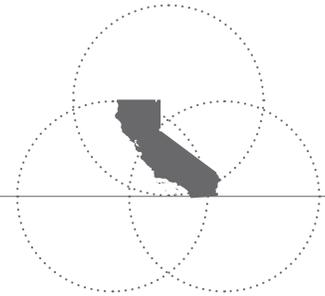


ORAL HEALTH & OBESITY POLICY BRIEF

CHILDHOOD OBESITY & DENTAL DISEASE: COMMON CAUSES, COMMON SOLUTIONS



FEBRUARY 2011



Too many California children suffer from high rates of preventable chronic conditions associated with childhood obesity and dental disease. The state is experiencing a crisis in both areas: 17% of children, ages 2-17, or over 1.6 million children, are overweight or obese¹; approximately two-thirds, or 6.3 million children, suffer needlessly from poor oral health conditions, such as tooth decay and abscesses, by the time they reach third grade.²

Fortunately, common factors that contribute to both conditions—including the rates of breastfeeding, access to healthy food and the consumption of sugar-sweetened beverages—can be addressed more effectively in order to reduce the prevalence of both childhood obesity and dental disease. Promising interventions at the state and local levels can be built upon to address these conditions. At the federal level, the Patient Protection and Affordable Care Act (ACA) and First Lady Michelle Obama's "Let's Move" campaign present timely opportunities to address both childhood obesity and dental disease.

This policy brief covers the intersections of childhood obesity and dental disease, and offers solutions that can promote the prevention of both. These conditions are not only costly to the children affected, but to the State as well. California has opportunities to promote prevention of these conditions by focusing on the common solutions associated with childhood obesity and dental disease. By improving coordination of existing services that currently treat each condition in isolation, the State could save money and more efficiently improve the overall health of children.

BACKGROUND

Childhood Obesity is an Epidemic in California

California is not alone in dealing with this crisis. Several states are also working to ensure that today's generation of children does not become the first in modern history to live shorter lives than their parents—by as much as five years.³

The consequences of childhood obesity to children's health are grave. Overweight children are more likely to suffer from a range of chronic health problems, such as cardiovascular disease, high blood pressure, diabetes, sleep apnea and asthma; they are also more likely to be obese as adults.^{4,5} Children's mental and emotional health also suffers with obesity. Children who are overweight or obese are often stigmatized by their peers, which can increase the likelihood of poor self-esteem, depression and the risk of social discrimination.

The societal costs of obesity are staggering. One study estimates the annual cost to California families, employers, health care industry and government is \$41.2 billion.⁶ It also determined that if the State were to reduce each risk factor associated with obesity by five percent a year, California could save nearly \$2.4 billion.⁷ In addition to financial costs, a report by retired military leaders finds that at least nine million 17- to 24-year-olds are too overweight to serve in the U.S. military.⁸

ONE STUDY
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California Children's Oral Health Is Among the Worst in the Nation

California ranks among the bottom three states in the nation on children's oral health status, besting only Arizona and Texas.⁹ If they are not provided treatment, the 6.3 million children with poor oral health conditions can suffer from pain, infection, nutritional problems due to difficulties eating, tooth loss, sleep deprivation and slower social development, as a direct result.¹⁰ In 2007, over 500,000 California children reported missing at least one school day as a result of oral health problems, which impacts children's ability to thrive in school.¹¹ Since school districts receive revenue based on student attendance, absences due to dental problems resulted in a loss of approximately \$29.7 million in the 2007-08 school year.¹²

Furthermore, poor oral health in childhood lays the foundation for poor adult oral health and other health problems.¹³ Poor oral health is linked to cardiovascular disease, diabetes and premature births. Left untreated, childhood dental health problems may lead to serious and expensive chronic issues for adults.

Funding childhood oral health prevention measures is a sound investment: investing in effective prevention measures can create significant savings in future expenses related to untreated dental disease. For every dollar spent on preventive dental services for children, \$8 to \$50 is saved in restorative and emergency treatments later in life.¹⁴ For example, a comprehensive oral exam averages \$60 in a dentist's office compared to \$172 for an emergency room visit or \$5,044 for hospitalization.¹⁵

COMMON RISK FACTORS FOR OBESITY AND DENTAL DISEASE

Obesity and dental caries share contributing factors, which more often than not are related to environmental factors where children live.

