In California approximately 1 in 33 births are affected by a structural birth defect, which can lead to mental retardation, long-term medical care and disability, and death.⁴³ Neural tube defects (NTDs), a group of conditions affecting the brain and spinal cord, including anencephaly, spina bifida, and encephalocele, are common and serious types of birth defects with a substantial public health impact. NTDs are monitored in-depth in eight counties in California in the Central Valley. In 2006 the incidence of NTDs in the eight counties studied was 7.2 per 10,000 fetal deaths plus live births. The rate of anencephaly was 2.7, the rate of spina bifida was 4.1, and the rate of encephalocele was 0.4 ([Figure 28](#)). Although the rates of anencephaly and spina bifida were comparable to past years in California, the rate for encephalocele has dropped from an average rate of 0.7 per 10,000 in 2002. It should be noted that these counties do not represent the state as a whole because their maternal population is younger and a greater proportion of women are Hispanic relative to the state population.

Figure 28. Neural Tube Defects in 8 California Counties*

Rate per 10,000 fetal deaths and live births (95% CI), 2006

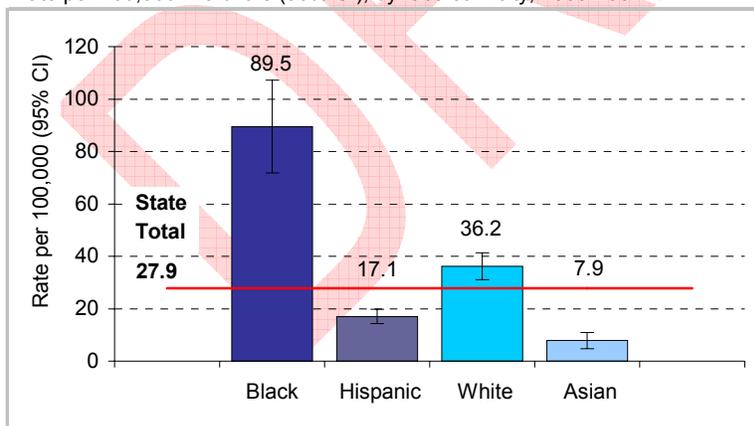


*Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare; excludes military births and all cases with single gene disorders and abnormal chromosomes
Data sources: Birth Statistical Master File (BSMF), fetal death file, hospital charts, genetics clinic data

Although there has been a marked reduction in Sudden Infant Death Syndrome (SIDS), SIDS remains a leading cause of postneonatal death among all racial/ethnic groups in California. The SIDS rate decreased by 43%, from 41.8 per 100,000 live births in 2000 to 23.8 in 2006. The SIDS rate increased in 2007 and 2008 for the first time since 1994. However, it is thought that trends in SIDS over the past decade have been influenced by changes in definitions used by local coroners and medical examiners in determining the cause and manner of infant deaths.⁴⁴ Nevertheless, the rate of SIDS among Black infants is still 89.5 per 100,000 live births, over twice that of Whites (36.2) (Figure 29). Therefore, a reduction in the rate of death from SIDS, particularly among Blacks, would contribute greatly to reducing the overall infant mortality rate and to closing the racial gap in postneonatal death.

Figure 29. Sudden Infant Death Syndrome

Rate per 100,000 live births (95% CI), by race/ethnicity, 2005-2007



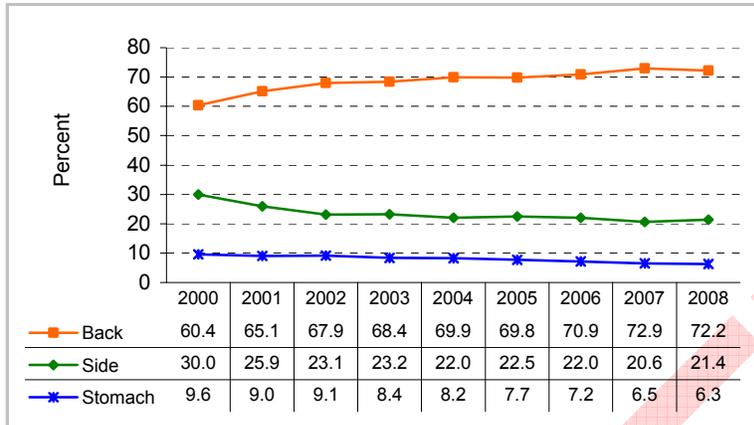
Data source: Birth and Death Statistical Master Files (BSMF/DSMF)

The decline in SIDS is largely attributed to the success of “Back-to-Sleep” campaigns. In California, the number of women with a recent live birth who report usually placing their infant to sleep on their back has increased substantially, from 60.4% in 2000 to 72.2% in 2008 (Figure 30a). However, some groups still fall below the state average. Black and Hispanic

women were less likely to place their infant to sleep on their backs (59.5% and 68.2%, respectively), compared with White (78.2%) and Asian/PI women (78.8%) ([Figure 30b](#)).

Figure 30a. Usual Infant Sleep Position

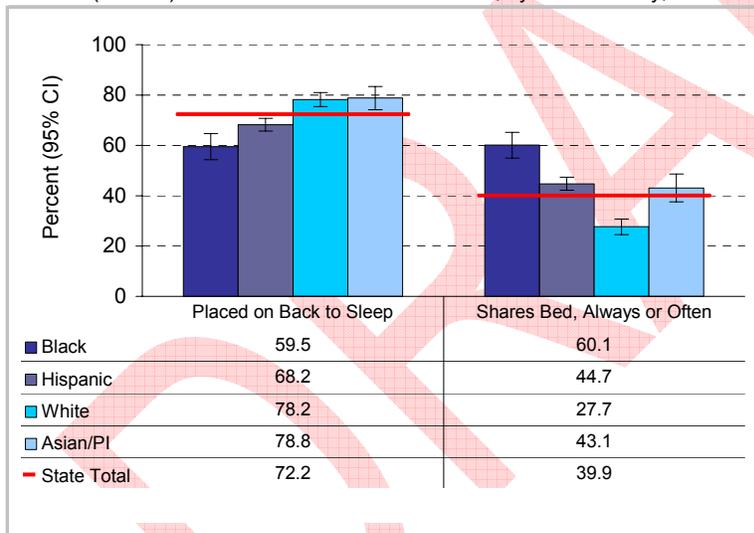
Percent of mothers with a recent live birth, 2000-2008



Data source: Maternal and Infant Health Assessment Survey (MIHA)

Figure 30b. Usual Infant Sleep Environment

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



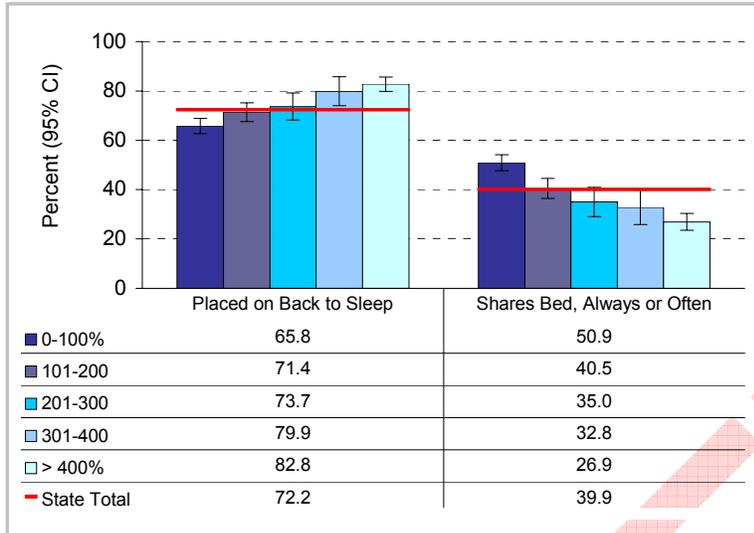
Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: PI = Pacific Islander

In more recent years, SIDS prevention efforts have expanded to focus on other risk factors in the sleep environment, such as co-sleeping. In 2005, the American Academy of Pediatrics recommended that infants be placed to sleep on their backs in a crib that meets safety standards and that is proximate to, but separate from the parent's bed.⁴⁵ In 2008, 40% of mothers with a recent live birth reported their infant slept in the same bed with them or with someone else always or often. Bed-sharing was more common among Black (60.1%), Hispanic (44.7%), and Asian/PI (43.1%) women, compared with White women (27.7%) ([Figure 30b](#)). The prevalence of infants who were placed on their backs increased and the prevalence of bed-sharing decreased as income increased ([Figure 29c](#)).

Figure 30c. Usual Infant Sleep Environment

Percent (95% CI) of mothers with a recent live birth, by income, 2008



Data source: Maternal and Infant Health Assessment Survey (MIHA)

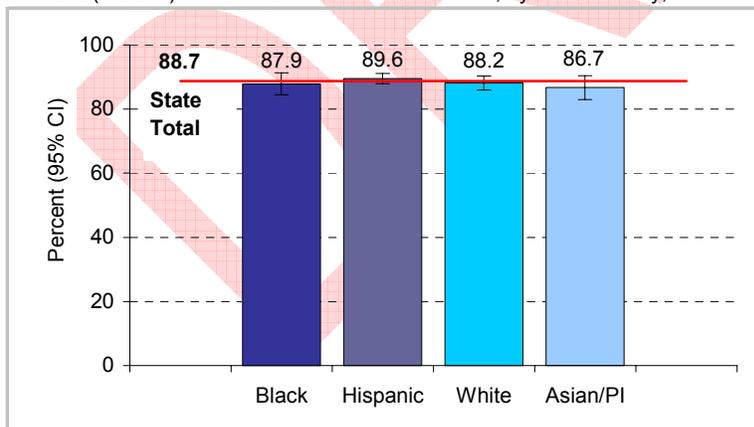
Notes: Income shown as a percent of the federal poverty level (FPL)

Postpartum Period

In 2008, 88.7% of women with a recent live birth reported they were currently doing something to prevent pregnancy in the postpartum period, including abstaining from sex or using a method of contraception. Overall, 22.5% of all women reported their main method of contraception was condoms. Birth control pills (20.0%), Intrauterine Devices (IUDs) (11.7%), and abstinence (9.6%) were the next most common forms of postpartum contraception. Any postpartum contraception use did not appear vary by race/ethnicity ([Figure 31](#)).

Figure 31. Postpartum Contraception Use*

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



*Any contraception use at time of response, including abstinence from sex

Data source: Maternal and Infant Health Assessment Survey (MIHA)

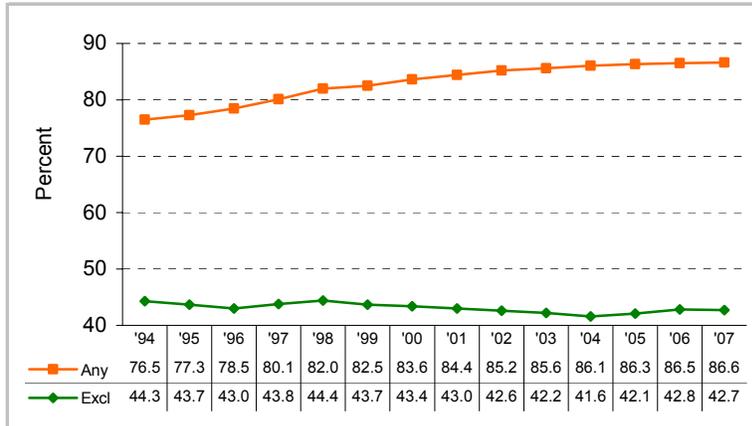
Notes: PI = Pacific Islander

Breastfeeding initiation shortly after birth is critical to establishing feeding practices and sustaining breastfeeding after the mother and infant leave the hospital. Although the prevalence of any in-hospital breastfeeding increased from 75.5% in 1994 to 86.6% in 2007,

exclusive breastfeeding rates have remained stagnant at approximately 40%. Therefore, the gap between exclusive breastfeeding and supplemented breastfeeding is wide and continues to grow ([Figure 32a](#)).

Figure 32a. Any and Exclusive In-Hospital Breastfeeding

Percent of mothers with a recent live birth, 1994-2007

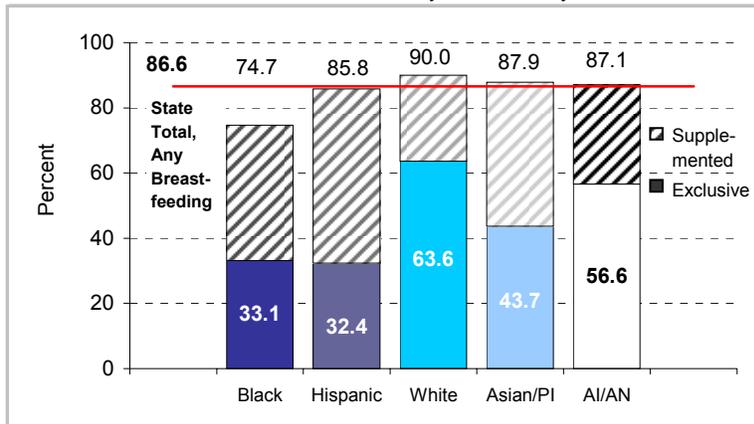


Data source: California Department of Public Health, Genetic Disease Screening Program, Newborn Screening Database

Formula supplementation plays an important role in shaping maternal beliefs and behaviors regarding breastfeeding. It is recommended that educational efforts take into account women's attitudes toward formula feeding and promote breastfeeding as the normal way to feed infants. Rather than focusing on the tremendous benefits of breastfeeding, some populations may benefit from messages that convey the risks of formula feeding and the costs to health and the community of not breastfeeding. For instance, a recent study found that preference for formula feeding affects the likelihood that Black women will initiate breastfeeding.⁴⁶ Indeed, in 2007 in California, Black women had the lowest in-hospital breastfeeding initiation rates (75%) and only a third of Black women breastfed exclusively. Although nearly 86% of Hispanic women breastfed their infants in the hospital, they also had the lowest rates of exclusive breastfeeding (32.4%). Over half of breastfeeding Hispanic women gave their infants formula during the hospital stay, while less than one third of breastfeeding White women supplemented with formula ([Figure 32b](#)).

Figure 32b. In-Hospital Breastfeeding

Percent of mothers with a recent live birth, by race/ethnicity, 2007



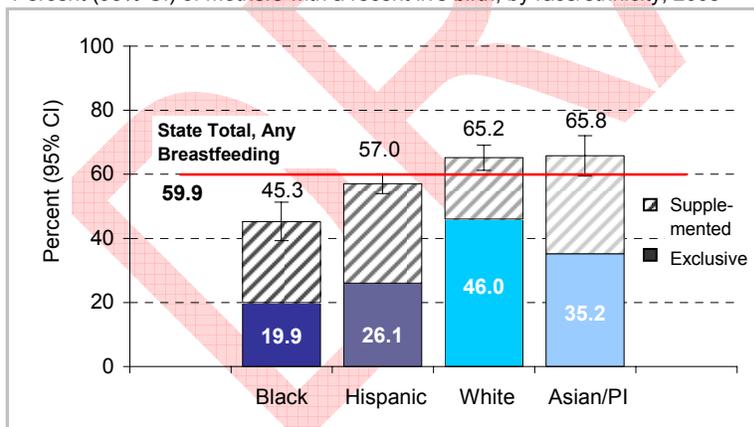
Data source: California Department of Public Health, Genetic Disease Screening Program, Newborn Screening Database

Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

It is important that women have the knowledge and support to continue breastfeeding after they return home from the hospital. The Healthy People 2010 objective is to increase the proportion of mothers who breastfeed exclusively through 3 months to 40%. In California in 2008, at one month postpartum, Black (39%) and Hispanic (39%) mothers were already not meeting the HP 2010 objective. By three months postpartum, only White mothers (46.0%) met the objective, while less than one third of Hispanic (26.1%) and Black (19.9%) mothers breastfed exclusively (Figure 32c). Breastfeeding at 3 months was also least common among low-income women.

Figure 32c. Breastfeeding at 3 Months

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



Data source: Maternal and Infant Health Assessment Survey (MIHA)

Notes: PI = Pacific Islander

Child and Adolescent Health

Child health and well-being provides the foundation upon which adult health is built. Developmental factors in early childhood impact health both directly and through social pathways such as education, employment, and inter-personal relationships. Further, weight gain patterns and associated factors during childhood can influence risks for and timing of the development of chronic disease and overall health in adulthood. This is of particular interest

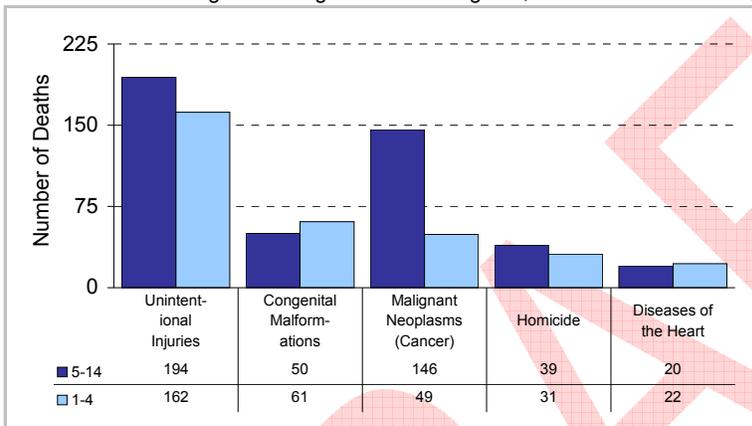
for the MCAH system as it relates to girls, for whom early onset of chronic disease or its precursors can increase maternal and infant risks during her reproductive years.

Child Health

Mortality rates among children decreased from 2000 through 2008, from 28.7 to 21.3 per 100,000 children ages 1-4 and 15.6 to 11.2 per 100,000 children ages 5-14.⁴⁷ Unintentional injuries were the leading cause of death among children in 2007, and homicide ranked in the top five causes (Figure 33). Among children ages 1-4, most fatal unintentional injuries were due to motor vehicle traffic (MVT) collisions (n = 59) and drowning (n = 53). Among children ages 5-14, most unintentional deaths were due to MVT collisions (n = 121).⁴⁸

Figure 33. Leading Causes of Child Death

Number of children ages 1 through 4 and 5 through 14, 2007



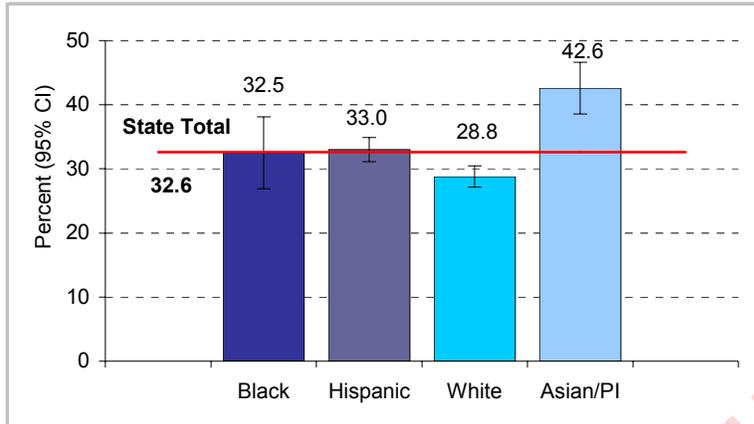
Data source: kidsdata.org

<http://www.kidsdata.org/data/topic/Dashboard.aspx?cat=49> Accessed 4/22/10

As in other industrialized countries, vaccinations have contributed to improvements in childhood mortality in California and in the U.S. The percent of children 19-35 months old who received the full schedule of age-appropriate immunizations against measles, heamophilus influenza, and hepatitis B steadily increased from 75.3% in 2000 to 81.3% in 2004, and has remained similar since then (80.6% in 2008). It is recommended that children 6 months through 18 years old get an annual flu shot.⁴⁹ In 2007, only 32.6% of children 6 months through 18 years old had a flu shot in the past year. The prevalence among White children was low (28.8%), compared with the prevalence among Hispanic (33.0%) and Asian/PI (42.6%) children (Figure 34).

Figure 34. Had Flu Shot in the Past 12 Months

Percent (95% CI) of children 6 months through 18 years, by race/ethnicity, 2007

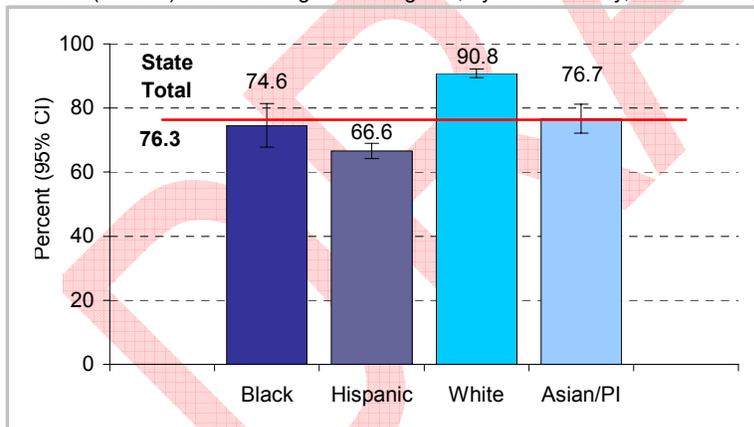


Data source: California Health Interview Survey (CHIS)
Notes: PI = Pacific Islander

Developmental disorders, chronic and oral health conditions, and injuries have significant impacts on child health and well-being. Overall, a child's health status, as perceived by his or her parents, is a useful indicator of general health and functionality. In 2007, 76.3% of California children ages 1-11 were reported in excellent or very good health by their parents. Excellent/very good health was reported more frequently by Whites (90.8%), compared with Asian/Pis (76.7%), Blacks (74.6%), and Hispanics (66.6%) ([Figure 35](#)).

