

MEDI-CAL STATISTICAL REPORT

MAY 2015

Medi-Cal's Adolescent Population Ages 12-17:

The Medi-Cal Population Before the Implementation of the Affordable Care Act

Introduction

California was one of many states that voluntarily expanded Medicaid under the Affordable Care Act (ACA) by extending benefits to previously unqualified populations. Evaluating the effects of this transition and the full implementation of the ACA on California's Medicaid program (Medi-Cal) requires researchers and stakeholders to possess a clear understanding of the Medi-Cal population before the expansion. To address this informational need, the Research and Analytic Studies Division (RASD) has created a series of reports on the socio-demographic, regional, and health characteristics of the 2011-12 Medi-Cal population.

This report focuses on Californians between the ages of 12 and 17 years. Medi-Cal provides coverage to 1.0 million individuals between the ages of 12 and 17, representing 30.9% of the state's population between 10 and 19 years of age.¹ Individuals between the ages of 12 and 17 constitute 13.2% of the total Medi-Cal population.

To create a nuanced picture of the 2011-12 adolescent Medi-Cal population, RASD combined Department of Health Care Services (DHCS) administrative data and data derived from the California Health Interview Survey (CHIS). As a survey, CHIS provides information on socio-demographic determinants of health and health behaviors not available in administrative data. In turn, Medi-Cal

Key Findings:

- More than half (57.9%) of adolescents enrolled in Medi-Cal came from families with incomes below 100% FPL. By contrast, only 3.3% of those with private insurance, 39.4% of the uninsured, and 11.9% of those enrolled in Healthy Families came from families with incomes below 100% FPL.
- Almost half of the adolescents enrolled in Medi-Cal had a parent or guardian who was unemployed (45.9%). This was more than twice as high as among the parents or guardians of adolescents with private insurance (16.9%).
- Adolescents enrolled in Medi-Cal (53.3%) were seven times more likely as those with private insurance (7.1%) to experience food insecurity.
- Adolescents enrolled in Medi-Cal (41.6%) were less likely than those with private insurance (66.9%) to have done volunteer work or community service in that past 12 months.
- Adolescents enrolled in Medi-Cal (13.3%) were twice as likely as those with private insurance (6.4%) to have changed school two or more times in the past 3 years.
- Adolescents enrolled in Medi-Cal (20.9%) were more likely to fear being attacked at school than those with private insurance (12.8%).
- Adolescents enrolled in Medi-Cal (12.3%) were three times more likely than those with private insurance (3.6%) to not feel safe traveling to and from school.
- Adolescents enrolled in Medi-Cal (82.1%) were less likely to believe there was a teacher or adult at school who listened to them than those with private insurance (91.4%).

administrative data balances the limitations of a telephone survey such as CHIS; while CHIS provides data from a sample of respondents weighted to represent the entire state, Medi-Cal administrative data includes a record for each Medi-Cal beneficiary.

In this report, RASD presents socio-demographic, health, and other data on social-determinants of health for the adolescent population by insurance status. Where population size allowed, RASD compared the characteristics of Medi-Cal beneficiaries to Californians with private insurance, without any insurance coverage, and those enrolled in California's Children's Health Insurance Program (CHIP), Healthy Families, in 2011-2012. The inclusion of Healthy Families as a distinct category allows stakeholders to monitor that population as it undergoes a transition independent of the ACA during the same period. (For more information on the Healthy Families program, please see the [Background](#) section of this report). Beginning in January 2013, DHCS began to transition the Healthy Families population into Medi-Cal. Subsequent reports will reflect that transition and the eventual discontinuation of the Healthy Families program by January 2014. Readers of this report should remain aware that the 2011-2012 Healthy Families population shown here corresponds with an eligibility category now integrated into the Medi-Cal population.

Data Sources

RASD used two complementary data sources to create this report: DHCS administrative Medi-Cal data and CHIS survey data. [Appendix A](#), Data Sources and Methods, contains a detailed technical discussion of the data and methodology used to produce the statistics in this report.

CHIS

CHIS is an independent, population-based telephone survey that represents California's non-institutionalized population living in households. CHIS covers a wide range of topics focused on the health and health care needs of California's diverse population. Although CHIS addresses recognized negative health behaviors, it also captures factors more subtly related to health, such as soft drink consumption, the availability of affordable fruits and vegetables, and neighborhood cohesion factors. In addition, the 2011-2012 CHIS covered topics specifically related to adolescents such as teen bullying, civic engagement, and role models. Because this level of detail is not available through administrative data, CHIS is a valuable resource for Medi-Cal stakeholders. Further, the addition of CHIS data allowed RASD to present the Medi-Cal population alongside privately insured and uninsured residents of the state, giving context to these unique statistics.

CHIS is a continuous survey that takes two years to complete a data cycle. During 2011 and 2012, CHIS completed 2,799 adolescent interviews (interviewees 12 to 17 years old). RASD excluded adolescents with public insurance other than Medi-Cal or Healthy Families from this analysis. After exclusions, this report includes data on 2,740 adolescents. Among this sample, 701 interviewees were enrolled in Medi-Cal, 1,610 had private insurance, 171 were uninsured, and 258 were enrolled in Healthy Families.

Within each household selected for survey participation, CHIS interviewed one randomly selected adult. If the selected adult was the parent or legal guardian of an adolescent and/or child, CHIS then selected one adolescent and/or child in the household to be interviewed. Adolescents ages 12 to 17 responded

for themselves. There are some cases where the adult gave permission for the adolescent interview but did not want to participate in the adult interview. There were 262 interviews for adolescents that could not be linked to data from an interview with their parent or guardian. Data for some characteristics in this report were obtained only from the adult interview associated with the adolescent. These characteristics included: employment, marital status, food insecurity, home ownership, affordable fruits and vegetables in the neighborhood, household smoking, and daily smoking by the parent or guardian.

DHCS Administrative Data

RASD drew enrollment eligibility data from Medi-Cal Eligibility Data Systems (MEDS) January 2012, reflecting a 12-month reporting lag, for 1,000,312 adolescents. RASD considers a specific month's eligibility count finalized 12 months after the month's end; therefore, RASD utilized a 12-month reporting lag to ensure the data were complete as possible.

RASD confined the administrative data for this study of Medi-Cal beneficiaries to "certified eligibles," individuals who received a valid eligibility determination and were enrolled during January 2012.² The certified eligible classification excludes beneficiaries who were qualified for Medi-Cal but not enrolled during the period,³ as well as beneficiaries who were required to meet a monthly Share of Cost (SOC) obligation as a condition of receiving Medi-Cal-covered services, but did not meet that obligation in January 2012. This definition differs from the CHIS statistics. In the CHIS survey individuals are described as Medi-Cal enrollees if they state they were covered by Medi-Cal.

Limitations

The CHIS survey presents estimated characteristics for the entire California population produced using a representative sample of interviewees from the state of California. As such, readers should review this report with an awareness of sampling error. Sampling error is the deviation between the 'true' value of the characteristics for a population and the estimate of the characteristics produced from a sample of the population. Charts derived from CHIS data include individual confidence intervals to provide readers with an indication of the reliability of the estimates. All differences cited in this report were found to be statistically significant when tested unless stated otherwise. Smaller sample size decreases the chance of detecting statistical significance. In some cases the smaller sample size for adolescents may have contributed to the lack of statistical significance reported here.

Further, readers should interpret the CHIS findings reported here with the understanding that adolescents between the ages 12 and 17 responded for themselves. There are some cases where the adult gave permission for the adolescent/child interview but did not want to participate in the adult interview.

Medi-Cal is a safety-net program intended to provide health care to individuals who might otherwise struggle to secure affordable health insurance. Many Medi-Cal beneficiaries qualify based on their income relative to the federal poverty level (FPL), coupled with their assets, deprivation (deprivation represents the absence of one parent or the underemployment or unemployment of the principal wage earner in a family with children), disability, and health needs not addressed through other means. Readers should remain mindful of Medi-Cal eligibility guidelines when drawing conclusions about

differences between the Medi-Cal, privately insured, and uninsured populations. RASD advises readers to interpret other economic indicators in this report (unemployment, educational attainment, home ownership, etc.), when comparing groups, with similar consideration for Medi-Cal’s program goals and eligibility guidelines.

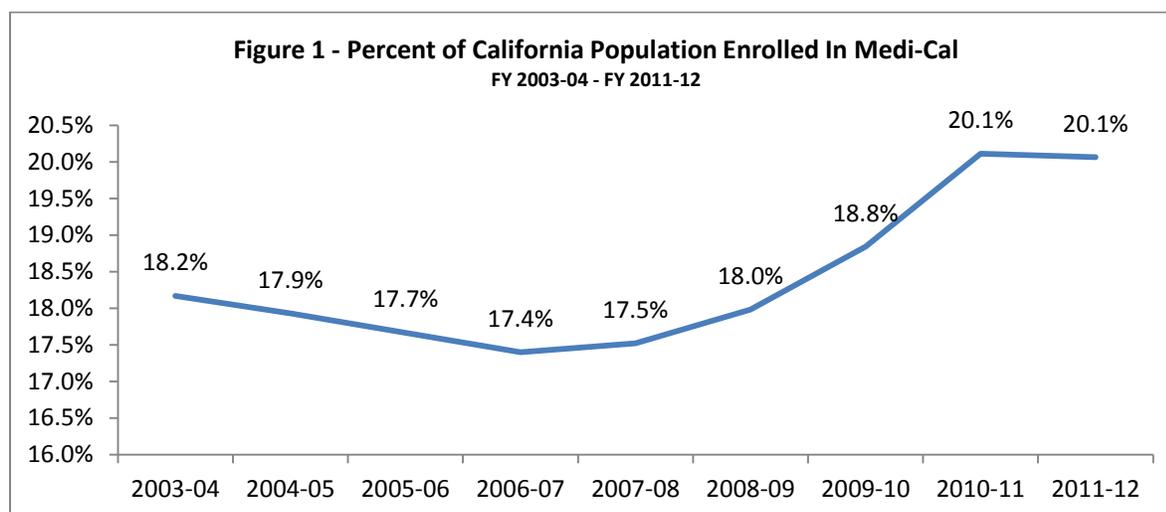
How to Read this Report

This report contains a general discussion and analysis on topics related to the health of the California population in 2011-12. As noted above, RASD used two complementary data sources to create this report: DHCS administrative Medi-Cal data and CHIS survey data. Sub-headers on each “Findings” page state which of these two data sources RASD used to produce the statistics related to that topic area. RASD advises readers to note the data source for each topic and remain mindful of the limitations specific to that data source when reviewing the report.

Background:

Medi-Cal

Medi-Cal is the joint state-federal program that provides low- and no-cost health care to low-income residents of California. While Medi-Cal eligibility is generally based on income relative to the FPL,⁴ the program also provides coverage to individuals considered blind or disabled under the Social Security Administration, individuals with qualifying health conditions (such as breast cancer or tuberculosis), and Medicare enrollees who meet specific income requirements. With annual spending of over \$45 billion in 2011, Medi-Cal is an essential financier of health care in California and provides care to a substantial percentage of the population.^{5,6}

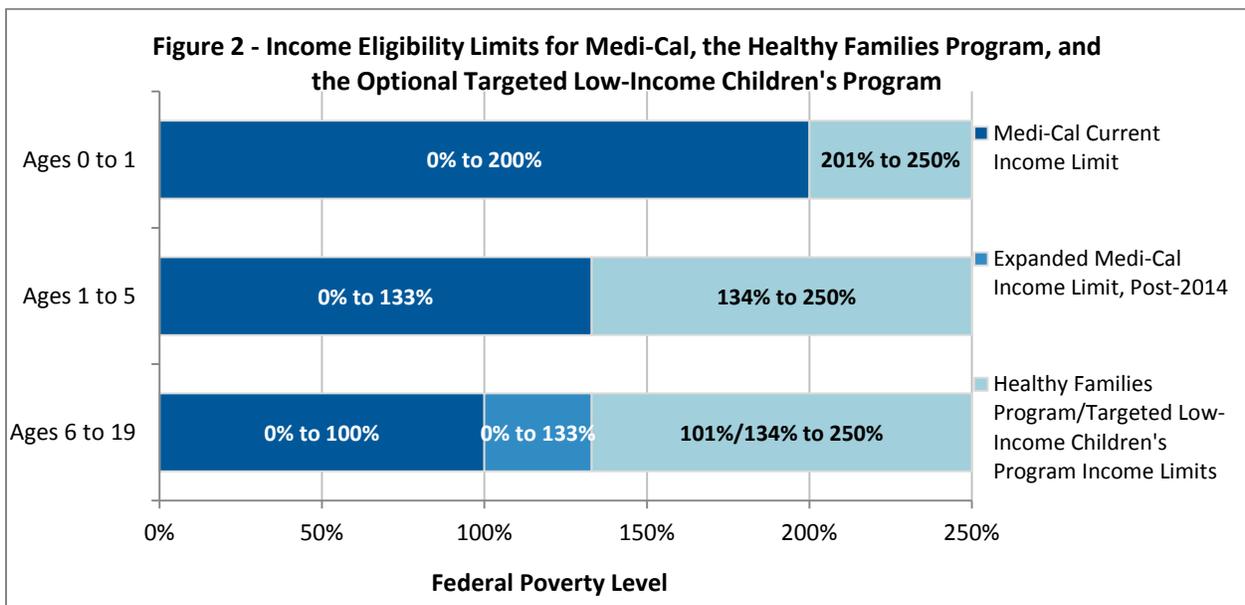


Source: Prepared by DHCS Research and Analytic Studies Division using (1) Medi-Cal Certified Eligible data selected from the MEDS System MMEF files, January 2003-December 2012, and (2) State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2000-2010 Sacramento, California, December 2011. February 2012 revision.

In January 2012, over 7 million Californians participated in Medi-Cal, accounting for 20.1% of the state's population. This value represents a leveling off of the previous trend; from 2007-08 to 2010-11 Medi-Cal provided services to a steadily increasing percentage of California's population, which was primarily driven by the nation's economic recession. Although there was no significant increase from 2010-11 to 2011-12, stakeholders predict that the percentage of Californians enrolled in Medi-Cal will continue to increase under the ACA.

California's CHIP Program: Healthy Families

CHIP is a federal program that was established in 1997 for the purpose of providing health insurance to uninsured children in families with modest household incomes too high to qualify for Medicaid. The federal government provides 65% of the funding for a state's program, while the state funds the remaining 35% of the cost. California's CHIP program, Healthy Families, became effective July 1, 1998. The Healthy Families Program is separate from Medi-Cal and provides health insurance at a low cost to eligible children and adolescents ages 0-19. Healthy Families covers children above Medi-Cal FPL limits by age group, up to and including 250% FPL.⁷ In 2012, the program had increased to a total of over 875,000 enrollees.⁸

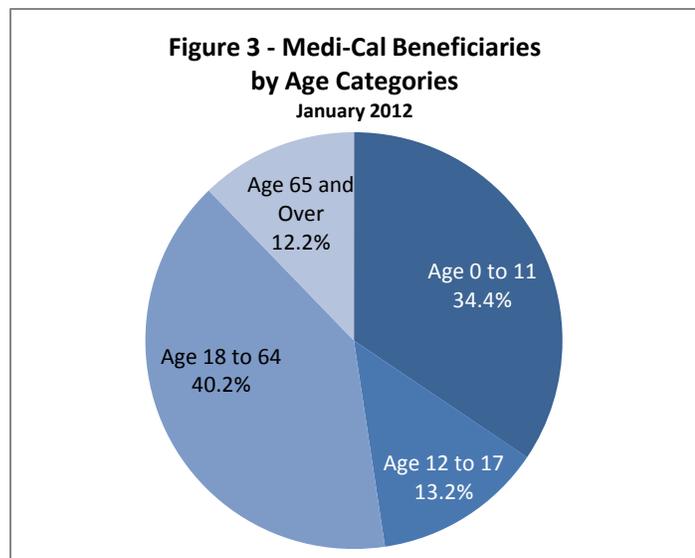


Source: California Healthcare Foundation's *Medi-Cal Facts and Figures: A Program Transforms*.

The ACA maintains CHIP eligibility standards until 2019. As a part of the Medicaid expansion, California began implementing the Optional Targeted Low-Income Children's Program (OTLICP) in order to transition Healthy Families enrollees into the Medi-Cal program beginning in January 2013. Eligibility standards, benefits and cost sharing will remain the same or similar to those effective under the Healthy Families Program.⁹ Understanding the socio-demographic, regional, and health characteristics of the CHIP/Healthy Families population is important in assessing the future of the overall Medi-Cal population as nearly one million former Healthy Families beneficiaries transition into Medi-Cal. The inclusion of Healthy Families as a distinct category in this report allows stakeholders to monitor that population as it undergoes a transition independent of the ACA during the same period.

Study Population:

This analysis will focus on Medi-Cal beneficiaries ages 12 to 17, enrolled during the 2011-12 period. As of January 2012, this cohort accounted for over 1 million beneficiaries, 13.2% of the Medi-Cal population. Beneficiaries ages 0 to 11 made up 34.4% of the Medi-Cal population in January 2012, beneficiaries ages 18 to 64 accounted for 40.2%, and beneficiaries ages 65 and older accounted for 12.2%.



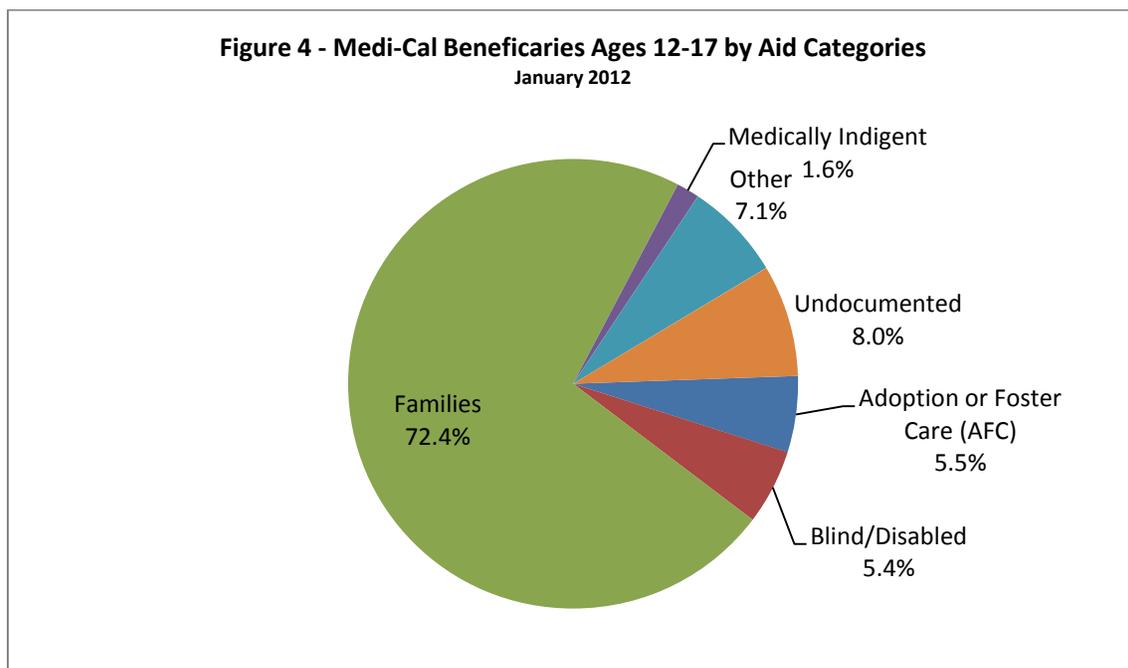
Source: *Certified Eligibles Only - Prepared by DHCS Research and Analytic Studies Division using Medi-Cal eligibility data obtained from the MEDS System MMEF files, January 2012.*

Eligibility Pathway of Study Population

An eligibility pathway represents the means by which a beneficiary qualified for Medi-Cal coverage. For analysis, eligibility pathways can be grouped into and presented as “aid categories”. In addition to representing the way a beneficiary qualified for Medi-Cal, aid categories indicate the scope of services available to that individual.

For the purpose of this analysis, RASD grouped Medi-Cal’s adolescent population into five broad categories: Families, Blind/Disabled, Undocumented, Adoption or Foster Care, and Other. The Undocumented aid category covers beneficiaries without satisfactory immigration status (SIS). In general, beneficiaries qualified under an Undocumented aid category are only eligible for emergency or pregnancy-related services through Medi-Cal. The Families aid category primarily includes beneficiaries with public assistance who qualify for Medi-Cal based on their low-income status relative to the FPL, the medically needy, and those who qualify based on 1931(b). Beneficiaries enrolled in the Blind/Disabled aid category generally qualify by meeting the Supplemental Security Income (SSI) medical definition of disability. The Other aid category is an aggregate of adolescents eligible for Medi-Cal under an eligibility pathway not specifically listed.

In January 2012, beneficiaries ages 12-17 in the Families category made up the largest portion of the Medi-Cal adolescent population (72.4%).

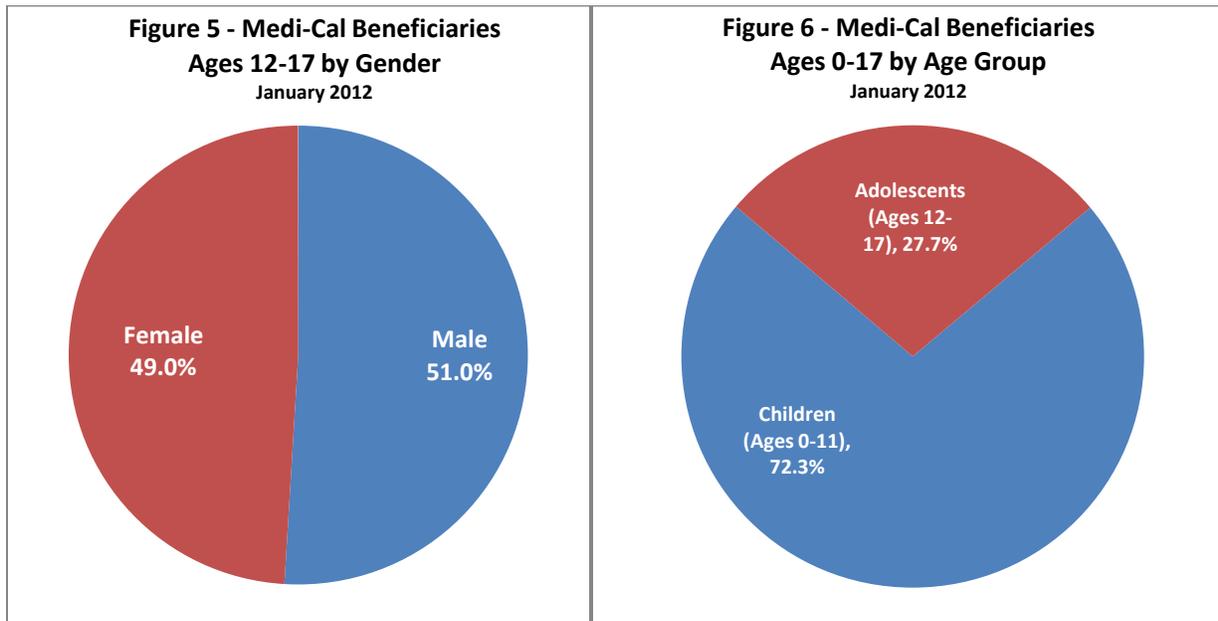


Source: Certified Eligibles Only- Prepared by DHCS Research and Analytic Studies Division using Medi-Cal eligibility data obtained from the MEDS System MMEF files, January 2012.

Findings: Age and Gender in Medi-Cal's Adolescent Population

Derived from DHCS Administrative eligibility data.

In January 2012, adolescents enrolled in Medi-Cal were evenly split between male (51.0%) and female (49.0%) beneficiaries. RASD found that children (ages 0 to 11) accounted for the majority (72.3%) of the Medi-Cal population age 17 and younger. Adolescents (ages 12 to 17) made up 27.7% of Medi-Cal beneficiaries ages 17 and younger.



Source: Certified Eligibles Only - Prepared by DHCS Research and Analytic Studies Division using Medi-Cal eligibility data obtained from the MEDS System MMEF files, January 2012.

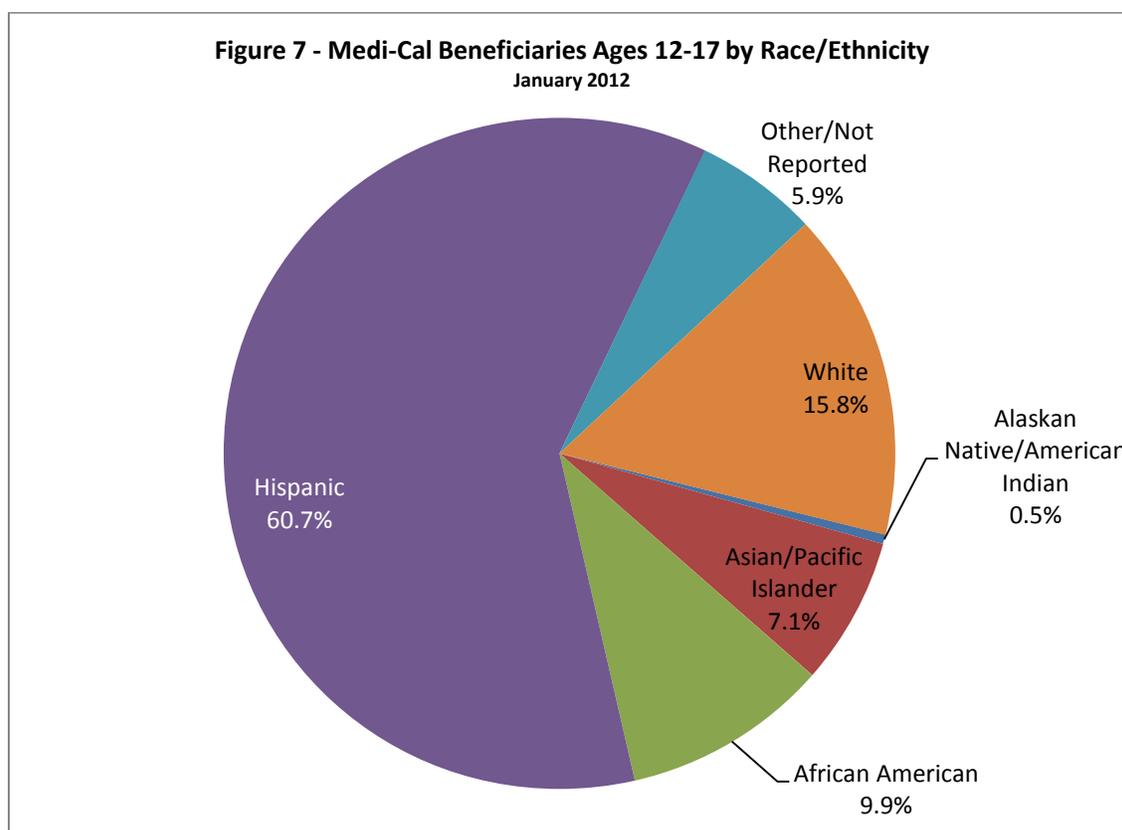
Findings: Race and Ethnicity in Medi-Cal's Adolescent Population

Derived from DHCS Administrative eligibility data.

Differences in health outcomes for racial and ethnic minorities remain a persistent problem in health care. Racial and ethnic minorities are less likely to receive routine medical treatments, and experience a lower quality of health care.^{10,11} In addition, the social, economic, and environmental disadvantages faced by some ethnic groups contribute to health disparities.¹²

Reduced access to health insurance and health care services exacerbate the difficulty in addressing variability in health outcomes for racial and ethnic minorities. Minorities are less likely to have employer-based insurance, which contributes to lower rates of insurance among minorities.¹³

In 2012, Hispanics accounted for 60.7% of the Medi-Cal adolescent population. Whites comprised the second largest group at 15.8%, followed by African-Americans (9.9%), and Asian/Pacific Islanders (7.1%).



Source: Certified Eligibles Only - Prepared by DHCS Research and Analytic Studies Division using Medi-Cal eligibility data obtained from the MEDS System MMEF files, January 2012.

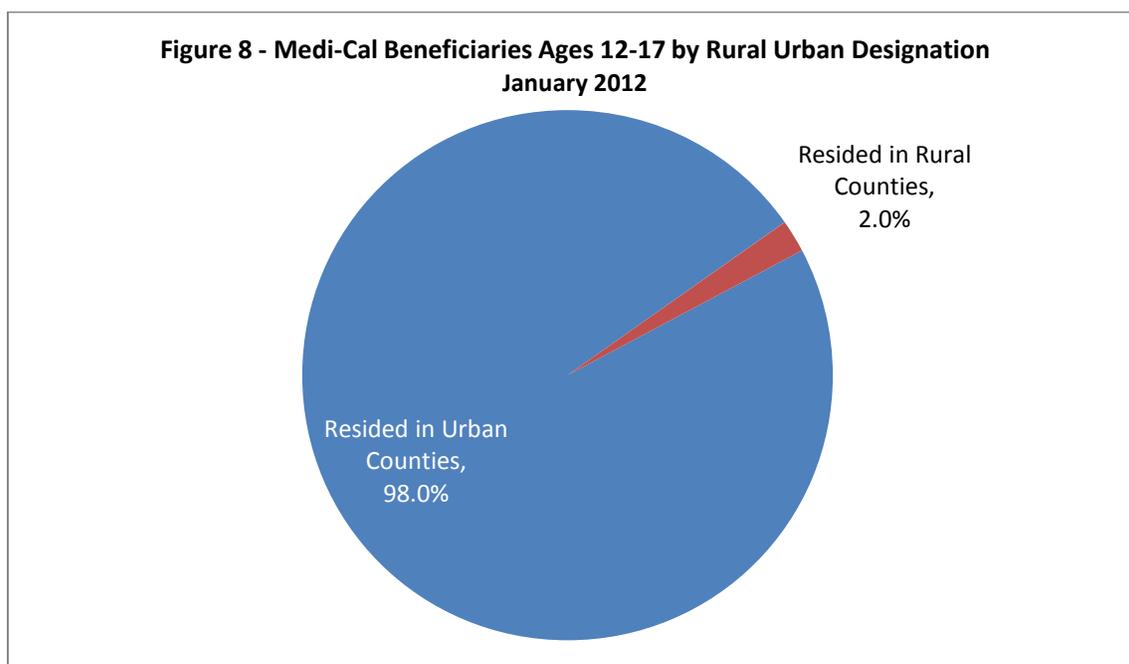
Findings: Regional Distribution in Medi-Cal’s Adolescent Population

Derived from DHCS Administrative eligibility data.