Lack of Breastfeeding

Healthy eating practices start early. Advocates addressing childhood obesity have long called for policies to promote breastfeeding by educating new mothers and making it easier for mothers returning to work to provide breast milk for their children. The benefits of breastfeeding can also be applied toward improved oral health. For younger children, poor infant feeding practices, such as feeding juice in a bottle at bedtime, are associated with more dental caries.¹⁶ Although breast milk itself does not mitigate the occurrence of dental caries, breastfeeding can reduce dental caries as it replaces the consumption of juices and other sugary drinks.¹⁷

Lack of Access to Healthy Foods

Healthy eating helps promote better overall nutrition, which is important in combating obesity and improving oral health. Children with poor dietary habits are more at-risk of becoming overweight or obese and experiencing dental caries in their primary teeth. Children who fail to eat breakfast regularly or who lack sufficient fruits and vegetables have more dental caries.¹⁸

Water is an often-overlooked, yet critical resource to address the risks of obesity and dental disease. Too many school cafeterias in California have inoperable water fountains; in many communities, the water supply lacks fluoride, an effective, safe, and inexpensive way to prevent tooth decay. With the recent passage of SB 1413 (Leno), schools will be required to make free, fresh drinking water available to students during school meals.

The Role of Sugar-Sweetened Beverages

Sweetened beverages, such as soda, provide an overwhelming source of sugar and calories in many children's diets. Children's consumption of sodas, fruit drinks, sports drinks and fruit juices have increased, putting them at risk of becoming obese and getting cavities. The most important contributing factor in the promotion of dental caries is sugar consumption, particularly sucrose.¹⁹

Impact on Children from Low-Income Communities

Children's economic status also contributes to these preventable conditions. Childhood obesity disproportionately affects children from low-income communities, where fresh fruits and vegetables are expensive, scarce, or both. California children who participate in the Free

FIVE RECOMMENDATIONS THAT ADDRESS CHILDHOOD OBESITY AND DENTAL DISEASE

1

Start Early: Since schools are structurally unable to target children from birth to age five—when many unhealthy behaviors and negative health consequences take root—it is critical to connect successful K-12 programs with local child care and early learning centers to achieve continuity in prevention messages and screening efforts. Efforts to promote breastfeeding and improve access to free, fluoridated water and healthy foods can also help establish better eating habits.

2

Use A “Whole Child” Approach: In order to successfully decrease the prevalence of childhood obesity and poor oral health in California’s children, solutions that address the needs of the whole child including prevention, education, and community-based wellness efforts are key.

3

Improve, Coordinate and Fund Best Practice Interventions: There are many programs and policies that effectively address childhood obesity and dental disease, but because approaches are often fragmented and not coordinated to address both conditions, these strategies are not large enough to impact statewide rates of disease. California must look for opportunities to build on or redesign successful components of past programs, fund current programs and invest in new intervention strategies that provide proven solutions. Examples of proven solutions include the California Children’s Dental Disease Prevention Program; Women, Infants and Children’s (WIC) Early Intervention for Oral Health Program; and school-based health centers.

4

Leverage Federal Opportunities: The ACA includes provisions to improve childhood obesity and children’s oral health, and First Lady Michelle Obama’s “Let’s Move!” Campaign continues to build momentum for and awareness of the childhood obesity epidemic. Both create potential opportunities for improvements at the state level. In order to take advantage of many of the new provisions, however, adequate federal implementation funding is needed. California’s leaders should push for significant federal funding for prevention and public health, and ensure that the State leverages available federal grant and policy opportunities.