Figure 35. Parent-Rated Excellent or Very Good Health

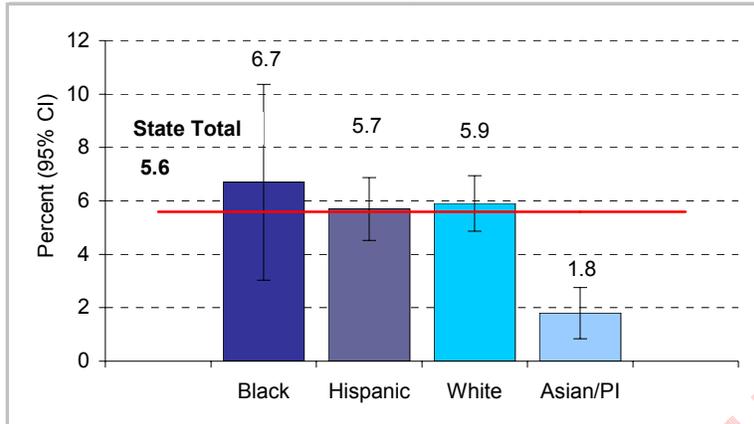
Percent (95% CI) of children ages 1 through 11, by race/ethnicity, 2007



Data source: California Health Interview Survey (CHIS)
Notes: PI = Pacific Islander

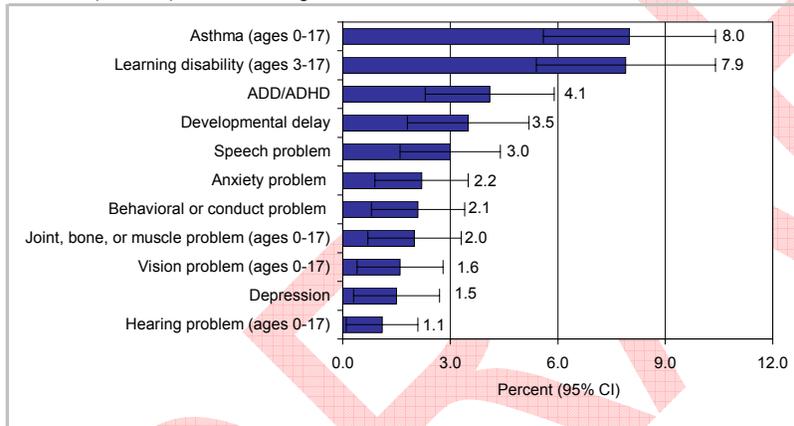
In 2007, 5.6% of children ages 1-11 had a condition that limited or prevented activities usual for the child's age. Asian/PI children were least likely to have a limiting condition compared with other racial/ethnic groups ([Figure 36a](#)). Of the 16 chronic health conditions measured in the National Survey of Children's Health (NSCH), 11 were available at the state-level in California. Common health conditions among children through 17 years old included asthma (8.0%), learning disabilities (7.9%), Attention Deficit Hyperactivity Disorder (ADHD) (4.1%), developmental delay (3.5%), and speech problems (3.0%) ([Figure 36b](#)).

Figure 36a. Condition that Limits Activities Usual for Age
Percent (95% CI) of children ages 1 through 11, by race/ethnicity, 2005



Data source: California Health Interview Survey (CHIS)
Notes: PI = Pacific Islander

Figure 36b. Current Chronic Health Conditions
Percent (95% CI) of children ages 2-17, 2007

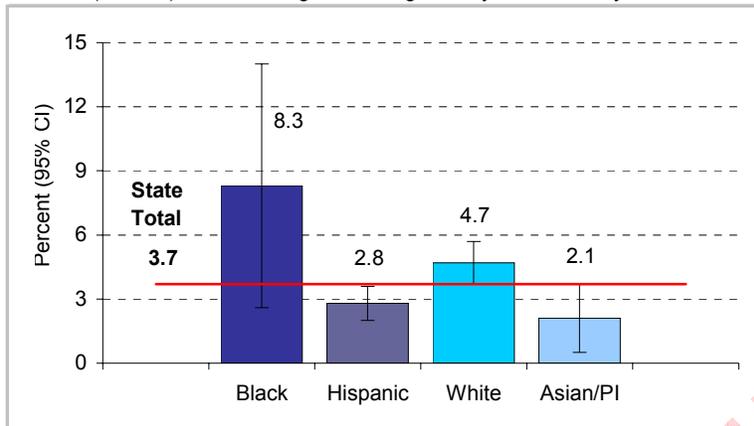


Data Source: National Survey of Children's Health (NSCH)
Notes: Percent of children ages 2-17, unless otherwise noted

ADHD (or Attention Deficit Disorder, ADD) is one of the most common neurobehavioral disorders of childhood. Children with ADHD have trouble paying attention, controlling impulsive behaviors, and are often overly active. The causes of ADHD are not well understood and diagnosis is often not straightforward, as other conditions have similar symptoms as ADHD. ADHD diagnosed in childhood often lasts into adulthood.⁵⁰ Among children ages 3-11, 3.7% were ever diagnosed with ADHD. Diagnosis was more common among White children (4.7%) compared with Hispanic (2.8%) and Asian/PI (2.1%) children ([Figure 37](#)).

Figure 37. Ever Diagnosed with ADHD

Percent (95% CI) of children ages 3 through 11, by race/ethnicity, 2007



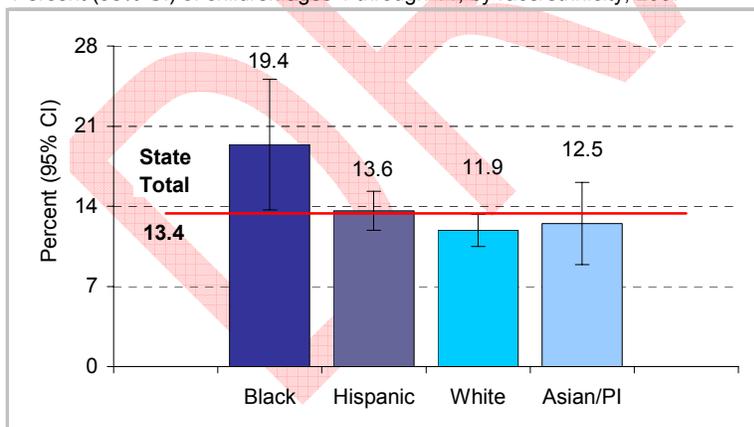
Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander; ADHD = Attention Deficit Hyperactivity Disorder

Asthma is one of the most common long-term diseases of childhood. Uncontrolled, asthma causes wheezing and coughing, poor sleep, missed school, limited physical activity, hospitalization, and in some cases, death.^{51,52} In 2007 in California, 13.4% of children ages 1-11 had ever been diagnosed with asthma. Asthma diagnosis was highest among Black children (19.4%) and lowest among White children (11.9%) (Figure 38). Although asthma diagnosis was highest among children ages 5-11 (15.4%) compared with children ages 1-4 (10.0%), young children have higher rates of emergency department (ED) visits and hospitalization for asthma than other age groups. In 2005 in California, there were 92.6 ED visits and 24.8 hospitalizations for asthma per 10,000 children ages 0-4. In comparison, the rate of emergency department visits among children ages 5-14 was 58.2 per 10,000.⁵³

Figure 38. Ever Diagnosed with Asthma

Percent (95% CI) of children ages 1 through 11, by race/ethnicity, 2007



Data source: California Health Interview Survey (CHIS)

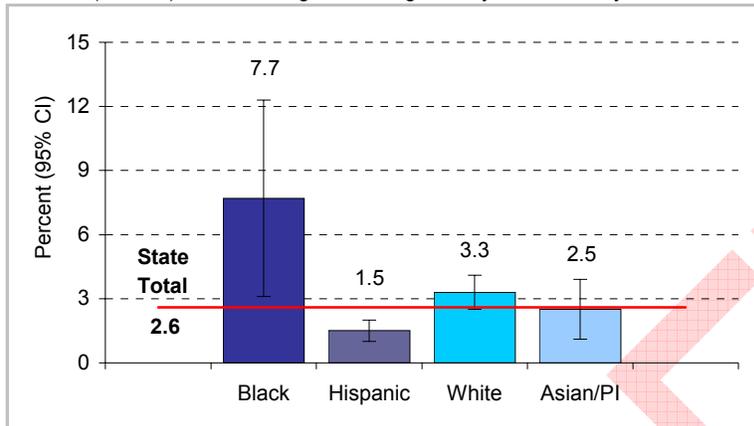
Notes: PI = Pacific Islander

In addition to maternal smoking during pregnancy, maternal exposure to environmental tobacco smoke (ETS), or second-hand smoke, may increase risk of asthma symptoms in young children.^{54,55} Continued exposure to ETS after birth is also associated with symptoms of asthma and asthma-related emergency department visits in childhood.^{56,57} Furthermore, regulation of smoking in public places has made smoking in the home the primary source of

fetal, infant, and childhood exposure to second-hand smoke.⁵⁸ In California in 2007, 2.6% of children ages 1-11 lived in a house where there was smoking indoors. The prevalence was higher among Black children (7.7%), compared with Hispanic children (1.5%) (Figure 39). The rates among White and Asian/PI children were 3.3% and 2.5%, respectively.

Figure 39. Exposure to Smoking in the Household

Percent (95% CI) of children ages 1 through 11, by race/ethnicity, 2007



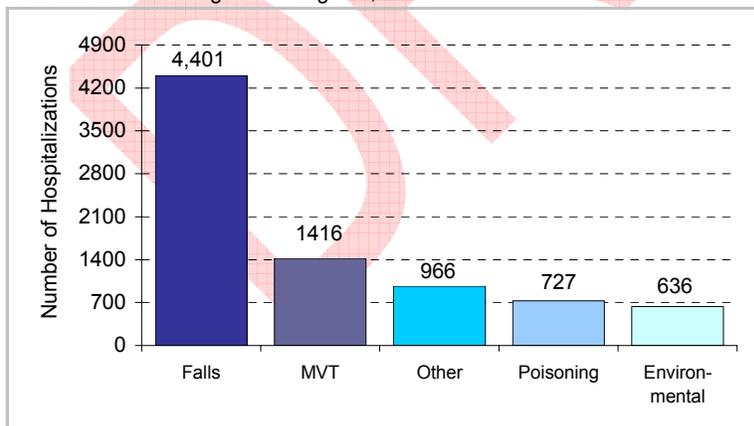
Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

Like asthma, injuries are a leading contributor to childhood hospitalization. In 2006, there were 19.1 non-fatal injury-related hospitalizations per 10,000 children ages 1-11. Unintentional falls (n = 4,401), MVT collisions (n = 1,416), other unintentional injuries (n = 966), poisoning (n = 727), and nature/the environment (n = 636) were the leading causes of injury-related hospitalization (Figure 40). Of hospitalizations for MVT collisions, nearly 10% were the result of a motor vehicle collision with a bicycle (n = 127) and there were another 423 hospitalizations to children ages 1-11 for non-MVT bicycle-related injuries.

Figure 40. Leading Causes of Hospitalization for Injuries*

Number of children ages 1 through 11, 2006



*Non-fatal injuries

Data source: EPICenter California Injury Data Online

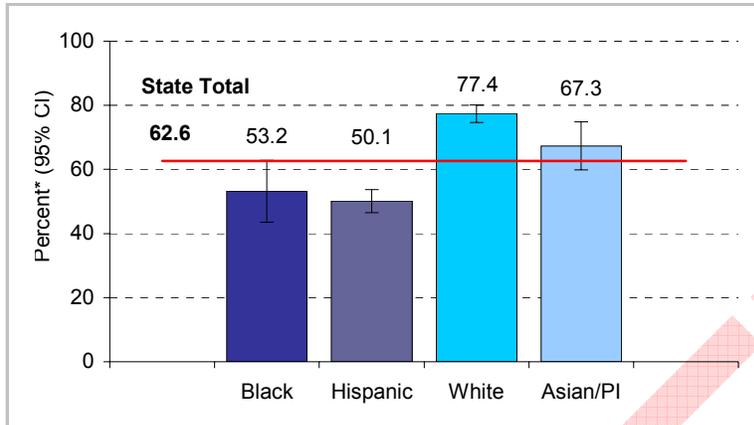
Notes: The leading five causes were all unintentional injuries

Helmet use greatly reduces risk of brain injury and hospitalization among children, and California law mandates that children under age 18 wear a helmet while riding a bicycle.⁵⁹ In California in 2003, 62.6% of children ages 6-11 who ride bikes always wore a helmet. Helmet

use was more common among White children (77.4%), compared with Asian/PI (67.3%), Black (53.2%), and Hispanic (50.1%) children ([Figure 41](#)).

Figure 41. Always Wears a Helmet while Riding a Bike*

Percent (95% CI) of children ages 6 through 11, by race/ethnicity, 2003



*Among children who ride bikes

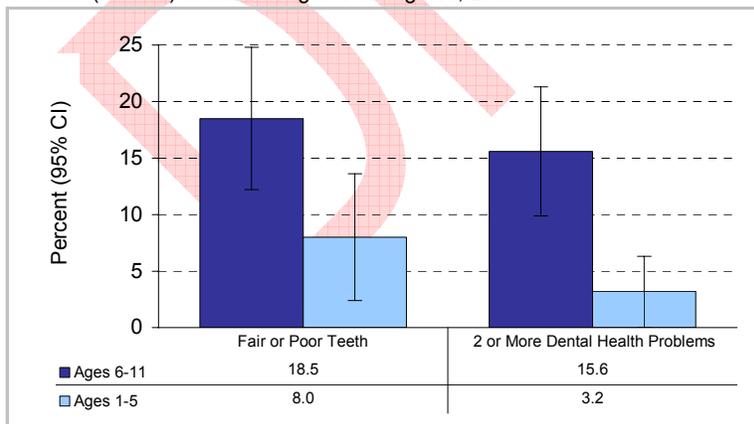
Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

In addition to the developmental disorders, chronic health conditions, and injuries described above, the oral health status of children in California is of particular concern, as the condition of children's teeth in California was ranked the third worst in the country in the 2007 National Survey of Children's Health (NSCH).⁶⁰ In 2007, 8.0% of children ages 1-5 and 18.5% of children ages 6-11 had teeth that were in fair or poor condition, as reported by their parents ([Figure 42](#)). These were well above the national averages of 5.4% among children ages 1-5 and 11.5% among children ages 6-11.ⁱ Furthermore, in 2007, 3.2% of children ages 1-5 had two or more oral health problems in the past six months. At 15.6%, the prevalence of two or more oral health problems was even higher among children ages 6-11.

Figure 42. Oral Health Status

Percent (95% CI) of children ages 1 through 11, 2007



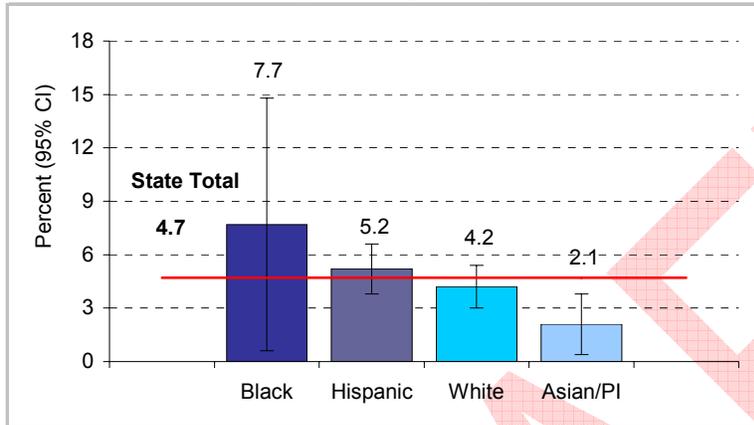
Data source: National Survey of Children's Health (NSCH)

The health conditions described above impact child development and education by contributing to missed school. In California in 2007, 3.4% of children ages 6-11 missed 11 or more days of school in the past year due to illness or injury, another 9.9% missed 6-10 days,

and 56.4% missed 1-5 days of school⁶¹ More specifically, in 2007, 4.7% of children ages 6-11 missed school because of a dental health problem (Figure 43a). In 2005, 35.9% of children of the same age missed school due to asthma. Asian/PI children were less likely than other racial/ethnic groups to miss school because of asthma, particularly compared with Black children (14.3% vs. 52.2%). Only a very small percentage of Asian/PI children missed 5 or more days of school due to asthma (1.4%), compared with nearly one-third of Black children (32.4%) (Figure 43b).

Figure 43a. Missed School for Dental Problem, Past Year

Percent (95% CI) of children ages 6 through 11, by race/ethnicity, 2007

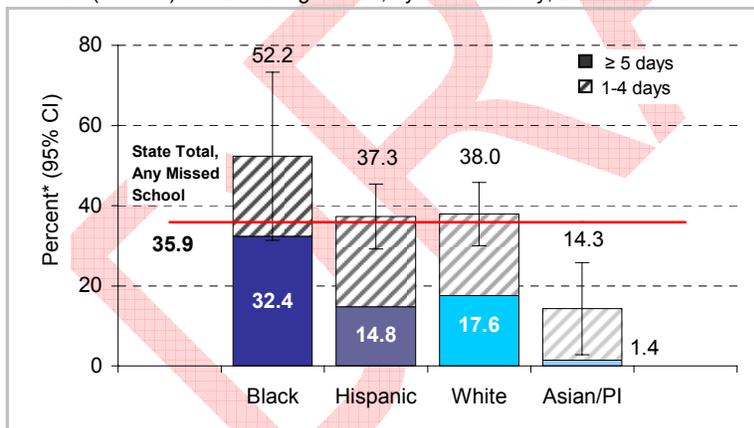


Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

Figure 43b. Missed School Due to Asthma, Past Year*

Percent (95% CI) of children ages 6-11, by race/ethnicity, 2005



*Among children who attended school or day care

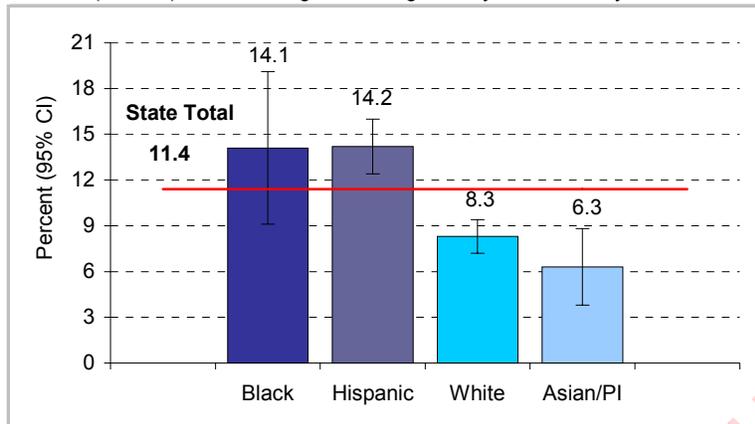
Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

Childhood obesity has more than tripled in the past 30 years in the U.S., from 6.5% in 1980 to 19.6% in 2008 among children ages 6-11.^{62,63} In comparison, in California in 2007, the percent of children ages 6-11 who were overweight for their age was 12.3%. The prevalence among children ages 1-5 was similar (10.5%). White (8.3%) and Asian/PI (6.3%) children were less likely to be overweight than Black (14.1%) and Hispanic (14.2%) children (Figure 44).

