



**Children's Hospital of
Orange County:
2010 Needs Assessment
Report**



Children's Hospital of Orange County: 2010 Needs Assessment Report

Completed by the Orange County Health Needs Assessment

Table of Contents

I.	2010 Community Benefits Needs Assessment Methodology	1
II.	The Changing Face of Health Care in Orange County	2
III.	2010 Community Benefits Needs Assessment Summary of Highlights	4
IV.	2010 Community Benefits Key Informant Survey Summary: Children's Hospital of Orange County	8
V.	Description of the Children's Hospital of Orange County Service Area	11
	1. Child Population	14
	2. Race/Ethnicity	16
	3. Household Composition	17
	4. Languages Spoken at Home	18
	5. Citizenship Status	20
	6. Employment Status and Unemployment	21
	7. Median Family Income and Income Distribution	22
	8. Poverty	24
	9. Self-Sufficiency	25
VI.	Access to Health Care	26
	1. Rising Unemployment and the Loss of Health Care Coverage	26
	2. Trends in Health Care Coverage Status	27
	3. Types of Health Coverage	28
	4. Demographics and Health Care Coverage in the CHOC Service Area	29
	5. Barriers to Health Care Coverage (OCHNA 2007)	33
	6. Satisfaction with Child's Health Care Plan (OCHNA 2007)	34
	7. Scope of the Safety Net in the Service Area (0-18 Years)	35
VII.	Health Care Utilization	38
	1. Child (0-17) Utilization of Health Care Services: OCHNA 2007	38
	2. Barriers to Health Care Utilization	43
	3. Emergency Room Utilization	43
VIII.	Dental Health Access and Utilization	53
	1. Access to Dental Coverage for Children (0-17)	53
	2. Income and Dental Coverage	54
	3. Dental Health Utilization and Prevention Practices	54
	4. Orange County Healthy Smile Survey (2005)	55
	5. Impact of Unmet Dental Health Needs	56

IX.	Mental Health Access and Utilization	57
	1. Access to Mental/Behavioral Health Coverage	57
	2. Demographics of Children without Mental/Behavioral Health Coverage	58
	3. Mental Health of Children (6-17)	60
	4. Mental Health Services Clients-County of Orange, Behavioral Health Services	62
	5. Substance Abuse Services	64
X.	Obesity, Nutrition, and Exercise	65
	1. Scope of the Obesity Crisis	65
	2. Demographics of the Overweight and Obese	67
	3. Weight Status of Low-Income Children	68
	4. Factors Contributing to Obesity	69
XI.	Immunizations, Major Diseases, Illness	74
	1. Immunizations	74
	2. Priority Diseases	79
	3. 2006-2008 Orange County Causes of Hospitalization: Orange County Health Care Agency	81
	4. Child Mortality	84
XII.	Maternal and Infant Health	90
	1. Crude Birth Rates of the Service Area	90
	2. Prenatal Care Indicators	92
	3. Maternal and Birth Outcomes	95
	4. Breastfeeding	99
XIII.	Child Safety and Injuries	104
	1. Child Care	104
	2. Car Safety Seats	104
	3. Proximity to Firearms	104
	4. Pool Safety	105
	5. Fatal and Nonfatal Childhood Injuries	107
XIV.	School Readiness and Achievements	109
	1. Shared Reading Time	109
	2. School Performance	110
	3. College Prep	116
	4. Graduation	121
	5. Post-Secondary Opportunities	125
XV.	Appendix	126

2010 Community Benefits Needs Assessment Methodology

Summary of Assessment Process

The Orange County Health Needs Assessment (OCHNA) is a community-based, not-for-profit collaborative that was created and designed to meet the requirements of SB697 for all not-for-profit hospitals in Orange County; the collaborative is jointly funded by the Health Care Agency of Orange County, the Children and Families Commission, CalOptima, and the nine Orange County not-for-profit HASC member hospitals.

Due to the economic downturn, county hospitals and governmental partners were unable to provide sufficient funding to conduct the random digit dial telephone survey of 5,000 households for the Orange County 2010 health needs assessment. An alternative needs assessment plan was developed that incorporated a mix mode approach to data collection that included a trend analysis of four previous OCHNA health needs surveys (1998, 2001, 2004, and 2007), as well as additional primary data from the Census Bureau's American Community Survey and the California Health Interview Survey. Population estimates for OCHNA 1998 and 2001 were updated with the latest estimates from the State of California Department of Finance, so the estimates provided for the county will differ from county estimates provided in previous reports released by OCHNA. In addition, OCHNA incorporated objective/secondary data sources, demographics/census data, and a key informant survey that OCHNA administered online, to be used as the source of qualitative data.

Objective/secondary data came from numerous sources (all cited within the report), including Dept. of Finance, 2009 Census estimates by Nielsen Claritas, Orange County Health Care Agency, and Healthy People 2020 (used as benchmarks). Qualitative data was obtained through a key informant survey of community based organizations, foundations, health advocates, community clinics, local political/policy leaders, public health organizations, and other hospitals.

In prior assessment years, hospitals have had to analyze their own raw data, and results have been mixed, depending on staff resources. New for the 2010 assessment year, OCHNA provided an objective analysis—including all tables, graphs, and text—of all data for each individual hospital, highlighting health priorities. The goal was to provide statistically reliable data analyses, which would be broad in scope, but allow for a more in-depth evaluation of specific health indicators at the hospital service area, to better meet the policy and program planning needs of each individual hospital.

The following priority health topics are highlighted for the service areas of Children's Hospital of Orange County (CHOC), which is at the countywide level, and CHOC at Mission:

- Health care access and coverage;
- Health care utilization;
- Dental health;
- Mental/behavioral health;
- Maternal and infant health;
- Nutrition, obesity, and exercise; and
- Child health and academic achievement.



The Changing Face of Health Care in Orange County

Economic Crisis Hits Home

Nationwide, economic circumstances have resulted in what is believed to be the harshest financial crisis since the Great Depression. Despite its reputation as an affluent community, Orange County has not been spared. Unemployment rates were estimated to be almost 10% in 2010, but many cities within the county had much higher rates: Santa Ana, a densely populated city, had an unemployment rate of 14%, Buena Park and Fullerton also had higher unemployment rates of 11% and 10%, respectively, more than doubling from 2007. Growing unemployment is accompanied with an increase in those living in poverty: the 2009 countywide estimate was 11%, but many cities had rates as high as 20%. In Anaheim over 24% of children lived at or below the Federal Poverty Level; both Buena Park and Fullerton had over 12.5% of their children living in poverty. Many Orange County residents have slid down the economic ladder, having lost one or more sources of family income and with it, their health care coverage.

Access to Health Care: Decade of Gains Lost in the Recent Economic Recession

From 1998 through 2007 the county demonstrated measurable improvements (reductions) in the rate of adults and children without health care coverage, dropping from a high of just under 15% to a low of 9% for adults and a high of less than 11% to a low of less than 4% for children. With the economic downturn continuing into 2010, those gains of the last 10 years have been completely erased.

Ethnic/minority populations throughout the county have experienced the largest losses of health care coverage, with 15% of all Asians and almost one in three Hispanic/Latinos (32%) having no health care coverage (just over 43% of Latino adults are without coverage). Hispanic children are over four times (16%) more likely than white children (3%) to be without health care coverage. Overall the uninsured population in OC has more than doubled from 2007 to 2009 for both adults (from 9% to 20%) and children (from under 4% to over 10%). In fact, the 2009 lack of health coverage estimates for children and adults are higher than estimates collected in the OCHNA 1998 survey.

Increased Need and the Reality of Fewer Services and Higher Premiums

For the increasing number of families who have lost their jobs, and with them, their health care and prescription coverage, access to preventative care and disease management has been lost as well. This may lead many to put off their needed care until it becomes a trip to the emergency room. In addition, safety net programs have either increased their premiums, reduced covered services, or both.

Effective 11/1/2010, **CaliforniaKids**, a program that offers access to primary and preventive health care services for children who do not qualify for state-sponsored programs due to their immigration status, has increased their premiums to \$75 per member, per month for all new enrollments; current members will also see the same increase effective 01/01/2011 and vision coverage will no longer be available. CaliforniaKids currently serves 2,358 children in the county and it is a concern that many families will not be able to afford to keep the insurance due to the increases, for that reason a transition plan has been developed in collaboration with the Coalition of Orange County Community Health Centers for those families.

The **Healthy Families** Program also increased their monthly premiums (for Category B and C) and co-payments as of November 1, 2009. Category B now ranges from \$13 to \$48 per family and Category C ranges from \$21 to \$72 per family. On the upside, the expansion and reauthorization of the State Children's Health Insurance Program (SCHIP), signed into law on February 4, 2009, will provide for about two-thirds of the funding needed for Healthy Families over the next four years.

In 2009 the California State Budget made reductions in payments to public safety net hospitals at the same time an increase in utilization of those services occurred. OC has experienced a jump in **Medi-Cal** enrollment of 4.5% from July 2007 to July 2008; from July 2008 to July 2009 there was an additional increase of 9.1%. At the same time the following Medi-Cal benefits were eliminated on July 1, 2009:

- Adult preventive dental services
- Audiology and speech therapy services
- Chiropractic services
- Acupuncture
- Optometric and optician services
- Psychological services
- Podiatric services

Most preventative dental services to adults provided through the **Denti-Cal** program were eliminated as of July 1, 2009 due to the state budget crisis, including cleanings, exams, fillings, gum treatments, crowns, root canals and dentures. Only limited dental services for the "relief of pain and infection," such as a tooth removal, are still available. While the federal and state government views these services "optional", the medical and dental communities view preventative dental care as both necessary and primary to the overall health of the patient.

The reduction of services, the increase in costs, and the growing number of uncovered families and children have all combined to create nearly insurmountable barriers to accessing needed preventative care, significantly limiting a patient's ability to manage existing chronic diseases. Having access to preventive health services is far more effective and cost efficient over time, and leads to better overall health for the patient, increasing productivity and quality of life.

Health Care Reform: Redefining Access and Creating New Challenges

With the passage of [The Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010](#) come a number of changes that will impact and redefine access to health care. It requires health plans and insurers to provide access to insurance to individuals, regardless of their health status, age or occupation. Those with preexisting health conditions can no longer be denied coverage, and dependent adult children up to age 26 can now be covered under their parents' health coverage plan. Just a few of the additional changes that will be implemented by 2014 include:

- An expansion of the **Medicaid** (Medi-Cal in California) program to all citizens and qualifying immigrants who earn up to 133 percent of the [federal poverty level](#); **MSI** patients will be moved into the Medi-Cal program (as of August 2010 there were 34,508 MSI patients in Orange County).
- A requirement that businesses with more than fifty employees provide affordable coverage or pay a fee. (Note: a majority of small business in Orange County have less than 50 employees).
- A requirement that individuals and families purchase insurance if it is affordable for them, or pay a penalty.
- New taxes on certain health sector business, high-income families, and high-cost health plans.

As health care reforms become implemented, more and more people will be utilizing health services than even before. Even with expanded access, it is estimated that there will still be approximately 220,000 people without coverage. The challenge to the health care leaders and providers is to redesign a health care delivery system that offers quality and timely services, even as there is a decline in primary care as a specialty of choice among new physicians, a shortage of pediatric dentists, and an ongoing shortage of available nurses. The roles of hospitals will be even more important to the communities they serve and the clinics they support in addressing the increased demand for services and ensuring access to health care.

2010 Community Benefits Needs Assessment Summary of Highlights

Access to Health Care: Decade of Gains Lost

From 1998 through 2007 the countywide Children's Hospital of Orange County (CHOC) service area demonstrated measurable improvements (reductions) in the rate of children without health coverage, dropping from about **11%** in 1998 to less than **4%** in 2007. However, the economic downturn that began in late 2007 appeared to **erase** the gains made over the previous decade. Overall the uncovered rate in the countywide service area has more than doubled from 2007 to 2009 for both adults (increasing from **9%** to **20%**) and children (increasing from under **4%** to just over **10%**). For adults, the 2009 rate is higher than the 1998 rate estimated by the OCHNA survey.

Ethnic/minority populations throughout the service area continue to be disproportionately uninsured; Hispanic children are over **four times (16%)** more likely than white children (**3%**) to be without health care coverage. Rates are notably high in cities that have higher proportions of low-income and minority populations and have seen their unemployment rates more than **double** since 2007.

- **Santa Ana:** In 2009 **20%** of children (0-17) were uncovered; rate of unemployment rose from **6%** in 2007 to **15%** in 2010.
- **Garden Grove:** In 2009 **13%** of children (0-17) were uncovered; rate of unemployment rose from **5%** in 2007 to **12%** in 2010.
- **Orange:** In 2009 **12%** of children (0-17) were uncovered; rate of unemployment rose from **4%** in 2007 to **9%** in 2010.
- **Anaheim:** In 2009 **12%** of children (0-17) were uncovered; rate of unemployment rose from **5%** in 2007 to **12%** in 2010.
- **Irvine:** In 2009 **1%** of children (0-17) were uncovered; rate of unemployment rose from **3%** in 2007 to **7%** in 2010.

The sustained nature of the economic downturn has led to an increased reliance on public safety net programs in Orange County. Since July of 2007, before the beginning of the recession, there has been an overall increase in the numbers of beneficiaries in the Medi-Cal program. The number of beneficiaries in July 2007 was **184,638**. This number increased by **20.1%** in July 2010 to **221,695** beneficiaries, coinciding with the economic downturn and an increase in young Medi-Cal patients receiving services at the hospital. Healthy Families enrollments also increased from July 2007 to July 2010 by **8.4%** (from 75,639 to 81,967).

Pediatric Health Care Utilization

Regular health care is vital in childhood. Especially in their early years, children undergo rapid growth, which is why it is important to maintain a relationship with a health care provider. In a well-child visit, a health practitioner provides preventive care by examining a child physically, behaviorally, developmentally, and emotionally. Such appointments enable the detection of potential developmental delays or disabilities, which can lead to treatment or management that reduces the future impact on both children and families. The following highlights are taken from the OCHNA 2007 survey, encompassing the countywide service area.

- **80%** of parents utilized one place as their source of care for their child, **16%** reported two places, **3%** reported three places, and a few (**1%**) reported more than four places for their child's source of care.
- The top three reasons the **20%** of parents gave for not having a usual source of care for their child were that the parent likes different places for child's health care needs (**21%**), there were a lack of evening or weekend services (**19%**), and finally the child seldom or never gets sick (**17%**).
- **70%** of children visited a general practitioner on their last appointment, **16%** visited a specialist, **8%** visited a pediatrician, **4%** used a nurse practitioner, and **3%** visited a physician's assistant.

- **90%** of children countywide had visited their doctor within the past year. The majority of those visits (**61%**) were for routine care. Some of the **22%** of visits for acute illness may have been prevented had the child received a flu vaccination. **5%** of those visits were for chronic disease treatment, **5%** were for treatment of an injury, and **2%** were for immunizations.

Some common barriers to health care utilization include: cost, health care coverage, transportation, personal and community beliefs, language, and parental unawareness of the importance of routine checkups. Cost and coverage status remain a barrier to obtaining needed services, possibly becoming more pronounced due to current economic conditions.

- **10%** of countywide children had not visited a doctor in the previous year since the survey for a routine exam. Most parents cited this was because their child was not ill (**80%**), and **5%** of parents cited cost.
- **4%** of children did not get needed treatment or received delayed treatment because of cost issues.
- Another barrier to the utilization of health care services is their availability when needed. **33%** of parents indicated their child's primary place for care is not open evenings or on weekends.

20% of countywide service area children visited an ER in 2007 according to the OCHNA survey. **3%** of all service area children visited at least twice. Almost **one in four** children utilized the services of an ER because their usual place of care was not open, which demonstrates the need for extended hours at primary care locations.

- The top five reasons why treatment was sought at the ER were injury (**27%**), fever (**9%**), flu (**7%**), laceration or wound (**7%**), and infection (**6%**).
- The survey determined that barely **1%** of children in the CHOC service area utilized the ER for routine health care.

Childhood Nutrition, Physical Activity, and Body Weight

Any effort to increase the quality of life and health of patients over time must consider increasing healthy eating, physical activity and maintaining a healthy weight a priority. Childhood experiences are imprinted early and become a life-long pattern of healthy or unhealthy behavior. Teaching children how to eat, play, and take care of themselves will provide a life-time of health.

- **Almost 25%** of Orange County children between 6 to 17 years of age in the countywide service area ate fast food at least 3 times in the previous week, with **16%** eating fast food between 5 and 7 times in the previous week (OCHNA 2007).
- **Over 23%** of Orange County children 6 to 17 years of age spent 3 or more hours watching TV or playing video games, and **12%** spent 3 or more hours using the computer or surfing the Internet on a typical day (OCHNA 2007).
- In the 2008-09 school year among all countywide service area public school districts, only **35%** of 5th graders, **44%** of 7th graders, and **45%** of 9th graders met all of the six fitness standards (CDE).

The percentage of Orange County children who were either *at risk of overweight* (between 85th to less than 95th percentiles) or *overweight* (95th percentile or more) in 2007 was **31%**. There are significant disparities within gender, income and race, with boys being almost **twice** as likely as girls to be at an unhealthy weight. In addition Hispanic children were more likely than non-Hispanic white children to be overweight, as well as those children living in households with annual incomes of \$25,000 or less.

- **24%** of girls (2-17) were *at risk for being overweight /overweight* compared to **38%** of boys.
- **36%** of Hispanic children (2-17) were *at risk for being overweight/overweight* compared to **26%** on non-Hispanic White children. **36%** of Vietnamese children were *overweight/at risk of overweight*, a higher percentage than non-Vietnamese Asian children, with **23%** that were *overweight /at risk*.
- **56%** of children living in households with an annual income of less than \$25,000 were estimated to *at risk for being overweight/overweight* compared to only **29%** of children in households making \$75,000 or more.

Maternal and Infant Health

There were a reported **40,431** live births in all of Orange County during 2009. From 2000 to 2009, the number of live births and the crude birth rate declined from **16.4 per 1,000** total Orange County population in 2000 (46,980 live births) to **12.6 per 1,000** in 2009.

- The cities of **Anaheim, Santa Ana, Irvine, Garden Grove, and Orange** accounted for almost **half** of all births in the entire CHOC service area in 2009, with **20,194** live births.

Teen moms face a higher risk of medical complications during pregnancy because they may fail to receive timely and proper prenatal care. Countywide, almost **7%** or 2,764 live births in 2009 were by mothers under 20 years.

- **56%** or 19 live births by mothers under 15 years of age and **26%** or 720 live births by mothers between 15 and 19 years had late or no prenatal care. The overall rate of late or no prenatal care in 2009 was **11%**.
- Over **7%** or 205 live births by a mother under 20 years of age had low birth weights. The overall rate of low birth weight among 2009 live births was almost **7%**.

The older a woman is during pregnancy, there is a higher risk for pregnancy complications. In the countywide CHOC service area, **4%** or 1,780 live births in 2009 were by mothers 40+ years of age.

- **10%** or 182 live births by a mother 40+ years had low birth weights and **9%** or 166 live births by mothers 40+ years had late or no prenatal care.

There are race/ethnic variations in the birth rates and in several birth and maternal health indicators. The crude birth rate varied within the county's main race/ethnic groups.

- For whites the rate was **8.5 per 1,000** total white population, while for Hispanic/Latinos the rate was **18.0 per 1,000** total Hispanic/Latino population.
- **14%** of Hispanic/Latino mothers received late or no prenatal care, compared to **8%** of white mothers.
- **8%** of Asian or PI live births had low birth weights, while **7%** of white live births and **6%** of Hispanic/Latino live births had low birth weights.

The 2007 Substance Exposed Babies in Orange County study assessed the prevalence of babies exposed to ATOD prior to birth. Nearly 2,600 pregnant women participated in the anonymous 2007 assessment. The countywide prevalence of ATOD use during pregnancy was **15.1%**. A higher percentage of pregnant women in West or South Orange County used substances during pregnancy, compared to the percent of pregnant women living in Central or North Orange County.

In addition to low birth weights, other negative outcomes of pregnancy include premature birth, maternal complications, and even infant death.

- **9%** of Orange County live births in 2008 were born premature.
- The OCHNA 2004 survey determined the percent of mothers with children between 0 to 5 years of age who experienced complications during pregnancy. **25%** of mothers experienced complications during pregnancy.
- Almost **34%** of all live births between 2006 and 2008 in Orange County were delivered by C-sections.
- In 2008 the number of infant deaths in the CHOC countywide service area was **202**—the infant mortality rate was **4.8 per 1,000** live births.

Priority Childhood Diseases

While the vast majority of young children are in good health, it is important that parents continue to assure their child's health by following professional recommendations and good health habits to avoid negative health outcomes or to detect problems in a timely manner and provide disease management. These precaution actions will allow a child to grow up to become a healthy, productive and happy individual.

Asthma

Asthma is a leading chronic illness in children. The best preventative measures against asthma are creating a smoke-free environment, removing indoor dirt and dust, avoiding air pollution, and treating mild asthma symptoms before they turn severe. In the countywide CHOC service area, over **9%** of children ages 0-17 had asthma in 2007.

- **44%** of children lived in a household with an annual household income below \$75,000, although the OCHNA 2007 survey showed no relationship between income level and asthma prevalence.
- Of the children and adolescents with asthma, **46%** were Hispanic/Latino, while **31%** were white.

Diabetes

That a large proportion of Orange County children were estimated to be overweight is worrisome to public health leaders because of the serious consequences on health and well-being later in life. Since diabetes is rare among children it is difficult to obtain an accurate estimate of those suffering from the disease with a telephone survey, which assesses only a sample of the total county population. The **OCHNA 2007** survey estimated that **0.2%** (1,996) of children and adolescents in Orange County may have diabetes (type 1 or 2). Children who have developed diabetes face an increased risk for diabetes-associated complications, e.g., renal failure and amputations, because they have had the disease for a longer time than those developing the condition as adults.

Influenza

According to the [CDC](#), influenza is more dangerous than the common cold to children. Many children under 5 years of age need medical care from complications; children under 2 years old are especially vulnerable to severe complications, as are children with chronic health problems, such as asthma or diabetes. The CDC recommends that all children from 6 months to 19 years get a seasonal flu vaccine. According to 2007 CHIS, an estimated **37%** of Orange County children 0-17 years received a flu vaccine.

Childhood Mortality

The child and youth death rates are the most severe measure of ill health in children. There were **466** deaths in 2008 of individuals younger than 25 years, accounting for almost **3%** of total deaths (out of **17,162**) in Orange County.

- Infants accounted for more deaths than other child or youth age groups.
- The age-specific death rate for infants less than 1 year was **444.2** per 100,000 infants. For toddlers 1-4 years, the age-specific death rate was **16.9** per 100,000 toddlers. For children 5-14 years, the age-specific death rate was **10.8** per 100,000 children. For youth 15-24 years, the age-specific death rate was **41.7** per 100,000 youth.
- The leading cause of death for infants was from conditions that arose during the perinatal period; the leading cause of death for children 1-4 years and youth 15-24 years was from an accident; and for youth 15-24 years, over **one in three** deaths were due to external causes.

2010 Community Benefits Key Informant Survey Summary: Children's Hospital of Orange County

The 2010 Community Benefits Key Informant Survey, which was conducted in September 2010, targeted local health care leaders selected by the OCHNA Steering Committee to determine community opinions on the health needs in Orange County, as well as the barriers faced by patients in accessing health care. **144** out of 474 invited individuals completed the online survey, for a **31%** response rate. Key informants also answered questions about challenges in the county's health care system that have limited the scope of health care services, as well as about the forms and quality of collaborative relationships between their organizations, service area hospitals, and other groups. There was broad representation of the health care sector, with particular representation from Community Based Organizations (CBOs).

The key organization groups used for analysis were Health Provider CBOs (21 key informants), County or City Governments (14), Hospitals (13), Community Clinics or FQHCs (11), and Health Advocacy or Education Organizations (8). The majority of key informants (**68%** or **105**) were Executives (such as CEOs, Directors, VPs), or Managers (such as Program Coordinators, Supervisors). The sample also included health care providers, educators, and researchers. Over **80%** of key informants belonged to organizations that provided direct services, either to the entire county or to specific populations (e.g. seniors, Asian and Pacific Islanders, the low-income). Of the 144 key informants, **38 key informants** viewed Children's Hospital of Orange County as a current collaborative partner, in addition to other hospitals, clinics or organizations. Please note that percents have been rounded to the nearest whole number and that the number of key informant responses (n) may vary for each question.

Top 5 Health Priorities or Needs

- **55% (78 out of 144)** indicated a need for *adequate funding for health services from public programs* and **52% (75)** indicated a need to *increase funding to community clinics*.
- **39% (56)** indicated a need for *dental care for low-income/uninsured individuals*; **37% (54)** indicated a need for *housing support for low to moderate- income*, and **35% (51)** indicated a need for *comprehensive efforts to improve healthy eating and exercise*.

Top 5 Health Care Delivery System Challenges

Many of the challenges related to funding issues or insufficient primary care for underserved groups:

- **76% (108 out of 142)** indicated *government funding cuts* and **54% (76)** indicated *cuts from other sources or within organizations* as challenges.
- **37% (53)** of respondents believed that there are *insufficient FQHC's to care for underserved populations* or that the *referral system for health services is fragmented*.
- **35% (50)** of respondents indicated that there are *insufficient physicians available to care for low-income populations*; Community Clinics were the most likely to pick this option (**55%** or **6**).

Top 5 Service Gaps for Underserved Populations

- **58% (80 out of 139)** viewed gaps in *behavioral health services* (e.g., *outpatient services, services for children and families*) and **54.7% (76)** viewed gaps in *primary care services* for underserved populations.
- **46% (64)** viewed gaps in *adult dental care services* for underserved groups; *adult dental care* is a notable priority for both Community Clinics (**73%** or **8**) and Hospitals (**62%** or **8**).
- **45.3%** or **63** would like to see more *affordable prescription programs*, and **42% (59)** would like to see more *case managers for health care* for underserved populations.

Top 5 Patient Barriers to Health Care

The chief patient barriers related to health coverage or costs of medical services or prescriptions:

- **63% (88)** out of 139) thought that health coverage *may be inadequate to cover all needs*, and **55.4% (77)** thought that *government eligibility levels are restrictive*. **64% (88)** of key informants selected the *cost of medical services* and **49% (68)** selected the *cost of prescriptions* as other key patient barriers.
- *Lack of adequate transportation* was also a high priority barrier (**45%** or **62**).
- Although not part of the top 5, **40% (55)** of key informants viewed *patient unfamiliarity with the health care system* as another barrier, with more Program Managers (**55%** or **21**) expressing this concern in comparison to Executives (**31%** or **18**).

Who Should Provide Health Care to Vulnerable Groups?

- **30.9% (43)** out of 139) believed that the responsibility rested with the *County Health Department* rather than *Community or Free Clinics* (**27%** or **37**) or the *State or Federal Government* (**18%** or **25**).
- **43% (6)** of County/City and **38% (8)** of Health Provider CBOs employees believed that *Community or Free Clinics* are responsible. **46% (5)** of Community Clinic key informants were also in agreement.
- Executives and Managers disagreed on where the responsibility resided. **32% (19)** of executives believed that *State or Federal Governments* are responsible, while **34% (13)** of managers believed that *Community Clinics/FQHCs* are responsible.
- Only **5% (7)** of all key informants believed that *Non-Profit Hospitals* are responsible for providing health care, and **1% (2)** believed that *Investor-Owned Hospitals* are responsible.

Primary Hospital Roles and Ratings of Effectiveness

132 key informants provided their opinions and ratings on the primary roles and services of service area hospitals (two-part question); there were a number of *I Don't Know* responses ranging from **24% (31)** to **52% (68)** for the various role/service ratings, which were removed for analysis purposes.

- **75% (99)** believed that *ER services* should be a primary service of hospitals; **73% (69)** of key informants with an opinion gave service area hospitals a “good” to “excellent” rating for *ER services*.
- **75% (99)** selected *Hospital/Surgery Services* as another important hospital function; **78% (67)** of key informants with an opinion gave service area hospitals a “good” to “excellent” rating for this service.
- **62% (82)** also selected *Community Health Education* as an important service; **61% (62)** of key informants with an opinion gave hospitals a “good” to “excellent” rating for this service.
- **66% (82)** thought that hospitals should *develop or support community clinics*; however, **59% (50)** of key informants with an opinion gave hospitals a “very poor” to “fair” rating for this service.
- **56% (74)** also believed that providing charity care was an important service; **58% (49)** of key informants with an opinion gave hospitals a “very poor” to “fair” rating for this service.
- **55% (73)** thought that hospitals should be leaders in redesigning the health care system; **65% (51)** of key informants with an opinion indicated that service area hospitals were doing a “very poor” to “fair” job; more than half of Executives (**64%** or **36**) believe that hospitals should lead redesigning the health care system, compared to only **41% (15)** of Managers.

Key Informant Relationships with Service Area Hospitals

66 key informants reported that CHOC operates in their service area. **56%** (**37**) indicated that service area hospitals (including CHOC) are partners in providing *direct services/outreach activities*, **36%** (**24**) indicated that service area hospitals provide *direct donations or grants for their services/programs*, and **24%** (**16**) indicated that service area hospitals *are not involved enough*. **60** of these key informants rated their overall relationships with service area hospitals:

- The majority (**58%** or **35**) selected “satisfied” to “very satisfied,” with **83%** (**6**) of Hospital key informants responding positively about their relationships with other service area hospitals.
- **12%** (**7**) selected “dissatisfied” to “very dissatisfied,” and **25%** (**15**) picked “neither satisfied nor dissatisfied”; this could mean that respondents could have mixed, uncertain, or neutral opinions about the relationships. Of the **22** key informants that picked the negative or neither/nor choice, the majority, or **55%** (**12**), would like to see more involvement from service area hospitals. **36%** (**8**) were collaborative partners with service area hospitals for direct services/outreach activities, but did not feel positively about their hospital relationships.

Key Informant Collaborative Partners

55 key informants selected CHOC as a current collaborative partner. The **55** CHOC partners also collaborated with other organizations; the top 12 groups are presented below:
County of Orange, Health Care Agency (**86%** or **47**)

- UCI Medical Center (**73%** or **40**)
- St. Joseph Hospital (**71%** or **39**)
- CalOptima (**67%** or **37**)
- Children and Families Commission of Orange County (**62%** or **34**)
- Hoag Memorial Presbyterian Hospital (**58%** or **32**)
- St. Jude Medical Center (**58%** or **32**)
- CHOC Clinic at Orange (**56%** or **31**)
- Coalition of Orange County Community Clinics (**55%** or **30**)
- Kaiser Foundation Hospital (**49%** or **27**)
- Sisters of St. Joseph Foundation (**47%** or **26**)
- Clinica CHOC Para Niños (**47%** or **26**)

Of the **55** CHOC collaborative partners that defined the relationships between their organization and service area hospitals:

- **66%** (**35**) reported that service area hospitals (including CHOC) were *collaborative partners in providing direct services/outreach activities*.
- **17%** (**9**) believed that service area hospitals (including CHOC) were *not involved enough*; this suggests that they may like to see more involvement from service area hospitals.

49 CHOC collaborative partners rated their relationships with service area hospitals. Of these the majority, or **73%** (**36**), were “satisfied” to “very satisfied” with their service area hospital relationships (including CHOC).

Description of the Children's Hospital of Orange County Service Area

The **Children's Hospital of Orange County (CHOC) service area** encompasses all of Orange County, which is composed of 41 cities and communities. The **CHOC at Mission service area** is a subset of the larger service area, covering South Orange County (Aliso Viejo, Dana Point, Foothill Ranch, Ladera Ranch, Laguna Beach, Laguna Hills, Laguna Niguel, Lake Forest, Mission Viejo, Rancho Santa Margarita, San Clemente, San Juan Capistrano, and Trabuco Canyon).

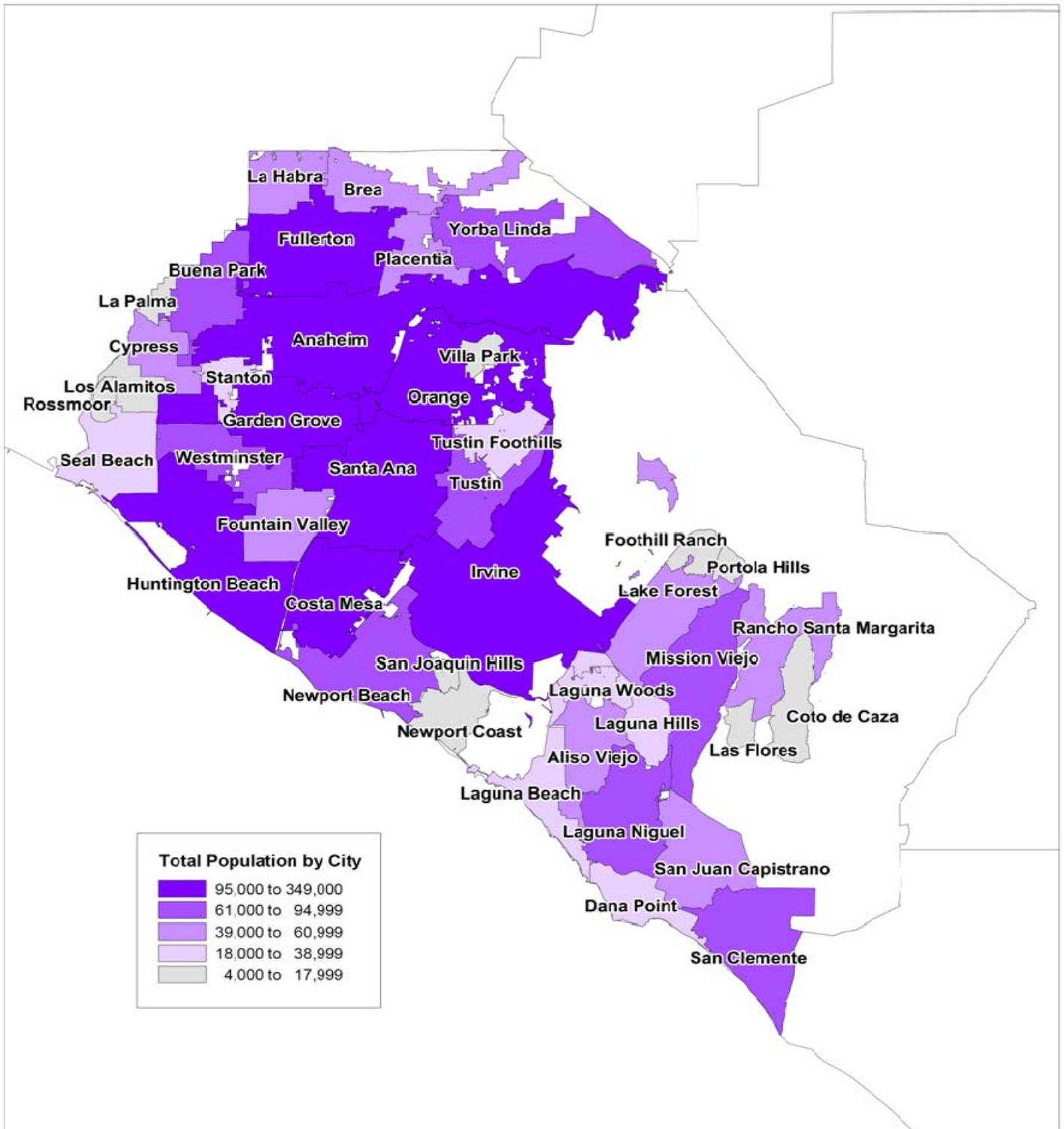
Data from the US Census Bureau uncovers the richness and diversity of the service area; for instance, the largest Vietnamese community in the entire nation is within Orange County. The county also has sizable Hispanic/Latino and Asian or Pacific Islander communities. In fact, Hispanic/Latino children account for almost half of the service area child population; by 2015 over half of all service area children will be Hispanic/Latino. The child Asian or Pacific Islander population is also expected to grow over the next five years.

Despite the mainstream perceptions of Orange County as a center of prosperity, census and OCHNA survey data point to many areas of health and social needs. Complicating this reality is the fact that the economic downturn has also plunged many otherwise secure middle-income families into economic uncertainty throughout the service area. The average yearly unemployment rate for Orange County increased from almost **4%** in 2007 to almost **10%** in 2010. There are numerous cities with low annual household income and high poverty levels, especially among children, such as Anaheim, Santa Ana, Garden Grove, and Westminster. While there are regions of affluence in the county, such as south county, Newport Beach, and Irvine, these communities have also been touched by the bad economy, as suggested by increased unemployment rates.



Children's Hospital of Orange County Service Area

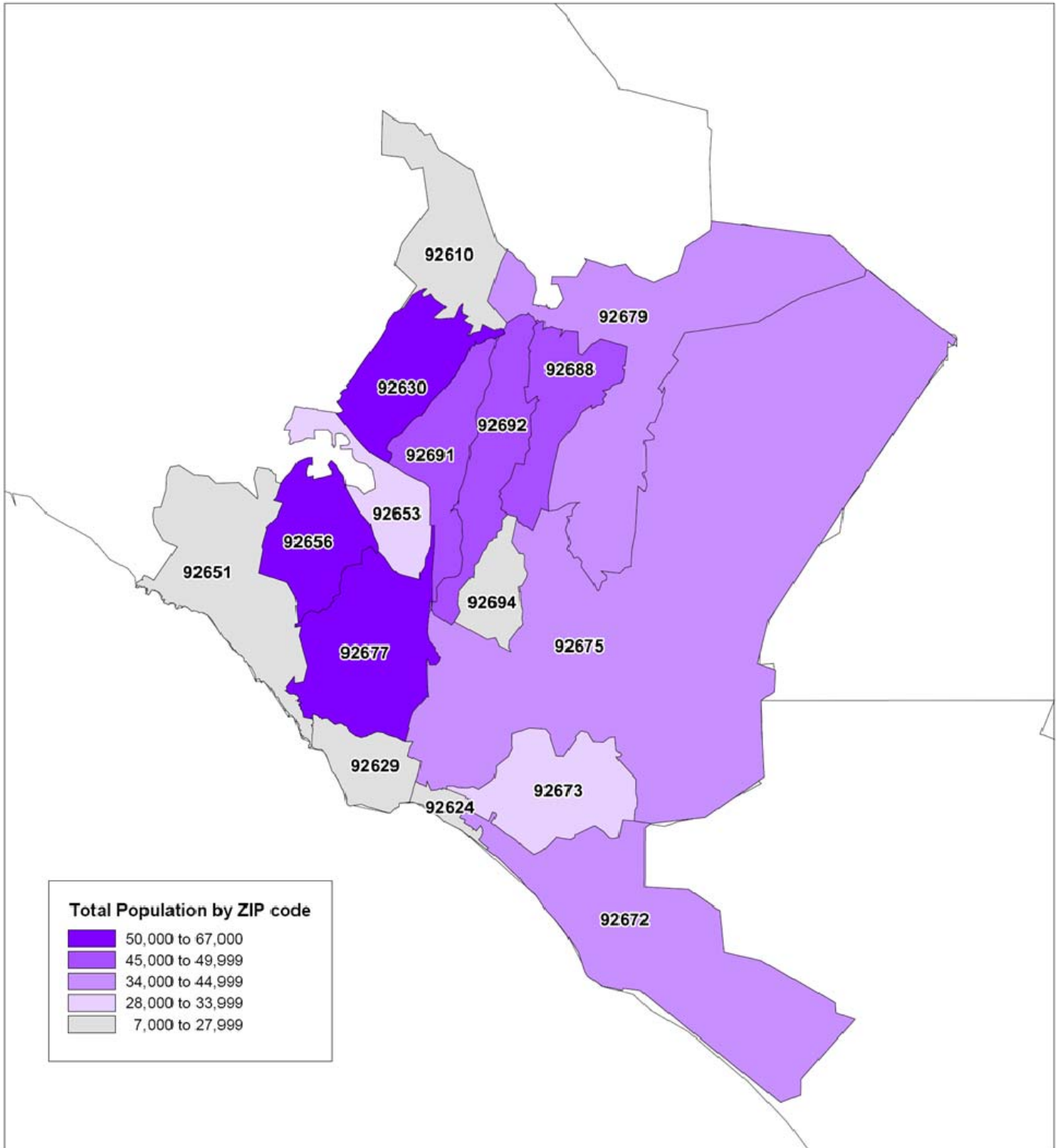
Population by City, 2010



Map Produced by Orange County Health Needs Assessment, December 2010
Data Source: Nielsen Claritas 2010 Census estimates

CHOC at Mission Service Area

Population by ZIP Code, 2010



Map Produced by Orange County Health Needs Assessment, December 2010
Data Source: Nielsen Claritas 2010 Census estimates

Child Population Size

In 2010, individuals between 0-17 years represented **25.3%** (780,932) of the overall CHOC service area population (3,091,673). From 2000 to 2010, the child population in the **CHOC service area** grew by an estimated **1.6%**. In comparison, the Orange County adult population (18+) grew by **11.2%**, a higher rate, during the same 10 year period. **19.0%** (147,994) of children in the entire CHOC service area resided within the **CHOC at Mission** subset. Of the entire CHOC at Mission service area population (582,561), children (0-17) comprised **25.4%**. The table below presents the growth of the child population from 2000 to 2010, as well as the projected growth from 2010 to 2015.

25.3% or 780,932
of CHOC service
area residents were
children (0-17
years).

Table 1: Growth/Decline and Projected Growth/Decline of the Child (0-17) Population: Countywide CHOC Service Area, 2000, 2010, & 2015

Age Group	2000 Census	2010 Estimate	% Growth from 2000	2015 Projection	% Projected Growth from
0-4 Years	216,014	219,439	1.6%	228,704	4.2%
5 to 9 Years	231,928	212,254	-8.5%	222,759	4.9%
10 to 14 Years	204,119	214,475	5.1%	216,131	0.8%
15-17 Years	116,358	134,764	15.8%	129,515	-3.9%
Total Children	768,419	780,932	1.6%	797,109	2.1%

Source: 2000 Census data from Nielsen Claritas. 2010 Census estimates and 2015 projections by Nielsen Claritas.

- The child population's growth from 2010 to 2015 is projected to be higher than the growth from 2000 to 2015.

The table below presents the 10 most populous CHOC service area cities for children.

Table 2: Population of Children (0-17) by City/Community: Countywide CHOC Service Area, 2010

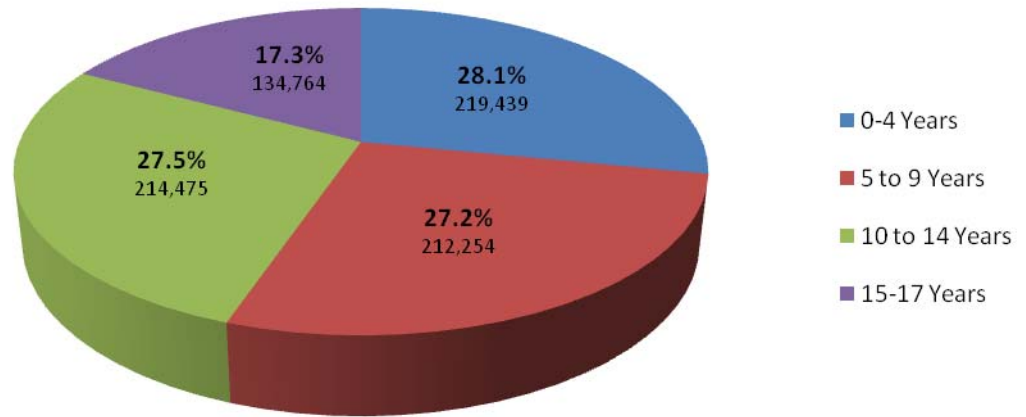
City/Community in Service Area	Estimated Population of Children	Estimated Total Population of City/Community	Percent of Children in City/Community
Santa Ana	108,695	344,451	31.6%
Anaheim	100,458	348,179	28.9%
Garden Grove	46,135	170,322	27.1%
Irvine	45,446	215,191	21.1%
Huntington Beach	41,031	193,566	21.2%
Orange	35,862	140,138	25.6%
Fullerton	31,677	134,567	23.5%
Costa Mesa	26,058	112,735	23.1%
Westminster	23,494	91,666	25.6%
Mission Viejo	23,385	94,741	24.7%

Source: 2010 US Census Estimates by Nielsen Claritas

- In 2010, Santa Ana was home to **13.9%** of the entire CHOC service area child population.

The figure below presents the age distribution of children in the CHOC service area.

Figure 1: Age Distribution of Child (0-17) Population: Countywide CHOC Service Area, 2010



Source: 2010 US Census Estimates by Nielsen Claritas

- Over half, or **55.3%** (431,693) of **CHOC service area** children were under age 10 in 2010.
- The child gender distribution is tilted slightly towards males, who compose **51.3%** of the CHOC service area population (0-17); females comprised **48.7%** (780,932). This is also similar for **CHOC at Mission**; males comprised **51.1%** (75,649) whereas females comprised **48.9%** of the subset.

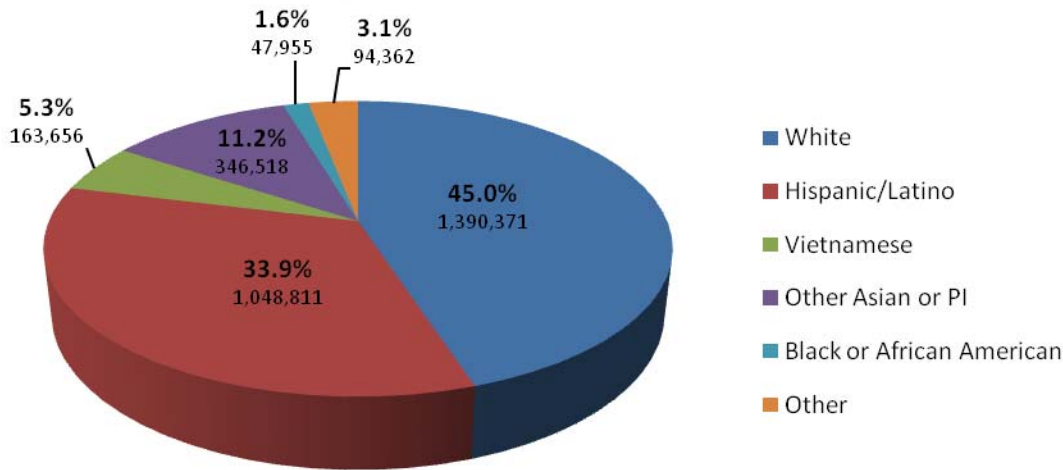


Over one in four children in the county were younger than 5 years in 2010.

Race/Ethnicity

The figure below presents the race/ethnic distribution of both children and adults in the CHOC service area using 2010 US Census Estimates by Nielsen Claritas.

**Figure 2: Race/Ethnicity Distribution (All Ages):
Countywide CHOC Service Area, 2010**

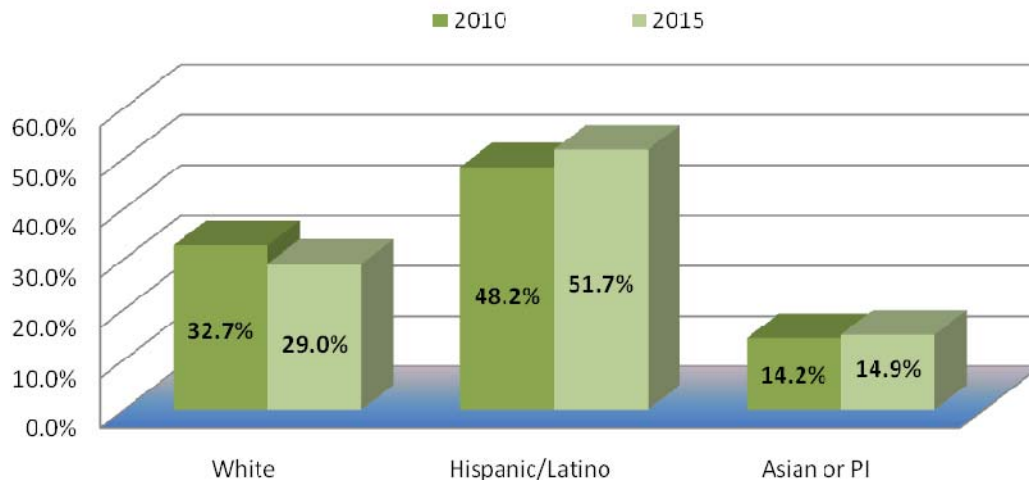


Source: 2010 US Census Estimates by Nielsen Claritas

- **55.0%** of the service area population was part of a race/ethnic minority.

According to the [State of California, Department of Finance](#), the proportions of Hispanic/Latino and Asian or PI children (including Vietnamese) are projected to increase from 2010 to 2015, while the proportion of white children is projected to decrease.

**Figure 3: Changes in Distribution for Key Race/Ethnic Groups of
Child Population (0-17): Countywide CHOC Service Area, 2010**



Source: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2050

- In 2010 the most represented race/ethnicity among children was Hispanic/Latino. In 2015 the race/ethnic group is expected to comprise over half of Orange County's child population.
- In 2010, over **one in three** Hispanic/Latinos (**33.7%**) were less than 18 years, compared to almost **one in five** whites (**18.5%**).

**Percent of
Hispanic/Latinos by
County, 2010**

47.8%
Los Angeles

33.9%
Orange County

44.6%
Riverside County

48.3%
San Bernardino
County

31.1%
San Diego County

25.5%
Santa Clara County

**Percent of Asians
or PI (including
Vietnamese) by
County, 2010**

13.1%
Los Angeles

16.5%
Orange County

5.7%
Riverside County

6.0%
San Bernardino
County

10.5%
San Diego County

31.6%
Santa Clara County

Service Area Communities with Large Ethnic Minority Populations

Hispanic/Latino Children 0-17

In Santa Ana, the majority of children were Hispanic/Latino: **88.5%** (96,197) of child residents were Hispanic/Latino. Other communities with large Hispanic/Latino populations include:

Anaheim—67.6% (67,887)

Costa Mesa—55.5% (14,469)

Orange—53.6% (19,212)

Fullerton—50.8% (16,101)

Garden Grove—49.4% (22,777)

Asian or Pacific Islander Children 0-17 (Including Vietnamese)

Westminster had the highest proportion of Asian or PI children—**43.6%** (10,235) of child residents were Asian or PI. **31.6%** (14,581) of Irvine children, **11.1%** (11,126) of Anaheim children, and **10.9%** (16,299) of Irvine children were Asian or PI.

Household Composition

While the traditional nuclear family household is still the most common living situation for children in Orange County, other types of family arrangements account for a sizable number of county households with children. There has been a fair amount of research into how non-traditional family living situations affect a child's development, but the subject is controversial because of religious and moral implications associated with family and marriage. In general, children growing up in non-traditional family households, for example in a single parent household or with a non-married couple, do not differ markedly in their development from children raised in a traditional home. **38.2%** (382,456) of households in the **CHOC service area** had at least one person who was under 18 years of age in 2010.

38.2% of households in the CHOC service area had children.

Table 3: Households with at least 1 Person under 18 Years: Countywide CHOC Service Area, 2010

Household Composition	Population Estimate	Percent
Married-Couple Family	283,794	28.4%
Other Family, Male Householder	29,031	2.9%
Other Family, Female Householder	67,282	6.7%
Nonfamily, Male Householder	1,735	0.2%
Nonfamily, Female Householder	614	0.1%

Source: 2010 US Census Estimates by Nielsen Claritas

- There was a total of 1,000,016 households in the CHOC service area.
- In the **CHOC at Mission** subset, **37.7%** (78,479 out of 208,069) of households had at least one person who was under 18 years.