In 2012, 79% of the U.S. population lived in metropolitan areas.¹⁴ Where a community falls on the urban to rural spectrum influences its demographic, environmental, economic, and social characteristics. Urban counties have younger, more diverse populations and higher concentrations of poverty, whereas rural populations live further from health resources.¹⁵ Geographic distance, severe weather, lack of transportation, or challenging traveling conditions may restrict health care access. Emergency response times are also a serious concern for rural populations that tend to be older and have more chronic health conditions.¹⁶ Rural populations are more likely to have chronic diseases and mental health issues, have higher proportions of obesity, and higher rates of infant mortality.¹⁷ Rural residents are also less likely to have insurance coverage through Medicaid.¹⁸

For this analysis, RASD defined an urban county as one in an established metropolitan region based on population size, degree of urbanization, and adjacency to a metropolitan area (see [Appendix A, Data Sources and Methods](#)). RASD classified counties outside or adjacent to metropolitan areas as rural. California’s population is highly urbanized. While California has 37 urban counties and 21 rural counties, 87% of the population lives in urban areas. This proportion reflects the population concentration inherent in the urban-rural analysis; rural counties have much smaller populations and thus account for a much smaller percent of the state’s population.

Only 2.0% of Medi-Cal beneficiaries ages 12 to 17 lived in rural counties in 2012. The remainder of the adolescent population (98.0%) resided in urban counties.



Source: Certified Eligibles Only - Prepared by DHCS Research and Analytic Studies Division using Medi-Cal eligibility data obtained from the MEDS System MMEF files, January 2012.

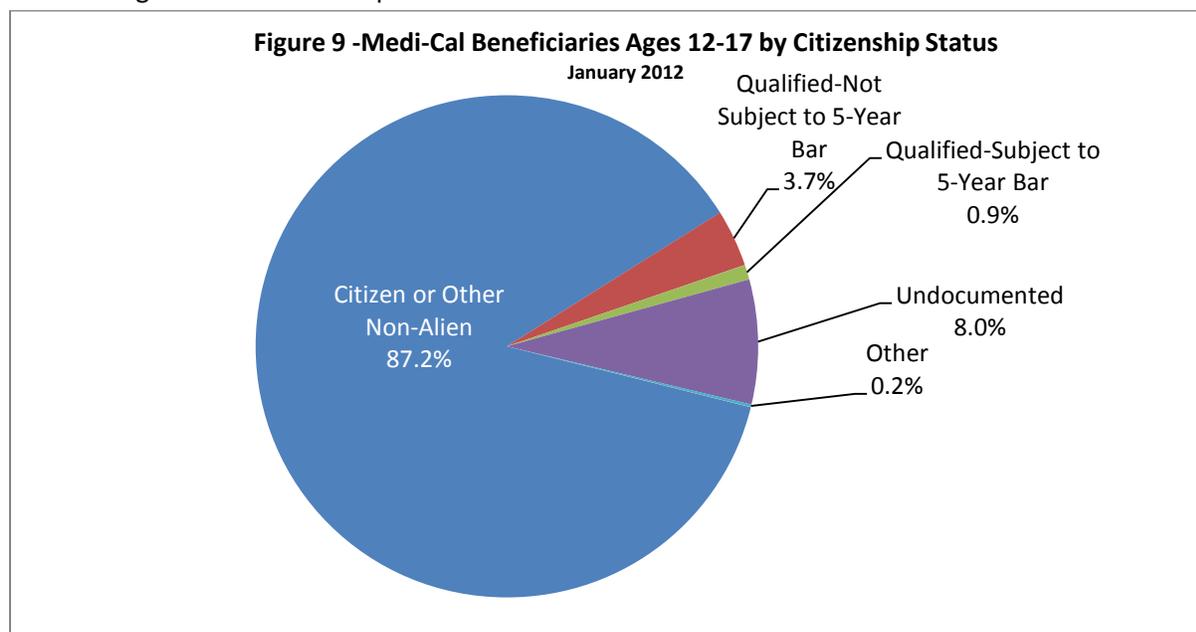
Findings: Citizenship Status in Medi-Cal's Adolescent Population

Derived from DHCS Administrative eligibility data.

The significant immigrant population in the U.S. includes a growing number of mixed-citizenship families. A mixed-citizenship status family refers to a household comprised of individuals with different citizenship or immigration status, including legal immigrants, undocumented immigrants, and naturalized citizens.^{19,20} Mixed-citizenship status families are very complex in regards to their health insurance eligibility. While some family members may qualify for different health insurance programs, others may not be eligible at all. California offers full-scope Medi-Cal coverage to legal immigrants, Permanently Residing under Color of Law (PRUCOL) immigrants, and naturalized citizens provided that they meet all other Medi-Cal qualifications, regardless of the length of their residency.²¹ In California, undocumented immigrants are not eligible for full-scope Medi-Cal benefits and are eligible for emergency and pregnancy related services only. An individual who is not eligible for a health insurance program may apply on behalf of an eligible family member, such as an undocumented parent may apply on behalf of their child who is a U.S. citizen.²²

Research shows that from 2006 to 2011, the number of children and adolescents ages 0 to 17 who had at least one parent who was an immigrant increased by 1.5 million children.²³ Children with immigrant parents account for nearly one-quarter of all children in the U.S. and the number continues to increase, thus resulting in an increase in mixed-citizenship status families.²⁴

In 2012, the majority of Medi-Cal's adolescent population had citizenship or non-alien status (87.2%). Beneficiaries without SIS (Undocumented, 8.0%) contributed the only other significant percentage. The percentage of adolescents with citizenship or other non-alien status is higher in comparison to the nonelderly Medi-Cal population with similar citizenship status, which demonstrates many adolescents are residing in mixed-citizenship status families.



Source: Certified Eligibles Only - Prepared by DHCS Research and Analytic Studies Division using Medi-Cal eligibility data obtained from the MEDS System MMEF files, January 2012.

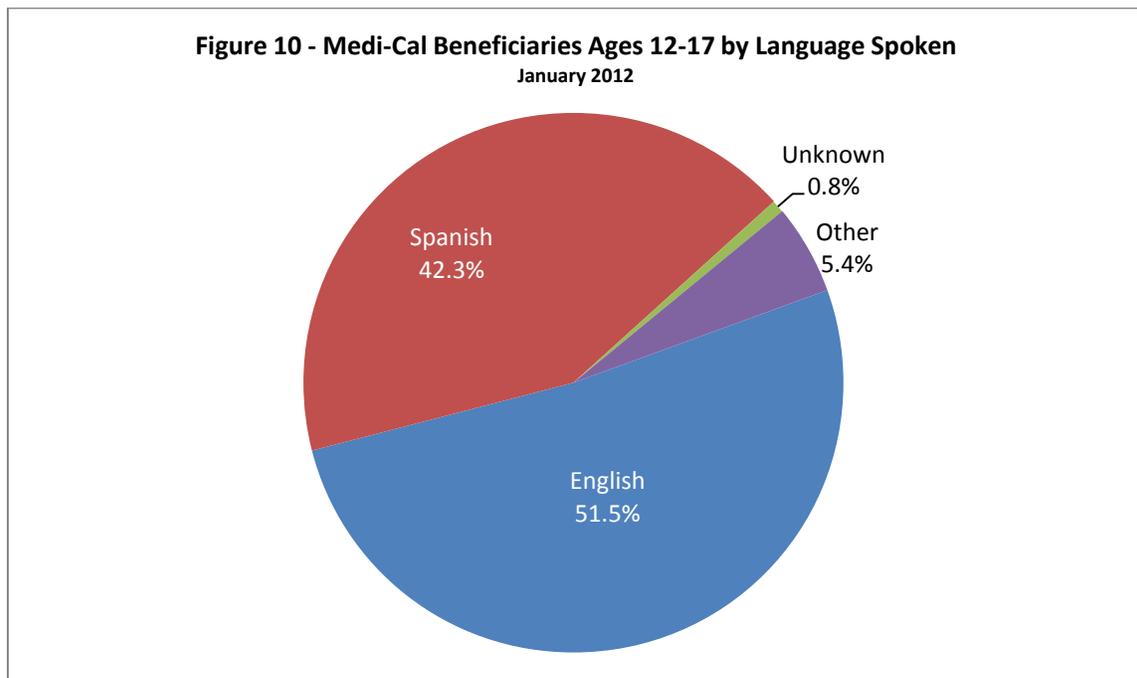
Findings: Language Spoken by the Medi-Cal’s Adolescent Population

Derived from DHCS Administrative eligibility data.

Non-financial barriers such as limited English proficiency contribute to disparities in insurance status and access to quality health care.²⁵ Immigrants with limited English proficiency report lower satisfaction with the level of care they received, and a poorer understanding of their medical diagnosis. Limited English proficiency can also affect patient safety due to a poor understanding of instructions, or an adverse reaction to medications.²⁶

[Appendix A](#), Data Sources and Methods, provides a complete breakdown of the languages spoken in the Medi-Cal population.

More than half of Medi-Cal beneficiaries between the ages of 12 and 17 spoke English (51.5%), while 42.3% of adolescents spoke Spanish.



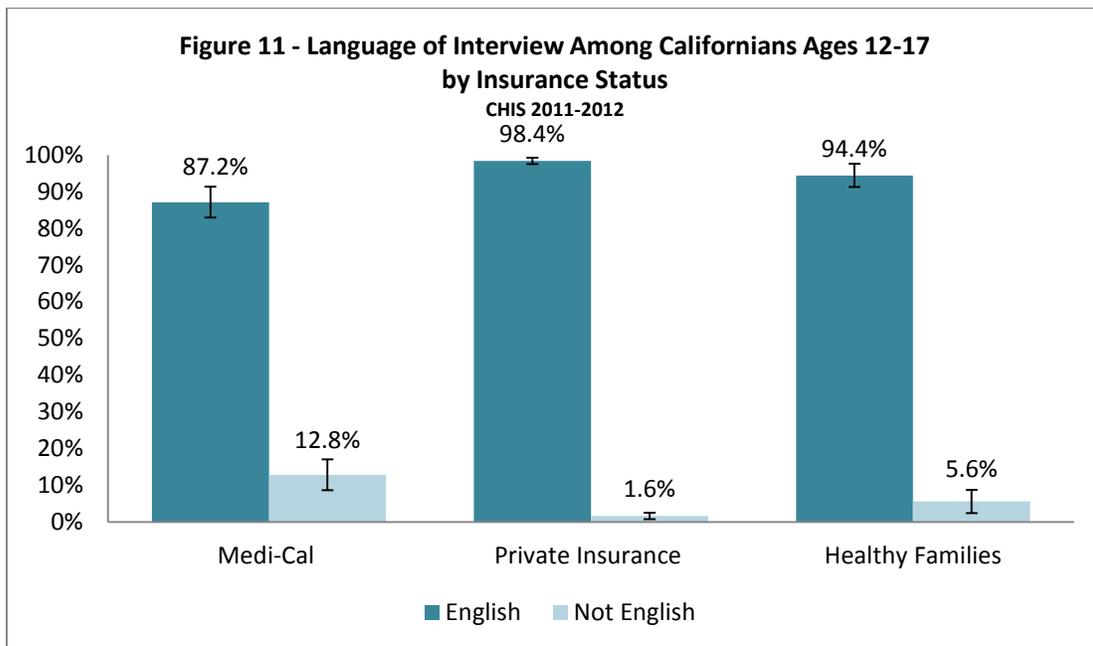
Source: Certified Eligibles Only - Prepared by DHCS Research and Analytic Studies Division using Medi-Cal eligibility data obtained from the MEDS System MMEF files, January 2012.

Findings: Language of Interview in California's Adolescent Population

CHIS Question: Language in which interviewer conducted CHIS interview.

RASD's findings for the language of CHIS interview for adolescents closely mirrors the language findings derived from DHCS administrative claims data. As noted earlier in this report, 51.5% of adolescent Medi-Cal beneficiaries spoke English as a primary language, followed by Spanish (42.3%). A combined category of all other languages accounted for only 6.2% of the Medi-Cal adolescent population.

Adolescents enrolled in Medi-Cal were less likely to have their interview conducted in English (87.2%) than those with private insurance (98.4%), and those enrolled in Healthy Families (94.4%),



Findings: Marital Status of Parent/Guardian in California’s Adolescent Population

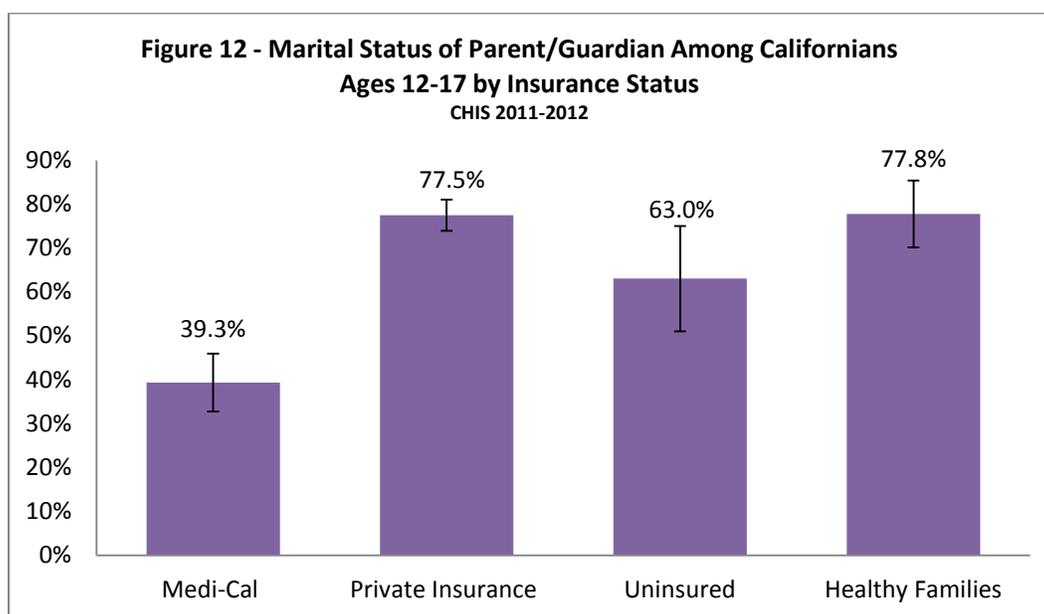
CHIS Question from adult interview: “Are you now married, living with a partner in a marriage-like relationship, widowed, divorced, separated or never married?”

Marital status correlates with both health status and income. Additionally, research has shown that there are health benefits from being married. Marriage is also associated with an increased likelihood of having health insurance coverage.^{27,28} In general, low-income populations are less likely to be married than those with higher incomes.²⁹

Research has consistently shown that children of divorced parents score lower on measures of well-being such as academic success and psychological adjustment than children from two parent families.³⁰ Several articles have suggested that children from two parent families have better mental health and greater life satisfaction than those from divorced or single parent families.³¹ Single mothers were more likely to report poorer physical health for their children than mothers in intact marriages. However, this may be due to the health risks associated with lower socio-economic status.³² Additionally, these trends may reflect the fact that children from two parent families obtain more education and engage in fewer negative health behaviors.³³

It is important to note that Medi-Cal considers the absence of one parent in a family with children as deprivation and an eligibility pathway for enrollment. The status of single-parenthood as a condition of eligibility may explain the elevated proportion of unmarried adults in Medi-Cal.

Adolescents ages 12-17 with private insurance were nearly twice as likely as those enrolled in Medi-Cal to have a parent or guardian who was married (77.5% and 39.3%, respectively). Those enrolled in Medi-Cal were less likely than those with private insurance, the uninsured (63.0%), and those enrolled in Healthy Families (77.8%) to have a parent or guardian who was married.



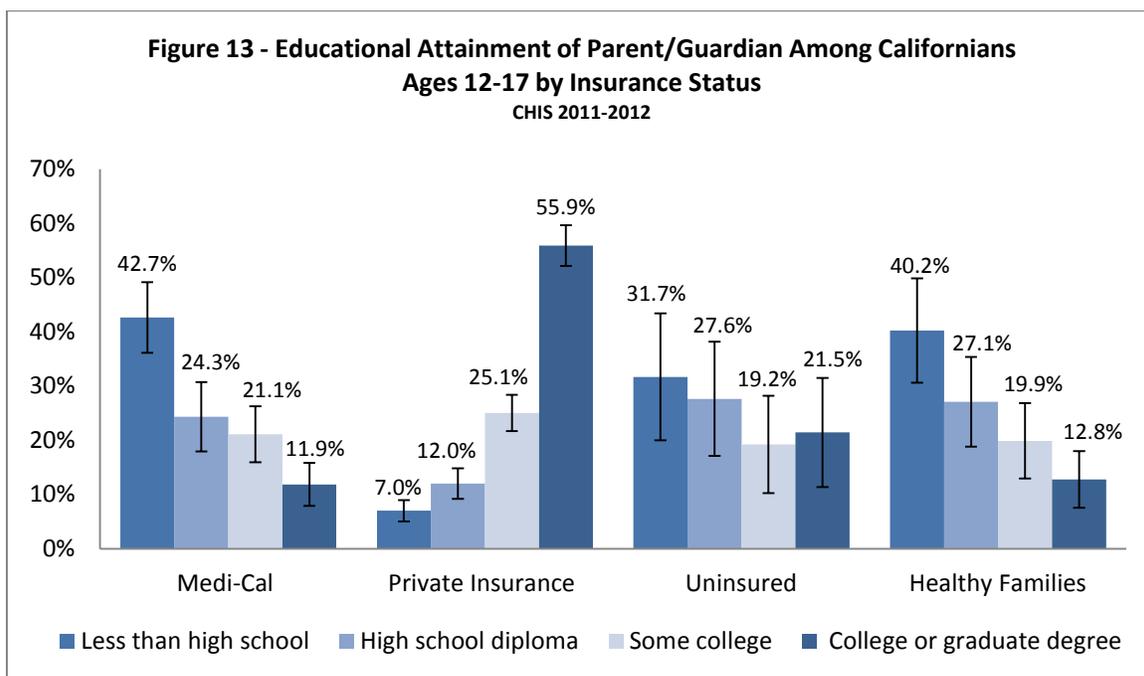
Findings: Education Level of Parent/Guardian in California’s Adolescent Population

CHIS Question from adult interview: “What is the highest grade of education you have completed and received credit for?”

A strong and persistent association exists between educational attainment and health status. The reviewed literature shows that morbidity and mortality rates are lower among people with higher educational attainment even after controlling for income, the labor market, and family background.³⁴ Individuals with more education are less likely to report or die from acute or chronic diseases, and less likely to report anxiety or depression.³⁵ Higher levels of education are associated with a lower probability of reporting fair or poor health, a reduced number of days of work lost, and an increase in reported positive health behaviors.³⁶ These associations also exist between a mother’s education and her child’s health.³⁷ Parental education has also been shown to be a strong predictor of a child’s achievement.

There is also a strong correlation between educational attainment and income. In 2011, 36.7% of families in which no adult had a high school diploma lived in poverty, compared to 19.9% of families with at least one adult with a high school diploma, and 5.4% of families with at least one adult with a college degree.³⁸

The parents and guardians of adolescents enrolled in Medi-Cal were less educated than those with private insurance. Adolescents enrolled in Medi-Cal were six times as likely as those with private insurance to have a parent or guardian with less than a high school education (42.7% and 7.0%, respectively).



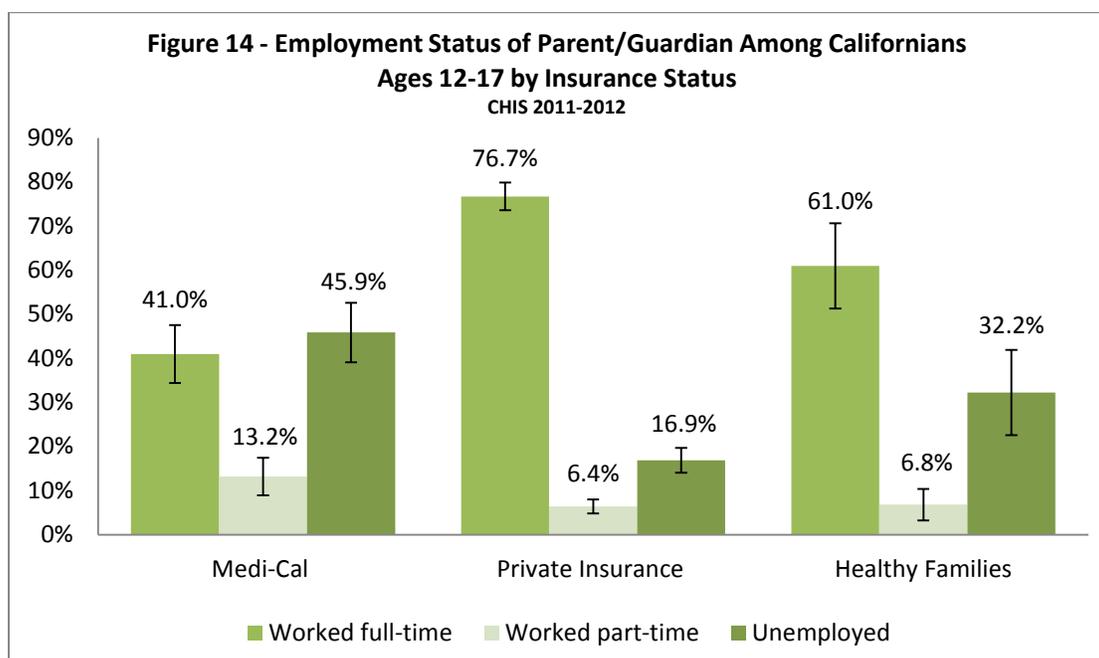
Findings: Employment Status of Parent/Guardian in California’s Adolescent Population

CHIS Question from adult interview: “How many hours per week do you usually work?”

There is a strong association between unemployment and adverse health outcomes. While some of this disparity may be the advantage of individuals with better health in seeking employment, the reviewed literature suggests that unemployment has measurable health consequences and that long-term unemployment may result in greater mortality.³⁹ This relationship is particularly evident when examining mental health issues, such as depression and substance abuse.⁴⁰ While unemployment is intrinsically linked to income level, the relationship between health and unemployment remains after adjusting for factors such as social class, poverty, age, and pre-existing morbidity.⁴¹ Children whose family is unemployed experience childhood poverty, as well as inferior health, social, and developmental outcomes.⁴² Additionally, children of parents who experience long-term unemployment tend to have poorer academic performance compared to children of parents who were employed.⁴³

Because Medi-Cal is intended to provide coverage to low- or no-income families and individuals, the relationship between unemployment and income creates a correlation between unemployment and Medi-Cal. Many Medi-Cal eligibility pathways require that enrollees have incomes at or below established low-income thresholds. RASD advises readers to remain mindful of the relationship between income and Medi-Cal eligibility when drawing conclusions from the unemployment data presented in this report.

Almost half of the adolescents enrolled in Medi-Cal had a parent or guardian who was unemployed (45.9%). This was more than twice as high as among the parents or guardians with private insurance (16.9%).



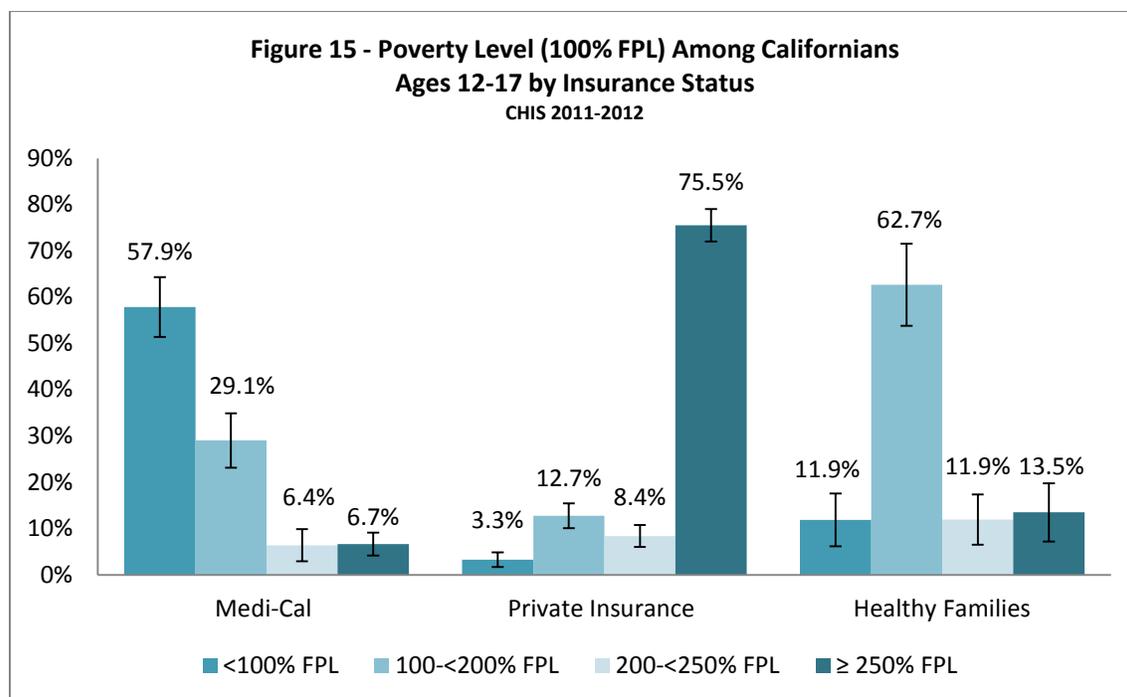
Findings: Federal Poverty Level Status in California’s Adolescent Population

CHIS Question from adult interview: “What is the best estimate of your household’s total annual income from all sources before taxes in 2010?”

Health status and income level are strongly related. Low-income individuals have an increased risk of mortality and morbidity, and are less likely to have sufficient access to health care or to receive an adequate quality of care.⁴⁴ Healthy People, a federal organization that identifies long-term health objectives for the U.S. population, recognizes living in poverty as a key determinant of health in a society and an important factor in reducing health disparities.⁴⁵ In the U.S., the standard measure of poverty is the FPL determined by the Department of Health and Human Services. Using household size and income, the FPL allows administrators to measure the proportion and characteristics of the population living in poverty. In 2011, the FPL for a family of four was an income of \$22,350 (100% FPL).⁴⁶

Many Medi-Cal eligibility pathways require that enrollees have incomes at or below established low-income thresholds. RASD advises readers to remain mindful of the relationship between income and Medi-Cal eligibility when drawing conclusions from the income data presented in this report.

More than half (57.9%) of adolescents ages 12-17 enrolled in Medi-Cal came from families with incomes below 100% FPL. By contrast, the proportion was only 3.3% of those with private insurance and 11.9% of those enrolled in Healthy Families. The proportion of adolescents who came from families with incomes above 250% FPL was 75.5% for those with private insurance while only 6.7% among those enrolled in Medi-Cal.



Findings: Food Insecurity in California’s Adolescent Population

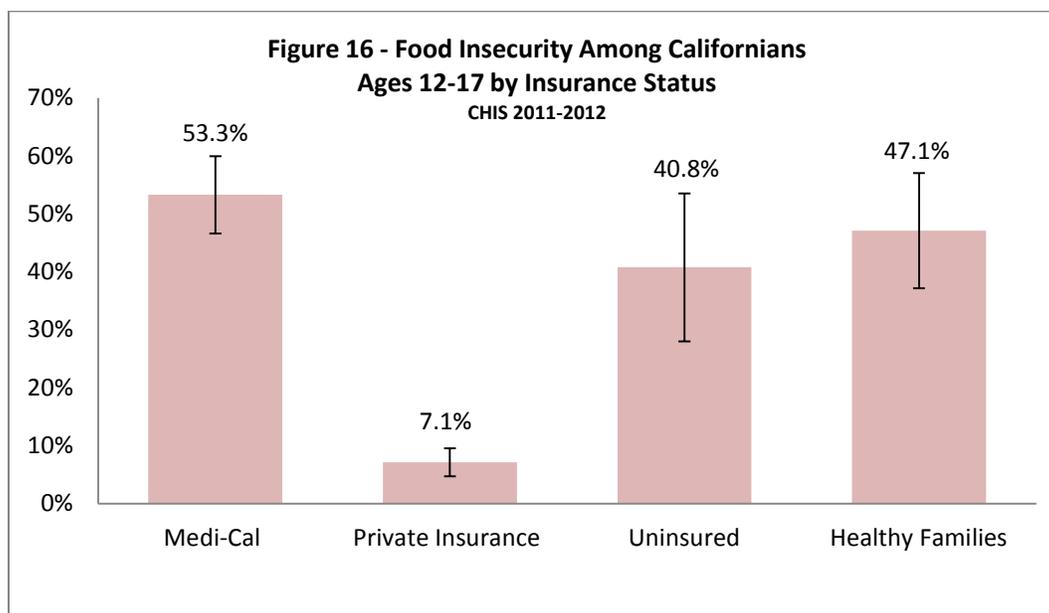
Questions from adult interview (See Appendix A for the questions used to measure food insecurity using CHIS data).

The U.S. Department of Agriculture (USDA) defines food insecurity as an individual or household that, at times, is “uncertain of having, or unable to acquire, enough food to meet needs” due to “insufficient money or other resources for food.”⁴⁷ During 2012, the USDA estimated 14.5% of U.S. households were food insecure at least some time during the year, including 10% of households with children.⁴⁸ Research has shown that there is a strong association with food insecurity and income.⁴⁹ Households with incomes near or below the FPL were more likely to experience food insecurity.⁵⁰

Research links food insecurity to numerous physical and mental health complications at all stages of life.⁵¹ Among children, food insecurity correlates to malnutrition, poor academic performance, and behavioral issues.⁵² There is an association between food security and children’s health, development, and well-being. Children who experience food insecurity have greater risks of health and developmental problems in comparison to their counterparts who do not experience food insecurity.⁵³ The reviewed literature indicates that children who experience food insecurity are sick more often and are more likely to be hospitalized.⁵⁴ Children who are food insecure are also more likely to have chronic conditions.⁵⁵

RASD constructed this food insecurity measure from several CHIS questions addressing the availability and affordability of food. Adolescents from households with incomes above 200% of the FPL were defined as food secure. A detailed description of the questions and method used to measure food insecurity is located in [Appendix A](#), Data Sources and Methods.