Figure 44. Overweight for Age*

Percent (95% CI) of children ages 1 through 11, by race/ethnicity, 2007



*Does not account for height

Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

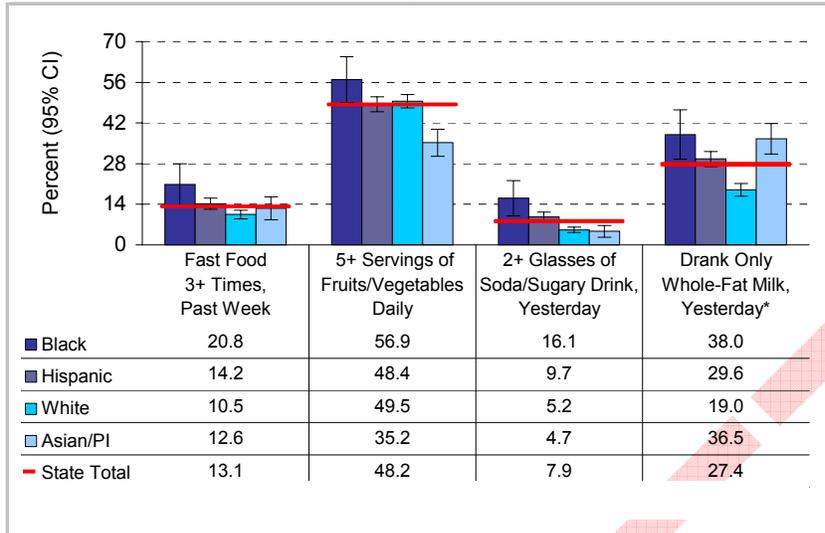
The factors contributing to overweight and obesity and chronic disease among U.S. children are multiple and complex, and include family history, health risk and protective behaviors, like diet and exercise, access to affordable healthy foods, and the built environment.^{64,65}

Diet (45)

In California in 2007, 13.1% of children ages 2-11 ate fast food on three or more occasions in the past week and 7.9% drank two or more glasses of soda or another sugary drink on the previous day. Only 48.2% of children ate five or more servings of fruit and vegetables on a daily basis, and 27.4% of children who drank milk drank whole-fat milk exclusively. Reported consumption of fast food, soda, and whole-fat milk, was higher among Black and Hispanic children compared with White children. Fast food and soda consumption was similar among Whites and Asian/Pis; however, like Blacks and Hispanics, Asian/PI children were more likely to drink whole-fat milk than Whites. Daily consumption of fruits and vegetables was higher among Black, Hispanic, and White children than among Asian/PI children ([Figure 45](#)).

Figure 45. Diet

Percent (95% CI) of children ages 2 through 11, by race/ethnicity, 2007



*Among children who drink milk

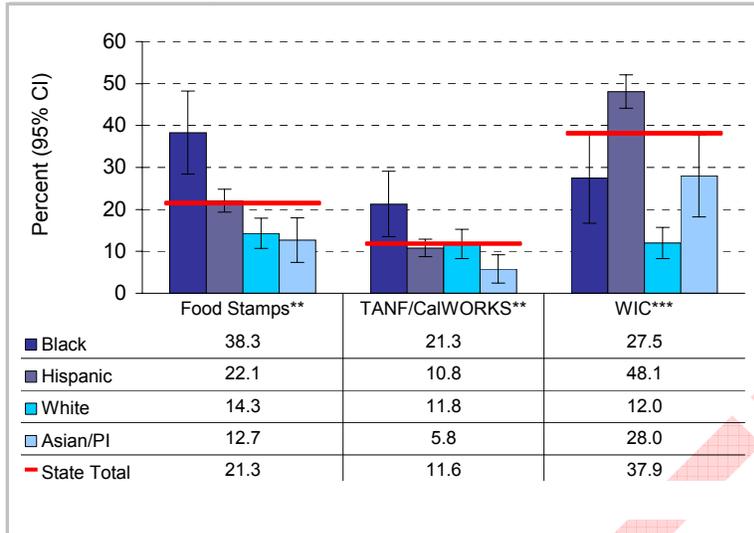
Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

Unfortunately, cheaper foods are often higher in sugar and fat and dietary choices may be driven by what families can afford. Many families with children in California qualify for assistance programs, which may increase access to and affordability of nutritious foods. In 2007, 21.3% of children ages 1-11 were on food stamps, and 11.6% were receiving assistance from TANF/CalWORKS. In 2003, 37.9% of children ages 1-6 were on WIC. Use of food stamps was more common among Black and Hispanic children compared with White and Asian/PI children. Blacks were more likely than other racial/ethnic groups to be on TANF/CalWORKS. WIC was more common among Hispanic children than all other racial/ethnic groups. However, Black and Asian/PI children were also more likely to be on WIC than Whites ([Figure 46](#)).

Figure 46. Public Assistance Programs

Percent of children ages 1 through 11*, by race/ethnicity, 2003 or 2007



*Unless noted otherwise

**Among children with annual family income ≤ 300% of the FPL, 2007

***Among children 1-6 years old, 2003

Data source: California Health Interview Survey (CHIS)

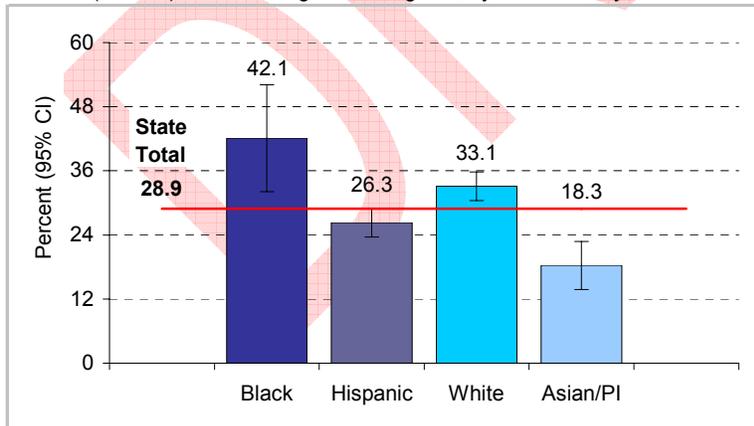
Notes: PI = Pacific Islander; TANF = Temporary Assistance for Needy Families (TANF);

WIC = Women, Infant, and Children Supplemental Food Program

At the individual level, obesity is the result of an imbalance between caloric intake and the calories a child uses to support growth, development, metabolism, and physical activity.^{64Error!}
Bookmark not defined. In California in 2007, only 28.9% of children ages 5-11 were physically active for at least one hour every day in the past week, excluding physical education classes at school. Physical activity was more common among Black (42.1%) and White (33.1%) children, compared with Hispanic (26.3%) and Asian/PI (18.3%) children (Figure 47).

Figure 47. 1 Hour Physical Activity Every Day, Past Week*

Percent (95% CI) of children ages 5 through 11, by race/ethnicity, 2007



*Excluding physical education at school

Data source: California Health Interview Survey (CHIS)

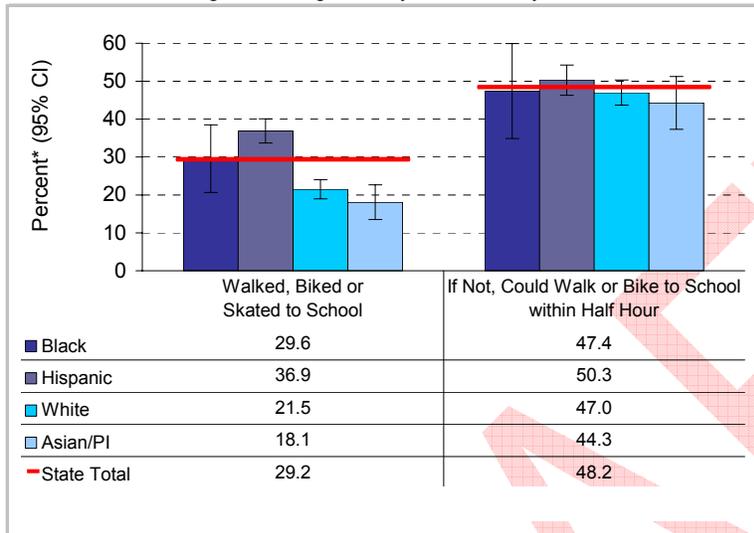
Notes: PI = Pacific Islander

Health behaviors, like physical activity, are shaped by the built environment surrounding where children live, play, and learn. For instance, many children do not live within walking or biking distance from school, which would facilitate daily physical activity. In 2007, only 29.2% of

children ages 1-11 who attended school walked, biked, or skated to school. Hispanic children were more likely (36.9%) than Whites (21.5%) and Asian/PIs (18.1%) to walk, bike, or skate to school (Figure 48). The prevalence among Black children was 29.6%. Among those who did not walk, bike, or skate to school, approximately half of parents (48.2%) indicated it was possible for their child to do so within a half hour. Proximity to school did not differ according to race/ethnicity.

Figure 48. Walking, Biking or Skating to School

Percent of children ages 1 through 11*, by race/ethnicity, 2007



*Among children who attended school

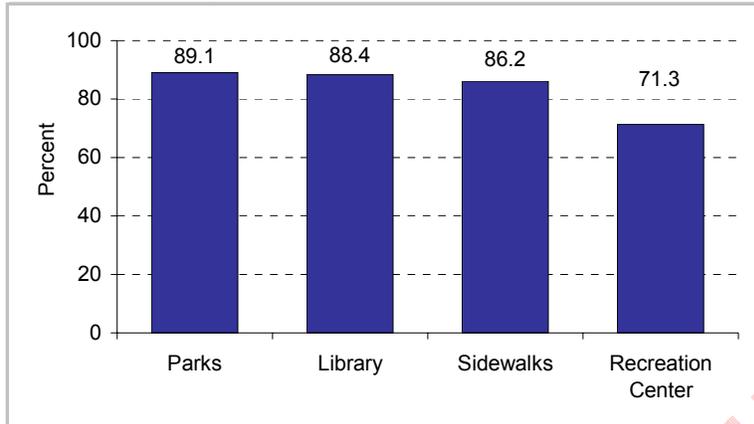
Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

Neighborhood amenities, like parks, recreational centers, and libraries, provide children with opportunities for recreation, education, and socialization. Other characteristics, like sidewalks, promote walkable neighborhoods and may prevent injuries.⁶⁵^{Error! Bookmark not defined.}⁶⁶ In 2007, 89.1% of children ages 0-17 had a park in their neighborhood, 88.4% had a library, 86.2% had sidewalks, and 71.3% had a recreational center (Figure 49a). However, only 62.3% of children had all four amenities. Furthermore, only 52.5% of Hispanic children had all four amenities, which was less than other racial/ethnic groups (Figure 49b).

Figure 49a. Neighborhood Amenities

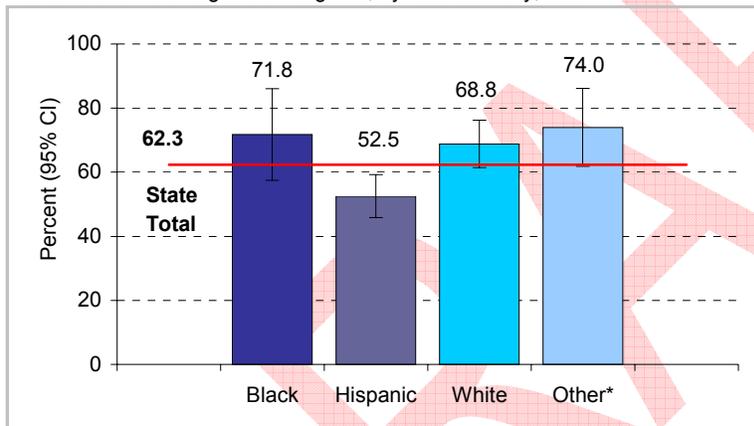
Percent of children ages 0 through 17, 2007



Data source: National Survey of Children's Health

Figure 49b. Neighborhood Amenities

Percent of children ages 0 through 17, by race/ethnicity, 2007



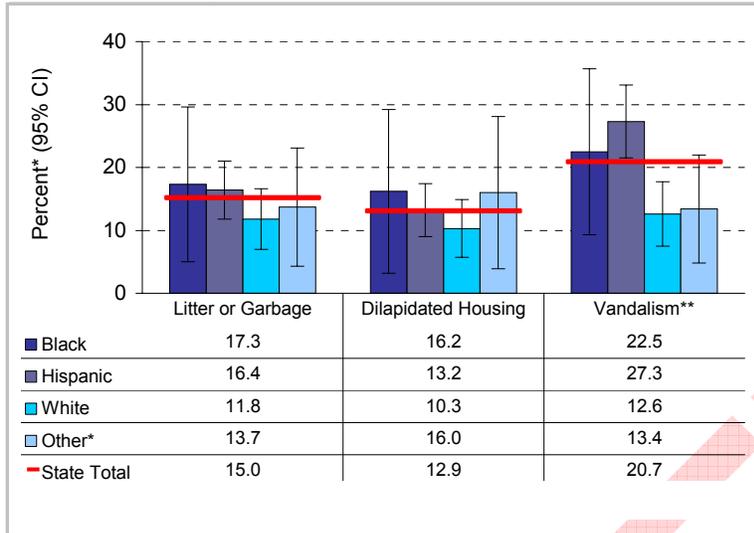
*Other non-Hispanic, excludes multiple races

Data source: National Survey of Children's Health (NSCH)

Even if a neighborhood has amenities like parks and recreational centers, other characteristics, such as litter, dilapidated housing, broken windows, and graffiti, can discourage activity and socialization within a community and contribute to crime and violence. Indeed, a neighborhood's physical aspects have been linked to health status and neighborhood poverty linked to health disparities.⁶⁷ In 2007, 15.0% of children ages 0-17 lived in neighborhoods with litter or garbage, 12.9% lived in neighborhoods with dilapidated housing, and 20.7% lived in neighborhoods where there was vandalism (Figure 50). The confidence intervals around the estimates for litter and dilapidated housing by race/ethnicity were wide and no differences between racial/ethnic groups were observed. However, Hispanic children (27.3%) were more likely than White children (12.6%) to live in neighborhoods where there was vandalism.

Figure 50. Detracting Neighborhood Characteristics

Percent of children ages 0 through 17, by race/ethnicity, 2007



*Other non-Hispanic, excludes multiple races

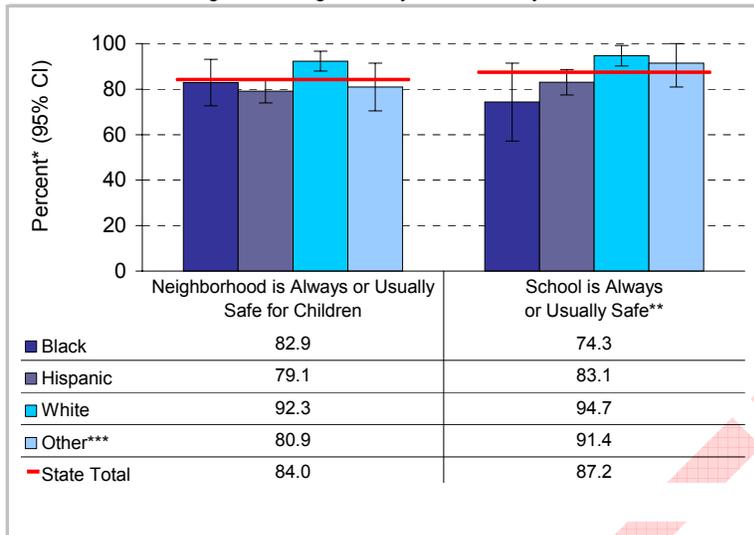
**Such as broken windows or graffiti

Data source: National Survey of Children's Health (NCHS)

Neighborhood crime and violence also discourage socialization and physical activity within a community, and lead to chronic stress. It is thought that repeated stress leads to wear and tear on the body's adaptive system, contributing to poorer health status over the life course. Furthermore, fetal exposure to maternal stress in utero is thought to affect birth outcomes and contribute to health problems later in life.⁶⁸ In 2007, 84.0% of children ages 0-17 lived in neighborhoods that their parents thought were always or usually safe for children, and 87.2% went to a school that their parents thought was always or usually safe. Hispanic children were less likely than White children to live in neighborhoods and go to schools that were perceived as always or usually safe ([Figure 51](#)).

Figure 51. Neighborhood and School Safety

Percent of children ages 0 through 17*, by race/ethnicity, 2007



*Unless noted otherwise

**Among children 6-17 years old who were enrolled in school

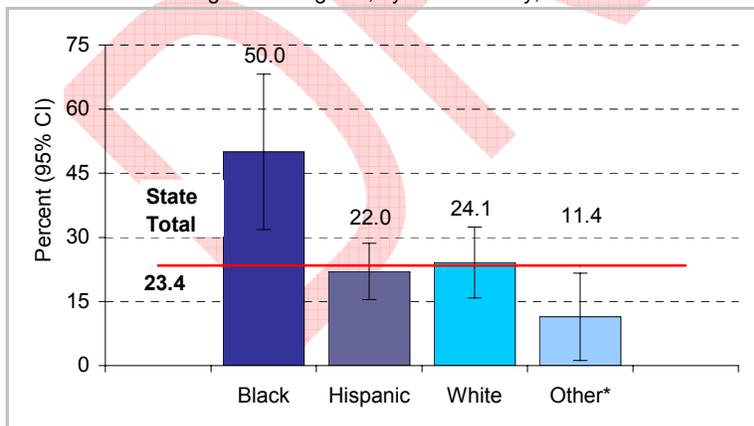
***Other non-Hispanic, excludes multiple races

Data source: National Survey of Children's Health (NCHS)

Engagement at school and participation in organized activities outside of school contribute to children's physical, social, and mental development.⁶⁹ In 2007, when parents were asked about their child caring about doing well in school and doing all of his or her homework in the past month, 23.4% of children ages 6-17 were categorized as never, rarely, or sometimes (as opposed to usually or always) engaged at school. Lack of engagement at school was higher among Black children (50.0%), compared with Hispanics (22.0%), Whites (24.1%), and children of other races/ethnicities (11.4%) ([Figure 52](#)).

Figure 52. Never, Rarely, or Sometimes Engaged at School

Percent of children ages 6 through 17, by race/ethnicity, 2007



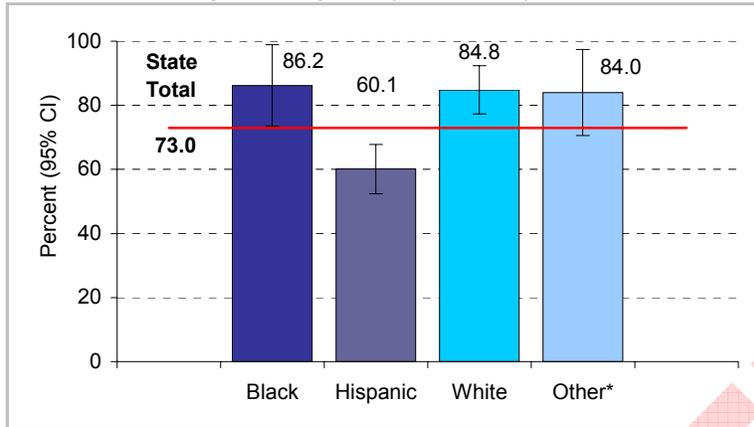
*Other non-Hispanic, excludes multiple races

Data source: National Survey of Children's Health (NSCH)

In 2007, 73.0% of children ages 6-17 participated in one or more organized activities, such as sports or clubs, outside of school. Hispanic children (60.1%) were less likely to participate in extracurricular activities compared with Blacks (86.2%), Whites (84.8%), and children of other races/ethnicities (84.0%) ([Figure 53](#)).

Figure 53. Participated in Extracurricular Activities

Percent of children ages 6 through 17, by race/ethnicity, 2007



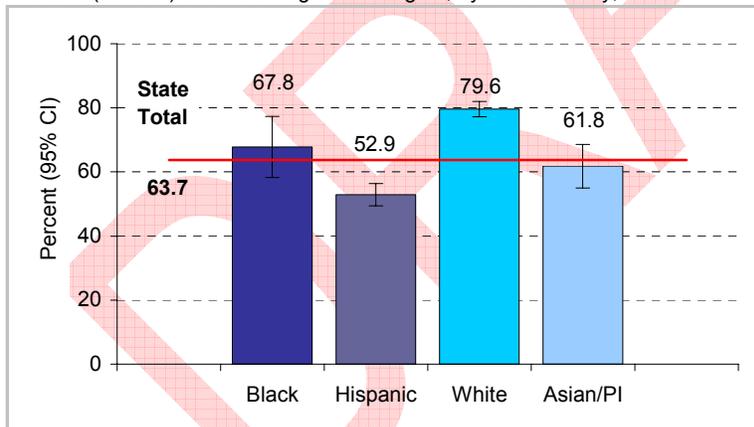
*Other non-Hispanic, excludes multiple races

Data source: National Survey of Children's Health (NSCH)

Children are more likely to overcome challenges when parents provide a strong and safe base of support. Activities such as singing and reading to children stimulate cognition and voice recognition.⁷⁰ In 2007, 63.7% of children ages 1-5 were read to by a parent or family member every day in a usual week. Daily reading was higher among White children (79.6%), compared with Black (67.8%), Asian/PI (61.8%), and Hispanic (52.9%) children ([Figure 54](#)).