Languages Spoken at Home

The level of English proficiency can influence a family's ability to access and utilize various health services. The table below presents the types of languages spoken at home by individuals age 5 and older.

Table 4: Language Spoken at Home (5+ Years): Countywide CHOC Service Area, 2010

Language	Percent	Population Estimate
English Only	56.5%	1,623,862
Asian or PI Language	12.3%	351,740
Indo-European Language	3.9%	112,335
Spanish	26.5%	760,057
Other Language	0.8%	24,240
Service Area Total	100.0%	2,872,234

Source: 2010 US Census Estimates by Nielsen Claritas

- Spanish or an Asian/Pacific Islander language was the most common non-English languages spoken at home in the CHOC service area. **26.5%** of residents spoke Spanish at home, and **12.3%** of residents spoke an Asian or Pacific Island language.
- 43.0%** of **Anaheim** residents 5+ years and **71.8%** of **Santa Ana** residents 5+ years spoke Spanish at home.
- 37.4%** of **Westminster** residents 5+ years, **30.4%** of **Garden Grove** residents 5+ years, and **24.1%** of **Fountain Valley** residents 5+ years spoke an Asian or PI language at home.

English Fluency of Children 5-17

The [American Community Survey](#) (ACS) also estimates the proportion of individuals 5-17 years who speak languages other than English at home, as well as their ability to speak English. The 2005-2009 ACS estimated that **46.7%** (253,068) of individuals 5-17 years in Orange County spoke a language other than English at home.

- Of the **34.7%** (187,844) of children 5-17 years in the county who spoke Spanish at home, **30.6%** (57,421) spoke English less than "very well" in 2009.
- Of the **9.1%** (49,450) of children 5-17 in the county who spoke an Asian or Pacific Islander language at home, **28.2%** (13,937) spoke English less than "very well" in 2009.
- Of the **2.9%** (15,774) of children 5-17 in the county who spoke another language at home, **12.3%** (1,946) spoke English less than "very well" in 2009.

Language Spoken at Home for Population 5+ Years in California, 2010:

57.7%
English Only

9.0%
Asian or PI Language

4.3%
Indo-European Language

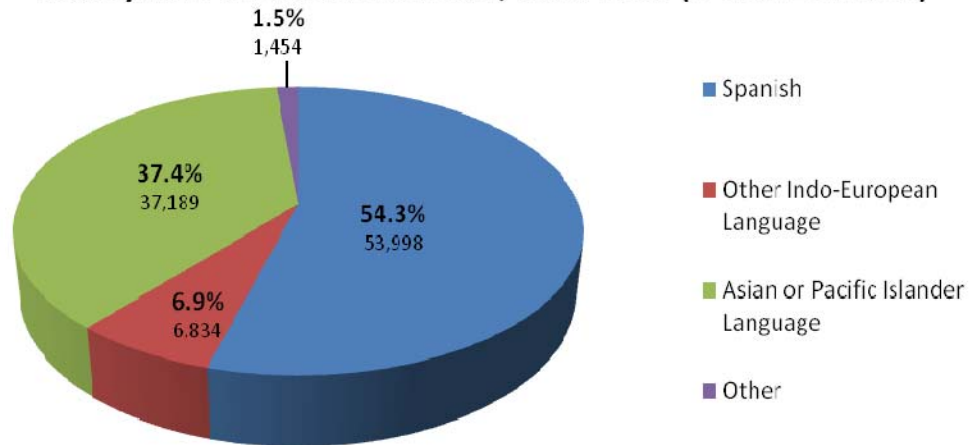
28.2%
Spanish

0.9%
Other Language

Children in “Linguistically Isolated Households”

According to the [US Census Bureau](#), in a linguistically isolated household there is no person aged 14 or over who speaks English at least “very well,” speaking another language at home. The 2005-2009 [ACS](#) 5-year aggregated estimate determined that there were approximately **974,001** total Orange County households, which corresponds to the entire CHOC service area. Of those households, **389,735 (40.0%)** spoke a language other than English at home. Among those households which spoke another language at home, **one in four (25.5% or 99,475)** were linguistically isolated. The figure below, which presents the distribution of languages spoken at home for linguistically isolated households, highlights that the majority of linguistically isolated households in the CHOC service area (Orange County) are Spanish-speaking.

Figure 4: Linguistically Isolated Households by Language Spoken: Countywide CHOC Service Area , 2005-2009 (5-Year Estimate)



Source: US Census Bureau, 2005-2009 American Community Survey

- In Santa Ana, **36.7%** (18,105) of Spanish speaking households were linguistically isolated.
- In Irvine, **25.0%** (4,196) of Asian or Pacific Islander language speaking households were linguistically isolated.
- In Garden Grove, almost **three in five (59.9% or 8,096)** households that spoke an Asian or Pacific Islander language were linguistically isolated.

76,549 children 5-17 years of age lived in a linguistically isolated household (ACS 2005-2009). Among those, **3.5%** (2,704) spoke only English (children between 5-13), **73.5%** (56,301) spoke Spanish, **20.9%** (15,987) spoke an Asian or Pacific Islander language, and **2.0%** (1,557) spoke another language at home.

Language of the 2007 OCHNA Interview

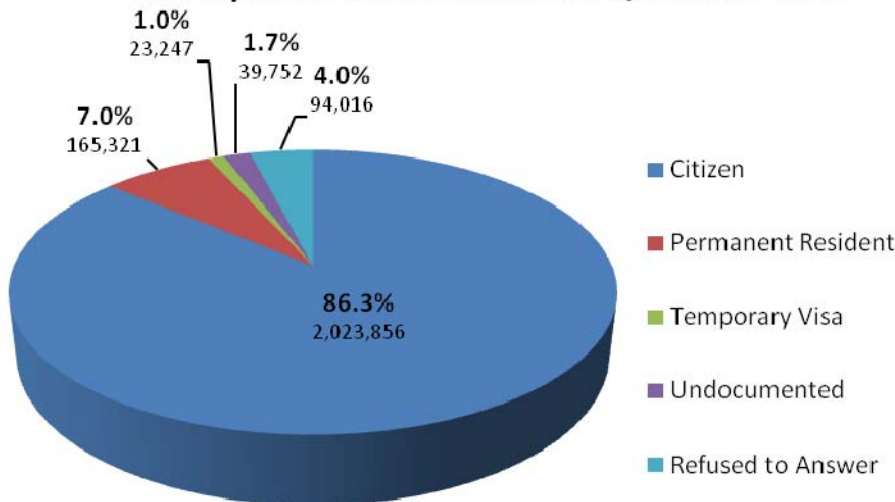
The 2007 OCHNA survey had a total of **2,585** respondents in the CHOC service area and was administered in English, Spanish, and Vietnamese. **76.9%** or **1,988** respondents were interviewed in English, **18.5%** or **477** respondents were interviewed in Spanish, and **4.6%** or **120** respondents were interviewed in Vietnamese.

Of the children in the CHOC service area who were living in linguistically isolated households, the majority lived in Spanish-speaking households.

Citizenship Status

The 2007 OCHNA Survey collected data on an individual's (18+) nationality and citizenship status. A series of three citizenship status questions were asked based on the level of documentation, from U.S. citizen to undocumented: *Are you a citizen of the U.S.? Are you a permanent resident of the U.S.? Do you have a temporary Visa to stay in the U.S.?* If the respondent answered *No* or *Don't Know/Refused to Answer* to any of the previous citizenship questions, he or she was asked the next question in the series. Those who answered *No* to the final question were considered to be without documentation. Individuals in the *Refused to Answer* category below did not answer *Yes* to any of the citizenship status questions.

**Figure 5: Citizenship Status of Adults (Ages 18+):
Countywide CHOC Service Area, OCHNA 2007**



- **5.7%** (133,768) of adults in the CHOC service area were undocumented or refused to answer.

Undocumented Adults in Orange County

The number of undocumented adults (18+) in Orange County, which corresponds to the CHOC service area, using OCHNA 2007 survey results, is estimated to be approximately **133,768** or **5.7%** of the total Orange County adult population, including those who refused to answer. It is important to remember that this is most likely still an underestimate, as this is self-reported data. Some respondents may have claimed to be a citizen or a permanent resident but were not, or some may have claimed to have a temporary visa and did not have one or had one that has since expired. It is equally important to remember that those who refused to answer cannot be definitively designated as "undocumented." Excluding those who refused to answer, the number of "undocumented" adults (who reported that they were not citizens or permanent residents and did not have a temporary visa) was **39,752** or **1.7%** of the total Orange County population.

- **90.0%** (35,794) were Hispanic/Latino.
- **45.8%** (17,070) lived in households with annual income less than \$25,000, and **47.6%** (17,741) lived in households with annual income between \$25,000 and \$49,999.
- **65.1%** (25,872) were between the ages of 25 and 44.
- **17.2%** (6,830) lived in Garden Grove, **10.6%** (4,195) resided in Santa Ana, and **10.5%** (4,176) lived in Anaheim.

Orange County Residents by US Citizenship Status, 2009: [\(American Community Survey\)](#)

69.6% (2,106,513)
Native Citizens

14.5% (438,471)
Foreign Born Naturalized Citizens

15.9% (481,802)
Foreign Born Non-Citizens

5.9% (44,368)
Percent of Non-Citizen Children 0-17 Years

19.3% (437,434)
Percent of Non-Citizen Adults 18+ Years

Unemployment Rates, 2010

([Employment Development Department](#))

12.4%
California

12.6%
Los Angeles County

8.9%
Orange County

14.7%
Riverside County

14.3%
San Bernardino County

10.6%
San Diego County

12.8%
Santa Clara

Employment Status and Unemployment Rate

According to the Bureau of Labor Statistics, the labor force is made up of all employed and unemployed individuals ages 16 and older. Those who are not in the labor force include retired individuals, students, homemakers, those taking care of children or other family members, and those who are not looking for work (discouraged workers). The unemployment rate is an important indicator of economic well-being. While official sources report that the US economy is now recovering from this historic recession, the unemployment rate shows that the downturn is still affecting thousands of Orange County residents and their families. The November 2010 Orange County unemployment rate was **9.3%** according to the State of California, [Employment Development Department](#). This is in marked contrast to the average unemployment rate of **3.9%** in 2007. It is clear that the economic recession has taken a toll on many residents. The table below presents the unemployment rates for 10 most populous service area cities of children for 2010 (average rates).

Table 5: Unemployment Rates by City (Not Seasonally Adjusted): Countywide CHOC Service Area, 2007-2010				
City	2007 (Average)	2008 (Average)	2009 (Average)	2010 (Average)
Anaheim	5.0%	6.8%	11.5%	12.2%
Costa Mesa	3.5%	4.7%	8.1%	8.6%
Fullerton	4.4%	5.9%	10.1%	10.7%
Garden Grove	4.9%	6.6%	11.2%	11.9%
Huntington Beach	3.1%	4.3%	7.3%	7.8%
Irvine	2.9%	3.9%	6.8%	7.2%
Mission Viejo	2.8%	3.8%	6.5%	7.0%
Orange	3.6%	4.8%	8.3%	8.8%
Santa Ana	6.3%	8.5%	14.1%	15.0%
Westminster	4.3%	5.9%	10.0%	10.6%
Orange County	3.9%	5.3%	9.0%	9.6%

Source: State of California, Employment Development Department

- For 2010, the average unemployment rates for all service area communities ranged from **3.1%** in Foothill Ranch to **15.2%** in Stanton.

Median Family Income and Income Distribution

Median income is determined by dividing families or households into two groups. The income level at which half of all families/households are above/below marks the median income. Median income levels are said to be a better socioeconomic indicators than average household income because they are not influenced by very high or low values. The following table presents median family income by the presence of children and median household income (regardless of the presence of children) for the 10 most populous service area cities of children 0-17 years. 2005-2009 5-Year Estimates by the American Community Survey have been presented, which have been adjusted to reflect 2009 inflation levels.

Table 6: Median Family by Presence of Children (0-17) and Median Household Income: Countywide CHOC Service Area, 2005-2009 (5-Year Estimate)			
City	Median Family Income with Own Children (0-17)	Median Family Income with No Own Children (0-17)	Median Household Income
Anaheim	\$54,214	\$71,267	\$57,870
Costa Mesa	\$59,990	\$77,889	\$62,303
Fullerton	\$69,754	\$82,047	\$66,189
Garden Grove	\$54,656	\$68,176	\$59,761
Huntington Beach	\$99,677	\$97,353	\$80,000
Irvine	\$111,381	\$102,844	\$92,195
Mission Viejo	\$98,416	\$99,677	\$94,333
Orange	\$78,692	\$89,786	\$76,669
Santa Ana	\$46,768	\$63,755	\$54,521
Westminster	\$64,403	\$66,770	\$58,846
Orange County	\$79,104	\$87,386	\$73,738

Source: US Census Bureau, 2005-2009 American Community Survey 5-Year Estimate

- Countywide, families with own children less than 18 years had lower median incomes compared to families with no children under 18.
- Of the 10 cities, Santa Ana had the lowest median family incomes and median household income. Anaheim had the second lowest median incomes, followed by Westminster.

California Median Household Income, 2010:

\$62,401

**Racial/Ethnic
Median Household
Income, 2010:**

California

\$47,841
Hispanic
\$68,696
Non-Hispanic

Los Angeles

\$44,608
Hispanic
\$64,353
Non-Hispanic

Orange County

\$58,262
Hispanic
\$84,322
Non-Hispanic

Riverside County

\$49,086
Hispanic
\$64,007
Non-Hispanic

San Bernardino
County

\$50,826
Hispanic
\$60,293
Non-Hispanic

San Diego County

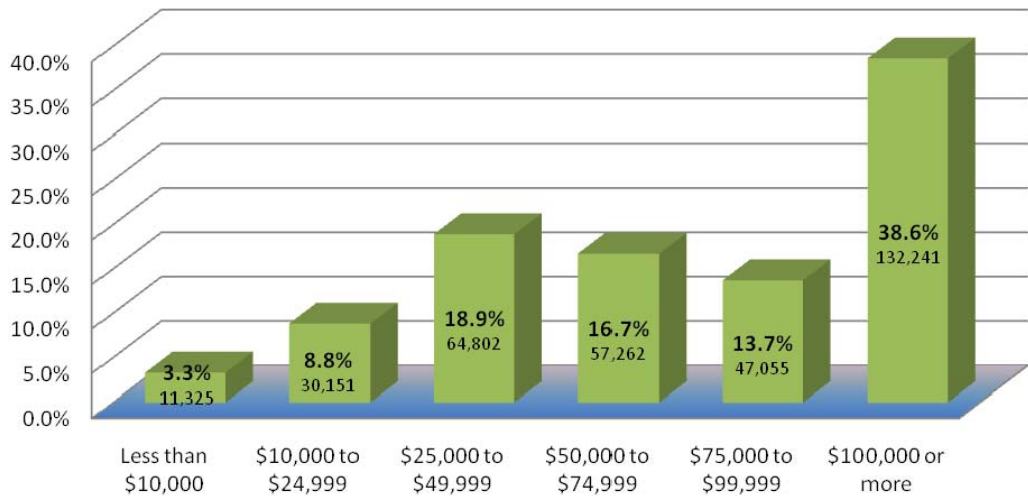
\$47,690
Hispanic
\$70,493
Non-Hispanic

Santa Clara County

\$67,933
Hispanic
\$96,840
Non-Hispanic

The figure below provides the income distribution of families with their own children (342,836) in the CHOC service area using ACS 2005-2009 data (income adjusted to 2009 inflation levels).

Figure 6: Distribution of Annual Income for Families with Own Children 0-17 Years: CHOC Service Area, 2005-2009 (5-Year Estimate)

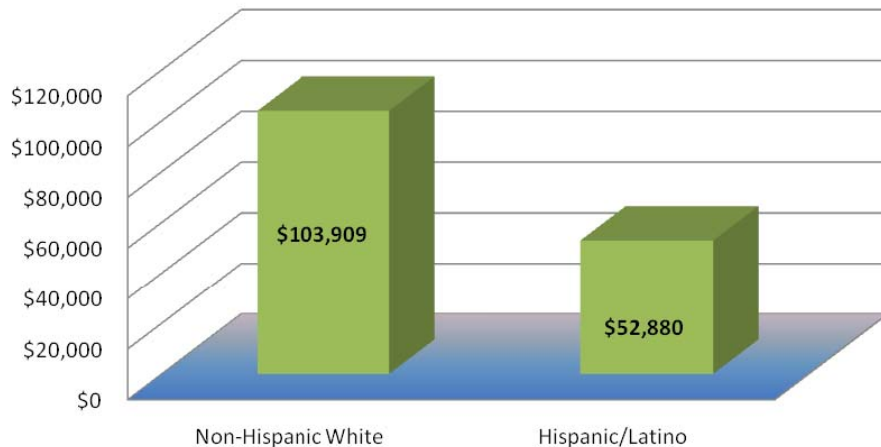


Source: US Census Bureau, 2005-2009 American Community Survey

- Over **three in ten** families with their own children (0-17) in the CHOC service area (**31.0%**) had an income of less than \$50,000.
 - **12.1%** (41,476) of all families with their own children (0-17) in the CHOC service area had an income of less of \$25,000.

The table below presents the median family income by race/ethnicity in the CHOC service area. There were a total of 689,212 families in the countywide service area, including those *without* their own children 0-17 years.

Figure 7: Median Family Income by Race/Ethnicity: Countywide CHOC Service Area, 2005-2009 (5-Year Estimate)



Source: US Census Bureau, 2005-2009 American Community Survey

- Hispanic/Latino households had a median family income that was almost **half** white median family income; the median family income for Hispanic/Latino families in Anaheim was **\$46,075**. In Santa Ana it was **\$47,612**.

Poverty

The 2009 federal poverty levels (FPL) described a family of family of four living below the FPL as having an annual household income of \$21,200. Estimates of families and individuals living in poverty are provided by the [American Community Survey](#). It is important to realize that the US Census Bureau’s definition of poverty does not consider the family’s location, varying only according to the size of the family and the ages of the members.

Table 7: Poverty Rates of Individuals by Most Populous Cities for Children (0-17): CHOC Hospital Service Area, 2005-2009 (5-Year Estimate)

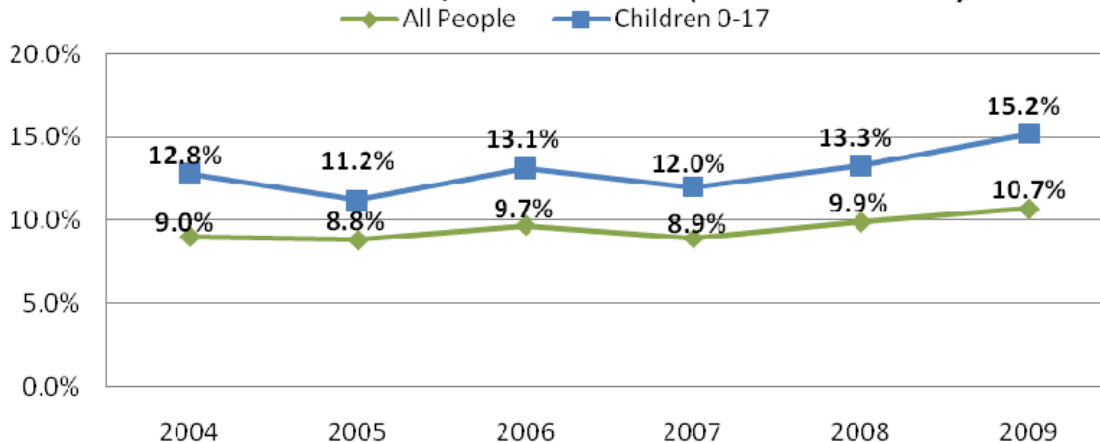
City in Service Area	Children (0-17 Years)	All People (All Ages)	Families with Related Children Under 18	All Families
Anaheim	19.6%	13.0%	14.8%	10.6%
Costa Mesa	17.0%	12.7%	16.7%	8.3%
Fullerton	12.5%	10.5%	9.3%	6.7%
Garden Grove	18.6%	13.1%	15.6%	11.3%
Huntington Beach	8.1%	6.2%	5.9%	3.8%
Irvine	6.2%	9.4%	5.0%	4.7%
Mission Viejo	4.2%	4.0%	3.3%	2.1%
Orange	11.4%	8.7%	8.5%	5.5%
Santa Ana	23.4%	17.3%	18.7%	14.8%
Westminster	13.4%	10.5%	11.9%	9.4%
Orange County	12.9%	9.6%	9.7%	6.7%

Source: US Census Bureau, 2009 American Community Survey

- Santa Ana had the highest percent of individuals in poverty; Santa Ana also had the highest proportion of children living in poverty.

The figure below captures the changes in poverty rates over the years from the American Community Survey.

Figure 8: Trend of Individuals in Poverty: CHOC Service Area, 2004 to 2009 (1-Year Estimate)



Source: US Census Bureau, 2004-2009 American Community Survey

- Since 2007, the poverty rate has been rising, corresponding to the economic downturn.

Poverty Rate of All Individuals, 2009
[\(American Community Survey\)](#)

14.2%
California

16.1%
Los Angeles County

10.7%
Orange County

13.9%
Riverside County

17.0%
San Bernardino County

12.6%
San Diego County

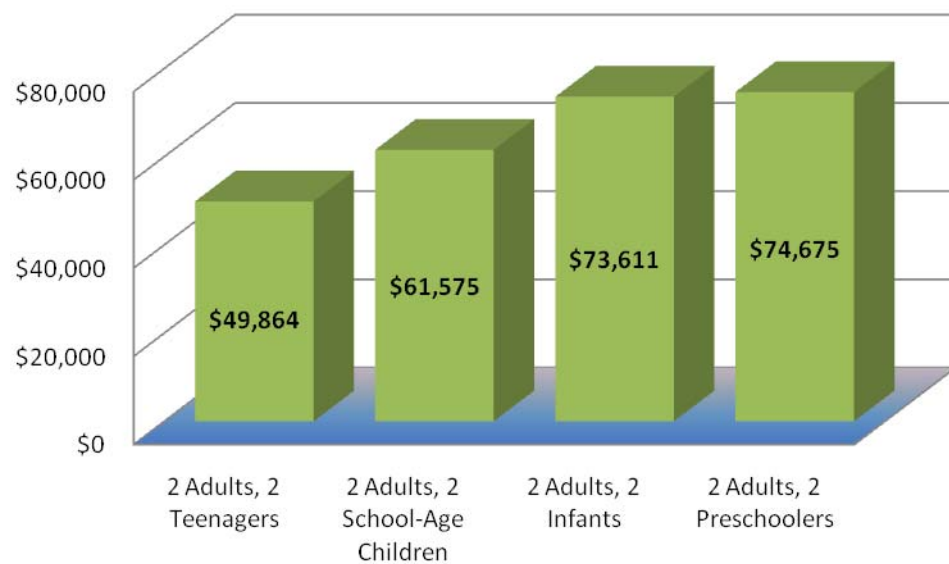
9.1%
Santa Clara

Self-Sufficiency Standard

The poverty levels presented in the section above are those reported by the American Community Survey, which uses the FPL to determine poverty. Using the FPL to determine poverty greatly underestimates the extent of poverty in the county. The [Self-Sufficiency Standard](#) is an alternative measure of economic self-sufficiency, which is the idea that a household can meet its needs without government or private assistance. The Self-Sufficiency Standard is a measure that calculates the estimated income it would take for a household or individual to live adequately in a county without outside help. In particular, it takes into consideration all of the expenses that face a typical household, primarily housing, food, transportation, out-of-pocket medical expenses, the tax burden, and miscellaneous spending.

The Self-Sufficiency Standard is adjusted for regional differences in prices and the number and ages of children in the household, whereas the federal poverty is fixed. The FPL for a family of four is \$21,200, but using the self-sufficiency standard, an income considered to be self-sufficient can vary significantly even within households of the same size, as illustrated in the following figure.

Figure 9: Annual Self-Sufficiency Income for a 2 Adult, 2 Child Household in Orange County, 2008



Source: Center for Community Economic Development, California Family Self-Sufficiency Standard by County, 2008

- A household with 2 adults and 2 teenagers living in Orange County would need **\$49,864**, and if the adolescents were instead preschool-age children, then the household would need **\$74,675** to be self-sufficient, with child care costs for both preschoolers accounting for the difference.

The cost of living in Orange County is relatively high, so using the FPL to calculate poverty is not necessarily the most appropriate measure for determining need, even though this is what is used by many government programs to determine eligibility, and information of poverty using the FPL is the most widely available and easily accessible. There would be more economic insecurity in Orange County if the Self-Sufficiency Standard were instead used as the guideline for measurement. The lowest self-sufficiency annual income level for a two-adult household with two teenagers is **\$49,894**, which is more than **twice** the federal poverty standard. A family of four with this income would be disqualified from eligibility for many government programs because the family earns too much to receive support from the public safety net and yet too little to pay for all its necessities.

**2010 Federal
Poverty Income:**
[\(US Dept. of Health and
Human Services\)](#)

**\$10,830
1-Person
Household**

**\$22,050
4-Person
Household**

Access to Health Care

Access to healthcare is the ability to make use of healthcare services to ensure the overall well being of an individual. Having access allows a person to treat illness, injuries, and chronic diseases, as well as participate in preventive measures to protect and ensure future health. For children, an important preventative measure is routine immunizations to guard against communicable diseases. A major component of access is health coverage which encompasses the following: primary, mental/behavioral, vision, dental, and prescription coverage.

Rising Unemployment and the Loss of Health Care Coverage

Harsh economic conditions have presented threats to the health of OC residents; the unemployment rate has risen drastically from a low of **3.7%** in January 2007 to **9.3 %** in November of 2010. As health care coverage is commonly linked to employment, increasing unemployment is connected to the dramatic loss of health care coverage among children, many of whom belong to a parent's employer-sponsored health coverage plan. The number of adults without health care coverage more than **doubled** for adults, going from **9.1%** in 2007 to **20.3%** in 2009. For children, the rate of non-coverage increased nearly **three-fold**, going from a low of **3.5%** in 2007 to **10.4%** in 2009, thus reversing the positive gains made during the period 1998-2007.

Beginning in 2008, the [American Community Survey](#) (ACS) estimates the rates of coverage in cities with population sizes of 65,000 or greater. 2009 data is presented below for service area cities available in the ACS dataset; please note that data is unavailable for lower income cities, such as San Juan Capistrano or San Clemente, where health care needs may be higher.

Table 1: Percent of Children 0-17 Without Health Care Coverage by Available Cities: CHOC Service Area, ACS 2009		
City	Percent	Population Estimate
Anaheim	11.8%	11,391
Buena Park	9.4%	1,878
Costa Mesa	11.5%	2,616
Fullerton	7.5%	5,697
Garden Grove	13.0%	5,506
Huntington Beach	4.9%	2,002
Irvine	7.2%	3,042
Lake Forest	5.9%	1,016
Mission Viejo	2.5%	626
Newport Beach	0.8%	105
Orange	11.5%	3,794
Santa Ana	20.1%	21,824
Tustin	8.0%	1,648
Westminster	8.8%	2,116
Yorba Linda	2.5%	421
Orange County	10.4%	78,738

Please note that the 2009 ACS does not have data available for cities with populations less than 65,000. Mission Viejo and Lake Forest are the only available CHOC at Mission service area cities.

CHOC Service Area

- Children in Santa Ana were almost **twice (20.1% vs. 10.4%)** as likely not to have health care coverage as the general population of Orange County.
- Children in the following cities had higher rates of non-coverage than the overall county estimate: Anaheim, Costa Mesa, Garden Grove, Orange, and Santa Ana.
- Children in Newport Beach had the lowest rate of non-coverage (**0.8%** or an estimate of 105).

Healthy People 2020 Objective

Increase to **100%** the proportion of people with health coverage by 2020.

Population Without Health Coverage, 2009:

[California Health Interview Survey Orange County](#)
5.8% (46,000)
0-17 Years

22.6% (447,000)
18-64 Years

1.7% (6,000)
65+ Years

[California](#)
4.9% (481,000)
0-17 Years

20.9% (4,901,000)
18-64 Years

0.9% (38,000)
65+ Years

[American Community Survey Orange County](#)
10.4% (78,738)
0-17 Years

23.4% (448,175)
18-64 Years

2.4% (8,260)
65+ Years

[California](#)
9.5% (890,998)
0-17 Years

24.4% (5,595,750)
18-64 Years

1.8% (72,600)
65+ Years

Trend of Lack of Coverage, Orange County and California: [CHIS](#)

Children 0-17 Years

9.7% (OC)
9.4% (CA)
2001

9.6% (OC)
7.1% (CA)
2003

8.2% (OC)
6.4% (CA)
2005

3.6% (OC)
5.7% (CA)
2007

5.8% (OC)
4.9% (CA)
2009

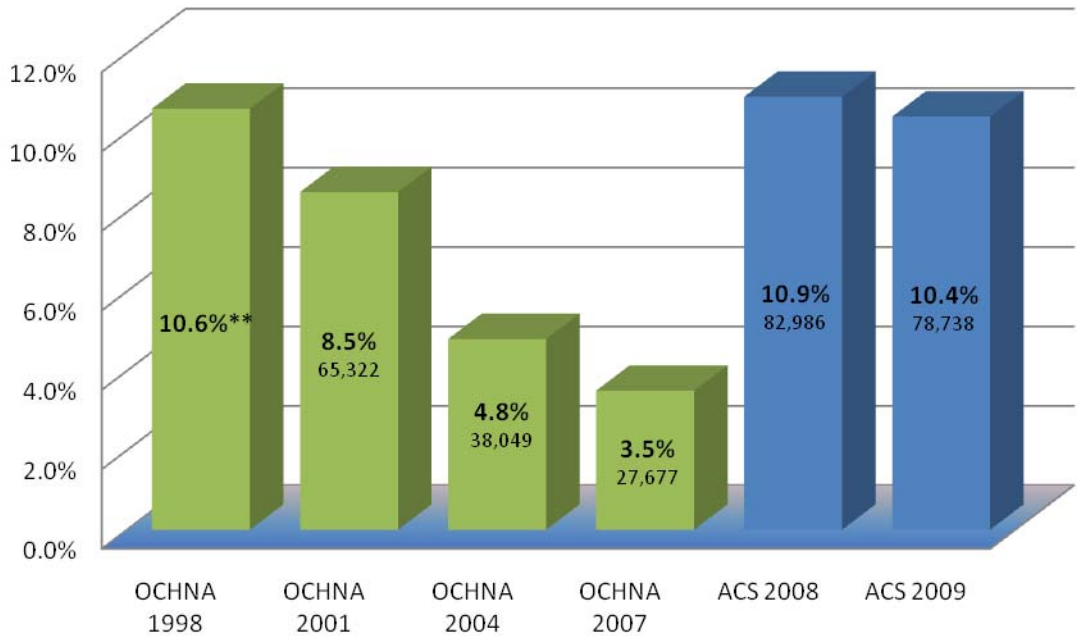
CHOC at Mission Service Area

An estimated **3.9%** (1,642) of children in Lake Forest and Mission Viejo lacked health coverage in 2009. As there are only two CHOC at Mission service area cities available on the ACS database, the population estimate of 1,642 reflects only a segment of the total uncovered population; it is expected that many more children in this subset did not have health coverage.

Trends in Health Care Coverage Status

Evidenced in the figure below, children made substantial gains in health care coverage from 1998 through 2007. However, 2008 ACS data show that the estimated proportion of children without health care coverage in the CHOC service area has increased considerably from the low levels in 2007. (Trend data of children in the CHOC at Mission service area was not possible because there were too few children without health care coverage to produce statistically reliable results in all survey years.)

Figure 1: Children 0-17 Without Health Care Coverage by Year: CHOC Service Area, OCHNA 1998-2007* and ACS 2008-2009



*OCHNA population estimates are based on State of California, Department of Finance population estimates.
**The 1998 OCHNA survey was adult only; the population estimate (80,271) of children is based on adult weights.
Source: US Census Bureau, 2008 and 2009 American Community Survey

- From 1998 to 2007, children in the CHOC service area without health care coverage declined by **67.0%**; during the same time period, the population of children served grew by **4.5%**.
- While the decline of children without health care coverage from 1998 to 2007 is notable, it appears the economic downturn has considerably negated these positive developments. The 2009 ACS estimate of uncovered children is almost **three times (3.5% vs. 10.4%)** the child estimates for 2007.

Types of Health Coverage

The table below presents the proportion of children in the CHOC and CHOC at Mission service area who lacked coverage for specific types of coverage.

Table 2: Children Without Specific Types of Coverage: CHOC Service Areas, OCHNA 2007				
Lack of Coverage by Type:	CHOC		CHOC at Mission	
	Percent	Population Estimate	Percent	Population Estimate
Primary Health Care Coverage.	3.5%	27,677	Statistically Unstable	-
Prescription Health Coverage.	8.4%	65,615	Statistically Unstable	-
Dental Health Coverage.	18.6%	144,334	16.9%	30,176
Vision Health Coverage.	24.7%	187,725	26.5%	46,630
Mental Health Coverage.	25.3%	157,855	18.6%	27,850

- Approximately **one in four** children in the **CHOC** service area lacked vision and mental health care coverage in 2007.
- Approximately **one in four** children in the **CHOC at Mission** service area lack Vision coverage.

Approximately **one in four** children in **Orange County** lacked vision and mental health coverage in 2007.



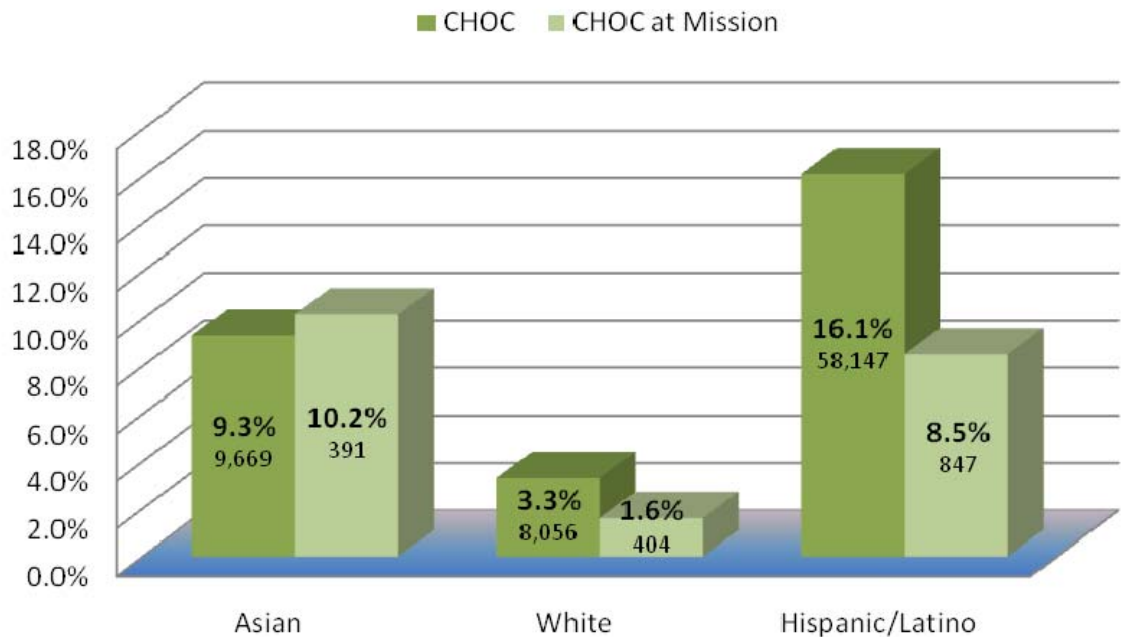
Demographics and Health Care Coverage in the CHOC Service Area

It is well recognized that income, race, and age are determining factors in an individual’s health coverage status. Generally households with an annual income under \$25,000 are less likely to have health care coverage; those over \$50,000 are more likely. Racial/ethnic minorities are less likely to have coverage; whites are more likely. The sections below examine the available demographic characteristics of those without coverage from the 2009 American Community Survey.

Race/Ethnicity

Race/ethnicity is a common factor in determining who is likely to have health coverage. In general, racial/ethnic minorities are less likely to have coverage than whites. In the CHOC service area and the CHOC at Mission subset (aggregation of Mission Viejo and Lake Forest data only), this disparity is also visible. The figure below presents the proportion of children who lacked coverage from ACS 2009.

Figure 2: Children Without Health Care Coverage: CHOC Service Areas, ACS 2009



Please note that the 2009 ACS does not have data available for cities with populations less than 65,000. Lake Forest and Mission Viejo are the only two cities in the CHOC at Mission service area that ACS has data on. Source: US Census Bureau, 2009 American Community Survey

- Hispanic/Latino children in the **CHOC** service area were nearly **five times** (3.3% vs. 16.1%) more likely to lack health care coverage than white children.
- Asian children in the **CHOC at Mission** service area were **six times** (1.6% vs. 10.2%) more likely to lack health care coverage than white children.

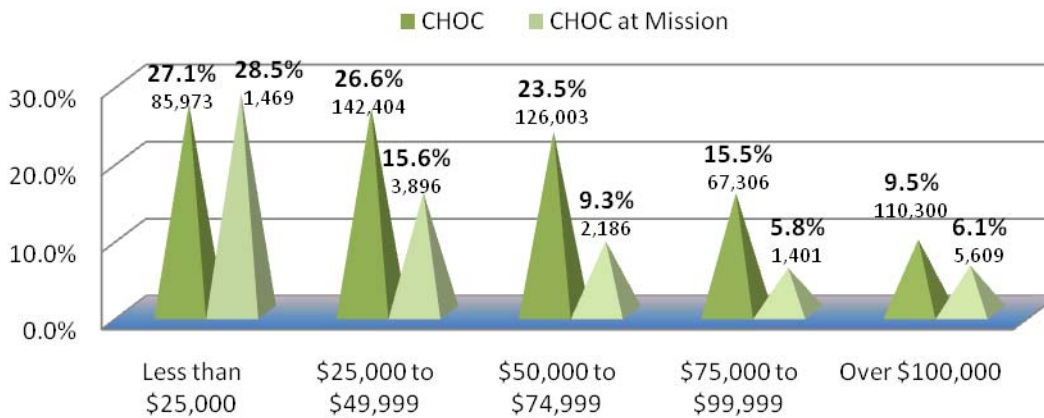
In the CHOC service area, Hispanic/Latino children had the lowest rates of coverage.

In the CHOC at Mission service area, Asian children had the lowest rates of coverage, followed by Hispanic/Latino children.

Income

Income is often closely related with health care coverage status. In this depressed economic climate, more families have been pushed into lower income levels from job losses or reductions in employment benefits. The following table presents individuals (adults and children) without health care coverage and their corresponding household income levels in the CHOC service areas.

Figure 3: Individuals (All Ages) Without Health Care Coverage Within Annual Household Income: CHOC Service Areas, ACS 2009



Please note that the 2009 ACS does not have data available for cities with populations less than 85,000. Lake Forest and Mission Viejo are the only cities in the CHOC at Mission service area with available ACS data. Source: US Census Bureau, 2009 American Community Survey

- There is a clear pattern concerning household income level and whether an individual has health care coverage. As income increases, the likelihood of having health care coverage increases as well.
- In the **CHOC** service area, over **one in four** of individuals from households with annual incomes below \$50,000 lacked health coverage.
- Except in the income category \$25,000 or less, individuals in the **CHOC at Mission** service area had lower levels of non-coverage than those in the CHOC service area.

Percent of Individuals Without Coverage by Household's Annual Income: [\(American Community Survey, 2009\)](#)

Less than \$25,000

25.5% (1,458,201)
California

30.0% (515,116)
Los Angeles

27.1% (85,973)
Orange County

27.0% (89,100)
Riverside

27.8% (100,054)
San Bernardino

26.2% (113,361)
San Diego

18.0% (30,843)
Santa Clara

\$100,000 or More

8.6% (949,072)
California

11.0% (286,033)
Los Angeles

9.5% (110,300)
Orange County

10.7% (57,707)
Riverside

11.1% (51,989)
San Bernardino

7.4% (68,668)
San Diego

6.5% (55,337)
Santa Clara

Health Coverage Status by Poverty Level

The table below presents the percent of children without health care coverage within each Federal Poverty Level (FPL). The FPL in 2009 for a four-person household was **\$22,050**; for a one-person household it was **\$10,830**.

Children living in poverty had the lowest rates of health care coverage.

Table 3: Children 0-17 Without Health Care Coverage <i>Within</i> Federal Poverty Level (FPL): CHOC Service Areas, ACS 2009				
Percent of FPL	CHOC Service Area		CHOC at Mission Service Area	
	Percent	Population Estimate	Percent	Population Estimate
Under 100%	18.3%	20,511	27.5%	418
100%- 199%	17.8%	27,766	9.5%	636
200%- 299%	12.2%	14,292	0%	0
300%- 399%	7.4%	6,817	2.3%	156
400% +	2.2%	5,710	1.8%	432

Please note that the 2009 ACS does not have data available for cities with populations less than 65,000. Lake Forest and Mission Viejo are the only two CHOC service area cities with available ACS data. Source: US Census Bureau, 2009 American Community Survey

- The closer a child was to poverty, the more likely he or she lacked health care coverage.
- Most children under 100% FPL will probably qualify for some kind of government coverage.
- Close to **one in five** children, under 199% FPL, lacked health care coverage in the **CHOC** service area.
- Close to **one in three** children under 100% FPL in the **CHOC at Mission** service area lacked health care coverage.
- For children in both service areas, lack of health care coverage decreased with each increase in the FPL.

Age

The table below provides the proportions of children in each age group who did not have health coverage in the CHOC service areas.

Older children were more likely to be without coverage than younger children.

Table 4: Children Without Health Care Coverage <i>Within</i> Age Group: CHOC Service Areas, ACS 2009				
	CHOC		CHOC at Mission	
	Percent	Population Estimate	Percent	Population Estimate
0-5 Years	8.9%	22,848	2.2%	281
6-17 Years	11.2%	55,890	4.6%	1,361

Please note that the 2009 ACS does not have data available for cities with populations less than 65,000. Lake Forest and Mission Viejo are the only two CHOC service area cities with available ACS data. Source: US Census Bureau, 2009 American Community Survey

- Children (0-5) in the **CHOC at Mission** service area were **four times (2.2% vs. 8.9%)** less likely to lack health care coverage than children in the main service area.
- **27%** (204,180) of children 0-5 in the **CHOC** service area had public health care coverage, which may include Medi-Cal or Healthy Families.

**Assessing Gaps in Health Care Coverage (OCHNA 2007):
Countywide CHOC Service Area**

Although **96.5%** of all parents reported that their child did have health care coverage in the OCHNA 2007 survey, a number of the children experienced gaps in coverage at some point in the year prior to the survey. A loss of health care coverage can lead to a disruption in needed medical care for chronic health conditions, such as asthma, and the delay of important preventative health services such as well baby check-ups and immunizations. This could potentially result in a need for more serious and costly medical services and/or ER visits.

- Of the **96.5%** who had coverage for their child in 2007, nearly **4% (3.9%** or an estimated 30,089) of parents reported that their child was without coverage in the previous year.
 - **55.6%** (16,718) were Hispanic/Latino.
 - **20.0%** (6,179) were white.
 - **47.1%** (14,168) were between the ages of 6 and 11.
 - **30.4%** (9,139) were between the ages of 0 and 5.
 - **52.2%** (10,218) had an annual household income between \$25,000 and \$49,999.
- Of the **3.9%** that experienced a lapse in coverage nearly **half (48.4%** or an estimated 10,114) of their children were without health care coverage lasting 1 to 4 months; over **one third (35.3%** or an estimated 7,388) experienced a gap in coverage lasting 8 to 12 months.

The most frequently reported reason for this gap in coverage was a change in or loss of employment, as shown below. Due to the economic downturn, these gaps may be more common and more prolonged among children and families.

Table 5: Top 3 Parent Reasons for Child’s Gap in Health Coverage in Previous Year:* CHOC Service Area, OCHNA 2007	
Changed Employment/ Lost Job	32.3%
Could Not Afford/ Too Expensive	17.3%
Loss of a Public Program Coverage (Medi-Cal/Healthy Families, etc.)	16.9%

*Of those whose child currently does have health care coverage

- Of the **16.9%** (4,757) who reported their child was without health care coverage due to a loss of a public health care program, **86.0%** (4,088) were Hispanic/Latino (between all race/ethnicities).

None of the **86.0%** Hispanic/Latino children “aged out” of a public program, as the oldest child reported was only ten years old. Income eligibility does not appear to be a major factor as **100%** of the respondents reported a low household income of \$20,000 to \$30,000. It is unknown whether factors such as an incomplete/ inaccurate application or other unmet eligibility requirements contributed to the child’s loss of a public program.

Lack of eligibility and lack of affordability were the major reasons for not having health care coverage.

Some common barriers that are well-known to affect access to coverage include:

- Language issues
- Undocumented immigration status for children and/or parents
- High cost of services or inability to pay premiums
- Job loss of parent/guardian
- Limited availability of low-income clinics
- Cutbacks in public programs due to the recession

Parents Without Health Care Coverage (OCHNA 2007): Countywide CHOC Service Area

Of the **3.5%** (27,677) of children who were without health care coverage, **57.1%** (15,675) of their parents lacked coverage also. In contrast, of the **96.5%** (773,062) of children who did have health care coverage, only **5.9%** (45,940) of the parents lacked health care coverage. Parents of children who lacked health care coverage were almost **ten times** more likely to be without coverage themselves compared to the parents of children with health care coverage.

Altogether, an estimated **7.7%** (61,771) of all parents were without health care coverage. Of these:

- **74.6%** (45,940) of parents indicated that their child had some form of health care coverage; with **53.6%** of these children having coverage from Medi-Cal and **25.3%** from Healthy Families, **2.7%** from California Kids and **0.4%** from the OC Healthy Kids program, which will be closing its doors February 2011. The remaining **18%** had coverage through the private sector.

The **7.7%** (61,771) of parents and guardians who themselves were without coverage at the time of the survey were asked for the main reason they were without it.

Table 6: Top 4 Parent/Guardian Reasons for Their own Lack of Health Care Coverage: CHOC Service Area, OCHNA 2007	
Costly or Could Not Afford to Pay Premiums	47.0%
Lost Job or Changed Employers	15.5%
Employer Does Not Offer or Stopped Offering Benefits/Coverage	9.0%
Do Not Know How to Get Health Insurance/ Looking For a Plan	7.7%

- **47.0%** (26, 406) respondents reported cost as the reason they were without care coverage. Of these:
 - **50.0%** (10,982) had a household income between \$25,000 and \$49,999.
 - *Between* race/ethnicity, **68.6%** (17,695) were Hispanic Latino and **19.0%** (4,912) were white.

Although parent health care coverage status can influence the coverage status of the child, it appears that publicly and privately funded coverage programs have helped to minimize the number of children without coverage even if a parent does not have coverage.

Barriers to Health Care Coverage (OCHNA 2007)

In 2007 **3.5%** (27,677) of children were without health care coverage; the cost of coverage was the number one barrier with **43.0%** (10,605) of parents reporting this as the reason their child was without coverage. Since then, the economic situation has clearly darkened for many families; job losses, reduced household incomes, and cuts in state and federal health care programs, have contributed to the current proportion (**10.4%** or an estimated 78,738) of children without health care coverage. The following bullet points describe some of the common barriers that are well-known to have an impact on whether or not children have health care coverage.

- Language issues
- Undocumented immigration status for children and/or parents
- High cost of services or inability to pay premiums
- Job loss of parent/guardian
- Limited availability of low-income clinics
- Cutbacks in public programs due to the recession

The top four reasons parents gave for their child being without coverage are presented in the table below.

Table 7: Top 4 Parent Reasons for Why Child Was Without Coverage: CHOC Service Area, OCHNA 2007	
Could Not Afford to Pay Premiums	43.0%
Became Ineligible Because of Age or Left School	12.0%
Spouse or Parent Lost Job or Changed Employers	9.0%
Became Divorced or Separated	8.2%

The 2007 OCHNA survey asked several questions regarding barriers to health care. One such question was whether the parent had delayed getting treatment for their child in the past 12 months. **4.3%** (34,066) of parents in the CHOC service area responded they had. **One in four (28.4%** or an estimated 9,298) listed cost as the reason.

Another barrier to health care is the availability of services when needed. **One in three (33.4%** or an estimated 222,948) respondents reported their child's usual source of care was not open evenings or on the weekends. Not having access to services when needed may increase the likelihood of utilizing the ER for non-emergency purposes.

Satisfaction with Child's Health Care Plan (OCHNA 2007)

Even though a child may have health coverage, there is no guarantee he or she will be able to receive all needed health services. This may be due to inadequacies in the child's health coverage plan, expensive co-pays or not being able to find a provider that a parent feels confident in or comfortable with. Any one of these factors can influence how a person views their child's health plan, the quality of their care, services received and the health professional.

Overall most respondents were satisfied or very satisfied (**89.7%** or an estimated 675,218) with their child's health care plan; however, **4.0%** (30,291) stated they were dissatisfied or very dissatisfied. There was very little variation in race/ethnicity or income for those that were dissatisfied. Of those dissatisfied, **60.5%** (18,330) reported *out-of-pocket costs* as the reason. The following table lists the top three reasons parents were dissatisfied or very dissatisfied with their child's health care plan.

Table 8: Top 3 Parent/Guardian Reasons for Dissatisfaction With Child's Current Health Coverage Plan: CHOC Service Area, OCHNA 2007	
Out-Of-Pocket Costs (Premiums and Co-Pays)	60.5%
Health Benefits Do Not Cover What Child Needs	13.8%
Do Not Like Quality of Care or Doctor/Health Care Provider	10.2%

- Just over **60.0%** (18,330) of those who were dissatisfied with their child's current health care coverage cited out-of-pocket costs as the number one reason. Of these:
 - **89.2%** (16,355) reported having employer-based plans such as Blue Cross and **10.8%** (1,975) reported having publicly funded plans such as Healthy Families.
 - **50.9%** (9,322) were Hispanic/Latino.

High premiums and co-pays are by far the most common reason for parent dissatisfaction with their children's health care coverage plan.