Adolescents ages 12-17 enrolled in Medi-Cal (53.3%) were seven times as likely as those with private insurance (7.1%) to have a parent or guardian who reported experiencing food insecurity with or without hunger.



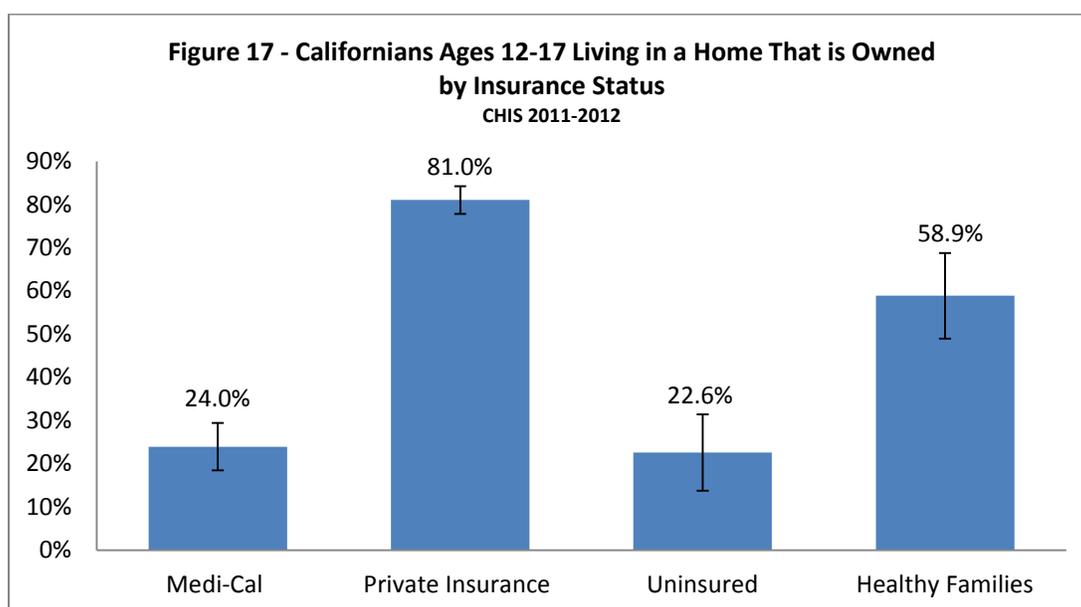
Findings: Renting/Owning a Home in California's Adolescent Population

CHIS Question from adult interview: "Do you own or rent your home?"

Homeownership is associated with improved health outcomes and social benefits.⁵⁶ Many of the health advantages of homeownership correspond with the tendency of homeowners to maintain healthier residences that promote better living conditions. Renters are more likely to suffer from health conditions associated with residential dampness, toxicity, or allergens.⁵⁷ Historically, researchers have associated homeownership with positive mental health outcomes, including greater life satisfaction.⁵⁸ However, recent studies suggest that the stresses of homeownership may negate some or all of the emotional health advantages for some population groups.⁵⁹ Home foreclosures, which are more common in low-income areas, negatively affect the mental health of residents.⁶⁰

Among children and adolescents, homeownership was associated with greater cognitive ability and fewer behavioral problems.⁶¹ Researchers have found that since homeowners have invested in their community, they are more likely to monitor and correct their children who engage in socially deviant behavior in comparison to individuals who are not homeowners.⁶² Children of homeowners also benefit from the stability accompanied with homeownership since homeowners tend to reside in one place longer; therefore, children are not required to move and change schools often, resulting in better school performance.⁶³ Children of homeowners are more likely to receive high scores on academic achievement tests and graduate high school in comparison to children of individuals who are not homeowners.⁶⁴ Children whose parents are homeowners are also less likely to become pregnant during adolescent years.⁶⁵ Research also suggests that homeowners possess managerial and financial skills necessary for homeownership, which are valuable skills that are instilled in their children.⁶⁶

Only 24.0% of adolescents ages 12-17 enrolled in Medi-Cal lived in homes that were owned. This was much lower than those with private insurance (81.0%) and those enrolled in Healthy Families (58.9%).



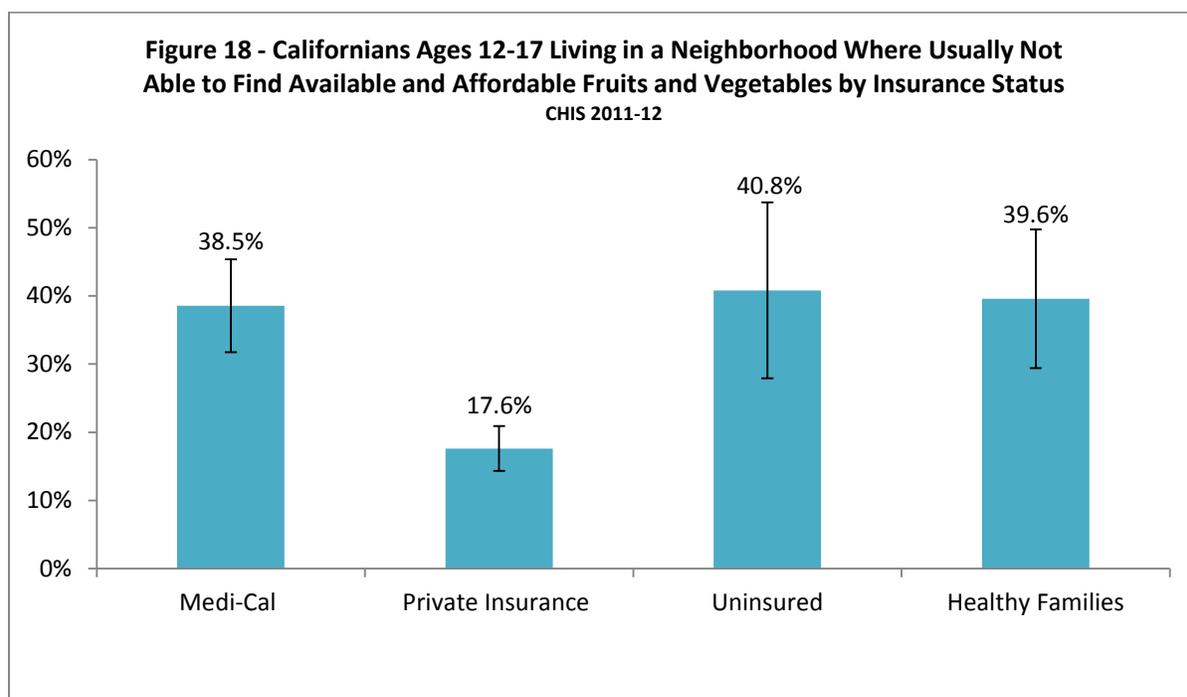
Findings: Ability to Find Affordable Fruit and Vegetables in the Neighborhood in California’s Adolescent Population

CHIS Questions from adult interview: “How often can you find fruits and vegetables in your neighborhood? Never, sometimes, usually or always or never shop for fruits and vegetables?”
“How often are they affordable? Never, sometimes, usually or always?”

Low-income areas are less likely to have healthy food options, making the affordability of available healthy food an important factor in access.⁶⁷ This limited availability compounds the budgetary concerns of low-income families. Energy-dense fats and starches are often the cheaper and more convenient option for low-income populations, while fresh produce is more expensive, harder to come by, and involves greater spoilage and cooking costs.⁶⁸ Access to fruits and vegetables correlates with positive health behaviors, an increased ability to meet federal dietary guidelines, and improved health outcomes.⁶⁹ When studying low-income populations like Medi-Cal beneficiaries, it is important that stakeholders consider the affordability of healthy foods as an impediment that compounds issues of physical access to healthy foods.

For the purpose of this analysis, RASD defined adolescents who answered “never” to the first question above or “sometimes” or “never” to the second question above as living in a neighborhood where one is usually not able to find available and affordable fruits and vegetables.

Adolescents ages 12-17 enrolled in Medi-Cal were more likely to live in a neighborhood where one is usually not able to find available and affordable fruits and vegetables than those with private insurance (38.5% and 17.6%, respectively).



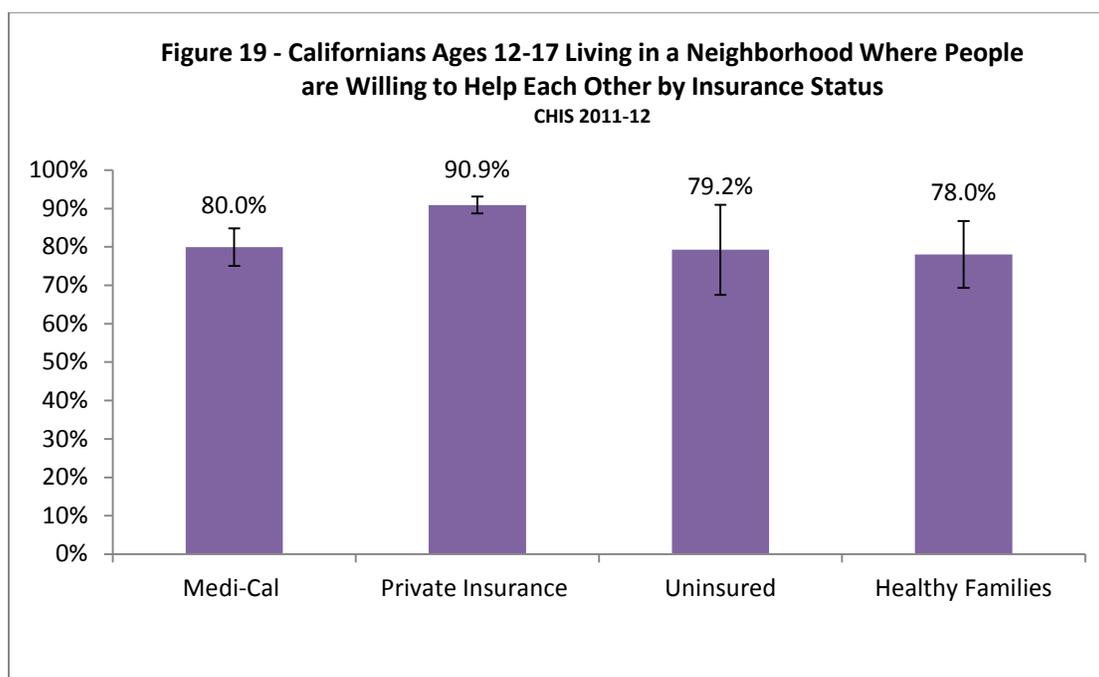
Findings: California’s Adolescent Population Living in a Neighborhood Where People are Willing to Help Each Other

CHIS Question: “People in my neighborhood are willing to help each other: Strongly agree, agree, disagree or strongly disagree.”

Like physical health hazards, the social environments of neighborhoods can influence the health outcomes of the residents. For example, neighborhoods where residents report feeling less close-knit experience increased rates of negative mental health outcomes and health-damaging behaviors like smoking and drinking.⁷⁰ Similarly, research indicates that higher levels of neighborhood social cohesion correlate with better physical and mental health outcomes.⁷¹ A resident’s willingness to help neighbors is a common indicator of the level of cohesion in a community.⁷² Children who reside in closely-knit neighborhoods are more likely to receive guidance from multiple adults and less likely to engage in negative health behaviors, such as smoking, drinking, or substance use.⁷³

For the purpose of this analysis, RASD defined adolescents who responded “strongly agree” or “agree” to the above question as living in a neighborhood where people were willing to help each other.

Adolescents with private insurance (90.9%) were more likely than those enrolled in Medi-Cal (80.0%), the uninsured (79.2%), and those enrolled in Healthy Families (78.0%) to live in a neighborhood where people are willing to help each other.



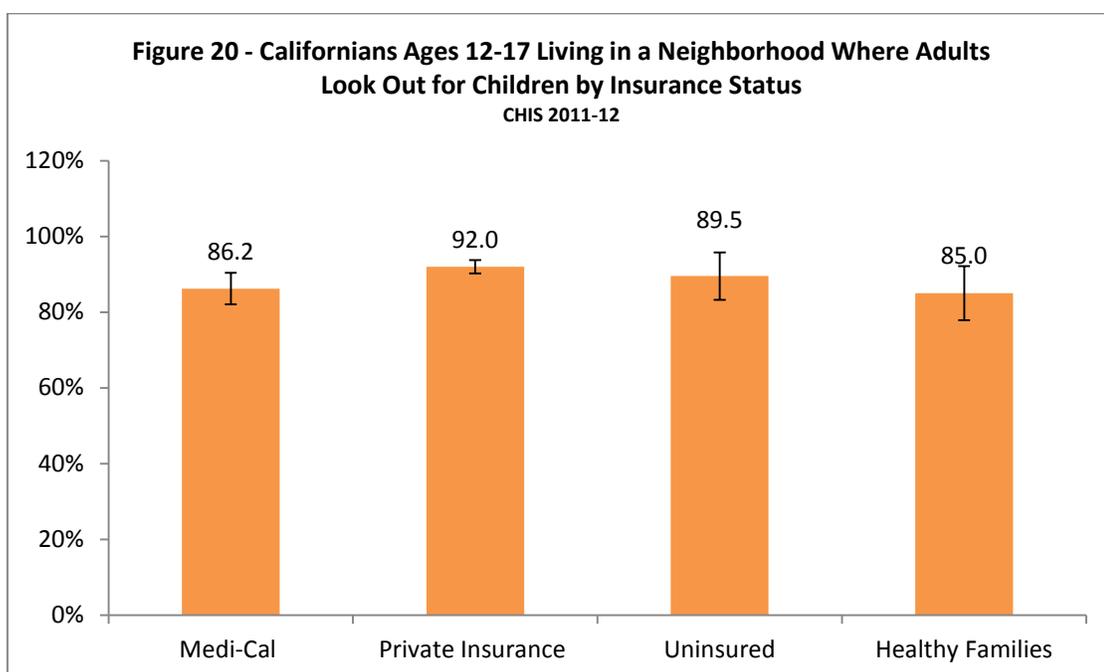
Findings: California’s Adolescent Population Living in a Neighborhood Where Adults Look Out for Children

CHIS Question: “You can count on adults in neighborhood to watch out that children are safe and don’t get in trouble? Strongly agree, agree, disagree, or strongly disagree?”

The social and economic features of a neighborhood affect the mortality, health status, and health behaviors of the population who lives there.⁷⁴ Children may be particularly vulnerable to unhealthy neighborhood conditions and may experience the consequences both in childhood and into adulthood.⁷⁵

For the purpose of this analysis, RASD defined adolescents who answered “strongly agree” or “agree” to the above question as living in a neighborhood where adults look out for children.

Adolescents with private insurance (92.0%) were more likely than those enrolled in Medi-Cal (86.2%), to live in a neighborhood where adults look out for children.



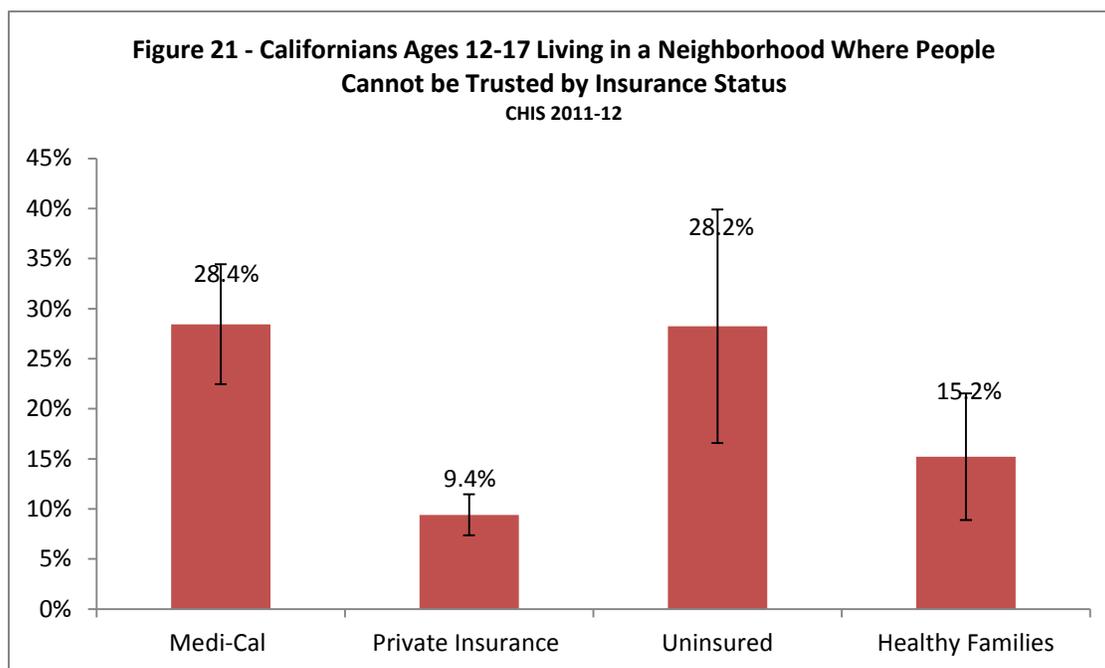
Findings: California’s Adolescent Population Living in a Neighborhood Where People Cannot be Trusted

CHIS Question: “People in this neighborhood can be trusted: Strongly agree, agree, disagree or strongly disagree.”

Research has shown that children learn the topic of trust from their parent’s lectures and from observing examples their parents set for their children in displaying trusting and trustworthy behavior.^{76,77} The reviewed literature suggests trust is formed, in part, by what adolescents hear from their parents regarding their responsibilities to others and by their parents modeling democratic parenting.⁷⁸ Research demonstrates that residents who reported high trust among people in a neighborhood area were more common among those who rated the reputation of their own area as very good.⁷⁹ Neighborhood attachment is determined upon the level of social trust and perceptions of social cohesion among neighbors.⁸⁰

For the purpose of this analysis, RASD defined adolescents who answered “disagree” or “strongly disagree” to the above question as living in a neighborhood where people cannot be trusted.

Among adolescents ages 12-17, those enrolled in Medi-Cal (28.4%) were more likely than those with private insurance (9.4%) and those enrolled in Healthy Families (15.2%) to live in a neighborhood in which people cannot be trusted, but equally likely as the uninsured (28.2%).



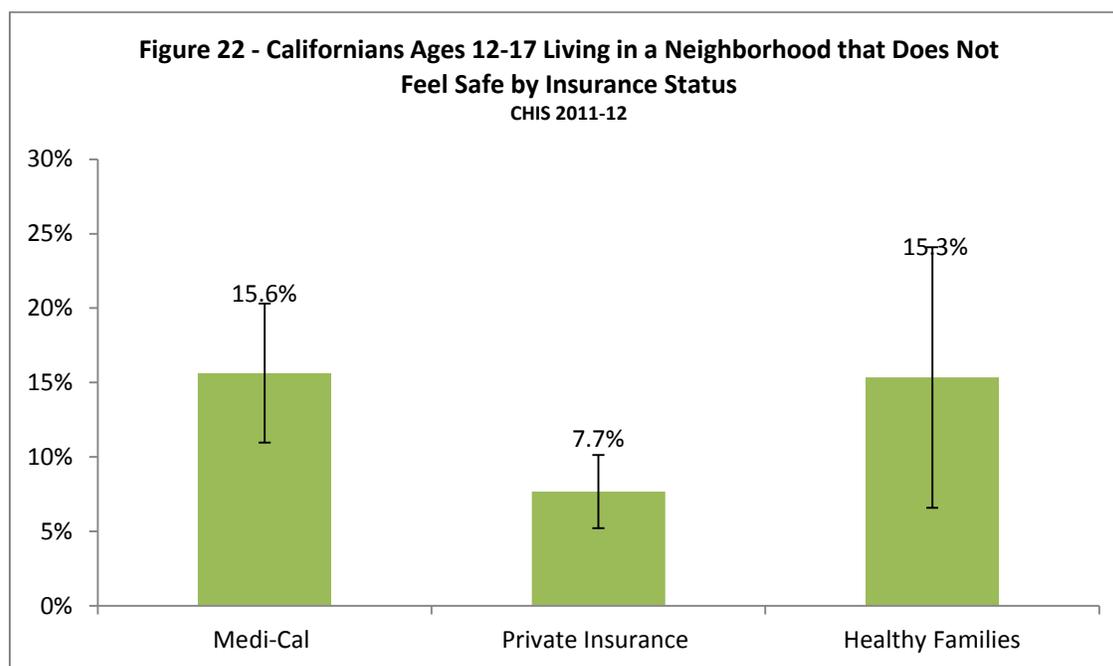
Findings: California’s Adolescent Population Living in a Neighborhood that Does Not Feel Safe

CHIS Question: “Do you feel safe in your neighborhood all of the time, most of the time, some of the time or none of the time?”

The social and economic features of a neighborhood affect the mortality, health status, and health behaviors of the population who lives there.⁸¹ Neighborhoods influence health through physical factors, such as poor air and water quality, unsafe housing, and limited access to healthy food and safe exercise spaces. Less obvious social factors in a neighborhood can also affect the health of the residents. Research suggests that unsafe neighborhoods affect a child’s daily activities and has been correlated with low physical activity levels.^{82,83} The reviewed literature demonstrates that a child’s perception of a neighborhood being less safe was independently associated with an increased risk to be overweight at the age of 7 years old.⁸⁴

For the purpose of this analysis, RASD defined adolescents who answered “some of the time” or “none of the time” to the above question as living in a neighborhood where they did not feel safe.

Among adolescents ages 12-17, those enrolled in Medi-Cal (15.6%) and those enrolled in Healthy Families (15.3%) were more likely than those with private insurance (7.7%) to live in a neighborhood where they did not feel safe.



Findings: Safety During the Day and the Night in the Neighborhood Park in California’s Adolescent Population

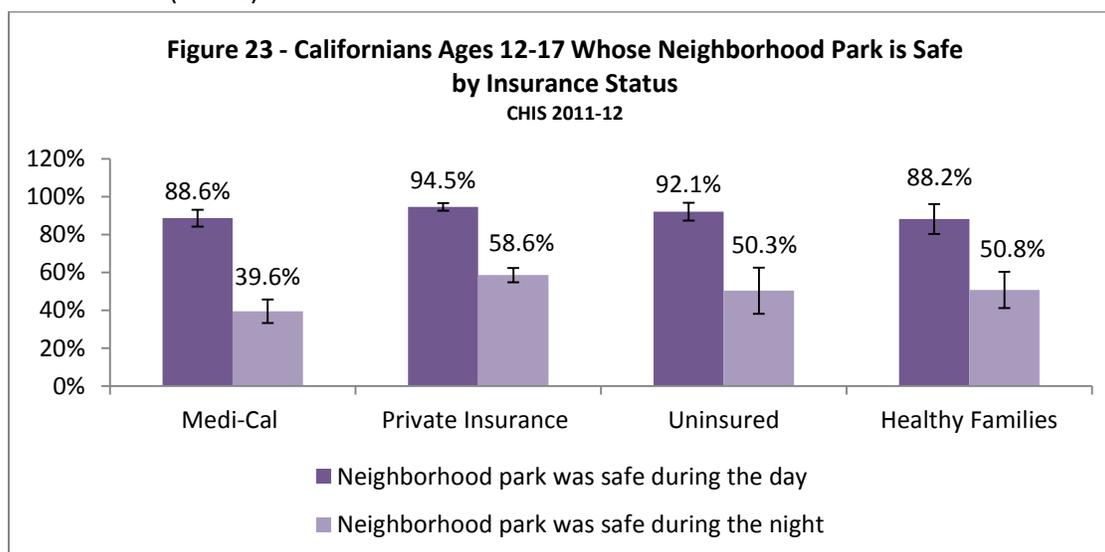
CHIS Question: “The park or playground closest to where I live is safe during the day. Strongly agree, agree, disagree, or strongly disagree?”

“The park or playground closest to where I live is safe during the night? Strongly agree, agree, disagree, or strongly disagree?”

The natural environment is a key determinant of health.⁸⁵ Researchers have found that “approximately one-quarter of global disease burden, and more than one-third of the burden among children, is due to modifiable environmental factors.”⁸⁶ Parks play a vital role in health and well-being as play has been found to be central to healthy growth and development among children.^{87,88} Physical play is associated with a decreased risk of obesity, improved self-esteem, and improved academic performance.⁸⁹ Parks not only offer a setting for sports and recreational activities, they also provide a location for residents to meet and interact with one another, providing the opportunity to enhance social networks and personal relationships.⁹⁰ The quality, accessibility, and safety of a playground influences the use of the playground as children are more likely to play on recently renovated playgrounds and playgrounds located near their residence.⁹¹ Neighborhoods with a greater percentage of parks are associated with greater physical activity among young children.⁹²

For the purpose of this analysis, RASD classified adolescents who answered “strongly agree” or “agree” to the first question above as living in a neighborhood where the closest park or playground was safe during the day. RASD classified adolescents who answered “strongly agree” or “agree” to the second question above as living in a neighborhood where the closest park or playground was safe during the night.

Although most adolescents lived near a park that was safe during the day, the proportion among those enrolled in Medi-Cal was lower than among those with private insurance (88.6% and 94.5%, respectively). Only 39.6% of adolescents enrolled in Medi-Cal lived near a park that was safe at night. This was lower than those with private insurance (58.6%), those enrolled in Healthy Families (50.8%), and the uninsured (50.3%).



Findings: Health Behaviors in California's Adolescent Population

The following section of this report explores household health behaviors for the adolescent population using eight measures – smoking allowed in home, ever smoked a cigarette, had a few sips of alcohol in past month, daily smoking of a parent or guardian, fruit and vegetable consumption, soda consumption, fast food consumption, and physically active seven days in typical week. Estimates for characteristics such as low fruit and vegetable consumption, high soda consumption, and high fast food consumption, were higher among adolescents who reported for themselves than among children whose parents supplied the data (as reported in *Med-Cal's Child Population: The Medi-Cal Population Before Implementation of the Affordable Care Act*). This finding may reflect that parents underreport negative health behaviors affecting their children because they do not understand the extent of their child's exposure or because they wish to conform to the recognized social conformity bias.⁹³ The reviewed literature points to a pattern of parental underreporting of both household smoking and soda consumption when questioned by health professionals.⁹⁴ However the finding may also reflect that parents monitor their younger children's behavior better than their adolescent's behavior.

RASD found no statistical significance for smoking allowed in home, fruit and vegetable consumption, fast food consumption, and having a few sips of alcohol in past month by insurance type despite the strong correlation of some of these health behaviors with socioeconomic status. These findings differ from RASD's findings for health behaviors among the non-elderly adult population (as reported in *Med-Cal's Nonelderly Adults: The Medi-Cal Population Before Implementation of the Affordable Care Act*), where RASD found negative health behaviors more common for those enrolled in Medi-Cal and those without insurance than for those with private insurance.⁹⁵ The smaller sample size for adolescents compared to the nonelderly adult population may have contributed to the lack of statistical significance reported for some of these health behaviors among adolescents.⁹⁶ However, the findings may reflect a tendency for adolescents in Medi-Cal to have health behaviors that more closely mirror the privately insured population than comparisons between adults in Medi-Cal and the privately insured.

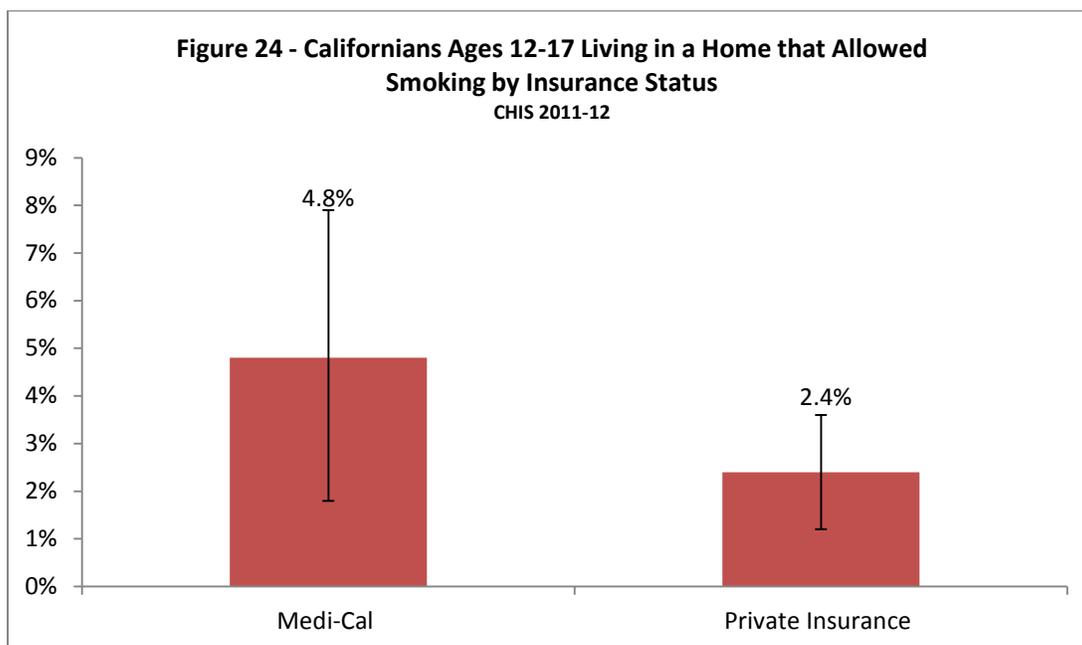
Findings: Smoking Allowed in Home Among California’s Adolescent Population

CHIS Question for Parent/Guardian: “Is smoking ever allowed in your home?”