Figure 54. Read to Every Day

Percent (95% CI) of children ages 1 through 5, by race/ethnicity, 2007



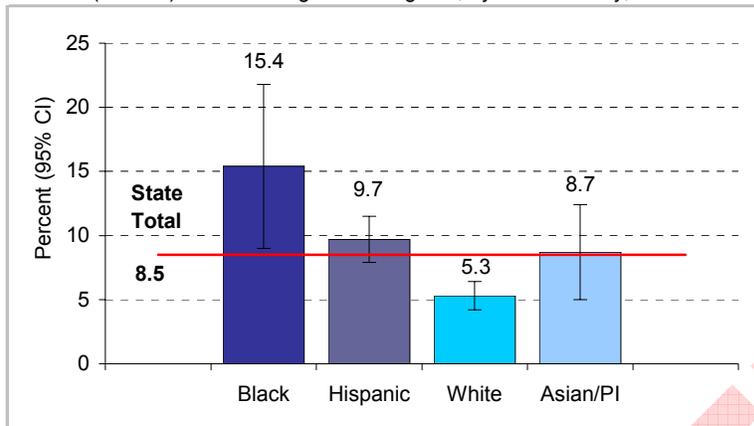
Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

Children today live in a media-centric culture. Unfortunately, media outlets can detract from other activities, such as reading and physical activity. Furthermore, television, movies, and increasingly, the internet, have profound impacts on child development and health risk behaviors. For instance, smoking and violence in the media have been linked to tobacco use and aggression in real life.^{71,72} In 2005, 8.5% of children ages 3-11 spent 4 or more hours engaged with television or video games on an typical weekday, and 50.5% consumed 2 or more hours. Black (15.4%) and Hispanic (9.7%) children were more likely to consume 4 or more hours, compared with White children (5.3%). The prevalence among Asian/PI children was 8.7% ([Figure 55](#)).

Figure 55. ≥ 4 Hours of Television on Average Weekday

Percent (95% CI) of children ages 3 through 11, by race/ethnicity, 2005



Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander

Adolescent Health

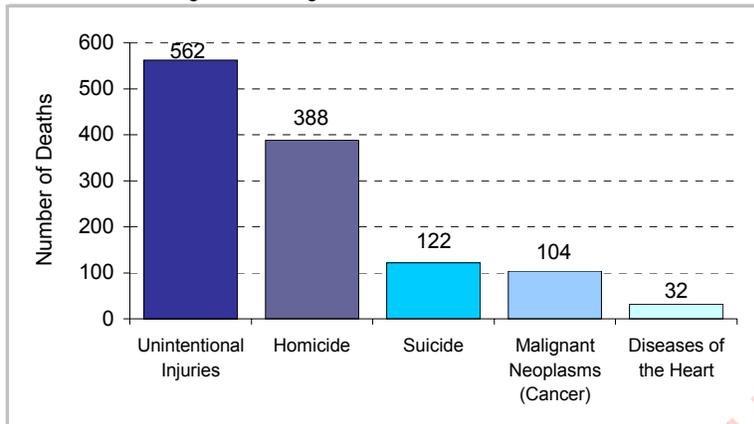
During adolescence new opportunities and vulnerabilities arise that can impact current and future health in areas such as injury, sexual and reproductive health, substance use, and nutrition and physical activities. These seemingly isolated health issues are influenced by common antecedent factors that can either protect or jeopardize adolescent development. The availability of supportive relationships and environments fosters the development of resilience, which influences health. While the cumulative effects of the earlier life stages may have already impacted the health status of adolescents, this sensitive period of physical, psychological, and social change presents opportunities to shift the life span trajectories away from risk and towards greater health.

Adolescence is a period of transition from childhood to adulthood marked by increasing independence and responsibility. For both young men and women, adolescence marks the beginning of the reproductive period, which requires attention to reproductive life planning. For young women in particular, the impacts of adolescent health status, conditions, and behaviors, as well as the broader context that shapes these factors, must be considered in relation to a potential pregnancy.

Injuries, both unintentional and violent, are responsible for a substantial portion of deaths among adolescents. In California in 2007, the leading cause of death for adolescents ages 15-19 was unintentional injuries (n = 562), followed by homicide (n = 388), suicide (n = 122), cancer (n = 104), and diseases of the heart (n = 32) ([Figure 56](#)). Although the rate of death among adolescents ages 15-19 decreased from 78.7 per 100,000 in 1995 to 51.8 per 100,000 in 2000, there has been an increase since then, to 56.8 in 2006, putting California further away from reaching the HP 2010 objective of 39.8 per 100,000.

Figure 56. Leading Causes of Teen Death

Number of teens ages 15 through 19, 2007



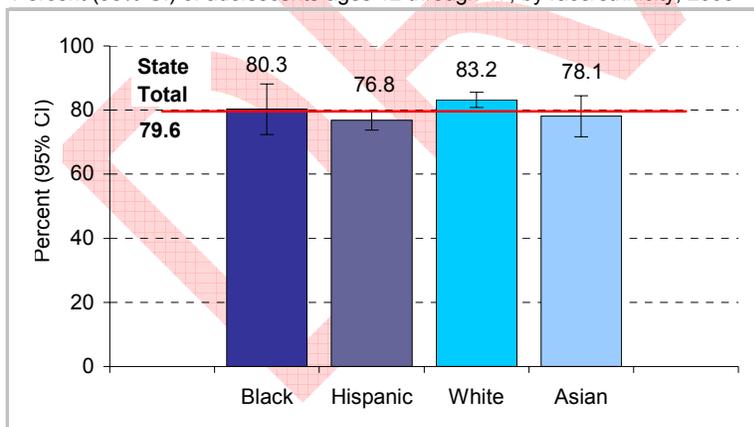
Data source: kidsdata.org

<http://www.kidsdata.org/data/topic/Dashboard.aspx?cat=49> Accessed 4/22/10

In 2007, motor vehicle crashes accounted for 71% of all fatal unintentional injuries among adolescents,⁴⁸ many of whom are learning to drive or riding in cars with friends who are novice drivers. Being a newly licensed teen driver is, in itself, a risk factor for teen crashes.⁷³ Nevertheless, motor vehicle crashes involving teens are preventable. For instance, compared with other age groups, teens have the lowest rate of seat belt use.⁷³ The HP 2010 objective is to increase the use of safety belts among drivers of all ages to 92%. In California in 2003, the percent of 12-17 year olds who reported always wearing a seat belt was only 79.6%. Whites reported the highest rate of always wearing a safety belt (83.2%), compared with Hispanics (76.8%). The rates among Blacks and Asians were 80.3% and 78.1%, respectively ([Figure 57](#)).

Figure 57. Always Uses a Seat Belt when Riding a Car

Percent (95% CI) of adolescents ages 12 through 17, by race/ethnicity, 2003



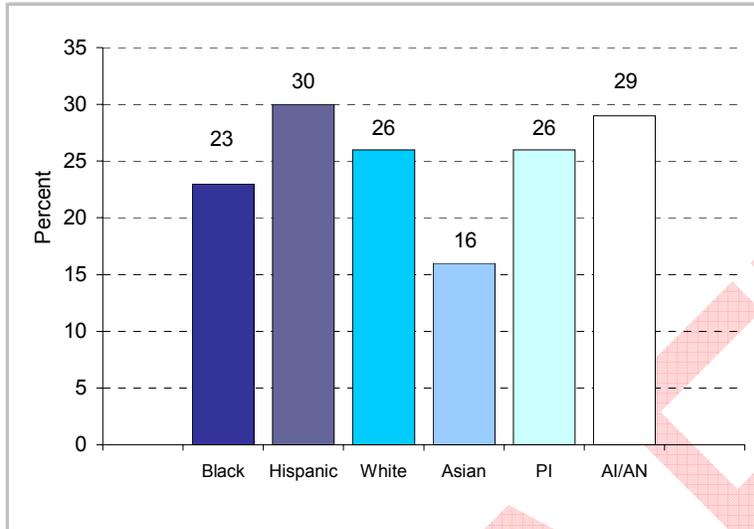
Data source: California Health Interview Survey (CHIS)

Furthermore, drugs and alcohol contribute to crashes involving adolescents. An estimated 25% of teen drivers who die in motor vehicle crashes have a blood alcohol level above 0.08.⁷³ During 2006-2008, 29% percent of 11th graders in California reported they had driven a car after drinking alcohol or that they had been in a car with someone who had been drinking. Among students in the 9th and 11th grades, Asians reported the lowest prevalence of riding/driving when drinking (16%). Hispanics had the highest prevalence (30%) followed by

AI/ANs (29%), Whites (26%), PIs (26%), and Blacks (23%) (Figure 58). The HP 2010 objective is to reduce the proportion of adolescents who report they rode with a driver who had been drinking alcohol in the past 30 days to 30%.

Figure 58. Youth Driving and Riding Under the Influence

Percent of students in grades 9 and 11, 2006-2008



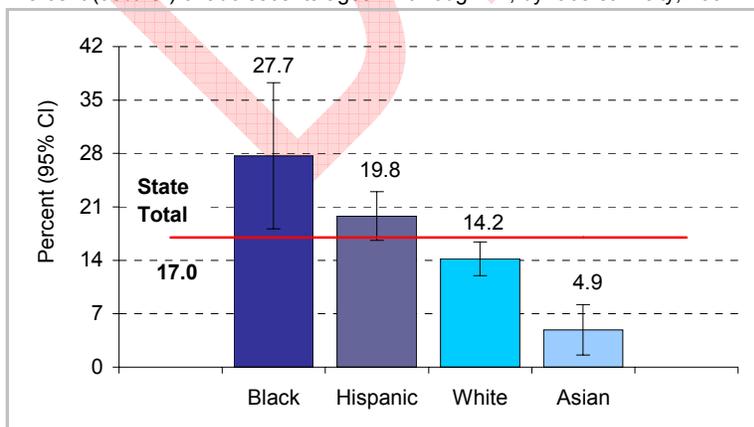
Data source: California Healthy Kids Survey (CHKS)

Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

Homicide is the second leading cause of death among adolescents, and an even greater number of youth in California have experienced injury and psychological trauma as a result of physical violence. In 2007, 17.0% of 12-17 year olds reported having been in at least one physical fight during the past 12 months. Asian youth were less likely to report fighting (4.9%), compared with Whites (14.2%). Both Asian and White teens reported less fighting than Hispanic (19.8%) and Black (27.7%) teens (Figure 59). Carrying a weapon at school increases the risk that physical fights on school grounds or after school will result in serious injury or death. During 2007-2008, 13.1% of 11th graders in California reported carrying a weapon on school property in the past 12 months.⁷⁴

Figure 59. In at Least One Physical Fight in Past Year

Percent (95% CI) of adolescents ages 12 through 17, by race/ethnicity, 2007

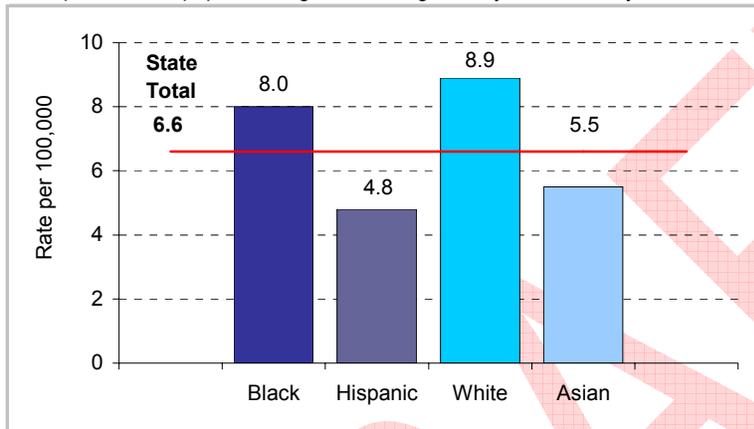


Data source: California Health Interview Survey (CHIS)

Suicide is the third leading cause of death among adolescents in California. In 2008, the suicide rate for 15-24 year olds was 6.6 per 100,000. Young males were more likely to die from suicide than females (10.1 and 3.0, respectively), as were Black and White youth (8.0 and 8.9, respectively), compared with Hispanics and Asians (4.8 and 5.5, respectively) (Figure 60). Furthermore, an even greater number of suicides are attempted by adolescents in California. During 2006-2008, the percent of students who attempted suicide in the past 12 months was 12% among students in the 9th grade and 11% among students in the 11th grade.⁷⁵ The HP 2010 objective is to reduce the rate of suicide attempts by adolescents in the 9th through 12th grades in the past year to 1%.

Figure 60. Suicide Deaths

Rate per 100,000 population ages 15 through 24, by race/ethnicity, 2008



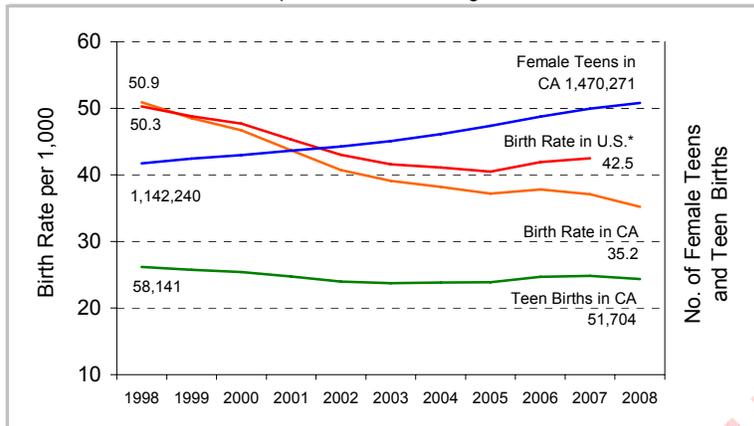
Data source: Center for Health Statistics, California Department of Public Health
<http://www.applications.dhs.ca.gov/vsq/default.asp> Accessed 5/5/10

Adolescence marks the beginning of the reproductive period. The development of a reproductive life plan and the adoption of protective attitudes and behaviors during this period can positively impact lifelong sexual and reproductive health for both men and women, which in turn positively impacts MCAH outcomes for the next generation.^{21,33}

Teenaged childbearing is associated with health and social risks for both mothers and infants.^{76,77} In California, birth rates have declined for teens ages 15-19, from 50.9 per 1,000 in 1998 to 35.2 in 2008. California's teen birth rate has also remained below the national rate over the past decade. Nevertheless, the decline in the teen birth rate in California is largely due to the steady increase in the size of the female teen population, as opposed to substantial decreases in the number of teen births (Figure 61a).

Figure 61a. Teen Births and Teen Population in California

Teens, births, and birth rate per 1,000 females ages 15-19, 1998-2008



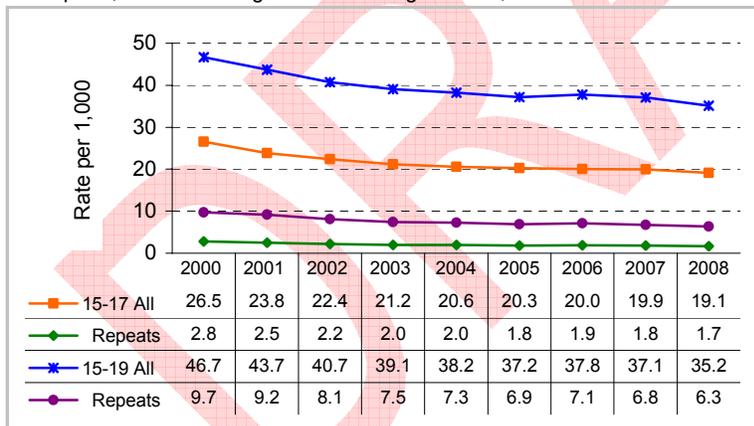
*In 2007, data for 2008 not available

Data sources: Birth Statistical Master File (BSMF); California Department of Finance, Race/Ethnic Population with Age and Sex Detail, 1990-1999. Sacramento, CA, May 2004; California Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2050. Sacramento, CA, July 2007; National Vital Statistics Report, Vol. 57, No. 7, January 7, 2009; Births: Preliminary Data for 2007. National Vital Statistics Report, Vol. 57, No. 12, March 18, 2009

The teen birth rate has also declined among younger teens, who are at greater risk of outcomes like premature labor, anemia, and high blood pressure.^{78,79} Between 2000 and 2008, the birth rate per 1,000 females ages 15-17 declined from 26.5 to 19.1 (Figure 61b).

Figure 61b. Teen Births and Repeat Teen Births

Rate per 1,000 females ages 15-17 and ages 15-19, 2000-2008

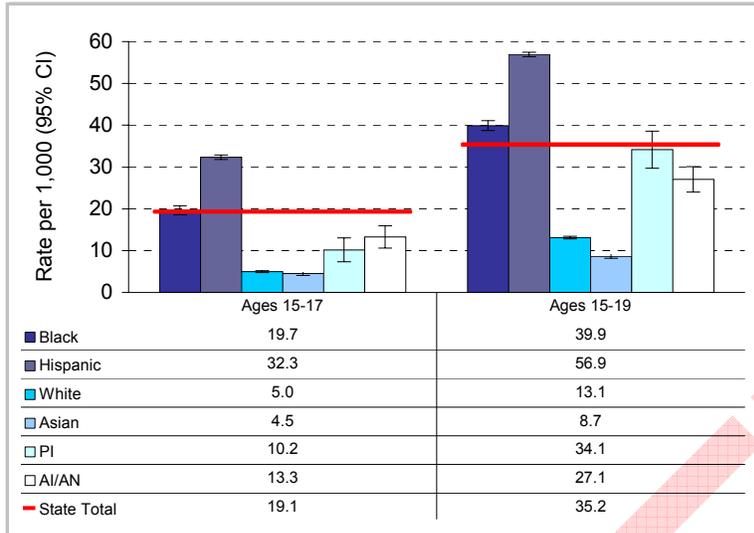


Data source: Birth Statistical Master File (BSMF); State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000-2050*. Sacramento, California, July 2007

Among all teens and among younger teens, Hispanics have the highest teen birth rates, followed by Blacks, whereas White and Asian teens have the lowest teen birth rates. In 2008, the Hispanic teen birth rate for females ages 15-17 (32.3) was over 7 times higher than the rate among Asians (4.5) (Figure 61c).

Figure 61c. Teen Births

Rate per 1,000 females (95% CI), by race/ethnicity, 2008



Data source: Birth Statistical Master File (BSMF); State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000-2050*. Sacramento, California, July 2007

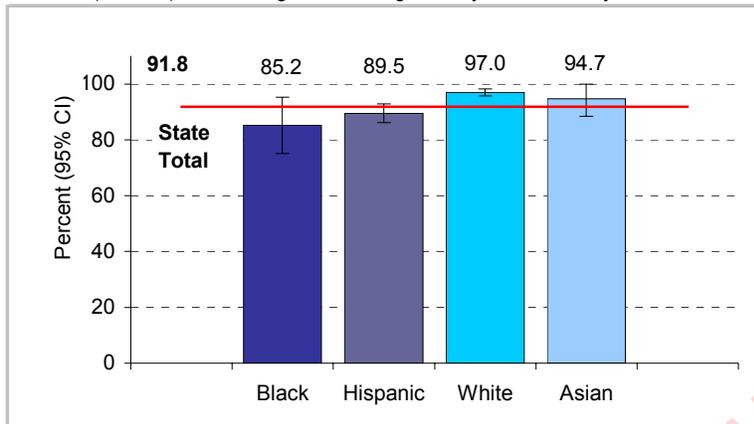
Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

Births to teens that are already mothers, or repeat teen births, compound problems associated with teenaged childbearing.⁸⁰ Factors associated with an increased risk of repeat teen birth are lower cognitive ability⁸¹ and wanting the first birth,⁸² while factors that reduce risk include delaying onset of sexual activity,⁸¹ initiating long-acting contraception,⁸³ and continuing school attendance following the first birth.⁸⁴ The declining trends over time and differences by race/ethnicity described above for all teen births were also observed among repeat births ([Figure 61b](#)).

One recent study found that risk of pregnancy among U.S. adolescents is decreasing; 86% of the decline was attributed to increased use of contraceptives, while 14% was due to increased abstinence.⁸⁵ In California in 2007, 91.8% of teens ages 15-17 reported they did not have sexual intercourse before age 15. Girls were more likely to abstain from sex until they were 15 years old (94.0%), compared with boys (89.8%); as were White teens (97.0%) compared with Hispanics (85.2%) and Blacks (89.5%) ([Figure 62](#)).

Figure 62. Had Not Had Sexual Intercourse by Age 15

Percent (95% CI) of teens ages 15 through 17, by race/ethnicity, 2007

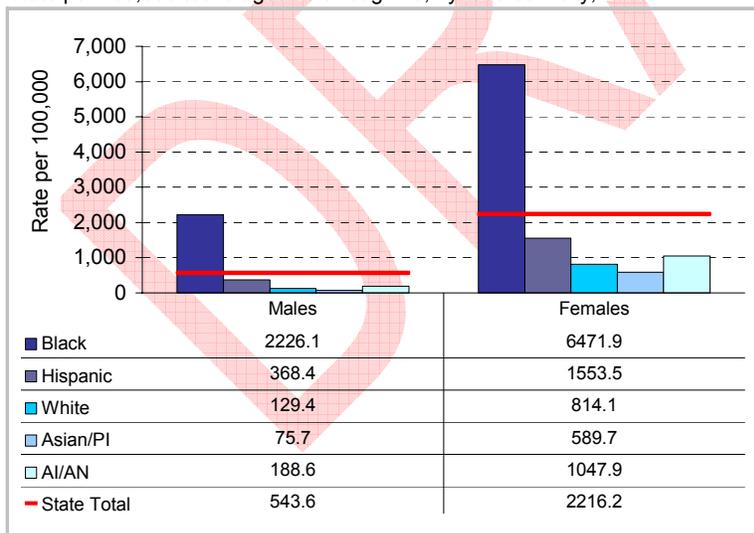


Data source: California Health Interview Survey (CHIS)

Sexually transmitted infections (STI) can have lifelong impact on health, and certain STIs, such as Chlamydia and Gonorrhea, can lead to reduced fertility. In 2009, the rate of Chlamydia among 15-19 year olds was 1362.5 per 100,000 population. Girls had a much higher rate of Chlamydia infection (2216.2) than boys (543.6) (Figure 63a). This marked an increase from 2000, when the rate among girls was 2134.5 and the rate among boys was 409.3.⁸⁶ Black girls ages 15-19 had the highest rate of Chlamydia (6471.9), followed by Hispanic and AI/AN girls (1553.5 and 1047.9, respectively), and White and Asian/PI girls (814.1 and 589.7, respectively). Similar trends in Chlamydia infection by race/ethnicity were observed among boys.