5

Create Disincentives for Unhealthy Foods and Beverages: In addition to continuing to remove unhealthy food and beverage options from schools, the California legislature should enact a sweetened beverage tax through legislation or a ballot initiative. Revenue from the tax would be used to fund prevention activities. Stakeholders should increase public awareness about the contribution of sweetened beverages to childhood obesity and dental disease.

and Reduced Lunch Program have a higher prevalence of decay than children who do not participate in the program (72% vs. 52%).²⁰ A 2007 Iowa study found that children with dental caries come from families with lower incomes and less-educated fathers; they also consume more soda than children without caries.²¹ Low-income children are at higher risk of suffering from dental disease. Another study finds that increased consumption of sugar-sweetened beverages, candy, chips and cookies not only provides excessive calories for children, but also increases their risk of getting caries. When combined with inadequate intake of fruits and vegetables, these children are deprived of nutrients essential to their growth and development.²²

Being at Risk for One Condition May Put Children at Risk for Both

A New York study finds that preschool children with tooth decay are more likely to be overweight or obese than their peers; regardless of weight, children with dental disease are more likely to consume too many calories.²³ A French study finds a significant link between body mass index and the number of decayed, missing and filled teeth among adolescents.²⁴ If resources are dedicated to preventing risk factors that childhood obesity and poor oral health have in common, the status of children's health could improve considerably.