The health consequences of smoking extend beyond the smoker into their household and community. The Centers for Disease Control and Prevention (CDC) defines secondhand smoke as a “combination of smoke from the burning end of a cigarette and the smoke breathed out by smokers.”⁹⁷ Children exposed to secondhand smoke have an increased chance of developing asthma, and are more likely to suffer from ear infections and other illness than children not exposed to secondhand smoke.⁹⁸ Consistent exposure to secondhand smoke among children is associated with respiratory tract infections, wheezing, coughing, middle ear infections, and sudden death syndrome.^{99,100,101} Smoking in the home has also been associated with an increase in the likelihood of emergency department visits for respiratory conditions and an increase in the likelihood of inpatient visits for these conditions.¹⁰²

Because exposure to secondhand smoke has serious health consequences, it is important for stakeholders to examine the number of households that allow smoking in the home in addition to the number of cigarette smokers in a population.

The proportion of adolescents ages 12-17 from homes that allowed smoking was not significantly different between those enrolled in Medi-Cal and those with private insurance (4.8% and 2.4%, respectively).



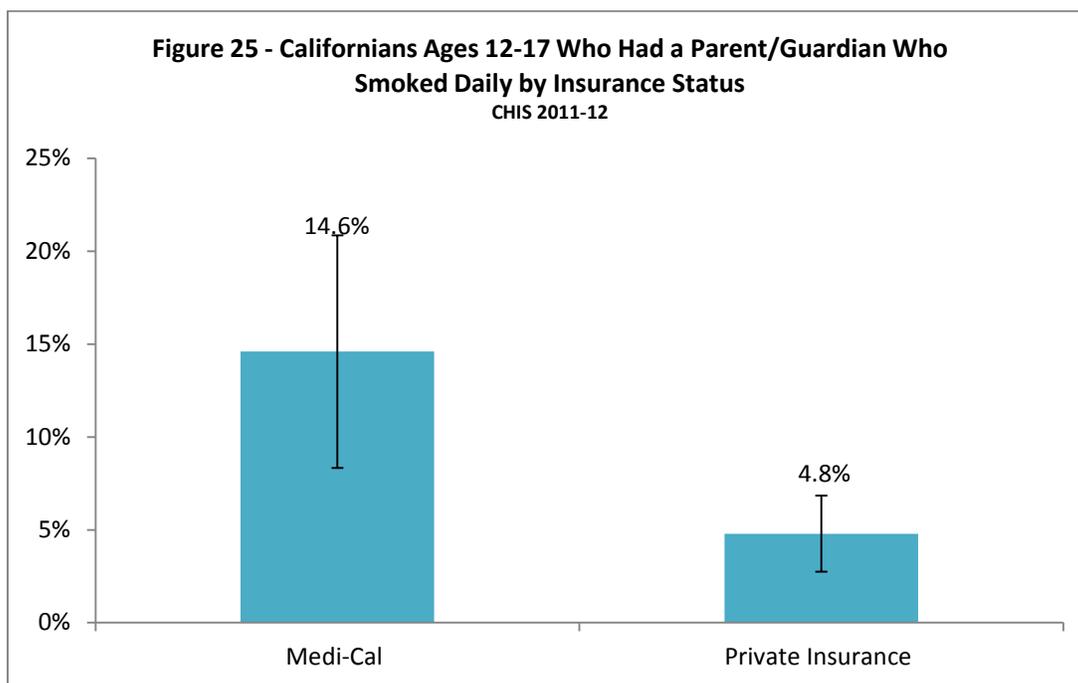
Findings: California’s Adolescent Population who had a Parent/Guardian who Smoked Daily

CHIS Question for Parent/Guardian: “Altogether have you smoked 100 or more cigarettes in your lifetime? Did you smoke every day, some days or not at all?”

The effects of secondhand smoke are substantial.¹⁰³ Increased exposure to secondhand smoke increases the risk for many of the same conditions found in cigarette smokers, including cardiovascular disease, stroke, and lung cancer.¹⁰⁴

Because exposure to secondhand smoke has serious health consequences, it is important for stakeholders to examine the number of households that allow smoking in the home in addition to the number of cigarette smokers in a population.

The proportion of adolescents who had a parent or guardian who was a daily smoker was more than three times higher among those enrolled in Medi-Cal than among those with private insurance (14.6% and 4.8%, respectively).

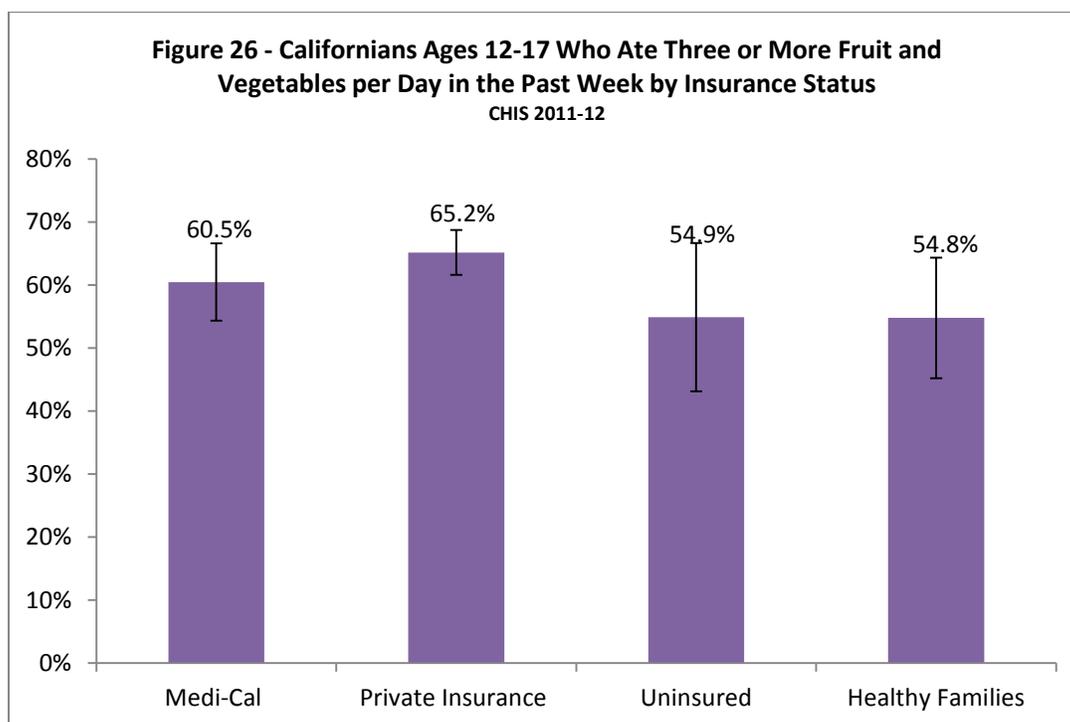


Findings: California’s Adolescent Population who Ate Three or More Fruits or Vegetables per Day

CHIS Question: “Yesterday how many servings of fruit such as an apple or banana did you/he/she eat? Yesterday how many servings of other vegetables did you/he/she eat such as green salad, green beans, or potatoes?”

Fruits and vegetables are an important part of a healthy lifestyle and should be included as part of a healthy diet for children and adolescents.¹⁰⁵ The *Dietary Guidelines for Americans* issued by the USDA suggests that Americans increase their intake of fruits and vegetables, especially vegetables that are dark green, orange, or red in color.¹⁰⁶ The USDA estimates that the average American consumes only 59% of the recommended vegetable intake and 42% of the recommended fruit intake, despite the well-established health benefits.¹⁰⁷ Most children in the U.S. do not get the recommended amounts of fruits and vegetables for their age and gender.¹⁰⁸ In 2007-2010, 60% of children 1-18 years of age did not meet the recommendations by the USDA Food Patterns for fruit intake and 93% did not meet their recommendations for vegetable intake.¹⁰⁹

There were no statistically significant differences among adolescents in the proportion who ate three or more fruits and vegetables per day between those enrolled in Medi-Cal (60.5%), the privately insured (65.2%), the uninsured (54.9%), and those enrolled in Healthy Families (54.8%).



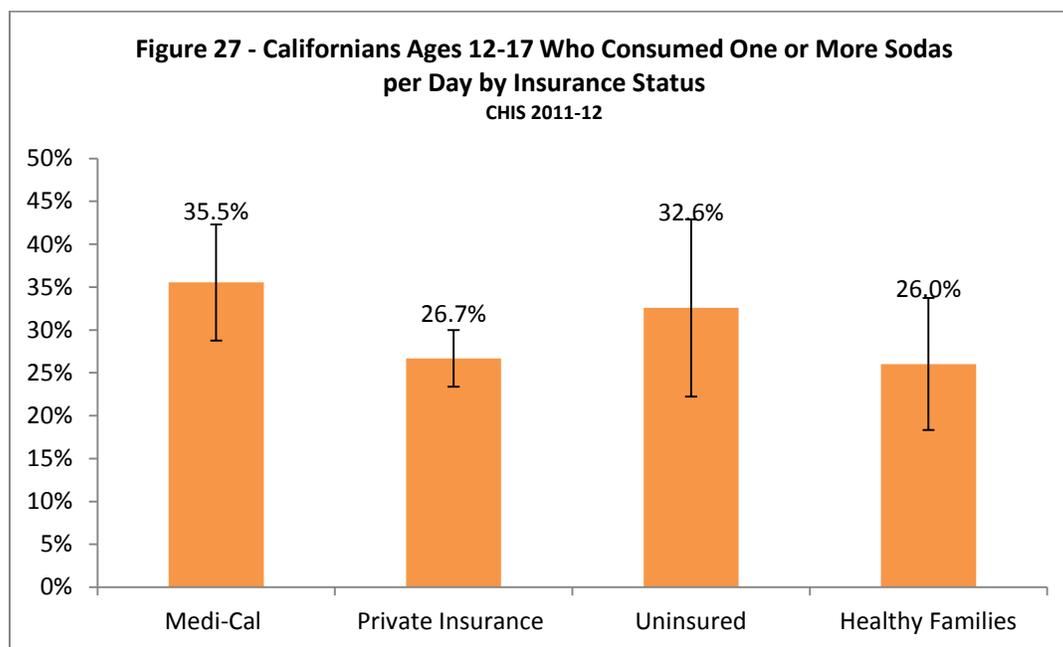
Findings: Soda Consumption in California’s Adolescent Population

CHIS Question: “Yesterday how many glasses or cans of soda that contain sugar, such as Coke, did you drink? Do not include diet soda. How many glasses or cans of sweetened fruit drinks, sports, or energy drinks, did you drink?”

Sugar-sweetened beverages, such as soda, provide little nutritional benefit while containing a high concentration of calories. The Academy of American Pediatrics recommends reducing the intake of sugar-sweetened beverages for children.¹¹⁰ Children and youth average about 224 calories per day from sugary drinks which is almost 11% of their daily caloric intake.¹¹¹ Soft drink consumption has been linked with obesity and overweight in both children and adolescents and both have been rising among children in the past decade.^{112,113} Drinking a lot of soda in both children and adolescents has been associated with a decrease in milk and fruit juice consumption.¹¹⁴

The reviewed literature indicates that the increase of soda consumption in recent decades, especially in low-income populations, is a major factor in the increased prevalence of obesity in the U.S.¹¹⁵ Consumption of sugar-sweetened drinks has been linked to a mother’s education level.¹¹⁶ A study tracking fruit, vegetables and sugar-sweetened beverages found that children of mothers with low education level were more likely to frequently consume sugar-sweetened beverages than those with higher education levels.¹¹⁷ The relationship between soda consumption and income disparity makes it an important area of study for Medi-Cal stakeholders.

Among adolescents, the percent drinking one or more sodas per day was higher for those enrolled in Medi-Cal (35.5%) than those with private insurance (26.7%).



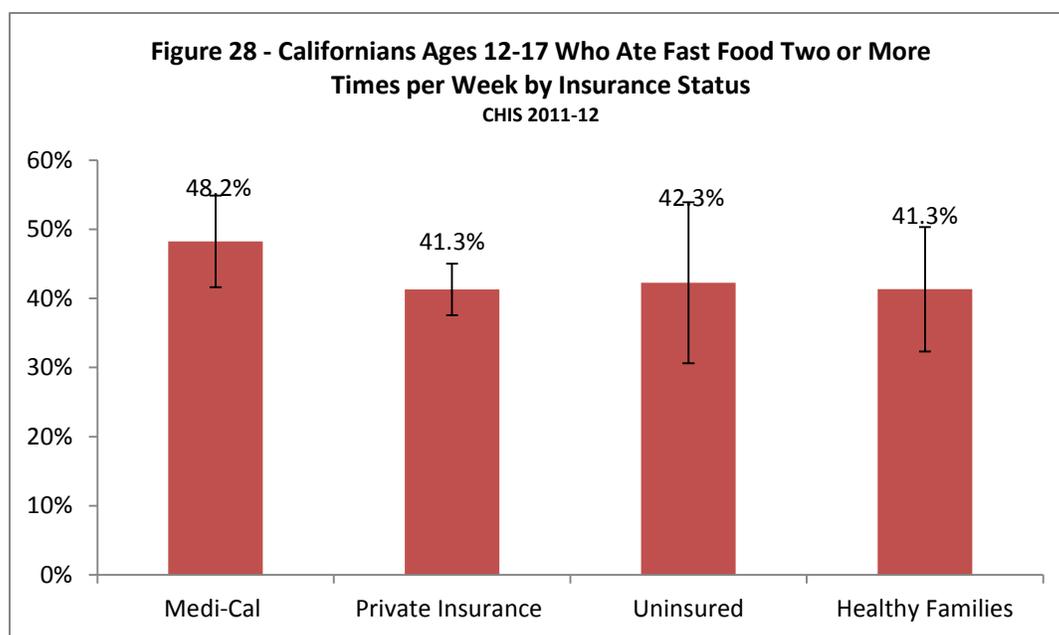
Findings: Fast-Food Consumption in California’s Adolescent Population

CHIS Question: “In the past 7 days, how many times did you eat fast food? Include fast food meals eaten at school or at home, or at fast food restaurants, carryout or drive thru.”

Although fast-food consumption has, on average, decreased in the U.S. in recent years, it still accounts for a substantial percentage of the nation’s calories.¹¹⁸ Regular fast-food consumption has been associated with higher fat intake, and lower intake of healthy nutrients.¹¹⁹ Frequently ingesting fast food contributes to increased weight gain due to the greater intake of calories, fat, saturated fat, and sugar-sweetened drinks.^{120,121} The consumption of fast food has been associated with obesity which is an epidemic among children and a public health problem in many countries.¹²² A number of studies indicate an association between rates of obesity and the proximity of schools to fast food restaurants. A study of elementary and middle school children indicated that those who lived very close to fast food restaurants had higher values of Body Mass Index (BMI) than those who did not, even after controlling for a proxy measure of socio-economic status.¹²³ Current research has shown that children who frequently ate fast food were more likely to consume more total calories, fat and sugar rich beverages, less fiber and fewer fruits and vegetables compared to children who did not frequently eat fast food. However, it has been shown that food eaten outside of fast food restaurants might have stronger associations with obesity than the food actually eaten at fast food restaurants.¹²⁴

Fast-food consumption is relevant for Medi-Cal stakeholders as some studies indicate a relationship between low-income adults and increased fast-food consumption.¹²⁵

The consumption of fast food among adolescents did not vary much by insurance type. There were no statistically significant differences in the consumption of fast food two or more times a week among those enrolled in Medi-Cal (48.2%), those with private insurance (41.3%), the uninsured (42.3%), and those enrolled in Healthy Families (41.3%).

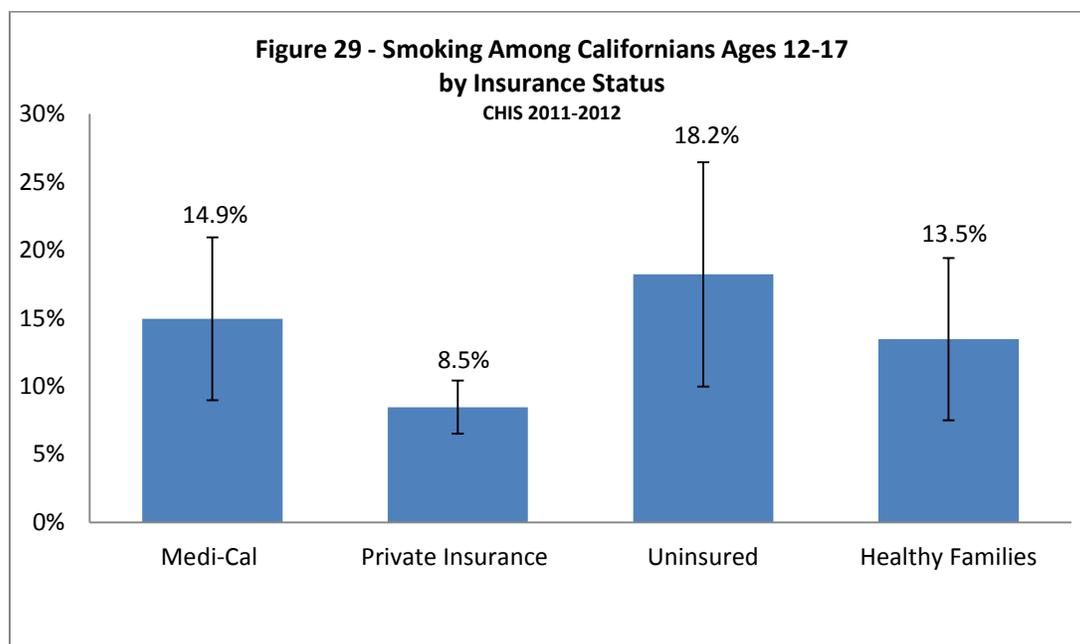


Findings: Smoking Among California’s Adolescent Population

CHIS Question: “Have you ever smoked cigarettes, even 1 or 2 puffs?”

Smoking cigarettes is the leading behavioral cause of premature death in the United States.¹²⁶ Cigarettes are associated with one in five deaths in Americans each year, including approximately one-third of cancer-related deaths.¹²⁷ Adolescents may begin smoking for various reasons. Some adolescents attribute smoking to the influence of behavior modeled by their parents, peers, or the media.¹²⁸ Research has found that despite widespread efforts at education and prevention, roughly one-quarter of teenagers are smoking cigarettes at least occasionally upon high school graduation.¹²⁹ Research has found that when compared to other ages, adolescents displayed higher levels of nicotine dependence than any other age group.¹³⁰ Adolescents ages 12-17 are also “more likely to become addicted after smoking fewer cigarettes per day than adults.”¹³¹ In 2013, the rate of cigarette smoking among high school students dropped to 15.7%, its lowest level in 22 years.¹³²

Adolescents enrolled in Medi-Cal (14.9%) were more likely to have smoked a cigarette at some point in their life than those with private insurance (8.5%), but equally as likely as the uninsured (18.2%) and those enrolled in Healthy Families (13.5%).

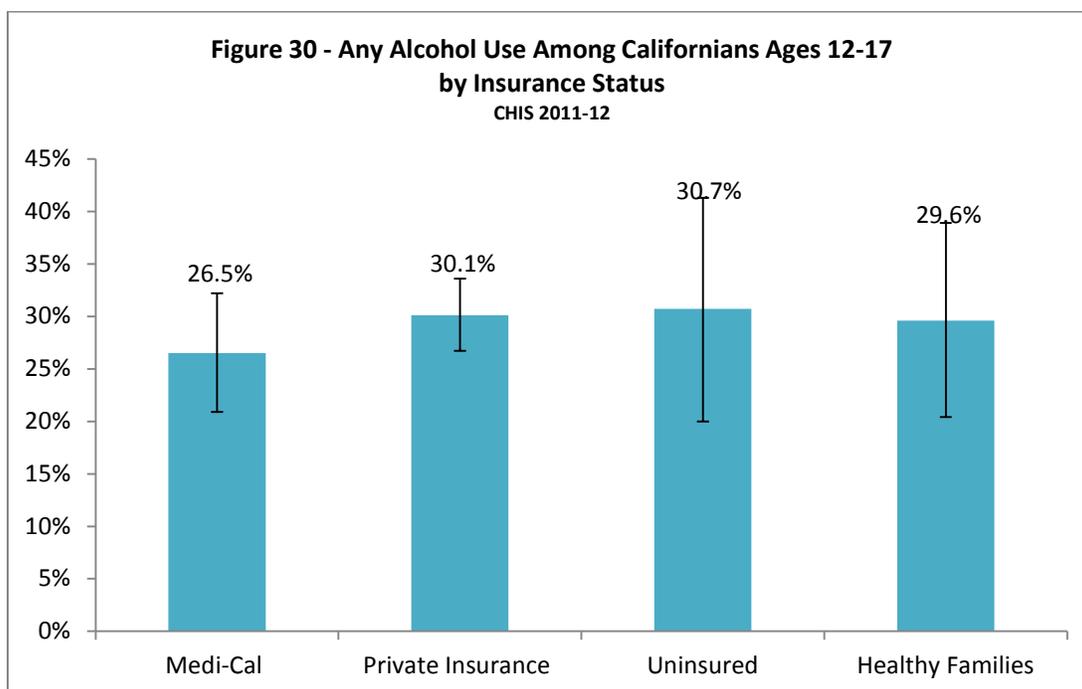


Findings: Alcohol Use Among California's Adolescent Population

CHIS Question: "Did you ever have more than a few sips of any alcoholic drink, like beer, wine, mixed drinks or liquor?"

Many Americans under the age of 21 consume alcohol despite the minimum drinking age of 21 in the U.S.¹³³ In the past decade there has been an increase in the consumption of alcohol, particularly evident among adolescents. Research has found that adolescents who begin drinking alcohol before the age of 15 increase their risk of drug dependency later in life by six to ten times.¹³⁴ Alcohol use among adolescents not only jeopardizes their development, but it is also often associated with risky behaviors, accidental injuries, and death.¹³⁵ Underage drinking contributes to the three leading causes of death including unintentional injury, homicide, and suicide among individuals ages 12 to 20.¹³⁶ For many adolescents, drinking alcohol is common; however, parenting practices have proven to be critical influences on adolescents' decisions regarding alcohol use.¹³⁷ Binge drinking, typically defined as consuming five or more drinks on an occasion, is the most common pattern of alcohol consumption among high school students.¹³⁸ In 2003, the National Youth Risk Behavior Survey found that 44.9% of high school students reported drinking alcohol during the past 30 days.¹³⁹ Of these students, 28.8% binge drank and 16.1% drank alcohol, but did not binge drink.¹⁴⁰

There were no statistically significant differences in the percent of adolescents who had more than a few sips of any alcoholic drink between those enrolled in Medi-Cal (26.5%), those with private insurance (30.1%), the uninsured (30.7%), and those enrolled in Healthy Families (29.6%).

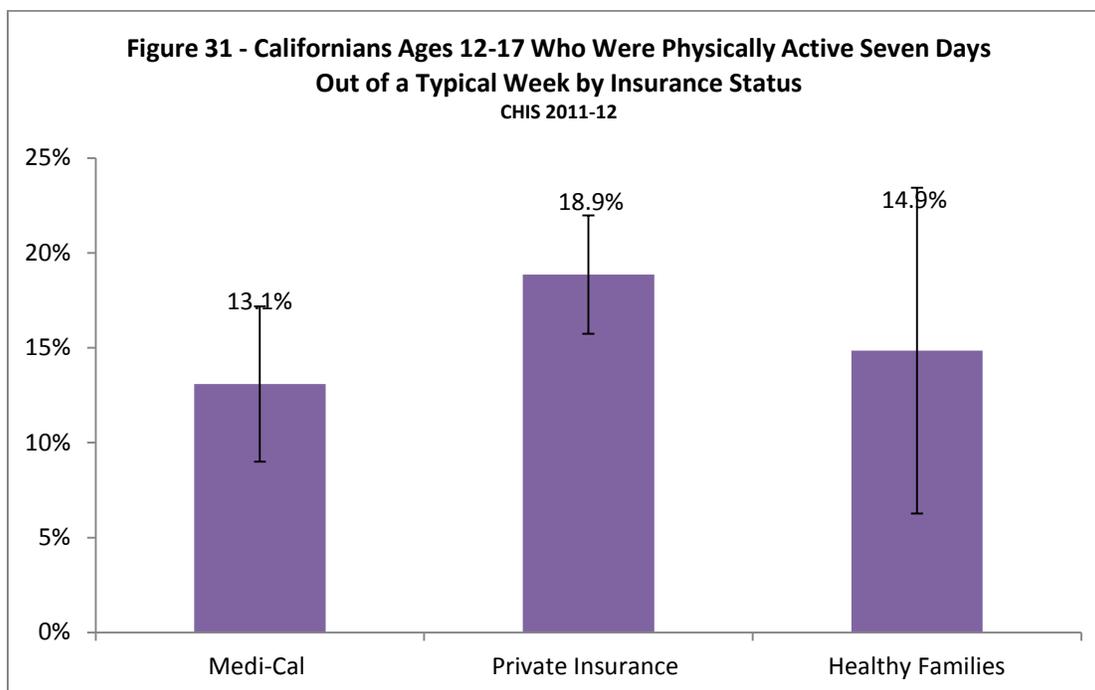


Findings: Physical Activity Among California's Adolescent Population

CHIS Question: "During a typical week, how many days are you physically active for at least 60 minutes per day? Do not include PE"

Regular physical activity improves strength and endurance, helps build healthy bones and muscles, helps maintain weight, reduces stress and anxiety, increases self-esteem, and may improve blood pressure and cholesterol levels.¹⁴¹ While physical activity has many important health benefits, many adolescents are not meeting the established guidelines stating that young people ages 6-17 years old should participate in at least 60 minutes of physical activity on a daily basis.^{142,143} Population surveys show that 80% of adolescents are physically active for approximately 30 minutes day; however, less than half of those adolescents are active for at least 60 minutes a day.¹⁴⁴ Research has found that physical activity decreases as adolescents get older.¹⁴⁵ The lack of physical activity increases an individual's risk of dying prematurely, dying of heart disease, developing colon cancer, and high blood pressure.¹⁴⁶

The proportion of adolescents with private insurance who were physically active in a typical week for at least 60 minutes per day for seven days was 18.9%. This was higher than among adolescents enrolled in Medi-Cal (13.1%), but not among adolescents enrolled in Healthy Families (14.9%).

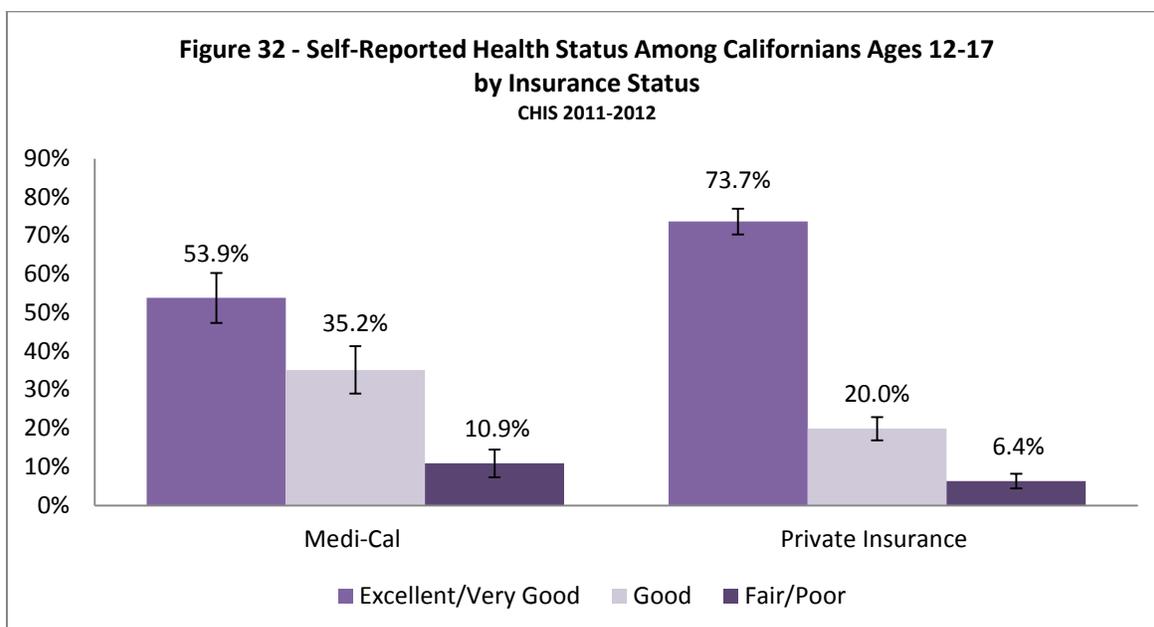


Findings: Self-Reported Health Status in California’s Adolescent Population

CHIS Question: “In general would you say your health is excellent, very good, good, fair or poor?”

Self-reported health status is the measure of an individual’s perception of their own health status. This versatile measure allows researchers to compare health over time and between populations that may not have sufficient conditions in common to allow for other corresponding measures.¹⁴⁷ Self-reported health status strongly correlates with socioeconomic factors. A national study found that states with greater income inequality were 30% more likely to have individuals report fair or poor health than states with less pronounced income disparity.¹⁴⁸ Research demonstrates that poverty negatively influences the health and development of children, including increased risk of mortality.^{149,150} The reviewed literature indicates that children who experience poverty are more likely to be classified into the most disadvantaged health status consisting of chronic conditions and developmental problems, including low cognitive achievement, poor social skills, and behavioral problems.¹⁵¹

Adolescents ages 12-17 enrolled in Medi-Cal were almost two times more likely than those with private insurance to have fair or poor health (10.9% and 6.4%, respectively). Those with private insurance were more likely to have excellent or very good health (73.7%) than those enrolled in Medi-Cal (53.9%).