225,135
Orange County
Medi-Cal
Beneficiaries Ages
0-18, Dec. 2010
[\(California Department of Health Care Services\)](#)

Healthy Families
Enrollments by
County, Dec. 2010:
[\(Managed Risk Medical Insurance Board\)](#)

222,458
Los Angeles
County

82,571
Orange County

75,832
Riverside County

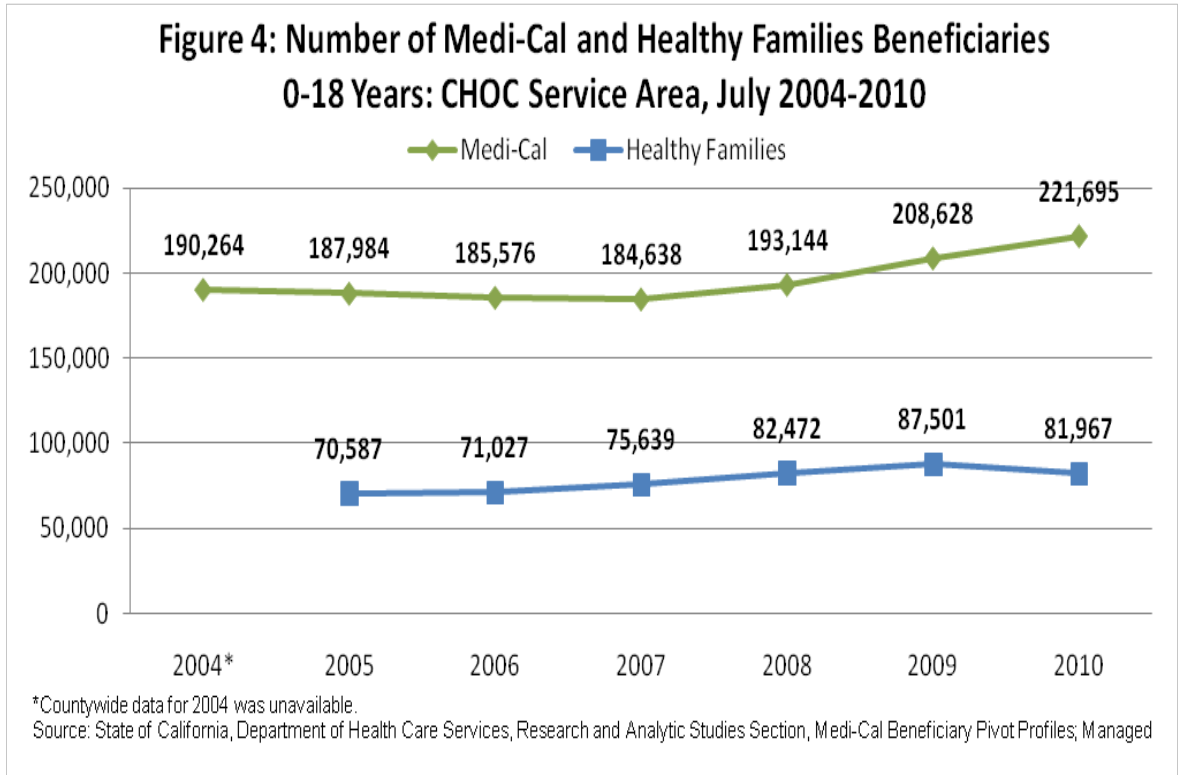
63,598
San Bernardino
County

72,052
San Diego

32,499
Santa Clara

Scope of the Safety Net in the Service Area (0-18 Years)

The sustained nature of the economic downturn has led to an increased reliance on public safety net programs in Orange County and all across California. Since July of 2007, before the beginning of the recession, there has been an overall increase in the numbers of beneficiaries in the Medi-Cal and Healthy Families programs, according to numbers provided by the State of California [Department of Health Care Services](#) and [Managed Risk Medical Insurance Board](#). The numbers include all beneficiaries, including Medi-Cal and Healthy Families members not covered through CalOptima (e.g. fee for service or limited scope Medi-Cal).



- From July 2005, the numbers of Medi-Cal beneficiaries has been steadily rising, with a noteworthy increase from July 2009 to July 2010, which coincides with the economic downturn.
- While the proportion of children in Healthy Families countywide has been decreasing since July 2009, there was a continuous increase from July 2005 to July 2009. The decrease from 2009 to 2010 could have been attributed to the Healthy Families enrollment freeze in fall of 2009.
- As of December 2010, there were **210,172** Medi-Cal beneficiaries countywide; children 0-18 years comprised **51.0%** of total Medi-Cal beneficiaries (out of 411,749).
- In December 2010 **10,961** beneficiaries had an undocumented immigration status, accounting for **5.2%** of Medi-Cal beneficiaries 0-18 years in the county during that month. Children with undocumented status composed **20.6%** of all undocumented Medi-Cal beneficiaries in Orange County during December 2010 (out of 53,243).

Healthy Families Enrollments (December 2010)

As of December 2010, **82,571** Healthy Families recipients (children between 0-18 years) lived in the CHOC service area, corresponding to all of Orange County; they lacked private health coverage, but did not qualify for no-cost Medi-Cal and are US citizens, nationals, or qualified aliens residing in California. The table below presents the population of Healthy Families members by the 10 most populous CHOC service area/Orange County cities for children.

- Over **one in five** (22.8%) Healthy Families recipients in Orange County resided in Santa Ana.
- The **CHOC at Mission** subset contained **8,432** Healthy Families recipients, or about **10.2%** of total countywide/service area-wide beneficiaries.

Table 9: Healthy Families Enrollments by Most Populous Service Area City: CHOC Service Area, December 2010	
City in Service Area	Number of People
Anaheim	13,688
Costa Mesa	3,173
Fullerton	3,786
Garden Grove	7,896
Irvine	3,038
Huntington Beach	2,531
Mission Viejo	1,621
Orange	3,419
Santa Ana	18,856
Westminster	3,600

Source: Managed Risk Medical Insurance Board, Healthy Families Enrollments

CaliforniaKids

Effective 11/1/2010, **CaliforniaKids**, a program that offers access to primary and preventive health care services for children who do not qualify for state-sponsored programs due to their immigration status, has increased their premiums to \$75 per member, per month for all new enrollments. Also effective 01/01/2011, premiums will be increased for current members to \$75 and vision coverage will no longer be available. CaliforniaKids currently serves **2,358** children in the county.

CalOptima Enrollments in the Service Area (August 2010)

Full Scope or Share of Cost Medi-Cal Enrollments

Medi-Cal is a state and federally funded safety net health care program that provides needed health coverage and services for those with limited income and resources. The scope of Medi-Cal benefits range from full (free) and share-of-cost Medi-Cal to limited-scope Medi-Cal. CalOptima is a county-organized managed care plan that generally oversees full or share-of-cost Medi-Cal in Orange County. There were a total of **195,000** CalOptima Medi-Cal members ages 0-18 years in the CHOC service area in August 2010 (includes those who listed PO Box addresses). Children 0-18 years accounted for **55.2%** of all CalOptima Medi-Cal members.

CalOptima Medi-Cal Membership by Age, Aug. 2010: (CalOptima)

38.0% (134,296)
0-10 Years

19.8% (69,985)
11-20 Years

353,185
Total Medi-Cal CalOptima Membership in August 2010

The table below presents 10 most populous service area cities with their CalOptima Medi-Cal membership.

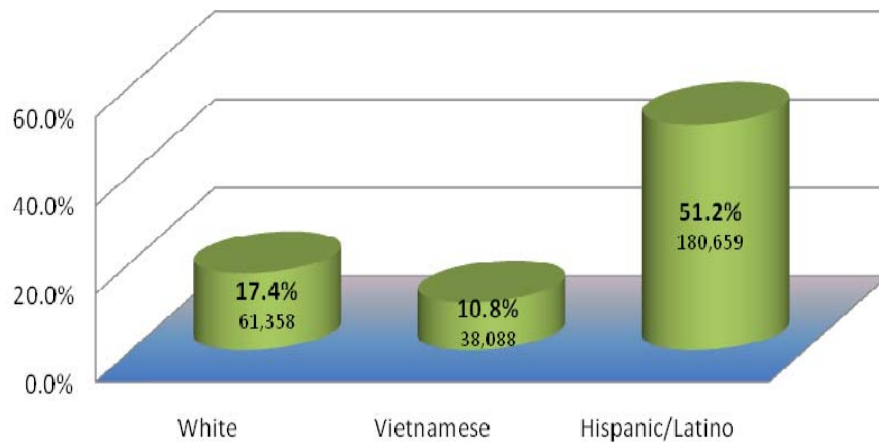
Table 10: CalOptima Medi-Cal Enrollments of Children 0-18 Years by Most Populous Service Area City: CHOC Service Area, August 2010			
City in Service Area	Number of People	City in Service Area	Number of People
Anaheim	38,278	Huntington Beach	6,268
Costa Mesa	6,788	Mission Viejo	2,183
Fullerton	8,123	Orange	9,547
Garden Grove	17,340	Santa Ana	52,224
Irvine	3,348	Westminster	8,051

Source: CalOptima

- The 10 cities were home to **78.0%** (152,150) of all CalOptima Medi-Cal members 0-18. Over **one in five** (22.9%) of those members resided in Santa Ana.
- **8,423** (4.3%) Medi-Cal beneficiaries under 19 years resided in the **CHOC at Mission** service area.

The figure below presents the race/ethnic distribution of overall CalOptima Medi-Cal membership for the key race/ethnic groups in Orange County (both children and adults).

Figure 5: Race/Ethnic Distribution of CalOptima Medi-Cal Members (All Ages): CHOC Service Area, August 2010



Source: CalOptima

- Over **half** of CalOptima Medi-Cal members in the CHOC service area were Hispanic/Latino.

Healthy Kids

The [Healthy Kids Program](#) is low-cost insurance for children and teens not eligible for no-cost Medi-Cal or the Healthy Families Program administered by CalOptima. The program is open to individuals 18 years and younger who live in California and are US citizens or legal residents. Individuals must also meet the income guidelines. However, CalOptima reports that the Healthy Kids Program will be ending on February 28, 2011 due to funding challenges.

- In the **CHOC** service area there were a total of **570** Healthy Kids members in August 2010.
 - In the **CHOC at Mission** subset, there were **33** Healthy Kids members in August 2010.

Hispanics/Latinos comprised the majority of all CalOptima Medi-Cal members in the county.

Health Care Utilization

The degree to which all types of health care services are used depends on a number of environmental, social, and economic factors that exist within a community. Such factors include the availability and affordability of medical services offered, the health care system's organizational structure, and individual or community beliefs and attitudes about utilizing health services. Furthermore, while good health is the primary objective of utilization, the interactions between patient and provider is integral to the overall process of accessing health services.

Note

The majority of the analysis in this section pertains to **OCHNA 2007 survey data** when the economic outlook was much more favorable. As suggested by the American Community Survey (ACS), the picture has darkened considerably. This means that there are many more children and their families who are currently unable to access needed health care services.

Child (0-17) Utilization of Health Care Services: OCHNA 2007 Sources of Health Care

The majority (**84.7%** or an estimated 662,804) of parents in the CHOC service area identified the doctor's office or an HMO provider as the source of their child's health care. As for the type of provider utilized, **68.8 %** (481,547) of parents sought services from a general practitioner. **79.6%** (624,511) of parents utilized one place as their source of care for their child, **16.1%** (126,626) reported two places, **3.1%** (23,935) reported three places, and a few (**1.1 %** or an estimated 9,245) reported four or more places for their child's source of care. Since the data is based on the OCHNA 2007 survey, this does not take into account the dramatic changes occurring from the economic downturn that has currently left many families unable to utilize various health care services. The following table lists the top five locations children were taken for routine health care.

Table 1 : Top 5 Responses for Location of Child's (0-17) Usual Source of Routine Health Care: CHOC Service Areas, OCHNA 2007				
Location	CHOC Service Area		CHOC at Mission Service Area	
	Percent	Population Estimate	Percent	Population Estimate
Doctor's Office or HMO	84.7%	662,804	88.3%	157,811
Community Clinic	4.7%	36,530	1.1%	1,894
Free Clinic*	2.9%	22,624	2.4%	4,204
Urgent Care*	2.5%	19,436	5.2%	9,308
Hospital Outpatient Center*	2.3%	18,063	0.7%	1,291

* Categories have too few respondents for further statistical analysis.

Type of Usual Source of Care for Child (0-17): [\(CHIS 2009\)](#)

California

64.5% (6,335,000)
 Doctor's Office/
 HMO/Kaiser

26.3% (2,581,000)
 Community Clinic/
 Government Clinic/
 Community
 Hospital

0.6% (55,000)
 Emergency Room/
 Urgent Care

0.8% (79,000)
 Some Other Place/
 No One Place

7.8% (765,000)
 No Usual Source of
 Care

Orange County

67.0% (524,000)
 Doctor's Office/
 HMO/Kaiser

20.3% (159,000)
 Community Clinic/
 Government Clinic/
 Community
 Hospital

0.3%* (2,000)
 Emergency Room/
 Urgent Care

0.8%* (6,000)
 Some Other Place/
 No One Place

11.6% (91,000)
 No Usual Source of
 Care

*Statistically unstable data estimate.

**Healthy
People 2020
Objective**

Increase to 100% the proportion of children 0-17 years with a source of ongoing care.

The service area did not meet the HP 2020 Objective

No usual place to go when in need of medical advice or when child is sick (0-17): [\(CHIS 2009\)](#)

7.8% (765,000)
California

8.3% (225,000)
Los Angeles
County

11.6% (91,000)
Orange County

7.5% (44,000)
Riverside County

7.0% (41,000)
San Bernardino
County

6.2% (50,000)
San Diego County

3.0%* (30,000)
Santa Clara County

*Statistically unstable data estimate.

CHOC Service Area

- 84.7 (662,804) of children in the CHOC service area saw their health care provider in a doctor’s office or HMO facility.
 - 63.4% (356,927) of children in the CHOC service area who last saw their health care provider in a doctor’s office had household incomes over \$75,000; only 4.1% (22,833) in the CHOC service area had household incomes under \$25,000.
 - In the CHOC service area, 77.1% (497,937) of these children had employer-based coverage; 11.6 % (75,179) had a government plan, and 8.6% (55,266) had an individually purchased plan.
 - There were no significant differences between racial/ethnic groups or age groups as it relates to the children who saw their health care provider in a doctor’s office or HMO facility.
- 8.2% (30,928) of Hispanic/Latino children in the CHOC service area received routine care at a community clinic, compared to 1.1% (2,815) of white children.
- A small fraction 0.8% (6,157) of children in the CHOC service area utilized the ER for routine health care.

CHOC at Mission Service Area

- 88.3% (157,811) of children in the service area saw their health care provider in a doctor’s office or HMO facility.
 - 78.2% (109,483) of children who last saw their health care provider in a doctor’s office had household incomes over \$75,000.
 - 84.9% (131,630) had employer-based coverage; 2.6% (4,009) had a government plan, and 9.1% (14,050) had individually purchased plans.

Usual Source of Care

A usual source of care is any medical facility a person views to be his or her regular site of care. Having a regular site of care helps to ensure the consistency of care the child receives as the provider will be familiar with the child’s medical history. However, the growth in the proportion of children without health coverage in 2008 and 2009 may suggest that fewer children currently have a usual source of care.

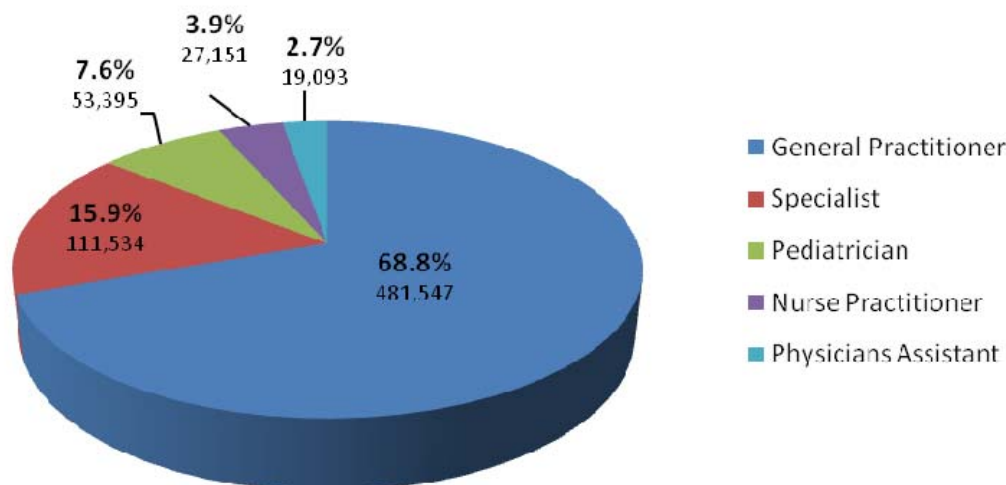
- In the **CHOC** service area, 79.6% (624,511) of children had a usual source of care, 16.1% (126,626) frequented two sites of care, and 4.2% (9,505) frequented three or more sites. Children in the CHOC at Mission service area had almost identical percentages.

The top three reasons parents gave for not having a usual source of care for their child were:

- Parent likes different places for child’s health care needs:
CHOC Service Area 21.4%
CHOC at Mission Service Area 28.6%
- Lack of evening or weekend services:
CHOC Service Area 19.1%
CHOC at Mission Service Area 16.5%
- Child seldom or never gets sick:
CHOC Service Area 17.4%
CHOC at Mission Service Area 14.3%

An important aspect of parents' utilization of health care services is choosing an appropriate provider for their child's needs. The figure below provides the practitioners that children visited on their last appointment.

**Figure 1: Top 5 Responses for Type of Practitioner
Child (0-17) Visited on Last Appointment:
CHOC Service Area, OCHNA 2007**



Most children saw a general practitioner during their last appointment.

CHOC Service Area

- **15.9%** (111,534) of children in the CHOC service area visited a specialist on their last appointment.
 - *Within* race/ ethnicity, white children were **twice** as likely (**17.5%** or an estimated 40,251) to have visited a specialist, than Other Asian or Pacific Islander children (**8.3%** or an estimated 4,592).
- There were no significant differences to report concerning income or age group of the children who last visited a specialist.

CHOC at Mission Service Area

- The proportion of children in the CHOC at Mission service area that visited various practitioners is very similar to those in the main service area:
 - **67.0%** (108,308) visited a general practitioner.
 - **17.5%** (28,288) visited a specialist.
 - **6.6%** (10,719) visited a pediatrician.
 - **5.5%** (8,884) visited a nurse practitioner.
 - **2.4%** (3,928) visited a physician's assistant.

Number of Doctor Visits in the Past Year for Child (0-17): [\(CHIS 2009\)](#)

California

10.2% (1,004,000)
0 Visits

23.0% (2,262,000)
1 Visit

47.6% (4,671,000)
2-4 Visits

14.0% (1,372,000)
5-8 Visits

3.2% (315,000)
9-12 Visits

1.9% (191,000)
13+ Visits

Orange County

16.2% (127,000)
0 Visits

25.8% (202,000)
1 Visit

42.1% (329,000)
2-4 Visits

11.2% (88,000)
5-8 Visits

4.7%* (37,000)
9+ Visits

*Statistically unstable data estimate.

Frequency of and Reasons for Primary Health Care Visits

Medical professionals recommend regular health care visits even for children with no health issues; these are often referred to as well child check-ups. These visits are instrumental to ensuring a child is not harboring a disease or illness they or their parents might be unaware of. Early detection of disease or illness often allows for better treatment options.

- **90.4%** (709,094) of children in the **CHOC** service area had visited their doctor within the past year; an additional **8.6%** (67,580) of children had visited their doctor within the past two years, bringing the total to **99.0%** within the two year time frame.
- **99.4%** (176,750) of children in the **CHOC at Mission** service area visited their doctor within the past two years.
- There was little variation in race/ethnicity, income, or age groups regarding frequency of visits.

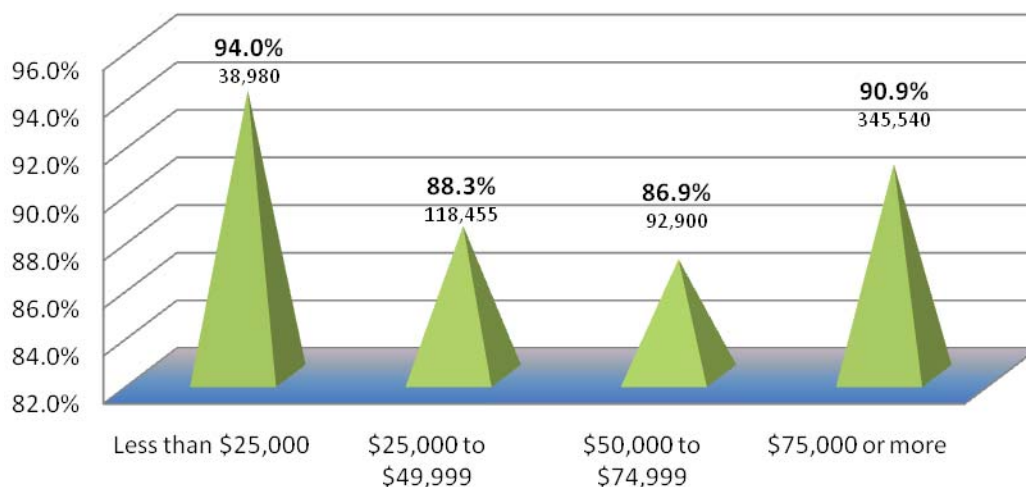
The following table lists the top five reasons given by parents for their child’s visit to a doctor in the past year.

Table 2: Top 5 Reasons for a Doctor Visit for Child (0-17): CHOC Service Areas, OCHNA 2007		
Reason	CHOC Service Area	CHOC at Mission Service Area
Routine Check-up	61.3%	59.0%
Acute Illness (e.g., flu)	21.9%	23.6%
Treatment for a Chronic Disease	5.3%	5.5%
Treatment of an Injury	4.9%	6.1%
Immunization	2.2%	0.9%

- The majority of visits in both service areas to a doctor were for routine care.
- In both service areas, approximately **22.0%** of visits to a doctor for acute illness may have been prevented had the child had a flu vaccination.

The following figure depicts the **90.4%** of children who had visited a doctor in the past year *within* household income level

Figure 2: Children (0-17) Who Visited a Doctor or Health Care Provider in the Past Year *Within* Household Income Level: CHOC Service Area, OCHNA 2007



The poorest and the wealthiest children were most likely to have received health care in the past year.

CHOC Service Area

- Children with a household income of *less than* \$25,000 were the most likely to have visited a doctor in the past year.
 - 75.7%** (23,984) of children in this income category had government health care coverage, such as CalOptima or Healthy Families; by contrast, only **0.4%** (1,478) of children with a household income over \$75,000 had government health care coverage.

CHOC at Mission Service Area

95.0% (22,337) of children in the service area with a \$50,000 to \$74,999 income level and **92.8%** (110,295) of children in the over \$75,000 income level visited a doctor in the past year.

Quality and Accessibility of Primary Health Care

94.8% (671,178) of parents in the **CHOC** service area reported they were either *satisfied* or *very satisfied* with the quality of care their child received on his/her last visit; **3.7%** (26,271) were neutral and only **1.5%** (10,613) reported being *dissatisfied* or *very dissatisfied*. Similarly, **93.6%** (153,948) of parents in the **CHOC at Mission** service area were either *satisfied* or *very satisfied* with the quality of care their child received on the last visit. Very few parents were *dissatisfied* or *very dissatisfied*.

As previously mentioned, having access to health care when a child needs it is a topic of concern for parents who often find themselves in an ER when their regular source of care is not available. Parents were asked if their child's health care provider offered evening or weekend hours.

- One in three (33.4%** or an estimated 222,948) health care providers *do not* offer evening or weekend hours in the **CHOC** service area.
- 36.9%** (57,002) of parents in the **CHOC at Mission** service area reported their child's health care provider did not offer evening or weekend hours.

Healthy People 2020 Objective

Reduce to **9.0%** the proportion of individuals who are unable to obtain or delay in obtaining necessary medical or dental care or prescription medicines.

Delayed or Didn't Get Prescription Medication for Child (0-12): [\(CHIS 2009\)](#)

5.0% (494,000)
California

7.1%* (56,000)
Orange County

Delayed or Didn't Get Other Medical Care for Child (0-17): [\(CHIS 2009\)](#)

5.1% (500,000)
California

6.0% (47,000)
Orange County

*Statistically unstable data estimate.

Barriers to Health Care Utilization for Children (0-17)

Some common barriers to health care utilization include: cost, health care coverage, transportation, personal and community beliefs, language, and parental unawareness of the importance of routine checkups. More importantly, cost and health care coverage status remains a barrier to obtaining needed health care services for a child, and have become even more pronounced in the current economic climate. In 2007, OCHNA estimated that **3.5%** (27,677) of children were without health care coverage countywide. As discussed previously, the ACS estimates that in 2009, the rate of children without health care coverage dramatically increased **threefold to 10.4%** (78,738); the rate today is likely to be even higher due to the continued economic crisis.

It is generally recommended that children have an annual routine exam. In the **CHOC** service area, **9.6%** (75,019) of children had not visited their doctor in the past year for a routine exam. The most common response parents gave as to why their child had not been to the doctor was *there was no need to go since the child was not ill* (**80.2%** or an estimated 59,998). Cost, however, was a barrier for **4.5%** (3,332) of children. (There were too few children in the CHOC at Mission service area that did not have a routine checkup in the past year for statistical analysis.)

Parents were asked if they delayed or did not get treatment for their child.

- **4.3%** (34,066) of parents in the **CHOC** service area reported that they had delayed or did not get treatment for their child.

Another barrier to the utilization of health care services is the hours of operation limited to the business day. When a primary place of health care is not open in the evenings or weekends, access becomes difficult, and increases the likelihood that an ER will be utilized for a non-emergency health concern.

- **33.4%** (222,948) of parents in the **CHOC** service area indicated their child's primary place for care is not open evenings or on weekends; likewise, **36.9%** (57,002) of parents in the **CHOC at Mission** service area reported a lack of evening or weekend hours at their child's primary source of care.

Emergency Room Utilization

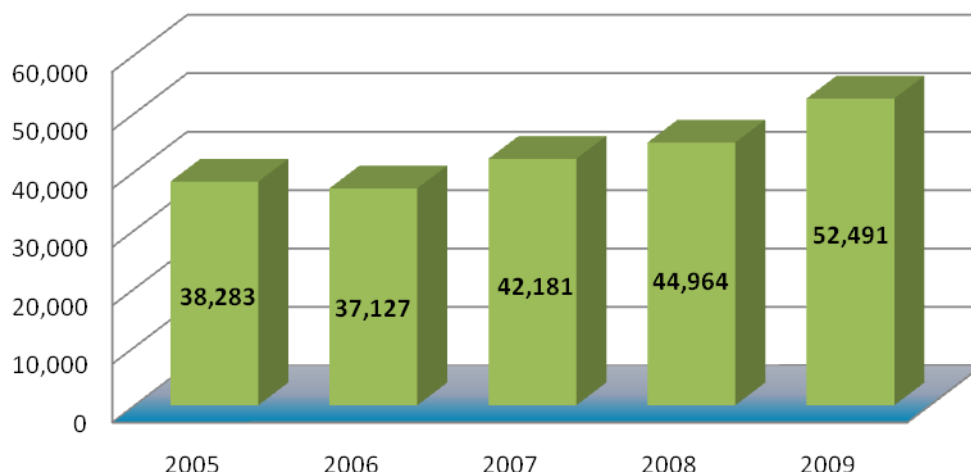
ED Encounters at the Children's Hospital of Orange County

The widespread loss of health coverage may play a role in increasing utilization at hospital emergency departments (ED). Without coverage, some may not be able to afford the treatments to manage their diseases, leading to an escalation of symptoms which take them to the ED. The figure on the next page presents the total number of yearly ED encounters at the Children's Hospital of Orange County between 2005 and 2009 from the [Office of Statewide Health Planning and Development](#) (OSHPD) quarterly ED profile reports. These ED encounters either resulted in a routine discharge, transfer to another facility, or discontinuation of care.

Countywide, the vast majority of ED encounters result in a routine discharge; in 2008, the most recent countywide data available, almost **95%** (543,832) of ED encounters in Orange County hospitals resulted in routine discharges.

Over **99%** of yearly ED encounters at CHOC resulted in routine discharges over 2005 to 2009. The vast majority of ED patients were under 20 years of age.

Figure 3: Total Yearly Emergency Department Encounters: Children's Hospital of Orange County, OSPHD 2005-09



Source: Office of Statewide Health Planning and Development (OSHPD) ED Reports

- There has been a gradual increase in ED utilization from 2006 to 2008; this upward movement was especially noteworthy from 2008 to 2009, when there was an increase of **16.7%**, which may coincide with the economic downturn.
- From January to September 2010, there were **35,471** ED encounters at the hospital; **99.6%** (35,322) of those encounters resulted in a routine discharge.

The table below displays the percent of ED encounters by Self-Pay patients (includes those without coverage, those who were applying to charity care, those paying with cash, or those who did not have health coverage at the time of service) and by Medi-Cal patients.

Table 3: Source of Pay for ED Encounters: Children's Hospital of Orange County, 2005-2009					
	2005	2006	2007	2008	2009
Medi-Cal	45.4% 17,363	48.5% 17,990	51.5% 21,723	54.7% 24,603	56.0% 29,405
Self-Pay	10.0% 3,817	9.8% 3,621	9.9% 4,184	7.4% 3,309	7.2% 3,772

Source: Office of Statewide Health Planning and Development (OSHPD) ED Reports

- The overall percent of Medi-Cal ED encounters at the Children's Hospital of Orange County increased from 2005 to 2009, which may be connected to the economic downturn. Since 2007 **over half** of ED encounters at the hospitals were by Medi-Cal patients.
- The percent of Self-Pay patients decreased from 2005 to 2009.
- From January to September 2010, there were **58.5%** (20,755) of encounters by Medi-Cal patients and **6.7%** (2,375) of encounters for Self-Pay patients at the Children's Hospital of Orange County.

Child (0-17) Visiting ER in the Past Year:
[\(CHIS 2009\)](#)

18.0% (1,770,000) California

13.8% (108,000) Orange County

The table below presents the five most common *primary diagnosis* groups of the **52,491** ED encounters in 2009 at Children’s Hospital of Orange County.

Table 4: Primary Diagnosis Groups of Emergency Department Encounters: Children’s Hospital of Orange County, 2009		
Primary Diagnosis Group	Percent	Number of ED Encounters
Symptoms	24.1%	12,626
Respiratory System	21.9%	11,507
Injuries/Poisonings/ Complications	19.4%	10,192
Infections	8.3%	4,359
Nervous System	7.7%	4,035

Source: Office of Statewide Health Planning and Development, Emergency Department Data, Public Data Set

- The vast majority of Children’s Hospital of Orange County ED patients were under 20 years of age. In 2009, **18.1%** (9,540) were under 1 years of age, **61.3%** (32,177) were between 1 and 9 years of age, and **20.3%** (10,670) were between 10 and 19 years of age.

The top reason for utilizing the ER was a result of injury.



Emergency Room Utilization: Children 0-17 Years (OCHNA 2007)

Parents in the CHOC service area were asked how many times they took their child to the emergency room (ER) in the past year; what prompted them to seek treatment, and why they chose the ER over other sources of care. All results are based on the 2007 OCHNA survey.

- **20.1 %** (151,365) of children in the **CHOC** service area visited an ER in 2007. Of these:
 - **17.2%** (129,357) visited the ER once in 2007.
 - **2.0%** (15,195) visited twice.
 - The remaining **0.8 %** (6,813) of children visited the ER three or more times.
- **19.2 %** (32,568) of children in the **CHOC at Mission** service area visited an ER in 2007. There are too few survey responses to determine the frequency of ER visits for each child in this sub-set.

The following table lists the top five reasons parents gave for why treatment was sought at the ER for their child.

Table 5: Top 5 Reasons for Child (0-17) Utilizing the ER: CHOC Service Areas, OCHNA 2007				
Reason	CHOC Service Area		CHOC at Mission Service Area	
	Percent	Population Estimate	Percent	Population Estimate
Injury	26.7%	39,111	53.9%	17,148
Fever	9.2%	13,416	N/A	-
Flu	7.4%	10,897	2.9%	919
Laceration/ Wound	6.7%	9,838	9.8%	13,122
Infection	5.6%	8,155	1.6%	494

- Over **one in four** trips to the ER was due to an injury in the **CHOC** service area; over **one in two** trips to the ER in the **CHOC at Mission** service area was for an injury.
- Utilization of flu vaccines could prevent **7.4%** of children from needing the services of an ER in the CHOC service area.

The reasons given for utilizing the ER were varied at the countywide **CHOC** service area.

- **33.3%** (49,422) stated it was the *fastest way to get care*.
- **24.1%** (35,708) *needed services after hours or on a weekend*.
- **13.1%** (19,378) *were told by their doctor to go to an ER*.

The fact that close to **one in four** children utilized the services of an ER because their usual place of care was not open, demonstrates the need for extended hours at primary care locations.

Many parents took their children to the ER because it was the fastest way to get care or services were needed when the usual place of care was not open.

2006-2008 Emergency Department Visits: Orange County Health Care Agency—[Orange County Geographic Health Profile 2011](#)

The data for this section comes from the California Office of Statewide Health Planning and Development (OSHPD) Emergency Department Visits Data for the period 2006- 2008. The non-public dataset includes de-identified records of visits to all Orange County hospital emergency departments in addition to all ED visits by Orange County residents to either OC or non-OC facilities. In the dataset the principal diagnosis for a visit is identified using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). ICD-9-CM is the official system of assigning codes to diagnoses and procedures associated with hospital utilization in the United States. We utilized 4 of the 5 possible digits in the ICD-9 code to group principal diagnoses. When a visit to an emergency department results in the patient being admitted to the same hospital, this visit is not included in the OSHPD ED visits dataset. Instead, it is included in the OSHPD Patient Discharge (PD) data. Thus, to get the complete picture of visits to emergency departments, all such visits that resulted in an admission were merged in the present analysis with the ED visits dataset. Insufficient data indicates areas where the total number of cases was low (e.g., 3-year average < 5) or the ZIP code population was small resulting in unstable rates.

On average OC residents made 699,828 ED visits during the study period. Some residents may have visited an ED more than once and so these data are not unduplicated counts. Additionally, about **12%** (n = 97,123) of the visits to emergency departments in Orange County were by patients who did not reside in OC.

44.6% the nearly 700,000 annual visits to EDs by OC residents could have been avoided or otherwise treated in a primary care setting. In contrast, **15.3%** of all ED visits were classified as unavoidable. Nearly one-in-four **23%** were injury-related and **3.8%** were classified as Psychiatric, Drug, or Alcohol-related. The remaining **13.2%** were unclassified, meaning they could not be assigned to a particular group.

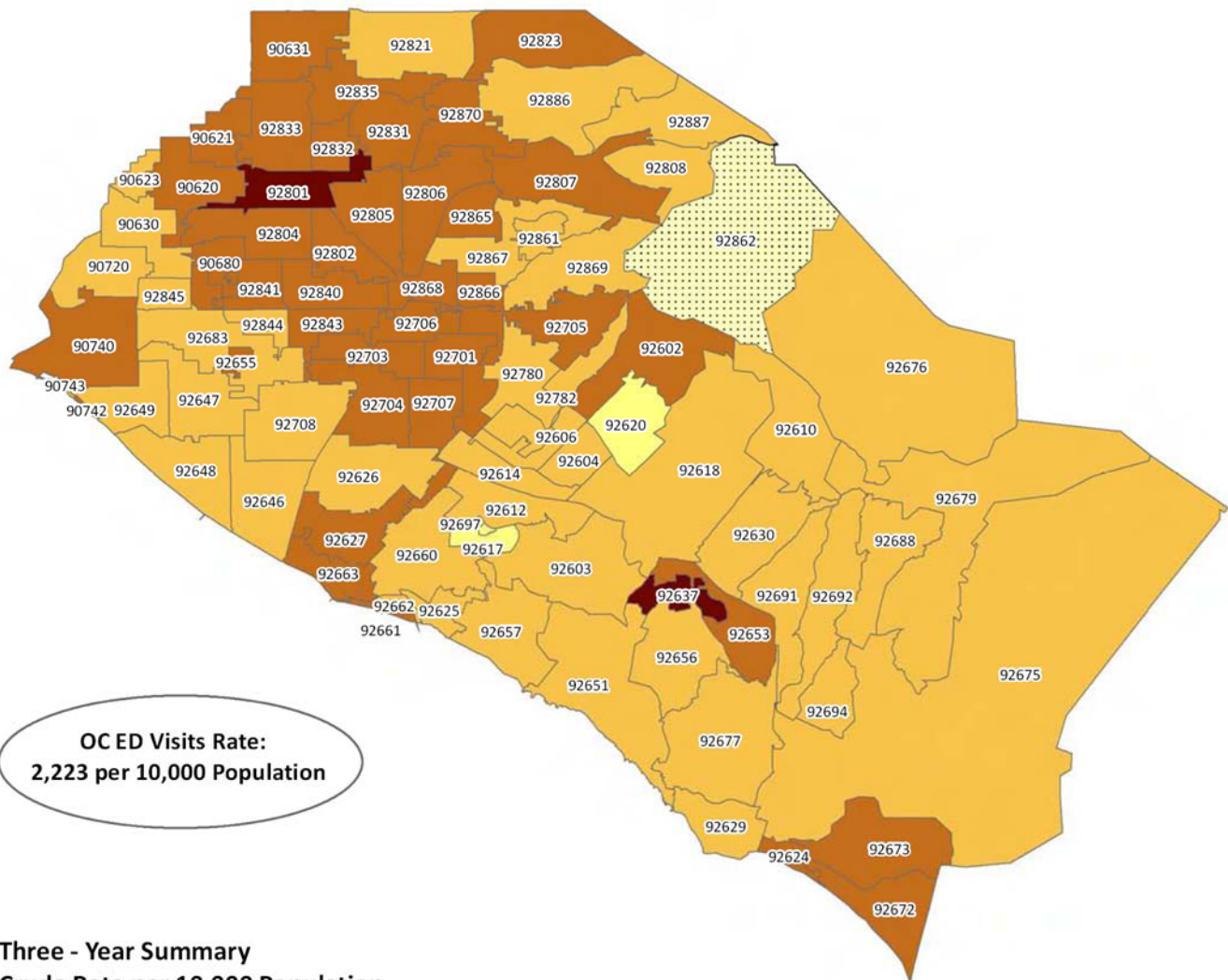
Reason for Emergency Department Visit (2006-2008)

Major Disease Category	Total	3-Year Average	Percent
Injury and Poisoning (800-999)	483,458	161,153	23.0%
Symptoms, Signs, and Ill-Defined Conditions (780-799)	422,779	140,926	20.1%
Diseases of the Respiratory System (460-519)	202,579	67,526	9.6%
Diseases of the Digestive System (520-579)	153,532	51,177	7.3%
Diseases of the Genitourinary System (580-629)	112,535	37,512	5.4%
Diseases of the Circulatory System (390-459)	111,463	37,154	5.3%
Diseases of the Nervous System And Sense Organs (320-389)	106,136	35,379	5.1%
Diseases of the Musculoskeletal System and Connective Tissue (710-739)	101,318	33,773	4.8%
Mental Disorders (290-319)	76,875	25,625	3.7%
Diseases of the Skin and Subcutaneous Tissue (680-709)	76,663	25,554	3.7%
Complications of Pregnancy, Childbirth, and the Puerperium (630-677)	64,327	21,442	3.1%
Factors Influencing Health Status and Contact With Health Services (V01-V88)	60,765	20,255	2.9%
Infectious and Parasitic Diseases (001-139)	56,865	18,955	2.7%
Endocrine, Nutritional and Metabolic Diseases, and Immunity Disorders (240-279)	39,729	13,243	1.9%
Neoplasms (140-239)	14,156	4,719	0.7%
Diseases of Blood and Blood-Forming Organs (280-289)	9,815	3,272	0.5%
Certain Conditions Originating In the Perinatal Period (760-779)	5,362	1,787	0.3%
Congenital Anomalies (740-759)	1,126	375	0.1%
Total	2,099,483	699,828	100%

Top Five Reasons for Emergency Department Visit by Age Group

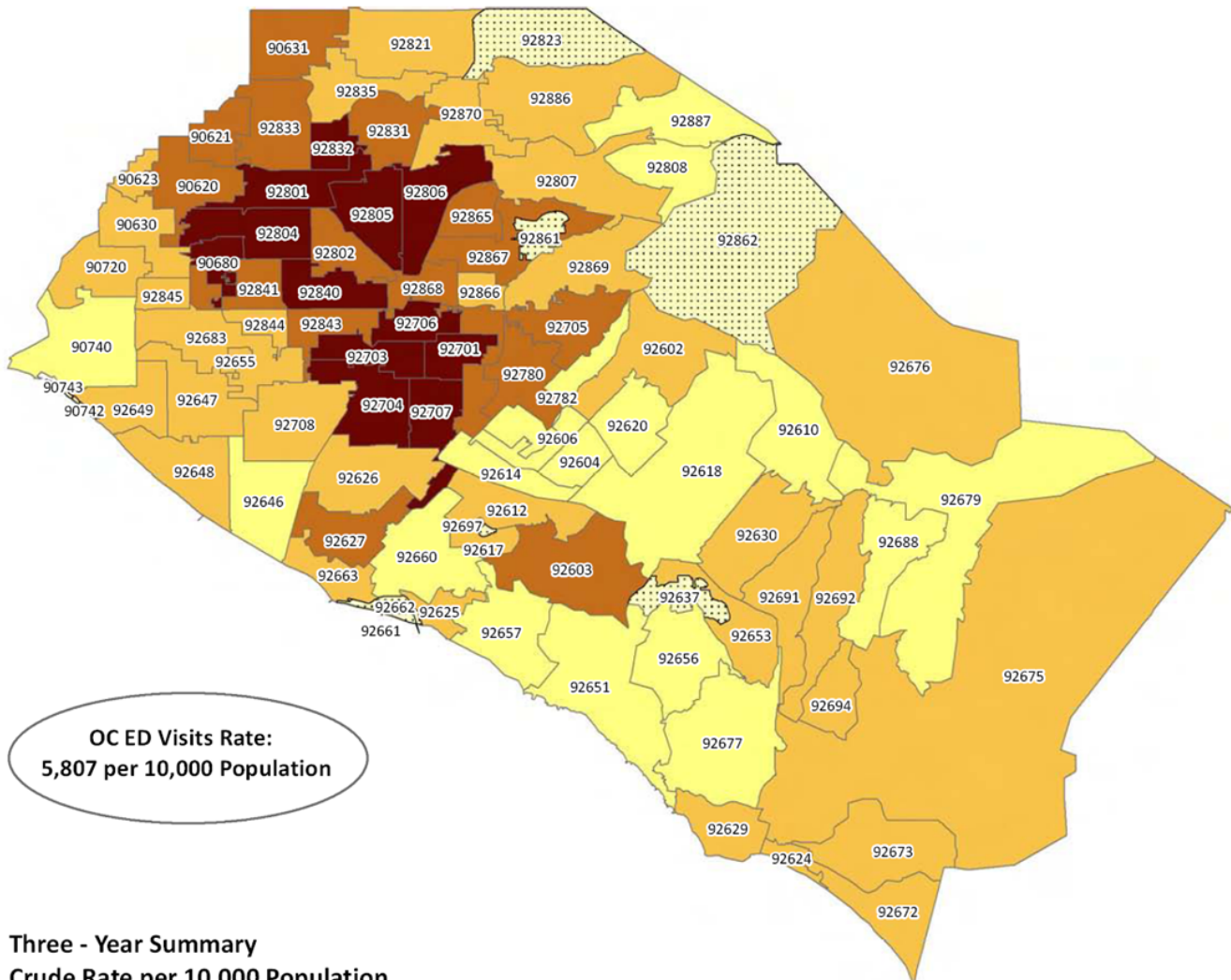
<i>Age Group and ICD-9 Code (Percent of All ED Visits)</i>	3-Year Total # of ED Visits	3-Year Average of ED Visits	% of All ED Visits	% of ED Visits Resulting in Hospital Admission
Children Ages < 1 Year (4%)				
Acute Upper Respiratory infection (465.9)	11,290	3,763	13.9	1.7%
Fever (780.6)	8,331	2,777	10.3	5.3%
Otitis media (inflammation of the middle ear) (382.9)	5,030	1,677	6.2	0.3%
Acute bronchiolitis (466.1)	4,346	1,449	5.4	27.0%
Nausea and vomiting (787.0)	3,566	1,189	4.4	5.4%
All other diagnoses	48,495	16,165	59.8	13.1%
Total	81,058	27,019	100.0	10.3%
Children Ages 1-17 Years (20%)				
Otitis media (inflammation of the middle ear) (382.9)	20,721	6,907	4.9	0.2%
Acute Upper Respiratory infection (465.9)	18,434	6,145	4.3	0.5%
Abdominal Pain (789.0)	18,139	6,046	4.3	4.6%
Open wound of face w/out mention of complication (873.4)	18,081	6,027	4.2	0.2%
Fever (780.6)	17,756	5,919	4.2	3.3%
All other diagnoses	333,328	111,109	78.2	7.2%
Total	426,459	142,153	100.0	6.0%
Adults Ages 18-44 Years (34.8%)				
Abdominal Pain (789.0)	44,426	14,809	6.1	3.7%
Chest Pain (786.5)	25,130	8,377	3.4	9.2%
Headache (784.0)	15,500	5,167	2.1	1.5%
Conditions complicating pregnancy, childbirth or puerperium (648.9)	13,616	4,539	1.9	6.5%
Threatened (Spontaneous) abortion (640.0)	11,456	3,819	1.6	0.5%
All other diagnoses	619,522	206,507	84.9	13.3%
Total	729,650	243,217	100.0	12.0%
Adults Ages 45-64 Years (20.6%)				
Chest Pain (786.5)	27,496	9,165	6.4	29.7%
Abdominal Pain (789.0)	20,284	6,761	4.7	6.3%
Headache (784.0)	7,577	2,526	1.8	2.2%
Lumbago (724.2)	6,283	2,094	1.5	2.0%
Urinary Tract Infection, site not specified (599.0)	5,607	1,869	1.3	15.8%
All other diagnoses	365,704	121,901	84.5	27.3%
Total	432,951	144,317	100.0	25.5%
Older Adults Ages 65+ Years (20.4%)				
Chest Pain (786.5)	18,887	6,296	4.4	39.8%
Urinary Tract Infection, site not specified (599.0)	12,469	4,156	2.9	45.4%
Pneumonia organism (486)	11,397	3,799	2.7	81.7%
Abdominal Pain (789.0)	10,504	3,501	2.4	10.4%
Congestive heart failure (428.0)	10,355	3,452	2.4	82.5%
All other diagnoses	365,709	121,903	85.2	45.6%
Total	429,321	143,107	100.0	46.3%

Orange County Emergency Department Visit Rates by ZIP Code of Residence (2006-2008)



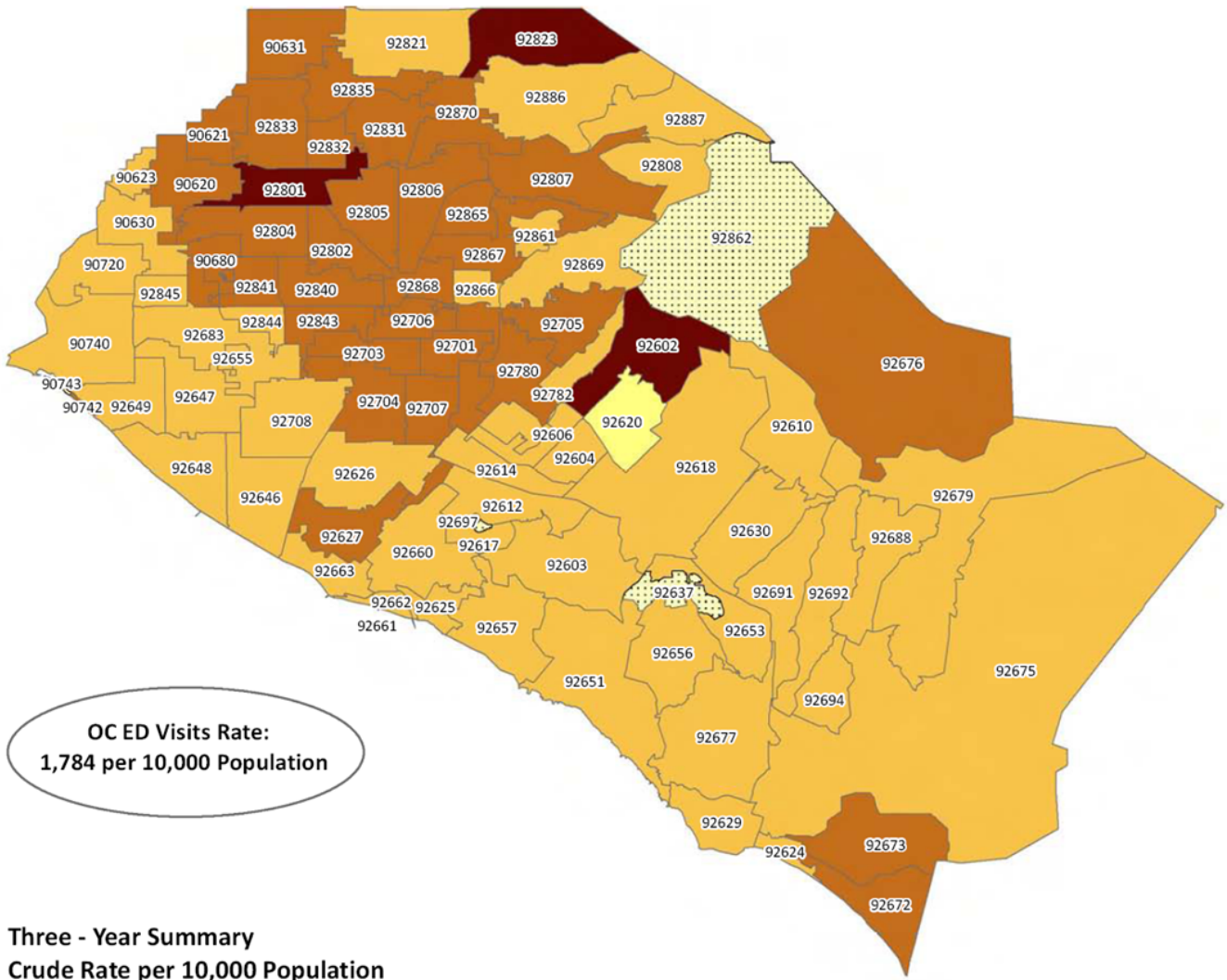
Data Source: 2006-2008 California Office of Statewide Health Planning and Development - Emergency Department Data

Orange County Emergency Department Visit Rates (Infants <1 Yrs) by ZIP Code of Residence (2006-2008)



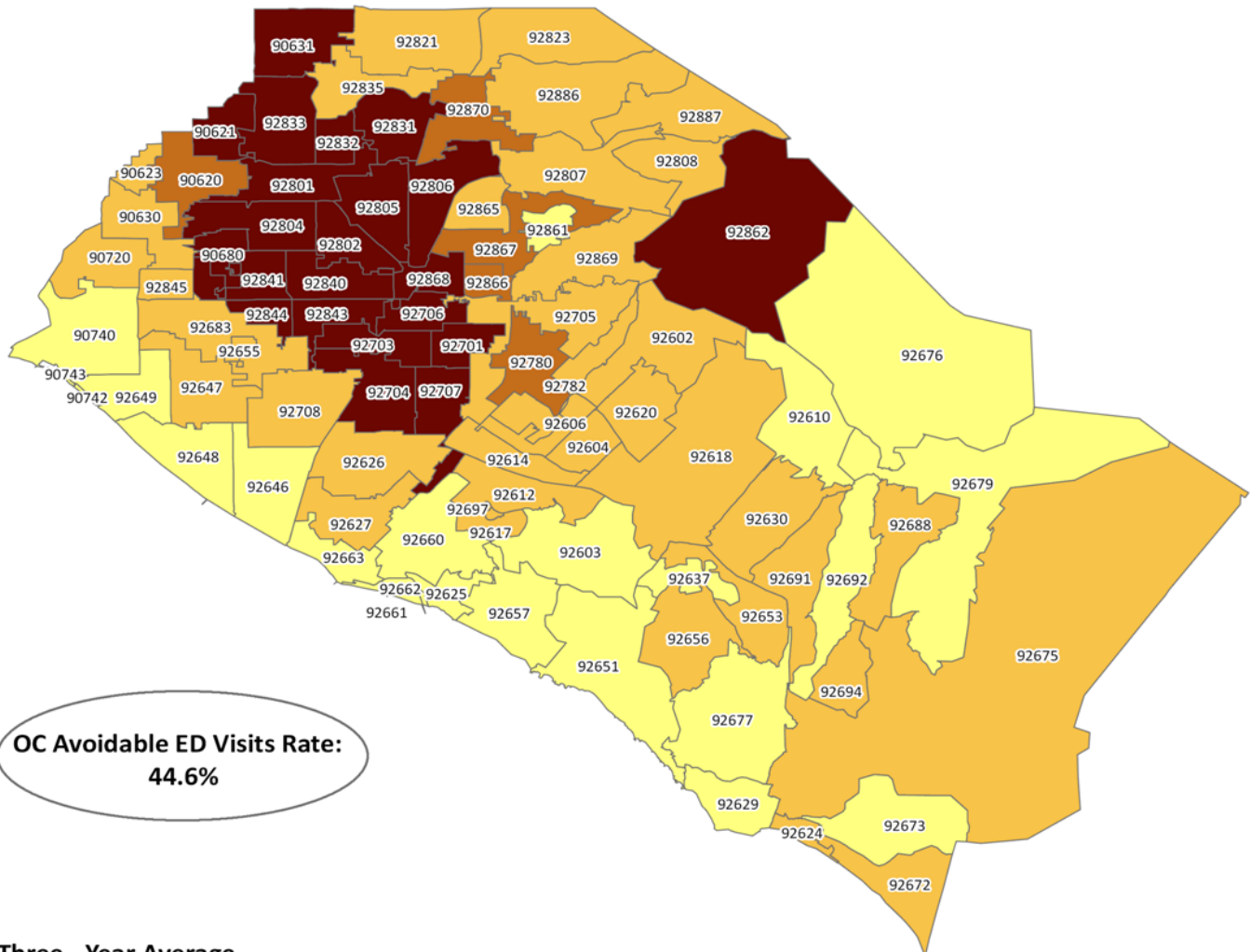
Data Source: 2006-2008 California Office of Statewide Health Planning and Development - Emergency Department Data

Orange County Emergency Department Visit Rates (1-17 Yrs) by ZIP Code of Residence (2006-2008)



Data Source: 2006-2008 California Office of Statewide Health Planning and Development - Emergency Department Data

Orange County Percent of Avoidable ED Visits by ZIP Code of Residence (2006-2008)



**Three - Year Average
Percent of Avoidable ED Visits**

- 32.9% - 39.5%
- 39.6% - 44.6%
- 44.7% - 45.9%
- 46.0% - 51.7%

Data Source: 2006-2008 California Office of Statewide Health Planning and Development - Emergency Department and Hospitalization Data

OC Geographic Health Profile 2011

No Current Dental Coverage for Children (2-17):
[\(CHIS 2007\)](#)

19.6% (1,831,000)
California

21.1% (557,000)
Los Angeles County

19.9% (150,000)
Orange County

25.4% (138,000)
Riverside County

19.9% (113,000)
San Bernardino County

20.1% (152,000)
San Diego County

12.8% (54,000)
Santa Clara County

Dental Health Access and Utilization

The US Surgeon General Report on Oral Health highlights that the health of the mouth may reflect the health condition of the body (such as Vitamin B deficiency). This emphasizes the fact that oral health is closely linked to the overall health of an individual.