Figure 63a. Chlamydia Infection

Rate per 100,000 teens ages 15 through 19, by race/ethnicity, 2009



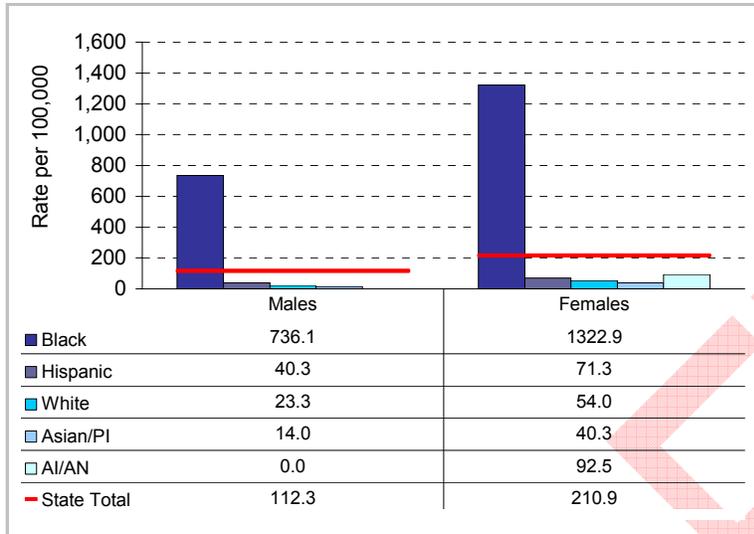
Data source: STD Control Branch, California Department of Public Health
<http://www.cdph.ca.gov/data/statistics/Pages/STDDDataTables.aspx> Accessed 6/3/10
Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

The rate of Gonorrhea increased steadily from 2000 (277.6 for girls, 107.8 for boys) through 2005 (374.6 for girls and 155.1 for boys), and has since decreased to 210.9 among girls and

112.3 among boys in 2009.⁸⁶Error! Bookmark not defined. Gonorrhea trends by race/ethnicity were similar to those observed for Chlamydia (Figure 63b).

Figure 63b. Gonorrhea Infection

Rate per 100,000 teens ages 15 through 19, by race/ethnicity, 2009



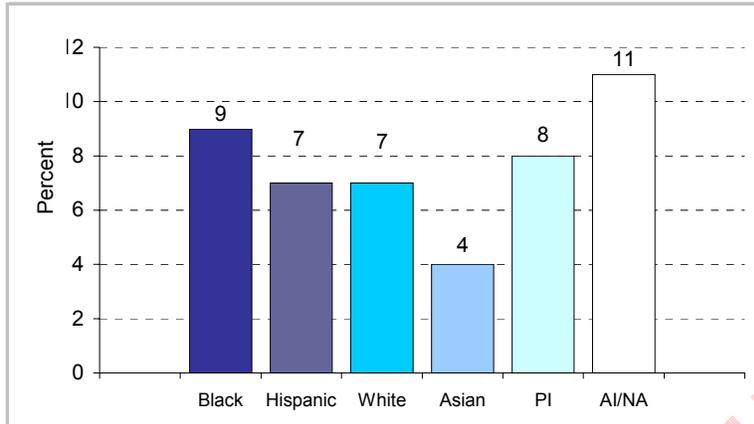
Data source: STD Control Branch, California Department of Public Health
<http://www.cdph.ca.gov/data/statistics/Pages/STDDDataTables.aspx> Accessed 6/3/10
 Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

In 2009, the primary and secondary Syphilis infection rate among 15-19 year olds was 2.3 (per 100,000). Boys had a higher rate of Syphilis infection (4.0) than girls (0.5). The Syphilis rate has increased since 2000, when it was 0.2 for boys and 0.3 for girls.⁸⁶Error! Bookmark not defined. Due to small numbers, rates are not presented by race/ethnicity. However, like Chlamydia and Gonorrhea, Syphilis rates appear to be higher among Black adolescents.

For some adolescents, early dating experiences involve partner violence. Intimate partner violence among youth is associated with increased sexual risk behavior and pregnancy.⁸⁷ During 2006-2008, 4% of students in the 7th grade reported their boyfriend or girlfriend hit, slap, or physically hurt them on purpose during the past 12 months. Reported IPV was higher among 9th and 11th graders (6% and 7%, respectively). Asian 9th and 11th graders had the lowest prevalence of IPV (4%), and American Indian/Alaskan Natives the highest (11%). Overall, 9% of Black, 7% of White, 7% of Hispanic, and 8% of Pacific Islander teens reported IPV (Figure 64). The percent of students who reported they had ever been forced to have sex when they did not want to was 10% for students in the 7th grade, 12% for students in the 9th grade, and 13% for students in the 11th grade.

Figure 64. Youth IPV in Past Year

Percent of students in grades 9 and 11, 2006-2008



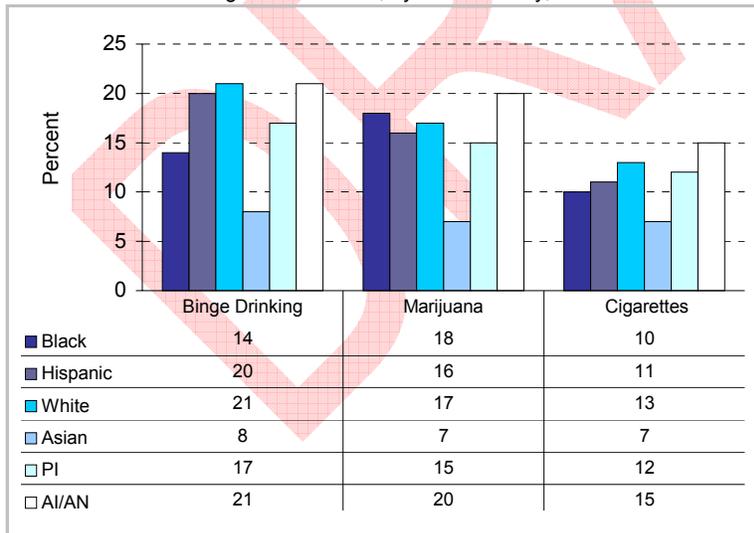
Data source: California Healthy Kids Survey (CHKS)

Notes: IPV = intimate partner violence; PI = Pacific Islander; AI/AN = American Indian/Alaska Native

Substance use in adolescence is associated with increased risk of a number of negative risks and outcomes such as injury, violence, and risky sexual behaviors.^{88,89} Among 11th grade students in California during 2006-2008, 18% reported marijuana use in the past 30 days. The prevalence among 9th and 7th graders was lower (12% and 5%, respectively). Among students in grades 9 and 11, Asians reported the lowest rate of marijuana use (7%) and AI/ANs reported the highest rate (20%), followed by Black (18%), White (17%), Hispanic (16%), and PI (15%) students, falling far short of the HP 2010 objective, which is to reduce the proportion of adolescents reporting marijuana use during the past 30 days to 0.7% ([Figure 65](#)).

Figure 65. Substance Use in Past 30 Days

Percent of students in grades 9 and 11, by race/ethnicity, 2006-2008



Data source: California Healthy Kids Survey (CHKS)

Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

During 2006-2008, 63% of 11th graders reported no alcohol consumption in the past 30 days. Abstinence was higher among younger students in the 7th and 9th grades (86% and 74%, respectively). Disconcertingly, when alcohol use did occur among 11th graders, it usually

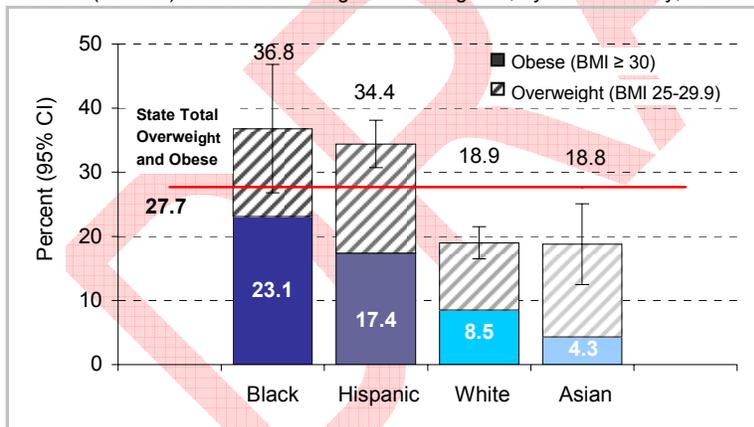
involved excessive consumption. During the same time period, 23% of all 11th graders reported binge drinking (consuming 5 or more drinks in a row) in the past 30 days. Asian students reported the lowest rate of binge drinking (8%), followed by Black (14%) and PI (17%) students. White, AI/AN, and Hispanic 9th and 11th graders reported the highest rates of binge drinking (21%, 21% and 20% respectively) ([Figure 65](#)).

A number of students in California also reported tobacco use. During 2006-2008, the percent of 11th graders who reported any cigarette use in the past 30 days was 14%, and lower among students in the 9th and 7th grades (9%, and 5%, respectively). Asian students in the 9th and 11th grades reported the lowest rate of cigarette use (7%), and American Indian/Alaskan Natives reported the highest rate (15%), followed by White (13%), PI (12%), Hispanic (11%), and Black (10%) students in the same grades ([Figure 65](#)).

Overweight and obesity in adolescence is a risk factor for chronic disease, such as diabetes, heart disease, and cancer in adulthood.^{90,91} In recent years, the age of onset of chronic disease, notably diabetes, has declined. When diabetes occurs during childhood, it is often assumed to be type 1, or juvenile-onset diabetes. However, increasingly, adolescents themselves are at risk of developing type 2 diabetes, formerly known as adult-onset diabetes.⁹² In 2007, 13.3% of 12-17 year olds were obese (above the 95% for BMI) and 27.7% were overweight or obese. Since 2001, there has been a marked increase in the disparity in obesity between Blacks and Whites. In 2001, at 10% and 15%, respectively, the obesity rates among White and Black 12-17 year olds were not statistically different. By 2007 the disparity grew, and obesity was much more common among Blacks (23.1%) compared with Whites (8.5%). In 2007, Hispanics also had a higher rate of obesity (17.4%) ([Figure 66](#)).

Figure 66. Overweight and Obesity

Percent (95% CI) of adolescents ages 12 through 17, by race/ethnicity, 2007



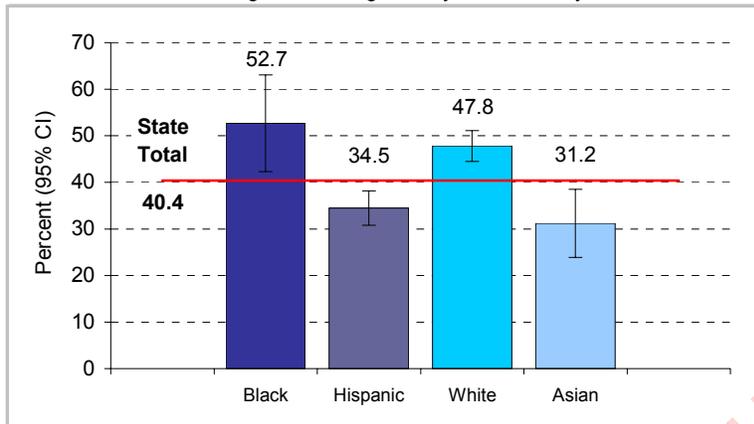
Data source: California Health Interview Survey (CHIS)

Notes: BMI = Body Mass Index

Physical inactivity among youth is associated with overweight and obesity during adolescence. In 2007, only 40.4% of 12-17 year olds in California reported 5 or more days of physically activity lasting at least one hour in a typical week. Asians (31.2%) and Hispanics (34.5%) were less likely to report physical activity compared with Blacks (52.7%) and Whites (47.8%) ([Figure 67](#)).

Figure 67. Physical Activity Lasting 1 Hour on 5+ Days

Percent of adolescents ages 12 through 17, by race/ethnicity, 2007



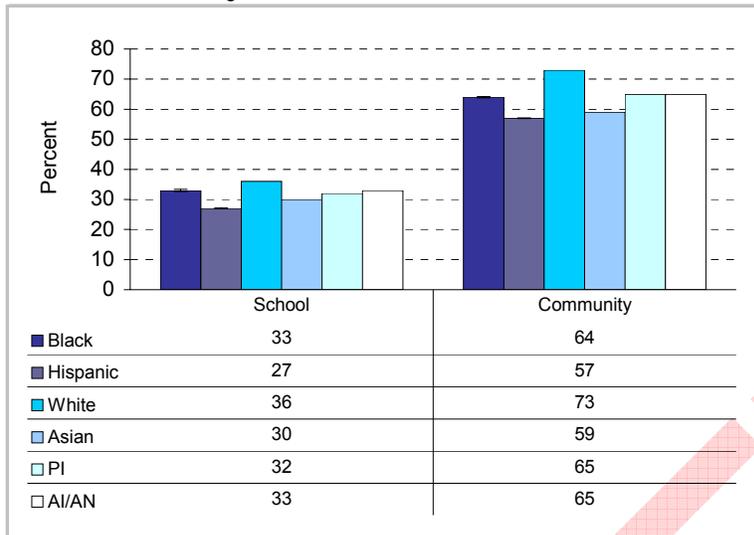
Data source: California Health Interview Survey (CHIS)

Establishing healthy diet and exercise patterns at this age is important because unhealthy habits developed during adolescence often carry over into adulthood. Furthermore, food insecurity is associated with overweight and obesity, as households affected by hunger often lack access to affordable healthy foods, and may rely on less nutritious foods to get by. Using pooled data from 2001-2007 from the California Health Interview Survey (CHIS), on average 17.1% of households with children in California were food insecure. The HP 2010 objective is to increase food security to 94% among U.S. households and in so doing reduce hunger.

Supportive relationships and environments at home and at school encourage healthy development and protect against many health risk behaviors in adolescents. The California Healthy Kids Survey (CHKS) provides a composite measure of protective relationships and environmental conditions (assets) at home, at school, and in the community perceived by adolescents. During 2006-2008, the percent of 11th graders scoring high in assets was 63% for the home environment, 33% for the school environment, and 63% for the community environment. There were disparities by race/ethnicity. For instance, White 9th and 11th graders scored highest in total assets in both school (36%) and community environments (73%), compared with school and community assets among Hispanics (27% and 57%, respectively), Asians (30% and 59%, respectively), Blacks (33% and 64%, respectively), PIs (32% and 65%, respectively), and AI/ANs (33% and 65%, respectively) ([Figure 68](#)).

Figure 68. Youth Resilience and Social Support*

Percent of students in grade 9 and 11, 2006-2008



*Percent of students who scored high on scale measuring student assets and support at school and in the community

Data source: California Healthy Kids Survey (CHKS)

Notes: PI = Pacific Islander; AI/AN = American Indian/Alaska Native

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DRAFT

HEALTH INSURANCE AND HEALTH CARE UTILIZATION

The population data presented in this section describe health insurance status, and utilization of and barriers to medical, dental, and mental health care among MCAH populations in California. These measures serve as outcome measures of the ability to reduce financial and other barriers to care, as well as measures of need for enabling services administered by MCAH and other partners in the overall MCAH system.

Health Insurance

Health insurance coverage plays an important role in influencing access to and utilization of health care among MCAH populations. Healthy People (HP) 2010 reinforces the importance of health insurance by promoting 100% insurance coverage of the population. In California, health insurance coverage falls short of this HP 2010 goal across different age groups and racial/ethnic groups. Most of the race/ethnicity insurance rate differences can be attributed to disparities in income.¹

Prior to the current recession, uninsurance rates showed a slight downward trend between 2001 and 2007.¹ In 2007, Whites were the least likely race/ethnicity to be uninsured (12.4%) and Latinos had the highest uninsurance rate at 29%.¹ Whites also had the lowest enrollment (6%) in public insurance programs, specifically Medi-Cal and Healthy Families (California's State Children's Health Insurance Program), compared with Asians (17%), Blacks (25%), Latinos (25%), and American Indians (25%).¹

Important changes in insurance coverage occurred between 2007 and 2009,^{1 2} when unemployment rates increased from 5.4% to 12.3% due to California's severe economic recession.³ Because the main source of insurance among non-elderly adults and children is through employment, this led to a corresponding drop in insurance coverage. It is estimated that nearly 2 million Californians lost their year-round health insurance coverage during this time.² This may have lasting effects as fewer Californians have regular, affordable access to preventive services and health care.

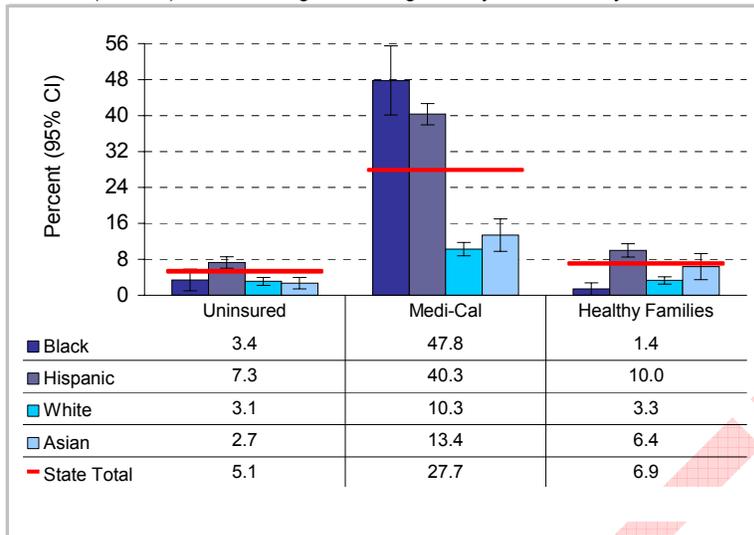
Children

[Figure 1a](#) displays insurance coverage rates for children ages 1-11 years in 2007. In 2007, 28% of children were covered by Medi-Cal, 7% were covered by Healthy Families, and 5% were uninsured. In total, approximately 300,000 children do not have health insurance.

Hispanics accounted for two thirds of all uninsured children in California and had the highest rate of uninsurance in this age group at 7%. The rate of uninsurance among White and Asian children was 3% in each group ([Figure 1a](#)). Among non-citizen children, 23% were uninsured and 37% were insured through Medi-Cal.

Figure 1a. Insurance Status of Children

Percent (95% CI) of children ages 1 through 11, by race/ethnicity, 2007



Data source: California Health Interview Survey (CHIS)

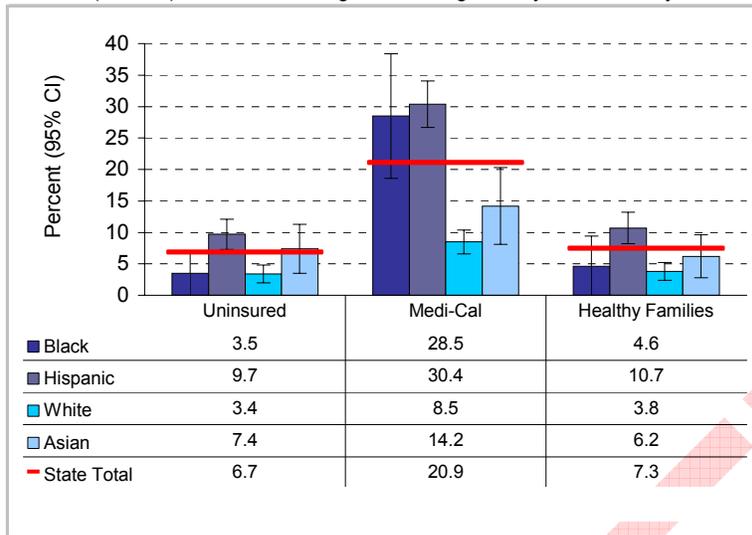
Public insurance is an important source of insurance coverage for children in several racial/ethnic groups in California. In 2007, nearly half of Black children were insured through Medi-Cal compared with Hispanics (40%), Asians (13%), and Whites (10%) (Figure 1a). Although not shown in Figure 2 because certain cell sizes were too small, Medi-Cal insurance was also high among American Indians/Alaska Natives (50%). Healthy Families insured 10% of Hispanic children, 6% of Asians, and 3% of Whites.