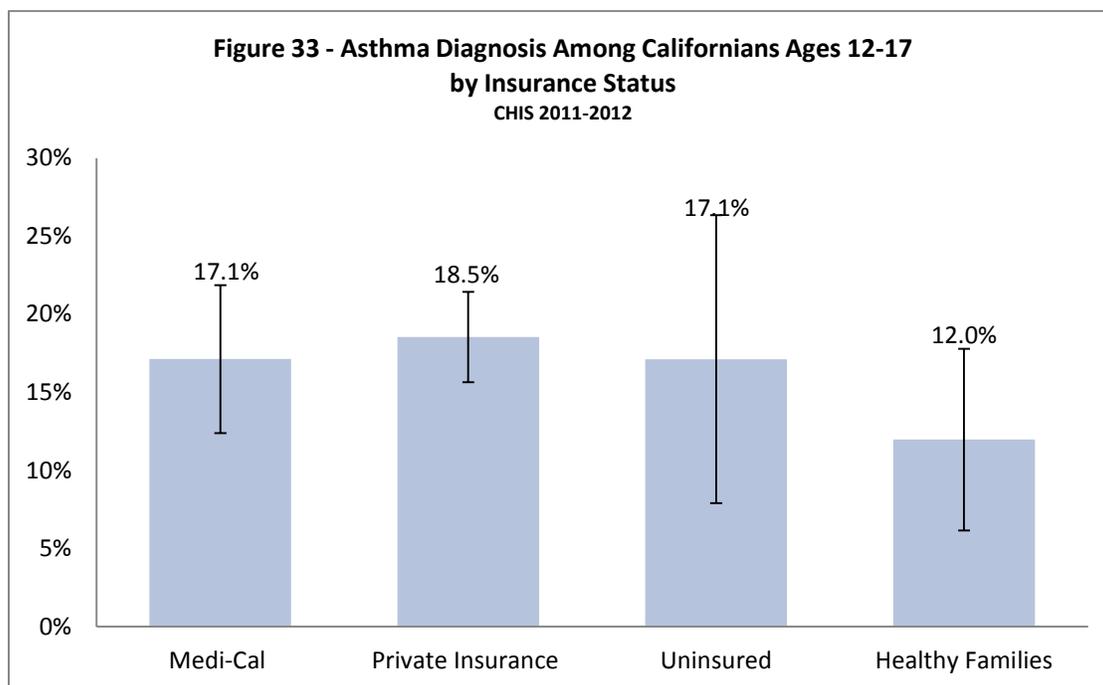
Findings: Asthma Diagnosis in California’s Adolescent Population

CHIS Question: “Has a doctor ever told you or your parents that you have asthma?”

Asthma is one of the most common chronic conditions among children.¹⁵² The National Heart, Lung, and Blood Institute defines asthma as a long-term lung disease that inflames and narrows the airways.¹⁵³ Some environmental factors that can trigger asthma include secondhand smoke, dust mites, air pollution, pets and mold.¹⁵⁴ There is no cure for the disease; however, further difficulties can be avoided if symptoms are managed properly.¹⁵⁵ Students with asthma may be more likely to experience the poor academic outcomes associated with increased absenteeism.¹⁵⁶ In 2007, approximately 1.6 million days of school were missed because of asthma in California.¹⁵⁷ Reviewed literature found that students who attended schools with the highest concentrations of low-income students were more likely to miss school due to asthma than those at schools where the concentration was lower.¹⁵⁸

According to a nationwide survey in 2012, approximately 14% of children under the age of 18 were reported by an adult familiar with the child’s health to be diagnosed with asthma.¹⁵⁹ Children with Medicaid (17%) were more likely to be diagnosed with asthma than those with private insurance (13%).¹⁶⁰

In California, there were no statistically significant differences in the proportion of adolescents to have been told by a doctor that they had asthma between those enrolled in Medi-Cal (17.1%), those with private insurance (18.5%), the uninsured (17.1%), and those enrolled in Healthy Families (12.0%).



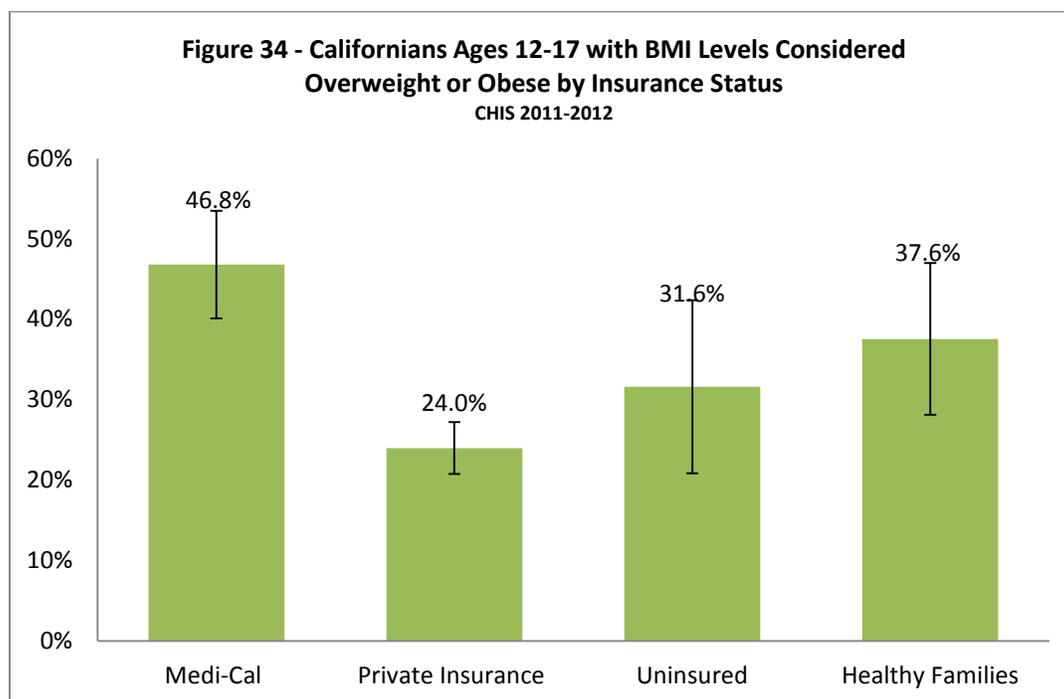
Findings: Overweight/Obesity in California's Adolescent Population

CHIS Question: "How tall are you without shoes? How much do you weigh without shoes?"

Millions of adolescents are bullied, but students who are overweight are often treated with particular cruelty.¹⁶¹ Research has shown that an adolescent's weight is one of the top reasons why he/she is bullied at school.¹⁶² In a recent survey, 79% of teens reported witnessing someone being bullied because of his/her weight.¹⁶³ Aside from the emotional impact accompanied with overweight and obesity, it also threatens one's health. The prevalence of overweight and obesity increases the risk of diabetes, high blood pressure, high cholesterol, asthma, arthritis, and poor health status.^{164,165}

Responses to the questions above were used to calculate Body Mass Index (BMI) based on the following formula: $[703 \times \text{weight (lbs.)}] / [\text{height (in.)}^2]$. Adolescents with BMI values greater than the 85th percentile were classified as overweight or obese.

Almost half of the adolescents enrolled in Medi-Cal were overweight or obese (46.8%). This is more than twice as high as among adolescents enrolled in private insurance (24.0%).

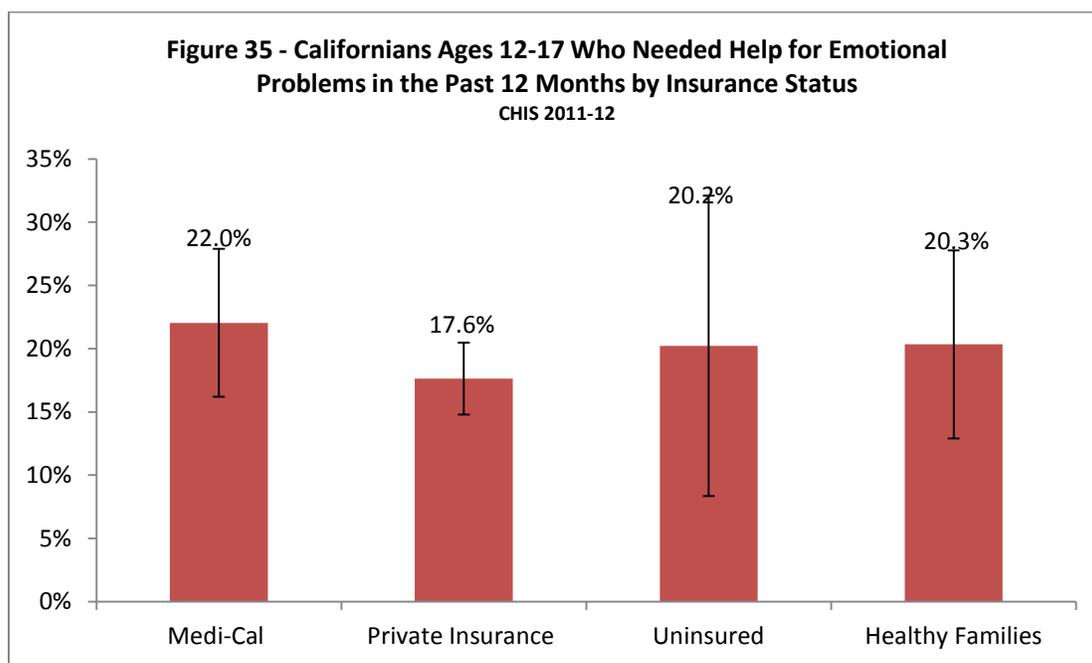


Findings: California’s Adolescent Population who Needed Help for Emotional Problems

CHIS Question: “In the past 12 months, did you think you needed help for emotional or mental health problem, such as feeling sad, anxious or nervous?”

Research has shown that mental health problems account for approximately half of all disabilities among individuals ages 10 to 24.¹⁶⁶ Individuals who experience emotional and mental health problems experience impairments throughout their lifetime.¹⁶⁷ It is necessary that schools are active partners in the mental health care of the students due to the important association between emotional health and school success.¹⁶⁸ While the importance of addressing student’s mental health needs has been widely established, there is an inconsistency between the needs and providing the needed services.¹⁶⁹

Although 22.0% of adolescents enrolled in Medi-Cal reported needing help for an emotional problem in the past 12 months, this was not significantly different from those with private insurance (17.6%), the uninsured (20.2%), and those enrolled in Healthy Families (20.3%).

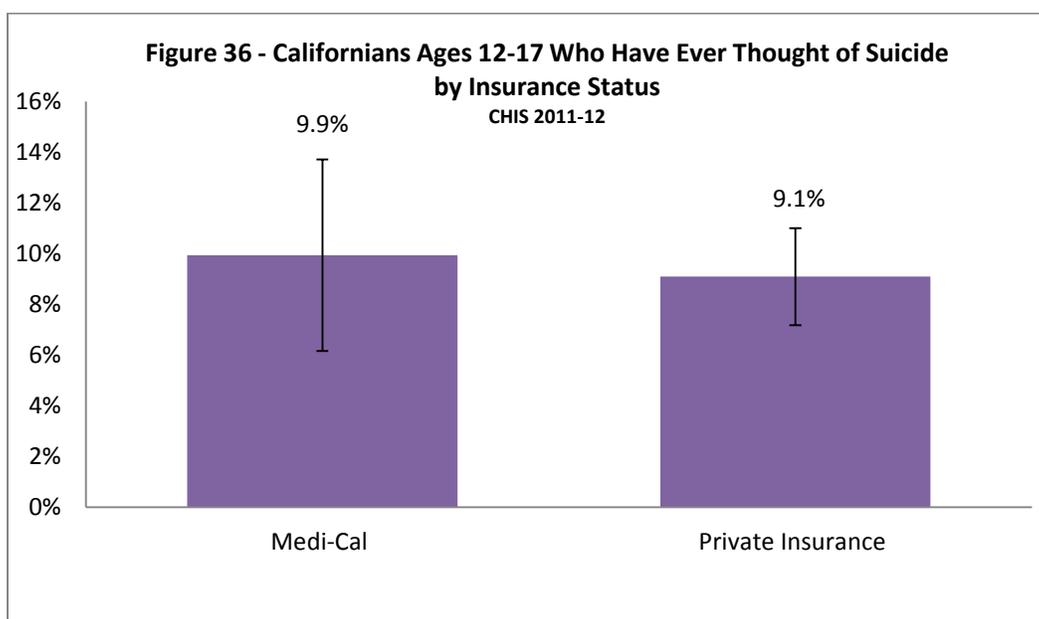


Findings: Suicide Ideation Among California's Adolescent Population

CHIS Question: "Have you ever thought about committing suicide?"

Over the past three decades, the suicide rate among Americans has been slightly increasing.¹⁷⁰ Among teenagers specifically, the suicide rate is increasing more quickly and dramatically.¹⁷¹ Teen suicide has increased by nearly two percent in over a two year period.¹⁷² With the rate of suicide increasing, the thought of suicide among teens is also increasing.¹⁷³ Suicide is the third leading cause of death among adolescents ages 15-24 years.¹⁷⁴ Research has found that teenagers who are bullied are twice as likely to consider suicide and 2.5 times as likely to actually attempt to commit suicide.¹⁷⁵

Approximately one tenth of adolescents enrolled in Medi-Cal have thought about committing suicide at some time in their life (9.9%). This was not significantly different than among those with private insurance (9.1%).



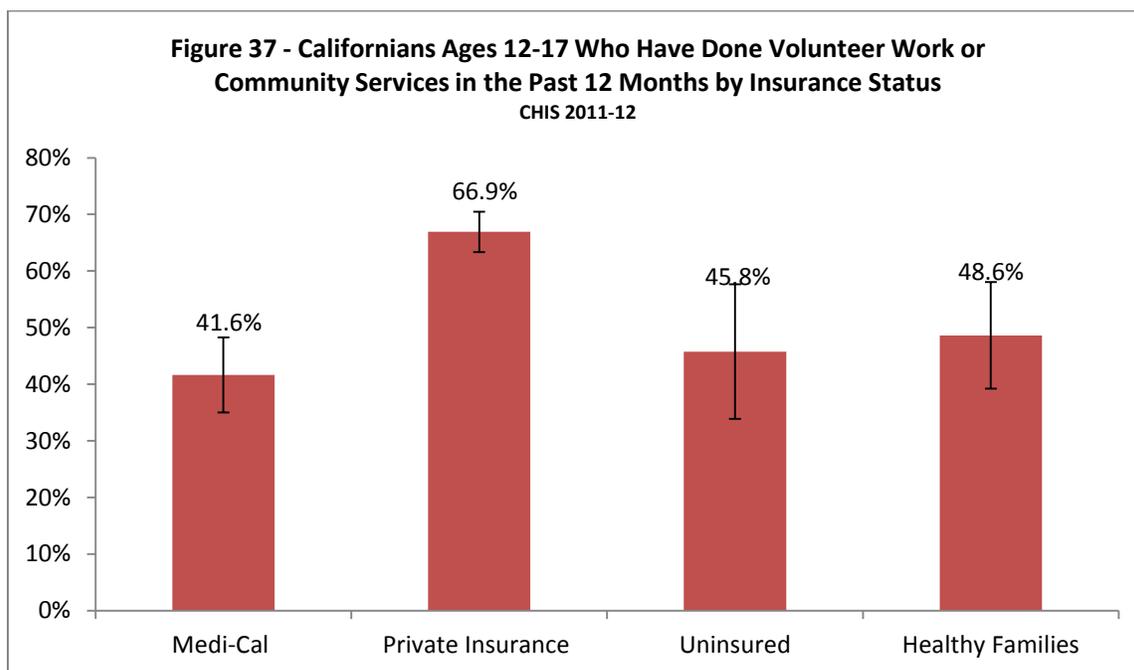
Findings: Volunteer Work/Community Service in California’s Adolescent Population

CHIS Question: “In the past 12 months, have you done any volunteer work or community service that you have not been paid for?”

Volunteer work benefits almost everyone involved; however, the greatest benefit of volunteerism is acquired by the volunteers themselves.¹⁷⁶ Research suggests volunteering contributes to identity development, skill enhancement, increased self-esteem, and development of empathy for others.¹⁷⁷ Volunteer work also provides the opportunity for an individual to expand his/her professional network as working with others toward a common goal fosters the formation of relationships and connections with others who have similar interests.¹⁷⁸ Volunteering also improves intrapersonal relationships, problem-solving skills, and improvements in one’s health.¹⁷⁹ Adolescents who volunteer one hour a week are less likely to abuse alcohol, cigarettes, become pregnant, or engage in other risky behavior.¹⁸⁰ Not only does volunteering positively impact the individual, the community also benefits as well.¹⁸¹ Volunteering promotes positive citizenship among adolescents by encouraging them to be more engaged in their own communities.¹⁸² Adolescents who volunteer feel more connected to their community, thus, are more likely to show concern and stay in or return to their communities.¹⁸³

Research has found the majority of adolescents in the U.S. engage in some form of volunteer work, and more youth (59%) serve as volunteers in comparison to adults (49%).¹⁸⁴

Adolescents ages 12-17 with private insurance (66.9%) were more likely to have done volunteer work or community service in the past 12 months than those enrolled in Medi-Cal (41.6%), the uninsured (45.8%), and those enrolled in Healthy Families (48.6%).

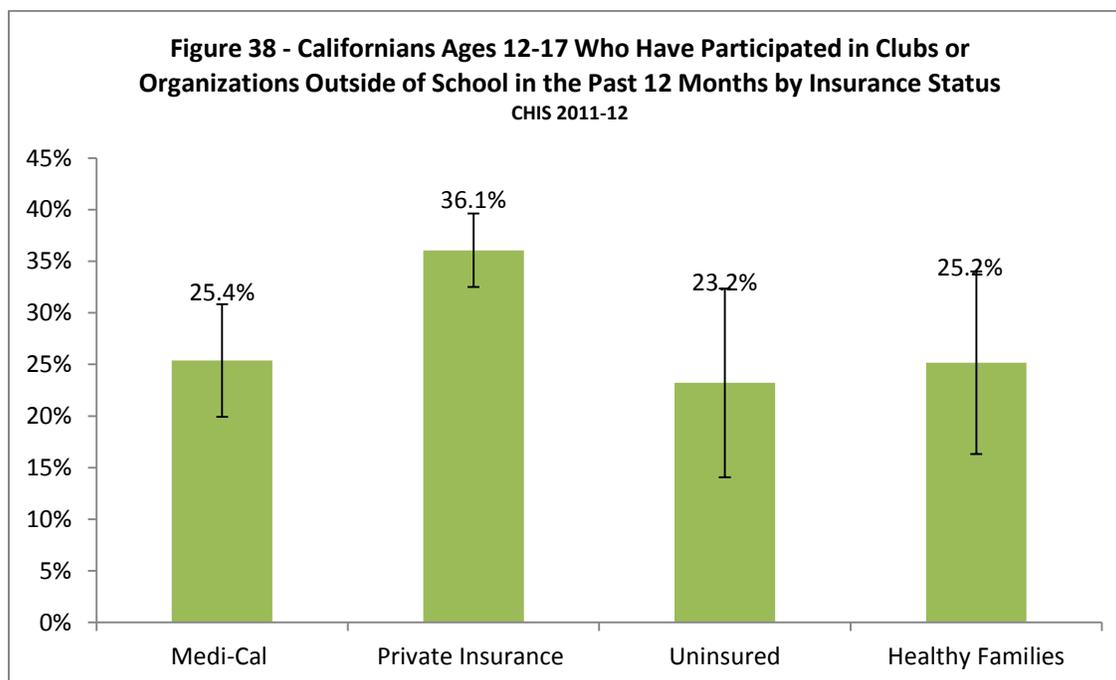


Findings: Participation in Clubs or Organizations in California’s Adolescent Population

CHIS Question: “In the past 12 months, did you participate in any clubs or organizations outside of school, other than sports, like the YMCA or Boys or Girls Club?”

Research has found that participating in extracurricular activities is associated with both short and long term indicators of positive development including school achievement and educational attainment.¹⁸⁵ The school dropout rate among at-risk students was significantly lower among students who had previously participated in extracurricular activities compared to their counterparts who had not participated.¹⁸⁶ There is a strong association between adolescents’ extracurricular activities and adult education attainment, occupation, and income, even after controlling for social class and cognitive ability.¹⁸⁷ Participation in extracurricular and service learning activities has also been linked to increases in intrapersonal competence, self-concept, high school GPA, school engagement, and education aspirations, as well as higher education achievement, better job quality, more active participation in the political process and other volunteer activities, continued sports engagement, and better mental health during young adulthood.¹⁸⁸ Researchers believe that voluntary participation in discretionary activities stimulates assessment of one’s talents, values, interests, and place in the social structure.¹⁸⁹

Adolescents enrolled in Medi-Cal (25.4%) were less likely than those with private insurance (36.1%) to participate in clubs or organizations outside of school, but equally likely as the uninsured (23.2%) and those enrolled in Healthy Families (25.2%).

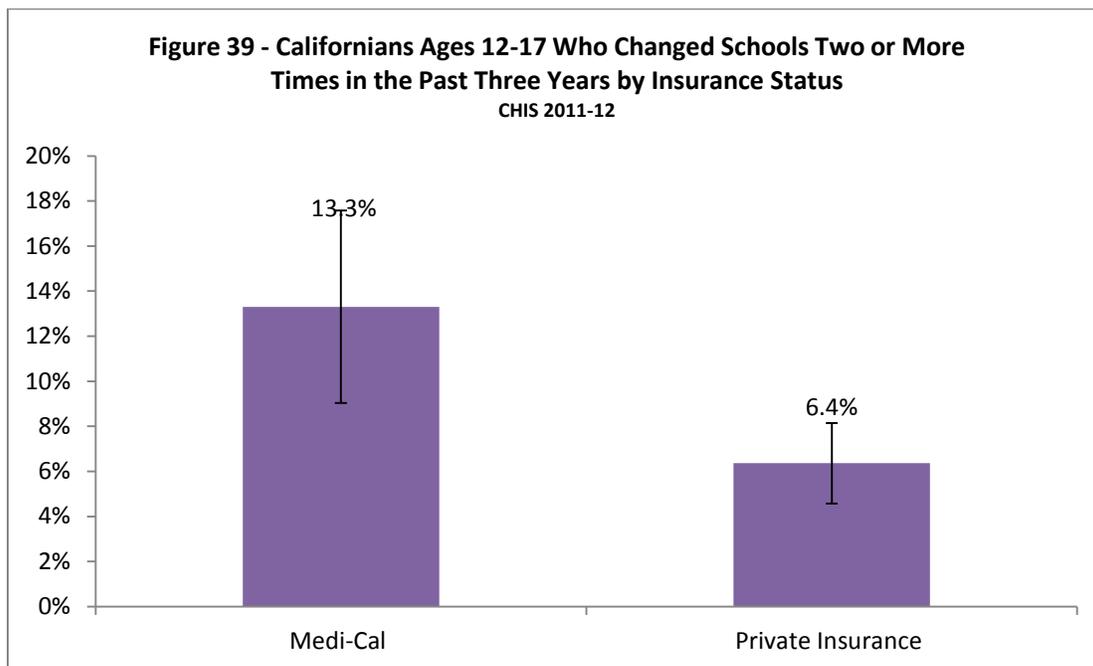


Findings: Change in Schools in California’s Adolescent Population

CHIS Question: “In the past 3 years, how many times did you change schools, not counting for graduation?”

When a student is required to move and change schools, it could have major impacts on the child’s success from academics to behavior.¹⁹⁰ Research has found that children who frequently change schools have an increased likelihood of dropping out and for those who do not drop out, they lose three of six months of academic progress with each move they encounter.¹⁹¹ Children who move frequently may lose instruction and critical information or may relearn content, rather than learning new material to expand their knowledge.¹⁹² Schools in low-income areas are more likely to see families move around as they may have to relocate for work and affordable housing.¹⁹³ Frequent changes in schools are also common among homeless students and children in foster care.¹⁹⁴

Adolescents enrolled in Medi-Cal were twice as likely as those with private insurance to have changed schools two or more times in the past three years (13.3% and 6.4%, respectively).



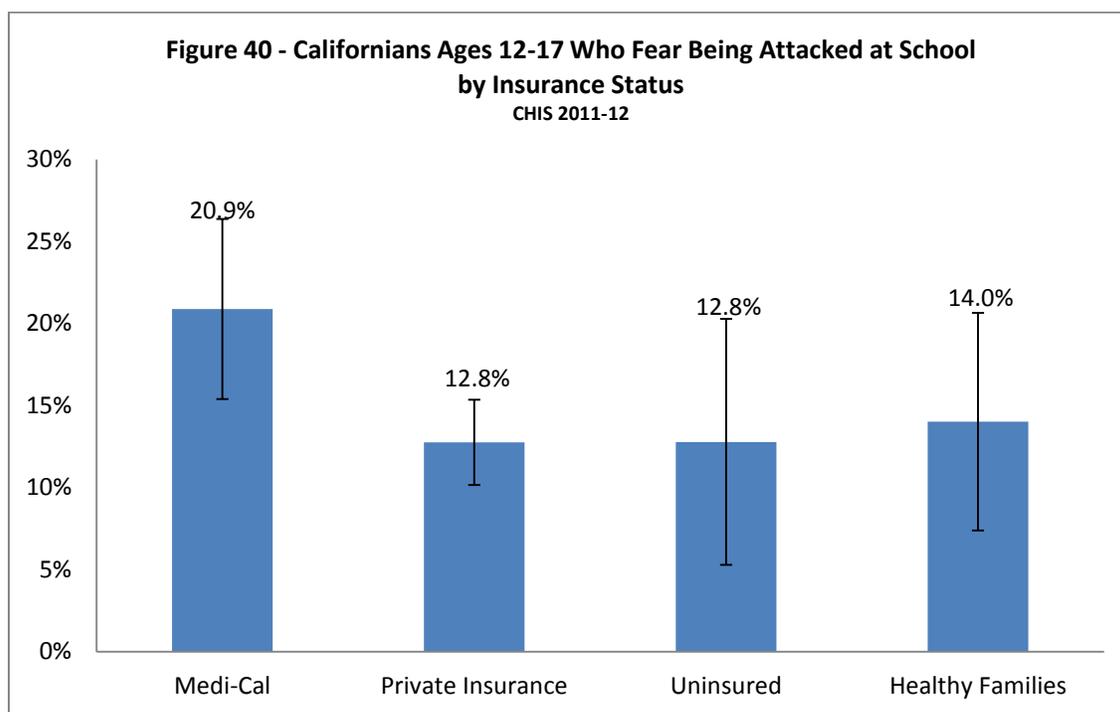
Findings: Fear Being Attacked at School in California’s Adolescent Population

CHIS Question: “In the past 12 months, how many times on school grounds have you been afraid of being beaten up?”

School violence can make students fearful and have an impact on their readiness and ability to learn.¹⁹⁵ In 2011, the School Crime Supplement to the National Crime Victimization Survey found that a higher percentage of students ages 12-18 reported that they were afraid to be attacked or harmed at school than away from school during the school year.¹⁹⁶ The percentage of students who reported being afraid, attacked, or harmed at school or away from school tended to be greater among students in lower grades than those in higher grades.¹⁹⁷ Research found a higher percentage of students in public schools reported being afraid, attacked, or harmed at school compared to their counterparts in private schools.¹⁹⁸

For the purpose of this analysis, RASD defined adolescents who responded that they were afraid of being beaten up one or more times in the past 12 months as fearing being attacked at school.

Adolescents enrolled in Medi-Cal (20.9%) were more likely to fear being attacked at school than those with private insurance (12.8%), the uninsured (12.8%), and those enrolled in Healthy Families (14.0%).

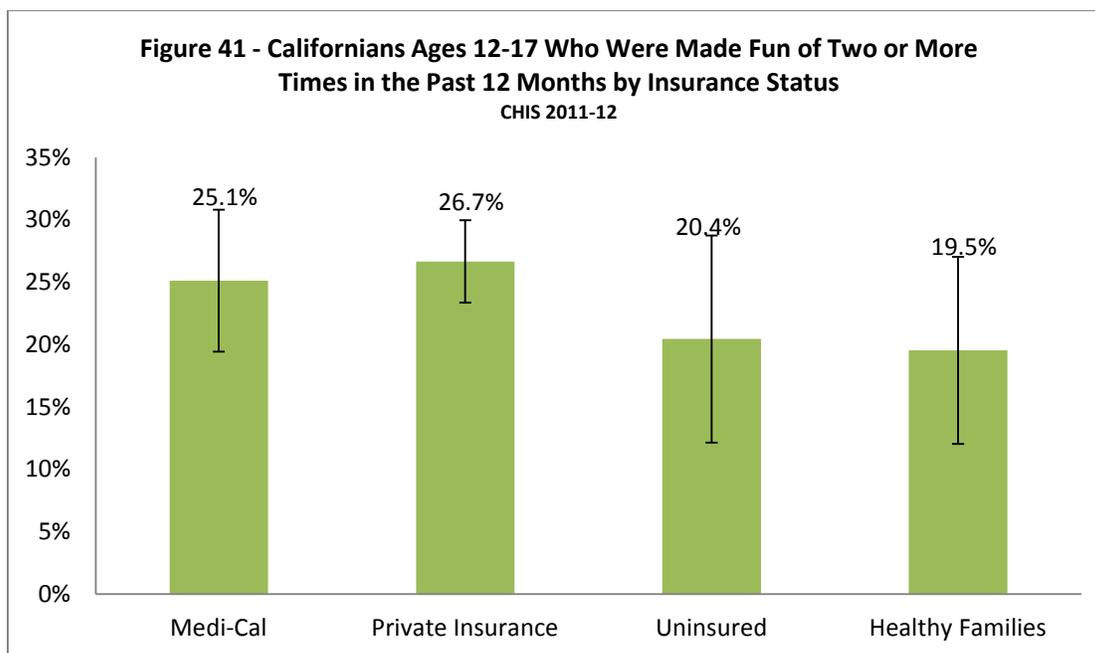


Findings: Adolescents Who Were Made Fun of in California’s Adolescent Population

CHIS Question: “In the past 12 months, how many times on school grounds have you been made fun of because of your looks or the way you talk?”

Bullying encompasses physical aggression, threats, teasing, and harassment and is a prevalent problem in schools and communities.¹⁹⁹ Bullying can create a school environment of fear and intimidation.²⁰⁰ Bullying is associated with lower academic achievement, school dropout, poor psychosocial adjustment, criminal activity, and other various long-term consequences.^{201,202} Over time, bullying is strongly associated to victim’s anger, frustration, and violent behaviors.²⁰³ Students are bullied for various reasons; however, according to a survey that reported adolescents who were harassed or bullied at school, 39% of teenagers were harassed most often based on their looks or body size.²⁰⁴

The proportion of adolescents enrolled in Medi-Cal who reported being made fun of at least two times in the past 12 months (25.1%) was similar to the proportion among the privately insured (26.7%), the uninsured (20.4%), and those enrolled in Healthy Families (19.5%).