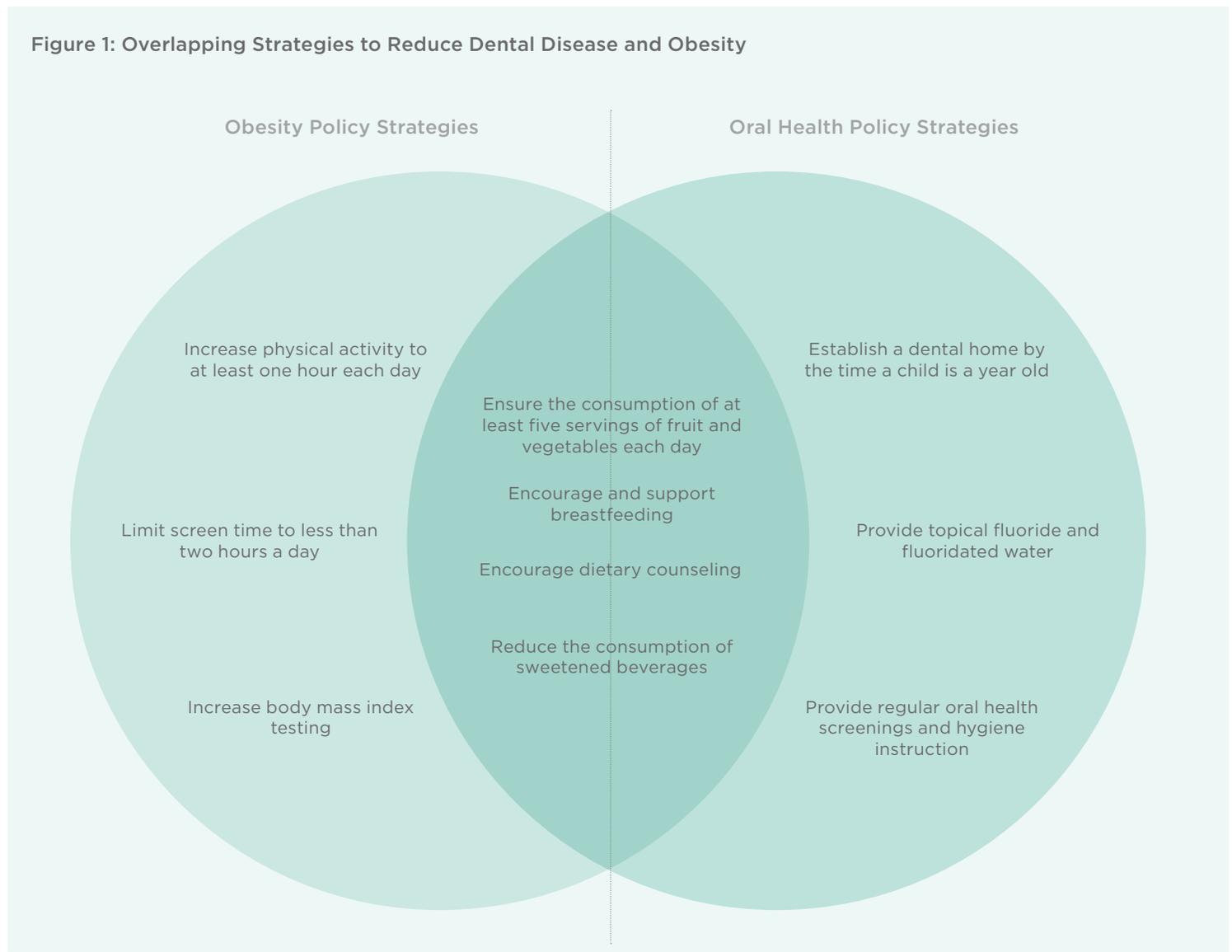
OVERLAPPING STRATEGIES TO REDUCE DENTAL DISEASE AND OBESITY

The American Academy of Pediatrics, American Academy of Pediatric Dentistry, Centers for Disease Control and Prevention, and other authorities have identified separate sets of key policy priorities for reducing childhood obesity and dental disease.²⁵ There is remarkable overlap, specifically in how both conditions can benefit from policies that:

- Ensure consumption of five fruits and vegetables per day;
- Encourage and support breastfeeding;
- Encourage dietary counseling by appropriate health care providers;
- Reduce consumption of sweetened beverages.

Other efforts that could impact the two conditions exist, but these four policies offer a useful framework for prioritizing current and emerging interventions (Figure 1). (For more examples of promising interventions to help mitigate childhood obesity and dental disease in California, please see Appendix, pp. 6-9.)

Figure 1: Overlapping Strategies to Reduce Dental Disease and Obesity



DEVELOPMENTS AT THE NATIONAL LEVEL MAY HELP CALIFORNIA HELP ITSELF

California can boost its support for children's public health prevention by taking advantage of recent developments at the national level. The ACA and First Lady Michelle Obama's "Let's Move!" campaign provide opportunities to help prevent childhood obesity and dental disease.

Public Health Provisions and Funding in the Affordable Care Act (ACA)

Signed on March 23, 2010, the ACA focuses on increasing health coverage opportunities and protections. The Act also includes important public health and prevention funding and policies that can be used to address childhood obesity and children's oral health,²⁶ including:

National Prevention, Health Promotion and Public Health Council to coordinate federal wellness and prevention activities and devise a national strategy to improve the nation's overall health.²⁷

Grants for School-based Health Centers and inclusion of oral health services in the list of qualified services to be provided at those centers. The ACA provides \$200 million in competitive federal funding over the next four years to improve school-based health center facilities and to purchase equipment, including dental equipment. Such an investment is a key opportunity to increase student access to oral health services.²⁸

Grants for Community Prevention Task Forces to implement and evaluate evidence-based community preventive activities, of which childhood obesity will be a primary focus.²⁹ The Centers for Disease Control and Prevention is authorized to award grants to state and local governments (and community-based organizations) to implement community transformation plans. Proposals submitted should include necessary changes to policy, environment and infrastructure that will promote healthy living and reduce disparities. Activities in the plan could include the following:³⁰

- Create healthier school environments, including increasing healthy food options, physical activity opportunities, promotion of healthy lifestyle, emotional wellness, prevention curricula and activities to prevent chronic diseases;
- Create infrastructure to support active living and access to nutritious foods;
- Develop and promote programs that target a variety of age levels to increase access to nutrition and physical activity or address any other identified chronic disease priority;
- Prioritize strategies to reduce ethnic/racial disparities, including social, economic and geographic determinants of health;
- Address special populations' needs, including all age groups and individuals with disabilities, and residents in urban and rural areas.

Assembly Bill 70 (Monning) would require the California Health and Human Services Agency to apply for a community transformation grant, as well as a federal grant through the Healthy, Hunger-Free Kids Act of 2010 to support the provision of school lunches, breakfasts and summer meals, and improve the quality and availability of healthful food in underserved communities.

Workforce Development for training of general, pediatric and public health dentists, with \$30 million for fiscal year 2010 to help train oral health providers.

Public Education Campaign to promote oral health, including a focus on early childhood caries, prevention, oral health of pregnant women and oral health of at-risk populations.

Any of these policies could be a gateway to address childhood obesity and oral health together. Unfortunately, Congress failed to provide adequate funding for many of these provisions this year, and advocacy efforts are needed to increase appropriations for these public health and prevention provisions in order to fulfill the promise of the ACA.

"LET'S MOVE!" AIMS TO SOLVE THE CHILDHOOD OBESITY EPIDEMIC WITHIN ONE GENERATION.