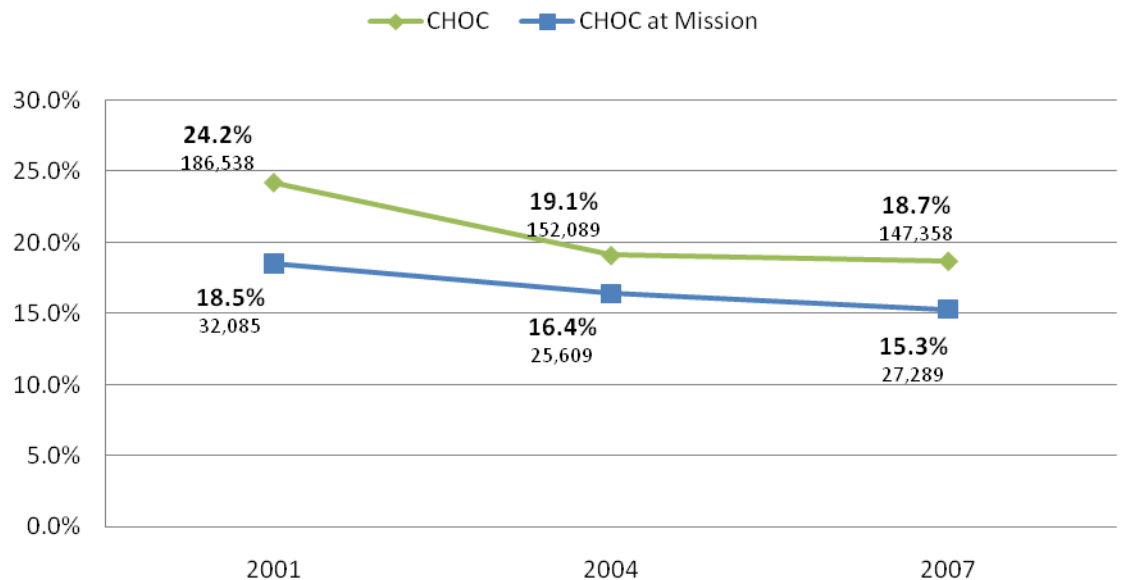
Note

The majority of the analysis in this section pertains to **OCHNA 2007 survey data** when the economic outlook was much more favorable. As suggested by the American Community Survey, the picture has darkened considerably. This means that there are many more children and families who are currently unable to access needed dental care services.

Access to Dental Coverage for Children (0-17)

Dental coverage can help offset the costs associated with preventative care, which helps detect early signs of oral health problems, prevent further damage, and, in some cases, reverse oral problems. The figure below examines the changes in dental health coverage status among children (0-17 years) in the service areas of CHOC and CHOC at Mission.

Figure 1: Trend of Children (0-17) With No Dental Health Coverage: CHOC Service Areas, OCHNA 2001-2007



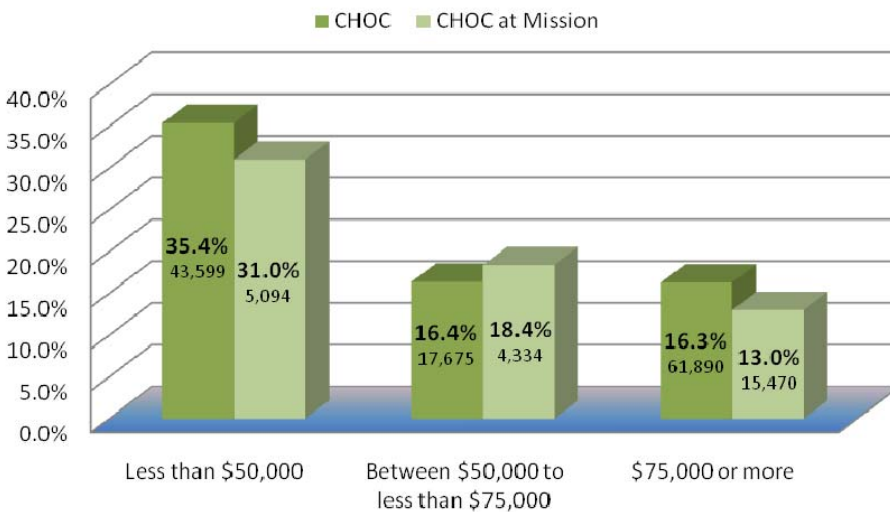
- The percentage of children with no dental coverage gradually decreased over the survey years for both service areas.
- While we do not have data on the percent of children that currently lack dental coverage, it is expected that this proportion has too increased. Dental coverage benefits are part of the health coverage or employment benefits package. With the dramatic loss of health coverage among Orange County residents, it follows that there has been an accompanying loss of dental coverage in the population; **10.4%** of Orange County children lacked health coverage in 2009. It is probable that an even greater fraction of children and adults lacked dental coverage for that year.

Income and Dental Coverage

The OCHNA 2007 survey estimated that **18.7%** (147,358) of children in the **CHOC** service area and **15.3%** (27,289) in the **CHOC at Mission** service area did not have dental coverage. There were no significant differences in the rates of dental coverage for children across race/ethnicity and age groups, but there were differences across income categories.

The following figure shows the percentages of children in the service areas of CHOC and CHOC at Mission with no dental coverage *within* income categories.

Figure 2: Children (0-17) with No Dental Coverage *within* Income Categories: CHOC Service Areas, OCHNA 2007



CHOC: Chi-square=22.554, p<0.001; CHOC at Mission: Chi-square=12.971, p=0.005

- Children in households with lower income are more likely to not have dental coverage.

Dental Health Utilization and Prevention Practices

The [American Dental Association](#) recommends that a child should be taken to a dentist as soon as he or she turns one or as soon as the first tooth appears. According to the OCHNA 2007 survey:

CHOC Service Area

- **13.7%** (109,295) of children in the CHOC service area had never been to the dentist. The majority of these children were ages 0 to 5. **89.0%** (97,312) of children who had never been to the dentist in CHOC of Orange’s service area were ages 0 to 5.
- Of those children who visited the dentist in the CHOC service area, the majority of them, or **92.3%** (633,952) visited the dentist within the previous year. **87.5%** (552,212) of these children visited the dentist for a routine check-up and cleaning.
- **96.8%** (713,820) of children in the CHOC service area brushed their teeth daily.

CHOC at Mission Service Area

- **11.3%** (20,281) of children in the service area had never been to the dentist. The majority of these children were ages 0 to 5. **99.5%** (20,179) of children who had never been to the dentist were ages 0 to 5.
- In CHOC at Mission service area, **97.0%** (153,763) of children visited the dentist within the previous year. **85.1%** (130,899) visited the dentist for a routine check-up and cleaning.
- In CHOC at Mission’s service area, **98.2%** (160,651) of children brushed their teeth daily.

No Current Dental Coverage for Children (2-17) by Poverty Level:
[\(CHIS 2007\)](#)

California

28.0% (530,000)
0%-99% of FPL

14.2% (616,000)
300% of FPL or More

Orange County

29.6% (42,000)
0%-99% of FPL

16.1% (67,000)
300% of FPL or More

Could Not Afford Needed Dental Care for Children (2-17; 1-2 With a Tooth) in Past Year:
[\(CHIS 2007\)](#)

6.3% (589,000)
California

6.2% (165,000)
Los Angeles County

8.8% (66,000)
Orange County

7.7% (42,000)
Riverside County

7.4% (42,000)
San Bernardino County

7.9% (59,000)
San Diego County

4.2%* (18,000)
Santa Clara County

Orange County Healthy Smile Survey (2005)

In the 2004-2005 school year the [Orange County Healthy Smiles Survey](#) screened **1,175** kindergarten and **1,089** 3rd grade students at **25** randomly selected Orange County elementary schools. Trained dental examiners collected information on five oral indicators from each child: presence of decayed teeth, presence of filled teeth, presence of dental sealants, history of rampant decay, and treatment urgency. An optional questionnaire to parents about access/ utilization of dental services, participation in free or reduced price lunch programs, and race/ ethnicity supplemented the screening. Over half of the children screened were Hispanic and more than **41%** of children screened had parents who spoke a language other than English at home. The survey uncovered discouraging realities about the state of child dental health in Orange County, with specific populations displaying higher rates of untreated tooth decay.

Prevalence of Tooth Decay

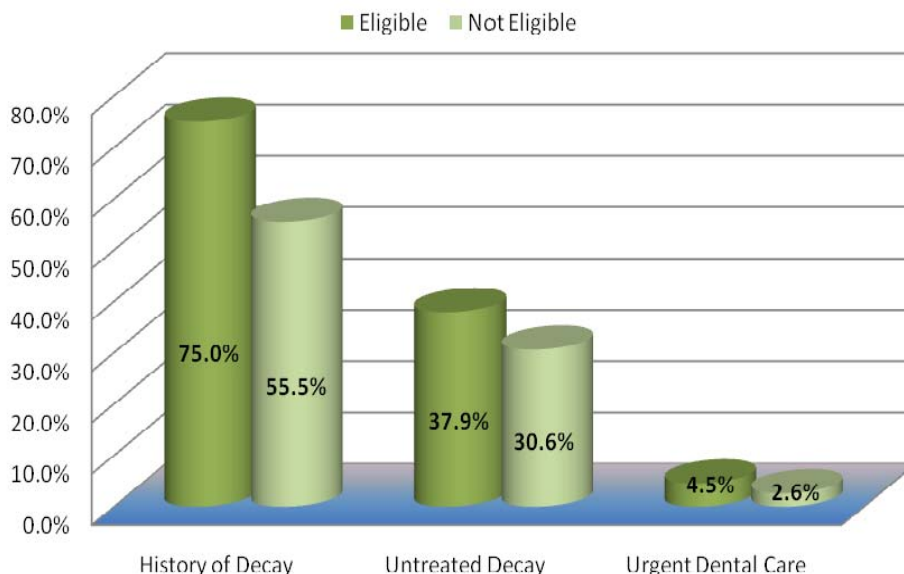
The survey determined that **56.4%** of screened kindergarten and **71.2%** of screened 3rd children had a history of tooth decay (overall percent for all screened children: **64.1%**). **33.3%** of kindergarten and **33.9%** of 3rd grade children had untreated tooth decay at the time of the screening. Screeners determined that **34%** of kindergarteners and 3rd graders in the examination needed dental care, with **30%** needing “non-urgent or early dental care” and **4%** needing urgent dental care “because of pain or infection.”

Rampant decay is when there has been a history of tooth decay in at least 7 teeth. **19.4%** of kindergarten children and **25.0%** of 3rd graders had rampant decay (treated or untreated).

Tooth Decay and Participation in Free/Reduced Price Meals Program

One indicator of socioeconomic status is the number of children receiving free/reduced price meals. A child can receive free or reduced price meals if they come from a household with an annual income 185 percent of FPL. In the 2004-2005 school year, this was **\$34,873** for a family of four. In the optional questionnaire, parents indicated their child’s participation in the program. Children who participated in the program had a higher prevalence of tooth decay compared to their counterparts. However, please note that since the survey was optional, the data may not be fully reflective of the sample group.

Figure 3: Orange Health of Kindergarten and 3rd Grade Children by Eligibility for Free/Reduced Price Lunch Program: 2004-2005 School Year



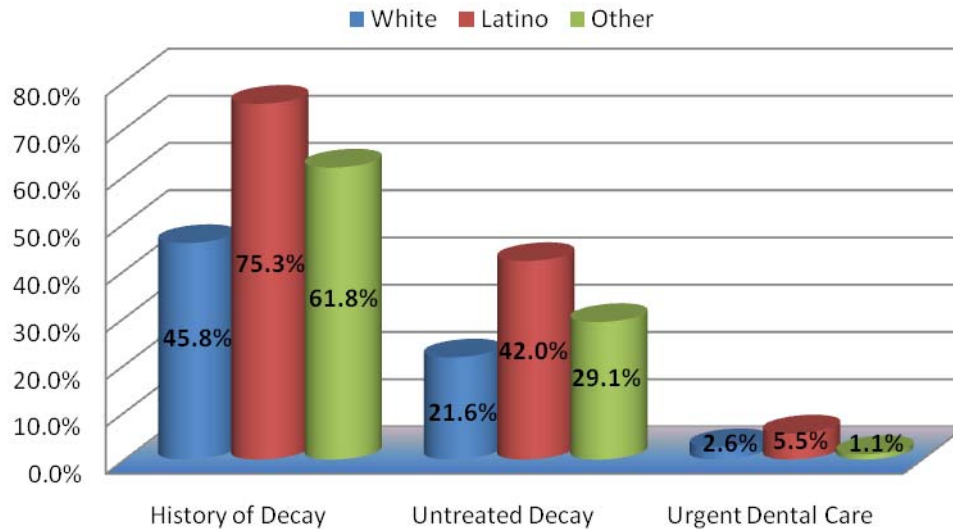
- Screened kindergarten and 3rd grade children who participated in the free/ reduced price lunch programs had higher rates of tooth decay history, untreated tooth decay, and the need for urgent dental care.

*Statistically unstable data estimate.

Tooth Decay by Race/Ethnicity

Hispanic/Latino and other minority children experienced treated/untreated tooth decay at higher rates compared to white children.

Figure 4: Oral Health of Kindergarten and 3rd Grade Children by Race/Ethnicity: 2004-2005 School Year



Source: The Dental Health Foundation, 2005 Orange County Healthy Smiles Survey

- Screened Latino kindergarten and 3rd grade children who participated in the free/reduced price lunch programs had higher rates of tooth decay history, untreated tooth decay, and the need for urgent dental care compared to white children.

Impact of Unmet Dental Health Needs

Untreated dental disease can seriously impact a person's health, causing unrelieved pain and discomfort that interferes with daily routine, and even contributing to absences from work and school. Dental caries is the most common dental disease, also known as tooth decay or cavity. Many believe that dental cavities are a result of decaying food sitting on the teeth, but in actuality, dental caries is an infectious, transmissible, and progressive disease wherein bacterial processes damage hard tooth structure. If left untreated, the disease can lead to pain, tooth loss, infection, and death in severe cases. According to the 2007 [California Health Interview Survey](#) 7.5% (43,000) of Orange County children between 5 and 17 years missed at least one day of school due to a dental problem.



Child (5-17) Missed One or More Days of School due to Dental Problems in Past Year: [\(CHIS 2007\)](#)

7.0% (504,000) California

5.8% (119,000) Los Angeles County

7.5% (43,000) Orange County

8.1% (34,000) Riverside County

6.7% (30,000) San Bernardino County

6.9% (40,000) San Diego County

6.8%* (22,000) Santa Clara County

*Statistically unstable data estimate.

159,475
The number of
service area
children without
mental/behavioral
health coverage.
(OCHNA 2007)

Mental Health Access and Utilization

Mental health is not simply the absence of mental illness, but a more comprehensive state of mental well-being and functioning. Strong mental health is important for an individual to be able to care about self, others, and society. Poor mental health, however, deters individuals from achieving their goals and participating in rewarding activities, and also hurts their ability to respond positively to hardship. A severe enough illness can also be disabling, preventing a person from completing basic tasks and from being self-reliant. It may be difficult to comprehend the devastation of mental illness because symptoms are generally not physical. The misunderstanding of and stigma associated with mental illness can deter individuals from seeking treatment, leaving those who need help to go without treatment.

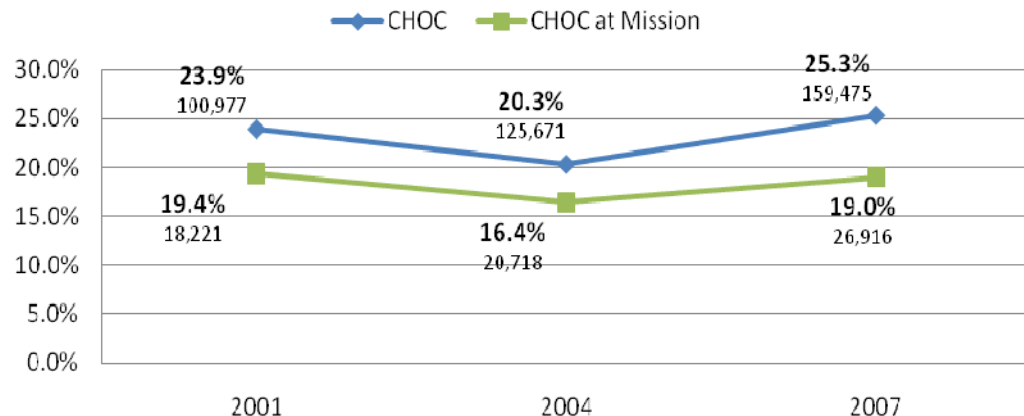
Note

The majority of the analysis in this section pertains to **OCHNA 2007 survey data** when the economic outlook was much more favorable. As suggested by the American Community Survey, the picture has darkened considerably. This means that there are many more children and families who are currently unable to access needed mental/behavioral health services.

Access to Mental/Behavioral Health Coverage

The figure below displays the percentage of children (0-17 years) without mental health coverage over the survey years for the service areas of CHOC and CHOC at Mission.

Figure 1: Trend of Children (0-17) Without Mental Health Coverage: CHOC Service Areas, OCHNA 2001-2007



- In the **CHOC** service area, the percentage of children with no mental health coverage decreased from 2001 to 2004, but then rose again in 2007.
- In the **CHOC at Mission** service area, the percentage of children with no mental health coverage decreased from 2001 to 2004, then approached its 2001 rate in 2007, but has remained fairly constant overall.
- While we do not have data on the percent of children that currently lack mental/behavioral coverage, it is expected that this proportion has too increased. Mental health benefits are oftentimes part of the health coverage or employment benefits package. With the dramatic loss of health coverage among Orange County residents, it follows that there has been an accompanying loss of mental health coverage in the population; **10.4%** of Orange County children lacked health coverage in 2009. It is probable that an even greater fraction of children lacked mental/behavioral health coverage for that year.

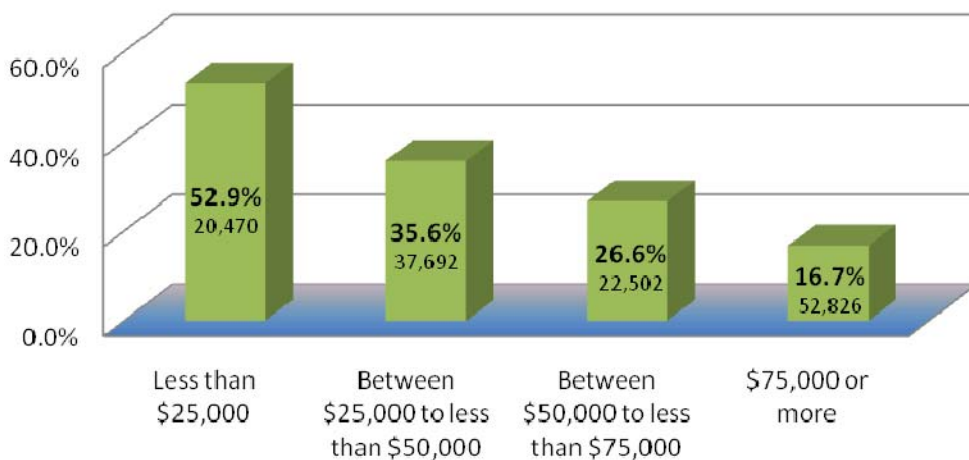
Demographics of Children without Mental/Behavioral Health Coverage

The following figures will provide the demographic breakout children in the service areas of CHOC and CHOC at Mission with no mental/behavioral health coverage by income and ethnicity.

Income

The following figure breaks out the percentages of children who have mental health coverage by household annual income in both service areas.

Figure 2: Children (0-17) with No Mental Health Coverage within Income Categories: CHOC Service Area, OCHNA 2007



Chi-square=106.7, p<0.001

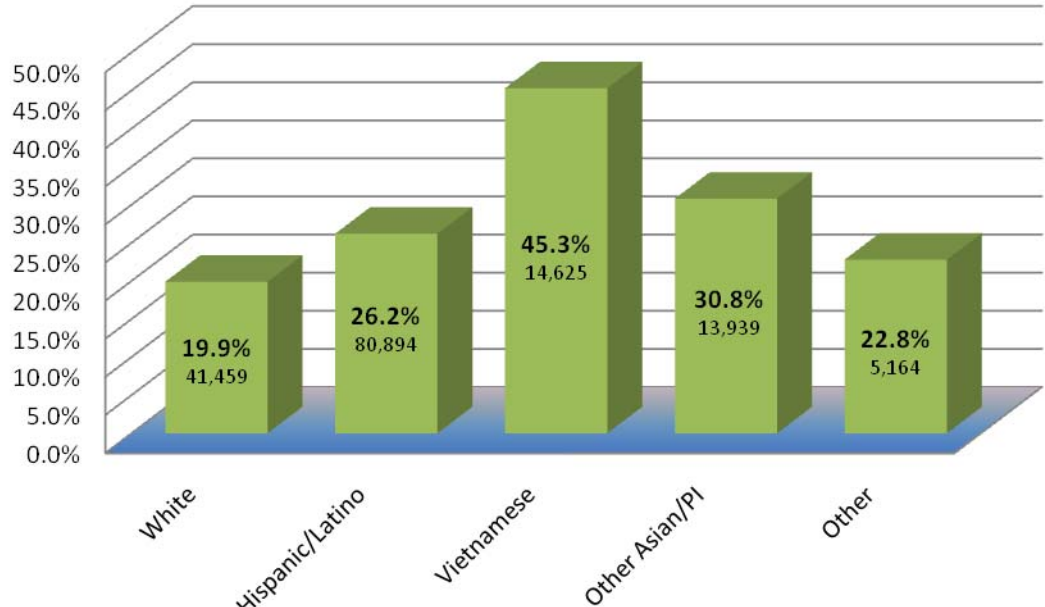
- In both service areas, children living in households with higher annual household income are more likely to have mental health coverage than children living in households with lower annual household income.
- In the **CHOC at Mission** service area, **29.6%** (10,043) of children living in households with annual income less than \$75,000 did not have coverage, compared to **16.0%** (14,941) of children living in households with annual income \$75,000 or more.

The higher the annual household income of the child’s family, the more likely that that child will have coverage for mental health.

Race/Ethnicity

The following figure displays the percentage of children with no mental health coverage in 2007 by race/ethnicity in the CHOC service area.

Figure 3: Children (0-17) with No Mental Health Coverage within Race/Ethnicity: CHOC Service Area, OCHNA 2007



Chi-square=98.344, p<0.001

White children have higher rates of coverage than children of other races/ethnicities.



- Vietnamese have the lowest rates of mental health coverage. Almost **half** of Vietnamese children in **CHOC’s** service area do not have any coverage for mental health services.
- Over **1 out of 4** Hispanic children do not have mental health coverage in the **CHOC** service area. Similarly, in the **CHOC at Mission** service area, **25.5%** (11,407) of Hispanic children did not have mental health coverage.

Mental Health of Children (6-17)

Questions concerning mental and behavioral health were asked only of parents of children ages 6 to 17. The parents of children ages 0 to 5 were not asked mental health questions, except for questions on mental health coverage.

Parents' Perceptions of Mental Health Status of Their Child

Parents of children aged 6 to 17 were asked if they perceived any problems with their child's emotions, concentration, behavior, or ability to get along with others.

- 13.8% (72,955) of parents in the **CHOC** service area perceived that their child had a mental/behavioral difficulty of some degree (minor, moderate, or severe).

Figure 4: Mental/Behavioral Health Difficulties of Children (6-17) reported by Parents: CHOC Service Area, OCHNA 2007

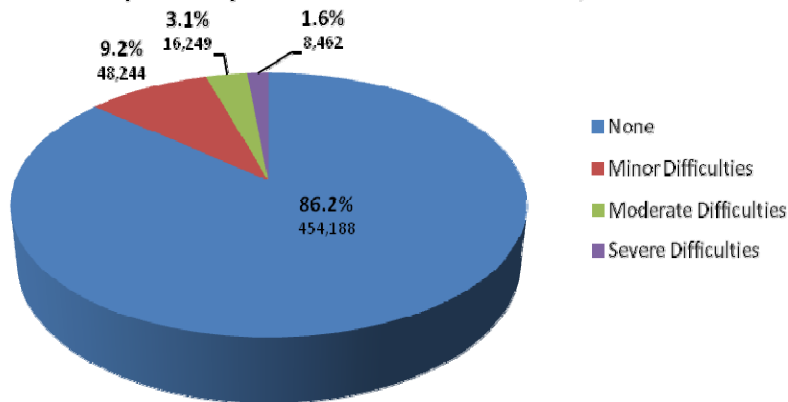
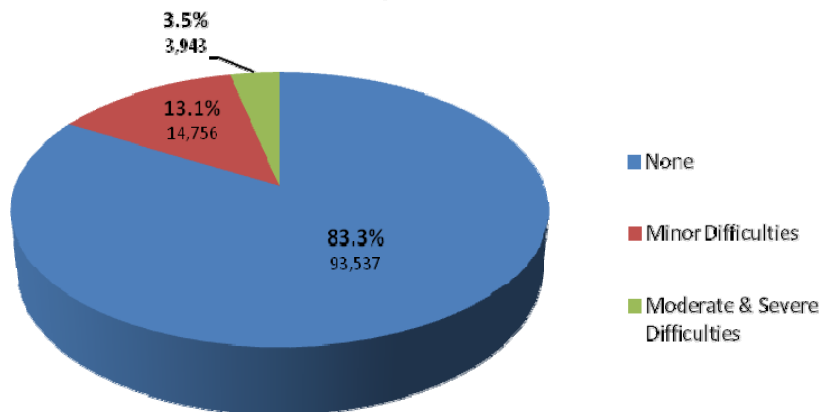


Figure 5: Mental/Behavioral Health Difficulties of Children (6-17) reported by Parents: CHOC at Mission Service Area, OCHNA 2007



- 16.7% (18,698) of parents in the **CHOC at Mission** service area perceived that their child had a mental/behavioral difficulty of some degree (minor, moderate, or severe).

Children who are overweight or obese are more vulnerable for developing mental health problems than healthy weight children.

Weight Status and Mental Health

Children who are overweight/at risk of overweight may be more vulnerable than healthy weight children to develop mental health problems.

- In the **CHOC** service area, of children who were at a healthy weight, **11.8%** (29,803) of parents reported that their child had problems with his/her emotions, concentration, behavior, or ability to get along with others. **21.5%** (11,871) of parents of overweight children indicated the same (Chi-square=26.327, p=0.002).
- There was no statistically significant relationship between weight status and mental health in the CHOC at Mission service area.

Commonly Diagnosed Mental and Behavioral Disorders

An estimated **5.9%** (30,939) of children in the **CHOC** service area have been diagnosed with a mental or behavioral disorder. **30.9%** (9,336) of the parents/guardians of these children reported that their child's symptoms placed a great burden on the family.

The following table shows the most common diagnoses in the CHOC service area.

Table 1: Most Common Diagnoses of Mental and Behavioral Disorders: CHOC Service Area, OCHNA 2007		
Diagnosis	Percent	Population Estimate
Attention Deficit Hyperactivity Disorder (ADHD) or Attention Deficit Disorder (ADD)	38.9%	12,576
Mood Disorder (Depressive or Bipolar Disorders)	18.3%	5,921
Autism	13.6%	4,385

ADD/ADHD is the most common diagnosis in the CHOC service area.

Almost **4 out of 10** diagnoses of a mental problem is ADD/ADHD.

In the **CHOC at Mission** service area, **7.1%** (8,044) of children were diagnosed with a mental or behavioral disorder, but the number of responses in this service area is too small to produce statistically reliable population estimates of the common diagnoses.

Seeking Mental Health Care for Children

Primary Care

CHOC Service Area

An estimated **7.5%** (39,609) of parents with children aged 6 to 17 years old talked to their primary health care provider to discuss their child's emotional or behavioral problem during the past 12 months.

In the CHOC service area, the higher the degree of a difficulty, the more likely the parent was to consult a doctor or other health care professional (Chi-square=361.5, $p < .001$).

- **59.0%** (14,572) of parents who perceived their child's mental/behavioral problem as moderate or severe had consulted with a health care provider about it during the past 12 months, whereas only **25.5%** (12,171) of parents who perceived their child's emotional problem as minor had sought consultation with a health professional.

CHOC at Mission

- **9.0%** (10,165) of parents talked to their primary health care provider about their child's problems.

Schools

In the **CHOC** service area, an estimated **13.4%** (70,790) of parents spoke with school teachers or personnel regarding their child's problems in emotions, concentration, behavior, or ability to get along with others. In the **CHOC at Mission** service area, **15.2%** (17,110) of parents spoke with school personnel about their child's behavioral problems.

Treatment for Children: Countywide CHOC Service Area

The following information is for the CHOC service area. (The number of responses in the CHOC at Mission service area is too small to produce statistically reliable population estimates for the following OCHNA 2007 survey results.)

Of the children whose parents had reported talking to a health care provider about the child's behavioral problem, **33.0%** (13,548) were prescribed medication for their difficulties.

51.7% (21,266) received treatment other than, or in addition to, medication for the child's difficulties with emotions, concentration, behavior, or ability to get along with others.

- **87.2%** (18,448) had received treatment within the past 12 months.
- **76.5%** (16,308) of children were still receiving treatment at the time of the survey.

Of children who received any treatment for their mental health problems:

- **40.7%** (8,573) received treatment from a mental health therapist in a private practice,
- **27.6%** (5,808) received help from the child's school psychologist or counselor, and
- **22.8%** (4,798) received help from a family doctor or pediatrician.

Examining Reasons for Underutilization

In **CHOC's** service area, **48.3%** (19,895) of the parents who spoke with a health care professional about their child's emotional and behavioral difficulties did not seek treatment or help for their child's problem. **57.6%** (11,330) of these parents did not receive help because they felt that their child did not need professional help, and **25.7%** (5,052) of these parents had reported that there was no reason to seek professional help because of no obvious problems.

Mental Health Services Clients—County of Orange, Behavioral Health Services

The Orange County's Behavioral Health Services (BHS) provides services for eligible county residents in need of treatment for alcohol and other drug abuse and mental health care. Children and youth receiving services from the agency have severe emotional disorders, such as disruptive behavior disorders, mood disorders, or adjustment or personality disorders.

It is important to realize that the numbers presented here reflect a small proportion of all psychologically distressed individuals in Orange County. Publicly-funded county mental health programs usually serve those receiving Medi-Cal coverage, those who are medically indigent, or those who receive any public funds to pay for all or part of their services.

During the 2009-2010 fiscal year (FY—July to June), there were a total of **36,106** clients receiving services from the Behavioral Services Agency in Orange County; of those, **32.0%** (11,567) of clients were under 18 years.

Healthy People 2020 Objective

Increase to **75.8%** the proportion of children with mental health problems who receive treatment.

The table below presents the 10 most common primary mental health diagnosis of children and youths who received services from the Health Care Agency in FY 2009-10 in Orange County.

Table 2: Top 10 Primary Mental Health Diagnosis of Children and Youth, Orange County, FY 2009-10	
Primary Diagnosis	Number
Disruptive/Impulsive	4,106
Substance Related	390
Depression - Other	1,686
Adjustment Disorder	2,257
Bipolar Disorder	238
Major Depression	410
Schizophrenia	17
Schizoaffective	25
Mood Disorder NOS	434
Anxiety Disorder	698

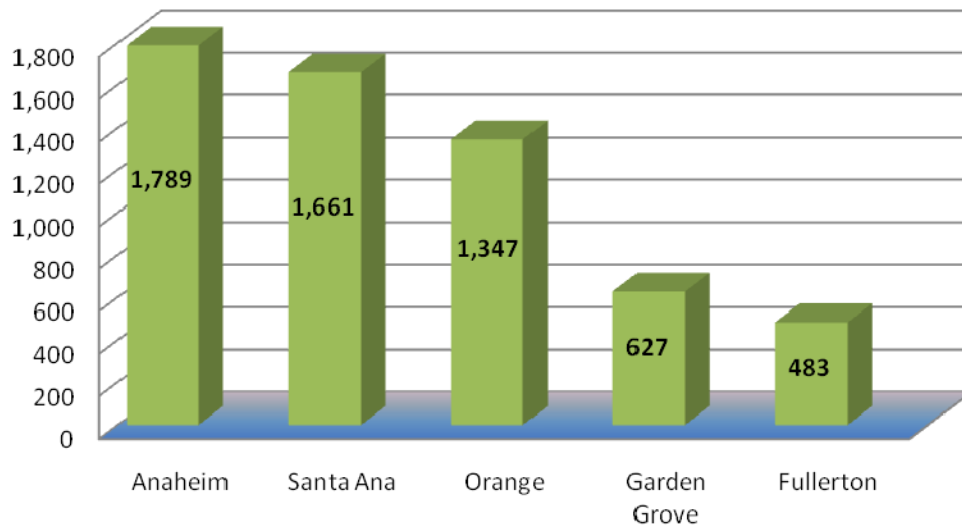
Source: County of Orange, Health Care Agency, Behavioral Health Services

The most common diagnosis for children and youth in Orange County was disruptive/impulsive.

- More children and youth were primarily diagnosed with *disruptive/impulsive* and *adjustment disorders* than adults.

The figure below presents the five cities in Orange County with the greatest number of BHS clients under 18 years of age.

Figure 6: Top 5 Cities of Residence of Behavioral Health Services Clients Under 18 Years: Orange County, FY 2009-10



Source: County of Orange, Health Care Agency, Behavioral Health Services

- **51.1%** (5,907) of all BHS children and youth clients resided in Anaheim, Santa Ana, Orange, Garden Grove, and Fullerton in FY 2009-10.

The table to the right presents the top five cities of residence for BHS clients under 18 years of age in the CHOC at Mission service area.

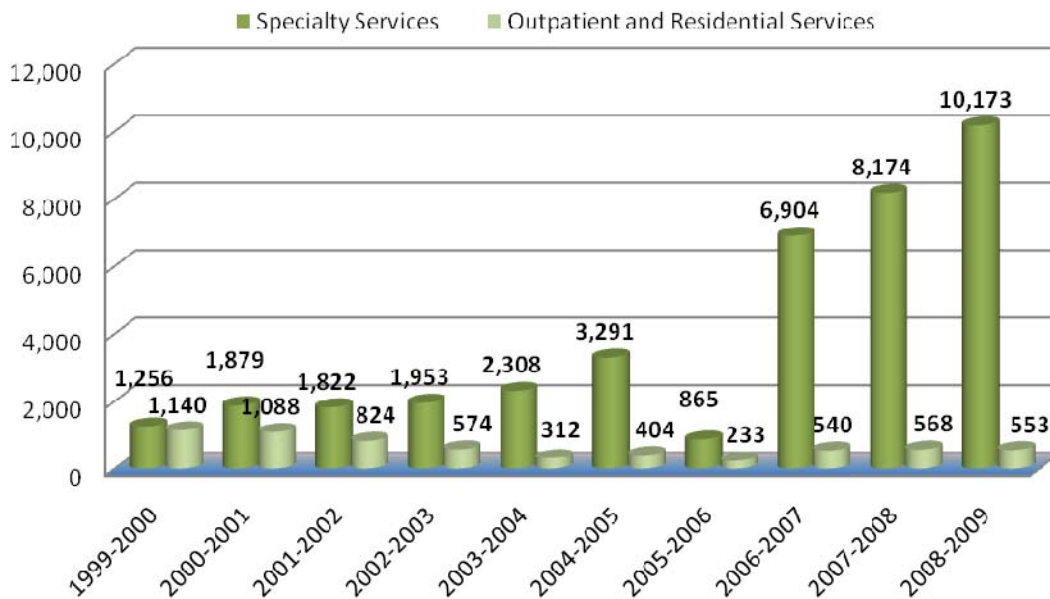
Table 3: Top 5 Cities of Residence for Clients Under 18 Years: CHOC at Mission Service Area, BHS FY 2009-10	
City	Number
Mission Viejo	187
Lake Forest	178
San Clemente	157
Laguna Niguel	131
Aliso Viejo	121

Source: County of Orange, Health Care Agency, Behavioral Health Services

Substance Abuse Services

The following indicator, replicated from the 16th [Annual Conditions of Children Report on the Conditions of Children in Orange County 2010](#), presents the number of adolescents who receive substance abuse services from the County of Orange, Health Care Agency’s Alcohol and Drug Abuse Services (ADAS). Please note that this indicator does not present the complete number of adolescents in need for substance abuse services in CHOC’s countywide service area.

Figure 7: Adolescents 17 and Under Receiving Publicly Funded Substance Abuse Services: CHOC Service Area, 1999/2000-2008/2009



16th Annual Conditions of Children Report on the Conditions of Children in Orange County 2010 and County of Orange Health Care Agency Alcohol and Drug Abuse Services: [Substance Abuse Services](#)

The number of adolescents in the CHOC service area receiving publicly-funded substance abuse specialty services ballooned in recent years.

- In 2008-2009, **94.8%** of adolescents receiving publicly funded services for substance abuse received specialized prevention and treatment services at the Probation camps and in the community including services at Alternative and Continuation schools, services at general high schools and other community health events and Red Ribbon fairs.
- The remaining 553 youth received treatment in outpatient treatment/recovery services and in residential treatment services.
- The ethnicity of the adolescents receiving services was **50%** Hispanic, **43%** Non-Hispanic white, **3%** Asian/Pacific Islander, **2%** Black or African-American, **1%** American Indian, and **2%** Other.

Obesity, Nutrition, and Exercise



Note: The Healthy People 2020 goals for childhood and adult obesity have been eased considerably from HP 2010, reflecting the worsening direction of national obesity trends as more people reached unhealthy weights in the last decade.

Healthy People 2020 Objective

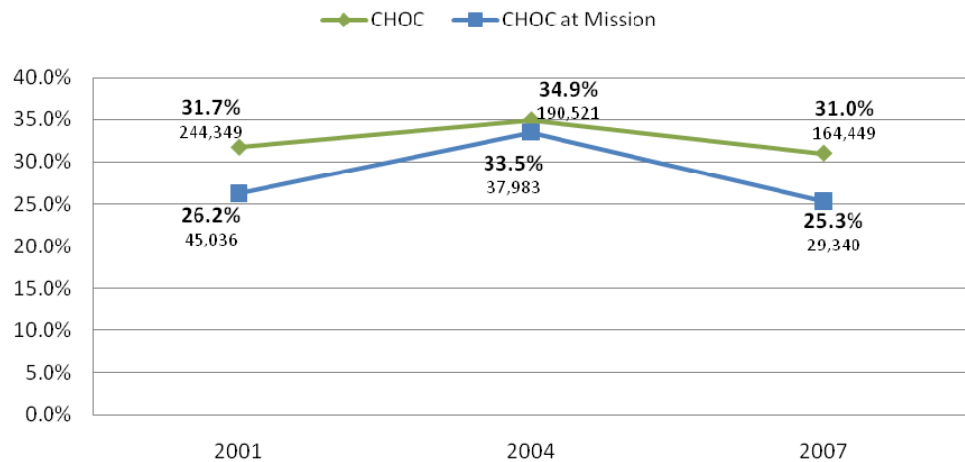
Reduce to **14.6%** the proportion of children and adolescents (2-19 years) who are overweight by 2020.

Healthy People 2010 Goal: 5%
(Note: Objective combines At Risk of Overweight AND Overweight 2-19 Year Olds)

Scope of the Obesity Crisis

Obesity has become a priority public health issue because an alarming proportion of children and adults are getting heavier. The following figure presents the trend in the percentage of children (2-17) who are overweight or who are at risk of being overweight over the last three OCHNA survey years for the service areas of CHOC and CHOC at Mission.

Figure 1: Trend of Overweight/At Risk of Overweight Children (2-17): CHOC Service Areas: OCHNA 2001-2007*



* Child weight status was not reported for 1998 because height and weight data was not collected.

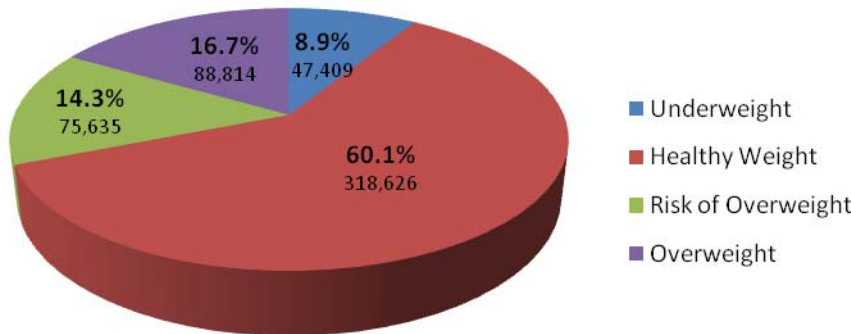
- From 2001 to 2007, the percentages of overweight/at risk of overweight children in **CHOC at Mission** and the countywide **CHOC** service area decreased.

Weight Status of Children (2-17) in the CHOC Service Areas

The BMI-for-age growth charts are applied to children and teens between 2 and 20 years of age, with percentiles providing the basis for weight status. OCHNA calculated the BMI of children 2 to 17 years and determined their weight status through the CDC growth charts with the following percentile category labels used by the National Institutes of Health (NIH): Underweight (less than the 5th percentile), Healthy Weight (5th percentile to less than the 85th percentile), Risk of Overweight (85th percentile to less than the 95th percentile), and Overweight (95th percentile or greater).

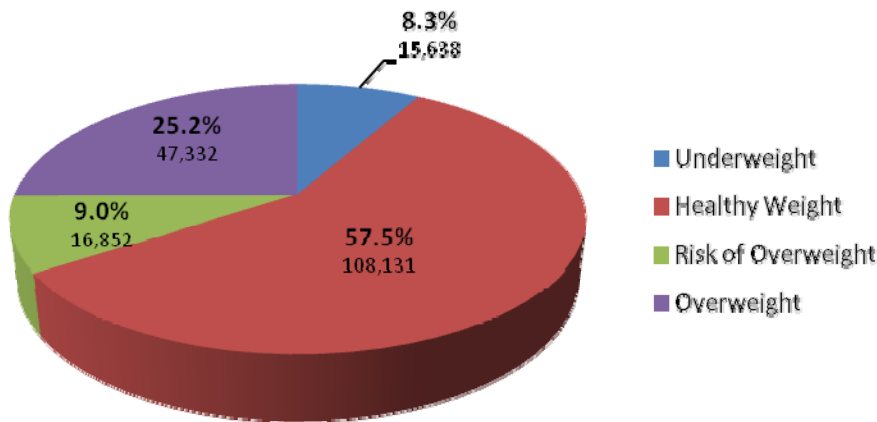
BMI categories for children include sex and age in addition to height and weight.

**Figure 2: Weight Status of Children (2-17):
CHOC Service Area, OCHNA 2007**



- The CHOC service area *did not meet* the Healthy People 2020 Objective of **14.6%** of children and adolescents who are overweight; **16.7%** (88,814) were overweight in 2007, **2.1** percentage points *more* than the HP 2020 Objective.

**Figure 3: Weight Status of Children (2-17):
CHOC at Mission Service Area, OCHNA 2007**



- The CHOC at Mission service area is even further from the HP 2020 targets than the countywide CHOC service area. **25.2%** (47,332) were overweight in 2007, **10.6** percentage points *more* than the HP 2020 target.

Demographics of the Overweight and at Risk Overweight

It is important to consider the variations in weight status within key demographic categories to determine whether a certain group is disproportionately facing obesity.

Age

Table 1: Weight Status of Children (2-17 Years) Within Age Groups: CHOC Service Areas, OCHNA 2007			
CHOC Service Area			
Weight Status	2-5 119,388	6-11 162,443	12-17 248,653
At Risk of Overweight	12.7%	19.6%	11.5%
Overweight	27.6%	19.0%	10.1%
Children: Chi square=139.5, p<0.001			
CHOC at Mission Service Area			
Weight Status	2-5 28,453	6-11 35,710	12-17 51,923
At Risk of Overweight	16.8%*	23.8%	10.8%
Overweight	14.9%	12.3%	3.5%*
Children: Chi square=30.854, p<0.001			

*Statistically unstable due to the small number of survey responses.

There are higher percentages of at risk overweight/overweight amongst younger children than teenagers.

Gender

There are notable differences of weight status within gender in CHOC's service area, with males more likely to be overweight or obese compared to females. Females were more likely to be at healthy weight. The CHOC at Mission service area had no differences based on gender.

Table 2: Weight Status of Children (2-17) Within Gender: CHOC Service Areas, OCHNA 2007				
	CHOC Service Area		CHOC at Mission Service Area	
	Female 258,644	Male 271,840	Female 53,571	Male 62,516
Healthy Weight	65.8%	54.6%	67.3%	67.3%
At Risk of Overweight/ Overweight	23.9%	37.8%	24.8%	25.7%
Chi square=34.973, p<0.001				

Race/Ethnicity

- White and Hispanic/Latino are the two largest race/ethnic groups in the CHOC service areas.
- In the **CHOC** service area, **35.6%** (83,175) of Hispanic/Latino children (2-17) were overweight or at risk, compared to **26.4%** (52,490) of white children (2-17). In the **CHOC at Mission** service area, **22.3%** (15,001) of white children (2-17) were overweight or at risk of overweight.
- In the **CHOC** service area, **36.1%** (9,010) of Vietnamese children were overweight/at risk of overweight, a higher percentage than non-Vietnamese Asian children, with **23.4%** (9,752) that were overweight or at risk.

In Orange County, boys were more likely to be overweight/at risk overweight than girls.

Annual Household Income

Poverty presents many barriers to physical activity and good nutrition. As the low-income have fewer resources, they may encounter more struggles in balancing basic household needs and caring for their families with healthy eating and behaviors.

Table 3: Weight Status <i>Within</i> Annual Household Income of Children (2-17): CHOC Service Area, OCHNA 2007				
Income Level	Less than \$25,000	\$25,000 to \$49,999	\$50,000 to \$74,999	\$75,000 or more
At Risk of Overweight or Overweight	56.4% 12,907	43.3% 32,896	30.1% 24,264	28.5% 80,908

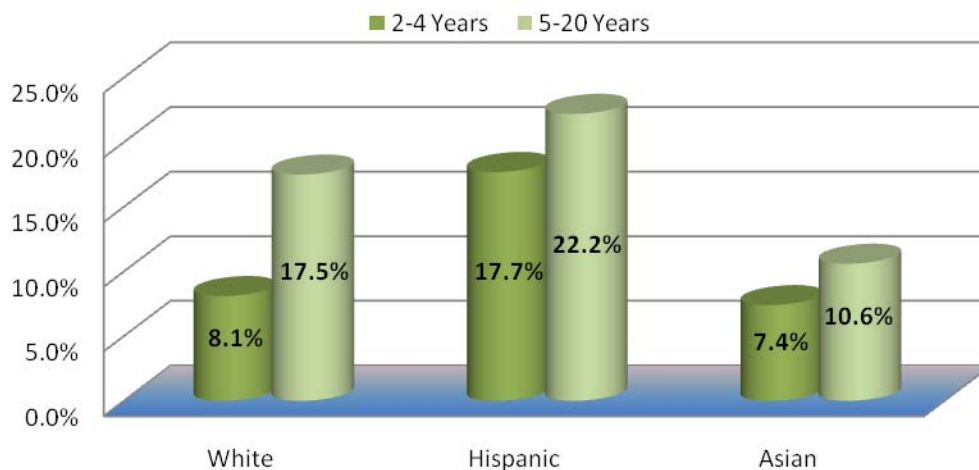
*The values for CHOC at Mission are not reported because the number of survey responses was too small to produce statistically reliable estimates.

- The percentage of children who are overweight or at risk overweight was higher in lower-income households.

Weight Status of Low-Income Children

PedNSS is a public health surveillance system, managed by the [CDC](#), which examines low-income children around the nation on various indicators of nutritional status. In California data are collected from children who participate in the [Child Health and Disability Prevention Program](#); those who qualify include Medi-Cal recipients between birth and 21 years and non-Medi-Cal children between 0-19 years whose family incomes are equal to/below 200% of federal poverty guidelines. Among the indicators is child weight status. The figure below presents the proportion of Orange County children (corresponding to the CHOC service area), in the PedNSS database, that are at/above 95th percentile on the BMI-for-age growth charts within race/ethnicity. (This indicator examined **6,909** 2-4 year olds and **15,439** 5-20 year olds.)

Figure 4: Proportion of Children in PedNSS Database at ≥95th Percentile of BMI-for-Age Growth Charts: Orange County, 2008



Source: State of California, Department of Health Care Services, Pediatric Nutrition Surveillance System, 2008 Annual

- The race/ethnicity disparity of overweight or at risk overweight remains pronounced even among children coming from households with similar incomes; Hispanic children in both age groups were the most likely to be at ≥95th of the CDC BMI-for-age growth chart.