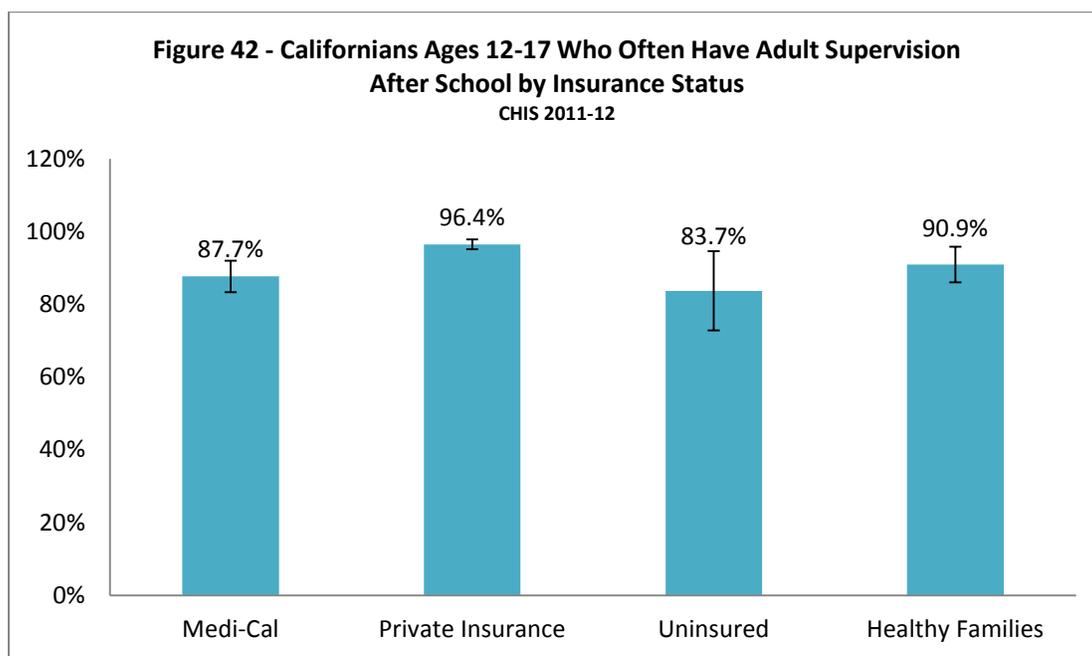
Findings: Adult Supervision in California’s Adolescent Population

CHIS Question: “About how often is there an adult around during your after school hours? Would you say: always, most of the time, some of the time, almost never or never?”

Research has found adolescents who spend unsupervised time with peers reported higher levels of aggression, delinquency, substance use, and vulnerability to peer pressure than did adolescents supervised by parents.²⁰⁵ A relationship exists between unsupervised care after school and the susceptibility to cigarette, alcohol, and marijuana use, as well as depressed mood, taking risks, and lower academic grades.²⁰⁶ Adolescents who were unsupervised at home were more likely to engage in problem behavior than their counterparts who were supervised at home.²⁰⁷ Researchers have found that adolescents who are supervised by an adult are less likely to skip school, use alcohol or marijuana, steal something or hurt someone.²⁰⁸

For the purpose of this analysis, RASD defined adolescents who answered “always” or “most of the time” to the above question as often having an adult around during after school hours.

Adolescents with private insurance were more likely to often have an adult around during after school hours (96.4%) compared to adolescents enrolled in Medi-Cal (87.7%), the uninsured (83.7%), and those enrolled in Healthy Families (90.9%).

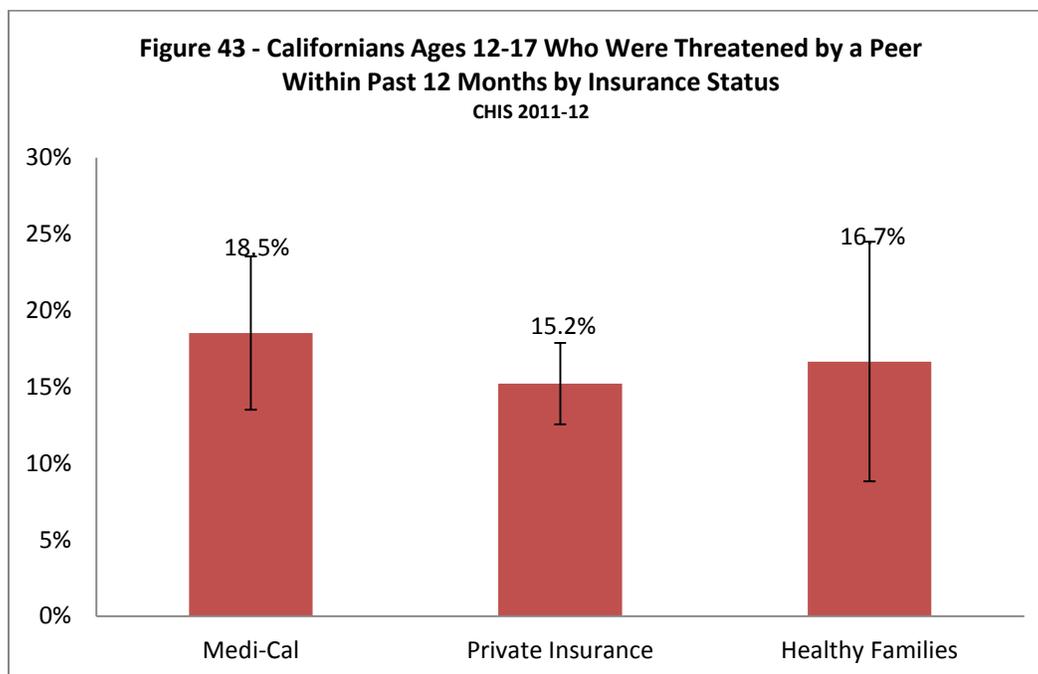


Findings: Peer Threatened to Hurt Teen in California's Adolescent Population

CHIS Question: "In the past 12 months, about how many times did someone about your age threaten to hurt you or threaten to beat you up?"

According to the National Crime Victimization Survey, 2.7 million violent crimes take place annually either at school or near schools.²⁰⁹ Approximately one in four public school teachers rated physical conflicts among students as a serious or moderately serious problem at their school.²¹⁰ According to the 1993 National Household Education Survey, half of students in 6-12 grades witnessed some type of crime or victimization at school and approximately one in eight students reported being directly victimized while at school.²¹¹ This has an impact on an adolescent's learning since schools need to be safe and secure for all students, teachers, and staff members in order for adolescents to reach their full potential.²¹² Without a safe learning environment at school, teachers may have difficulty teaching and students may have difficulty learning.²¹³ In 1999-2000, 20% of all public schools experienced at least one serious violent crime such as rape, sexual assault, robbery, and aggravated assault.²¹⁴ In 2003, male students in 9-12 grades were more likely than female students to report being threatened or injured in the past year (12% and 6%, respectively).²¹⁵

Among adolescents ages 12-17, there were no statistically significant differences by insurance type in the proportion of adolescents who were threatened by a peer within the past 12 months. The proportion of adolescents who were threatened by a peer within the past 12 months was similar among those enrolled in Medi-Cal (18.5%), those with private insurance (15.2%), and those enrolled in Healthy Families (16.7%).



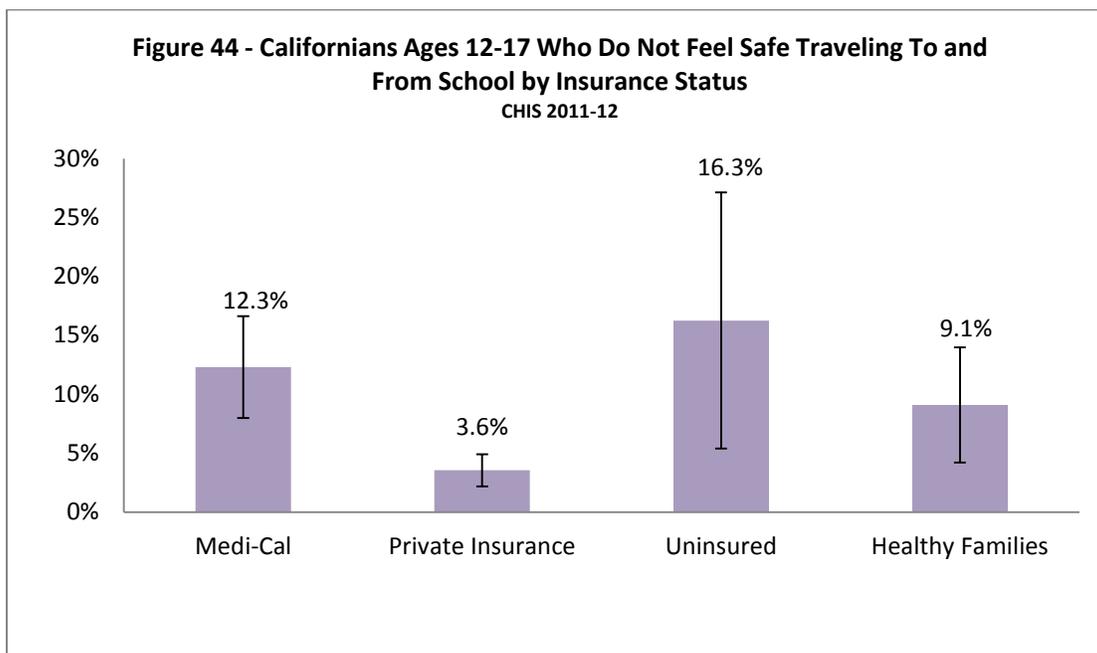
Findings: California’s Adolescent Population Who Believe they are Not Safe Traveling To and From School

CHIS Question: “How often do you feel safe on your way to or coming home from school? Would you say all of the time, most of the time, some of the time, or none of the time?”

According to a national survey, the percentage of students who reported being afraid of being attacked at school or on the way to and from school decreased from 12% in 1995 to 6% in 2001; however, there was been no difference in the most recent survey years.²¹⁶

For the purpose of this analysis, RASD defined adolescents who answered “some of the time” or “none of the time” as not feeling safe traveling to or from school.

Adolescents enrolled in Medi-Cal were three times more likely than those with private insurance to not feel safe traveling to and from school (12.3% and 3.6%, respectively). The percent of adolescents enrolled in Medi-Cal (12.3%) who did not feel safe traveling to and from school was not significantly different from the uninsured (16.3%) and those enrolled in Healthy Families (9.1%).

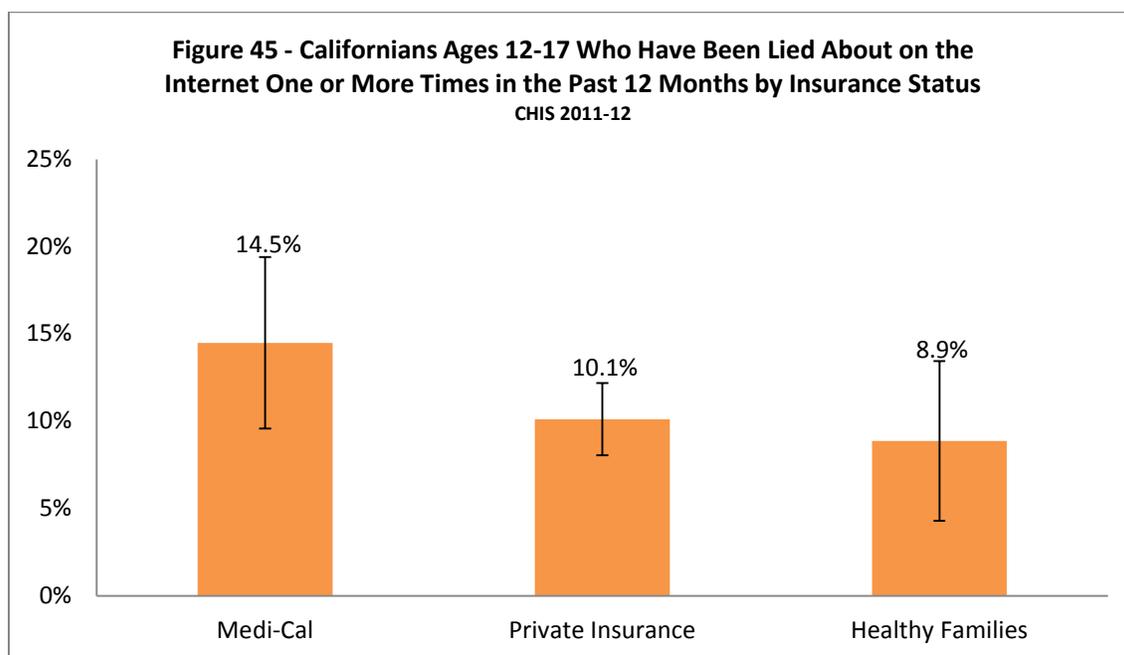


Findings: California’s Adolescent Population Who Have Been Lied About on the Internet

CHIS Question: “In the past 12 months, how many times did other students spread mean rumors or lied about you on the internet?”

Among adolescents, the most frequent use of the internet is to communicate with other individuals.²¹⁷ According to a U.S. survey, “87% of youth send or receive emails, 68% send or receive instant messages, 55% use an online social networking site, 57% participate in video-sharing spaces, and 18% visit chat rooms.”²¹⁸ The internet can be a useful tool when searching for information or being connected to a peer group; however, it can be abused as a tool for offensive and harmful behavior.²¹⁹ During adolescence, individuals are susceptible to negative social interactions, and frequent use of the internet may expose them to bullying and harassment.²²⁰ Research has found that cyberbullying has become particularly dangerous with adolescents considering that those who were cyberbullied were more than three times as likely to contemplate suicide as non-bullied adolescents.²²¹ This may be attributed to the victims feeling degraded in front of a wider audience with cyberbullying.²²² Once something is published on the internet, it is difficult to get it completely erased, thus cyberbullying lasts longer and has a greater capacity to haunt the victims.²²³ The internet has become a popular avenue for social interaction, thus, it has also become a growing opportunity for bullying among the youth.²²⁴

The percent of adolescents enrolled in Medi-Cal who reported that students spread mean rumors or lies about them on the internet at least one or more times in the past 12 months was 14.5%. This was not statistically different from the percent among adolescents with private insurance (10.1%) or the percent among those enrolled in Healthy Families (8.9%).



Findings: Role Models in California's Adolescent Population

The last section of this report is about the role models, such as teachers and other adults at an adolescent's school. The relationship between an adolescent and their teachers and other adults at school are explored based on an adolescent's responses to questions measuring how much their teachers or other adults at their school care about them, notice them when they are absent, listen to them, praise good work, want them to do their best, and notice them when they are in a bad mood.

A role model can be anyone, perhaps a parent, a sibling, a friend; however, some of the most influential role models are teachers.²²⁵ Adolescents spend a significant amount of their time at school, thus, teachers are poised to become one of the most influential individuals in the student's life.²²⁶ Research has found that the time a teenager spends with teachers is the most important opportunity for them to learn from adults in the American culture.²²⁷ Teachers are faced with many obstacles in their everyday teaching; however, they make a positive difference in the lives of many students.²²⁸ Research has also found that when teenagers were asked to discuss who or what influenced them to become who they are today, 58% mentioned one or more teachers.²²⁹

RASD found no statistical significance by insurance type for adolescents for the following measures - belief teachers or adults at school praise good work, teachers or adults at school want them to do their best, and teachers or adults at school notice their bad moods. As mentioned previously, the smaller sample size for adolescents may have contributed to the lack of statistical significance reported for some of these measures regarding role models.

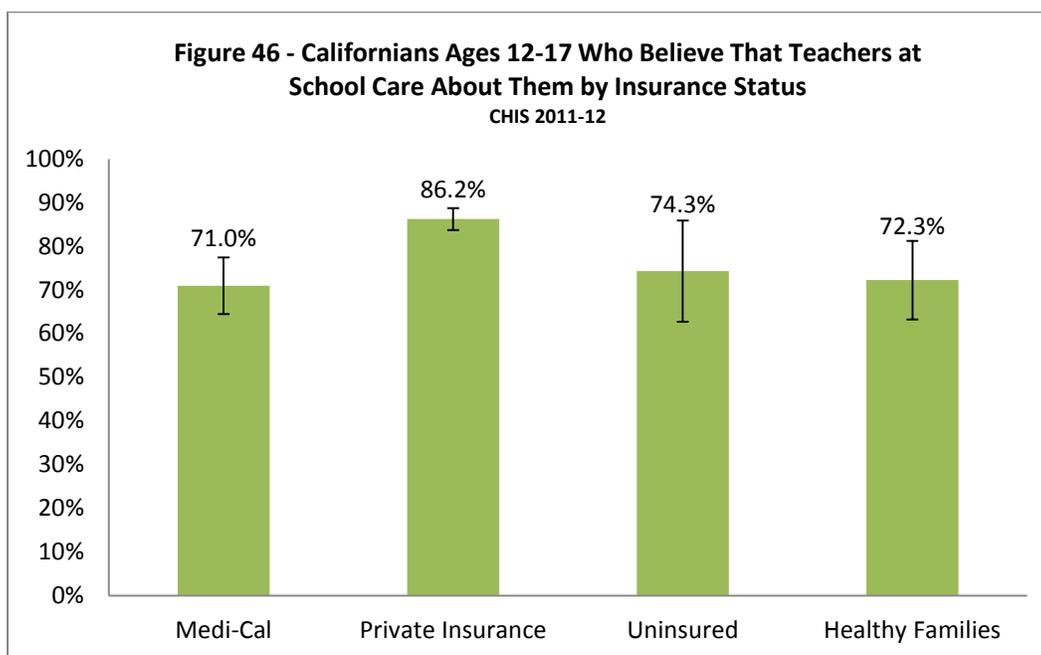
Findings: California’s Adolescent Population who Believed that Teachers or Adults at School Care about Them

CHIS Question: “At my school, there is a teacher or some other adult who really cares about me? Would you say this is not at all true, a little true, pretty much true or very true?”

Over the past several decades, research has found increasing evidence of the importance of supportive student-teacher relationships to improve student motivation, learning, and achievement.²³⁰ The relationship between a student and his/her teacher can affect the student’s emotional well-being and academic success.²³¹ Teachers who are caring or supportive create classroom environments that encourage students to behave in a socially responsible way and emphasize learning.²³² Research has found that junior and senior high school students who perceive their teachers as caring are more likely to connect with the classroom material and are less likely to drop out of school.²³³ A relationship that facilitates learning involves investment by both the teacher and the student.²³⁴ Research has found that students perceive teachers as caring when they make an attempt to understand and connect with their students as individuals.²³⁵

For the purpose of this analysis, RASD defined adolescents who answered, “pretty much true” or “very much true” to the question above as believing there was a teacher or adult at school who cared about them.

A higher percent of adolescents with private insurance (86.2%) believed they had a teacher or adult who cared about them than those enrolled in Medi-Cal (71.0%), the uninsured (74.3%), and those enrolled in Healthy Families (72.3%).



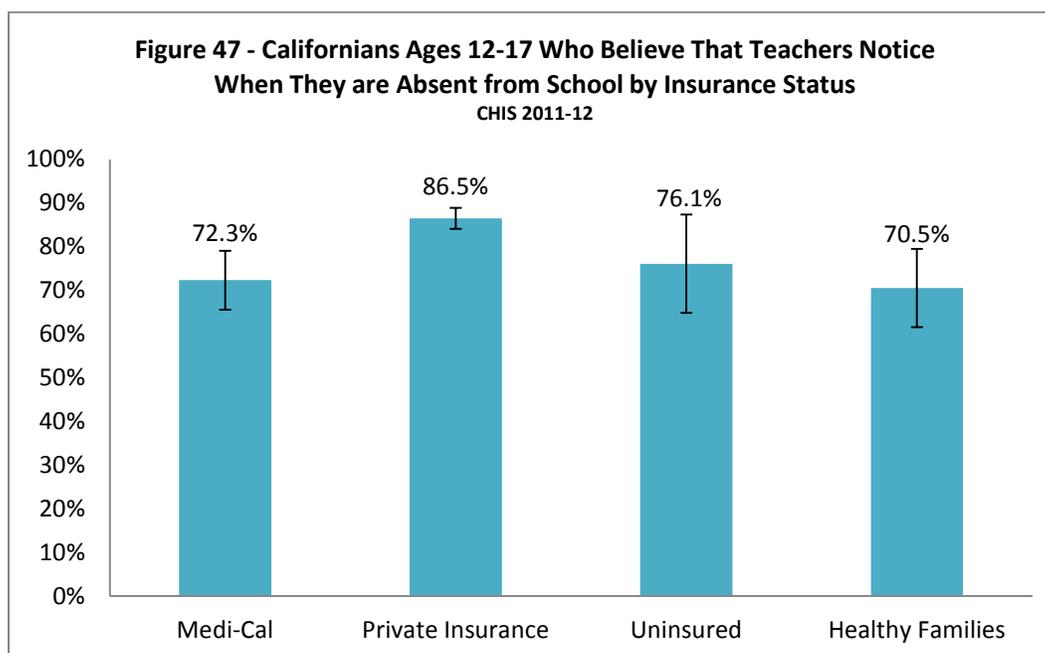
Findings: California’s Adolescent Population who Believe Teachers or Adults Notice When Adolescent is Absent from School

CHIS Question: “At my school, there is a teacher or some other adult who notices when I’m not there. Would you say this is not at all true, a little true, pretty much true or very true?”

Every day, hundreds of thousands of adolescents are absent from school and many are absent without a valid excuse and considered truant.²³⁶ Research has found that school characteristics and culture can have an influence on students who are absent and truant.²³⁷ Truancy can have substantial negative effects on the students, schools, and society and has been associated with delinquent activity in adolescents and negative behavior and characteristics in adults.²³⁸ Truancy has been associated with substance abuse, gang-related activity, and involvement in criminal activity, such as burglary and theft.²³⁹ Adolescents who have the highest truancy rates have the lowest academic achievement rates and also have high dropout rates.²⁴⁰ Research has found that adolescents who were truant experienced the effects into adulthood.²⁴¹ These adults were more likely to have poorer physical and mental health, lower paying jobs, an increased likelihood of living in poverty, more reliance on welfare support, children with behavioral problems, and an increased likelihood of incarceration.²⁴²

For the purpose of this analysis, RASD defined adolescents who answered “pretty much true” or “very much true” to the question above as believing there was a teacher or adult at school who usually noticed when they were not there.

Adolescents enrolled in Medi-Cal (72.3%) were less likely than those with private insurance (86.5%) to believe there was a teacher or adult at school who noticed when they were not there, but equally likely as those enrolled in Healthy Families (70.5%).



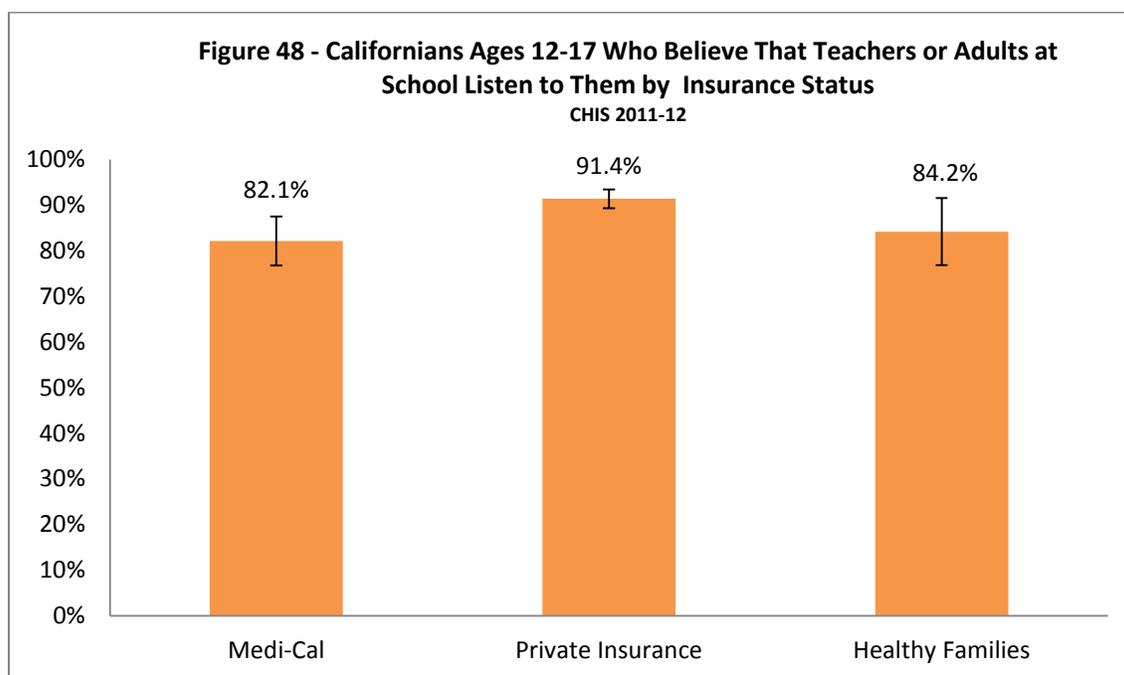
Findings: California’s Adolescent Population who Believe that Teachers or Adults Listen to Them

CHIS Question: “At my school, there is a teacher or some other adult who listens to me when I have something to say. Would you say this is not at all true, a little true, pretty much true or very much true?”

Like anyone else, students want to be heard and validated.²⁴³ Research has found that student voice is most successful when it allows “students to feel that they are members of a learning community, that they matter, and that they have something valuable to offer.”²⁴⁴ Research has shown that if a teacher or other adult at school listens to the student or makes them feel important in another way, they feel good about themselves and their learning.²⁴⁵

For the purpose of this analysis, RASD defined adolescents who answered “pretty much true” or “very much true” to the question above as believing there was a teacher or adult at school who listens to them.

Adolescents with private insurance (91.4%) were more likely to believe there was a teacher or some other adult who listened to them when they had something to say than those enrolled in Medi-Cal (82.1%) and those enrolled in Healthy Families (84.2%).



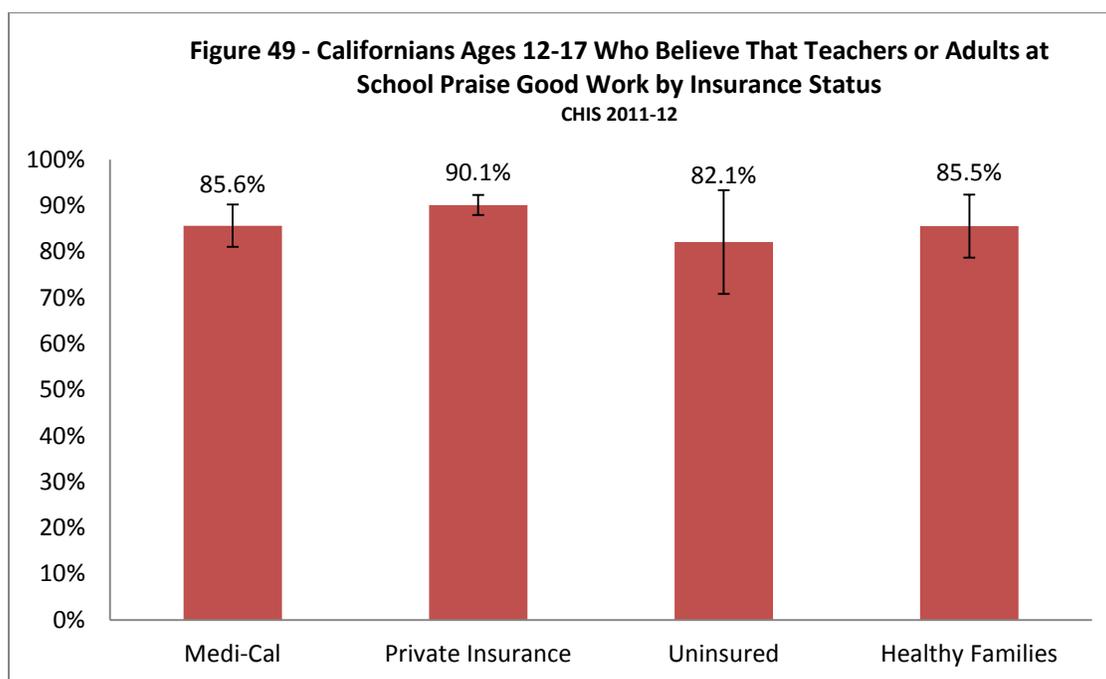
Findings: California’s Adolescent Population who Believe that Teachers or Adults at School Praise Good Work

CHIS Question: “At my school, there is a teacher or some other adult who tells me when I do a good job. Would you say this is not at all true, a little true, pretty much true or very much true?”

Research suggests that good teachers make all the difference and the effectiveness of the teacher is the biggest factor affecting students’ academic growth.²⁴⁶ Research has found that receiving praise from a teacher can be a powerful motivator for students; however, praise is not used enough in the classroom setting.^{247,248} The power of praise can result in changing a student’s behavior in that it indicates teacher approval and informs the student about how the academic performance or behavior corresponds to the teacher’s expectations.²⁴⁹

For the purpose of this analysis, RASD defined adolescents who answered “pretty much true” or “very much true” to the question above as believing there was a teacher or adult at school who praised them when they did a good job.

There were no statistically significant differences in the percent of adolescents who believed there was a teacher or adult at school who praised them when they did a good job by insurance status among those enrolled in Medi-Cal (85.6%), those with private insurance (90.1%), the uninsured (82.1%), and those enrolled in Healthy Families (85.5%).