Adolescents

Among adolescents ages 12-17 years, 21% were covered by Medi-Cal in 2007, 7% were on Healthy Families, and 7% were uninsured (Figure 1b). Approximately 236,000 adolescents were not covered by health insurance. Hispanics had the highest rate of uninsurance among adolescents at 10%, compared with Asians (7%) and Whites (3%) (Figure 1b). Similar to children, a greater percentage of non-White adolescents were covered by public insurance programs compared with White adolescents. Nearly a third of adolescent Hispanics were insured through Medi-Cal, followed by Blacks (29%), Asians (14%), and Whites (9%). Healthy Families insured 11% of adolescent Hispanics, 6% of Asians, and 4% of Whites. Additionally, among non-citizen adolescents, 28% are uninsured, 34% are covered by Medi-Cal, and 11% are insured through Health Families.

Figure 1b. Insurance Status of Adolescents

Percent (95% CI) of adolescents ages 12 through 17, by race/ethnicity, 2007



Data source: California Health Interview Survey (CHIS)

Overall, Medi-Cal and Healthy Families insure a third of California's children and adolescents.⁴ In addition to these larger public insurance programs, the Children's Health Initiative (CHI) was developed in 2001 to promote access to public health insurance coverage. CHI created a new insurance product called Healthy Kids for children and adolescents who lack insurance but are ineligible for Medi-Cal and Healthy Families due to family income or immigration status. Healthy Kids programs are operated at the county level and funded through private and public partnerships. CHI also includes an outreach and enrollment component to increase enrollment in Medi-Cal, Healthy Families, and Healthy Kids.

Currently, 25 of the state's 58 counties have CHI programs and cover approximately 70,000 children; this is a decrease from the 30 counties that were participating in 2007. Similar to other public health insurance programs, enrollment in Healthy Kids began to decline in 2008 in response to reductions in funding.⁵ Error! Bookmark not defined.

In 2007 there were over half a million children and adolescents without insurance. This is a slight decrease from 2001.¹ However, due to the recent economic recession and loss of jobs in the state, 2009 estimates of insurance coverage indicate an increase in the rate of uninsurance during all or part of the year among youth ages 0-18 years.² While public insurance programs were able to mitigate part of the uninsurance rate increase for youth ages 0-18 years, these efforts were hindered in 2009 by a temporary enrollment freeze in Healthy Families. Healthy Families also suffered cuts to services and increases in enrollment fees and premiums in 2009.⁵ While these cuts were backfilled by other funding sources, the supplemental funds will expire in 2010. Further cuts and service reductions are expected in the upcoming state budget.⁶

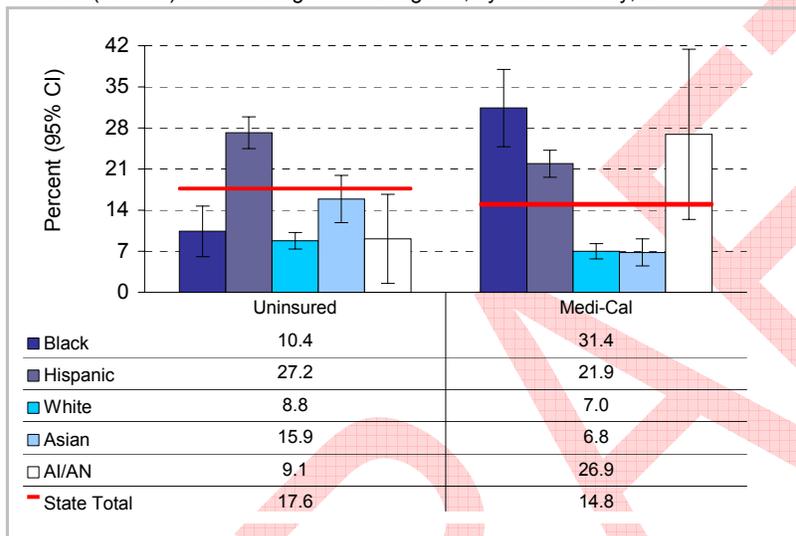
Proposed cuts to Medi-Cal will also impact population groups that rely on public insurance to enable access to health care services. In California, Hispanic populations are the fastest growing and are disproportionately dependent on Medi-Cal and Healthy Families. The anticipated cuts to the already shrinking public insurance programs in the state will result in negative impacts of increased uninsurance and a corresponding reduction in access to care for the most vulnerable populations.

Women of Reproductive Age

In 2007, 18% of reproductive aged women 15-44 years of age were uninsured and 15% were covered by Medi-Cal (Figure 1c). Hispanics of reproductive age had the highest percentage of uninsurance at 27%, substantially higher than uninsurance among Asians (16%), Blacks (10%), and Whites (9%) (Figure 1c). Nearly a third of Black women were covered by Medi-Cal, compared with 27% of American Indian women, 22% of Hispanics, 7% of Whites, and 7% of Asians.

Figure 1c. Insurance Status of Women of Reproductive Age

Percent (95% CI) of women ages 15 through 44, by race/ethnicity, 2007



Data source: California Health Interview Survey (CHIS)

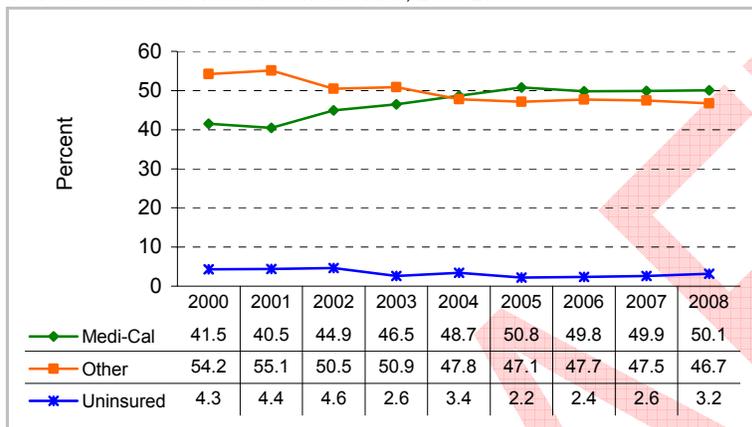
Among non-citizen women of reproductive age, 40% were uninsured.⁷ This encompasses over 660,000 women who are particularly vulnerable due to socioeconomic disadvantages and limited access to public programs. This figure likely underestimates the number of uninsured non-citizen women, due to low participation of undocumented women in health surveys. For undocumented women, neither Medi-Cal nor Healthy Families provides full-scope coverage.¹ However, Medi-Cal does cover all pregnant women regardless of documentation status if they meet financial requirements.

Pregnant and Post-Partum Women and Infants

Among California women with a recent live birth, insurance coverage during pregnancy was 96.8% in 2008, and has remained relatively stable since 2000 ([Figure 2a](#)). Approximately half of pregnancies in 2008 were covered by Medi-Cal, which includes a comprehensive set of pregnancy-related services. Although Medi-Cal adult benefits suffered cuts in 2009, coverage of pregnancy-related services for pregnant women has remained intact.⁸ From 2000 to 2008, Medi-Cal coverage during pregnancy increased from 41.5% to 50.1%, while other insurance coverage (including employer-based insurance) declined.

Figure 2a. Maternal Health Insurance During Pregnancy

Percent of mothers with a recent live birth, 2000-2008

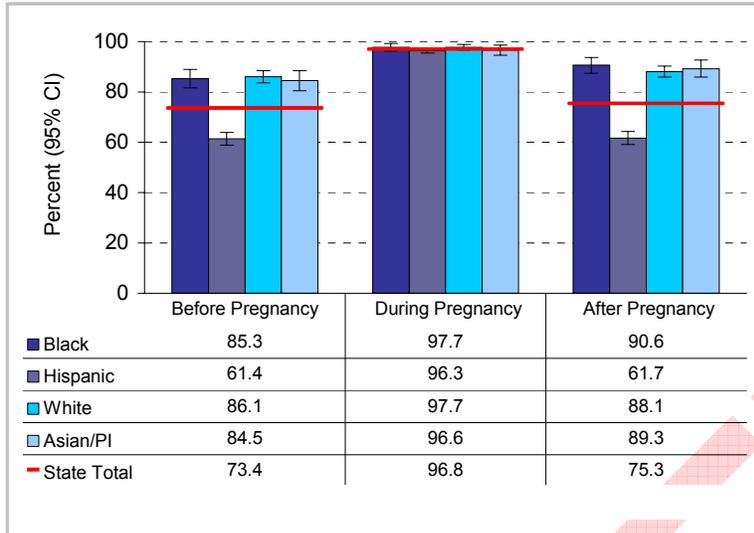


Data source: Maternal and Infant Health Assessment Survey (MIHA)

In 2008, 73.4% of women with a recent live birth reported having any kind of health insurance just before their most recent pregnancy. Due to expanded eligibility for public insurance during pregnancy, insurance coverage increased greatly during the prenatal period to nearly 100%. Health insurance coverage after pregnancy fell to near pre-pregnancy levels overall, though coverage gains were observed for some racial/ethnic groups ([Figure 2b](#)).

Figure 2b. Maternal Health Insurance

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008

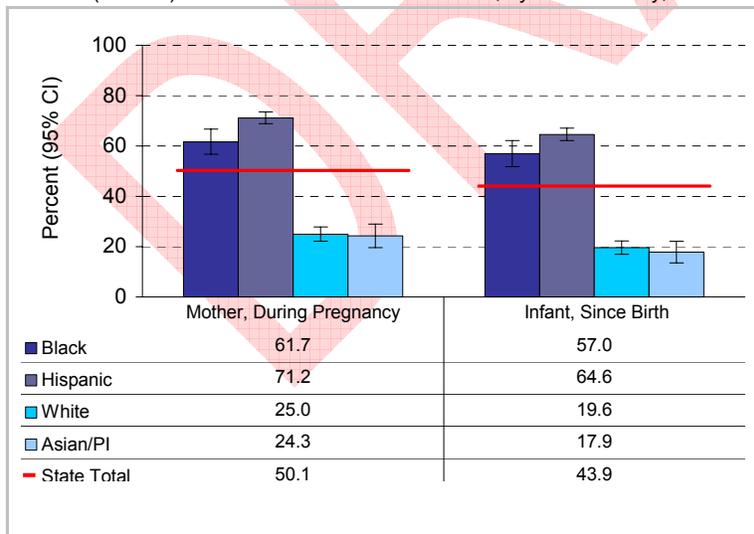


Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: PI = Pacific Islander

Hispanic women were the most likely to be without health insurance before and after their pregnancy, compared to other groups (Figure 2b). Unlike Hispanic women, the percent of Black, Asian/PI, and White women with insurance after pregnancy increased slightly compared to pre-pregnancy levels. The percent of women insured during pregnancy did not differ according to race, although Hispanic and Black women were more likely to report having Medi-Cal during pregnancy than other types of insurance compared with White and Asian/PI women (Figure 2c).

Figure 2c. Mothers and Infants on Medi-Cal

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: PI = Pacific Islander

In 2008, 4.1% of mothers reported their infant was uninsured, which was down from 6.7% in 2002. Between 2002 and 2008, Medi-Cal coverage for infants increased from 39.0% to 43.9%,

as did Healthy Families coverage (from 2.5% to 4.4%). Infants whose mothers were Black and Hispanic were more likely to be on Medi-Cal since birth, compared with infants whose mothers were White and Asian/PI ([Figure 2c](#)).

Many publicly available reproductive health and pregnancy-related services, however, are at risk of funding cuts or elimination. For pregnant women who do not meet the financial requirements of Medi-Cal, the Access for Infants and Mothers (AIM) program provides health insurance coverage during pregnancy and 60 days postpartum. AIM also provides coverage for infants of AIM mothers through automatic eligibility in Healthy Families. This public insurance program for lower income women and infants may be eliminated completely in the 2010-2011 state budget.

The Family Planning, Access, Care, and Treatment (Family PACT), California's Family Planning Medicaid Waiver Program provides access to family planning services for low-income men and women of reproductive age who may not be eligible for Medi-Cal and are uninsured. Family PACT serves approximately 1.6 million residents per year.⁹ Nearly two-thirds of clients are Latino, 20% are White, 6% are Black, 6% are Asian/Filipino/Pacific Islander, and 3% are Native American and other. Between 2004 and 2008, the number of clients served increased by 6-10% for each ethnicity/race.⁹

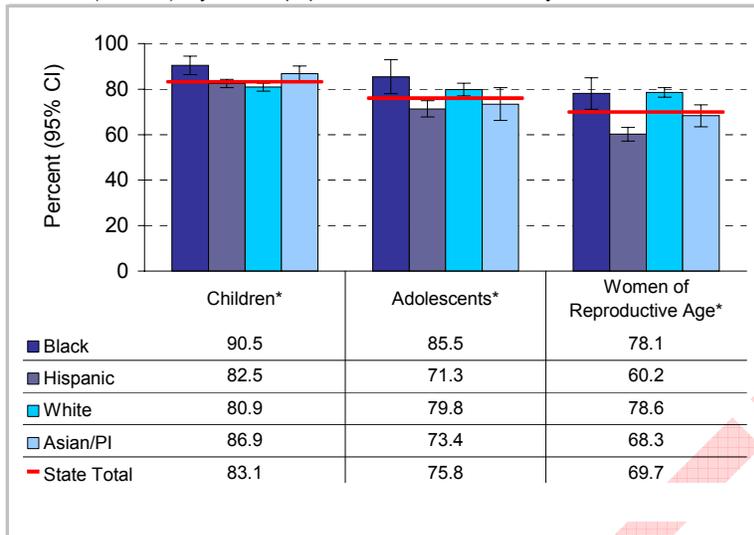
Dental Insurance

Californians without dental insurance are less likely to visit dentists and dental hygienists for checkups and more likely to report unmet dental needs and delayed visits.¹⁰ Among children age 1-11 years, 83% were covered by dental insurance ([Figure 3](#)). Coverage dropped to 76% among adolescents and 69.7% among women of reproductive age. Among children, dental insurance was most common among Blacks (91%) and Asian/Pis (87%), compared with White (81%) and Hispanic (83%) children. Among both adolescents and women of reproductive age, dental insurance was more common among Blacks and Whites, and less common among Hispanics and Asian/Pis. Data on dental insurance is not available among recent mothers in California.

Denti-Cal, California's Medicaid dental program, is the primary payer of dental care for approximately 8.5 million Californians, and dental care reimbursed by Denti-Cal is mostly provided in community clinics or group practices.¹¹ While most adult dental benefits were eliminated July 1, 2009, Denti-Cal remains an important source of dental care for medically underserved children. Despite these cuts, recent funding from the American Recovery and Reinvestment Act (ARRA) provides the opportunity to increase Denti-Cal reimbursement rates or restore Denti-Cal adult coverage.¹¹

Figure 3. Dental Insurance

Percent (95% CI), by MCAH population and race/ethnicity, 2007



*Children ages 1-11; adolescents ages 12-17; women of reproductive ages 18-44

Data source: California Health Interview Survey (CHIS)

Notes: Question measured current dental insurance among children and adolescents, and dental insurance in the past year among women of reproductive age

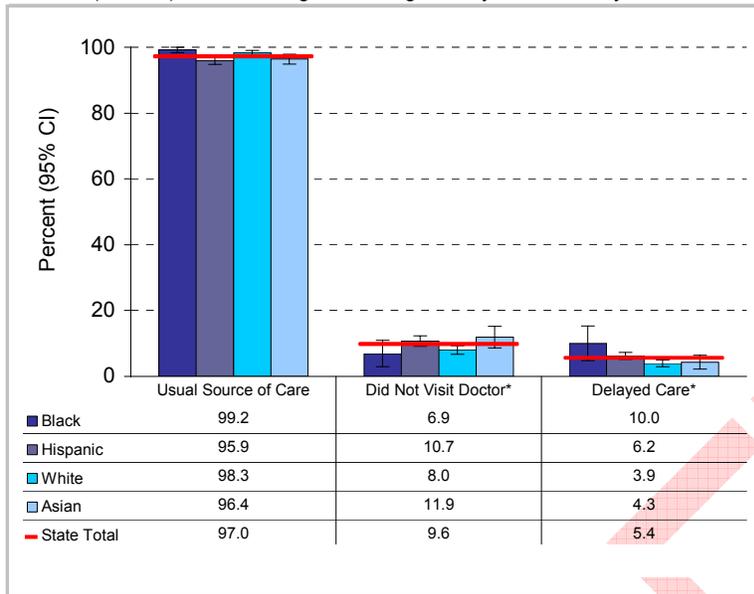
Health Care Utilization

Children

Overall, children have the highest rates of all MCAH groups in access to and utilization of medical care in California. In 2007, among children ages 1-11, 97% had a usual source of health care, 91% visited a doctor in the past year, and 95% received care when needed in the past year. No substantial differences were observed between racial/ethnic groups in having a usual source of care or doctor visit in the last year. Black children more commonly experienced delayed care due to cost than White. ([Figure 4a](#)).

Figure 4a. Health Care Utilization among Children

Percent (95% CI) of children ages 1 through 11, by race/ethnicity, 2007



*Within in the past year

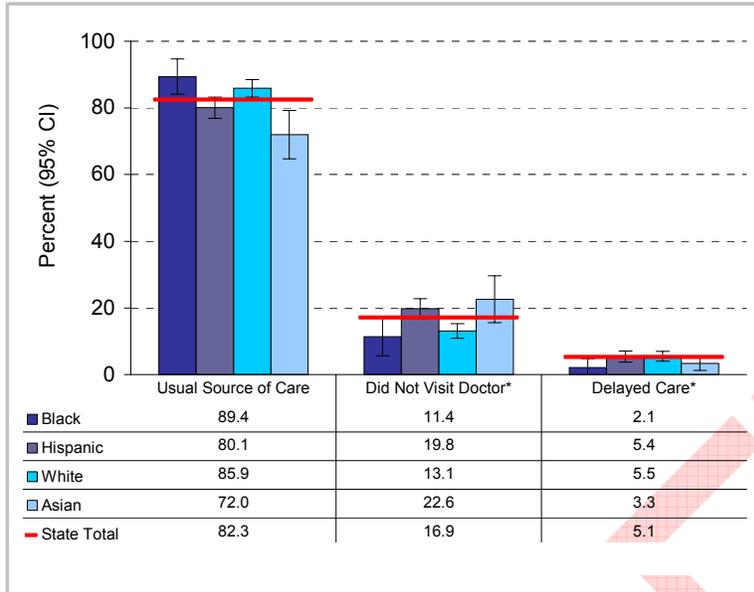
Data source: California Health Interview Survey (CHIS)

Adolescents

Medical care utilization rates are lower among adolescents than children in California, and differences between racial/ethnic groups are larger in this age group for usual source of care and doctor visit in the past year. In 2007, 82% of adolescents ages 12-17 had a usual source of health care, 17% did not visit a doctor in the past year, and 5% had delayed care. Asians were least likely to report having a usual source of care, most likely to report not having seen a doctor in the past year, and had a low rate of delayed care. Hispanic adolescents also reported a low prevalence of having a medical home and a high prevalence of not seeing the doctor ([Figure 4b](#)).

Figure 4b. Health Care Utilization among Adolescents

Percent (95% CI) of adolescents ages 12 through 17, by race/ethnicity, 2007



*Within in the past year

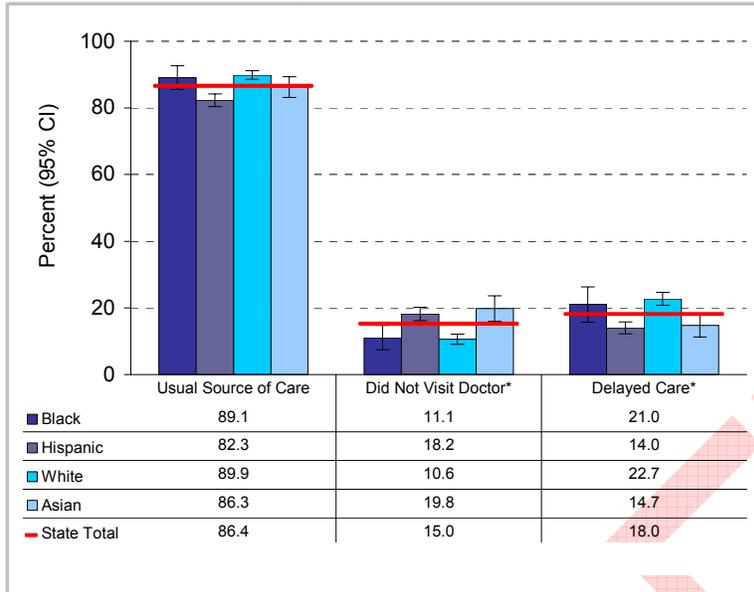
Data source: California Health Interview Survey (CHIS)

Women of Reproductive Age

Among reproductive aged women, 86% had a usual source of health care, 15% did not visit a doctor in the past year, and 18% reported a delay in getting care they needed. Black and White women were more likely to report having a usual source of care and visiting a doctor in the past year, compared with Hispanic and Asian women. At the same time, delayed care was more commonly reported among Black and White women, compared with Hispanic and Asian women ([Figure 4c](#)).