Rate of PedNESS Children and Youth at/above 95th Percentile of BMI-for-Age Growth Charts: ([PedNESS 2008](#))

California

17.3% 2-4 Years
22.8% 5-19 Years

Los Angeles Metro Area

18.8% 2-4 Years
22.8% 5-19 Years

Orange County

16.6% 2-4 Years
21.2% 5-19 Years

Riverside County

14.7% 2-4 Years
21.4% 5-19 Years

San Bernardino County

16.0% 2-4 Years
21.3% 5-19 Years

San Diego County

16.2% 2-4 Years
23.0% 5-19 Years

Santa Clara County

16.9% 2-4 Years
22.2% 5-19 Years

Healthy People 2020 Objective

Reduce to 29.8% the consumption of calories from solid fats and added sugars in the diets of the population aged 2 years and older by 2020.

Number of Times Fast Food Eaten by Child (2-17) in Past Week: [CHIS 2009](#)

California

28.0% (2,410,000) No Times

33.9% (2,917,000) 1 Time

21.0% (1,806,000) 2 Times

9.1% (784,000) 3 Times

7.9% (684,000) 4+ Times

Orange County

23.4% (163,000) No Times

34.0% (236,000) 1 Time

20.7% (144,000) 2 Times

9.0% (63,000) 3 Times

12.9% (89,000) 4+ Times

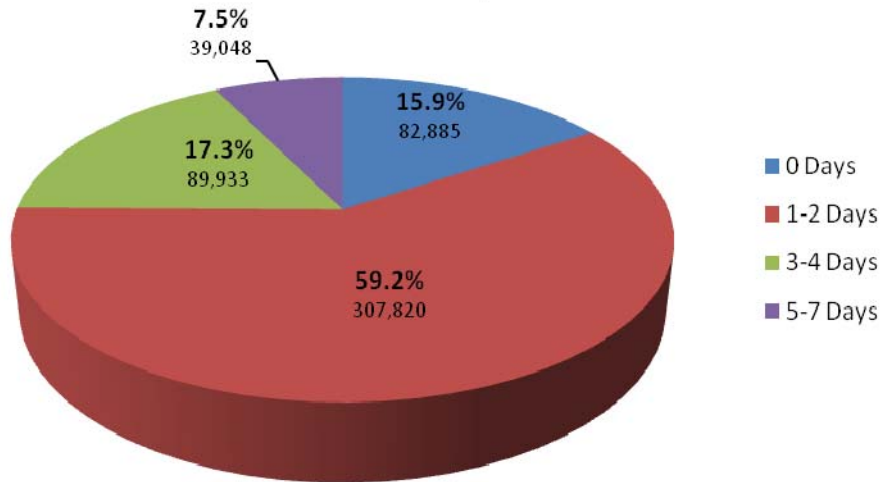
Factors Contributing to Obesity

There are numerous factors that can contribute to obesity, notably poor diet, physical inactivity, and even the walkability, safety, and the availability of recreational resources in a community.

Nutritional Choices and Access

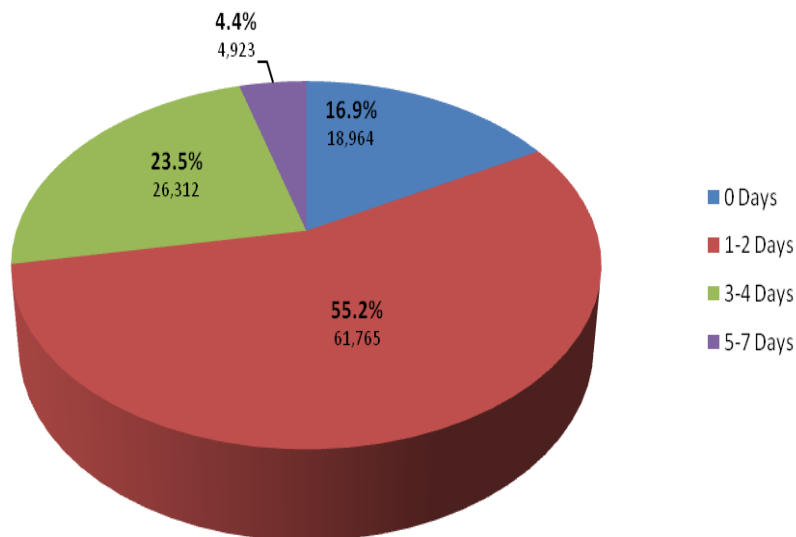
The pie graphs below examine the number of times that children between 6 and 17 years from the CHOC service areas ate fast-food, including school lunches, in the previous week as reported by parents/guardians; the examples provided were burgers, fries, tacos, burritos, and pizza. This OCHNA 2007 survey question included school lunches to address the fact that many schools offer fast food options to their students.

Figure 5: Fast Food Consumption of Children (6-17): CHOC Service Area, OCHNA 2007



- In CHOC’s service area, 24.8% (128,981) of children ages 6-17 ate fast food at least 3 times in the previous week.

Figure 6: Fast Food Consumption of Children (6-17): CHOC at Mission Service Area, OCHNA 2007



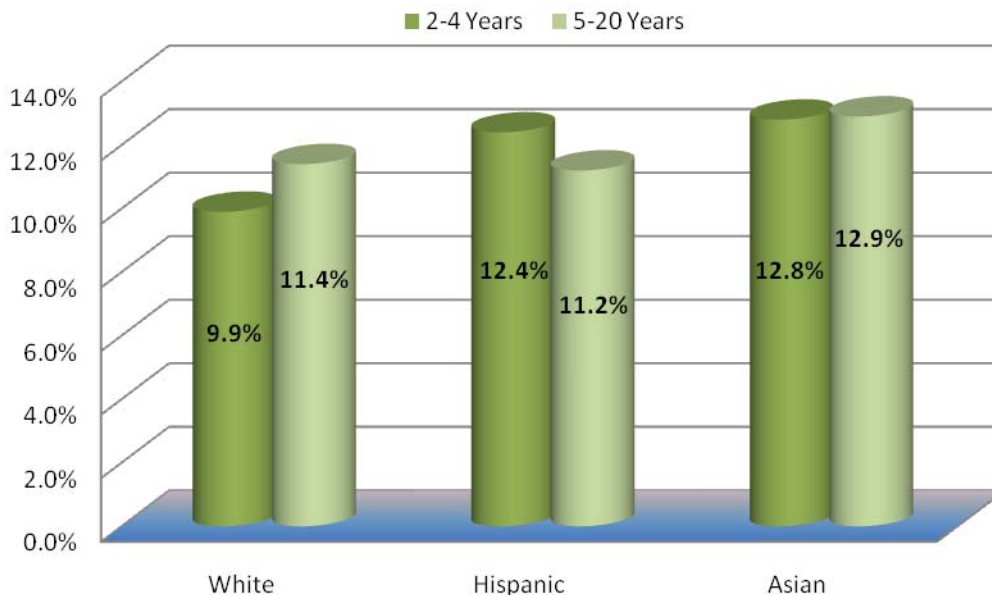
- In the CHOC at Mission service area, 27.9% of children between 6 to 17 years of age ate fast food at least 3 times in the previous week.

Anemic Children

Lack of proper nutrition can result in anemia, or a decrease in red blood cells most commonly due to iron deficiency. Children need an average of 1 mg per day of iron. However, since children's bodies only absorb about a tenth of the iron in their food, most children must have foods totaling about 8 to 10 mg of iron per day. Iron deficiency is easily treatable by the intake of iron supplements or iron rich foods.

Anemia, a low hemoglobin (Hb) concentration or low hematocrit (Hct) level, is defined by age and gender specific cutoff values based on the 5th percentile from the third [National Health and Nutrition Examination Survey](#). According to the [CDC](#), anemic children between 1 and 2 years have an Hb concentration less than 11.0g/dL or an Hct level less than 33.0%; anemic children between 2 and 5 years have an Hb concentration less than 11.1g/dL or an Hct level less than 33.3%. The figure below presents information from the 2008 PedNSS prevalence reports for anemia among Orange County's low-income children: Medi-Cal recipients or children whose family incomes are at/below 200% of federal poverty guidelines. (This indicator examined 27,787 2-4 year olds and 29,163 5-20 year olds.)

Figure 7: Proportion of Children with Anemia in PedNSS Database: Orange County, 2008



Source: State of California, Department of Health Care Services, Pediatric Nutrition Surveillance System, 2008 Annual PedNSS Prevalence Reports

- White children in the PedNSS database displayed the lowest rates of anemia; Asian and Hispanic children between 2-4 years displayed similar levels of anemia, while Asian children 5-20 years displayed the highest levels of anemia.

Rate of PedNESS Children and Youth with Anemia:
[\(PedNESS 2008\)](#)

California

14.3% 2-4 Years
12.5% 5-19 Years

Los Angeles Metro Area

13.6% 2-4 Years
10.4% 5-19 Years

Orange County

12.5% 2-4 Years
11.6% 5-19 Years

Riverside County

14.6% 2-4 Years
12.6% 5-19 Years

San Bernardino County

14.9% 2-4 Years
12.6% 5-19 Years

San Diego County

13.3% 2-4 Years
11.2% 5-19 Years

Santa Clara County

11.7% 2-4 Years
12.5% 5-19 Years

California Physical Fitness Test Pass Rates in 2008-2009 by District: [\(CDE\)](#)

Anaheim City Elementary

21.0% (574)
5th Grade

Anaheim Union High

35.8% (1,933)
9th Grade
34.8% (1,850)
7th Grade

Capistrano Unified

40.0% (1,520)
5th Grade
49.3% (1,884)
7th Grade
57.2% (2,165)
9th Grade

Garden Grove Unified

26.4% (933)
5th Grade
40.2% (1,506)
7th Grade
43.8% (1,625)
9th Grade

Irvine Unified

42.8% (855)
5th Grade
57.8% (1,157)
7th Grade
68.2% (1,483)
9th Grade

Santa Ana Unified

25.1% (1,017)
5th Grade
31.6% (1,306)
7th Grade
30.9% (1,232)
9th Grade

Physical Activity

Public school students in grades five, seven, and nine are required to take the California Physical Fitness Test (PFT). Fitness tests administered throughout Orange County schools indicated that the number of children passing the tests has improved over the school years, although a large percentage of children and adolescents remain physically unfit. The PFT assesses students on six fitness standards: aerobic capacity, body composition, flexibility, abdominal, trunk, and upper body strength. The PFT pass rates are determined for all Orange County school districts, using the California Department of Education [Dataquest](#) query system.

- In the 2008-09 school year, **34.5%** (12,355 students) of 5th graders, **43.7%** (16,182 students) of 7th graders, and **45.0%** (17,273 students) of 9th graders met all of the six fitness standards.
- In the 2007-08 school year, **32.9%** (12,003 students) of 5th graders, **42.6%** (15,902 students) of 7th graders, and **43.4%** (16,414 students) of 9th graders met all of the six fitness standards.
- In the 2000-01 school year, **25.7%** (9,918 students) of 5th graders, **32.1%** (10,919 students) of 7th graders, and **30.4%** (8,385 students) of 9th graders met all of the six fitness standards.

Outdoor Play (0-5)

The sedentary lifestyle of the modern age means that fewer children are playing outside, and more spend their hours watching television or playing video games instead. However, outdoor play is important because it encourages a child to explore her surroundings and builds her sense of independence as well as her physical dexterity. The [CDC](#) recommends that a young child should play for an hour each day, preferably outside in parks and other open, safe areas because of nature’s ability to “improve one’s physical, mental and social health.” The table below displays the amount of time children ages 0-5 in the CHOC service area played outdoors.

Table 4: Number of Hours Per Day Children 0-5 Spent Playing Outdoors: CHOC Service Areas, OCHNA 2007				
Hours	CHOC Service Area		CHOC at Mission Service Area	
	Percent	Population Estimate	Percent	Population Estimate
0-1	28.5%	72,313	23.1%	14,520
2	33.2%	84,240	32.0%	20,138
3	20.4%	51,877	23.8%	15,012
4	11.5%	29,245	13.7%	8,602
5+	6.3%	16,044	7.4%	4,687

- **71.7%** (185,472) of parents in the **CHOC** service area reported they were happy with the amount of outdoor play their child received, while **28.3%** (73,184) of parents reported they would have preferred their child had more outdoor play time.
 - Of parents in the service area who felt their child did not play outdoors enough, **42.5%** (30,795) indicated that the reason was because no adult had the time to take the child to a park or playground.
 - **11.8%** (8,544) indicated that there was no park or playground nearby.
 - **9.2%** (6,651) felt that their neighborhood was not safe enough for their child to play outdoors.
- In the **CHOC at Mission** service area, **25.7%** (16,473) of parents felt that their child did not play outdoors enough.
- Within the countywide **CHOC** service area, **6.1%** (15,431) of children did not play outside at all.

Sedentary Activities

There has been a significant change in people's daily habits due to modern developments and conveniences that have resulted in a less active way of life for many individuals. Among children and adolescents, [several national studies](#) have shown a relationship between the hours spent watching television and being overweight. The correlation may arise from decreased physical activity and increased consumption of non-healthy foods.

- In **CHOC's** service area, **23.3%** (121,331) of children 6 to 17 years of age spent 3 or more hours watching TV or playing video games on a typical day.
- In the **CHOC at Mission** service area, comparatively, only **18.2%** (20,324) of children 6 to 17 years of age spent 3 or more hours watching TV or playing video games. **11.9%** (62,186) in CHOC's service area and **11.6%** (12,962) in the CHOC at Mission service area spent 3 or more hours using the computer or surfing the Internet.

Body Image and Perceived Weight

Parents in the service areas of CHOC and CHOC at Mission have some difficulty in accurately assessing their child's weight, which can have important repercussions on a child's body image and health. In the OCHNA 2007 survey, parents/guardians were asked to identify the weight status of their child.

CHOC Service Area

- **84.6%** (677,022) of parents/guardians said their child was about the right weight, and **9.1%** (72,587) perceived their child as being overweight.
- Perception of weight was compared to BMI (calculated from reported height, weight, age, and gender). Of the parents/guardians who perceived their child as being overweight, **75.4%** (39,348) in CHOC's service area were accurate in their assessment, with children having BMI falling in the overweight or at risk of overweight categories.
- Of the parents/guardians in CHOC's service area who believed that their child was about the right weight, **34.8%** (154,574) were inaccurate in their assessment, having children who were in fact determined to be underweight, overweight, or at risk of overweight. **8.0%** of children were determined to be underweight, **13.2%** were at risk of overweight, and **13.6%** were overweight.

CHOC at Mission Service Area

- **88.6%** (158,130) of parents/guardians said their child was about the right weight, and **6.4%** (11,471) perceived their child as being overweight.
- Of the parents/guardians who perceived their child as being overweight, **83.9%** (5,323) in the CHOC at Mission service area were accurate in their assessment, with children having BMI falling in the overweight or at risk of overweight categories.
- **27.7%** (28,628) of parents who perceived their child to be about the right weight were inaccurate in their assessment, with **6.3%** underweight, **15.2%** at risk of overweight, and **6.2%** overweight.

Poor diet and lack of physical activity contributes to obesity.

***“Eat to live, not
live to eat.”
—Benjamin
Franklin***

Family Dynamics and Child Weight Status

There are numerous studies that examine how parents and family dynamics can contribute to childhood overweight and obesity. A 2008 article in the [Journal of the American Academy of Political and Social Sciences](#) uses three levels of parental influences to illustrate the complicated nature of this relationship: parental feeding practices regulating a child's eating behavior and intake, general parental behaviors shaping child attitudes and behaviors, and family functioning and stability at home. Such parental feeding practices as limiting access to certain foods, using treats as rewards, deciding portion sizes, and prompting a child to eat or to “finish the plate,” could cause children to develop unhealthy eating habits. Parental behaviors can also mold child attitudes or eating practices, such as the quality of the foods available at home and parental eating habits. According to two articles in the *Journal of the American Dietetic Association*, children who were asked to describe eating patterns reported having more healthy eating habits if their parents ate fruits and vegetables and had low dietary fat intake ([Tibbs et al. 2001](#); [Fisher et al. 2002](#)). The last level of parental influence is the least studied, however the article suggests that poor family functioning and parental style could cause stress or chaos in the household, “which then contributes to poor development and control of dietary habits in a child.”

A 2009 article based on a longitudinal study from 1991 to 1995 in the [American Journal of Preventive Medicine](#) explored the association between overweight in children (ages 8, 11, and 14 at baseline) and parental weight and television viewing. It found that children with one or two overweight/obese parents watched more TV per day on average compared to children of normal weight parents, suggesting that overweight/obese parents may display behaviors that could influence their child's TV viewing, which in turn could affect child weight status. Furthermore, BMI and percent body fat (PBF) in children increased significantly (statistical significance) for each hour of TV watching among children with overweight parents only. Another article, published in [Journal of the American Board of Family Medicine](#) in 2008, specifically explored the connection of parental weight and attitudes with overweight in children—maternal and paternal overweight were both associated with child overweight. Moreover, a lower proportion of parents with overweight children accurately described the weight status of their child in comparison of parents with normal weight children, substantiating findings from the OCHNA survey.

While the OCHNA survey did not examine the relationship between parent and child weight status, these studies highlight the profound impact that parents have on their child's nutritional intake and health behaviors.



Immunizations, Major Diseases, Illness

While the vast majority of young children are in good health, it is important that parents continue to assure their child’s health by following professional recommendations and good health habits to avoid negative health outcomes. In turn, these actions will allow a child to grow up to become a healthy, productive and happy individual.

Immunizations

Young children are immunized against many harmful diseases, including whooping cough, diphtheria, measles, and polio. Vaccinations have been highly effective in preventing, and even eradicating, once widespread diseases that permanently impaired or even killed children in the past. The most current immunization schedule can be reached by clicking [here](#). It is vitally important that a child receives all recommended vaccinations before entering school to prevent the spread of diseases.

Experiences with Immunization Services

In the OCHNA 2007 survey, parents/guardians of children between 0 and 5 years old were asked a series of questions regarding their experiences with immunization services and materials as well as their personal beliefs on immunizations.

- **15.7%** (40,443) of parents/guardians in the CHOC service area stated they *did not* receive **immunization reminders** for their child.
- Parents/guardians were asked if they found **immunization schedules** easy to understand; **8.2%** (21,017) responded they did not find schedules easy to understand.
- Parents/guardians were asked if they needed assistance **utilizing immunization services** in the community; **11.2%** (28,560) stated they did require assistance.
- Parents/guardians were asked if they **believed immunizations to be harmful to a child’s health**; **26.7%** (63,562) believed that immunizations can be harmful.

Up-to-Date at 2nd Birthday

- 3 Doses of Polio
- 4 Doses of Diphtheria, Tetanus and Pertussis (DTaP)
- 1 Dose of Measles, Mumps and Rubella (MMR)

Up-to-Date at Kindergarten (proof required for entry)

- 4 Doses of Polio
- 4 Doses of DTaP
- 3 Doses of Hepatitis B
- 2 Doses of MMR
- 1 Dose of Varicella

Immunization Coverage Rates

The Kindergarten Assessment and Retrospective Surveys help to determine the rates of immunization coverage in young Orange County children, which corresponds to the whole CHOC service area. The Kindergarten Retrospective Survey data is based on randomly selected kindergarten immunization records for Orange County and California. As a retrospective survey, immunization coverage rates reflect levels among toddlers approximately 3 to 4 years ago who entered kindergarten in 2009. Data is taken from the 16th [Annual Conditions of Children Report](#).

Child Immunization Schedule: [\(CDC\)](#)

Up-to-Date at 2nd Birthday

3 Doses of Polio

4 Doses of Diphtheria, Tetanus, and Pertussis (DTaP)

1 Dose of Measles, Mumps and Rubella (MMR)

Up-to-Date at Kindergarten (proof required for entry)

4 Doses of Polio

4 Doses of DTaP

3 Doses of Hepatitis B

2 Doses of MMR

1 Dose of Varicella

Healthy People 2020 Objective:

Achieve & maintain vaccination coverage levels for young children (19-35 months) by 2020:

Hepatitis A & B: 85%

Rotavirus: 80%

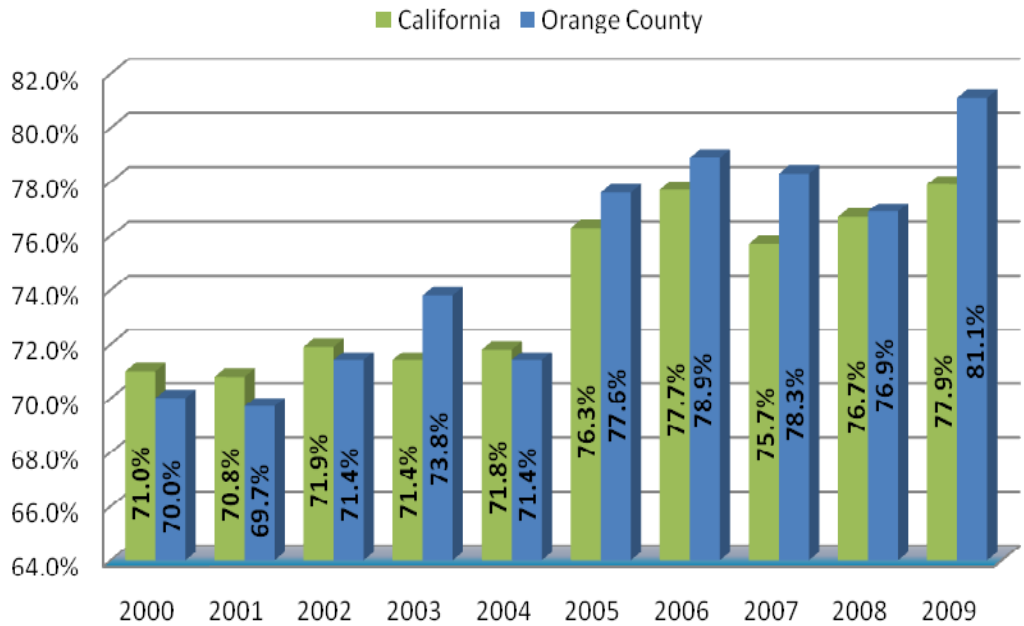
Other universally recommended vaccines: 90%

89.6% or 36,862 of OC kindergarten entrants had all of their required immunizations in Fall 2009; 10.4% or 4,287 did not.*

91.1% of kindergarten entrants statewide had all of their required immunizations in Fall 2009.*

*Source: CDPH, Immunization Branch

Figure 1: Percent of Up-to-Date Immunizations at 2nd Birthday: CHOC Service Area, Assessment Years 2000-2009

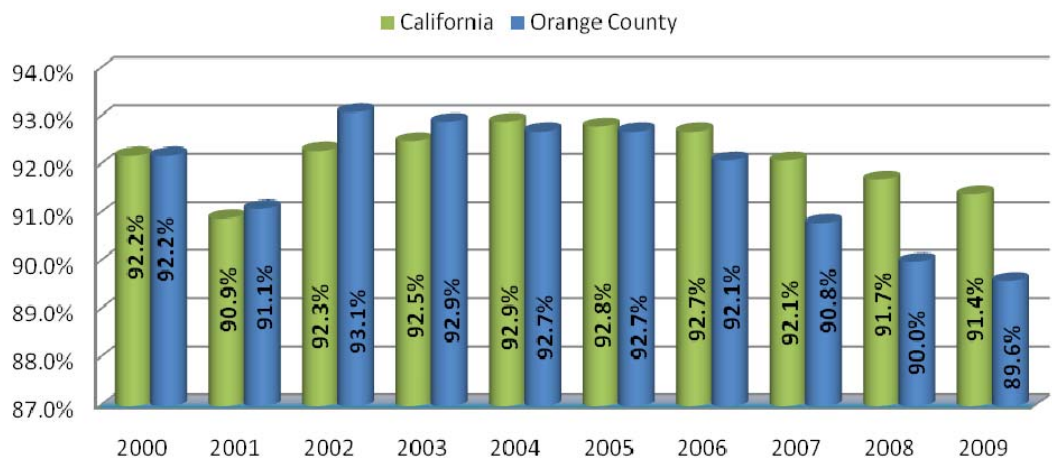


State of California, Department of Public Health, Immunization Branch: Kindergarten Retrospective Survey 2009; 16th Annual Report on the Conditions of Children in Orange County 2010: Good Health-Immunization of Children

- The highest up-to-date immunization coverage level among kindergarteners at their 2nd birthday was documented in the 2009 assessment, with a rate of over **81%** in the county, after a drop in 2008.

After reaching a peak of **92.7%** and **92.9%** in 2004 for the county and state respectively, up-to-date immunization rates among children entering kindergarten have been declining.

Figure 2: Percent of Up-to-Date Immunization Among Students Entering Kindergarten: CHOC Service Area, Assessment Years 2000-2009



State of California, Department of Public Health, Immunization Branch: Kindergarten Assessment Survey 2009; 16th Annual Report on the Conditions of Children in Orange County 2010: Good Health-Immunization of Children

- Over the decade-long period, the highest up-to-date coverage service area-wide (Orange County) rate was achieved in 2002. The 2009 service area rate dropped by **3.5 percentage points**.

Immunization Rates for Kindergarteners by District

Each year, California schools with kindergartens provide immunization coverage data to the California Department of Public Health. In order to enter kindergarten, a child must receive vaccinations for polio, diphtheria, tetanus, whooping cough, measles, mumps, rubella, hepatitis B and chicken pox (if they did not have chicken pox). However, children may be exempted from the immunization requirement if they have previously had one or more of the diseases and have authorization from their physicians, or if their parents/guardians have signed a personal belief exemption. Children with these exemptions are advised to be excluded from school if there is a disease outbreak. The table below provides information on schools with 10 or more kindergarteners in the CHOC service area from the [California Department of Public Health](#) for fall 2009.

Table 1: Average Up-to-Date Immunization Coverage Rates for Kindergarten Children	
School District	Average Percent
Anaheim City	96.6%
Garden Grove Unified	95.6%
Fullerton	95.5%
Westminster Unified	91.9%
Santa Ana Unified	91.6%
Newport-Mesa Unified	90.1%
Irvine Unified	87.8%
Huntington Beach City	86.4%
Capistrano	80.7%

Source: State of California, Department of Public Health, Immunization Branch, School Immunization Rates in California, 2009

- The Capistrano Unified School District had one of lowest average up-to-date immunization coverage rate among kindergarteners of **80.7%**; some elementary schools had up-to-date immunization rates as low as **30%** and as high as **97%**, with 38 elementary schools reporting data.
- Anaheim Unified School District had the highest average up-to-date immunization coverage rate among kindergarteners of **96.6%**; the coverage rates in individual elementary schools ranged from **92%** to **100%** (46 elementary schools reported).



OC Kindergartener Immunization Coverage Rate by Vaccine, Fall 2009:*

91.8%
4+ DTP

92.1%
3+ Polio

92.0%
2+ MMR

95.5%
3+ Hep. B

96.6%
Var 1+

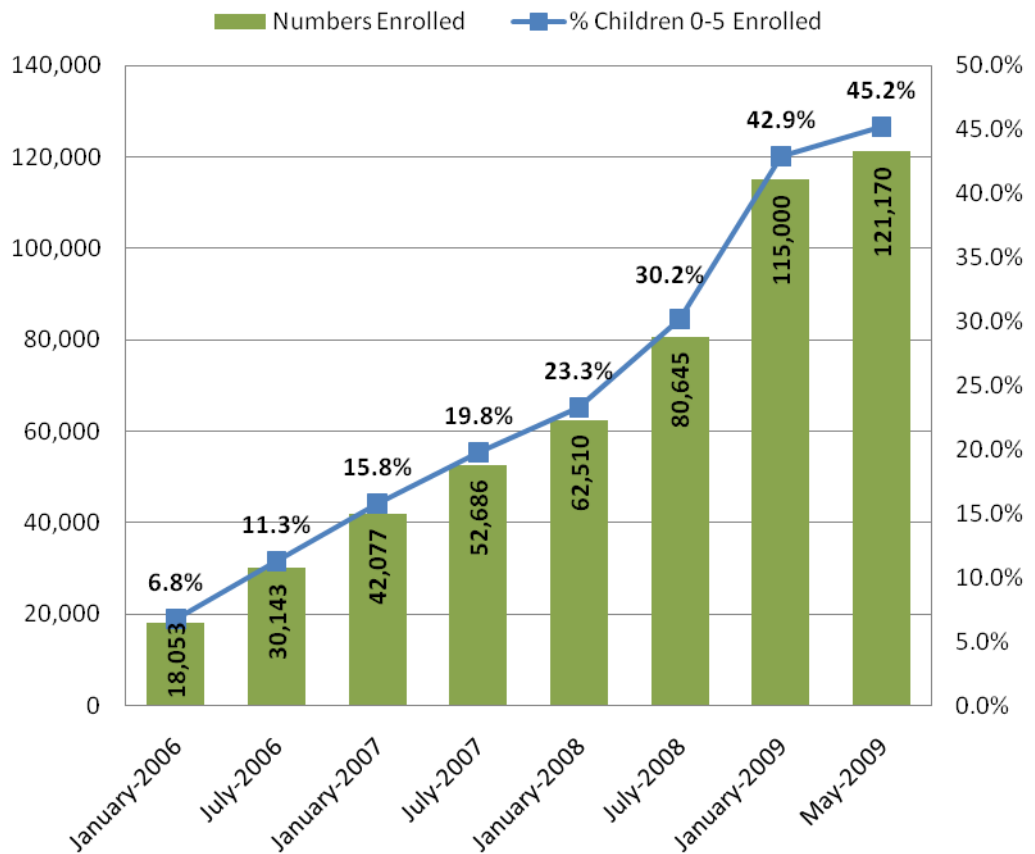
*Source: CDPH, Immunization Branch

The Orange County Immunization Coalition launched an immunization registry to increase immunization rates.

Promoting Immunization Coverage in Orange County

Immunization registries are computerized databases that allow doctors to follow and maintain a patient’s immunization record. Because the system is always updated, doctors can also see the immunizations that a patient may need and send them reminder notices. With these systems in place, the Orange County Immunization Coalition works to expand immunization coverage and to lessen over-immunization in the community by engaging health care providers, community leaders, and parents and families. Locally, the Los Angeles-Orange Immunization Network (LINK) collaboration has worked to implement the California Automated Immunization Registry application in order to achieve these goals. The Orange County Immunization Coalition launched its immunization registry in March 2005. Since then, **45.2% (112,170)** of children under 6 years old in Orange County have been enrolled in the LINK registry as of May, 2009. The coalition measures its progress with the Healthy People 2020 Objective, which seeks to increase the proportion of children under 6 years old participating in a fully-operational immunization registry to **95%**.

Figure 3: Orange County LINK Cases Enrolled and Rates for Children < 6 Years: 2006-2009

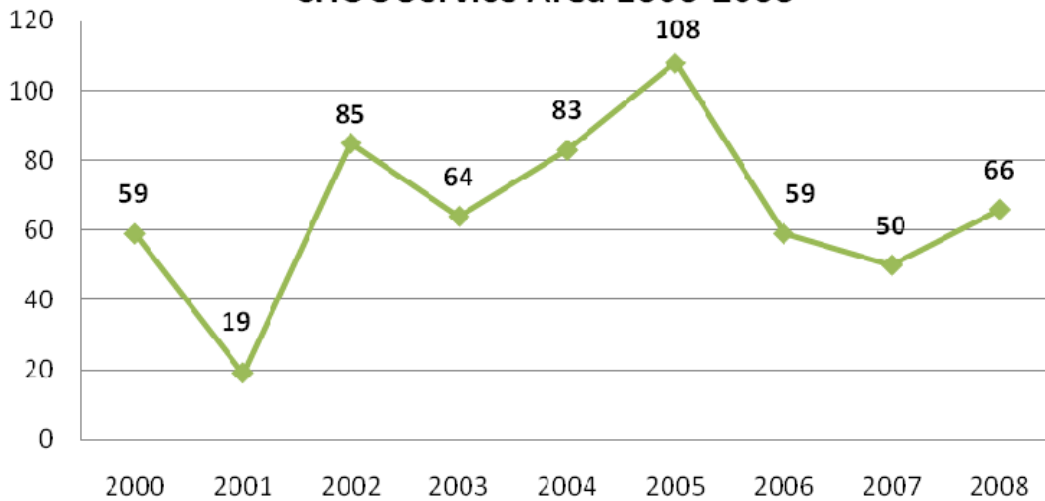


Source: Orange County Immunization Coalition: LINK Summary July 2005 to May 2009

- In August of 2005, **3.9% (10,231)** of 0 to 5 year olds were enrolled in the Orange County LINK registry. As of May of 2009, **45.2%** of children between 0 and 5 years were enrolled in the registry.

The fact that vaccine-preventable diseases still persist, with a total of 66 cases in 2008 among service area children under 6 years of age, highlights the importance of maintaining high to complete immunization coverage. Data is taken from the 2010 [Orange County Community Indicators Report](#).

Figure 4: Total Number of Reportable Vaccine-Preventable Cases Among Children 0-5 Years: CHOC Service Area 2000-2008



Source: Orange County Community Indicators Report 2010; County of Orange Health Care Agency

Since 1999 vaccine-preventable diseases include polio, tetanus, diphtheria, pertussis, hepatitis A, hepatitis B, HIB, mumps, measles, and rubella. Pneumococcal disease was included as of 2003 and varicella was included as of 2004.

Since the launch of LINK by the Orange County Immunization Coalition in 2005, the total number of reportable vaccine-preventable cases have been falling. It is possible that LINK has helped.

Child (1-17) Ever Diagnosed with Asthma: [CHIS 2009](#)

13.4% (1,320,000) California

7.4% (57,000) Orange County

Current Asthma Status for Child Among Ever Diagnosed: [CHIS 2009](#)

62.3% (822,000) of 1,320,000 California

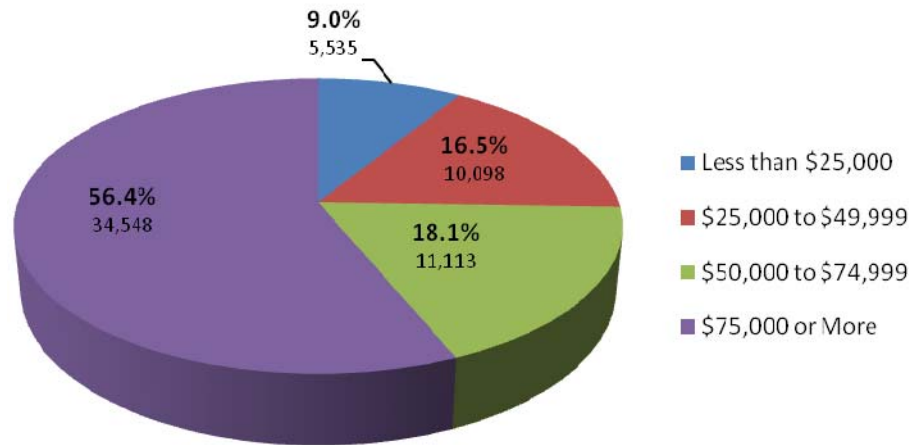
54.8% (32,000) of 57,000 Orange County

Priority Diseases Asthma

Asthma is a leading chronic illness in children, according to the [Centers for Disease Control and Prevention](#). In the CHOC service area, 9.4% (75,514) of children ages 0-17 had asthma in 2007. In the CHOC at Mission service area, 7.2% (12,819) had asthma.

The following figures show the income and ethnicity distribution of children with asthma in the CHOC service area. The number of responses in the CHOC at Mission service area was too small to produce similar break-outs.

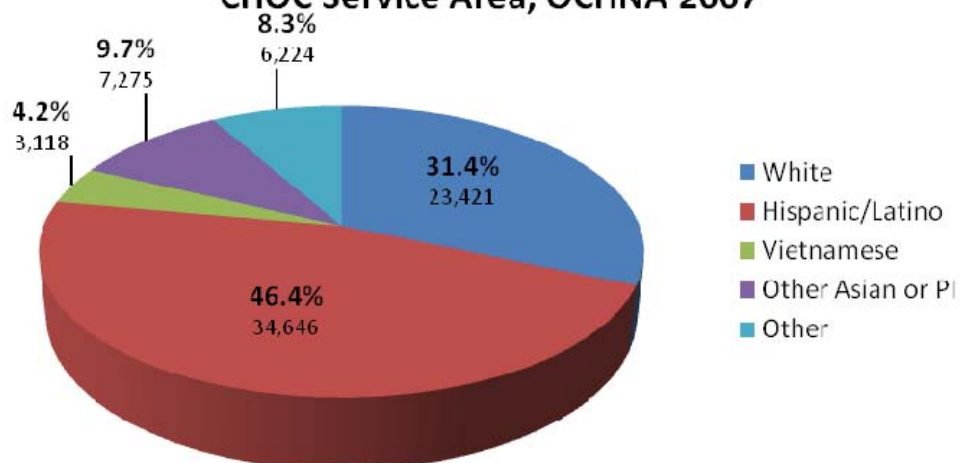
Figure 5: Annual Household Income Distribution of Children with Asthma: CHOC Service Area, OCHNA 2007



- 43.6% (26,746) of children in the CHOC service area live in a household with an annual household income below \$75,000.
- While it may be shown elsewhere that children in less affluent households are more likely to have asthma compared to their counterparts, the OCHNA 2007 survey showed no relationship between income level and asthma prevalence.

The following figure shows the race/ethnicity of children with asthma in the CHOC service area.

Figure 6: Race/Ethnicity of Children with Asthma: CHOC Service Area, OCHNA 2007



- Of the children and adolescents with asthma, 46.4% were Hispanic/Latino and 31.4% were white.

The best preventative measures against asthma are creating a smoke-free environment, removing indoor dirt and dust, avoiding air pollution, and treating mild asthma symptoms before they turn severe.

Nationwide, the average cost of care for an individual hospitalized for asthma totaled **\$13,862**, and the average cost of care for an emergency room visit due to asthma totaled **\$629**, according to the 2007 [Medical Expenditure Panel Survey](#) (MEPS).

Diabetes

That a large proportion of Orange County children were estimated to be overweight is worrisome to public health leaders because of the serious consequences on health and well-being later in life. The **2007 California Health Interview Survey** shows an association between weight status and diabetes among adults: only **3.2%** of Orange County adults with a normal BMI (**18.5 to 24.99**) reported that they had diabetes. **7.2%** of Orange County adults with an overweight BMI (**25.0 to 29.99**) reported that they had diabetes. In contrast, over **15%** (**15.1%**) of Orange County adults who were obese (**30.0 or more**) reported that they had diabetes.

Since diabetes is rare among children it is difficult to obtain an accurate estimate of those suffering from the disease with a telephone survey, which assesses only a sample of the total county population. The **OCHNA 2007** survey estimated that **0.2%** (1,996) of children and adolescents in Orange County may have diabetes (type 1 or 2). The number of responses in the CHOC at Mission is too small to produce any statistically stable population estimates.

The overall prevalence of diabetes in children is low, although there are reports of increasing rates within this group. Children who have developed diabetes face an increased risk for diabetes-associated complications, e.g., renal failure and amputations, because they have had the disease for a longer time than those developing the condition as adults.

Influenza

According to the [CDC](#), influenza is more dangerous than the common cold to children. Many children under 5 years of age need medical care from complications; children under 2 years old are especially vulnerable to severe complications, as are children with chronic health problems, such as asthma or diabetes. The CDC recommends that all children from 6 months to 19 years get a seasonal flu vaccine. According to 2007 CHIS, an estimated **37.1%** (287,000) of Orange County children 0-17 years received a flu vaccine.

Healthy People 2020 Objective

Reduce to **48.7%** the proportion of 5-17 year olds with asthma who miss school days due to asthma in the past 12 months.

Proportion of Children (5-17) Currently with Asthma Missing School in Past 12 Months: [CHIS 2009](#)

21.1% (243,000)
California

14.7% (7,000)
Orange County

Both California and Orange County met the HP 2020 Objective in 2009.

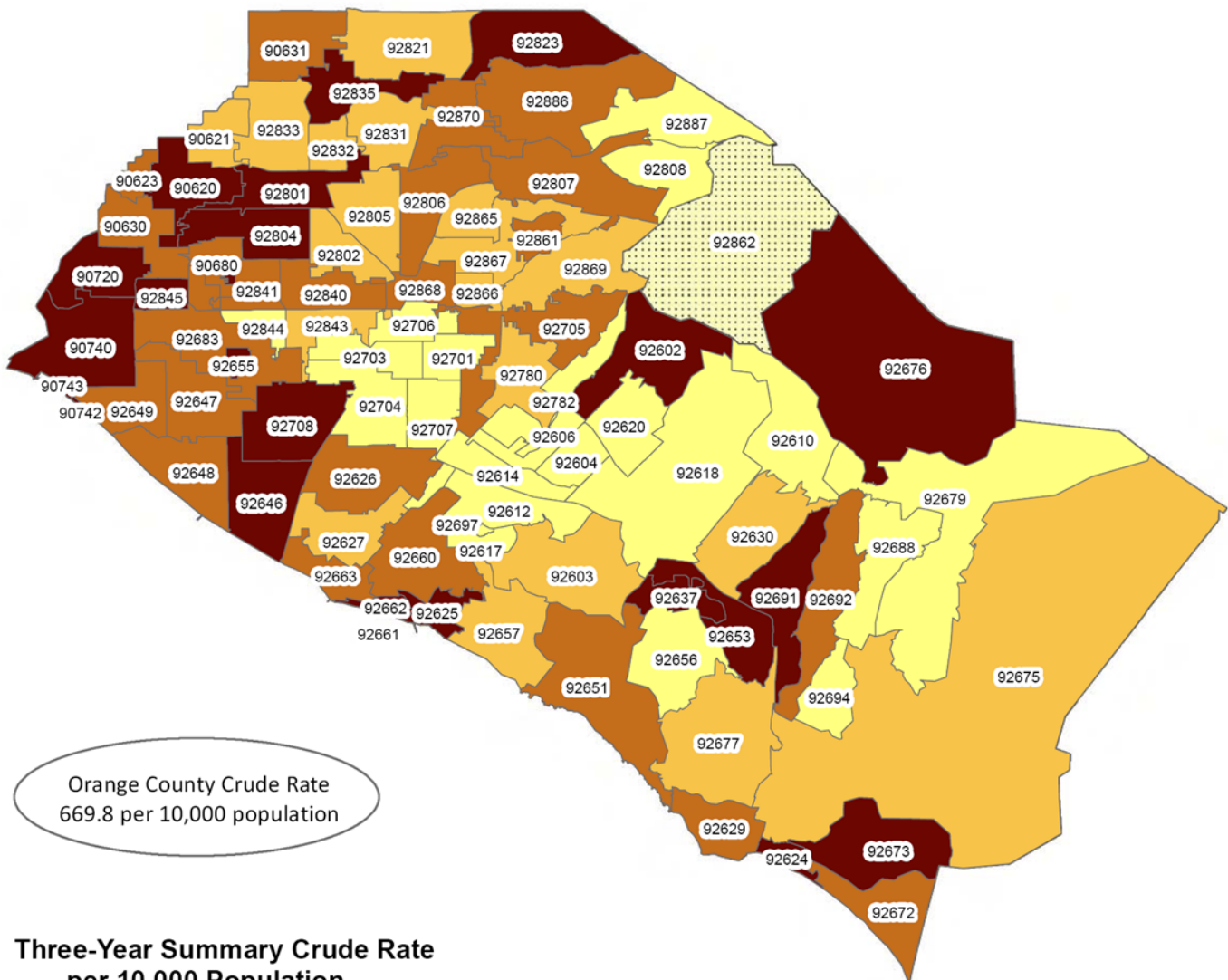
2006-2008 Orange County Causes of Hospitalization: Orange County Health Care Agency—[Orange County Geographic Health Profile 2011](#)

The data on the following pages come from the OSHPD Patient Discharge Data for the 2006-2008 epoch. The non-public dataset includes de-identified records of visits to all Orange County hospitals, in addition to all hospitalizations of Orange County residents to either OC or non-OC facilities. In the dataset, the principal diagnosis for a visit was identified using the International Classifications of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). Hospitalizations due to all causes combined for OC residents were analyzed in this category. From 2006 to 2008, there was an average of **260,038** hospitalizations of Orange County residents per year. The three-year average hospitalization crude rate was **669.8** per 10,000 population.

Table 6.1: Leading Causes of Hospitalization
Number of Visits and Percent
All Residents - Orange County, 2006-2008

Rank	Cause	Number of Visits (3-Year Average)	Percent
1	Pregnancy, childbirth, and the puerperium (630-677)	46,618	17.9%
2	Diseases of the digestive system (520-579)	27,259	10.5%
3	Heart disease (391-392.0,393-398,402,404,410-416,420-429)	23,577	9.1%
4	Mental Disorders (290-319)	14,681	5.6%
5	Diseases of the genitourinary system (580-629)	13,022	5.0%
6	Malignant neoplasms (140-208,230-234)	10,376	4.0%
7	Infectious and parasitic diseases (001-139)	9,483	3.6%
8	Fractures (800-829)	7,417	2.9%
9	Cerebrovascular disease (430-438)	6,554	2.5%
10	Pneumonia (480-486)	6,451	2.5%
11	Diseases of the musculoskeletal system and connective tissue (710-739)	5,750	2.2%
12	Osteoarthritis and allied disorders (715)	5,205	2.0%
13	Diseases of the nervous system and sense organs (320-389)	4,770	1.8%
14	Diseases of the skin and subcutaneous tissue (680-709)	4,450	1.7%
15	Benign neoplasms (210-229)	3,532	1.4%
16	Diabetes mellitus (250)	3,231	1.2%
17	Diseases of the blood and blood-forming organs	2,788	1.1%
18	Intervertebral disc disorders (722)	2,641	1.0%
19	Chronic bronchitis (491)	2,466	0.9%
20	Volume depletion (276.5)	2,067	0.8%
21	Certain conditions originating in the perinatal period (760-779)	1,886	0.7%
22	Asthma (493)	1,867	0.7%
23	Poisonings (960-989)	1,743	0.7%
24	Congenital anomalies (740-759)	1,318	0.5%
25	Alcohol dependence syndrome (303)	1,234	0.5%
26	Acute bronchitis and bronchiolitis (466)	1,222	0.5%
	Other	48,430	18.6%
	Total =	260,038	100.0%

All Orange County Hospitalization Rates by ZIP Code of Residence (2006-2008)



Source: Office of Statewide Health Planning and Development, State of California
 The map does not display cases with a PO Box or unknown ZIP Code (1.2% or 2,566 out of 213,420 Hospitalizations).

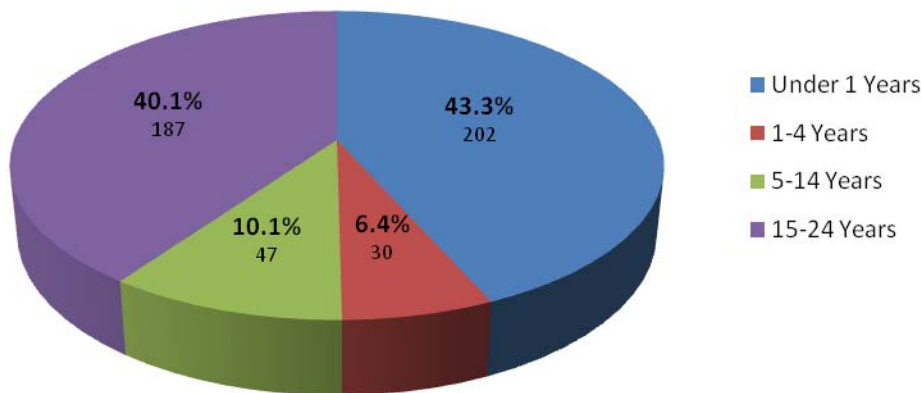
Table 6.4: Leading Causes of Hospitalization
Number of Visits and Percent
0-17 Years - Orange County, 2006-2008

Rank	Cause	Number of Visits (3-Year Average)	Percent
1	Diseases of the digestive system (520-579)	2,314	11.6%
2	Certain conditions originating in the perinatal period (760-779)	1,886	9.4%
3	Mental Disorders (290-319)	1,415	7.1%
4	Pregnancy, childbirth, and the puerperium (630-677)	1,168	5.8%
5	Congenital anomalies (740-759)	907	4.5%
6	Acute bronchitis and bronchiolitis (466)	892	4.5%
7	Infectious and parasitic diseases (001-139)	862	4.3%
8	Pneumonia (480-486)	795	4.0%
9	Fractures (800-829)	745	3.7%
10	Diseases of the nervous system and sense organs (320-389)	717	3.6%
11	Diseases of the genitourinary system (580-629)	669	3.3%
12	Asthma (493)	569	2.8%
13	Diseases of the skin and subcutaneous tissue (680-709)	470	2.4%
14	Volume depletion (276.5)	405	2.0%
15	Diseases of the blood and blood-forming organs	371	1.9%
16	Diseases of the musculoskeletal system and connective tissue (710-739)	357	1.8%
17	Malignant neoplasms (140-208,230-234)	269	1.3%
18	Poisonings (960-989)	201	1.0%
19	Diabetes mellitus (250)	173	0.9%
20	Heart disease (391-392.0,393-398,402,404,410-416,420-429)	121	0.6%
21	Benign neoplasms (210-229)	74	0.4%
22	Cerebrovascular disease (430-438)	40	0.2%
23	Alcohol dependence syndrome (303)	28	0.1%
24	Chronic bronchitis (491)	10	0.1%
25	Intervertebral disc disorders (722)	10	0.1%
26	Osteoarthritis and allied disorders (715)	1	0.0%
	Other	4,512	22.6%
	Total =	19,981	100.0%

Child Mortality

The child and youth death rates are the most severe measure of ill health in children and are reported by the number of deaths and rate per 100,000 children and youth. The leading causes of death for children for each age group are presented below. According to the [California Department of Public Health](#), there were **466** deaths in 2008 of individuals younger than 25 years, accounting for **2.7%** of total deaths (out of **17,162**) in Orange County, corresponding to the entire CHOC service area.

**Figure 7: Childhood/Youth Deaths by Age Group:
CHOC Service Area, 2008**



Source: State of California, Department of Public Health, Vital Statistics Query System

- Infants accounted for more deaths than other child or youth age groups.
- The age-specific death rate for infants less than 1 year was **444.2** per 100,000 infants. For toddlers 1-4 years, the age-specific death rate was **16.9** per 100,000 toddlers. For children 5-14 years, the age-specific death rate was **10.8** per 100,000 children. For youth 15-24 years, the age-specific death rate was **41.7** per 100,000 youth.

In the **CHOC at Mission** service area, there were **74** deaths in 2008 among children and youth between 0-24, accounting for **2.4%** of all deaths in the subset (out of 3,025 total deaths). **35** deaths occurred in youth 15-24 years, **27** deaths occurred in infants (under 1 years), and **6** deaths each occurred the 5-14 and 1-4 age groups.

Healthy People 2020 Objective

Reduce infant deaths to **6.0** deaths per 1,000 live births.

5.1 California [\(CDPH 2008\)](#)

4.8 Orange County [\(CDPH 2008\)](#)

The table below presents the top 5 causes of death by age group in 2008.

Table 2: Top 5 Causes of Death for Children and Youth (0-24 Years) by Age Group and Numbers of Death: CHOC Service Area, 2008								
	Under 1 Years		1-4 Years		5-14 Years		15-24 Years	
1	Perinatal Conditions	129	Accidents	14	Cancer	17	Accidents	73
2	Congenital Malformations	64	Congenital Malformations	4	Accidents	5	Suicide	28
3	Diseases of Circulatory System	9	Cancer	4	Assault (Homicide)	4	Assault (Homicide)	25
4	Sudden Infant Death Syndrome	4	Assault (Homicide)	2	Congenital Malformations	3	Cancer	18
5	Accidents	3	Perinatal Conditions	2	Diseases of Circulatory System	3	Diseases of Circulatory System	11

Source: State of California, Department of Public Health, Vital Statistics Query System

- The leading cause of death for infants was from conditions that arose during the perinatal period; perinatal refers to a time immediately before or after birth. Examples of perinatal conditions include respiratory distress in a newborn, congenital pneumonia, or bacterial sepsis of a newborn.
- The leading cause of death for children 1-4 years and youth 15-24 years was from an accident.
- For youth 15-24 years, over **one in three** deaths (**67.4%** or 126 deaths) were due to external causes in 2008.