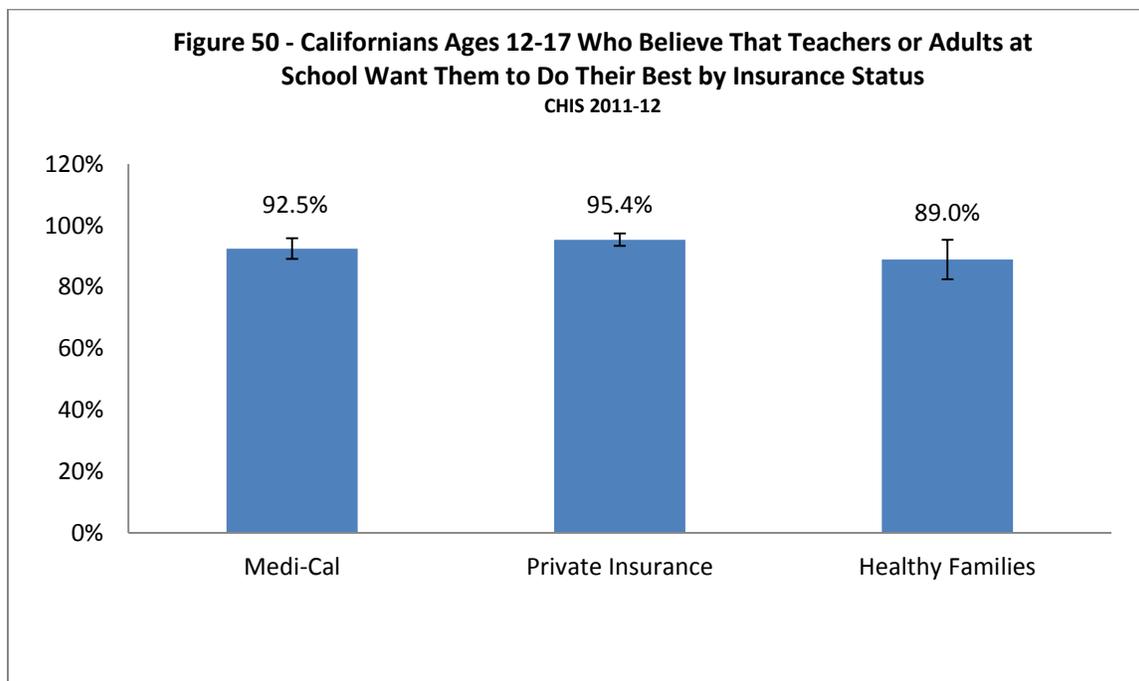


Findings: California’s Adolescent Population who Believe that Teachers or Adults at School Want Them to Do Their Best

CHIS Question: “At my school, there is a teacher or some other adult who always wants me to do my best. Would you say this is not at all true, a little true, pretty much true or very much true?”

For the purpose of this analysis, RASD defined adolescents who answered “pretty much true” or “very much true” to the question above as feeling there was a teacher or adult at school who wanted them to do their best.

There were no statistically significant differences in the percent of adolescents who felt there was a teacher or adult at school who wanted them to do their best by insurance status among those enrolled in Medi-Cal (92.5%), those with private insurance (95.4%), and those enrolled in Healthy Families (89.0%).



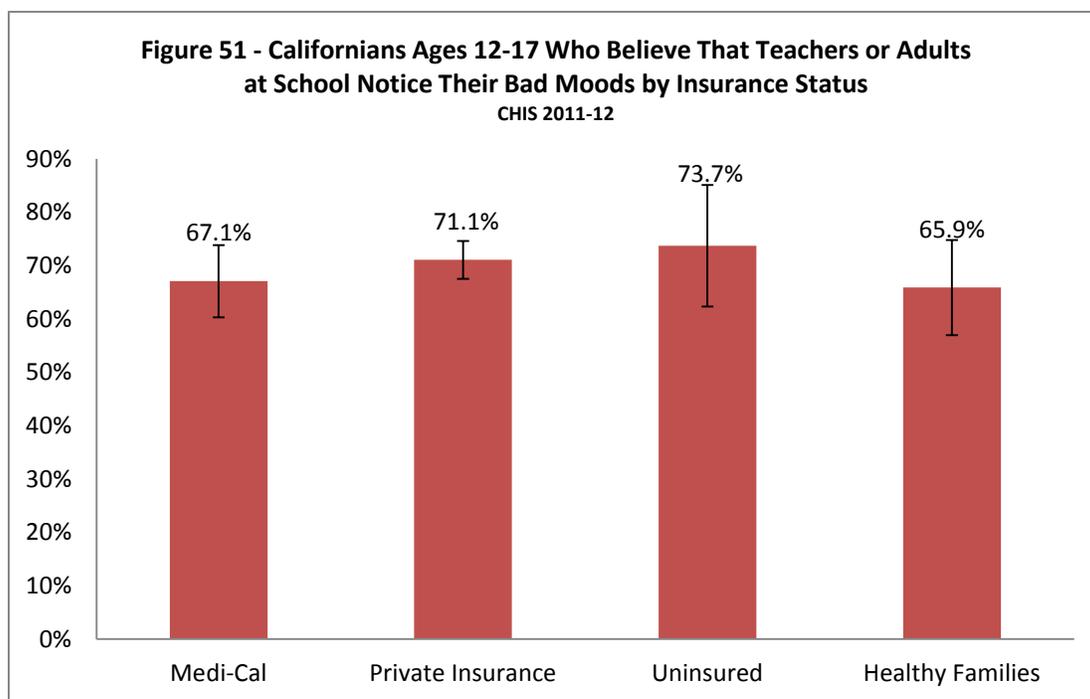
Findings: California’s Adolescent Population who Believe that Teachers or Adults at School Notice Their Bad Mood

CHIS Question: “At my school, there is a teacher or some other adult who notices when I am in a bad mood. Would you say this is not at all true, a little true, pretty much true, or very much true?”

Many adolescents experience mood swings commonly associated with growing up, including hormonal changes, peer pressures, and rapid physical and cognitive development.²⁵⁰ While adolescents may experience changes in mood based on factors associated with growing up, research has also found that experiencing negative events at school is associated with short-term changes in the student’s mood and self-esteem.²⁵¹ It is important for teachers and other adults to recognize a student’s bad mood in case the bad mood lasts for a prolonged period of time and may be a mood disorder. A mood disorder is treatable; however, parents and teachers or other school personnel need to know the signs and symptoms.²⁵²

For the purpose of this analysis, RASD defined adolescents who answered “pretty much true” or “very much true” to the question above as believing there was a teacher or adult at school who noticed when they were in a bad mood.

There were no statistically significant differences by insurance status in the proportion of adolescents who believed there was a teacher or adult at school who noticed when they were in a bad mood among those enrolled in Medi-Cal (67.1%), those with private insurance (71.1%), the uninsured (73.7%), and those enrolled in Healthy Families (65.9%).



More Information on the Medi-Cal Population

The Research and Analytic Studies Division (RASD) of the Department of Health Care Services (DHCS) performed the analysis for this report. RASD compiles official statistics and performs analytical studies to assist DHCS in achieving its mission and goals. More information regarding Medi-Cal enrollment, program expenditures, and other relevant topics is available at the RASD [website](#).

Subscribe to the RASD Mailing List

Click [here](#) to receive email notifications when new statistical content is added to the RASD website. The RASD website is updated regularly with graphics, pivot tables and statistical briefs describing the Medi-Cal population, Medi-Cal enrollment trends, and other issues relevant to the Medi-Cal program and its stakeholders.

IF YOU PLAN TO CITE THIS PAPER IN A SUBSEQUENT WORK, WE SUGGEST THE FOLLOWING CITATION:

Watkins, J, Epstein, J, and Foos, S. 2015. Medi-Cal's Adolescent Population: The Medi-Cal Population Before the Implementation of the Affordable Care Act. California Department of Health Care Services. Sacramento, CA. May 2015.

PLEASE NOTE:

This document provides a brief summary of complex subjects and should be used only as an overview and general guide to the Medi-Cal program. The views expressed herein do not necessarily reflect the policies or legal positions of the California Health and Human Services Agency (CHHS) or the California Department of Health Care Services (DHCS). These summaries do not render any legal, accounting, or other professional advice, nor are they intended to explain fully all of the provisions or exclusions of the relevant laws, regulations, and rulings of the Medicare and Medicaid programs. Original sources of authority should be researched and utilized.

Appendix A: Data Sources and Methods

Data Sources

The California Health Interview Survey (CHIS)

The California Health Interview Survey (CHIS) is the largest health survey in the state of California. The UCLA Center for Health Policy Research conducts CHIS in collaboration with the California Department of Public Health, the Department of Health Care Services and the Public Health Institute. Collecting information for all age groups on health and health related issues, CHIS gives a detailed picture of the health and health care needs of California's large and diverse population. In 2011, CHIS transitioned to a continuous survey taking two years to complete a data cycle. CHIS has included households with only cell phones since 2007.

Using an independent multistage probability sample, CHIS provides a representative sample of the state's non-institutionalized population. CHIS also provides estimates for most individual counties, as well as estimates for major racial ethnic subgroups and some smaller ethnic subgroups. CHIS conducted the landline sample using a random digit dialing (RDD) method from 41 single county strata and three multi-county strata. For the cell phone sample, CHIS used a RDD sample from telephone numbers with cellular service stratified into 28 geographic strata using seven CHIS regions and telephone area codes. Approximately 20% of the interviews included in the 2011-12 survey occurred via cell phone. Interviews were conducted in five languages: English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, and Korean.

The 2011-12 survey completed 2,799 adolescent interviews. After exclusions, the graphs and charts for this report reflect data from 2,740 interviews of adolescents ages 12-17.

Medi-Cal Administrative Data

RASD drew enrollment eligibility data from Medi-Cal Eligibility Data Systems (MEDS) January 2012, reflecting a 12-month reporting lag, for 1,000,312 adolescents.

Methods

All estimates in this report using CHIS data were weighted to represent the population of California. Estimates were calculated using procedures in the statistical software package SAS that account for the CHIS complex sample design. Standard errors to produce confidence intervals were calculated using Taylor series linearization. Significant differences were identified with t-tests. This section provides details on select measures reported by RASD in this analysis.

Language Assignment (Language Spoken, Administrative Data)

Language	Percentage	Language	Percentage
Unknown	0.8%	Lao	0.1%
ASL	0.0%	Mandarin	0.1%
Arabic	0.3%	Mien	0.0%
Armenian	0.4%	Other Chinese	0.1%
Cambodian	0.2%	Other Non-Eng.	0.4%
Cantonese	0.7%	Other Sign	0.0%
English	51.5%	Polish	0.0%
Farsi	0.1%	Portuguese	0.0%
French	0.0%	Russian	0.3%
Hebrew	0.0%	Samoan	0.0%
Hmong	0.7%	Spanish	42.3%
Ilocano	0.0%	Tagalog	0.2%
Italian	0.0%	Thai	0.0%
Japanese	0.0%	Turkish	0.0%
Korean	0.1%	Vietnamese	1.5%

Urban/Rural Distinction

Definition	List of Counties
Urban Counties Includes: Counties in metro areas with populations of 1 million or more; Counties in metro areas with populations of 250,000 to 1 million; and Counties in metros areas with populations smaller than 250,000.	Alameda, Contra Costa, El Dorado, Los Angeles, Marin, Orange, Placer, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Mateo, Santa Clara, Yolo, Fresno, Kern, Monterey, San Joaquin, Santa Barbara, Santa Cruz, Solano, Sonoma, Stanislaus, Tulare, Ventura, Butte, Imperial, Kings, Madera, Merced, Napa, San Luis Obispo, Shasta, Sutter, Yuba
Rural Counties Includes: Urban populations of 20,000 or more, adjacent to a metro area; Urban populations of 20,000 or more, not adjacent to a metro area; Urban population of 2,500 to 19,999, adjacent to a metro area; Urban population of 2,500 to 19,999, not adjacent to a metro area; Completely rural area or an urban population less than 2,500, adjacent to a metro area; and Completely rural area or an urban population less than 2,500, not adjacent to a metro area	Lake, Mendocino, Nevada, Tehama, Tuolumne, Humboldt, Amador, Calaveras, Colusa, Glenn, Lassen, Modoc, Del Norte, Inyo, Mono, Plumas, Siskiyou, Alpine, Mariposa, Sierra, Trinity

Food Insecurity

If a respondent's income was above 200% of the FPL they were defined as food secure.

For adults with incomes at or below 200% of the FPL food insecurity was determined using the following 6 questions which represent a validated scale derived from the U.S. Household Food Security questionnaire:²⁵³

1. *"The food that I/we bought just didn't last, and I didn't have money to get more. Was that often true, sometimes true, or never true for you in the last 12 months?"*
2. *"I/we couldn't afford to eat balanced meals. Was that often true, sometimes true, or never true for you in the last 12 months?"*
3. *"Please tell me yes or no in the last 12 months, since (date 12 months ago), did you (or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?" (This question is asked only if there is a yes response to question 2.)*
4. *"How often did this happen-almost every month, some months but not every month, or in only 1 or 2 months?"*
5. *"In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?" "yes or no?"*
6. *"In the last 12 months, since (date 12 months ago), were you ever hungry but didn't eat because you couldn't afford enough food?"²⁵⁴ "yes or no?"*

For questions 1 and 2: a responses of "often true" or "sometimes true" were coded as 1 and a response of "never true" was coded as 0.

For questions 3, 5, and 6: a response of "yes" was coded as 1 and a response of "no" was coded as 0.

For question 4: a response of "almost every month" or "some months but not every month" was coded as 1 and a and a response of "only in 1 or 2 months" was coded as 0.

The scores for each of these questions were summed to obtain a total score from 0 to 6. Those with a total score from 0 to 1 were defined as food secure. Those with a total score of 2, 3 or 4 were defined as food insecure without hunger and those with a total score of 5 or 6 were defined as food insecure with hunger.

Index

Figure 1 – Percent of California Population Enrolled in Medi-Cal	5
Figure 2 – Income Eligibility Limits for Medi-Cal, the Healthy Families Program, and the Optional Targeted Low Income Children’s Program.....	6
Figure 3 – Medi-Cal Beneficiaries by Age Categories	6
Figure 4 – Medi-Cal Beneficiaries Ages 12-17 by Aid Categories.....	7
Figure 5 – Medi-Cal Beneficiaries Ages 12-17 by Gender	8
Figure 6 – Medi-Cal Beneficiaries Ages 0-17 by Age Categories.....	8
Figure 7 – Medi-Cal Beneficiaries Ages 12-17 by Race/Ethnicity.....	9
Figure 8 – Medi-Cal Beneficiaries Ages 12-17 by Rural Urban Designation	10
Figure 9 – Medi-Cal Beneficiaries Ages 12-17 by Citizenship Status	11
Figure 10 – Medi-Cal Beneficiaries Ages 12-17 by Language Spoken.....	12
Figure 11 – Language of Interview Among Californians Ages 12-17 by Insurance Status	13
Figure 12 – Marital Status of Parent/Guardian Among Californians Ages 12-17 by Insurance Status.....	14
Figure 13 – Educational Attainment of Parent/Guardian Among Californians Ages 12-17 by Insurance Status	15
Figure 14 – Employment Status of Parent/Guardian Among Californians Ages 12-17 by Insurance Status	16
Figure 15 – Poverty Level (100% FPL) Among Californians Ages 12-17 by Insurance Status.....	17
Figure 16 – Food Insecurity Among Californians Ages 12-17 by Insurance Status.....	18
Figure 17 – Californians Ages 12-17 Living in a Home That is Owned by Insurance Status.....	19
Figure 18 – Californians Ages 12-17 Living in a Neighborhood Where Usually Not Able to Find Available and Affordable Fruits and Vegetables by Insurance Status.....	20
Figure 19 – Californians Ages 12-17 Living in a Neighborhood Where People are Willing to Help Each Other by Insurance Status.....	21
Figure 20 – Californians Ages 12-17 Living in a Neighborhood Where Adults Look Out for Children by Insurance Status.....	22
Figure 21 – Californians Ages 12-17 Living in a Neighborhood Where People Cannot be Trusted by Insurance Status	23
Figure 22 – Californians Ages 12-17 Living in a Neighborhood that Does Not Feel Safe by Insurance Status	24
Figure 23 – Californians Ages 12-17 Whose Neighborhood Park is Safe by Insurance Status	25
Figure 24 – Californians Ages 12-17 Living in a Home that Allowed Smoking by Insurance Status	27
Figure 25 – Californians Ages 12-17 Who Had a Parent/Guardian who Smoked Daily by Insurance Status.....	28
Figure 26 – Californians Ages 12-17 Who Ate Three or More Fruit and Vegetables per Day in the Past Week by Insurance Status.....	29
Figure 27 – Californians Ages 12-17 Who Consumed One or More Sodas per Day by Insurance Status.....	30
Figure 28 – Californians Ages 12-17 Who Ate Fast Food Two or More Time per Week by Insurance Status	31
Figure 29 – Smoking Among Californians Ages 12-17 by Insurance Status	32

Figure 30 – Any Alcohol Use Among Californians Ages 12-17 by Insurance Status.....	33
Figure 31 – Californians Ages 12-17 Who Were Physically Active Seven Days Out of a Typical Week by Insurance Status.....	34
Figure 32 – Self-Reported Health Status Among Californians Ages 12-17 by Insurance Status	35
Figure 33 – Asthma Diagnosis Among Californians Ages 12-17 by Insurance Status	36
Figure 34 – Californians Ages 12-17 with BMI Levels Considered Overweight or Obese by Insurance Status ..	37
Figure 35 – Californians Ages 12-17 Who Needed Help for Emotional Problems in the Past 12 Months by Insurance Status.....	38
Figure 36 – Californians Ages 12-17 Who Have Ever Thought of Suicide by Insurance Status	39
Figure 37 – Californians Ages 12-17 Who Have Done Volunteer Work or Community Service in the Past 12 Months by Insurance Status	40
Figure 38 – Californians Ages 12-17 Who Have Participated in Clubs or Organizations Outside of School in the Past 12 Months by Insurance Status	41
Figure 39 – Californians Ages 12-17 Who Changed Schools Two or More Times in the Past Three Years by Insurance Status.....	42
Figure 40 – Californians Ages 12-17 Who Fear Being Attacked at School by Insurance Status.....	43
Figure 41 – Californians Ages 12-17 Who Were Made Fun of Two or More Times in the Past 12 Months by Insurance Status.....	44
Figure 42 – Californians Ages 12-17 Who Often Have Adult Supervision After School by Insurance Status	45
Figure 43 – Californians Ages 12-17 Who Were Threatened by a Peer Within Past 12 Months by Insurance Status	46
Figure 44 – Californians Ages 12-17 Who Do Not Feel Safe Traveling To and From School by Insurance Status	47
Figure 45 – Californians Ages 12-17 Who Have Been Lied About on the Internet One or More Times in the Past 12 Months by Insurance Status.....	48
Figure 46 – Californians Ages 12-17 Who Believe That Teachers at School Care About Them by Insurance Status	50
Figure 47 – Californians Ages 12-17 Who Believe That Teachers Notice When They are Absent from School by Insurance Status.....	51
Figure 48 – Californians Ages 12-17 Who Believe That Teachers or Adults at School Listen to Them by Insurance Status.....	52
Figure 49 – Californians Ages 12-17 Who Believe That Teachers or Adults at School Praise Good Work by Insurance Status.....	53
Figure 50 – Californians Ages 12-17 Who Believe That Teachers or Adults at School Want Them to Do Their Best by Insurance Status.....	54
Figure 51 – Californians Ages 12-17 Who Believe That Teachers or Adults at School Notice Their Bad Moods by Insurance Status.....	55

End Notes

- ¹ California Department of Finance Demographic and Research Unit (2014, December). Report P-2 State and County Population Projections by Race/Ethnicity and Age (5-year groups) 2010 through 2060 (as of July 1). Retrieved from [Report P-2: State and County Population Projections - Race/Ethnicity and 5-Year Age Groups, 2010-2060 \(by year\)](#)
- ² A detailed definition of “certified eligibles” is located in the RASD report, “[FINDING CALIFORNIA’S MEDI-CAL POPULATION: CHALLENGES AND METHODS IN CALCULATING MEDI-CAL ENROLLMENT NUMBERS.](#)”
- ³ These are individuals who are eligible for Medi-Cal but not enrolled.
- ⁴ Medi-Cal eligibility takes income, assets, and deprivation factors into account.
- ⁵ California Department of Health Care Services. (July 2012). *Medi-Cal Funding Summary*. Department of Health Care Services and California Health and Human Services. Retrieved from http://www.dhcs.ca.gov/dataandstats/reports/mcestimates/Documents/Appropriation/M11_Approp_Est.pdf
- ⁶ The May 2014 Medi-Cal budget estimates annual spending at \$62 billion. California Department of Health Care Services. (2014 May). *Medi-Cal May 2014 Local Assistance Estimate for Fiscal Years 2013-14 and 2014-15*. Department of Health Care Services and California Health and Human Services. Retrieved from http://www.dhcs.ca.gov/dataandstats/reports/mcestimates/Documents/2014_May_Estimate/M1400_Complete_Estimate.pdf
- ⁷ Medicaid.gov. (2010, August 11). *California Title XXI State Program Fact Sheet*. Retrieved from <http://www.medicare.gov/CHIP/Downloads/CA/CACurrentFactsheet.pdf>
- ⁸ California Department of Health Care Services (DHCS). (n.d.). *Healthy Families Program Transition to Medi-Cal*. Retrieved from <http://www.dhcs.ca.gov/provgovpart/Documents/Waiver%20Renewal/AppendixCHFP.PDF>
- ⁹ California Department of Health Care Services (DHCS). (n.d.). *Healthy Families Program (HFP) Transition to Medi-Cal*. Retrieved from <http://www.chcf.org/~media/MEDIA%20LIBRARY%20Files/PDF/M/PDF%20MediCalFactsAndFigures2013.pdf>
- ¹⁰ Centers for Disease Control and Prevention (CDC). (2011, January 14). CDC Health Disparities and Inequalities Report – United States, 2011. *CDC, 60*. Retrieved from <http://www.cdc.gov/mmwr/pdf/other/su6001.pdf>
- ¹¹ Smedley, B.D., Stith, A.Y., and Nelson, A.R. (2003). *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, D.C.: The National Academies Press.
- ¹² Smedley, Stith, and Nelson. (2003).
- ¹³ Brown, E.R., Ojeda, V.D., Wyn, R., Levan, R. (2000). Racial and Ethnic Disparities in Access to Health Insurance and Health Care. *UCLA Center for Health Policy Research*. Retrieved from <https://escholarship.org/uc/item/4sf0p1st#page-5>
- ¹⁴ The Henry J. Kaiser family Foundation. (Accessed 2014). “Urban Population (Percent of Total Population Living in Urban Areas.” *Global Health Facts*. Retrieved from <http://kff.org/global-indicator/urban-population/>
- ¹⁵ Eberhardt MS, Ingram DD, Makuc DM, et al. (2001). Urban and Rural Health Chartbook. Health, United States, 2001. Hyattsville, Maryland: National Center for Health Statistics. Retrieved from <http://www.cdc.gov/nchs/data/abus/abus01cht.pdf>
- ¹⁶ Stanford School of Medicine. (n.d.)
- ¹⁷ De Poel, E., O’Donnell, O., and Van Doorslaer, E. (2009 November). “What Explains the Rural-Urban Gap in Infant Mortality: Household or Community Characteristics?” *Demography*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2831359/>
- ¹⁸ Stanford School of Medicine. (n.d.) Rural Health Fact Sheet: Healthcare Disparities and Barriers to Healthcare. *Stanford.edu*. Retrieved from <http://ruralhealth.stanford.edu/health-pros/factsheets/disparities-barriers.html>
- ¹⁹ National Immigration Law Center. (2013 October). The Affordable Care Act and Mixed-Status Families. Retrieved from http://www.nilc.org/aca_mixedstatusfams.html
- ²⁰ Fix, M.E., Zimmerman, W. (1999, October 6). All Under One Roof: Mixed-Status Families in an Era of Reform. Urban Institute. Retrieved from <http://www.urban.org/UploadedPDF/409100.pdf>
- ²¹ Derose, K.P., Escarce, J.J., and Lurie, N. (2007, September). Immigrants and Health Care: Sources of Vulnerability. *Health Affairs*, 26(5). Retrieved from <http://content.healthaffairs.org/content/26/5/1258.long>

-
- ²² National Immigration Law Center. (2013).
- ²³ Hanson, D. and Simms, M. (2014, May). Children of Immigrants: 2011 State Trends Update. The Urban Institute Retrieved from <http://www.urban.org/sites/default/files/alfresco/publication-pdfs/413113-Children-of-Immigrants--State-Trends-Update.pdf>
- ²⁴ Hanson, D. and Simms, M. (2014).
- ²⁵ Derose, Escarce, and Lurie. (2007).
- ²⁶ Derose, Escarce, and Lurie. (2007).
- ²⁷ Avellar, S., Goesling, B., and Wood, R. (2007). *The Effects of Marriage on Health: A Synthesis of Recent Research Evidence*. U.S. Department of Health and Human Services. Retrieved from <http://www.mathematica-mpr.com/~media/publications/PDFs/marriagehealth.pdf>
- ²⁸ Avellar, Goesling., and Wood. (2007).
- ²⁹ Greenstone, M. and Looney, A. (February 2012). "The Marriage Gap: The Impact of Economic and Technological Change on Marriage Rates." *The Hamilton Project*. The Brookings Institute. Retrieved from <http://www.brookings.edu/blogs/jobs/posts/2012/02/03-jobs-greenstone-looney>
- ³⁰ Amato P. R. (2000). The consequences of divorce for adults and children. *Journal of Marriage and the Family*, 62 1269-1287
- ³¹ Amato, P.R., & Sobolewski J. M. (2001). The effects of divorce and marital discordance on adult children's psychological well-being. *American Sociological Review*, 66, 900-921
- ³² Angel, R, Worobey, J.I. (1988) Single Motherhood and Children's Health, *Journal of Health and Social behavior* 29:38-52
- ³³ Avellar, Goesling., and Wood. (2007).
- ³⁴ National Poverty Center. (2007). *Education and Health*. Policy Brief No. 9. Gerald R. Ford School of Public Policy, University of Michigan. Retrieved from http://www.npc.umich.edu/publications/policy_briefs/brief9/policy_brief9.pdf
- ³⁵ National Poverty Center. (2007).
- ³⁶ National Poverty Center. (2007).
- ³⁷ Cochrane SH, Leslie J, O'Hara DJ. Parental education and child health: intracountry evidence *Health Policy Educ.* 1982 Mar;2(3-4):213-50.
- ³⁸ Bohn, S. and Levin, M. (August 2013). "Poverty in California." *Just the Facts*. Public Policy Institute of California. Retrieved from http://www.ppic.org/main/publication_show.asp?i=261
- ³⁹ Nichols, A., Mitchell, J., and Lindner, S. (July 2013). *Consequences of Long-Term Unemployment*. The Urban Institute. Retrieved from: <http://www.urban.org/uploadedpdf/412887-consequences-of-long-term-unemployment.pdf>
- ⁴⁰ Dooley, D., Fielding, J., and Levi, L. (1996). "Health and Unemployment." *Annual Review of Public Health*. Vol. 17. Retrieved from <http://www.annualreviews.org/doi/abs/10.1146/annurev.pu.17.050196.002313>
- ⁴¹ Walker, G.M. and Wilson, S.H. (1993). "Unemployment and health: a review." *Public Health*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/8511234>
- ⁴² Brooks-Gunn, J. and Duncan, G. J. (1997). The Effects of Poverty on Children. *The Future of Children*. Retrieved from https://www.princeton.edu/futureofchildren/publications/docs/07_02_03.pdf
- ⁴³ Nichols, Mitchell, and Lindner. (2013).
- ⁴⁴ Centers for Disease Control and Prevention (CDC). (2014). "Fact Sheet. Health Disparities in Education and Income." *Findings from the CDC Health Disparities and Inequalities Report – United States, 2011*. Retrieved from <http://www.cdc.gov/minorityhealth/reports/CHDIR11/FactSheets/EducationIncome.pdf>
- ⁴⁵ Healthy People. (2014). *Social Determinants of Health*. Healthy People 2020 Objectives. Retrieved from <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=39>
- ⁴⁶ U.S. Department of Health and Human Services. (2011). *The 2011 HHS Poverty Guidelines*. Retrieved from

<http://aspe.hhs.gov/poverty/11poverty.shtml>

- ⁴⁷ U.S. Department of Agriculture (USDA). (2012). "Key Statistics and Graphics." *Food Security in the U.S.* Economic research Service. Retrieved from <http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx>
- ⁴⁸ Coleman-Jensen, A., Nord, M., and Singh, A. (2013, September). Household Food Security in the United States in 2012, ERR-155, U.S. Department of Agriculture (USDA), Economic Research Service. Retrieved from <http://ers.usda.gov/media/1183208/err-155.pdf>
- ⁴⁹ Coleman-Jensen, Nord, and Singh. (2013).
- ⁵⁰ Coleman-Jensen, Nord, and Singh. (2013).
- ⁵¹ USDA. (2012).
- ⁵² Robert Wood Johnson Foundation. (2010).
- ⁵³ Nord, M. (2009, September). Food Insecurity in Households with Children: Prevalence, Severity, and Household Characteristics. EIB-56. U.S. Department of Agriculture (USDA), Economic Research Service. Retrieved from <http://files.eric.ed.gov/fulltext/ED508211.pdf>
- ⁵⁴ Nord. (2009).
- ⁵⁵ Nord. (2009).
- ⁵⁶ Dietz, R. (2003). *The Social Consequences of Homeownership*. Ohio State University Department of Economics. Center for Urban and Regional Analysis. Retrieved from http://www.researchgate.net/publication/228701487_The_social_consequences_of_homeownership
- ⁵⁷ Joint Center for Housing Studies. (2013). *Reexamining the Social Benefits of Homeownership after the Housing Crisis*. Harvard University. Retrieved from <http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/hbtl-04.pdf>
- ⁵⁸ Dietz. (2003).
- ⁵⁹ Joint Center for Housing Studies. (2013).
- ⁶⁰ Robert Wood Johnson Foundation. (2011) "Foreclosure Process Takes Toll on Physical, Mental Health." *RWJF Newsroom*. Retrieved from <http://www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2011/10/foreclosure-process-takes-toll-on-physical-mental-health.html>
- ⁶¹ Haurin, D.R., Parcel, T. L., and Haurin, R. J. (2002). Does Homeownership Affect Child Outcomes?. *Real Estate Economics*, 30:635-666. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/1540-6229.t01-2-00053/abstract>
- ⁶² Dietz. (2003).
- ⁶³ Rohe, W. M., and Lindbland, M. (2013, August). Reexamining the Social Benefits of Homeownership after the Housing Crisis. Retrieved from <http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/hbtl-04.pdf>
- ⁶⁴ Dietz. (2003).
- ⁶⁵ Dietz. (2003).
- ⁶⁶ Dietz. (2003).
- ⁶⁷ Karpyn, A. and Treuhaft, S. (2010). *The Grocery Gap: Who Has Access to Healthy Food and Why It Matters*. Retrieved from http://thefoodtrust.org/uploads/media_items/grocerygap.original.pdf
- ⁶⁸ Drewnowski and Eichelsdoefer. (2010).
- ⁶⁹ Karpyn and Treuhaft. (2010).
- ⁷⁰ Braveman, P., Cubbin, C., Egerter, S., and Pedregon, V. (2011). Neighborhoods and Health. Issue Brief No. 8. Exploring the Social Determinants of Health Series. The Robert Wood Johnson Foundation Commission to Build a Healthier America. Retrieved from http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf70450