Figure 4c. Utilization among Women of Reproductive Age

Percent (95% CI) of women ages 15 through 44, by race/ethnicity, 2005/2007



*Within the past year

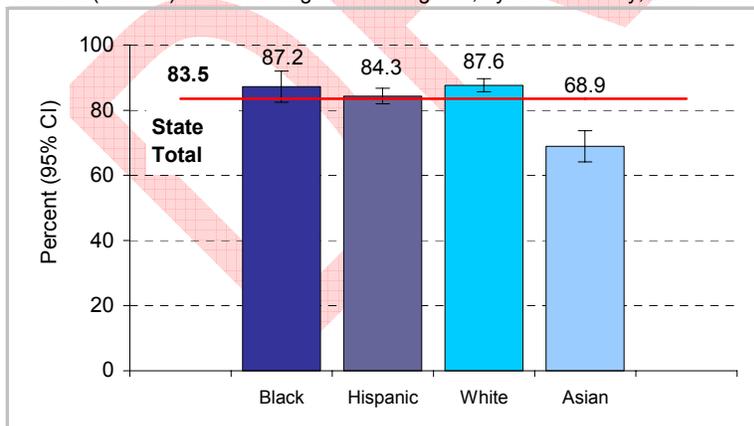
Data source: California Health Interview Survey (CHIS)

Notes: Data on usual care and doctor's visits come from 2007; data on delayed care come from 2005

Receipt of a pap test within three years is an indicator of reproductive care utilization among women. Approximately 84% of women ages 18-44 received a pap test within the last three years in California. Approximately 85% of women covered by Medi-Cal and 74% of women without insurance received a recent Pap test. Asian women were less likely to report having received a pap test than other racial or ethnic groups ([Figure 5](#)).

Figure 5. Pap Test in Past 3 Years

Percent (95% CI) of women* ages 18 through 44, by race/ethnicity, 2007



*Women without a hysterectomy

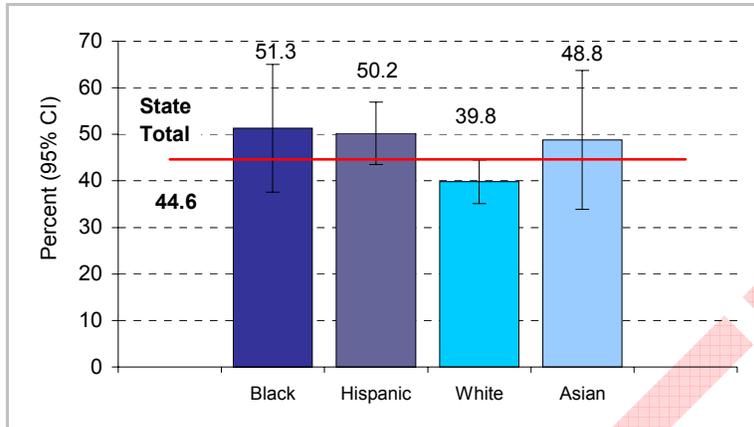
Data source: California Health Interview Survey (CHIS)

In 2007, over 1.5 million women of reproductive age in California reported that they might need professional assistance with managing emotional or alcohol and drug problems. Of the women who reported needing help, 45% did not receive mental health treatment. Whites were least

likely to report that they did not receive needed treatment compared to other race/ethnicity groups ([Figure 6](#)).

Figure 6. Did Not Receive Mental Health Treatment

Percent (95% CI) of women* ages 18 through 44, by race/ethnicity, 2007



*Among women who felt they might need to see a professional for problems with emotions or drugs/alcohol in past year

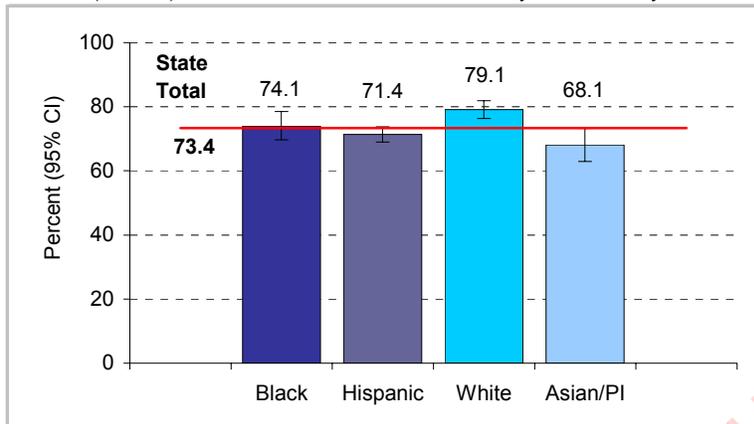
Data source: California Health Interview Survey (CHIS)

Pregnant and Post-Partum Women and Infants

Utilization of routine and preventive care before pregnancy helps to ensure that women enter pregnancy in good health and can prevent negative outcomes for infants and mothers. In 2008, 73% of women with a recent live birth reported having had a usual source of care or “medical home” before their pregnancy. Fewer women with a recent live birth report having a usual source of care than women of reproductive age in general (75% vs. 86%, respectively, in 2007). Having a usual source of care before pregnancy has increased since 2000, with the exception of a one year decline in 2005 ([Figure 7a](#)). Asian/PI and Hispanic women were the least likely to report having a usual source of care before pregnancy (68% and 71%, respectively) compared with 74% of Black and 79% of White women ([Figure 7b](#)).

Figure 7b. Usual Source of Care Before Pregnancy

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008

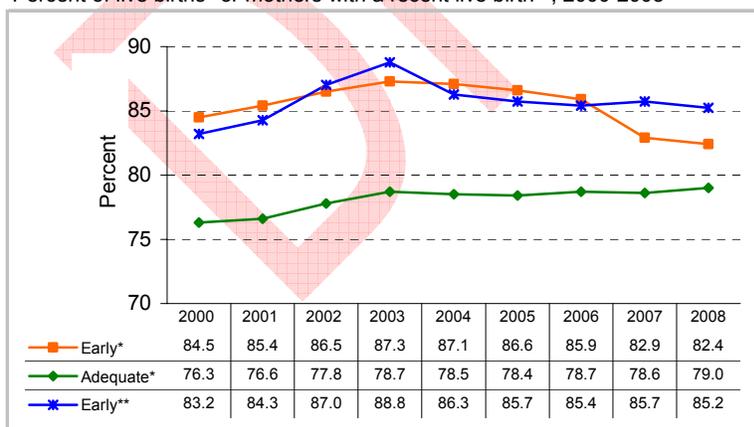


Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: PI = Pacific Islander

California has seen a recent decline in first trimester prenatal care (PNC) initiation. The percent of women with a live birth who received PNC in the first trimester increased from 85% in 2000 to 87% in 2003, but then decreased to 82% in 2008 (Figure 8a). Beginning in 2007, new variables on the California birth certificate require more precise timing of PNC initiation, which has resulted in fewer women showing PNC beginning in the first month and a rise in unknown PNC. The drastic drop seen in the birth certificate data in 2007 is explained in part by the new reporting format. Using data from the Maternal and Infant Health Assessment Survey (MIHA), the drop in first trimester PNC in recent years does not appear to be as great. Regardless, there has been a decrease between 2003 and 2008, and the percent of California women with first trimester PNC is moving away from the HP 2010 target of 90%. However, even after the decline, California ranks higher than the national average. In 2006, the most recent year for which national comparison data is available, 86% of California births had first trimester PNC initiation compared to 83% for U.S. births.¹²

Figure 8a. Early and Adequate Prenatal Care

Percent of live births* or mothers with a recent live birth**, 2000-2008



*Data Source: Birth Statistical Master File (BSMF); the dramatic drop from 2006 to 2007 in early initiation in the BSMF is believed to be an artifact of changes beginning in 2007 in the prenatal care initiation variable on the California birth certificate

**Data Source: Maternal and Infant Health Assessment Survey (MIHA)

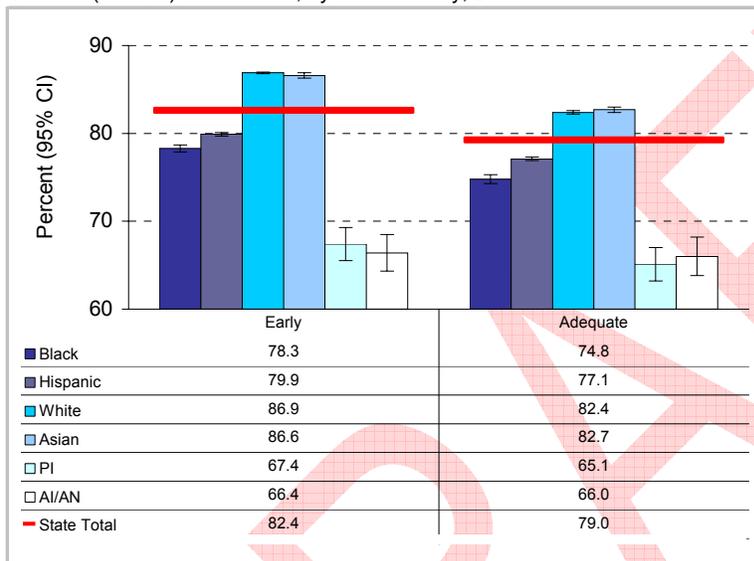
Notes: Early was defined as prenatal care in the first trimester; adequate prenatal care was defined using the Kotelchuck index based on the number and timing of prenatal care visits

Although first trimester PNC has gradually decreased, the percent of women with adequate prenatal care has increased. In 2008, 79% of women ages 15-44 received adequate prenatal care, defined using the Kotelchuck index, which combines data on the timing and number of PNC visits. This was up from 76% in 2000.

In 2008, the percent of births with first trimester PNC was highest among White and Asian groups compared to Hispanic and Black groups. Pacific Islander women and American Indian/Alaska Natives had the lowest first trimester PNC initiation. Adequate PNC followed a similar pattern by race/ethnicity (Figure 8b). In 2006, first trimester PNC initiation was higher in California than in the U.S. overall for every racial/ethnic group.¹²

Figure 8b. Early and Adequate Prenatal Care

Percent (95% CI) of live births, by race/ethnicity, 2008



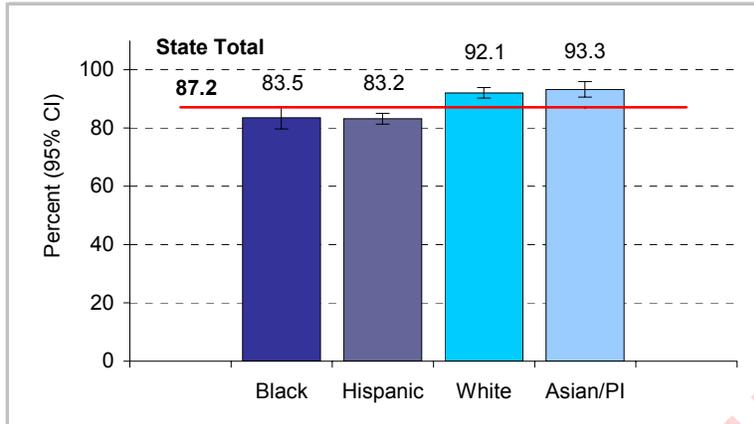
Data Source: Birth Statistical Master File (BSMF)

Notes: Early was defined as prenatal care in the first trimester; adequate prenatal care was defined using the Kotelchuck index based on the number and timing of prenatal care visits

The postpartum visit is recognized as a key component of interconception care.¹³ Overall, in 2008, 87% of women reported having had a post-partum check-up since their most recent birth. Hispanic and Black women were least likely to report having had a post-partum check-up (Figure 9).

Figure 9. Postpartum Check-Up

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008

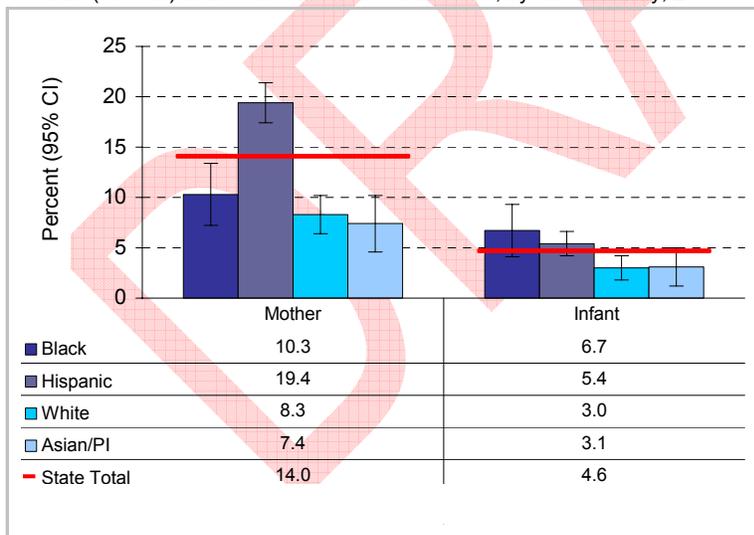


Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: PI = Pacific Islander

After delivery, 14% of mothers with a recent live birth needed health care, but did not go because they could not afford it (Figure 10). Additionally, 4.6% of recent mothers had an infant who needed care but did not go because of the cost. Hispanic mothers (19.4%) were much more likely to report not getting care for them self because of the cost, compared with Black (10.3%), White (8.3%), and Asian/PI (7.4%) women. Hispanic (5.4%) and Black (6.7%) mothers were more likely to report not getting care for their infant because of the cost, compared with White (3.0%) and Asian/PI (3.1%) women.

Figure 10. Needed but Could Not Afford Health Care*

Percent (95% CI) of mothers with a recent live birth, by race/ethnicity, 2008



*Since the birth, the mother or the infant needed health care, but did not go because she could not afford to pay for it

Data source: Maternal and Infant Health Assessment Survey (MIHA)
Notes: PI = Pacific Islander

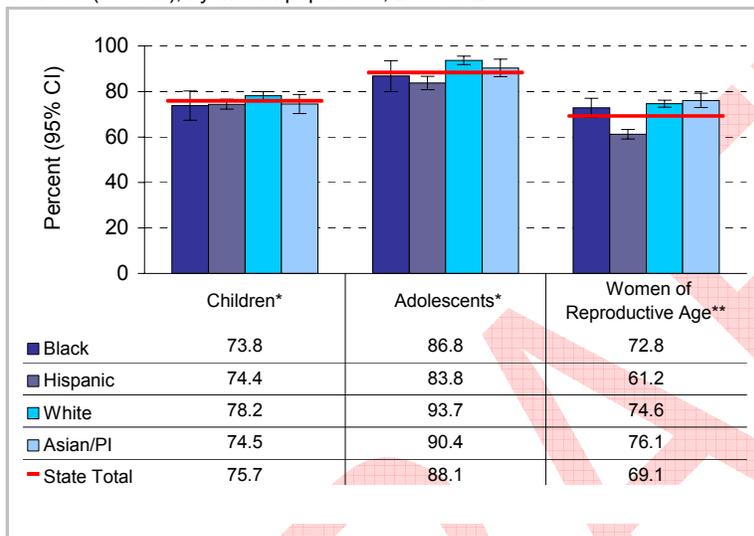
Dental Care Utilization

The American Academy of Pediatrics recommends establishment of a dental home for children six months after the first tooth erupts or by the time the child is one year old.¹⁴

Thereafter, it is recommended that children, adolescents, and adults have regular dental check-ups each year. In 2007, 75% of children ages 1-11 visited a dentist in the past year. At 88.1%, the prevalence was higher among adolescents ages 12-17. In 2003 only 69.1% of women of reproductive age (15-44) visited a dentist in the past year. Among children and adolescents, Hispanics were less likely than Whites to have received dental care in the past year. In each age group, the rates among Blacks and Asian/PIs were also lower than Whites, although the confidence intervals were wide. Among women of reproductive age, only 61.2% of Hispanics received dental care in the past year, compared with 72.8% of Black, 74.6% of White, and 76.1% of Asian/PI women ([Figure 11](#)).

Figure 11. Dental Visit in the Past Year

Percent (95% CI), by MCAH population, 2003 or 2007



*Data for children ages 1-11 and adolescents ages 12-17 from 2007

**Data for women of reproductive age (15-44) from 2003

Data source: California Health Interview Survey (CHIS)

Notes: PI = Pacific Islander; the question was asked of participants 2 years and older, and of children younger than 2 years if they had teeth

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DRAFT

BUDGET IMPACT

California, like the rest of the nation, is in a severe economic downturn. The combined effect of the state's continuing structural budget deficit and the loss of revenues resulting from the economic downturn resulted in a budget gap of \$26.3 billion for State Fiscal Year (FY) 2009-10. In order to address the budget shortfall, all California State General Funds (SGF) for the Maternal, Child and Adolescent Health (MCAH) Program were eliminated effective July 1, 2009, reducing the state and local MCAH Program budget by \$20.3 million in SGF and \$12 million in related matching Federal Title XIX funds.

Legislatively, MCAH administers the State's Public Health Domestic Violence Program. The FY 2009-10 budget eliminated \$20.4 SGF from the MCAH Domestic Violence Program. Subsequently, 80% of the eliminated funds (\$16.3 million) was reinstated for one year using a special fund to Domestic Violence Programs as a result of an emergency Senate bill (SBX 13). These reinstated funds are no longer administered by MCAH; the funds are administered by CalEMA (California Emergency Medical Agency).

The loss of SGF to local and state MCAH Programs, Black Infant Health (BIH) Programs, Adolescent Family Life Programs (AFLP), the Comprehensive Perinatal Services Program (CPSP), Domestic Violence Programs, and the California Birth Defects Monitoring Program (CBDMP) has resulted in deep reductions to local staffing, the numbers of clients served, and public health activities.

In addition, local MCAH programs are being impacted by a reduction in state realignment revenues and associated Title XIX matching funds. Public Health Realignment funds come from a one-half cent sales tax and a portion of vehicle license fees, both of which have been reduced as the result of the shrinking economy. Between FY 2006-2007 and FY 2009-2010, the total Public Health Realignment funds transferred to counties has declined by \$228.7 million. Public Health Realignment funding distributions to local public health agencies for FY 2009-2010 are projected to be approximately \$62 million lower than FY 2008-09.

Statewide, Local Health Jurisdictions (LHJs) allocate approximately 3.25% of Public Health Realignment funds to local MCAH, BIH, and AFLP programs. Realignment funds are the source of nearly all local agency funding for MCAH programs, including BIH and AFLP. The Federal Title XIX match to these funds is approximately 35% (enhanced and non-enhanced). The projected \$62 million reduction in total Public Health Realignment funds has resulted in reduced local/county funding contributions to MCAH and AFLP budgets, while counties increased local funding for BIH programs through the use of various other funding sources, such as First 5.

Local MCAH Programs

The California MCAH Program funds all 61 LHJs (58 counties and 3 city health departments) for provision of MCAH services and programs to improve the health of mothers, infants, children, adolescents, and their families in their communities. LHJs also facilitate increased utilization of medical assistance programs, such as Medi-Cal, Healthy Families, Healthy Kids, and California Children's Services through outreach and referral. Allocations to LHJs are determined by the percentage of women and children living in poverty each jurisdiction, with special allocations to LHJs serving California's smallest populations to ensure minimum program support. Some LHJs also receive separate funding to operate BIH and AFLP programs.

The MCAH Program requirements for a minimum basic Local MCAH program include:

- an MCAH Director;
- operation of a toll-free information and referral line for MCAH issues;
- provision of outreach and application assistance for pregnant women, infants, and children eligible for Medi-Cal;
- development of infrastructure and partnerships to implement services for the MCAH population;
- identification of emerging health issues;
- public health prevention activities; and
- SIDS risk reduction mandated activities.

The elimination of \$2.1 million in SGF from local MCAH programs resulted in a loss of \$2.1 million in Title XIX federal matching funds. Total local MCAH funds lost as a direct result of the elimination of SGF and the related Title XIX federal match was \$4.2 million statewide in FY 2009-10.

Due to reduced realignment revenue statewide, local MCAH programs have budgeted \$1,900,000 less in county agency funds and \$600,000 less in matching Title XIX funds for FY 2009-10.

Based on personnel lists submitted with the FY 2009-10 MCAH budgets, 69 full time equivalent (FTE) local MCAH positions were eliminated statewide as a result of budget cuts.

Local MCAH programs have decreased infrastructure and capacity due to loss of staff from decreased funding. In turn, this has meant the elimination of certain programs such as Youth Substance Abuse Prevention Programs, a decrease in client outreach activities along with reduced or eliminated perinatal care guidance programs and drastically reduced referrals for prenatal care in most counties. Along with the availability of fewer Public Health Nurses (PHNs), this results in only the very highest risk clients receiving service whereas others are turned away for care. MCAH Action estimates elimination or reduction in services to over 1 million individuals as a result of state and local budget reductions.

Sacramento County MCAH

Sacramento County MCAH serves as a common example of the effects budget reductions at the state and local level have had on local MCAH programs. Like most California counties, Sacramento County is experiencing budget deficits and has been unable to replace the loss of SGF. In fact, Sacramento County reduced its own MCAH agency budget by \$61,350.