The "Let's Move!" Campaign

Launched in February 2010, First Lady Michelle Obama's "Let's Move!" nationwide campaign aims to solve the childhood obesity epidemic within one generation. As part of this campaign, President Obama signed an Executive Order creating the first federal Task Force on Childhood Obesity, which is conducting a comprehensive review of every federal program and policy that relates to childhood physical activity and nutrition, in order to develop a national strategy.

"Let's Move!" has identified four primary areas for national efforts to reduce childhood overweight and obesity: (1) empowering parents and caregivers, (2) creating healthier schools, (3) increasing physical activity and (4) improving access to healthier, affordable food.³¹ These efforts span every sector and include several policy and legislative recommendations that intersect with children's oral health, such as early care and education, the promotion of breastfeeding, and better access to healthy foods.

CONCLUSION

Children in California suffer needlessly from high rates of preventable chronic conditions associated with childhood obesity and dental disease. By focusing on the common risk factors of both conditions—i.e., working to increase breastfeeding rates, improving children's access to healthy food options and decreasing consumption of sugar-sweetened beverages—rates of childhood obesity and dental disease can decrease dramatically. Programs at the local and state levels that address these common factors for one condition can be better coordinated to address both. In doing so, prevention efforts will be more effective and efficient. Not only will this enable California to promote better health for its children, it will also help to provide significant long-term cost-savings to the State.

APPENDIX: PROMISING INTERVENTIONS ADDRESS BOTH ISSUES

The significant common factors that contribute to childhood obesity and poor oral health provide possible opportunities for intervention and prevention.

California has several program and policy interventions that target each condition separately that could be better aligned to address both, in order to more efficiently bring down the rates of childhood obesity and children with dental caries. With improved coordination and funding of these existing programs, as well as an active willingness to take advantage of provisions of the ACA, California has the opportunity to make significant gains to improve the health status of its children.

The following are some examples of the most promising approaches. They are divided into four types: school-based, state and county public health, community-based, and state policy.

School-Based Interventions Are Easy to Access and Can Reach All School-Age Children

Intervention	Program/Policy Description
<p>School Meal Programs</p> <p>California can reduce childhood obesity and dental disease by increasing the nutritional value and participation rates for school breakfast and lunch programs.</p>	<ul style="list-style-type: none"> • Over 1.2 million California students qualify for free or reduced-price school meals, but fewer than half of eligible children participate.³² • The federal Child Nutrition Act, the major law determining school food policy and resources was reauthorized in 2010. This will ensure that the more than two million children in California who experience food insecurity have access to healthy meals. It also establishes standards for all foods sold outside the school meal programs, on school grounds and at anytime during the school day.
<p>School Nurses</p> <p>Most school nurses are mandated to comply with requirements for vision and hearing screenings, mental health services, immunizations, and to provide asthmatic students inhalers and diabetic students insulin and blood glucose monitoring. If there were more school nurses in the system, they could potentially add screening for obesity and dental disease to their scope of work.</p>	<ul style="list-style-type: none"> • Approximately half of all California school districts have no school nurses.³³ • On average, there is one nurse for every 2,155 students in California, ranking the state 45th in the nation in nursing levels with numbers far below the recommended ratio of one nurse per 250 students.³⁴
<p>School Health Centers</p> <p>Increasing the number and health prevention scope of school health centers would help combat obesity and dental disease. Funding streams, such as Medi-Cal Administrative Activities Funds, can help sustain some services and providers.</p>	<ul style="list-style-type: none"> • Approximately 153 school-based health centers operate in California schools. • Fifteen health centers provide some form of dental treatment service to students, and many others provide preventive oral health education and assessment services. Similarly, services for childhood obesity screening and prevention vary from site to site. • One model site in Stockton integrates childhood obesity prevention efforts (such as nutritional counseling and body mass index screening) with other school programs.³⁵
<p>School Data Systems</p> <p>State-level monitoring and referral services for obesity, dental disease and other conditions could be aided by the California Longitudinal Pupil Achievement Program (CALPADS), the state's new data system.</p>	<ul style="list-style-type: none"> • The data system is structured to track student demographics, course data and other data for state and federal reporting; adding chronic illnesses may help monitor the prevalence of these conditions. • School health centers often lack access to student data systems, which could be helpful in measuring need for services, so it will be critical to address this barrier to coordination.³⁶

State and County Public Health Agencies Can Coordinate Across Sectors

State/County Public Health Program

Program/Policy Description

The California Physical Activity, Nutrition, and Obesity Prevention Collaborative (CPANOP) and the California Obesity Prevention Plan (COPP)

Primary goals, which include healthy eating, are immediately relevant to improving dental disease, and efforts to implement statewide tracking could be employed to evaluate impact of grants to create healthier environments.