**2006-2008 Mortality: Orange County Health Care Agency—
Orange County Geographic Health Profile 2011**

Deaths due to all causes combined are analyzed in this category. From 2006 to 2008, there was an average of **16,895** deaths per year among Orange County residents; there were an average of **319** deaths per year among Orange County residents 0-17 years. The average death rate for all individuals was 536.7 per 100,000 population.

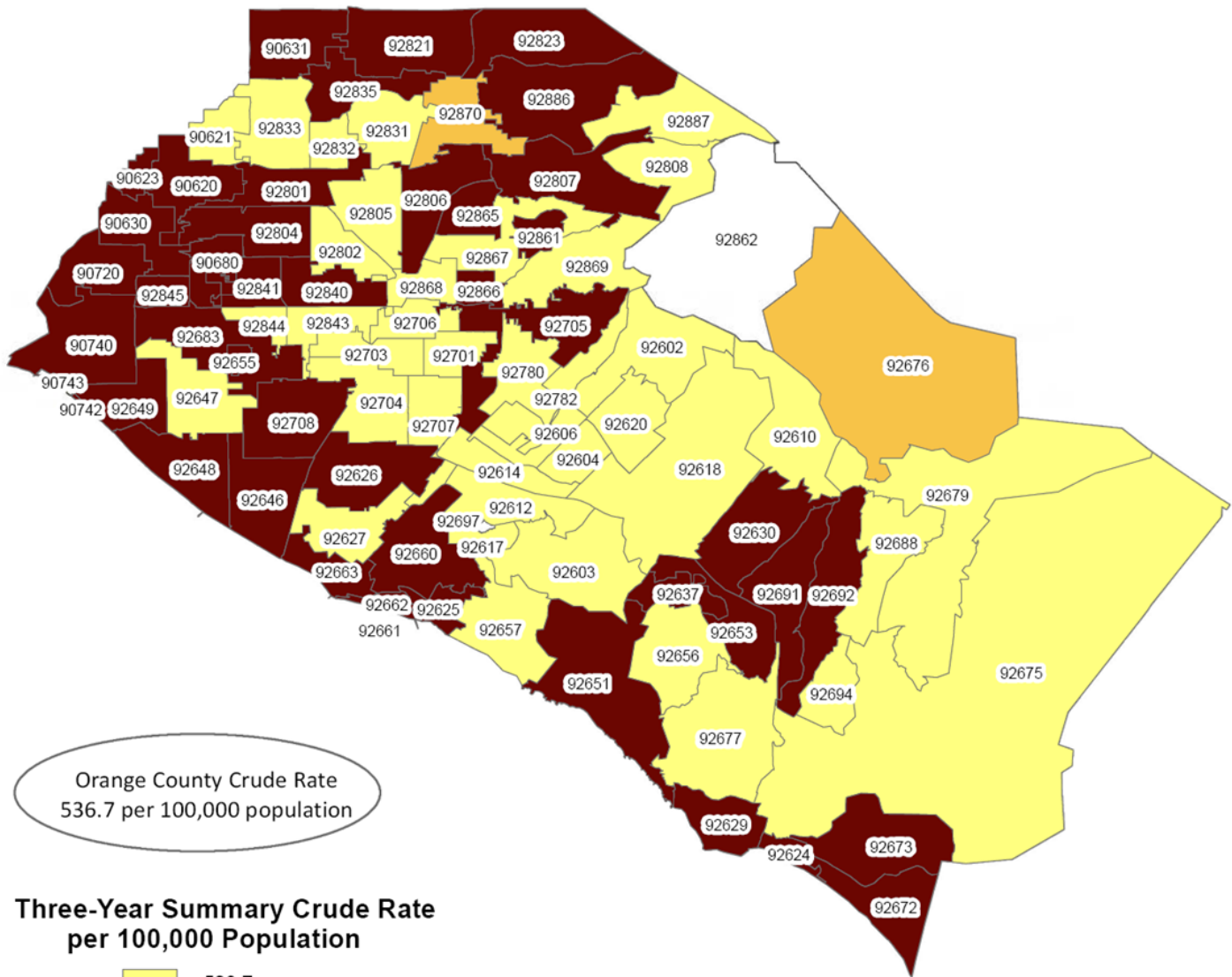
The following pages display the causes of deaths for individuals of all ages as well as the causes of deaths for children and youth under 19 years of age. These tables and maps display the crude death rates for each geographic ZIP code area in Orange County.

There were 6 deaths of OC youth under 15 years from accidental submersion in 2008; all 6 were between 1-4 years. (CDPH)

Table 5.1: Leading Causes of Death
All Residents, Orange County, 2006-2008

Rank	Disease	Number of Deaths (3-Year Average)	%
1	Heart Disease	4,638	27.5
	<i>Ischemic Heart Disease</i>	3,332	19.7
	<i>Cardiomyopathy</i>	222	1.3
2	Cancer	4,144	24.5
	<i>Lung Cancer</i>	985	5.8
	<i>Breast Cancer</i>	319	1.9
	<i>Colon Cancer</i>	314	1.9
	<i>Prostate Cancer</i>	213	1.3
	<i>Leukemia</i>	175	1.0
3	Cerebrovascular Disease	1,101	6.5
4	Lung Disease (CLRD)	888	5.3
5	Alzheimer's Disease	802	4.7
6	Unintentional Injury	658	3.9
	<i>Accidental Poisoning</i>	222	1.3
	<i>Motor Vehicle Traffic</i>	204	1.2
	<i>Accidental Falls</i>	114	0.7
	<i>Drowning and Submersion</i>	27	0.2
7	Influenza & Pneumonia	559	3.3
8	Diabetes	431	2.6
9	Cirrhosis	280	1.7
10	Suicide	272	1.6
11	Hypertension	229	1.4
12	Nephritis, Nephrotic Syndrome	181	1.1
13	Parkinson's Disease	174	1.0
14	Atherosclerosis	121	0.7
15	Perinatal Conditions	106	0.6
16	Congenital Malformations	97	0.6
17	Aortic Aneurysm	94	0.6
18	Homicide	81	0.5
19	AIDS	46	0.3
	All Other Causes	1,993	11.8
	TOTAL	16,895	100.0

Orange County All Death Rates by ZIP Code of Residence (2006-2008)

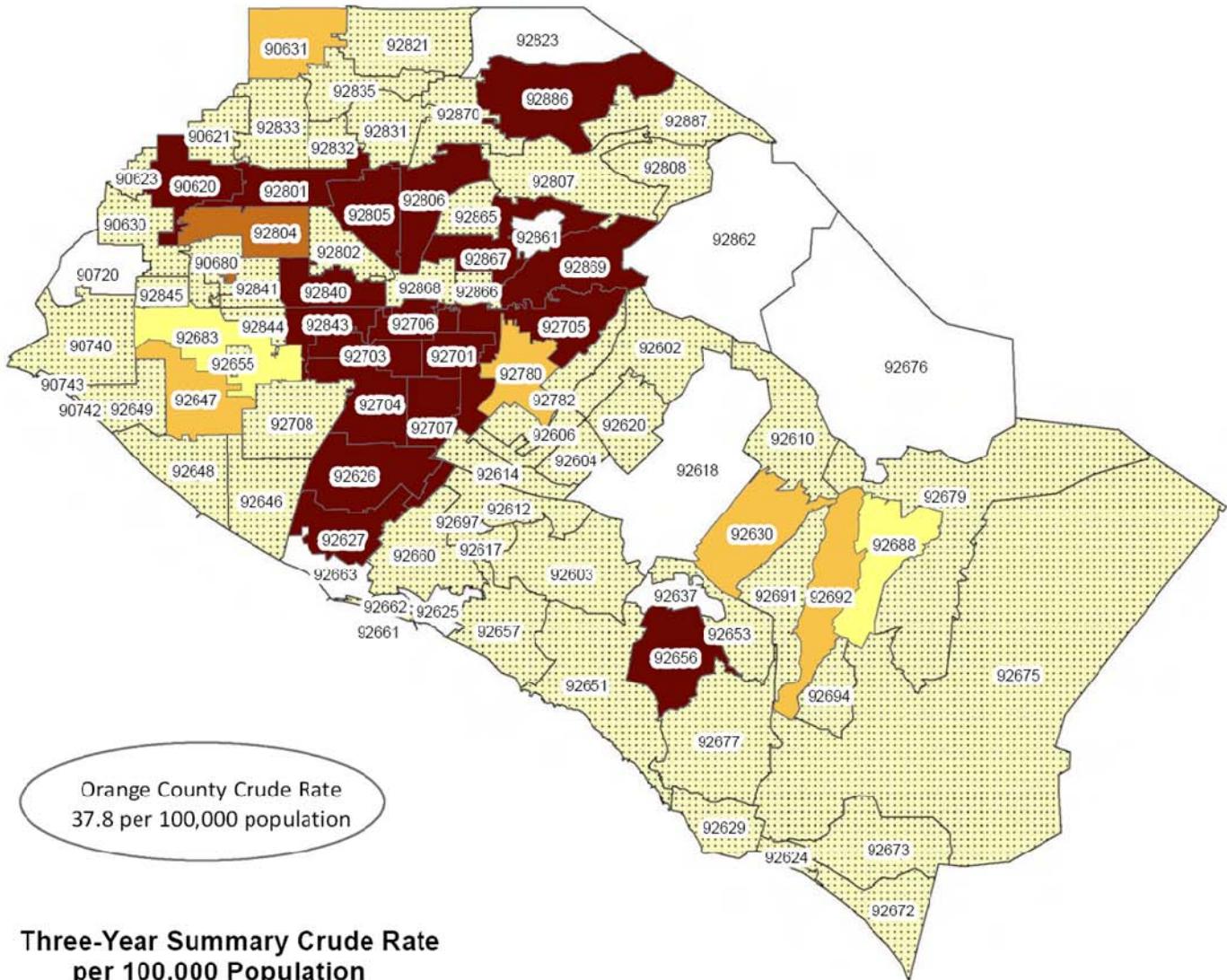


Data Source: State of California Death Master File

**Table 5.8: Leading Causes of Death
0-17 Yrs, Orange County, 2006-2008**

Rank	Disease	Number of Deaths (3-Year Average)	%
1	Perinatal Conditions	106	33.2
2	Congenital Malformations	68	21.3
3	Unintentional Injury	34	10.7
	<i>Motor Vehicle Traffic</i>	17	5.3
	<i>Drowning and Submersion</i>	7	2.2
	<i>Accidental Poisoning</i>	3	0.9
	<i>Accidental Falls</i>	1	0.3
4	Cancer	23	7.2
	<i>Leukemia</i>	9	2.8
	<i>Lung Cancer</i>	0	0.0
5	Homicide	12	3.8
6	Heart Disease	9	2.8
	<i>Cardiomyopathy</i>	3	0.9
	<i>Ischemic Heart Disease</i>	0	0.0
7	Suicide	5	1.6
8	Influenza & Pneumonia	4	1.3
9	Lung Disease (CLRD)	2	0.6
10	Diabetes	1	0.3
11	Cerebrovascular Disease	1	0.3
12	Nephritis, Nephrotic Syndrome	1	0.3
13	Cirrhosis	0	0.0
	All Other Causes	53	16.6
	TOTAL	319	100.0

Orange County Death Rates, 0 to 17 Years Old by ZIP Code of Residence (2006-2008)



Data Source: State of California Death Master File

Maternal and Infant Health

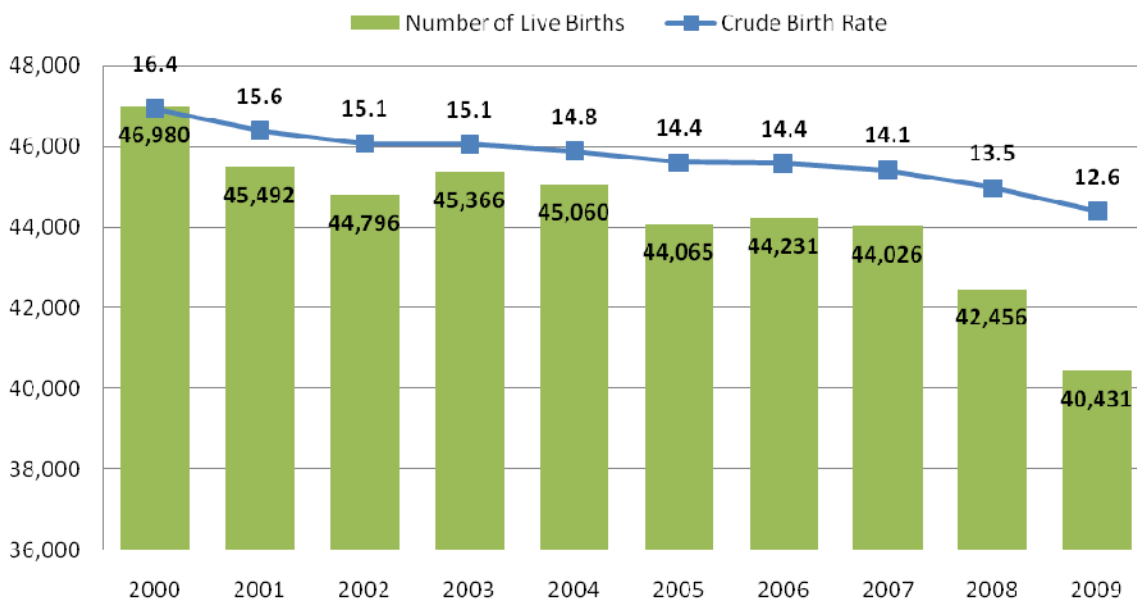
An overriding priority of health services is to ensure healthy, risk-free births. A mother-to-be can also take measures to reduce risk factors and help ensure the health of her baby, including adequate prenatal care and good nutrition. After a child is born, breastfeeding can provide several health benefits, including helping to protect an infant from a variety of illnesses, bacteria, and infections.

- In 2009, the [California Department of Public Health](#) (CDPH) Vital Statistics Query System reported **40,431** live births in all of Orange County.

Crude Birth Rates of the Service Area

From 2000 to 2009, the CDPH Vital Statistics Query System shows that the number of live births and the crude birth rate has been in decline—the crude birth rate is determined by the number of live births as a proportion of the total county population. This decline may be connected to the economic downturn. For 2009, the birth rate was **12.6 per 1,000** total Orange County population (corresponding to the CHOC service area) using population estimates from the [State of California, Department of Finance](#).

Figure 1: Number of Live Births and Crude Birth Rate per 1,000 Total Population: CHOC Service Area, 2000-2009



Source: State of California, Department of Public Health, Vital Statistics Query System

- The birth rate has been declining since 2000, with the largest drop occurring from 2008 to 2009; from 2000 to 2009, there was a **-13.9%** change in the number of live births.
- In the **CHOC at Mission** service area there were **6,779** live births in 2001, **7,030** live births in 2005, and **6,781** live births in 2009; in 2009, **16.8%** of total service area live births occurred in the CHOC at Mission subset.

Number of Live Births and Crude Birth Rate per 1,000 Total Population in California: [\(CDPH\)](#)

531,285 (15.6)
2000

527,371 (15.2)
2001

529,245 (15.0)
2002

540,827 (15.1)
2003

544,685 (15.0)
2004

548,700 (14.8)
2005

562,157 (15.0)
2006

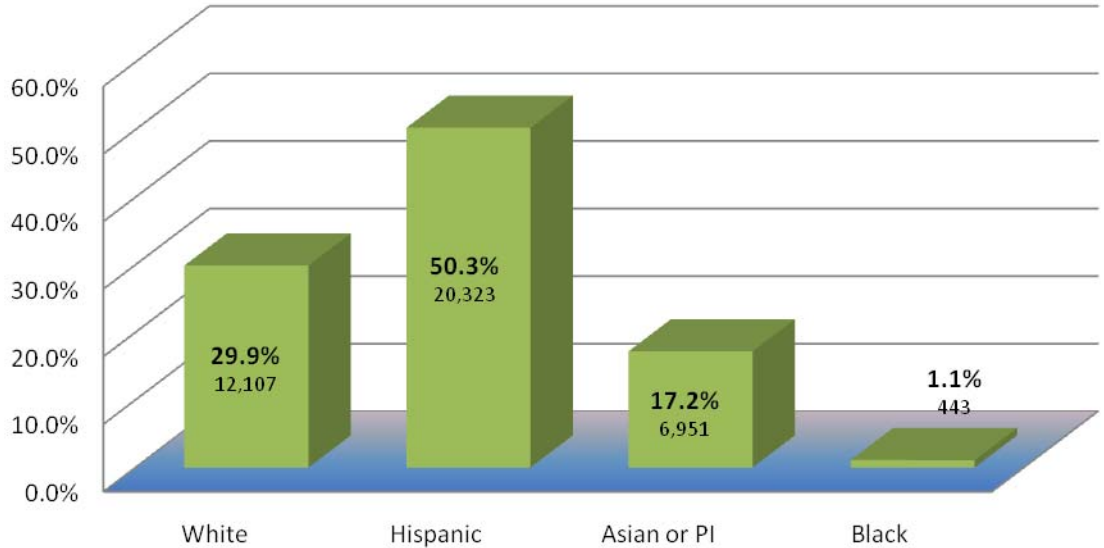
566,137 (15.0)
2007

551,567 (14.4)
2008

526,774 (13.6)
2009

The figure below depicts the percent distribution of live births by each race/ethnicity.

Figure 2: Percent Distribution of Live Births by Race/Ethnicity: CHOC Service Area, 2009



Source: State of California, Department of Public Health, Vital Statistics Query System

The live birth rates for Hispanics/Latinos were the highest.

- In the overall CHOC service area, encompassing all of Orange County, the race/ethnicity specific birthrate for whites was **8.5 per 1,000** total white population; for Hispanic/Latinos the rate was **18.0 per 1,000** total Hispanic/Latino population; for Asian or Pacific Islanders the rate was **13.4 per 1,000** total Asian or PI population; and, for blacks the rate was **11.0 per 1,000** total black population.
- In the **CHOC at Mission** service area, the majority of live births were white (**54.0%** or 3,660), followed by Hispanic/Latino live births (**28.2%** or 1,909), and finally Asian or PI live births (**10.4%** or 703).

Table 1: Births by Most Populous Service Area City: CHOC Service Area, 2009

City in Service Area	Number of People
Anaheim	5,912
Costa Mesa	1,614
Fullerton	1,675
Garden Grove	2,454
Irvine	2,528
Huntington Beach	1,964
Mission Viejo	1,356
Orange	1,975
Santa Ana	7,325
Westminster	1,131

Source: State of California, Department of Public Health, Birth Profiles by ZIP Code, 2009

- The cities of **Anaheim, Santa Ana, Irvine, Garden Grove, and Orange** accounted for almost half of all births in the entire CHOC service area in 2009, with **20,194** live births.

Prenatal Care Indicators

Prenatal Care and Folic Acid

OCHNA previously collected data on prenatal care in the **OCHNA 2004 survey**.

- In the **CHOC** service area, almost all mothers with children between 0 and 5 years received regular prenatal care during their pregnancy (**98.3%** or 247,211).
- In the **CHOC at Mission** service area, **99.6%** (50,772) of mothers with children between 0 and 5 years received regular prenatal care during their pregnancy.

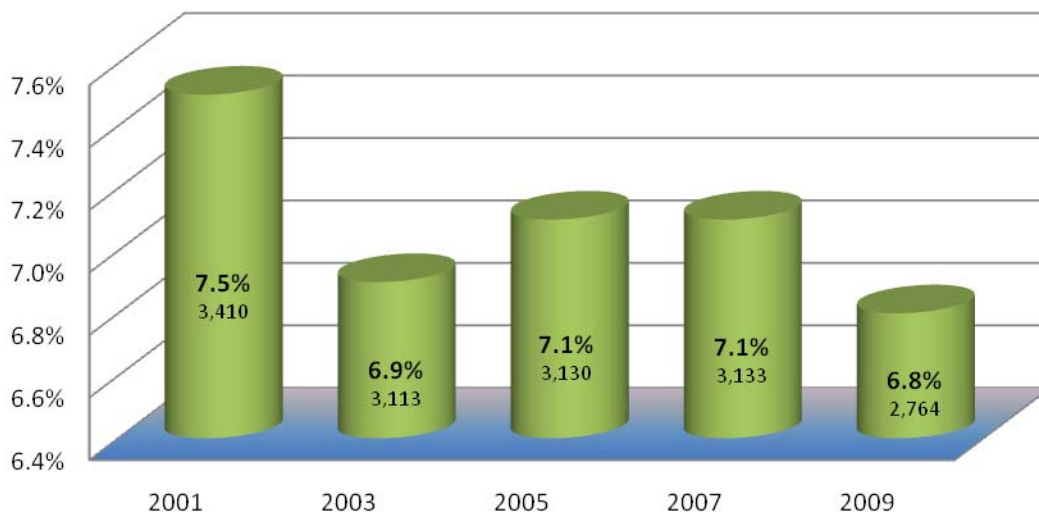
The CDC recommends that women of childbearing age should consume 400 to 800 micrograms (mcg) of folic acid daily. Folic acid is essential in preventing neural tube defects in a developing fetus.

- In the **CHOC** service area, **69.6%** (179,802) of mothers with children between 0 and 5 years took folic acid supplements during their pregnancy according to the OCHNA 2004 survey.
- In the **CHOC at Mission** service area, **79.3%** (41,610) of mothers with children between 0 and 5 years took folic acid supplements during their pregnancy according to the OCHNA 2004 survey.

Teen Pregnancies

Teenaged mothers face a higher risk of medical complications during pregnancy because they often fail to receive timely and proper prenatal care. The figure below presents the proportion of births by teen mothers (under 20 years) in the overall service area from 2001 to 2009.

Figure 3: Percent of Births by Teen Mothers (Under 20 Years): CHOC Service Area, 2001-2009



Source: State of California, Department of Public Health, Vital Statistics Query System

- For the **CHOC** service area, **6.8%** (2,764) of live births in 2009 were by mothers under 20 years of age.
- In the countywide **CHOC** service area, **4.4%** (1,780) of live births in 2009 were by mothers 40+ years of age.
- In the **CHOC at Mission** service area, **3.7%** (251) of live births in 2009 were by mothers under 20 years of age.

State of California, [Maternal and Infant Health Assessment Survey 2005-2006 \(Mothers Recently Giving Birth\)](#):

68.5%
Percent of Orange County mothers with a usual source of care just before pregnancy

Percent of Teen Mothers (Under 20 Years): [\(CDPH 2009\)](#)

9.2% (48,359)
California

9.5% (13,278)
Los Angeles

6.8% (2,764)
Orange County

10.7% (3,392)
Riverside County

12.3% (3,922)
San Bernardino County

8.0% (3,582)
San Diego County

5.3% (1,329)
Santa Clara County

Healthy People 2020 Objective

Increase to **77.6%** the proportion of pregnant women who receive early and adequate prenatal care.

Late or No Prenatal Care: [\(CDPH 2009\)](#)

16.8% (88,430) California

11.1% (4,501) Orange County

Pregnancy and Access to Health Care

Access to health care is particularly critical during pregnancy, when a mother-to-be needs continuous care to ensure that her pregnancy progresses smoothly.

- According to the 2007 [California Health Interview Survey](#) (CHIS), **5.2%** of all Orange County women (45 years of age or younger and who did not have a hysterectomy) were pregnant at the time of the survey. Of these women, **88.8%** had health care coverage.

Late or No Prenatal Care

Prenatal care is considered late if it is initiated in the 2nd trimester of pregnancy (after the 12th week) or later. Delaying or forgoing prenatal care can lead to a number of negative health outcomes, such as maternal complications or low birth weights. The table below examines the number of live births by the age and race/ethnicity of the mothers who received late or no prenatal care.

Table 2: Number of Live Births with Late or No Prenatal Care Within Age, Race/Ethnicity: CHOC Service Area, 2009				
Age of Mother	2 nd Trimester	3 rd Trimester	No Prenatal Care	Overall Percent
Under 15 Years	12	2	5	55.9%
15-19 Years	575	125	20	26.4%
20-29 Years	1,825	363	52	12.6%
30-39 Years	1,160	177	19	7.5%
40 Years and Over	147	16	3	9.3%
Race/Ethnicity of Mother	2 nd Trimester	3 rd Trimester	No Prenatal Care	Overall Percent
White	759	153	16	7.7%
Hispanic	2,282	402	63	13.5%
Asian or PI	562	100	9	9.6%

Source: State of California, Department of Public Health, Vital Statistics Query System

- **13.5%** of Hispanic/Latino mothers received late or no prenatal care, compared to **7.7%** of white mothers.
- In the overall **CHOC** service area **11.1% (4,501)** of all live births in 2009 had late or no prenatal care.
- In the **CHOC at Mission** service area, **9.6%** (648) of all live births in 2009 had late or no prenatal care.

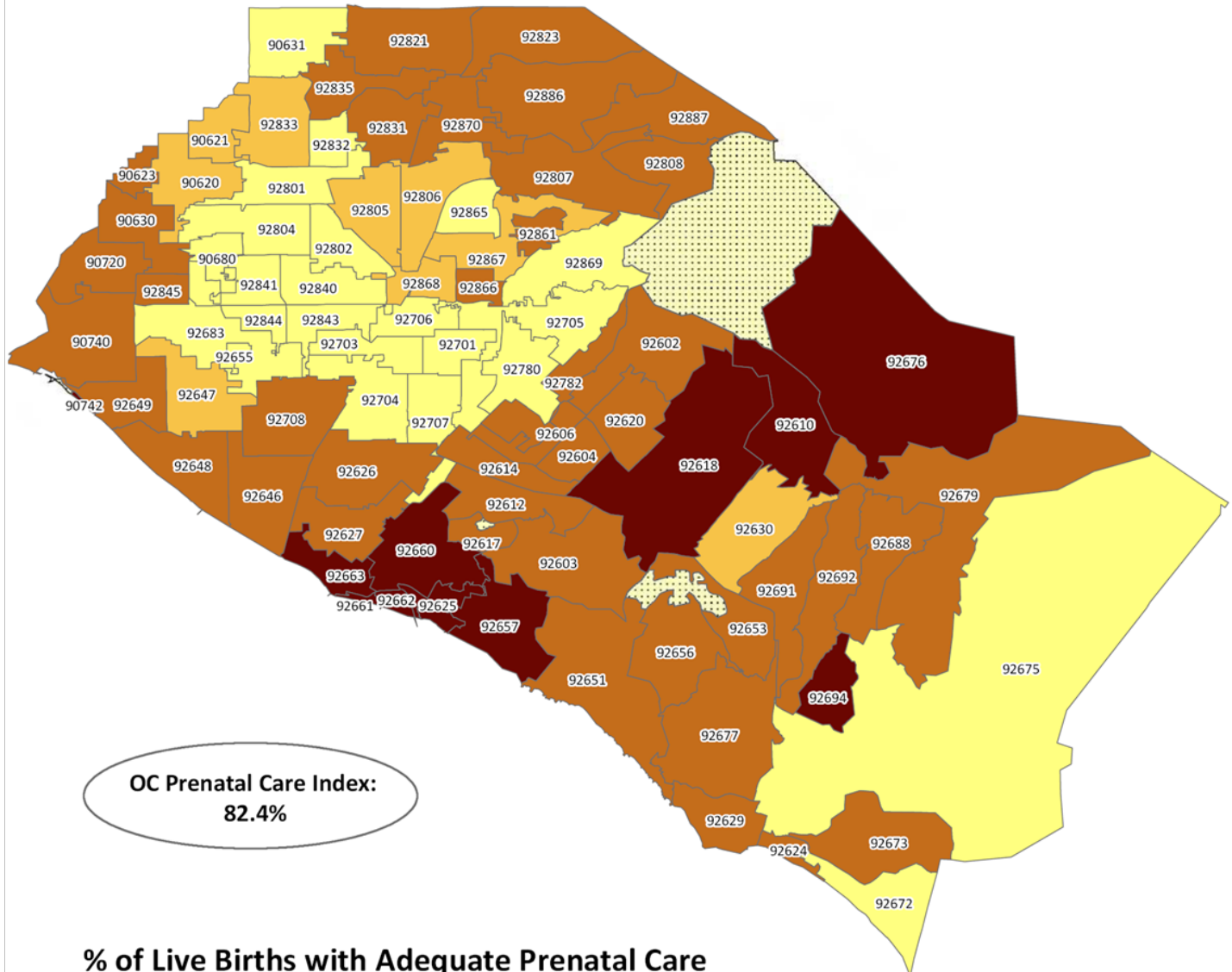
2006-2008 Inadequate Prenatal Care: Orange County Health Care Agency—2011 Orange County Geographic Health Profile

The Kotelchuck Adequacy of Prenatal Care Utilization (APNCU) index examines two components to determine whether a mother’s prenatal care was adequate: 1) when prenatal care was initiated, and 2) the frequency of prenatal care visits. These two indices are scaled on the APNCU matrix, which provides the overall adequacy level of prenatal care. The levels are inadequate, intermediate, adequate, and adequate plus.

The 2011 Orange County Geographic Health Profile reported the inadequate scores for Orange County live births between 2006 and 2008 by ZIP code of residence that have been averaged for stability purposes. The average number of births over that time period was **43,571**.

- There were an average of **82.4%** (35,804) of live births in Orange County with mothers who received adequate prenatal care over 2006 to 2008.

Orange County Adequate Prenatal Care Index by ZIP Code of Residence (2006-2008)



*Adequacy of Prenatal Care Utilization (APNCU) Index is a composite indicator for Adequate prenatal care.

Data Source: 2006-2008 Orange County Birth Statistical Master Files

Substance Use

Maternal alcohol, tobacco, or other drug (ATOD) use during pregnancy can pose multitudes of health risks to a developing fetus, causing both short-term and long-term harm. The [2007 Substance Exposed Babies in Orange County](#) study assessed the prevalence of babies exposed to ATOD prior to birth. Nearly 2,600 pregnant women participated in the anonymous 2007 assessment. The countywide prevalence of ATOD use during pregnancy was **15.1%**.

Table 3: Regional Distribution of OC Women Using Any Substance (ATOD) During Pregnancy: County of Orange, Health Care Agency, 2007				
Region	Substance Type*			
	All Substances	Alcohol	Tobacco	Illicit Drugs
Central	14.5%	12.5%	4.3%	3.1%
North	12.1%	9.9%	5.0%	2.4%
South	16.6%	14.5%	4.6%	3.7%
West	16.9%	13.8%	6.0%	4.4 %
Countywide	15.1%	12.9%	4.9%	3.5%

*All prevalence rates are based on self-reported use from Phase 2 except for illicit drug use prevalence which was based on results from Phase 1 urinalysis/charted use.

Source: County of Orange, Health Care Agency, 2007 Substance Exposed Babies in Orange County

- A higher percentage of pregnant women in West or South Orange County used substances during pregnancy, compared to the percent of pregnant women living in Central or North Orange County.

Maternal and Birth Outcomes

Maternal Complications

The OCHNA 2004 survey determined the percent of mothers with children between 0 to 5 years of age who experienced complications during pregnancy.

- In the **CHOC** service area, **24.7%** (62,011) of mothers experienced complications during pregnancy. Survey responses were too few to obtain data estimates for the CHOC at Mission Service Area.

Premature Births

Premature babies are born before the 37th week of pregnancy (gestation). Premature babies have special health needs because they weight much less than full-term babies and have complications, such as breathing problems, due to organ systems that have not yet fully developed. The [Centers for Disease Control and Prevention](#) (CDC) National Vital Statistics Query System presents the percent of premature births.

- In the entire **CHOC** service area **9.7%** of live births in 2007 were premature, meeting the Healthy People 2020 Objective of **11.4%** of preterm births.

2006-2008 Cesarean Births: Orange County Health Care Agency—2011 Orange County Geographic Health Profile

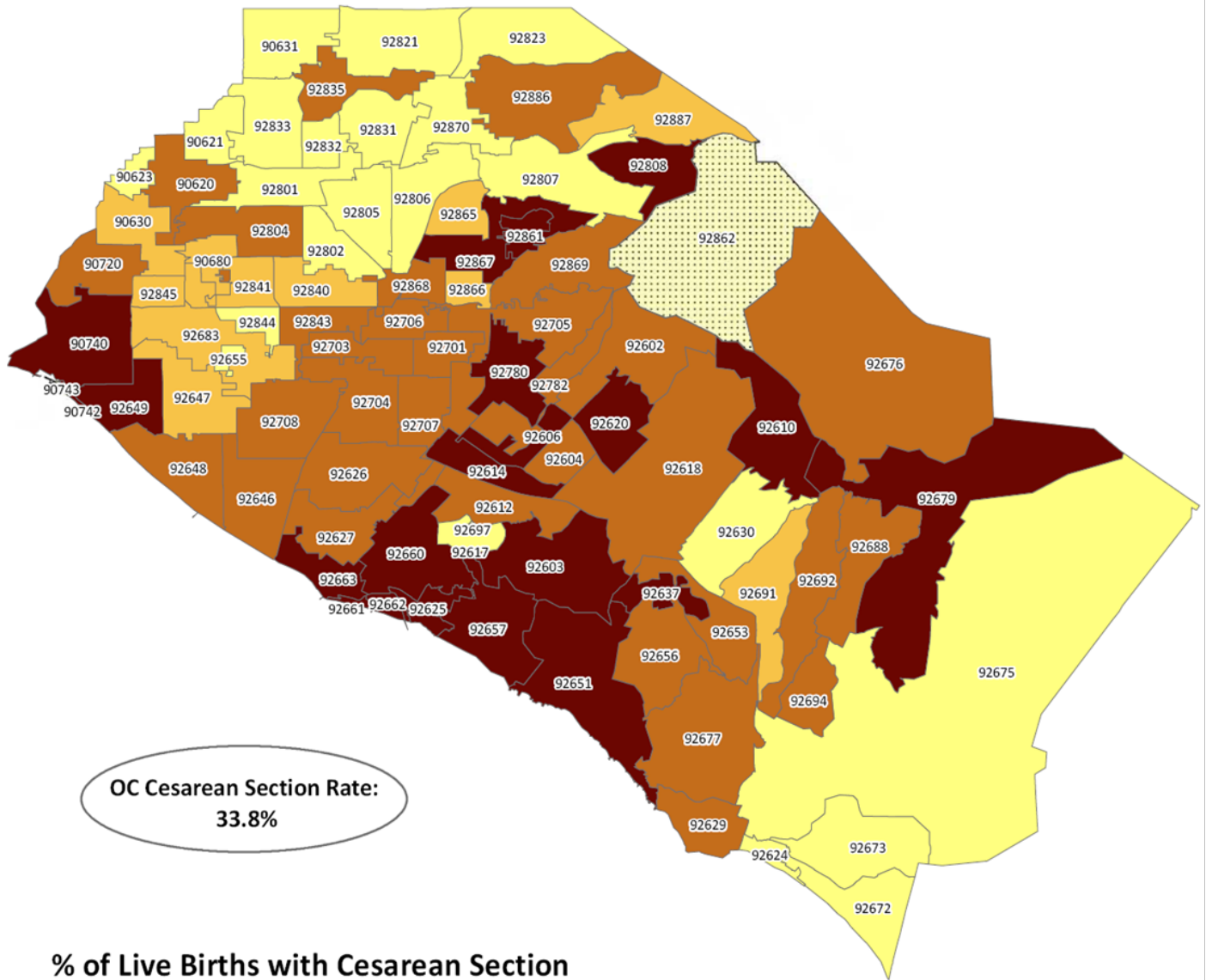
A Cesarean section (C-section) is usually performed when a vaginal delivery presents health risks to the mother or baby. The 2011 Orange County Geographic Health Profile reported C-section rates for Orange County live births over 2006 to 2008 by ZIP code of residence, which have been averaged for stability purposes. The average number of births over that time period was **43,572**.

- An average of **33.8%** (14,747) of all live births over 2006 to 2008 in Orange County was delivered by C-sections.

Healthy People 2020 Objective

Reduce to **28%** maternal illness and complications due to pregnancy (complications during hospitalized labor and delivery).

Orange County Cesarean Section Rates by ZIP Code of Residence (2006-2008)



OC Cesarean Section Rate:
33.8%

% of Live Births with Cesarean Section (3-Year Average)

- 27.4% - 32.2%
- 32.3% - 33.8%
- 33.9% - 36.6%
- 36.7% - 56.8%
- Insufficient Data

Data Source: 2006-2008 Orange County Birth Statistical Master Files

Healthy People 2020 Objective

Reduce low birth weight to **7.8%** (less than 2,500 grams) and very low birth weight to **1.4%** (less than 1,500 grams).

California (CDPH 2009)

6.7% (35,835) Low Birth Weight Live Births

1.1% (6,127) Very Low Birth Weight Live Births

Orange County (CDPH 2009)

6.6% (2,670) Low Birth Weight Live Births

1.0% (406) Very Low Birth Weight Live Births

Low Birth Weight

Low birth weight babies weigh less than 2,500 grams (5 pounds, 8 ounces). Very low birth weight babies weigh less than 1,500 grams (3 pounds, 5 ounces). Most low birth weight babies are born preterm/premature, although some babies born at full-term may weigh less at birth, but would still be considered healthy. Countywide, corresponding to the entire CHOC service area, **6.6% (2,670)** of live births had low birth weights, meeting the Healthy People 2020 Objective of 7.8% of live births with low birth weight (2,500 grams).

Table 4: Percent Distribution of Live Births with Low Birth Weight by Race/Ethnicity: CHOC Service Area, 2009

Race/Ethnicity	Percent	Number
White	30.3%	809
Hispanic	45.5%	1,215
Asian or PI	21.1%	564

Source: State of California, Department of Public Health, Vital Statistics Query System

- **8.1%** of Asian or PI live births had low birth weights.
- **6.7%** of white live births had low birth weights.
- **6.0%** of Hispanic/Latino live births had low birth weights.

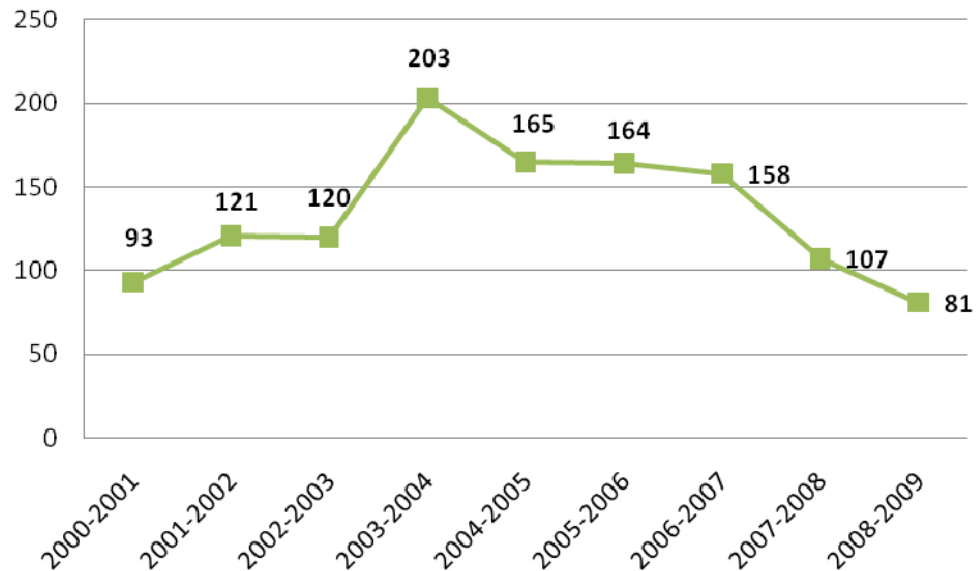
In the **CHOC at Mission** service area, **6.6%** (448) of live births were low birth weight babies.

- **10.2%** (182) of live births by a mother 40+ years had low birth weights; **7.4%** (205) of live births by a mother under 20 years had low birth weights.

Substance-Exposed Infants in Out-of-Home Care

This indicator shows the number of infants with positive toxicology results at the time of birth that were provided emergency response services by the Orange County Social Services Agency, resulting in juvenile court intervention.

Figure 4: Number of Infants Taken into Protective Custody as a Result of Testing Positive for ATOD Exposure at Birth: CHOC Service Area, 2000/01 to 2008/2009



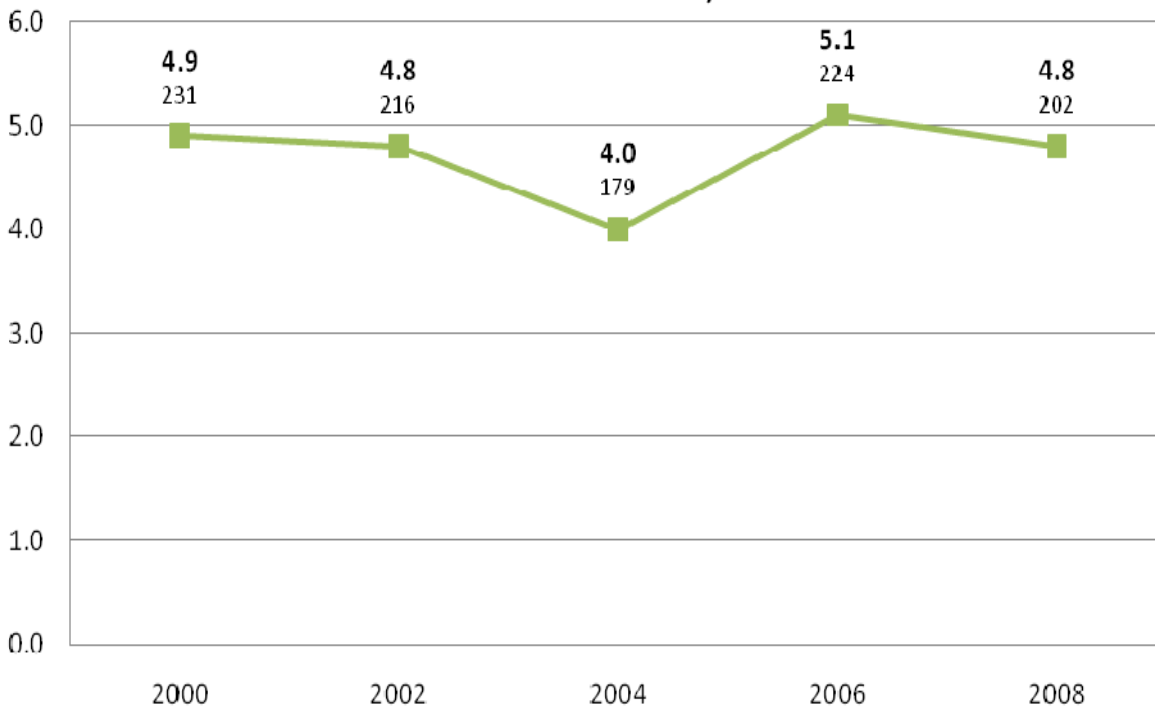
16th Annual Conditions of Children Report on the Conditions of Children in Orange County 2010 and County of Orange Social Services Agency: Substance Exposed Babies

- During 2008-2009, **81** infants in Orange County were taken into protective custody as a result of testing positive for ATOD exposure during birth. Since 2003 to 2004, the number has dropped by **60%**.

Infant Mortality

An infant death is defined as death occurring after birth and under 365 days of age. The infant death rate is based on the number of deaths per 1,000 live births. The [CDPH](#) reported the number of deaths in 2008. Orange County as well as the CHOC at Mission subset met the Healthy People 2020 Objective for infant deaths for reducing the infant rate death to 6.0 per 1,000 live births.

Figure 5: Infant Mortality Rate and Number of Infant Deaths: CHOC Service Area, 2000-2008



Source: State of California, Department of Public Health, Vital Statistics Query System

- In 2008 the number of infant deaths in the CHOC service area was **202**—the infant mortality rate was **4.8 per 1,000** live births.
- In the **CHOC at Mission** service area, the number of infant deaths was **27** in 2008—the infant mortality rate was **3.9 per 1,000** live births, lower than the entire CHOC service area.

Premature Birth Rates: [\(CDC\)](#)

10.5% (57,770)
California

11.2% (16,606)
Los Angeles County

9.4% (3,990)
Orange County

11.0% (3,614)
Riverside County

10.9% (3,704)
San Bernardino County

9.8% (4,595)
San Diego County

9.2% (2,454)
Santa Clara County

Healthy People 2020 Objective

Reduce infant deaths to **6.0** deaths per 1,000 live births.

5.1
California [\(CDPH 2008\)](#)

4.8
Orange County [\(CDPH 2008\)](#)

Healthy People 2020 Objective

Increase the proportion of mothers who breastfeed their babies by 2020—

81.9% Ever

60.5% At 6 Months

34.1% At 1 Year

Breastfeeding

Many leading health organizations, including the [American Academy of Pediatrics](#) and the [American Public Health Association](#) recommend that infants are breastfed for at least 12 months, with exclusive breastfeeding for the first 6 months. Breast milk contains the right balance of protein, sugar, fat and water for a baby’s proper growth and development, and is easily digested and absorbed compared to cow milk or formula. In addition, breast milk also contains antibodies and macrophages that help to protect against common childhood diseases and infections such as diarrhea, ear infections or pneumonia. Furthermore, milk from the breast is sterile and safe for the baby.

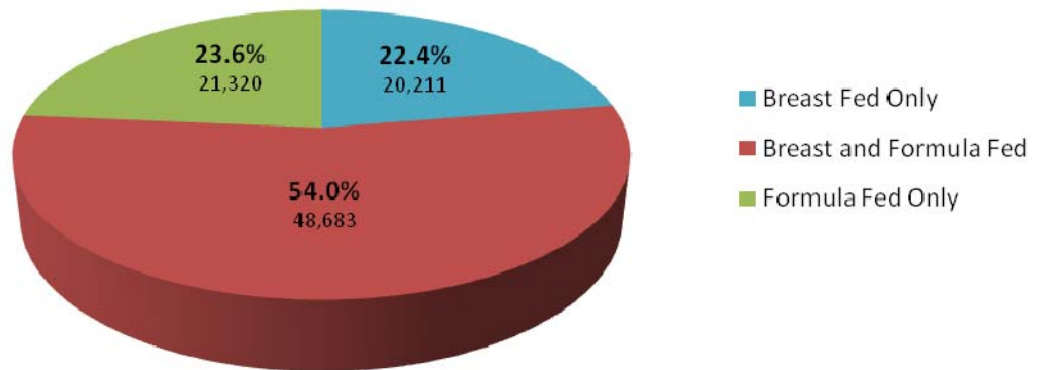
Breastfeeding Behaviors

In the OCHNA 2007 survey, respondents with children ages 0 to 2 in the household were asked questions about how the mother fed her infant. Survey responses were too few to obtain stable data estimates for the CHOC at Mission service area.

- In the CHOC service area, only **22.4%** (20,211) of mothers with children between 0 and 2 years exclusively breastfed their baby according to the OCHNA 2007 survey.



Figure 6: Feeding Practices for Child 0-2 Years: CHOC Service Area, OCHNA 2007

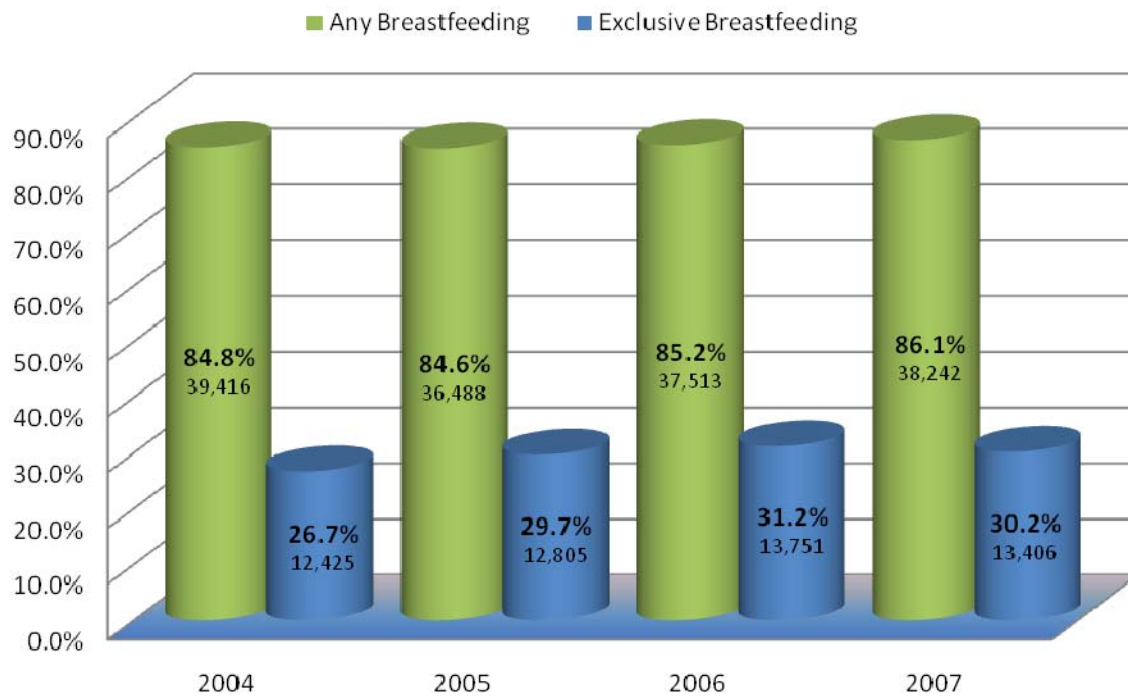


- **53.4%** (33,930) of children received breast milk for at least 6 months. **46.6%** (29,664) received breast milk for less than 6 months.

In-Hospital Breastfeeding

California in-hospital infant feeding practices are monitored using data collected by the [Newborn Screening \(NBS\) Program](#) at the [CDPH](#). The figure below presents the proportion of new mothers who initiated *any breastfeeding* (a combination of breastfeeding and formula) and *exclusive breastfeeding* in Orange County hospitals that have provided data (22 non-profit and investor-owned hospitals) from 2004 to 2007. 2008 data cannot be included in the trend because of changes to the NBS tools as well as changes in data analysis methodology and has been provided separately as a bullet point.

Figure 7: In-Hospital Any and Exclusive Breastfeeding Initiation Rates by Year: Orange County, 2004-2007



Exclusive Breastfeeding:
[\(CDPH\)](#)

Orange County

26.7% (12,425)
2004

29.7% (12,805)
2005

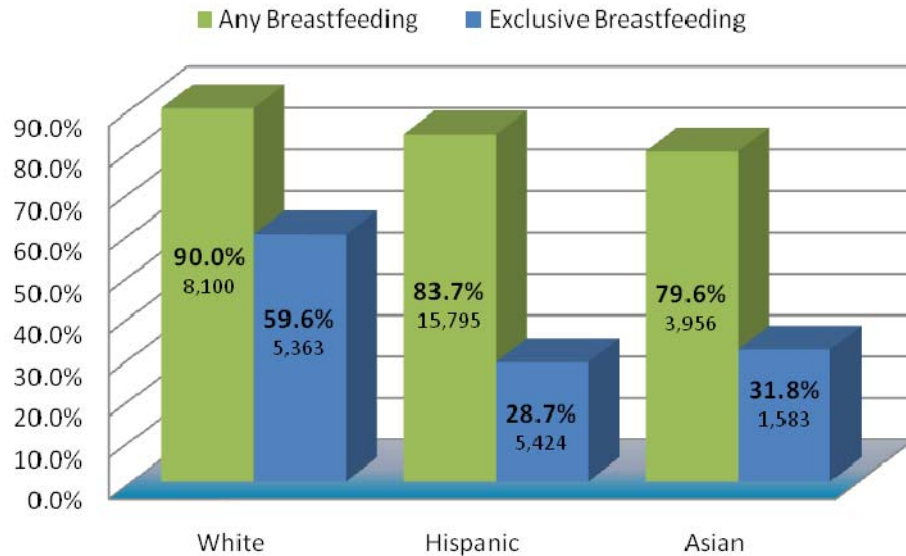
31.2% (13,751)
2006

30.2% (13,406)
2007

- The *exclusive breastfeeding* rate increased from 2004 to 2006, but decreased in 2007. The *any breastfeeding* rate increased in 2006 and 2007, after dropping in 2005.
- In 2008, there were **38,444** births at the county's reporting hospitals; **84.8%** (32,604) of mothers initiated *any breastfeeding*, and **38.9%** (14,955) of mothers initiated *exclusive breastfeeding*.