The loss of \$47,445 SGF and \$61,350 local agency funds has resulted in an additional loss of \$143,844 in Title XIX match, due to matching requirements related to indirect costs and personnel matching. Title XIX matching is primarily driven by the level of matching to personnel costs. Sacramento County lost the Title XIX match for personnel costs because they were required to use local agency funds to pay for indirect/overhead costs, which are not matchable.

The loss of SGF to Sacramento County MCAH, compounded by the County's reduction of local agency funds, has resulted in a net budget reduction of \$252,058 in FY 2009-10 from FY 2008-09 (a 47% reduction in funding).

Sacramento County MCAH Budget Comparison

<u>FY 2008-09</u>		<u>FY 2009-10</u>	
Title V	\$186,040	Title V*	\$161,059
SGF	\$47,445	SGF	
Agency Funds	\$165,096	Agency Funds	\$103,746
Title XIX	\$143,263	Title XIX	
Total Budget	\$541,844	Total Budget	\$264,805

*BIH FIMR (\$24,981) was shifted from MCAH to BIH

Sacramento County MCAH currently operates with one Public Health Nurse who is budgeted at 100% FTE in MCAH and an MCAH Director who is budgeted at 42% FTE in MCAH. They are maintaining the minimum level of staffing and services needed to comply with Scope of Work (SOW) requirements in order to remain operational.

Black Infant Health Program (BIH)

The BIH Program addresses the disproportionate burden of infant mortality among African American women in California. Until 2009, BIH operated in the 17 local health jurisdictions where over 90% of all African American infant births and deaths occur.

The 2009-2010 California budget eliminated \$3.9 million SGF and \$3.7 million related Title XIX to BIH programs statewide. A number of local programs were able to identify short-term external funding to address budget shortfalls, primarily from First 5 County Commissions, but this varied based on local resources. BIH is the only program that was able to increase local agency funding statewide in FY 2009-10. Local agency funding in FY 2008-09 was \$2.7 million, which was matched to \$1 million Title XIX federal funding. Local agency funding increased to \$4.2 million in FY 2009-10, with Title XIX match of \$1.6 million statewide. However, the additional \$2.1 million is inadequate to backfill the combined loss of \$7.6 million in SGF and Title XIX funds. In October 2009, BIH programs enrolled 58% fewer new clients than were newly enrolled during October 2008. The total number of BIH clients served was 1,797 lower in calendar year 2009 than in calendar year 2008, a 14% decrease in clients served. The number of total clients served will continue to decline as a result of ongoing restrictions in enrollment and length of program participation.

Budget reductions have caused two sites, Riverside and San Bernardino Counties, to close. As a result, BIH currently operates in LHJs where 75% of all African American births occur, down from 90% in 2009. Statewide, local agency BIH staffing was reduced by 12 FTE, with an additional 18 FTE reduction as a result of the Riverside and San Bernardino County closures.

Other counties have implemented program changes in response to budget cuts, such as drastically reduced enrollment capacity, eliminated PHN case management services, limited the length of enrollment to one year after the birth of the child instead of two years, and referred many other clients to other programs that may not be able to meet their needs.

Potential consequences of these reductions among populations targeted by BIH are:

- late or no prenatal care;
- increased low birth weight and prematurity;
- increased maternal, fetal, and infant mortality;
- increased domestic violence;
- fewer referrals to social services;
- higher costs for delivery, postpartum, and infant care; and
- increased need and costs for special care units and neonatal intensive care units.

Kern County

A comparison of Kern County’s BIH FY 2008-09 and FY 2009-10 budgets shows the financial impact of recent budget reductions to local BIH programs:

Kern County BIH Budget Comparison

<u>FY 2008-09</u>		<u>FY 2009-10</u>	
Title V	\$215,786	Title V	\$215,786
SGF	\$187,812	SGF	
Agency Funds	\$21,727	Agency Funds	\$114,839
Title XIX	<u>\$237,320</u>	Title XIX	<u>\$136,510</u>
Total Budget	\$662,645	Total Budget	\$467,135

Although Kern County was able to increase agency funding by \$93,112, the net loss of funding due to the elimination of SGF and reduction of Title XIX reduced Kern County’s BIH budget by \$195,510 – 30% of their budget. Since local agency funds have been enhanced by First 5, which is a short-term measure, it is unknown how long local agencies like Kern County will be able to maintain increased levels of local agency funds.

Adolescent Family Life Program (AFLP)

In 2009-2010, \$10.7 million SGF and \$5.1 million related Title XIX were eliminated for AFLP, the case management program that serves approximately 17,000 pregnant and parenting teens in 37 counties. In FY 2008-09, AFLP served 20% of all women under age 19 giving birth in California.

Statewide, local agency funding for AFLP was \$4.3 million in FY 2008-09. In FY 2009-10, local agency funding for AFLP was \$3.8 million. Community Based Organizations (CBOs) that participate in AFLP may match local agency funds for Title XIX, but may not match at the higher, enhanced level. Counties may match local agency funds at both the enhanced and non-enhanced matching levels. Given that local agency funding for AFLP was reduced statewide in FY 2009-10, there was no backfill for the lost SGF or Title XIX funds.

AFLP reductions resulted in 4,522 fewer clients served in October 2009 compared to October 2008 – a 44% reduction in clients served. New client enrollments were 34% lower in October 2009 than in October 2008. AFLP agencies experienced staff reductions of 170 FTE statewide.

As a result of reduced staffing and program activity funds, program services to clients have also been reduced, resulting in:

- limited outreach;
- case finding and intake reductions;
- reduced assessment;
- minimal intervention; and
- elimination of advocacy for clients.

The impacts of these reductions will likely result in increased teen birth rates, increased dependency on welfare by teen mothers and their children, and poor birth outcomes due to inadequate prenatal education and care.

At an administrative level, cuts have been made to program planning, monitoring, and evaluation.

Three AFLP programs – Riverside, San Bernardino, and Siskiyou Counties – have been discontinued in FY 2009-10 as a result of their inability to perform program activities at the current funding levels. These program closures will result in an additional 39 staff reductions and elimination of client services for approximately 1,400 clients. Additional program closures and staff reductions are anticipated as short-term budget solutions are exhausted by local AFLP agencies.

AltaMed Health Services Corporation (AltaMed)

AltaMed provides AFLP services to Los Angeles County. A comparison of their FY 2008-09 and FY 2009-10 budgets is indicative of the financial impact state and local budget reductions have on local AFLP agencies.

Alta Med AFLP Budget Comparison

<u>FY 2008-09</u>		<u>FY 2009-10</u>	
Title V	\$377,430	Title V	\$377,430
SGF	\$479,555	SGF	
Agency Funds	\$53,372	Agency Funds	\$40,558
Title XIX	\$243,950	Title XIX	
Total Budget	\$1,154,307	Total Budget	\$417,988

The elimination of SGF and the Title XIX match reduced AltaMed's budget by \$723,505 – 63% of their FY 2008-09 budget. Local agency funds further reduced their budget by \$12,814. These budget reductions resulted in a loss of 10 FTE – 66% of their AFLP staff.

State Operations

State MCAH Support

State support staffing and activities have been significantly adversely impacted by the elimination of SGF for MCAH programs as follows:

- The State has lost the ability to leverage SGF to draw down Title XIX matching funds. The loss of \$3.5 million resulted in an additional loss of approximately \$1 million in federal Title XIX matching funds.
- State staffing levels were reduced – vacant positions have not been filled, creating added work burden for remaining State staff.
- Reduced capacity at the local level to collect data has impacted the State’s ability to document positive program outcomes and identify and address needed changes.
- Reduced resources to coordinate services across LHJs and advocate for vulnerable at-risk MCAH populations.
- Overall reduction in statewide collaboration to assure statewide program equality, information sharing, training, and problem solving.
- Travel reduction for state staff to audit and monitor budgets and operations and provide crucial technical assistance.

California Birth Defects Monitoring Program (CBDMP)

Birth defects are the leading cause of infant mortality in the U.S. The California Birth Defects Monitoring Program (CBDMP) has been an active ascertainment population based registry since 1982, when the California State legislature mandated the collection of data on birth defects, stillbirths, and miscarriages. CBDMP monitors birth defects counts and trends in California for the safety of the public, performs public outreach and education, responds to public concerns, helps plan intervention and prevention strategies in California, and provides information to other CDPH programs, the Local Health Jurisdictions, national reporting systems, and researchers worldwide.

- Of the \$3.5 million SGF eliminated from the State Operations budget, \$1.6 million was for CBDMP.
- Registry activities have been reduced from 40% of California births to 26% with the loss of data collection in the Inland Empire.
- Registry activities have been reduced to 10 counties.
- Reduced funding has led to program restructuring and loss of staff.
- The core business of data collection, processing, analysis, and reporting has been cut back.
- Public health surveillance activities have been reduced.

Comprehensive Perinatal Services Program (CPSP)

CPSP enhances the range of perinatal services reimbursed by Medi-Cal, from conception through 60 days postpartum. In addition to standard obstetric services, women receive

nutrition, psychosocial, health education services, and related case coordination services from a multi-disciplinary team. This program is closely linked with the LHJ MCAH programs. The CPSP Perinatal Services Coordinator for each LHJ works within the MCAH program and is responsible for provider recruitment, training, and quality assurance.

As a result of the loss of SGF to other programs, there has been a reduction in resources to address the needs of pregnant and post-partum women. At the same time, expansion of CPSP services, such as case coordination, that could fill some of these gaps is limited.

The loss of SGF to MCAH has reduced the LHJs' capacity to:

- promote access to early prenatal care;
- recruit new CPSP providers;
- provide training to new CPSP providers;
- provide technical assistance to existing and new CPSP providers; and
- monitor and evaluate CPSP providers.

Domestic Violence (DV)

Through June 2009, MCAH DV funded 94 domestic violence shelter agencies to provide emergency and non-emergency services to victims of domestic violence. Over 105,000 victims and their children received emergency shelter, legal assistance with restraining orders, transitional housing, and other support services. Additionally, CDPH DV administered a major Training and Technical Assistance Project to build shelter agencies' capacity to serve certain unserved and underserved populations; namely, the disabled and developmentally disabled, persons with mental health and substance abuse issues, and lesbian, gay, bisexual, transgender, questioning individuals.

The replacement of 80% of DV funding for FY 2009-10 was a one-time special fund loan and is administered by CalEMA. It is unknown to what extent the funding was directed to specific CDPH grantees, or to what extent non-emergency preventative services were continued.

CALIFORNIA 2010-2014 TITLE V PRIORITIES

The identification of California's potential priority needs was based on several factors: identification by local health jurisdictions, priority status in the previous five year cycle, identification as an emerging priority, California Department of Public Health goals, analysis of statewide surveillance data, and assessment of statewide capacity.

Local Health Jurisdiction Priorities

Each of California's 61 local health jurisdictions completed a local needs assessment, which included development of local priorities. These priorities are an important source of information in setting statewide priorities, as they reflect interpretation of local surveillance data, extensive engagement with stakeholders, assessment of local systems and needs, and expertise from across California. LHJs were given flexibility in developing and framing priorities in accordance with their own local framework, organizational structure, and capacity. Two suggested approaches to prioritizing needs were outlined in the local needs assessment guidance provided by the state MCAH Program. Both facilitated the scoring of each identified need according to multiple criteria (i.e., burden, disparity, impact on downstream issues, and level of community concern) in order to identify which needs were of the greatest priority in relation to existing capacity. LHJs were also given the option to implement their own prioritization process. LHJs articulated a range of local priorities, including long-term health outcomes, such as infant mortality; health behaviors, such as breastfeeding; specific population group health status, such as adolescent health; and strategies for improving health, such as access to care or health education.

A team at the state MCAH Program coded local priorities to identify commonalities across California's jurisdictions, using an approach that was similar to that used in the 2005-2009 needs assessment. Each local priority was associated with both a broad health topic and a more specific sub-topic. This dual approach allowed identification of general areas of common interest, while also providing greater detail about the specific aspect of an issue that a jurisdiction may be addressing. For example, adolescent health was a common broad priority, but jurisdictions varied in the specific aspects of adolescent health of concern, from overweight and obesity to adolescent pregnancy and childbearing. Importantly, sub-topics could be included in more than one broad topic area. For example, adolescent pregnancy and childbearing was included within the broad topics of adolescent health and reproductive health.

Some changes in the broad topic categories were implemented with the 2010-2014 needs assessment. For example, the category of *health conditions* was changed to *healthy weight and nutrition* and *chronic health conditions*. Therefore, comparison between current priorities and those identified during the prior needs assessment is not possible.

Table 1 shows the ranking of health priorities identified by LHJs in the 2010-2014 needs assessment. Leading priority topics for LHJs were adolescent health, healthy weight and nutrition, and access to care. Other broad priority areas identified by more than half of the LHJs included, prenatal care (61%), reproductive health (59%), maternal and infant outcomes (56%), and substance abuse (51%).

Table 1. Local Health Jurisdiction priorities by broad topic and subtopic

Priorities	LHJs	
	Number	Percent
ADOLESCENT HEALTH	54	89%
Obesity and Overweight	25	41%
Adolescent Pregnancy and Child Bearing	25	41%
Adolescent Health in General	15	25%
HEALTHY WEIGHT AND NUTRITION	49	80%
Obesity and Overweight	45	74%
Physical Activity	8	13%
Nutrition in General	6	10%
ACCESS TO CARE/SERVICES	39	64%
Access to Health and Medical Care	13	21%
Access to Dental Care	12	20%
Access to Care in General	11	18%
PRENATAL CARE	37	61%
Early Prenatal Care	23	38%
Adequacy of Prenatal Care	22	36%
Prenatal Care in General	7	11%
REPRODUCTIVE HEALTH	36	59%
Adolescent Pregnancy and Child Bearing	25	41%
Sexually Transmitted Illnesses	11	18%
Birth Spacing	9	15%
MATERNAL AND INFANT OUTCOMES	34	56%
Low Birth Weight and Preterm Birth	22	36%
Infant Mortality	14	23%
Birth Outcomes in General	7	11%
SUBSTANCE USE	31	51%
Perinatal Substance Use	24	39%
Substance Use among Children or Adolescents	8	13%
Substance Abuse Treatment	4	7%
BREASTFEEDING	27	44%
Breastfeeding in General	20	33%
breastfeeding at hospital discharge	8	13%
duration of breastfeeding	8	13%
ORAL HEALTH	24	39%
in general	13	21%
access to dental care	12	20%
lack of dental insurance	8	13%
MENTAL HEALTH	20	33%
Mental health in General	9	15%
Specific Populations	9	15%
access to mental health care	9	15%

Table 1. Local Health Jurisdiction priorities by broad topic and subtopic (con't)

Priorities	LHJs	
	Number	Percent
PRECONCEPTION HEALTH / CARE	18	30%
Repeat Births	9	15%
Birth Spacing	9	15%
Preconception Care in General	6	10%
SPECIAL POPULATIONS (AT RISK)	17	28%
Ethnic Minority Subgroups	15	25%
At Risk Subgroups in General	4	7%
Low Income or Medi-Cal Subgroups	3	5%
EDUCATION	16	26%
Health Education or Promotion, Outreach	12	20%
Education in General	8	13%
Parenting Education	2	3%
VIOLENCE	15	25%
Domestic, Partner, or Family Violence	12	20%
Child Abuse and Neglect	3	5%
Community or School Violence	3	5%
CHILD HEALTH/DEVELOPMENT	14	23%
Child or Adolescent Deaths	5	8%
Child Immunizations	3	5%
Child Abuse and Neglect	3	5%
Foster Care	3	5%
CHRONIC HEALTH CONDITIONS	11	18%
Asthma	9	15%
Diabetes or Gestational Diabetes	3	5%
OTHER MISCELLANEOUS	9	15%
Immunizations in general	3	5%
Data Needs for Mental Health or Children	3	5%
Mortality in General	2	3%
INJURIES	7	11%
Injuries in General	6	10%
Deaths Due to Injuries	2	3%
Motor Vehicle Injuries	2	3%
PROVIDERS AND SERVICES	4	7%
Providers and Services in general	3	5%
Lack of Specialty Providers	2	3%
BASIC NEEDS	3	5%
Homelessness in General	1	2%
Safety in Home or in Community	1	2%
Poverty or Low Wage	1	2%

Adolescent health, a priority identified by 89% of LHJs, encompassed a range of 10 subtopics. Most commonly cited priorities within adolescent health were adolescent obesity or overweight (41% of LHJs); teen pregnancy, birth, and birth spacing (41%); and adolescent health in general (25%). Local priorities related to healthy weight and nutrition were identified by 80% of LHJs, and 74% of LHJs identified overweight and obesity as a priority within this broad

category. The broad priority of access to care, identified by 64% of LHJs, included a range of 12 sub-topics, including insurance coverage and barriers to care. Within access to care, leading local priorities were access to health and medical services (33%), access to dental care (31%), and access to care in general (16%).

Table 2 shows the ranking of local priorities coded as sub-topics. Shown according to sub-topic, obesity (in general) was the leading local priority, identified by 74% of LHJs, followed by adolescent obesity (41%), teen pregnancy and child bearing (41%), perinatal substance use (39%), and early prenatal care access (38%). Other local priorities identified by more than one third of LHJs included adequacy of prenatal care, preterm births and low birth weight, and breastfeeding.

Table 2. Local Health Jurisdiction Priorities by Subtopics

Priorities (Broad Topics)	LHJs	
	Number	Percent
Obesity and Overweight (Healthy Weight and Nutrition)	45	74%
Adolescent Obesity or Overweight (Adolescent Health)	25	41%
Adolescent Pregnancy & Child Bearing (Adolescent Health / Reproductive Health)	25	41%
Perinatal Substance Use (Substance Use)	24	39%
Early Prenatal Care (Prenatal Care)	23	38%
Adequacy of Prenatal Care (Prenatal Care)	22	36%
Low Birth Weight or Premature Births (Maternal and Infant Outcomes)	22	36%
Breastfeeding in General (Breastfeeding)	20	33%
Adolescent Health in General (Adolescent Health)	15	25%
Ethnic Minority Subgroups (Special Populations)	15	25%
Infant Mortality (Maternal and Infant Outcomes)	14	23%
Access to Health and Medical Care (Access to Care)	13	21%
Oral Health in General (Oral Health)	13	21%
Access to Dental Care (Oral Health / Access to Care)	12	20%
Domestic, Partner, or Family Violence (Violence)	12	20%
Health Education or Promotion, Outreach (Education)	12	20%
Access to Care in General (Access to Care)	11	18%
Sexually Transmitted Illnesses (Reproductive Health)	11	18%
Lack Health Insurance (Access to Care)	10	16%
Access to Mental Health Care (Mental Health / Access to Care)	9	15%

Statewide Priorities

Development of statewide priorities for California followed the completion of the local needs assessment, summarization of local priorities, analysis of statewide MCAH health status, and the assessment of the MCAH system capacity. The process was developed by MCAH Program managers and needs assessment staff, and included an all staff meeting, web survey, and workgroup. The all staff meeting provided a needs assessment status update, an orientation to the importance of priorities for the MCAH Program, an introduction to needs assessment findings, and guidance on completing the web survey. In preparation for completing the web survey, staff were provided with the needs assessment surveillance data,

a summary of LHJ priorities, and the 2005-2009 Title V priorities. The web survey facilitated staff ranking of the leading priority topics for the 2010-2014 period, and provided an opportunity for staff to write and submit priority statements for consideration.

Following the summarization of the staff survey, a workgroup reviewed the multiple data sources to identify leading overall priorities and begin to frame priority statements. The workgroup was composed of approximately 20 staff from throughout the MCAH Program, approximately half of whom have been involved in the ongoing needs assessment steering committee. Therefore, the workgroup included individuals familiar with the details of the process as well as others who brought a fresh perspective to the selection of priorities. The selection of priority topics was facilitated through a mind mapping process, which identified key themes and the many interconnections between potential priority topics identified by LHJs, through statewide surveillance data, and by staff. This process facilitated the next step of framing the priority statements based on the leading priorities and the interconnections between them. Additionally, priority statements submitted by staff through the web survey were referenced throughout this process. Draft priority statements were developed by workgroup members and reviewed by senior MCAH Program management. The seven MCAH Program priorities for the 2010-2014 period are listed below.

2010-2014 California Title V MCAH Priorities

Improve maternal health by optimizing the health of females across the life course, focusing on chronic conditions, oral health, mental health, substance abuse, healthy relationships, family planning and social determinants of health.

Promote healthy nutrition and physical activity among MCAH populations throughout the lifespan beginning with exclusive breastfeeding of infants to six months of age.

Reduce maternal morbidity and mortality and the widening disparity in maternal health outcomes by promoting access to and utilization of high quality maternity care and by addressing factors that lead to poor health during pregnancy.

Reduce infant mortality and address disparities by promoting preconception health and health care and by preventing underlying causes such as birth defects, low birth weight/prematurity, SIDS, and maternal complications in pregnancy.

Support the physical, social, and emotional development of children of all ages, focusing on early childhood coordinated and integrated prevention, early identification, and intervention.

Promote evidence based positive youth development strategies to support the physical, mental, sexual and reproductive health of adolescents.

Link the MCAH population to needed medical, mental, social, dental, and community services to promote equity in access to quality services.