- The California legislature mandated that the California Department of Public Health create the COPP in 2005 to respond to the obesity crisis in California. This plan was developed in concert with Gov. Schwarzenegger's 2005 Summit on Health, Nutrition, and Obesity, and it identifies four primary goals:
 - » Ensure state level leadership and coordination that reaches into communities across the state;
 - » Create a statewide public education campaign that frames healthy eating and active living as "California living";
 - » Support local assistance grants and implement multi-sector policy strategies to create healthy eating and active living community environments;
 - » Create and implement a statewide tracking and evaluation system.³⁷
- CPANOP is managed by California Project LEAN, a joint collaborative between California Department of Public Health and Public Health Institute, and funded by a grant from the Centers for Disease Control and Prevention.

Department of Public Health - Maternal, Child, and Adolescent Health Program (MCAH)

California's MCAH program coordinates the dissemination of information and resources to local county public health departments to promote healthy living for mothers, children and adolescents. These programs could provide crucial information about the importance of breastfeeding and healthy eating to expectant mothers and possibly link them to necessary social services (such as the Women, Infants and Children program).

- About one-third of county MCAH programs address oral health directly.³⁸
- Recent budget cuts have limited the reach of MCAH programs; however, they are potentially powerful sites for the coordination of obesity and dental disease prevention efforts.

Community-Based Interventions Can Address Unique Local Needs

Community-Based Intervention	Program/Policy Description
<p>Place-Based Initiatives</p> <p>The California Endowment and other foundations have funded local communities to address health disparities. Initiatives such as Healthy Eating, Active Communities, the Central California Regional Obesity Prevention Program and Building Healthy Communities bring together community leaders, concerned citizens, local elected officials, county health departments and others to address relevant factors impeding health in their cities and counties comprehensively. These initiatives present opportunities for local communities to align services that address childhood obesity and dental disease.</p>	<ul style="list-style-type: none"> • Since collaboratives are responsive to the unique needs of the communities in which they serve, many have developed innovative approaches to obesity prevention. • Activities have included working with schools to implement wellness policies, working with community planning agencies to limit fast-food expansion, and improving physical activity spaces at parks and school yards.³⁹ • Although oral health prevention measures have not been explicitly considered in the early collaborative activities, efforts to do so are in progress.
<p>First 5 County Commissions</p> <p>The California Children and Families Commission, otherwise known as First 5 California, was created in 1998 with the passage of Proposition 10.⁴⁰ As quasi-governmental county commissions, funding decisions are made locally. Subsequently, specific funding targets vary, although each county is dedicated to improving the lives of California's young children and families through education, health, childcare and other services.⁴¹ Opportunities to engage families and young children early, as healthy habits are being established, is a key strategy to preventing childhood obesity and dental disease.</p>	<ul style="list-style-type: none"> • First 5 California is one of the biggest funders of oral health services in the state, tailored to local needs.⁴² For example, Orange County built a dental clinic and implemented a loan forgiveness program for dentists choosing to remain in the county. San Francisco County implemented a program to train dentists in administering anesthesia during pediatric care and other best practices for working with children. And Sacramento County invested in water fluoridation to reduce the rates of dental caries among children.⁴³ • First 5 Commissions have also filled in funding gaps created by state budget cuts, most recently when many of them worked with school districts to provide replacement services affected by the suspension of California Children's Dental Disease Prevention Program funding.⁴⁴
<p>Community Clinics and Health Centers</p> <p>Increased funding for clinics and health centers and better reimbursement for prevention services would enable clinics to provide continual, comprehensive care to address chronic conditions, such as obesity and dental disease.</p>	<ul style="list-style-type: none"> • California has over 800 community clinics and health centers. They typically serve low-income, underserved and uninsured individuals who might not otherwise have access to health care services. • Clinics often serve as community resource centers, offering services such as parenting classes, children's oral health assessments and access to healthier food options. Some clinics also provide case management for chronically ill patients.⁴⁵
<p>WIC Oral Health Collaboratives</p> <p>The federally-funded, state-supplemented Women, Infants and Children program provides nutrition counseling, health care referral services and vouchers for healthy food options to pregnant women, new parents, and their children, which is relevant to combating obesity and dental disease. Women, Infants and Children sites are starting to promote the early establishment of a dental home, a critical step to protecting children's oral health and for which early evaluations suggest success for these program interventions.</p>	<ul style="list-style-type: none"> • In California, 60% of all newborns are eligible for WIC.⁴⁶ The nutrition and obesity prevention messages naturally dovetail with oral health promotion. • In 13 counties throughout California, Women, Infants and Children sites have recently introduced a "Dental Days" program in collaboration with local dental providers and with technical assistance from the Center for Oral Health. These programs provide a dental assessment and preventive services (such as fluoride varnish) for infants and their older siblings, as well as educational sessions for parents.⁴⁷ Clients are then referred to a local dentist for follow-up care.⁴⁸
<p>Pilot Obesity Interventions in Dental Settings</p> <p>Since dental providers often already educate parents and children about the impact of food choices, several pilots are investigating the practicality and effect of body mass index screening and other obesity interventions in dental offices.</p>	<ul style="list-style-type: none"> • Practitioners at Rady Children's Hospital in San Diego have developed an obesity intervention training module for dentists.⁴⁹ • The Forsyth Institute in Boston has successfully piloted a "healthy weight intervention" protocol for pediatric dentists and is expanding its reach.⁵⁰