-
- ⁷¹ Brennan, R., Buka, S., Kawachi, I., and Lochner, K. (2003). "Social Capital and Neighborhood Morality Rates in Chicago." *Social Science and Medicine*. Vol. 56. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/12639596>
- ⁷² Macinko J., and Starfield B. (2001). "The utility of social capital in research on health determinants." *Milbank Quarterly*. Vol 79, No. 3. Retrieved from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-primary-care-policy-center/Publications_PDFs/A165.pdf
- ⁷³ Braveman, Cubbin, Egerter, and Pedregon. (2011).
- ⁷⁴ Braveman, Cubbin, Egerter, and Pedregon. (2011).
- ⁷⁵ Braveman, Cubbin, Egerter, and Pedregon. (2011).
- ⁷⁶ Harbaugh, W.T., Krause, K., Liday Jr., S.G., and Vesterland, L. (2002, March). Trust in Children. Retrieved from <http://pages.uoregon.edu/harbaugh/Papers/TrustInChildren.pdf>
- ⁷⁷ Harbaugh, Krause, Liday Jr, and Vesterland. (2002).
- ⁷⁸ Wray-Lake, L., and Flanagan, C.A. (2012). Parenting practices and the development of adolescents' social trust. *Journal of Adolescence*. (35)(3).
- ⁷⁹ Kullberg, A., Timpka, T., Svensson, T., Karlsson, N., and Lindqvist, K. (2010). Does the perceived neighborhood reputation contribute to neighborhood differences in social trust and residential wellbeing? *Journal of Community Psychology*, 38(5).
- ⁸⁰ Kullberg, Timpka, Svensson, Karlsson, and Lindqvist. (2010).
- ⁸¹ Braveman, Cubbin, Egerter, and Pedregon. (2011).
- ⁸² Lumeng, J.C., Appugliese, D., Cabral, H.J., Bradley, R.H., Zuckerman, B. (2006). Neighborhood Safety and Overweight Status in Children. *Arch Pediatr Med*. 2006;160(1):25-31. Retrieved from <http://archpedi.jamanetwork.com/article.aspx?articleid=204390>
- ⁸³ Franzini, L., Elliot, M., Cuccaro, P., Schuster, M., Gilliland, M. J., Grunbaum, J., Franklin, F., and Tortolero, S. R. (2009, February). Influences of Physical and Social Neighborhood Environments on Children's Physical Activity and Obesity. *American Journal Public Health*.99(2):271-278 Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2622771/>
- ⁸⁴ Lumeng, Appugliese, Cabral, Bradley, and Zuckerman. (2006).
- ⁸⁵ Maller, C., Townsend, M., Leger, L. S., Henderson-Wilson, C., Pryor, A., Prosser, L., and Moore, M. (2009). Healthy Parks, Healthy People: The Health Benefits of Contact with Nature in a Park Context. Retrieved from <http://www.georgewright.org/262maller.pdf>
- ⁸⁶ Maller, Townsend, Leger, Henderson-Wilson, Pryor, Prosser, and Moore. (2009).
- ⁸⁷ Maller, Townsend, Leger, Henderson-Wilson, Pryor, Prosser, and Moore. (2009).
- ⁸⁸ Allen, E. M., Hill, A. L., Tranter, E., and Sheehan, K. M. (2013, January). Playground Safety and Quality in Chicago. *Pediatrics*.131:233 Retrieved from <http://pediatrics.aappublications.org/content/131/2/233.full.pdf+html>
- ⁸⁹ Allen, Hill, Tranter, and Sheehan. (2013).
- ⁹⁰ Maller, Townsend, Leger, Henderson-Wilson, Pryor, Prosser, and Moore. (2009).
- ⁹¹ Allen, Hill, Tranter, and Sheehan. (2013).
- ⁹² Roemmich, J. N., Epstein, L. H., Raja, S., Yin, L., Robinson, J., Winiewicz, D. (2006, December). Association of Access to Parks and Recreational Facilities of Young Children. *Preventative Medicine*. 43(6). Retrieved from <http://www.sciencedirect.com/science/article/pii/S0091743506002829>
- ⁹³ Bes-Rastrollo, M. and Martinez/Gonzalez, M.A. (2008). "Differential Underreporting and Other Caveats About Sugar-Sweetened Beverages and Weight Gain." *American Society for Clinical Nutrition*. Vol. 88 No. 5. Retrieved from <http://ajcn.nutrition.org/content/88/5/1450.full>
- ⁹⁴ J.C. Jacobson Vann et al. (2011). "Use of a Tool to Determine Perceived Barriers to Healthy Eating and Physical Activity and Relationships to Health Behaviors." *Journal of Pediatric Nursing*. Retrieved from <http://www.ncaccesscare.org/publications/BarriersToHealthyWeight032011.pdf>

-
- ⁹⁵ Watkins, J, Epstein, J, and Carpenter, W. 2014. "Medi-Cal's Nonelderly Adults: The Medi-Cal Population Before the Implementation of the Affordable Care Act." California Department of Health Care Services. Retrieved from http://www.dhcs.ca.gov/dataandstats/statistics/Documents/RASB_Issue_Brief_CHIS_Report.pdf
- ⁹⁶ Glover M. et al. (2013). "Parent Versus Child Reporting of Tobacco Smoke Exposure at Home and in the Car." *The New Zealand Medical Journal*. Vol. 126 No. 1375. Retrieved from <https://www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2013/vol-126-no-1375/article-glover2>
- ⁹⁷ CDC. (2014). "Health Effects of Secondhand Smoke." *Smoking and Tobacco Use*. U.S. Department of Health and Human Services. Retrieved from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/health_effects/index.htm
- ⁹⁸ CDC. (2014). "Health Effects of Secondhand Smoke."
- ⁹⁹ Abdullah A.S., Hua F., Xia X., et al (2012) Second-hand smoke exposure and household smoking bans in Chinese families: a qualitative study *Health and Social Care in the community* 20(4):356-
- ¹⁰⁰ U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006 [cited 2014 Mar 5].
- ¹⁰¹ U.S. Department of Health and Human Services. [The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General](#). Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014 [accessed 2014 Mar 5].
- ¹⁰² Hill S.C., and Liang L. (2008) Smoking in the home and children's health, *Tob Control* 17(1):32-37
- ¹⁰³ Barnoya, J. and Glantz, S. A. (2005). Cardiovascular Effects of Secondhand Smoke Nearly as Large as Smoking. *Circulation*. Retrieved from <http://circ.ahajournals.org/content/111/20/2684.full>
- ¹⁰⁴ CDC. (2014). "Health Effects of Secondhand Smoke."
- ¹⁰⁵ Bjelland M. , Brantsaeter A.L., Haugen M. et al (2013) Changes and tracking of fruit, vegetable, and sugar-sweetened beverages intake from 18 months to 7 years in the Norwegian mother and child cohort study *BMC Public Health* 13. retrieved at <http://www.biomedcentral.com/1471-2458/13/793>
- ¹⁰⁶ USDA. (2010). *Dietary Guidelines for Americans*. U.S. Department of Health and Human Services. Retrieved from <http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>
- ¹⁰⁷ USDA. (2010).
- ¹⁰⁸ Taylor J.C. Johnson R.K. "Farm to School as strategy to increase children's fruit and vegetable consumption in the United States: Research and Recommendations
- ¹⁰⁹ CDC. (2014). Vital Signs: Fruits and Vegetable Intake Among Children –United States, 2003-2010. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6331a3.htm?s_cid=mm6331a3_w
- ¹¹⁰ Gidding, S.S., Denison B.A., Birch L.L. et al (2006) "American Academy of Pediatrics Dietary Recommendations for Children and Adolescents: a guide for practitioners". *Pediatrics* 117 544-559 retrieved at <http://pediatrics.aappublications.org/content/117/2/544.full>
- ¹¹¹ Wang YC, Bleich SN, Gortmaker SL. (2008) Increasing caloric contribution from sugar-sweetened beverages and 100% fruit juices among US children and adolescents, 1988-2004. *Pediatrics*. 121:e1604-14.
- ¹¹² Ludwig D.S., Peterson K.E., (2001) "Relation between consumption of sugar-sweetened drinks in childhood obesity: a prospective observational analysis". *Lancet* 357:505-508.
- ¹¹³ Danyliw A.D., Vatanparast H., Nikpartow N. and Whiting S.J. (2012) Beverage patterns among Canadian children and relationship to overweight and obesity. *Appl. Physiol. Nutr. Metab.* 37:900-906
- ¹¹⁴ Harnack L., Stang J., Story M. (1999) " Soft drink consumption among US children and adolescents: nutritional consequences". *J Am Diet Assoc.* 99(4):436-441.
- ¹¹⁵ Brownell, K., Schwartz, M., and Vartanian, L. (2007). "Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis." *American Journal of Public Health*. American Public Health Association. Retrieved from

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1829363/>

- ¹¹⁶ Bjelland and Brantsaeter et al (2013).
- ¹¹⁷ Bjelland, Brantsaeter, Haugen et al. (2013).
- ¹¹⁸ Fryar C. and Ervin R. (2013). *Caloric intake from fast food among adults: United States, 2007-2010*. NCHS data brief, no 114. National Center for Health Statistics. Retrieved from <http://www.cdc.gov/nchs/data/databriefs/db114.htm>
- ¹¹⁹ Fryar and Ervin. (2013).
- ¹²⁰ Fryar and Ervin. (2013).
- ¹²¹ Anderson B., Rafferty A., Lyon-Callo S., Fussman C., and Imes G. (2011). "Fast-food consumption and obesity among Michigan adults." *Preventing Chronic Disease*. Centers for Disease Control and Prevention. Retrieved from http://www.cdc.gov/pcd/issues/2011/jul/10_0186.htm
- ¹²² Fraser LK., Clarke, G.P., Cade J.E., and Edwards K.L. (2012) Fast food and Obesity: A spatial analysis in a large United Kingdom population of Children Aged 13-15. *American Journal of Preventive Medicine* 42(5):77-8
- ¹²³ Mellor, J.M., Dolan C.B., and Rapoport R.B. (2011) Child body mass index, obesity, and proximity to fast food restaurants. *International Journal of Pediatric Obesity* 6:60-68
- ¹²⁴ Pot J.M., Duffey K.J., and Popkin B.M. (2014) "The association of fast food consumption with poor dietary outcomes and obesity among children: is it fast food or the remainder of the diet". *The American Journal of Clinical Nutrition* 99(1):162-171.
- ¹²⁵ Fryar and Ervin. (2013).
- ¹²⁶ Helping Teens Stop Smoking. (2007). *Harvard Mental Health Letter*, 24(6).
- ¹²⁷ Helping Teens Stop Smoking. (2007).
- ¹²⁸ Helping Teens Stop Smoking. (2007).
- ¹²⁹ Helping Teens Stop Smoking. (2007).
- ¹³⁰ Helping Teens Stop Smoking. (2007).
- ¹³¹ Helping Teens Stop Smoking. (2007).
- ¹³² Sifferlin, A. (2014). Teen Smoking Is Way Down. But What About E-cigs? *Time.Com*. Retrieved from <http://time.com/2864214/teen-smoking-is-way-down-but-what-about-e-cigs/>
- ¹³³ O'Malley, P. M., Johnson, L. D., and Bachman, J. G. (1998). Alcohol Use Among Adolescents. *Monitoring the Future*. 22(2) Retrieved from <http://monitoringthefuture.org/pubs/text/pomldj98.pdf>
- ¹³⁴ Bogenschneider, K., Ming-Yeh, W., Raffaelli, M., and Tsay, J.C. (1998, May). "Other Teens Drink, but Not My Kid": Does Parental Awareness of Adolescent Alcohol Use Protect Adolescents from Risky Consequences? *Journal of Marriage and Family* 60(2). Retrieved from <http://www.istor.org/discover/10.2307/353854?uid=3739560&uid=2479493387&uid=2134&uid=2&uid=70&uid=3&uid=247949337&uid=3739256&uid=60&sid=21105443626433>
- ¹³⁵ Bogenschneider, Ming-Yeh, Raffaelli, and Tsay. (1998).
- ¹³⁶ Miller, J. W., Naimi, T. S., Brewer, R. D., and Jones, S. E. (2007, January). Binge Drinking and Associated Health Risk Behaviors Among High School Students. *Pediatrics*. 119(1). Retrieved from <http://pediatrics.aappublications.org/content/119/1/76.short>
- ¹³⁷ Bogenschneider, Ming-Yeh, Raffaelli, and Tsay. (1998).
- ¹³⁸ Miller, Naimi, Brewer, and Jones. (2007).
- ¹³⁹ Miller, Naimi, Brewer, and Jones. (2007).
- ¹⁴⁰ Miller, Naimi, Brewer, and Jones. (2007).

-
- ¹⁴¹ U.S. Department of Health and Human Services. *Physical Activity Guidelines Advisory Committee report*. Washington, DC: U.S. Department of Health and Human Services, 2008.
- ¹⁴² Sallis, J. F., Prochaska, J. J., and Taylor, W. C. (1999). A Review of Correlates of Physical Activity of Child and Adolescents. *Official Journal of the American College of Sports Medicine*.
- ¹⁴³ U.S. Department of Health and Human Services. (2008).
- ¹⁴⁴ Sallis, Prochaska, and Taylor. (1999).
- ¹⁴⁵ CDC. Youth Risk Behavior Surveillance—United States, 2013. *MMWR*
- ¹⁴⁶ U.S. Department of Health and Human Services (2008).
- ¹⁴⁷ Healthy People. (Accessed 2014). "General Health Status." *Foundation Health Measures*. Retrieved from <http://www.healthypeople.gov/2020/about/genhealthabout.aspx#>
- ¹⁴⁸ Kennedy, B. (1998). "Income Distribution, Socioeconomic Status, and Self rated Health in the United States: multilevel analysis." *British Medical Journal*. Retrieved from <http://www.bmj.com/content/317/7163/917>
- ¹⁴⁹ Aber J. L., Bennett, N. G., Conley, D. C., Li, J. (1997). The Effects of Poverty on Child Health and Development. *Annual Review Public Health*. 18:463-83 Retrieved from http://www.researchgate.net/publication/14074184_Aber_JL_Bennet_NG_Jiali_Li_et_al._The_effects_of_poverty_on_child_health_and_development
- ¹⁵⁰ Aber, Bennett, Conley, Li. (1997).
- ¹⁵¹ Hillemeier, M. M., Lanza, S. T., Landale, N. S., and Oropesa, R. S. (2013). Measuring Early Childhood Health and Health Disparities: A New Approach. *Maternal & Child Health Journal*, 17(10). Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3615056/>
- ¹⁵² United States Environmental Protection Agency. (2013, March). Asthma Facts. Retrieved from http://www.epa.gov/asthma/pdfs/asthma_fact_sheet_en.pdf
- ¹⁵³ National Heart, Lung, and Blood Institute. (2012, June). What is Asthma? Retrieved from <http://www.nhlbi.nih.gov/health/health-topics/topics/asthma/>
- ¹⁵⁴ Centers for Disease Control and Prevention. (2009, April). Asthma: Basic Information. Retrieved from <http://www.cdc.gov/asthma/faqs.htm>
- ¹⁵⁵ Bateman, E.D., Hurd, S.S., Barnes, P.J., et al. (2008). Global Strategy for Asthma Management and Prevention: GINA Executive Summary. *European Respiratory Journal*, 31: 143-178. Retrieved from <http://erj.ersjournals.com/content/31/1/143.full.pdf+html>
- ¹⁵⁶ Meng ,Y., Babey, S. H., and Wolstein, J. (2012). Asthma-Related School Absenteeism and School Concentration of Low-Income Students in California. *Preventing Chronic Disease*, 12(9) Retrieved from http://www.cdc.gov/pcd/issues/2012/11_0312.htm
- ¹⁵⁷ Meng, Babey, and Wolstein. (2012).
- ¹⁵⁸ Meng, Babey, and Wolstein. (2012).
- ¹⁵⁹ Bloom, B., Jones, Lindsey I., and Freeman, G. (2013). Summary Health Statistics for U.S. Children: National Health Interview Survey, 2012. National Center for Health Statistics. *Vital Health Stat*, 10(258). Retrieved from http://www.cdc.gov/nchs/data/series/sr_10/sr10_258.pdf
- ¹⁶⁰ Bloom, Jones, Lindsey, and Freeman. (2013).
- ¹⁶¹ Morais, C. (2012). Yes, These Teens are Overweight Now Please Get Over it. *Scholastic Choices*, 28(1) Retrieved from http://go.galegroup.com/ps/i.do?id=GALE%7CA310256040&v=2.1&u=lom_accessmich&it=r&p=GRGM&sw=w&asid=6c31de524be0304e656642e5a4df6305
- ¹⁶² Morais. (2012).
- ¹⁶³ Morais. (2012).

-
- ¹⁶⁴ Daniels S, Arnett D, Eckel R.. Overweight in children and adolescents: pathophysiology, consequences, prevention, and treatment. *Circulation* 2005
- ¹⁶⁵ Institute of Medicine. *Preventing Childhood Obesity: Health in the Balance*. Washington, DC: The National Academies Press; 2004.
- ¹⁶⁶ Lazarus, P. J. and Sulkowski, M. L. (n.d). Research Based Practice The Emotional Well-Being of Our Nation’s Youth and the Promise of Social-Emotional Learning. *Communiqué* 40(2) Retrieved from <http://www.nasponline.org/publications/cq/40/2/emotional-well-being.aspx>
- ¹⁶⁷ Lazarus and Sulkowski. (n.d.)
- ¹⁶⁸ Lazarus and Sulkowski. (n.d.)
- ¹⁶⁹ Lazarus and Sulkowski. (n.d.)
- ¹⁷⁰ Parachin, V. M. (2014). Teen Suicide. *Priest*, 70(6). Retrieved from <https://www.osv.com/OSVNewsweekly/ByIssue/Article/TabId/735/ArtMID/13636/ArticleID/14591/Teen-Suicide.aspx>
- ¹⁷¹ Parachin. (2014).
- ¹⁷² Parachin. (2014).
- ¹⁷³ Parachin. (2014).
- ¹⁷⁴ King, K. A., Strunk, C. M., and Sorter, M. T. (2011). Preliminary Effectiveness of Surviving the Teens Suicide Prevention and Depression Awareness Program on Adolescents’ Suicidality and Self-Efficacy in Performing Help-Seeking Behaviors. *Journal of School Health*, 81(9).
- ¹⁷⁵ Alter, C. Bullied Teens Twice as Likely to Consider Suicide. (2014). *Time.com* Retrieved from <http://time.com/19873/bullied-teens-twice-as-likely-to-consider-suicide/>
- ¹⁷⁶ University of Nebraska-Lincoln. (2007, August). Youth Volunteerism. Retrieved from <http://www.ianrpubs.unl.edu/epublic/live/g1750/build/>
- ¹⁷⁷ University of Nebraska-Lincoln. (2007).
- ¹⁷⁸ Hamp, E. (2014). Volunteering: Giving Back has Many Benefits. *Parks & Recreation*, 49(10). Retrieved from <http://www.parksandrecreation.org/2014/October/Volunteering-Giving-Back-has-Many-Benefits/>
- ¹⁷⁹ Hamp. (2014).
- ¹⁸⁰ Lantham, M. (n.d.).
- ¹⁸¹ University of Nebraska-Lincoln. (2007).
- ¹⁸² University of Nebraska-Lincoln. (2007).
- ¹⁸³ University of Nebraska-Lincoln. (2007).
- ¹⁸⁴ University of Nebraska-Lincoln. (2007).
- ¹⁸⁵ Eccles, J.S., Barber, B. L., Stone, M., and Hunt. J. (2003). Extracurricular Activities and Adolescent Development. *Journal of Social Issues*, 59(4). Retrieved from <http://www.rcgd.isr.umich.edu/garp/articles/eccles03g.pdf>
- ¹⁸⁶ Mahoney, J. L. and Caaims, R. B. (1997, March). Do Extracurricular Activities Protect Against Early School Dropout? *Developmental Psychology* 33(2) Retrieved from <http://psycnet.apa.org/journals/dev/33/2/241/>
- ¹⁸⁷ Eccles, Barber, Stone, and Hunt. (2003).
- ¹⁸⁸ Eccles, Barber, Stone, and Hunt. (2003).
- ¹⁸⁹ Eccles, Barber, Stone, and Hunt. (2003).
- ¹⁹⁰ Schimel, K. (2014, March). As Students Move in and Out, Districts and Schools Try to Catch Up. Retrieved from <http://co.chalkbeat.org/2014/03/16/as-students-move-in-and-out-districts-and-schools-try-to-catch-up/#.VejuGdRHcs>

-
- ¹⁹¹ Schimel. (2014).
- ¹⁹² Schimel. (2014).
- ¹⁹³ Schimel. (2014).
- ¹⁹⁴ Schimel. (2014).
- ¹⁹⁵ National Center for Education Statistics (NCES). (2014). Indicators of School Crime and Safety: 2013 Retrieved from http://nces.ed.gov/programs/crimeindicators/crimeindicators2013/ind_17.asp
- ¹⁹⁶ NCES. (2014).
- ¹⁹⁷ NCES. (2014).
- ¹⁹⁸ NCES. (2014).
- ¹⁹⁹ Cohn, A. and Canter, A. (2003). Bullying: Facts for Schools and Parents. Retrieved from http://www.nasponline.org/resources/factsheets/bullying_fs.aspx
- ²⁰⁰ DeVoe, Peter, Kaufman, Miller, Noonan, Snyder, and Baum. (2004).
- ²⁰¹ Cohn and Canter. (2003).
- ²⁰² Nansel, T. R., Craig, W., Overpeck, M. D., Saluja, G. and Ruan, W. J. (2004). Cross-National Consistency in the Relationship between Bullying Behaviors and Psychosocial Adjustment. *Archives of Pediatrics and Adolescent Medicine*.
- ²⁰³ Nansel, T. R., Overpeck, M. D., Haynie, D. L., Ruan, W. J., and Scheidt, P. C. (2003). Relationships between Bullying and Violence among U.S. Youth. *Archives of Pediatrics and Adolescent Medicine*.
- ²⁰⁴ Viadero, D. (2005). Most Teen Students Bullied, Survey Finds. *Education Week*. 25(8). Retrieved from <http://www.edweek.org/ew/articles/2005/10/19/08report-1.h25.html>
- ²⁰⁵ Flannery, D. J., Williams, L. L., and Vazsonyi, A. T. (1999. April). Who Are They With and What Are They Doing? Delinquent Behavior, Substance Use, and Early Adolescents' After-School Time. *American Journal of Orthopsychiatry*. 69(2)
- ²⁰⁶ Richardson, J. L., Radziszewska, B., Dent, C. W., and Flay, B. R. (1993, July). Relationship Between After-School Care of Adolescents and Substance Use, Risk Taking, Depressed Mood, and Academic Achievement. *Pediatrics* 92(1). Retrieved from <http://pediatrics.aappublications.org/content/92/1/32.short>
- ²⁰⁷ Richardson, Radziszewska, Dent, and Flay. (1993).
- ²⁰⁸ Aizer, A. (2004, August). Home Alone: Supervision After School and Child Behavior. *Journal of Public Economics*. 88(9-10). Retrieved from <http://www.sciencedirect.com/science/article/pii/S0047272703000227>
- ²⁰⁹ Nolin, M. J., Davies, E., and Chandler, K. (2009, October). Student Victimization at School. *Journal of School Health*. 66(6) Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1746-1561.1996.tb08289.x/pdf>
- ²¹⁰ Nolin, Davies, and Chandler. (2003).
- ²¹¹ Nolin, Davies, and Chandler. (2003).
- ²¹² DeVoe, J.F., Peter, K., Kaufman, P., Miller, A., Noonan, M., Snyder, T.D., and Baum, K. (2004). *Indicators of School Crime and Safety: 2004* U.S. Departments of Education and Justice. Retrieved from <http://files.eric.ed.gov/fulltext/ED483086.pdf>
- ²¹³ DeVoe, Peter, Kaufman, Miller, Noonan, Snyder, and Baum. (2004).
- ²¹⁴ DeVoe, Peter, Kaufman, Miller, Noonan, Snyder, and Baum. (2004).
- ²¹⁵ DeVoe, Peter, Kaufman, Miller, Noonan, Snyder, and Baum. (2004).
- ²¹⁶ DeVoe, Peter, Kaufman, Miller, Noonan, Snyder, and Baum. (2004).

-
- ²¹⁷ Mesch, G. S. (2009). Parental Mediation, Online Activities, and Cyberbullying. *Cyberpsychology & Behavior*, 12(4) Retrieved from <http://soc.haifa.ac.il/~gustavo/manuscriptc&B.pdf>
- ²¹⁸ Mesch. (2009).
- ²¹⁹ Mesch. (2009).
- ²²⁰ Mesch. (2009).
- ²²¹ Alter. (2014).
- ²²² Bullied Teens Twice as Likely to Consider Suicide. (2014).
- ²²³ Bullied Teens Twice as Likely to Consider Suicide. (2014).
- ²²⁴ Williams, K. R. and Guerra, N. G. (2007, December). Prevalence and Predictors of Internet Bullying. *Journal of Adolescent Health* 44(5). Retrieved from <http://www.sciencedirect.com/science/article/pii/S1054139X0700362X>
- ²²⁵ Teachers as Role Models. (n.d.) Teach Make A Difference. Retrieved from <http://teach.com/what/teachers-change-lives/teachers-are-role-models>
- ²²⁶ Teachers as Role Models. (n.d.)
- ²²⁷ Csikszentmihali, M. and McCormack, J. (1986). The Influence of Teachers. *The Phi Delta Kappan*, 67(6).
- ²²⁸ Csikszentmihali and McCormack. (1986).
- ²²⁹ Csikszentmihali and McCormack. (1986).
- ²³⁰ Davis, H. A. (2003). Conceptualizing the Role and Influence of Student-Teacher Relationship on Children's Social and Cognitive Development. *Educational Psychologist*.
- ²³¹ Davis, H. (2011). Caring Teachers. Retrieved from <http://www.education.com/reference/article/caring-teachers/>
- ²³² Davis. (2011).
- ²³³ Davis. (2011).
- ²³⁴ Muller, C. (2001). The Role of Caring in the Teacher-Student Relationship for At-Risk Students. *Sociological Inquiry*, 71(2). Retrieved from http://www.utexas.edu/cola/orgs/etag/files/pdfs/articles/2001/Muller%202001_6.pdf
- ²³⁵ Davis. (2011).
- ²³⁶ Baker, M. L., Sigmon, J. N., and Nugent, M. E. (2001, September). Truancy Reduction: Keeping Students in School. Retrieved from <https://www.ncirs.gov/pdffiles1/ojdp/188947.pdf>
- ²³⁷ Hartneet, S. (2008). Does Peer Group Identity Influence Absenteeism in High School Students? *The High School Journal* 91(2). Retrieved from <http://muse.jhu.edu/journals/hsi/summary/v091/91.2hartnett.html>
- ²³⁸ Baker, Sigmon, and Nugent. (2001, September).
- ²³⁹ Baker, Sigmon, and Nugent. (2001, September).
- ²⁴⁰ Baker, Sigmon, and Nugent. (2001, September).
- ²⁴¹ Baker, Sigmon, and Nugent. (2001, September).
- ²⁴² Baker, Sigmon, and Nugent. (2001, September).
- ²⁴³ Cook-Sather, A. (2009). "I Am Not Afraid to Listen": Prospective Teachers Learning from Students. *Theory Into Practice*. Retrieved from http://repository.brynmawr.edu/cgi/viewcontent.cgi?article=1007&context=edu_pubs
- ²⁴⁴ Cook-Sather. (2009).

-
- ²⁴⁵ Cook-Sather. (2009).
- ²⁴⁶ Stipek, D. (2004). In Praise of Good Teachers. *San Francisco Chronicle*. Retrieved from <http://cepa.stanford.edu/content/praise-good-teachers>
- ²⁴⁷ Brophy, J. (1981). Teacher praise: A functional analysis. *Review of Educational Research*, 51, 5-32.
- ²⁴⁸ Hawkins, S. M., & Heflin, L. J. (2011). Increasing secondary teachers' behavior-specific praise using a video self-modeling and visual performance feedback intervention. *Journal of Positive Behavior Interventions*,13(2) 97–108.
- ²⁴⁹ Burnett, P. C. (2001). Elementary students' preferences for teacher praise. *Journal of Classroom Interaction*, 36(1), 16-23.
- ²⁵⁰ Cash, R. E. and Cowan, K. C. (2006, November). Mood Disorders: What Parents and Teachers Should Know. *NASP Communiqué* 35(3). Retrieved from <http://www.nasponline.org/publications/cq/cq353mooddisorders.aspx>
- ²⁵¹ Lehman, B. J. and Repetti, R. L. (2007, August). Bad Days Don't End When The School Bell Rings: The Lingering Effects of Negative School Events on Children's Mood, Self-Esteem, and Perceptions of Parent-Child Interaction. *Social Development* 16(3).
- ²⁵² Cash and Cowan. (2006).
- ²⁵³ Department of Agriculture (USDA). (2012). U.S. Household Food Security Survey Module: Six-Item Short Form. Economic Research Service http://www.ers.usda.gov/datafiles/Food_Security_in_the_United_States/Food_Security_Survey_Modules/short2012.pdf
- ²⁵⁴ Blumberg, S. Bialostosky, K. Hamilton, W. and Briefel, R. (1999.)“The Effectiveness of a Short Form of the Household Food Security Scale.” *American Journal of Public Health*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1508674/>