The figure below presents the proportion of any and exclusive breastfeeding *within* key race/ethnic groups for all reporting hospitals in Orange County provided by the [CDPH](#).

Figure 8: In-Hospital Breastfeeding Initiation by Race/Ethnicity: Orange County, 2008



Source: State of California, Department of Public Health, In-Hospital Breastfeeding Initiation Data, 2008

- White mothers were the most likely to initiate any and exclusive breastfeeding at hospitals in 2008.
- While a greater proportion of Hispanic mothers initiated *any breastfeeding* compared to Asian mothers at hospitals, a greater proportion of Asian mothers initiated *exclusive breastfeeding* compared to Hispanic mothers.

2008 Any/Exclusive Breastfeeding: Orange County Health Care Agency—[2011 Orange County Geographic Health Profile](#)

The 2011 Orange County Geographic Health Profile reported any and exclusive breastfeeding rates of birth mothers in 2008 by ZIP code of residence. Countywide, feeding practice information was captured for 35,546 mothers.

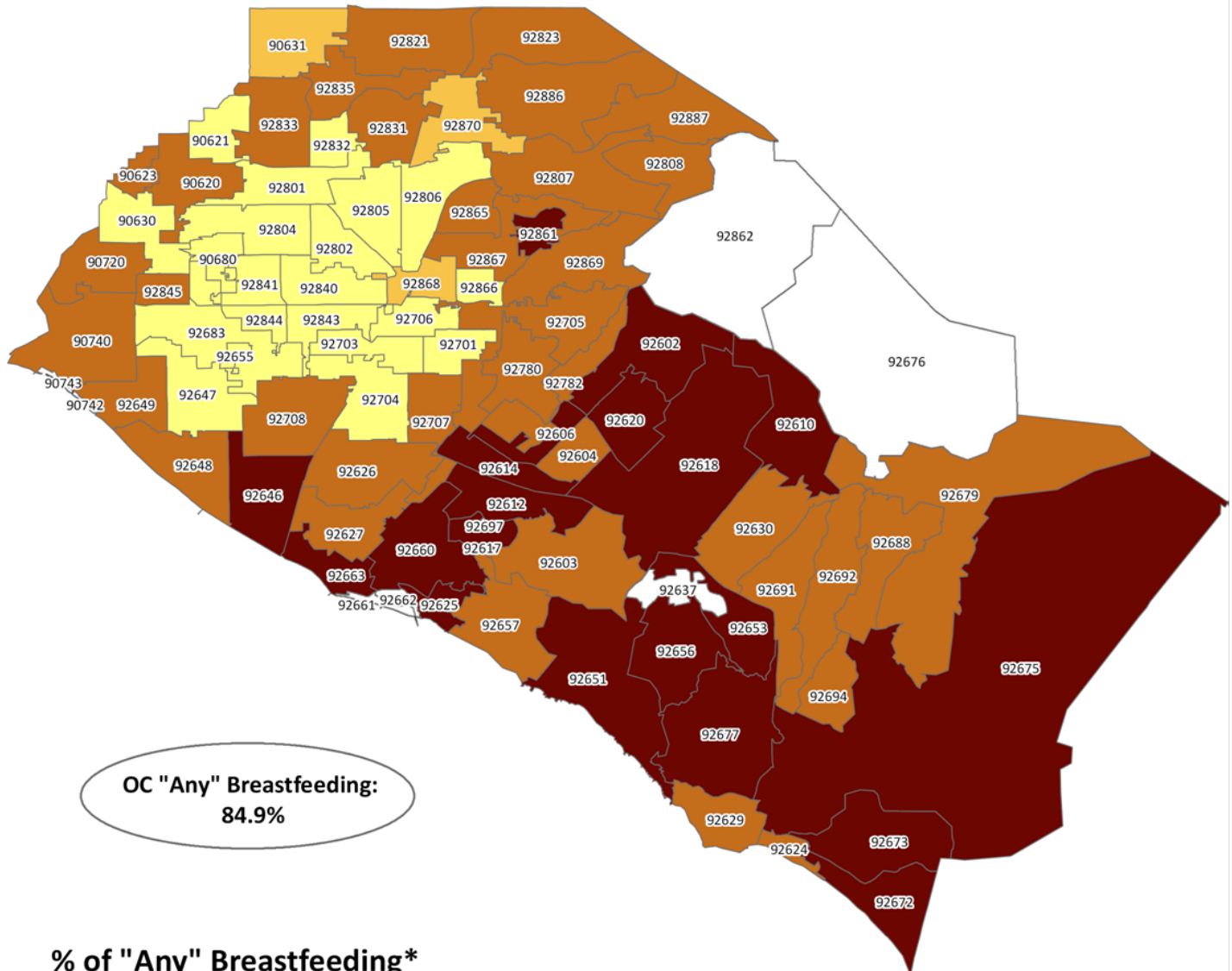
- Of the **35,546** mothers in Orange County giving birth in 2008, **84.9%** (30,174) of new mothers indicated they would initiate any breastfeeding, and **38.2%** (13,594) of new mothers indicated they would initiate exclusive breastfeeding.

White mothers had the highest rates of breastfeeding.

2008 Any/Exclusive Breastfeeding Note:

There were **35,546** cases where the feeding practices were known.

Orange County "Any" Breastfeeding by ZIP Code of Residence (2008)



% of "Any" Breastfeeding* (2008)

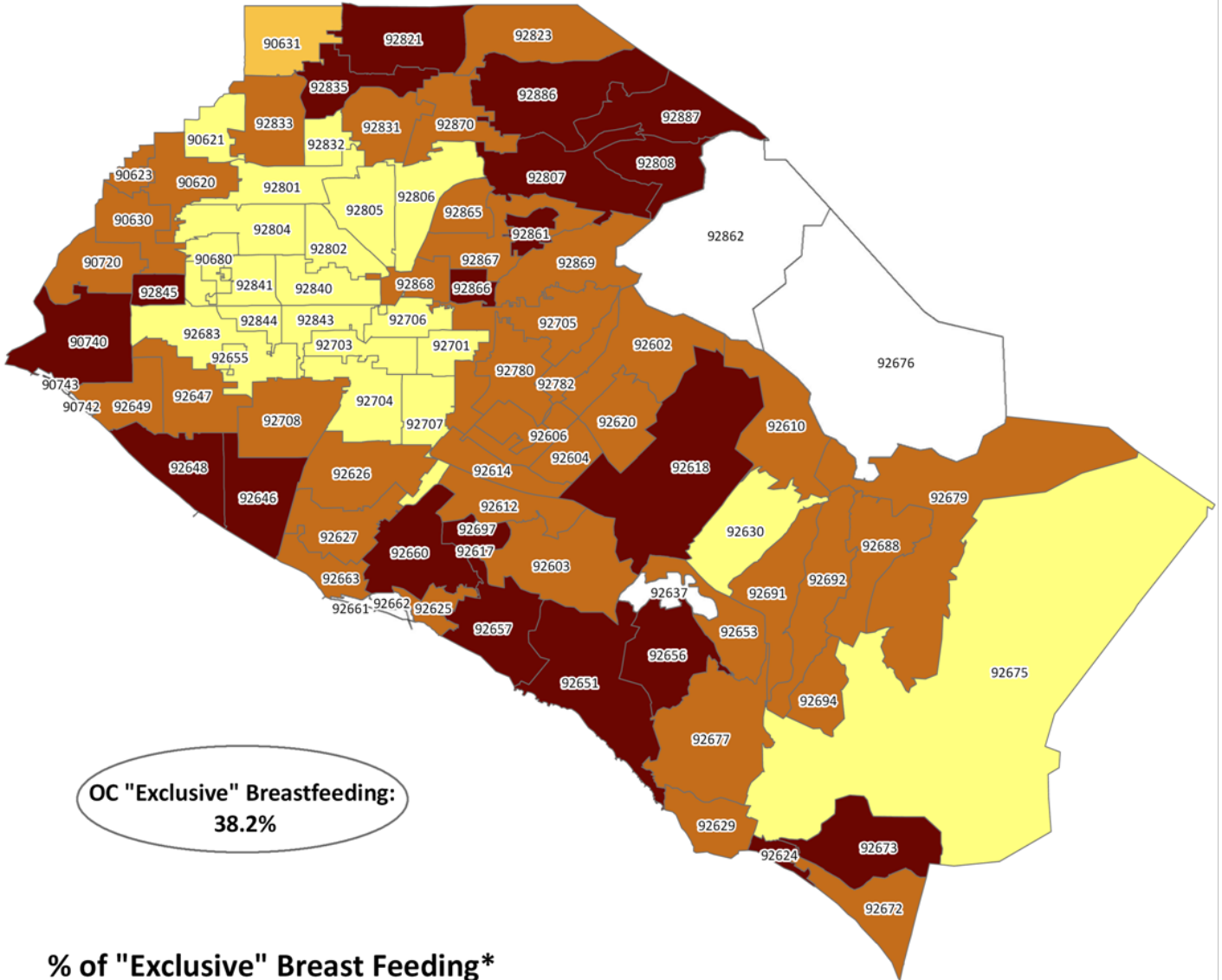
- 66.7% - 84.1%
- 84.2% - 84.9%
- 85.0% - 91.4%
- 91.5% - 100.0%
- No Events

*Percent of all cases with known feeding methods.

Includes those exclusively breastfeeding and those supplementing breastmilk w/formula, as measured in hospital at discharge.

Data Source: Maternal, Child and Adolescent Health Program California Department of Public Health

Orange County "Exclusive" Breastfeeding by ZIP Code of Residence (2008)



% of "Exclusive" Breast Feeding* (2008)

- 20.7% - 37.9%
- 38.0% - 38.2%
- 38.3% - 52.4%
- 52.5% - 62.5%
- No Events

*Percent of all cases with known feeding methods.

Includes only those mothers who fed exclusively with breastmilk since birth, as measured in hospital at discharge.

Data Source: 2008 Maternal, Child and Adolescent Health Program California Department of Public Health

Child Safety and Injuries

Child Care

The first few years of a child's life are crucial to overall development, which is why it is important for working parents and guardians to find quality child care that is safe and nurturing and that provides them with the reassurance to remain in the workforce. Child care can be provided by a parent, child care homes and centers, baby-sitters, and even relatives. The following table lists how children were cared for in the CHOC service area.

Table 1: Top Three Types of Child Care Received by Children Ages 0 to 5: CHOC Service Area, OCHNA 2007

Type of Child Care	Percent	Population Estimate
Cared for in the Child's Home by a Parent	60.8%	157,658
Cared for Outside Child's Home, e.g., Day Care, Preschool	19.3%	49,983
Cared for in the Child's Home by a Relative	8.9%	23,029

- Most of the children in the countywide **CHOC** service area received child care in their own home by a parent.
- In the **CHOC at Mission** service area, **76.3%** (49,080) of children received child care in their own home by a parent, and **13.0%** (8,342) received child care outside the home, such as in day care centers or pre-school.

Car Safety Seats

According to the [National Highway Traffic Safety Administration](#), motor vehicle crashes are a leading cause of death among children ages 2 to 14, partly due to the non-use or improper use of child safety seats or restraints. To make sure a child is properly secured and safe for every car trip, the [American Academy of Pediatrics Car Seat Guide](#) states that infants should always ride rear-facing in a safety seat until they are 1 year old and weigh at least 20 pounds. After passing the 1 year, 20 pound mark, children can ride face-forward in their safety seat. Once they have outgrown their car safety seat, children should stay in a booster seat until adult belts fit correctly, which is usually between 8 to 12 years of age. Studies have shown that child safety seats have reduced fatal injury in infants by **71%** and in toddlers by **54%**.

Proximity to Firearms

The best way to ensure gun safety in the home is to not have guns present at all. However, if firearms are in the home, parents or guardians must take crucial steps to lessen the dangers, including the following: storing all firearms unloaded and un-cocked in a securely locked container out of reach for children, storing guns and ammunition in separate locked locations, placing a padlock around the weapon or using a trigger lock, and never leaving a gun unattended when it is being handled or cleaned.

- **13.1%** (85,323) of children in the **CHOC** service area lived in a household containing a firearm that is kept in or around the home, including in the garage, outdoor storage area, and/or motor vehicle.
 - **63.6%** (51,381) were handguns, such as pistols or revolvers, and **5.0%** (4,062) were both loaded and locked.
- In the **CHOC at Mission** service area, **13.1%** (22,374) of children lived in households containing a firearm. **71.5%** (13,972) were handguns.

Regular Child Care Arrangements for Children (0-11) for 10+ Hours of Child Care/Week: [\(CHIS 2009\)](#)

28.7% (1,839,000)
California

29.4% (151,000)
Orange County

Pool Safety

According to the [US Consumer Product Safety Commission](#), nationally there have been 350 child drowning or non-fatal injuries since Memorial Day 2010. Child drowning is the number one fatality of children under five in California. There have been 27 fatalities and 15 non-fatal injuries in California since Memorial Day.

It is highly recommended that all households with a pool completely fence in the pool on all sides. Gates should be self-closing, self-latching, and out of reach of small children.

- According to the 2004 OCHNA survey, **36.8%** (292,696) of children in the **CHOC** service area resided in a home with a pool.
 - **25.6%** (74,718) of these children lived in a home with a pool that was *not* surrounded by a fence.
- **41.0%** (64,018) of children in the **CHOC at Mission** service area resided in a home with a pool.
 - **30.9%** (43,789) of these children lived in a home with a pool that was *not* surrounded by a fence.

Childhood Drowning

In 2008 drowning was the top cause of death among children 1 to 4 years of age in Orange County, accounting for **20%** (6 deaths out of 30) of deaths in that age group, according to the [California Department of Public Health](#) (CDPH). Moreover it is among the top five causes of death for children between 0 to 17 years of age. Accidental drowning can occur in a number of circumstances, during swimming or other water recreational activities, or when a young child is left unattended in a bathtub or in a home with easy access to pools or spas. Even a few minutes of parental inattention could be dangerous and even fatal to a child if a spa or swimming pool is not properly covered or enclosed. Drowning can happen in as little as an inch of water and is usually quick and silent. After two minutes of submersion, a child can lose consciousness. Irreversible brain damage then occurs within four to six minutes; most child drowning fatalities are found after 10 minutes, according to the [American Academy of Pediatrics](#).

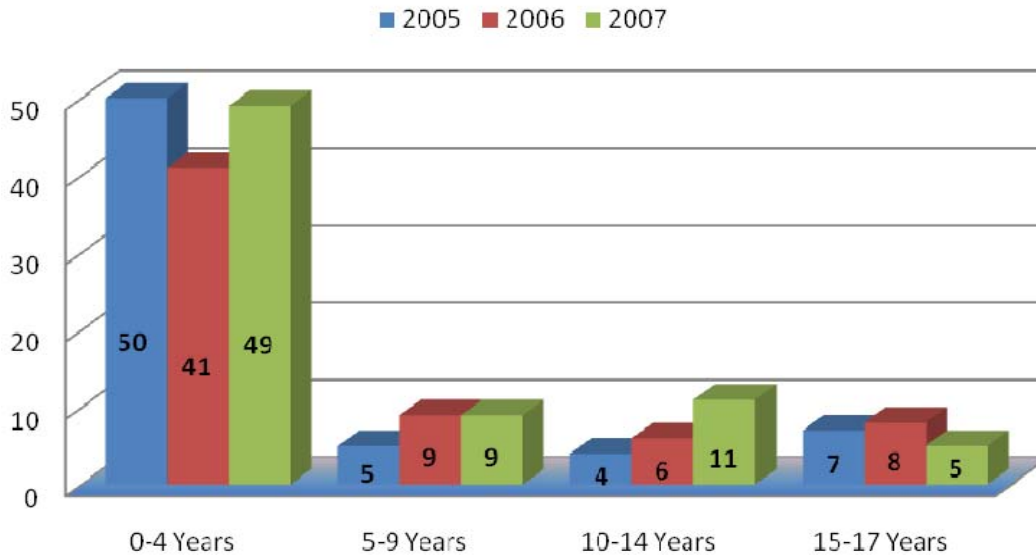
The County of Orange Health Care Agency prepared a report in 2009 that examined the number of immersion related Emergency Department (ED) visits and immersion fatalities from 2005 and 2007, titled [Childhood Immersion Incidents and Deaths in Orange County](#).



Drowning is the leading cause of death among young children in Orange County, necessitating the need for pool safety measures and guidelines.

- There were **66** immersion related ED visits among Orange County children 0-17 years in 2005. There were **74** immersion related ED visits in 2007.
- More than two-thirds of all ED visits (**68.6%**) occurred among children under 5 years of age.
- The report determined a mean age for males of **5.2 years** and a mean age for females of **4.4 years**.

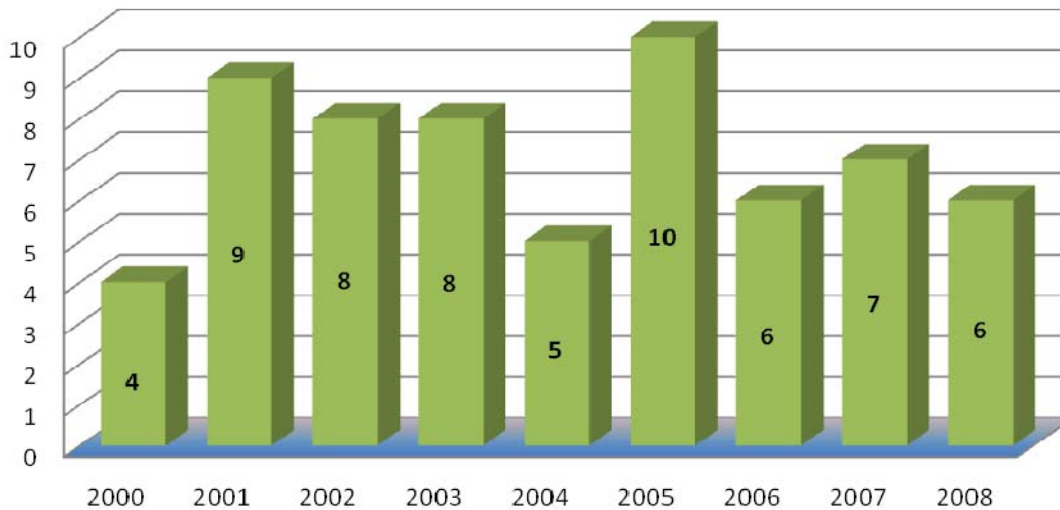
Figure 1: Immersion Related ED Visits by Age Group: CHOC Service Area, 2005-2007



There were **6** deaths of OC youth under 15 years from accidental submersion in 2008; all 6 were between 1-4 years. [\(CDPH\)](#)

The chart below presents the number of drowning deaths for children between 2000 and 2008 according to the [CDPH](#).

Figure 2: Accidental Drowning and Submersion Deaths of Children 0-14 Years: CHOC Service Area, 2000-2008



State of California, Department of Public Health, Vital Statistics Query System

- There were a total of **63** deaths of children 0-14 years from accidental drowning or submersion from 2000 to 2008. **82.5%** (52) of those deaths occurred among children 1-4 years of age in the countywide CHOC service area.

Unintentional injuries are the leading cause of fatalities for children: drowning for younger children and traffic fatalities for older children and teens.

Fatal and Nonfatal Childhood Injuries

Injuries are the leading causes of mortality or morbidity in children. An average of **12,075** children between 0 and 19 years nationwide died from an unintentional injury from 2000 to 2006, according to the Centers for Disease Control and Prevention [Childhood Injury Report](#); injuries related to transportation were the leading cause of death among children 0-19 years. For children less than 1 year, **two in three** unintentional injury deaths were due to suffocation. The leading cause of injury death for children between 1 and 4 years was drowning. The leading cause of injury death for those between 5 and 19 years was being an occupant in a motor vehicle traffic crash. The table below presents the leading causes of injury deaths among CHOC service area children ages 0-20 years in 2007 ([CDPH](#)).

Table 2: Five Leading Causes of Fatal Injuries of Children 0-20 Years by Age Group: CHOC Service Area, 2007		
Less than 1 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional-Poisoning	1
1	Homicide/Assault	1
1-4 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional – Drowning/Submersion	5
2	Unintentional – MVT, Occupant	2
2	Unintentional – MVT, Pedestrian	2
3	Unintentional – MVT, Unspecified	1
3	Homicide/Assault	1
5-12 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional – Drowning/Submersion	2
2	Unintentional – Fall	1
2	Unintentional – MVT, Occupant	1
2	Unintentional – MVT, Unspecified	1
13-15 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional – Burn, Fire/Flame	1
1	Unintentional – MVT, Occupant	1
1	Unintentional – Bicyclist	1
1	Unintentional – Transport	1
1	Unintentional - Poisoning	1
1	Suicide/Self-Inflicted	1
16-20 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional – MVT, Occupant	22
2	Homicide/Assault	18
3	Unintentional - Poisoning	10
4	Suicide/Self-Inflicted	9
5	Unintentional – Burn, Fire/Flame	2
5	Unintentional – MVT, Motorcyclist	2
5	Unintentional – MVT, Unspecified	2

Source: California Department of Public Health, Vital Statistics Death Statistical Master File; EPIC Branch

The [CDC report](#) also estimated that **9.2 million** children had an initial emergency room visit because of an unintentional injury nationwide, with falls being the leading cause of nonfatal injury among children 0 to 19 years. Among children ages 0 to 9 years, the next leading causes of nonfatal injuries were being struck by/against an object and animal bites or insect stings. Among children 10 to 14 years, the next leading causes of nonfatal injury were being struck by/against an object and overexertion. Among children 15 to 19 years, the next leading causes were being struck by/against an object, falls, and motor vehicle occupant injuries. The table below presents the leading causes and numbers of nonfatal injuries among CHOC service area children ages 0-20 years in 2006 ([California Injury Data Online](#) application).

Among young children, injury due to falls were the most common reason for hospitalization.

Table 3: Five Leading Causes of Hospitalized Nonfatal Injuries of Children 0-20 Years by Age Group: CHOC Service Area, 2006		
Less than 1 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional – Fall	36
2	Unintentional – Suffocation	17
3	Unintentional – Burn Hot Object/Substance	8
4	Unintentional - Poisoning	7
5	Assault	7
1-4 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional – Fall	207
2	Unintentional – Burn Hot Object/Substance	47
3	Unintentional – Poisoning	40
4	Unintentional – MVT, Pedestrian	25
5	Unintentional – Drowning/Submersion	22
5-12 Years		
Rank	Cause of Injury	Number of Injuries
1	Unintentional – Fall	246
2	Unintentional – Bicyclist, Other	41
3	Unintentional – Struck by Object	34
4	Unintentional – MVT, Occupant	29
5	Unintentional – Natural/Environmental	29
13-15 Years		
Rank	Cause of Injury	Number of Injuries
1	Self-Inflicted	114
2	Unintentional – Fall	75
3	Unintentional – Struck by Object	48
4	Unintentional – MVT, Pedestrian	28
5	Unintentional – Bicyclist, Other	22
16-20 Years		
Rank	Cause of Injury	Number of Injuries
1	Self-Inflicted	273
2	Unintentional – MVT, Occupant	252
3	Homicide/Assault	142
4	Unintentional – Fall	101
5	Unintentional – Struck by Object	52

Source: State of California, Office of Statewide Health Planning and Development, Patient Discharge Data; Prepared by the State of California, Department of Public Health, EPIC Branch

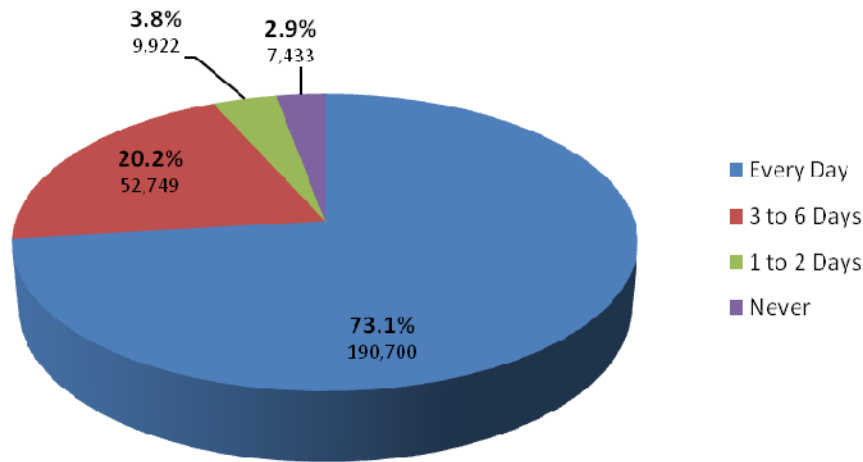
73.1% of service area parents/guardians of children 0-5 read to their children daily. (OCHNA 2007)

School Readiness and Achievements

Shared Reading Time

Shared reading time builds and strengthens a child’s literacy skills and presents families with a prime bonding opportunity. The [National Children’s Reading Foundation](#) recommends parents to begin reading to their child at birth for 20 minutes each day. The figure below displays the average number of days in a week that parents in the CHOC service area read to their child.

Figure 1: Average Days per Week that Parent/Guardian Reads to Child 0 to 5: CHOC Service Area, OCHNA 2007



- The majority of parents (73.1%) in the CHOC service area read to their child every day.
- 56.9% (8,210) of Vietnamese parents read to their child every day, compared to 81.7% (64,815) of white parents and 70.0% (93,672) of Hispanic/Latino parents.

The programs supported by the Early Literacy Program include:

Reach Out and Read: Pediatricians and volunteers in various Orange County clinics participate to promote early literacy during well-child visits.

Raising a Reader: This program encourages parents to engage in a daily “book cuddling” with their young child. Children in this program bring home a bag with four “high-quality, developmentally-appropriate, multi-cultural children’s books” each week.

Early Literacy Program

Supported by the Children and Families Commission of Orange County, the [Early Literacy Program](#) promotes early literacy in reading, listening, writing, and speaking through various services to underprivileged young children and their families. According to the 15th [Annual Conditions of Children Report](#), the Early Literacy Program accomplished the following between July 2008 and June 2009:

- 82,753 children were read to by literacy readers at health clinic sites and community events, providing 25,000 hours of reading provided to young children.
- 44,962 parents/caregivers received literacy resources such as reading tips and developmental milestones tied to literacy.
- 117 community events were supported with readers, books, and literacy resources.
- 56,917 new and gently used books were distributed to underprivileged children in the community.
- 25 school districts provided literacy support.

The programs supported by the Early Literacy Program include:

Reach Out and Read: Pediatricians and volunteers in various Orange County clinics participate to promote early literacy, informing parents about its importance and providing books during well-child visits.

Raising a Reader: This program encourages parents to engage in a daily “book cuddling” with their young child. Children in this program bring home a bag with four “high-quality, developmentally-appropriate, multi-cultural children’s books” each week.



School Performance

School performance is not only a measure of a student's academic abilities and self-motivation, but also the extent of parental involvement in a child's life, school and teacher quality, community health (e.g. safe, violence-free environments), and multiple social and economic factors, such as family income and poverty, housing instability, and English proficiency.

School Achievement and Discipline: Children 6-17 (OCHNA 2007)

CHOC Service Area

- **68.5%** (362,650) of parents in the CHOC service area reported that their child's academic performance was *very good* or *excellent*; only **3.0%** (15,688) felt their child was doing *poorly*.
 - **93.0%** (36,476) of Asian/Pacific Islander parents excluding Vietnamese in the CHOC service area felt their child was doing *very good* or *excellent*, compared to only **59.6%** (17,009) of Vietnamese and **60.2%** (151,296) of Hispanic /Latino parents.
 - **73.6%** (129,500) of white parents felt their child's academic performance in school was *very good/excellent*.
- In the OCHNA 2007 survey, **9.3%** (48,949) of parents in the CHOC service area reported that their child had been disciplined by a school official sometime in the past 12 months.
 - **11.3%** (27,720) of Hispanic/Latino children were reported to have been disciplined by the school compared to **8.7%** (15,321) of white children and **5.7%** (1,613) of Vietnamese children.

CHOC at Mission Service Area

- In the CHOC at Mission service area, **75.4%** (84,953) of parents reported that their child's academic performance was *very good* or *excellent*.
- **10.3%** (11,594) of parents in the CHOC at Mission service area reported that their child had been disciplined by a school official sometime in the past 12 months.

15,688 of CHOC service area parents believed their child (6-17 years) was doing poorly at school in 2007.

English Learners (K-12)

English Learner (EL) students speak languages other than English at home and do not possess the English language skills of listening comprehension, speaking, reading, and writing to do well in regular instructional programs. Those designated as EL students through an objective assessment are placed in one of two types of English language classrooms: Structured English Immersion and English Language Mainstream. The former is designed for students with less than “reasonable fluency,” and the latter is designed for students with “reasonable fluency” or a “good working knowledge of English.” Fluent English Proficient (FEP) students have a primary language other than English and have met the district English proficiency criteria. The table below presents the proportion and number of students in selected school districts in the CHOC service area that are under these designations from the [California Department of Education](#) (CDE).

Table 1: Percent of English Learner and Fluent English Proficient Students (K-12) in Each Selected District: CHOC Service Area, 2009-2010		
School District	English Learners	Fluent-English Proficient Students
Anaheim City Elementary School District	56.9% 10,984	24.1% 4,649
Anaheim Union High School District	23.3% 7,726	42.5% 14,112
Capistrano Unified School District	11.0% 5,890	9.3% 4,939
Garden Grove Unified School District	45.1% 21,603	25.5% 12,226
Irvine Unified School District	14.7% 3,954	24.7% 6,627
Santa Ana Unified School District	55.9% 31,819	29.7% 16,936
All of Orange County	28.2% 141,608	20.1% 100,954

Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- Countywide, well over **one in four** students in Orange County public schools between K-12 grades were designated as English Learners during the 2009-2010 school year, and a further **one in five** were Fluent-English Proficient, which means that they have a primary language other than English but have met district English proficiency criteria.
- Over **half** of students in Anaheim City Elementary and Santa Ana Unified school districts were designated English Learners during the 2009-2010 school year.

Anaheim City Elementary School District, Garden Grove Unified School District, and Santa Ana Unified School District have higher proportions of English Learners.

Special Education

Provided to children with learning disabilities, mental conditions, or other impairments, special education is designed to address their unique educational and developmental needs. The federal [Individuals with Disabilities Education Act](#) ensures early intervention and special education services to infants, toddlers, children, and youth with disabilities through the public education system. The [CDE](#) provides data on the number of individuals between birth to 22 years of age that are enrolled in early intervention and special education services at the district level.

Almost one in ten K-12 students in Orange County public school districts were enrolled in early intervention and special education services.

Table 2: Number of Individuals (Newborn to 22 Years) Receiving Early Intervention and Special Education Services by District: CHOC Service Area, 2009-2010 School Year

School District	K-12 Enrollments	All Other Enrollments*	Total Enrollments
Anaheim City Elementary School District	1,906	307 0-5 Years: 307 18-22 Years: 0	2,213
Anaheim Union High School District	3,201	128 0-5 Years: 0 18-22 Years: 128	3,329
Capistrano Unified School District	4,125	671 0-5 Years: 528 18-22 Years: 143	4,756
Garden Grove Unified School District	4,438	635 0-5 Years: 505 18-22 Years: 130	5,073
Irvine Unified School District	2,264	335 0-5 Years: 286 18-22 Years: 49	2,599
Santa Ana Unified School District	4,948	767 0-5 Years: 497 18-22 Years: 270	5,715
All of Orange County	45,009	6,385	51,394

*Includes individuals ages 0 to 22 years "ungraded" or who are infants, enrolled in Community College, Other Postsecondary Education, or Preschool.

Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- **9.0%** (45,009) of students between K-12 in Orange County public school districts were enrolled in early intervention and special education services.

Special Education Enrollment: Children 3-5 Years (OCHNA 2007)

Provided to children with learning difficulties, mental conditions, and other disabilities, special education is designed to address the unique educational and developmental needs of disabled children. In the 2007 survey, parents/guardians were asked if their child aged 3 to 5 years was currently enrolled in special education. An estimated **5.0%** (8,483) of children 3 to 5 years old, residing in the CHOC service area, were currently enrolled in special education.

Extracurricular Involvement

Participation in extracurricular activities is important because it provides the opportunity to students to expand their skills beyond the school setting, enabling them to become more well-rounded, mature, and conscientious. It is also beneficial to their emotional and social health, allowing students to engage in activities that they enjoy and to meet peers with similar interests. With college-admission becoming more competitive over the years, extracurricular involvement can also diversify a student’s application.

After-school activities may be sponsored by the school or may be at an outside organization, such as the YMCA or Boys and Girls Club. There are a variety of activities available for children to participate in. After-school activities consist of sports, band, cheerleading, theater, clubs and organizations, etc.

- **70.6%** (371,891) of children in the **CHOC** service area participated in after-school activities in 2007.
 - Vietnamese children were the least likely to participate in after school activities, with only **53.5%** (15,045) participating in after-school activities.
- In the **CHOC at Mission** service area, **75.9%** (85,558) of children participated in after-school activities.

The following table shows the common reasons given for not participating in after-school activities.

Table 3: Top 5 Main Reasons for Child Not Participating in After-School Activities: CHOC Service Area, OCHNA 2007		
Reason for Non-Participation	Percent	Population Estimate
No Interest in After-School Activities	29.7%	42,866
No After-School Activity Available	25.0%	36,080
Do Not Have Time for After-School Activity	16.5%	23,786
Problems with Transportation	5.1%	7,367
Desired After-School Activity Not Available	3.5%	5,120

- Over **one in four** children did not participate in an after-school activity because of a lack of interest in the countywide **CHOC** service area.
- In the **CHOC at Mission** service area, **38.3%** (9,687) of children did not participate in after-school activities because they had no interest, **17.9%** (4,530) did not have time, and **13.6%** (3,447) did not have any activity available to them.

Lack of interest or lack of availability were the main reasons for not participating in after-school activities.

After school, children can be participating in after-school activities, but there are also other common activities that children engage in, such as studying/reading, watching television, or surfing the Internet. The table below shows the average number of hours during a weekday that children do the following:

- Watch TV or play video games (such as Playstation),
- Use the computer for fun or to be on the Internet,
- Study or read, and
- Listen to music, such as MP3 players, CDs, or radios.

Table 4: Average Number of Hours During a Weekday that Children Engage in Common Activities: CHOC Service Area, OCHNA 2007				
Hours	Watch TV or Play Video Games	Use the Computer	Study or Read	Listen to Music
0	5.4% 27,899	16.0% 79,829	4.1% 21,465	18.1% 91,508
Less than 1	5.3% 27,442	18.5% 91,972	13.1% 68,418	26.9% 135,793
1	32.4% 168,834	38.6% 192,249	31.4% 163,990	27.0% 136,330
2	33.6% 174,999	14.4% 71,945	26.3% 137,354	13.6% 68,893
3	13.1% 68,160	6.8% 33,945	13.9% 72,237	4.7% 23,563
4 to 5	6.4% 33,445	3.9% 19,204	6.1% 31,660	5.6% 28,087
6 to 12	3.8% 19,725	1.8% 9,036	5.1% 26,390	4.1% 20,553

The table below shows the same information for the CHOC at Mission service area.

Table 5: Average Number of Hours During a Weekday that Children Engage in Common Activities: CHOC at Mission Service Area, OCHNA 2007				
Hours	Watch TV or Play Video Games	Use the Computer	Study or Read	Listen to Music
0	7.4% 8,249	16.4% 18,204	3.9% 4,412	18.1% 19,424
Less than 1	5.1% 5,678	18.7% 20,815	12.2% 13,758	25.1% 26,947
1	35.4% 39,563	37.0% 41,183	33.8% 37,946	29.2% 31,352
2	33.9% 37,826	16.2% 18,063	27.7% 31,093	16.2% 17,338
3	10.1% 11,274	7.8% 8,674	15.2% 17,082	3.4% 3,683
4+	8.1% 9,050	3.9% 4,288	7.1% 8,023	8.0% 8,585

Amount of TV Watching on Weekends for Children (3-17) per Day: [CHIS 2009](#)

California

24.6% (1,884,000)
Under 2 Hours

29.4% (2,246,000)
2 Hours/Day

18.6% (1,425,000)
3 Hours/Day

18.6% (1,419,000)
4-5 Hours/Day

8.8% (671,000)
6-20 Hours/Day

Orange County

21.6% (131,000)
Under 2 Hours

33.6% (204,000)
2 Hours/Day

19.8% (120,000)
3 Hours/Day

18.5% (112,000)
4-5 Hours/Day

6.5% (39,000)
6-20 Hours/Day

California Healthy Kids Survey

Mandated by the No Child Left Behind Act, the [California Healthy Kids Survey](#) (CHKS) is administered every two years to students in grades 5 to 12. Including indicators such as student attitudes, behaviors, and experiences related to school and learning, the survey collects data to help schools and districts better identify student and school strengths as well as areas of improvement. The CHKS is also a source of information on student participation in extracurricular activities, clubs, and hobbies; data is available on a countywide level for Orange County (corresponding to the countywide CHOC service area) students in grades 7, 9, and 11 from 2007 to 2009, totaling **58,153** students. As this is self-reported data by students, it may not be fully reflective of their true extracurricular involvement.

Table 6: Percent of CHKS Survey Respondents Indicating that “Very Much True” to the Following Statements: CHOC Service Area, 2007-2009			
Survey Inquiry	7 th Grade	9 th Grade	11 th Grade
I am part of clubs, sports teams, church or temple, or other group activities.	49%	50%	47%
I am involved in music, art, literature, sports, or a hobby.	60%	59%	57%
I help other people (helping out at school or in the community).	36%	34%	39%

Source: California Department of Education, California Healthy Kids Survey 2007-09: Community Based Assets

Teen (12-17) Did Volunteer Work in Past Year: [CHIS 2009](#)

58.5% (2,000,000)
California

58.1% (155,000)
Orange County

- There were no clear differences in the extent of participation in extracurricular activities and other enriching behaviors or hobbies between the grades.
- Orange County students appeared to be more involved or conscientious compared to students in California as a whole; a greater proportion of Orange County 7th, 9th, and 11th grade survey respondents partook in various group activities and hobbies, and a greater proportion also helped other people compared to students statewide ([CHKS Student Well-Being in California](#)).



College Prep Completion of UC/CSU Course Requirements

The table below provides the percent of high school graduates in the 2007-08 school year who have completed the minimum number of courses required for University of California (UC) and/or California State University (CSU) entrance, with at least a grade of "C" (CDE). These courses include four years of approved English courses; three years of Mathematics (Algebra to Intermediate Algebra); two years of science with lab (chosen from biology, chemistry, and physics); two years of history or social science (covering World History and US History and Government); two years of foreign language; one year of a visual/performing arts; and one year of electives. This represents one component of all UC/CSU entrance requirements. The percent of graduates completing college-preparation classes varies across school districts in the CHOC service area, as demonstrated in the figure below from the CDE.

Figure 2: Percent of High School Graduates Completing UC/CSU Required Courses by District: CHOC Service Area, 2004-2005 and 2008-2009



Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- Although their rates are lower than the overall countywide rate, Anaheim Union High, Garden Grove Unified, and Santa Ana Unified school districts experienced notable increases in the proportion of their graduates meeting the UC/CSU requirements.
- The countywide proportion of high school graduates meeting UC/CSU course requirements increased from 2004-2005 to 2008-2009.
- While the overall countywide proportion showed an increase when comparing 2004-05 and 2008-09, there was a decrease in the Irvine Unified School District.

Percent of California High School Graduates Completing UC/CSU Required Courses by School Year: (CDE)

California

35.2% (125,068)
2004-2005
35.3% (135,370)
2008-2009

Los Angeles County

39.7% (34,788)
2004-2005
40.1% (37,452)
2008-2009

Orange County

38.7% (11,991)
2004-2005
40.3% (13,920)
2008-2009

Riverside County

34.5% (6,990)
2004-2005
29.4% (7,482)
2008-2009

San Bernardino County

22.9% (5,076)
2004-2005
23.7% (5,813)
2008-2009

San Diego County

37.2% (10,808)
2004-2005
41.6% (13,177)
2008-2009

Santa Clara County

45.5% (6,891)
2004-2005
49.3% (8,003)
2008-2009

Number of AP Exam Takers by School Year: [CDE](#)

California

183,365
2004-2005
231,050
2008-2009

Los Angeles County

52,979
2004-2005
65,638
2008-2009

Orange County

18,801
2004-2005
25,495
2008-2009

Riverside County

9,796
2004-2005
13,075
2008-2009

San Bernardino County

8,499
2004-2005
10,719
2008-2009

San Diego County

21,111
2004-2005
25,722
2008-2009

Santa Clara County

10,559
2004-2005
13,484
2008-2009

Advanced Placement Coursework

Many college-minded high school students enroll in Advanced Placement (AP) classes to be competitive in the college admissions process. AP courses are designed to be as rigorous and challenging as classes offered at colleges and universities. Towards the end of each school year, students take an exam to assess their mastery of the subject; the registration fee for each exam is \$87, and some students may qualify for a fee discount of \$22, according to the [College Board](#) which administers the testing process. The grading scale is a number system ranging from 1 to 5; students who pass the exams receive college-credit. The minimum score to pass an exam is 3. There are over 30 AP courses offered in Orange County schools that cover a range of subjects, from Calculus and Biology to English Literature and Art History. 11th and 12th graders usually enroll in AP courses, although some students elect to take them earlier. The table below presents the numbers of AP exam takers by select CHOC service area school district as well as the total number of students enrolled in the 11th and 12th grades from the [CDE](#).

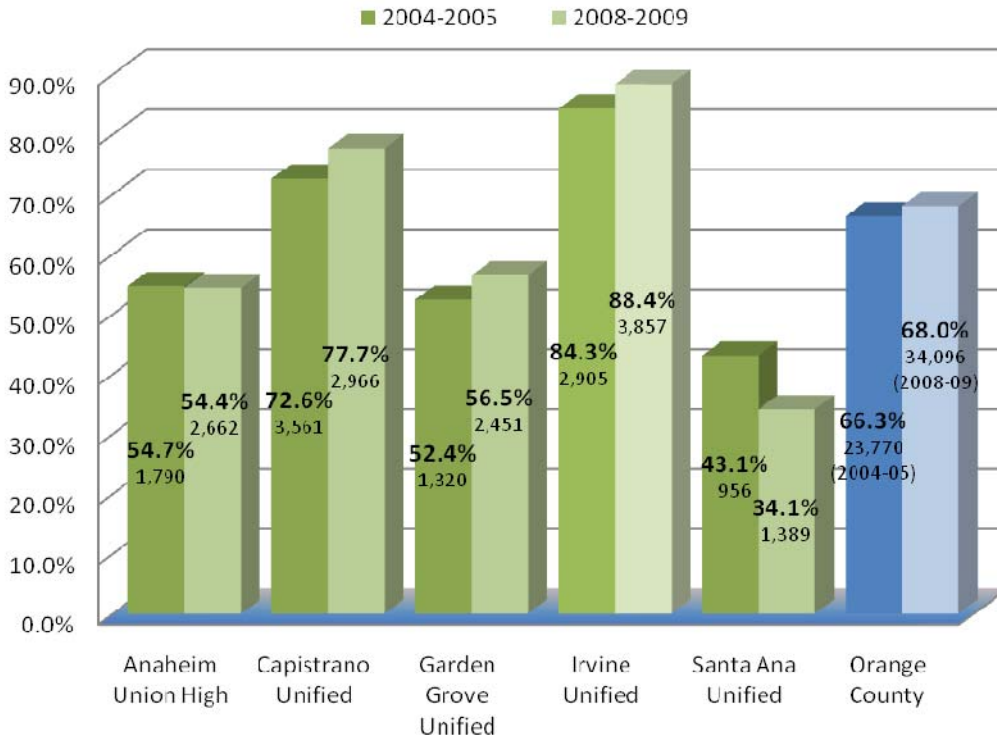
Table 7: Number of AP Exam Takers by School District and Total 11 th /12 th Grade Enrollment: CHOC Service Area, 2004-2005 and 2008-2009				
School District	2004-2005 School Year		2008-2009 School Year	
	Number of AP Exam Takers	Total 11 th and 12 th Grade Enrollments	Number of AP Exams Takers	Total 11 th and 12 th Grade Enrollments
Anaheim Union High	1,747	8,851	2,512	10,556
Capistrano Unified	2,454	6,593	3,371	7,930
Garden Grove	1,359	6,488	2,173	7,059
Irvine	1,811	4,219	2,126	4,472
Santa Ana	1,292	6,802	2,321	7,808
Orange County	18,801	72,065	24,495	82,278

Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- The countywide ratio of the total number of 11th-12th graders to the number of AP exam takers was **3.8** in 2004-2005 and slightly improved to **3.4** in 2008-2009. Thus, for every AP exam taker, there were **3.4** 11th and 12th graders. This suggests that a higher proportion of students took an AP exam in 2008-2009 compared to 2004-2005.
- The ratio of the total number of 11th-12th graders to the number of AP exam takers for all selected districts improved from 2004-05 to 2008-09, when higher proportions of students took AP exams. For Santa Ana Unified, it improved from **5.3** to **3.4**, matching the countywide ratio. For Anaheim Union High, it improved from **5.1** to **4.2**, although a lower proportion of students took AP exams compared to the overall countywide rate.

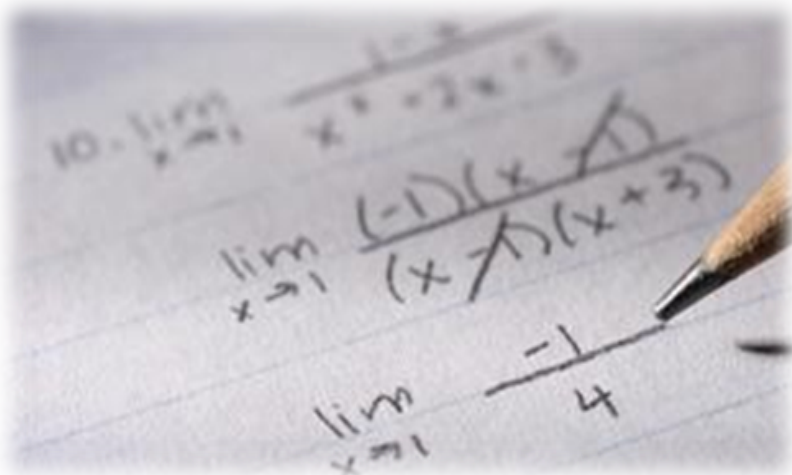
The figure below compares the proportion of AP exams with passing scores of 3, 4, or 5 between the 2004-2005 and 2008-2009 school years.

**Figure 3: Percent of AP Exams with Passing Scores:
CHOC Service Area, 2008-2009**



Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- Anaheim Union High, Garden Grove Unified, and Santa Ana Unified school districts had lower AP exam pass rates compared to the overall countywide rate.
- For the Santa Ana Unified School District, the 2008-2009 AP exam pass rate was lower than the 2004-2005 rate.



AP Exam Pass Rates by School Year: [CDE](#)

California

56.1% (184,498)
2004-2005
58.3% (243,649)
2008-2009

Los Angeles County

52.5% (50,648)
2004-2005
53.0% (63,047)
2008-2009

Orange County

66.3% (23,770)
2004-2005
68.0% (34,096)
2008-2009

Riverside County

43.6% (7,178)
2004-2005
46.4% (10,573)
2008-2009

San Bernardino County

47.7% (6,993)
2004-2005
46.7% (8,972)
2008-2009

San Diego County

52.5% (20,661)
2004-2005
59.5% (27,633)
2008-2009

Santa Clara County

67.0% (12,948)
2004-2005
73.0% (18,152)
2008-2009

Proportion of 12th Graders Taking SAT Reasoning Test: [CDE](#)

California

35.9% (146,877)
2004-2005
34.7% (164,275)
2008-2009

Los Angeles County

39.0% (38,918)
2004-2005
39.3% (45,192)
2008-2009

Orange County

42.4% (14,056)
2004-2005
40.8% (15,920)
2008-2009

Riverside County

31.1% (7,190)
2004-2005
29.7% (9,285)
2008-2009

San Bernardino County

28.9% (7,520)
2004-2005
25.7% (8,358)
2008-2009

San Diego County

40.1% (13,339)
2004-2005
35.1% (14,528)
2008-2009

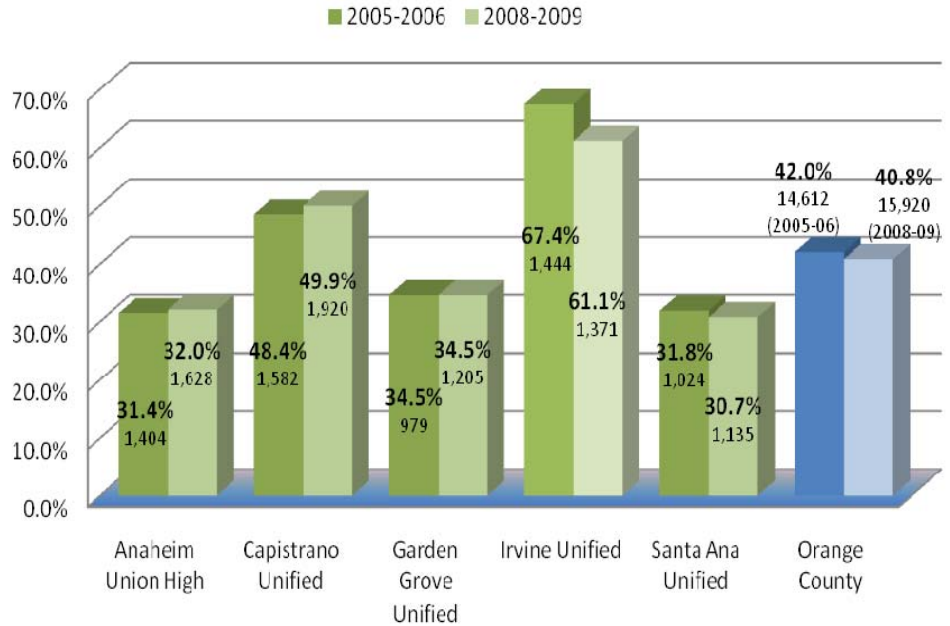
Santa Clara County

49.7% (8,767)
2004-2005
45.7% (9,099)
2008-2009

The SAT Reasoning Test

The SAT Reasoning Test is a standardized test for college admissions which measures the problem-solving abilities of college-bound students. The SAT reasoning tests has three parts that are scored out of 800 points: Critical Reading, Mathematics, and Writing. Performance on the SAT is one of the factors considered by colleges and universities for student admission. The figure below provides the proportion of 12th graders in the selected school districts who took the SAT reasoning test in the 2005-2006 and 2008-2009 school years from the [CDE](#).