State Policy Efforts Make Powerful Tools Available to All Communities

State Policy Effort	Policy Description
<p>Limiting Unhealthy Food and Beverage Access</p> <p>California has become a leader in efforts to reduce unhealthy food and beverage choices in schools. Reducing children’s consumption of unhealthy products in schools will promote healthier eating habits that are helpful to preventing the onset of childhood obesity and dental disease.</p>	<ul style="list-style-type: none"> • In 2005, a school junk food ban (SB 12, Escutia) established limits on fat and sugar content and portion size on all foods sold a la carte. A high school soda ban (SB 965, Escutia) expanded previous efforts focused on K-8 grades to set standards for beverage availability at schools, effectively eliminating the sale of soda and other sweetened beverages from all school campuses.⁵¹ • In 2010, AB 2084 (Brownley) established nutrition guidelines for beverages served in child care facilities.⁵² SB 1413 (Leno) mandated that schools provide free, fresh drinking water.⁵³ A bill, however, that would have restricted the sale of sugary sports drinks in public schools to certain hours after the school day (SB 1255, Padilla) failed to pass.
<p>Sugar-Sweetened Beverage Tax Efforts</p> <p>A tax would help reduce overall consumption of sugar-sweetened beverages and raise significant revenue to fund health prevention and treatment efforts for California children.</p>	<ul style="list-style-type: none"> • SB 1210 (Florez) and AB 2100 (Coto) aimed to impose a tax of one cent per teaspoon of sugar on manufacturers of sweetened beverages. Revenues would have been collected in a newly created trust fund held by the State Treasury and would have funded efforts to reduce childhood obesity and the promotion of children’s health in California.^{54,55} According to revenue projections published by the Rudd Center for Food Policy and Obesity, the proposed tax could have generated about \$1.6 billion dollars for the state.⁵⁶ • A recent Field Research poll that found that 56 percent of Californians support such a tax, including majorities of low-income and Latino populations.⁵⁷

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Children Now is a national organization for people who care about children and want to ensure that they are the top public policy priority. Children Now is pleased to be a part of the Oral Health Access Council, a multilateral, nonpartisan effort directed toward improving the oral health status of the state's traditionally underserved and vulnerable populations. This policy brief was produced for the Oral Health Access Council and in collaboration with the California Center for Public Health Advocacy.

Cover photography by Chiaki Kang

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