Figure 4: Proportion of 12th Graders Taking SAT Reasoning Test: CHOC Service Area, 2005-2006 and 2008-2009 School Year



Source: State of California Department of Education, Educational Demographics Unit, Dataquest Query System

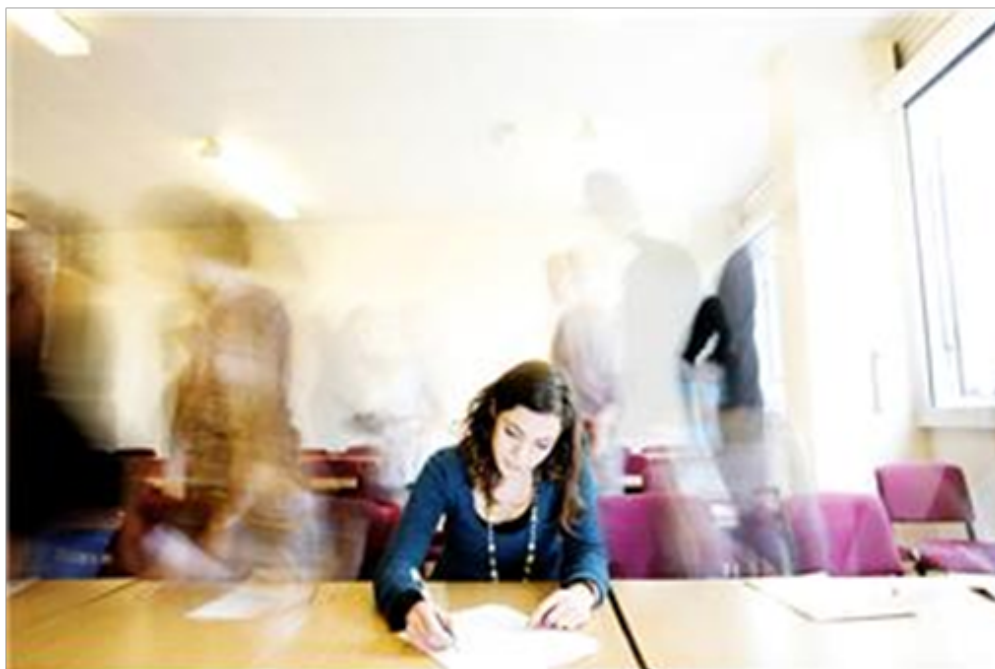
- Countywide, almost 41% of 12th graders took the SAT in 2008-2009.
- There was a notable decrease in the proportion of 12th graders taking the SAT reasoning test in the Irvine Unified School District over the 2005-2006 and 2008-2009 school years. At the same time, the school district had the highest rate of 12th graders sitting for the exam in the selected group of districts.

The table below presents the average SAT scores of 12th graders in 2008-2009.

Table 8: Average SAT Reasoning Scores by Section for Tested 12 th Graders: CHOC Service Area, 2008-2009 School Year					
School District	Mathematics	Critical Reading	Writing	Overall Score	Percent Scoring ≥ 1,500
Anaheim Union High	522	489	488	1,499	46.6% 758
Capistrano Unified	559	542	541	1,642	67.8% 1,302
Garden Grove	528	483	490	1,501	50.0% 602
Irvine	635	577	586	1,798	82.7% 1,136
Santa Ana	460	448	449	1,633	28.4% 322
Orange County	552	523	525	1,600	61.6% 9,805

Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- For all Orange County public high schools, the total score of averages was **1,600** in 2008-2009. **61.6%** of 12th graders got a score of 1,500 or more. In 2005-2006, the countywide total of each section’s average score was **1,593**.



Sum of Average Scores for Each SAT Reasoning Test Section in 2008-2009: [\(CDE\)](#)

1,502
California

1,437
Los Angeles County

1,600
Orange County

1,423
Riverside County

1,423
San Bernardino County

1,535
San Diego County

1,661
Santa Clara County

CAHSEE Pass Rates by Section Among 10th Graders in 2009-2010: (CDE)

California

80.6% (385,196)
2004-2005
80.7% (383,887)
2008-2009

Los Angeles County

78.5% (98,733)
ELA
78.0% (97,786)
Math

Orange County

85.6% (34,406)
ELA
86.7% (26,351)
Math

Riverside County

79.9% (26,372)
ELA
80.1% (26,351)
Math

San Bernardino County

77.6% (25,268)
ELA
76.3% (24,783)
Math

San Diego County

82.6% (31,518)
ELA
84.9% (32,014)
Math

Santa Clara County

85.0% (16,464)
ELA
86.1% (16,403)
Math

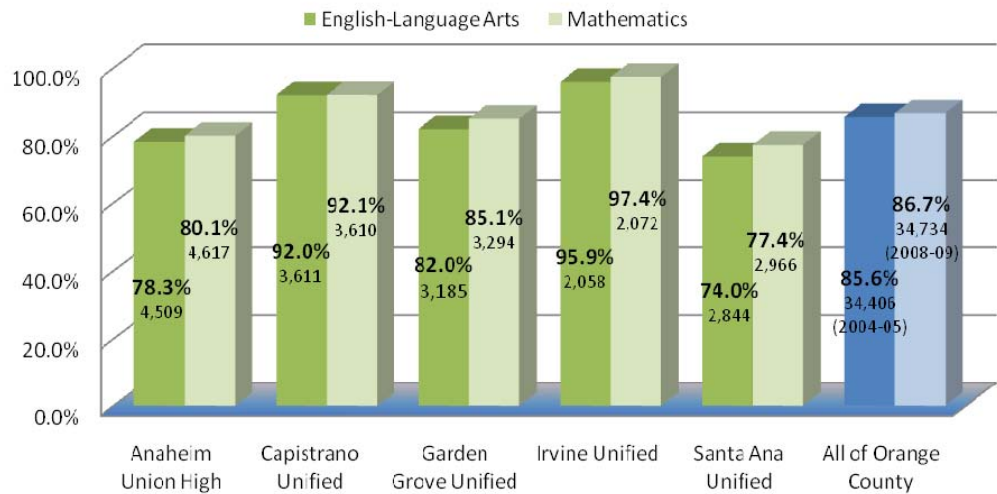
Graduation

A high school diploma is an important stepping stone to further education and economic success in adulthood. Graduation rates are informative indicators about the performance level of schools and school districts as well as the socioeconomic health of the communities served.

California High School Exit Exam

In order to get their diploma, public high school students are required to pass the [California High School Exit Exam](#) (CAHSEE), except eligible students with disabilities. A two-part test, the English and Language Arts section assesses student competency in content standards up to the 10th grade. The Mathematics section assesses state standards in grades six and seven and Algebra I. Students take the exam in 10th grade during the spring, and have at most five opportunities in their junior and senior years for retakes if they have yet to pass. The [CDE](#) provides the percent of 10th graders who took and passed the exam during the spring 2010. Please note that the number of students taking each section of the exam may vary by district, and that the percents have been rounded to the nearest whole number.

Figure 5: Percent of 10th Grade Students Passing CAHSEE by District: CHOC Service Area, Spring 2010



Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- Anaheim Union High, Santa Ana Unified, and Garden Grove school districts had lower passing rates for both CAHSEE sections compared to overall countywide rates.

At the countywide level, there have been race/ethnic and gender disparities in CAHSEE10th grader pass rates in 2009-2010; these dissimilarities have remained persistent since 2006-2007, the earliest that data is available.

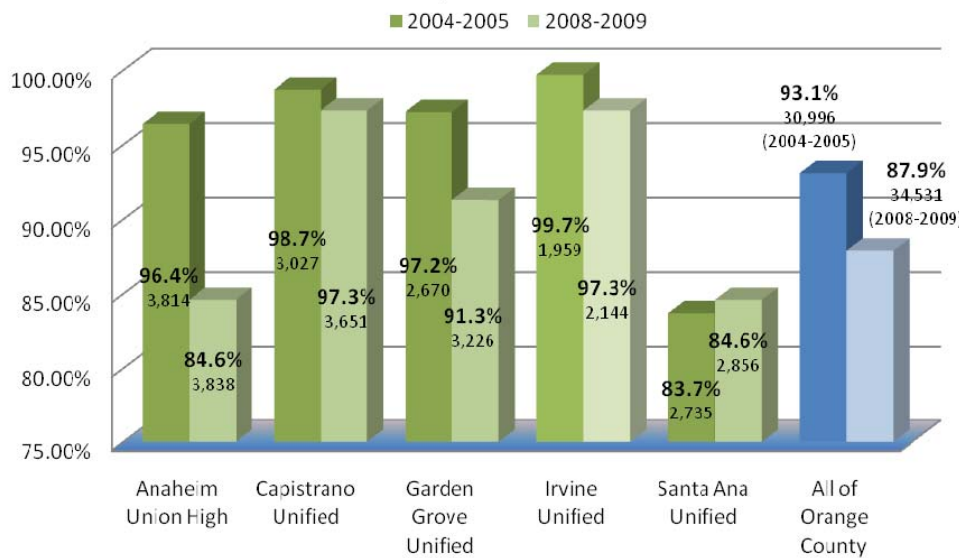
- Compared to males, a greater proportion of females passed both the English-Language Arts (**83% vs. 88%** for females) and the Mathematics sections (**86% vs. 87%**) in 2009-2010.
- A greater proportion of Asian and white 10th graders passed the two CAHSEE sections compared to Hispanic/Latino 10th graders; **94%** of Asian and **95%** whites passed the English -Language Arts section compared to **75%** of Hispanics/Latinos, and **98%** of Asians and **94%** of whites passed the Mathematics section, compared to **77%** of Hispanics/Latinos.

Graduation Rates

The CDE uses the National Center for Education Statistics formula to calculate graduation rates, which divides the number of graduates with a regular diploma during the school year by the sum of the number of those graduates and the number of students in the same cohort that dropped out in the 9th through 12th grades. The NCES formula does not include the number of students who received alternative diplomas or certificates.

The figure below provides the graduation rate by selected school districts for the class of 2005 and 2009 (2004-2005 and 2008-09 school years).

Figure 6: NCES Graduation Rates by District: CHOC Service Area, 2004-2005 and 2008-2009

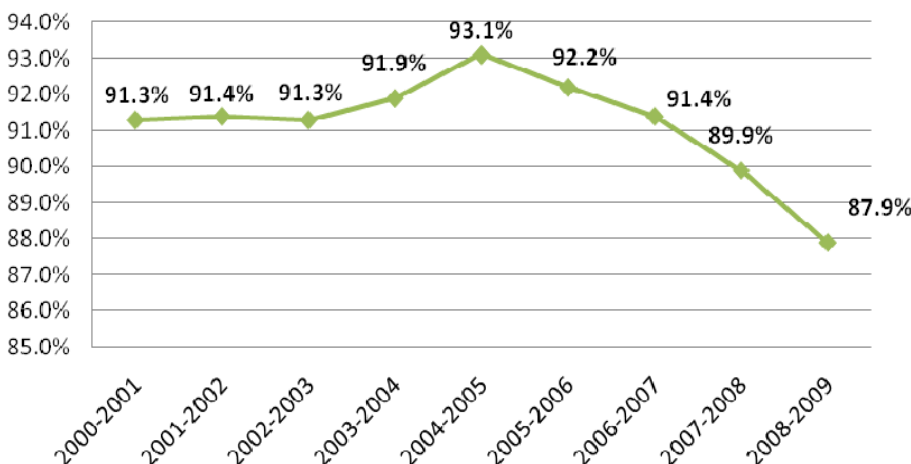


Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- It is notable that all of the above school districts, except for Santa Ana Unified, experienced a drop in the graduation rate over 2004-2005 and 2008-2009. Anaheim Union High School District underwent the most dramatic drop.

The figure below presents the overall graduation rates for Orange County from 2000-2001 to 2008-2009.

Figure 7: NCES Graduation Rates in Orange County: 2000-2001 to 2008-2009



- Since 2004-2005, there has been a downward trend in the graduation rate.

Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

NCES Graduation Rates in Orange County (2000-01 to 2008-09): (CDE)

91.3%
2000-2001

91.4%
2001-2002

91.3%
2002-2003

91.9%
2003-2004

93.1%
2004-2005

92.2%
2005-2006

91.4%
2006-2007

89.9%
2007-2008

87.9%
2008-2009

Adjusted Drop Out Rates in 2008-2009:
[\(CDE\)](#)

California

5.7%
One-Year Rate
21.5%
Four-Year Rate

Los Angeles County

6.4%
One-Year Rate
24.3%
Four-Year Rate

Orange County

3.7%
One-Year Rate
14.3%
Four-Year Rate

Riverside County

5.7%
One-Year Rate
21.9%
Four-Year Rate

San Bernardino County

5.7%
One-Year Rate
21.6%
Four-Year Rate

San Diego County

5.4%
One-Year Rate
20.2%
Four-Year Rate

Santa Clara County

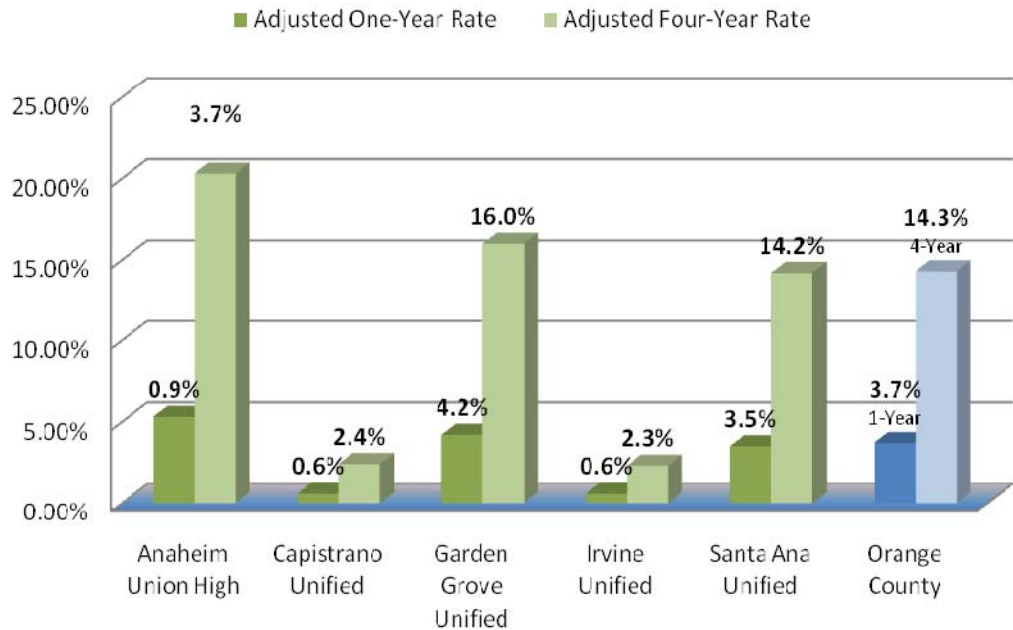
4.2%
One-Year Rate
16.1%
Four-Year Rate

Dropout Rates

The [CDE](#) calculates dropout rates from data reported for the 9th to 12th grades. The one-year dropout rate calculation divides the number of dropouts from the 9th to 12th grades by the total enrollment in the 9th to 12th grades. The four-year derived rate estimates the percent of students who would drop out in a four-year period using data collected in a single year. High school drop outs may face limited employment prospects and economic mobility.

The figure below presents the adjusted one-year and four-year derived dropout rates from the 2007-2008 school year for selected districts. Adjusted data removes students initially classified as dropouts but later found to be enrolled in another California public school (reenrolled dropouts) and adds in students who were reported to be transferred to another California public school but were not found to be enrolled (lost transfer). There were a total of **6,272** adjusted dropouts in the 2008-2009 school year in Orange County (corresponding to the CHOC service area).

Figure 8: Adjusted One-Year and Four-Year Derived High School Dropout Rates: CHOC Service Area, 2008-2009



Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- The adjusted one-year dropout total for the Anaheim Unified School District was **1,188**; for the Santa Ana Unified School District it was **591**; and, for the Garden Grove Unified School District it was **632**.

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Adjusted 4-Year Dropout Rate by Race/Ethnicity for California in 2008-2009 [\(CDE\)](#)

Table 9: Adjusted Four-Year Derived Dropout Rate <i>Within</i> Race/Ethnicity: CHOC Service Area, 2008-2009						
Race/Ethnicity	Anaheim Union High	Capistrano Unified	Garden Grove Unified	Irvine Unified	Santa Ana Unified	Orange County
White	15.6% 159	1.8% 52	13.2% 83	1.7% 17	4.9% 11	7.8% 1,253
Hispanic	26.7% 874	5.7% 39	19.1% 371	4.6% 8	15.1% 558	22.5% 4,050
Asian	9.3% 60	0.8% 2	11.1% 136	2.0% 18	7.1% 11	6.7% 412
African American	19.8% 36	3.2% 2	32.3% 13	6.1% 3	19.0% 8	26.5% 236

14.1% (22,753)
White

26.7% (65,201)
Hispanic

9.6% (4,382)
Asian

36.8% (16,525)
African American

Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- The four-year derived dropout rate was the highest for Hispanic students in the Anaheim Union High and Capistrano Unified school districts. On the county level, African American students had the highest four-year derived dropout rate.
- Over **64%** of the 2008-2009 9th-12th grade adjusted-dropouts were Hispanic (64.6or 4,050 students) in Orange County public schools. Hispanic students comprised **43.4%** of the enrollments between 9th and 12th grades (72,444 out of 167,557).



Percent of High School Graduates Going Straight to In-State Higher Education Institutions in 2008:
[\(CPEC\)](#)

53.6% (219,996)
California

58.9% (60,918)
Los Angeles County

61.4% (22,286)
Orange County

50.4% (12,387)
Riverside County

32.8% (8,101)
San Bernardino County

57.7% (19,206)
San Diego County

38.0% (6,935)
Santa Clara County

Post-Secondary Opportunities

Higher education provides countless benefits to individuals, contributing to personal growth and helping to ensure economic success in the future. It may also provide many societal benefits, such as a highly skilled work force and a vibrant economy, as well as higher incomes, and less poverty and crime.

First-Time Freshman College Attendance in California

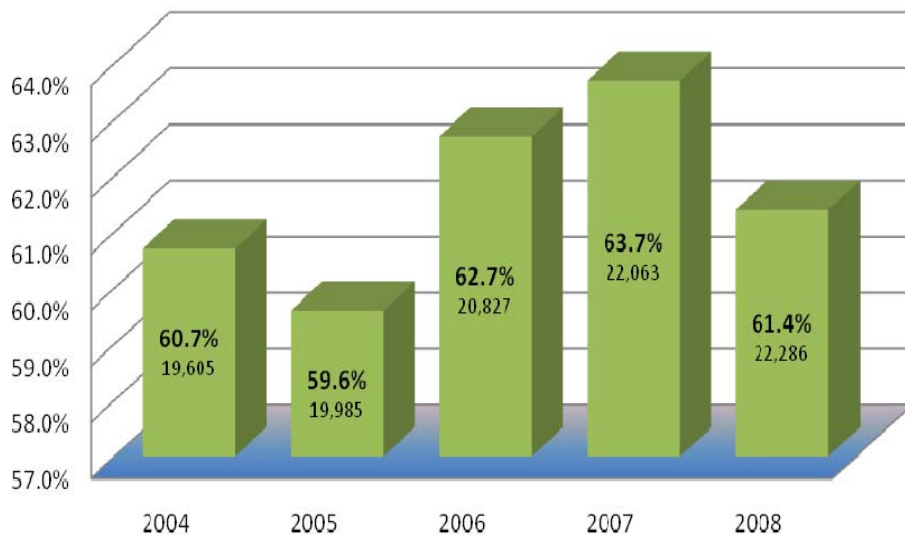
The [California Post-Secondary Education Commission](#) presents data on the number of high school students that have advanced to higher education institutions in the state without a break. The most recent complete data is available for the Class of 2008. The [Freshman Pathways](#) data tables provide the number of first-time freshman in the UC system, the CSU system, or any California Community College based on the student’s high school, high school district, or city of origin.

In 2008, there were **33,317** high school graduates from public Orange County high schools. There were an additional **2,985** students graduating from private Orange County high schools.

- Of the **36,302** total graduates, **59.5%** (21,500) enrolled in public higher education institutions in California.
 - **3,026** enrolled in the University of California (UC) system.
 - **4,255** enrolled in the California State University (CSU) system.
 - **14,215** enrolled in a California Community College (CCC).

Another **786** students enrolled in the private California higher education institutions. The figure below presents the proportion of Orange County high school graduates (from private or public high schools) that has proceeded to any higher education institution in California by year. This includes the UC and CSU system schools, community colleges, and private institutions. Please note that this does not include students who attend out-of-state or out-of-country higher education institutions.

Figure 9: Percent of High School Graduates Going Straight to In-State Higher Education Institutions, Orange County 2004-2005



Source: State of California, Department of Education, Educational Demographics Unit, Dataquest Query System

- There was an increase in the proportion of Orange County high school graduates attending California-based higher education institution until 2008.

Appendix

Technical Information

Survey Development (OCHNA 1998, 2001, 2004 and 2007)

The methodology for primary data collection included the development of a valid survey instrument using the Center for Disease Control's (CDC) Behavioral Risk Factor Surveillance Survey (BRFSS) as the protocol. In addition, national and state surveys were reviewed, and questions from those surveys were incorporated into the OCHNA instrument to allow comparison between local, state, and national data.

OCHNA also reviewed the California Health Interview Survey (CHIS) as an additional source of questions. These were incorporated into the assessment, covering information gaps and allowing the OCHNA survey to focus on specific issues or needs not addressed by CHIS. The sample size provided by CHIS for Orange County is too small to deliver reliable data for the individual hospital service areas or for analyzing significant differences among our sub-populations (e.g. Vietnamese, seniors, and households with children under the age of six), and therefore is not a realistic alternative to the OCHNA survey. CHIS has provided an objective source that confirms the accuracy of the OCHNA findings at the county wide level for uninsured in Orange County.

OCHNA developed two surveys focusing on adult and children's health issues. Both surveys include items pertaining to access, coverage, utilization, prevention, risk behaviors, and major diseases. The surveys were designed and administered in English, Spanish, or Vietnamese, depending on the respondent's preference.

Sample Design

The surveys have employed a dual-frame sample design, consisting of both Random Digit-Dialed (RDD) and listed samples to meet the target quotas for children, adults, and self-identified Vietnamese respondents of Orange County. The sampling for this project drew telephone numbers from five different sampling frames:

- RDD sample with telephone numbers in Orange County; stratified into high, medium, and low incidence Vietnamese exchanges;
- Listed sample for households containing children ages 0-5 years;
- Listed sample for households containing children ages 6-17 years;
- Listed sample for households containing adults 55 years of age or older; and,
- Listed Vietnamese surname sample.

Within each sampled household, a respondent was randomly selected to complete the survey. Households with children were randomly assigned to either the adult questionnaire or the child questionnaire so that households with children were represented in the data for both the adult and child studies. If the selected respondent was a child, that is, under the age of 18, the child survey was administered with a knowledgeable parent or guardian in the household, and if the selected respondent was an adult, the adult survey was administered.

Data Collection

Data collection was conducted via telephone surveys with randomly selected adults in randomly selected telephone equipped Orange County households. Interviews were obtained using the Computer Assisted Telephone Interviewing (CATI) system that utilizes the random digit dialing (RDD) method for respondent selection. The use of geographic indicators, such as zip codes, telephone prefixes, city, and major cross streets, were used to aggregate interviewees in hospital service areas and regions. Data analysis was completed through collaboration between OCHNA staff and Macro International statisticians.

Population Weighting

Prior to analysis, current demographic information from the U.S. Census on Orange County residents was used to develop case weights so that unbiased population estimates can be computed from the sample data. Information on three demographic variables (gender, age, and race) was used to develop the case weights.

Composition of Survey Respondents

The sample frame for this survey included households with telephones located in the service areas of Orange County based hospitals. The population of inference is non-institutionalized individuals, ages 18 years or older, residing in households with telephones. Persons in institutions, including penal facilities, hospitals, military barracks, cell phone only users, and some college dormitories, were excluded. Also, households without any adults speaking English, Spanish, or Vietnamese well enough to be interviewed were excluded, since the interview was conducted in only those three languages. Individuals with physical or mental impairments that prevented them from completing an interview, and with no knowledgeable proxy available, were excluded from the sample of respondents. As the U.S. Census estimates a 99.3% penetration of telephones in Orange County households, 0.7% of residential households have a zero probability of inclusion.

The Adult survey was a general random sample of Orange County households equipped with a telephone. In this sample, the adult respondents were asked questions about their own health status, health access, and utilization of the health care system. The sample for the Child survey consisted of households where there was at least one child under the age of 18 living in the household. In this survey, the respondents—adults 18 years of age or older—were asked questions about only one of the children (selected at random) living within the household. It was generally more difficult to secure interviews concerning younger children than concerning older children.

A sample size of 4,746 respondents (using 2007 as an example) was obtained, to ensure generalizability of the findings to the Orange County population as a whole, as well as to the individual hospital service areas. Hospitals defined their own service areas and provided a list of both primary and secondary zip codes, which were then reviewed by the research team for accuracy. The 4,746 interviews were split between the two separate surveys, with 2,621 respondents for the Adult survey and 2,123 respondents for the Child survey. Over-sampling was done for the Vietnamese sub-population, seniors (individuals 55 years and older), and households with children under the age of six, to ensure that the sample sizes of these sub-groups of the population were sufficiently large to reach independent conclusions.

A full technical report for each survey year is on file and available upon request.

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FY 2011 Community Health Needs Assessment Supplement

CHNA FEDERAL REQUIREMENTS

1. Each charitable hospital must complete the following steps in conducting a CHNA:
 - a) **Define the community it serves.**
 - CHOC Children's Orange – Pages 11-12 of FY 2011 CHNA
 - CCMH – Page 13 of FY 2011 CHNA
 - b) **Include demographics of the community served.**
 - CHOC Children's Orange & CCMH– Pages 14-25 of FY 2011 CHNA
 - c) **Assess the health needs of that community.**
 - CHOC Children's Orange & CCMH– Pages 25-125 of FY 2011 CHNA
 - d) **Prioritize the significant health needs of the community. Provide a description of the process and criteria used in identifying and prioritizing significant health needs of the community.**
 - CHOC Children's Orange & CCMH–Pages 1, 8-10 of FY 2011 CHNA
 - e) **Provide a description of the potential measures and resources identified through the CHNA to address the significant health needs.**
 - Seven (7) high priority needs are listed on page 1 of the FY 2011 CHNA. CHOC offers a multitude of programs and services that address these needs. These programs and services are described in Appendix A of this FY2011 CHNA Supplement.
 - f) **Take into account input from persons representing the broad interests of the community including those with special knowledge in public health.**
 - CHOC Children's Orange & CCMH– Pages 8-10 of FY 2011 CHNA
 - g) **Document the CHNA in a written report adopted by an authorized body of the hospital facility.**
 - CHOC Children's Orange & CCMH– Present the FY 2011 CHNA and supplement to the mirrored Board of Directors in June 2013 for adoption
 - h) **Make the CHNA report widely available to the public.**
 - CHOC Children's Orange & CCMH – After BOD adoption, post the CHNA and supplement on the CHOC Children's internet web page
 - CHOC Children's Orange & CCMH – Make a paper copy of the CHNA available for public inspection.



FY 2011 Community Health Needs Assessment Supplement

2. Each charitable hospital must develop a written implementation strategy to address the significant community health needs identified through the CHNA that includes the following:
 - a. **Describes how the hospital plans to address significant health needs, the anticipated impact of these actions and a plan to evaluate such impact.**
 - Appendix A of this FY 2011 CHNA Supplement describes the programs and services that CHOC Children's Orange and CCMH provide that meet the high priority needs identified in the CHNA.
 - By the end of calendar year 2013, CHOC will be conducting a new CHNA that will retrospectively assess the impact of the existing plan by gathering data to quantitatively show the impact of the services provided over the past three years and assist the organization in developing new goals for the ensuing plan.
 - b. **Identifies the programs and resources the hospital plans to commit to address the significant health needs.**
 - Seven (7) high priority needs are listed on page 1 of the FY 2011 CHNA. Appendix A of this FY 2011 CHNA Supplement describes the programs and resources that address the significant health needs identified in the CHNA.
 - In addition to the services listed in Appendix A, CHOC also addresses the Dental Health high priority need through its "Healthy Smiles for Kids of Orange County" program in conjunction with the Garden Grove Boys and Girls Club. The Children's Health and Dental Center offers medical, dental and family services to Garden Grove's underserved population and features a dental residency program the USC School of Dentistry. Healthy Smiles has a satellite clinic on the first floor of CHOC Children's Ambulatory Care Center in Orange, where children are cared for by USC Dental residents for screening, prevention and treatment of dental issues.
 - c. **Describes any planned collaboration between the hospital and other facilities or organizations in addressing significant health needs.**
 - CHOC Children's Orange & CCMH– CHOC and CCMH collaborate extensively with other health care providers in the community – both adult and pediatric-focused. In addition, CHOC works closely with other organizations in the community to address critical needs that impact children. A list of those collaborators can be found in Appendix B of this FY 2011 CHNA Supplement.

d. Identifies significant health needs the hospital does not intend to address and explains why the hospital does not intend to address the health need.

- One of the areas of high priority need identified in the 2011 CHNA was “Child Health and Academic Achievement”. While CHOC’s and CCMH’s core mission is the provision of health care to the pediatric population, CHOC does provide services that impact a child’s academic achievement.
- CHOC’s Reach Out and Read (ROR) program has been affiliated with the nationwide program begun by Boston pediatricians in 1989 to better prepare their young patients for academic success when they reach school age. CHOC initially offered this program in one clinic location and now offers it in four of its primary care clinics. In the clinic waiting areas, books are available for reading while patients wait to be seen; CHOC volunteers read stories to patients and their families; the children are encouraged to take the books home. The ROR program continues into the exam room, where the pediatrician encourages the parents to read to the children every day. An age-appropriate book is given to them to take home and enjoy with their child. CHOC has distributed over 10,000 donated books each year. Since July 2011, the program has been incorporated into the Pediatric Residency program.

Community Health Needs Assessment FY 2011 Supplement Appendix A

CHOC Children's Crosswalk – High Priority Needs from 2011 CHNA to Master List of Community Benefit Services

The attached pages contain an alphabetical list of services and a description of each one. The column to the left indicates which of the high priority needs identified in the CHOC 2011 CHNA are addressed through that particular program/service.

The High Priority Needs are coded as follows:

- A = Health Care Access and Coverage
- B = Health Care Utilization
- C = Dental Health
- D = Mental/Behavioral Health
- E = Maternal and Infant Health
- F = Nutrition, Obesity and Exercise
- G = Child Health and Academic Achievement

Those programs and services that do not fit into one of these high priority categories are coded as "O".

Community Health Needs Assessment FY 2011 Supplement

Appendix A

Alphabetical Master List of Benefit Services

HIGH PRIORITY NEED	SERVICE TITLE	DESCRIPTION
B	AMERICAN HEALTH JOURNAL/PBS	A health program that airs on PBS to provide healthcare information to general public.
A	ASTHMA BREATHMOBILE	The Breathmobile mobile van program is a collaborative effort between CHOC and Orange County schools to provide comprehensive asthma care and management services to underprivileged children of the community.
B,G	ATHLETIC TRAINING PROGRAM	Provide trainers (2 FTE's) to work with student athletes in the Irvine Unified School District.
D	BEHAVIORAL HEALTH SERVICES-MENTAL HEALTH INTERVENTION	Psychology provides assessment, treatment planning and case management service to CHOC Children's patients in the ED who are presenting with suicidal ideation or need a suicide assessment. The treatment planning and case management time is not billable so those hours are donated to best serve these patients.
B,F	BIKE AND BIKE HELMET SAFETY	Interactive bicycle safety program for students K-6, including a low-income helmet distribution program for clinic patients.
O	BRANDMAN UNIVERSITY-CNO ADVISORY GROUP FOR SKILLS LAB	Serve on CNO Advisory working group for Skills Lab for Brandman University.
B,E	BRINGING BABY HOME INFANT CLASS	Bringing Baby Home for parents of NICU babies. This class is to equip new parents with some basic parenting skills when they bring their Neonate home from the hospital. How to prepare their environment (temperature, pets, tobacco smoke, visitors), when to call the doctor, and general care reminders for bathing and feeding. There is also time allowed for skill practice such as diaper changing, temperature taking, bathing, calming techniques and swaddling.
G	BUCKLE BEAR	Preschool and kindergarten program that teaches children the importance of wearing a seat belt and riding safely in a car.
O	CALIFORNIA STATE UNIVERSITY FULLERTON PHILANTHROPIC FOUNDATION	CHOC's CFO is a member of the California State University Fullerton Philanthropic Foundation board of directors and chairs its nursing initiative.
A	CALIFORNIA CHILDREN'S HOSPITAL ASSOCIATION	California Children's Hospital Association participation by the CEO, CFO, and government relations leadership including participation in board meetings, CCS Access issues, Public Policy and Governance Best Practice Meetings.
O	CALIFORNIA COUNCIL FOR EXCELLENCE	California Council for Excellence participation by COO: CCE is an educational foundation that administers the CAPE program.

Community Health Needs Assessment FY 2011 Supplement Appendix A

A	CALOPTIMA BOARD AND BOARD COMMITTEES	CFO and Chief Governmental Relations Officer participation with CalOptima board and related committees. CalOptima is a county organized health system for low-income families.
O	CANCER SURVIVORS DAY-COURAGEOUS KIDS CELEBRATION	Annual event for patients and families to celebrate cancer survivors.
A,B	CAREPAGES	Enable patients and family to create their own individual web sites to post information on their progress, keep family and friends updated, share information about their treatment, etc.
B,D	CAST	County public-private partnership of Orange County's Social Services Agency, Health Care Agency, and the District Attorney's Office and the non-profit Orange County Child Abuse Prevention Center, formed to decrease the trauma for abused children and their families by offering a coordinated child-friendly approach to child abuse investigations. CAST conducts forensic interviews and forensic medical examinations, provides expert legal testimony, and supports victims and non-offending family members with mental health crisis intervention services and voluntary child advocacy services.
O	CHAPMAN UNIVERSITY GUEST LECTOR	Guest Lector at Chapman University – subject of healthcare finance for Master of Health Administration students.
A	CHARITY CARE	Charity care provided to families with children who are uninsured or underinsured and cannot afford to pay for their medical care.
O	CHILD LIFE INTERNSHIP PROGRAM	A comprehensive structured internship (15 week duration) that upon completion, will fulfill eligibility requirements for child life certification.
O	CHILD LIFE PRACTICUM PROGRAM	A comprehensive structured practicum program for students interested in pursuing a degree related to (or in) Child Life.
B,E	CHILD PASSENGER SAFETY	Four-part program designed to reduce automobile-related childhood deaths and injuries; provides car seat giveaways, low-cost purchases, loans, and rentals; program works with local police department to provide ongoing car seat check off points.
A	CHILDREN AND FAMILIES COMMISSION OF ORANGE COUNTY	Participate on the Orange County Children and Families Commission to provide needed services to children 0-5 and their families. Represent CHOC at monthly Prop 10 Commission meetings (to allocate funding for community health care, quality child care and education programs for young children and families) and maintain regular communication with Prop 10 staff.
A	CHILDREN'S HEALTH INITIATIVE - ORANGE COUNTY	Serve as a board member for CHI-OC, whose mission is to provide government funded insurance for all children in Orange County.

Community Health Needs Assessment FY 2011 Supplement Appendix A

A	CHILDREN'S HOSPITAL ASSOCIATION	Actively participate in government relations and advocacy projects and programs of the Children's Hospital Association.
A,B	CHOC CLINIC - GARDEN GROVE	Community-based clinic and outreach services that respond to the health care needs of high-risk and disadvantaged populations.
O	CHOC EDUCATION CENTER	Donation of CHOC Education center for community organization meetings, classes and support groups.
B,D	CHOC FISHING TRIP TO IRVINE LAKE	Fishing trip for CHOC patients and families to encourage socialization in a non-hospital setting.
A,B	CHOC NURSE ADVISE (KIDWISE)	24-hour bilingual information phone line providing health information, advice, triage, community services referrals and physician referrals.
A	CHOC RESIDENCY PROGRAM ADVOCACY ROTATION	Provide advocacy training and experience to pediatricians-in-training to prepare them to help influence public policy to support the health care needs of children in the community.
A,B	CLINICA CHOC PARA LOS NINOS	Community-based clinic and outreach services that respond to the health care needs of high-risk and disadvantaged populations.
O	CLINICAL EDUCATION FOR NEURODIAGNOSTICS	Clinical education for EEG students.
O	COMMUNITY BENEFIT PLAN - PREPARATION	Delineate and quantify community benefits outreach provided in response to SB 697.
A,B	COMMUNITY COMMITTEE HOURS: COMMUNITY EDUCATION	Provide representation and advocacy for children's health and safety issues at vital coalition meetings at local, state and national levels.
A,B	COMMUNITY OUTREACH AND EDUCATION	Provide educational curriculum and outreach services to children and families, schools and health care agency providers to enhance community awareness, identification and treatment of asthma and Chronic Lung Disease.
A	COMMUNITY OUTREACH HEALTH FAIRS	Participation in health fairs; community events.
A,B	COSTA MESA CLINIC	Primary care clinic serving children 0-18 years of age.
O	DISASTER RELIEF PREPAREDNESS	Help with drugs and supplies when disaster happens.
O	DONATED EQUIPMENT TO ORANGE COAST COLLEGE	Donate equipment to Orange Coast College to educate allied health students in respiratory training.
O	EDUCATION EVENTS SPONSORED BY THE CHOC INSTITUTES	Provide primary care physicians and clinicians with education regarding the evaluation, management and treatment of pediatric illnesses and disorders. Lecture program topics included adolescent sports injuries, scoliosis, emergency medicine, respiratory obstruction in pediatric patients, disease specific presentations and updates on pediatric vaccines.
O	EDUCATION FOR PROVIDERS	Clinical observation of developmental evaluations by students and fellows in all disciplines of health care.

Community Health Needs Assessment FY 2011 Supplement Appendix A

A	ELECTRONEURODIAGNOSTIC TESTING/MONITORING	Service providing electroneurodiagnostic testing and monitoring, GI motility and urodynamics.
A,G	GERM BUSTERS/NUTRITION/MEDIA PROGRAMS	In-school programs teaching preschool and school age children awareness related to strangers and personal safety/hygiene and infection prevention/good food choices and food groups.
O	HEALTH PROFESSIONAL EDUCATION - DIETARY	Affiliations with CSULB and Cal Poly, Pomona plus 1-2 other Dietetic internships to offer undergraduate training for clinical dietitians students.
O	HEALTH PROFESSIONAL EDUCATION - PHARMACY	Provide pediatric pharmacy practice and pharmacology education to physicians and pharmacy students.
O	HEART REUNION	Event for patients and families who had heart surgery at CHOC.
A	HOSPITAL ASSOCIATION OF SOUTHERN CALIFORNIA	Participation in Hospital Association of Southern California Executive and Planning Committee meetings, which advocates for legislation to improve access to health services and to mental health services. It also works on preparations for natural disasters.
B,D,F,G	KIDSHEALTH NEWSLETTER	Monthly e-newsletter distributed to subscribers in the community that provides information on parenting, wellness, special events and programs.
B,D,F,G	KIDS HEALTH CLINICAL ONLINE REFERENCE SYSTEM	Web based tool offering more than 1100 pediatric health and wellness topics for the community.
A	LATINO HEALTH ACCESS BOARD OF DIRECTORS	The mission of Latino Health Access is to assist in improving the quality of life and health of uninsured, underserved people through quality preventive services and educational programs.
O	LIFE REMEMBRANCE	Annual event for all CHOC Mission families who have lost a child or baby.
D	MENTAL HEALTH SCREENING	Behavioral health screening in ED and CCS, team centered care clinics and adolescent medicine clinic.
F	NUTRITION EDUCATION FOR THE COMMUNITY	Provide necessary nutrition education to children and their families in the community. Emphasis has been on general health eating and obesity prevention. However, presentations targeted for patients dealing with certain diagnoses such as diabetes or epilepsy have also been conducted. Another area of focus has been proper nutrition for the student athlete.
O	ONCOFERTILITY GIRLS ACADEMY	Participation in the BEWISE (Better Education for Women in Science and Engineering) a program for high school girls to explore the basic science, clinical applications and career options in reproductive science, cancer biology and oncofertility.
A	ORANGE CHAMBER OF COMMERCE PARTICIPATION	Participate on Legislative Action and Government Affairs committees of the Orange Chamber of Commerce.

Community Health Needs Assessment FY 2011 Supplement Appendix A

O	ORANGE COUNTY BUSINESS COUNCIL (OCBC)	Participate at meetings and events of the Orange County Business Council to promote well-being of OC residents.
G	ORANGE COUNTY DEPT. OF EDUCATION MEDICAL OFFICER SEARCH	Serve on the committee to select new Medical Officer for the OC Dept of Education. The goal is to advance student wellness and in doing so, support the OCDE goal of ensuring a world class education where every student succeeds.
O	ORANGE COUNTY FORUM BOARD MEETINGS	Mission to exchange ideas and to provide members an opportunity to interact directly with international and national decision makers, helping shape the political, cultural, social and economic trends of the future. Also provides opportunity to better understand critical issues from the people who are making critical choices.
O	ORANGE COUNTY FOUNDATION FOR MEDICAL CARE	CFO participation with the Orange County Foundation for Medical Care, a not-for-profit entity associated with the Orange County Medical Association.
O	ORANGE COUNTY HEALTHCARE NEEDS ASSESSMENT	Collaborative county-wide effort to comprehensively assess healthcare needs and behavioral risks for all Orange County residents as part of SB 697's three-year assessment requirements.
O	ORANGE COUNTY MEDICAL ASSOC/CALIF MED ASSOC.	Leadership participation in the Orange County Medical Association and California Medical Association to promote the science and art of medicine, the care and well-being of patients, the protection of the public health, and the improvement of the medical profession.
O	ORANGE COUNTY RONALD MCDONALD HOUSE PLANNING MEETINGS	Participate in planning meetings for the Orange County Ronald McDonald House.
B	ORANGE COUNTY SAFE KIDS AND PROMOTION	Coalition focusing on grass roots efforts and collaboration of injury prevention efforts in Orange County following the National SAFE KIDS guidelines.
A,B	ORANGE PRIMARY CLINIC	Community-based clinic and outreach services that respond to the health care needs of high-risk and disadvantaged populations.
B	PACEMAKERS IN CHILDREN AND YOUNG ADULTS ANNUAL REUNION	Annual reunion among Pacemakers/ICD patients to express their experience and ask questions in regards to the device.
B	PARENTING CLASSES AND WORKSHOPS	Provide parents with the tools and tips for raising healthy children.
O	PEDIATRIC RN TRAINING PROGRAM	20 week RN Residency provides hands-on experience in pediatrics for RNs from a variety of local universities and colleges.
A,B	PHARMACEUTICAL INDIGENT PROGRAM	To provide medications to patients who cannot afford them.
B	PHARMACY EDUCATION TO PATIENTS AND FAMILIES	Pharmacy education to patients and families in the community.

Community Health Needs Assessment FY 2011 Supplement Appendix A

O	RESIDENT EDUCATION PROGRAM	Residency Education Program providing pediatric medical specialty education across the continuum of care.
O	RESPIRATORY THERAPY STUDENT EDUCATION	Respiratory Therapy Students rotate thru CHOC to gain basic understanding required to care for Neonatal and Pediatric patients. Also, supplement the bedside clinical education provided to Nursing Students by the staff RN.
B	SAFE SITTER	A medically accurate instruction series teaching boys and girls ages 11-13 how to handle emergencies when caring for young children, including basic lifestyle techniques, safety precautions to prevent accidents, and tips on basic child care.
A,B	BOYS AND GIRLS CLUB OF SANTA ANA CLINIC	Healthcare services provided to the economically disadvantaged.
O	SCA IN CHILDREN CONFERENCE	The Sudden Cardiac Arrest in Children and Adolescents Conference is a biennial CHOC-based community, national and international scientific meeting for physicians and medical trainees regarding the current evidence-base for screening, treatment and prevention of sudden cardiac arrest due to cardiac and non-cardiac conditions, many of which are identifiable and treatable through adequate screening and available therapeutics. The 2011 meeting was the inaugural scientific session for this Conference and was attended by physicians locally, nationally and internationally.
O	SCAN COMMITTEE	Review and Evaluate suspected child abuse cases, share information about prevention and available community resources.
G	SCHOOL REINTEGRATION	Program to help the medically fragile re-enter the regular school program.
A	SOCIAL SERVICES	Counseling, screening and advocacy to obtain medical care and other support resources for patients/families; psychosocial assessments for patient/family functioning; patient/parent support groups; crisis intervention; coordination.
F	SPECIAL CHILDREN'S DAY	Offer outdoor activities to children with special needs who otherwise not have the opportunity to participate.
B	SPOT A SPOT - SKIN CANCER AWARENESS	Spot a Spot Program is a community education program for middle, high school and college students, taught by volunteer medical school students at the school site and at health fairs.
B,D,E,F	STAYWELL HEALTH INFORMATION ONLINE LIBRARY	Web based tool offering health care topics to patients, families and the community.

Community Health Needs Assessment FY 2011 Supplement Appendix A

O	STUDENT RELATIONS PROGRAM	Program designed to meet our community's and CHOC's need for future healthcare providers by promoting student clinical placements in the following disciplines: registered nurses, licensed vocational nurses, physical therapists, respiratory care practitioners, radiology technology, dietary, occupational therapy, speech therapy, nursing assistants and medical/clerical.
B	TEEN DRIVING SAFETY	Provide education on distracted driving to teens in waiting room of Ambulatory Care Clinic and at community health events. Includes a Safety Tip sheet, Parent/Teen passenger Agreement, interactive demonstration and social media messages.
O	UNIVERSITY OF CALIFORNIA, IRVINE ADMISSIONS COMMITTEE	Participation in review of applications for University of California, Irvine School of Medicine.
O	UNIVERSITY OF CALIFORNIA, IRVINE SCHOOL OF BIOLOGICAL SCIENCES MENTORING PROGRAM	Program provides mentoring for undergrad students in the School of Biological Sciences who are interested in healthcare careers including public health.
O	UNFUNDED BASIC AND CLINICAL RESEARCH	Various basic science and pediatric clinical research projects not funded by outside grants or donations. Research areas include Oncology, Neurology, Hematology, Stem Cell and Biomedical Optics as performed by CHOC Research faculty.
O	UNREIMBURSED CLINICAL RESEARCH	The Pharmacy Department provides support to 7 under-funded research studies in FY09. The Department develops dispensing protocols and procedures, dispense investigational agents, maintain inventory of investigational agents and assist in other aspects of investigational drug protocols.
A	UNREIMBURSED COSTS OF MEDI-CAL/CCS/CALOPTIMA	Unreimbursed cost of care for Medi-Cal, CCS and CalOPTIMA recipients.
B,G	WATER SAFETY	Multi-segmented program for pre-schoolers, children, parents, care givers, grandparents, health care professionals, and the community to increase awareness of the risks of drowning and the action steps to be taken to prevent drowning.

Community Health Needs Assessment FY 2011 Supplement
Appendix B
Collaborators by Type

Businesses

Active Parenting Publishers
AllState Insurance Company
American Health Journal
Irvine Lake
Public Broadcasting Service (PBS)
State Farm Insurance

Community Organizations

American Heart Association
Bass Clubs of Southern California
Boys & Girls Club of Garden Grove
Boys & Girls Club of Santa Ana
California Children Services
California Children's Hospital Association
California Council for Excellence
California Medical Association
Child Abuse Prevention Council of Orange County
Child Abuse Services Team
Child Passenger Safety Task Force
Children and Families Commission of Orange County
Children's Health Initiative - Orange County
Children's Hospital Association
Coalition of Orange County Community Health Centers
Drowning Prevention Network
Family Violence Project
Health Options
Hospital Association of Southern California
John Wayne Cancer Foundation
Latino Health Access
Leukemia and Lymphoma Society
Maternal Outreach Management Services (MOMS)
National Drowning Prevention Network
Orange County Business Council
Orange County Chamber of Commerce
Orange County Child Abuse Prevention Center

Community Health Needs Assessment FY 2011 Supplement
Appendix B
Collaborators by Type

Community Organizations (continued)

Orange County Forum
Orange County Health Needs Assessment
Orange County Medical Association
Orange County Safe Kids
Partners for Health Committee
Ronald McDonald House Charities of Southern California
Safe from the Start
Safe Kids Orange County
San Diego Science Alliance
Second Harvest Food Bank
Suspected Child Abuse & Neglect Committee (SCAN)
Violence Prevention Coalition of Orange County

Educational Institutions

Anaheim City School District
Azusa Pacific University
Biola University
Brandman University
California State Polytechnic University, Pomona
California State University, Dominguez Hills
California State University, Fullerton
California State University, Long Beach
Centralia School District
Chapman University
Cypress College
Garden Grove Unified School District
Gates School
Golden West College
Irvine Unified School District
La Verne University, Volunteer Services Dept.
Los Angeles City College
Magnolia School District
Mount Saint Mary's College
Mt. San Antonio Community College

Community Health Needs Assessment FY 2011 Supplement
Appendix B
Collaborators by Type

Educational Institutions (continued)

Newbridge College
Orange Coast College
Pio Pico Elementary School
Rea School
Saddleback College
Saddleback Valley School District
San Joaquin Valley College School of Respiratory Therapy
San Juan School
Santa Ana College
Santa Ana Unified School District
University of California, Irvine School of Biological Sciences
University of California, Irvine School of Medicine
University of California, Irvine
University of California, Los Angeles
University of Iowa
Veeh School

Other Healthcare Providers

American Academy of Pediatrics
CalOPTIMA
Children's Center at Sutter Medical Center, Sacramento
Children's Hospital & Research Center at Oakland
Children's Hospital Central California
Children's Hospital Los Angeles
College Hospital PET Team
Garden Grove Hospital
Health Dimension, Inc.

Community Health Needs Assessment FY 2011 Supplement
Appendix B
Collaborators by Type

Other Healthcare Providers (continued)

Healthy Smiles For Kids of Orange County
Hoag Memorial Hospital Presbyterian
Loma Linda University Children's Hospital
Loma Linda University Medical Center
Lucile Salter Packard Children's Hospital at Stanford
Mattel Children's Hospital at UCLA
Miller's Children's Hospital
Orange County Foundation For Medical Care
Orange County Heart Institute
Presbyterian Intercommunity Hospital
Rady Children's Hospital San Diego
San Antonio Community Hospital
Seattle Children's Hospital
St. Joseph Health System
Texas Children's Hospital
University of California, Irvine Medical Center
University of California, Davis Children's Hospital
University of California, San Diego Children's Hospital
University of California, San Francisco Children's Hospital

Public Sector Agencies

Children and Youth Services (CYS) Clinics
Consumer Product Safety Commission
Department of Social Services
Irvine Police Department
National Institute of Allergy & Infectious Diseases (NIAID)
National Institute of Child Health & Human Development ((NICHD)
National Institutes of Health/Collaborative Antiviral Study Group (NIH/CASG)
Orange County Child Passenger Safety Task Force
Orange County Department Education Bell Campaign
Orange County Department of Education
Orange County Department of Education School Nurses Program
Orange County District Attorney's Office
Orange County Fire Association

Community Health Needs Assessment FY 2011 Supplement
Appendix B
Collaborators by Type

Public Sector Agencies (continued)

Orange County Health Care Agency
Orange County Mental Health Agencies
Orange County Sheriff's Department
Orange County Social Services Agency
Orange Police Department
Regional Center of Orange County