BACKGROUND
At the April 2006 Board meeting Chair Antonovich requested that the Commission expand on its efforts and investments to promote good oral health and nutrition for young children and their families in Los Angeles County and directed staff to further develop plans for this action. At the May 2006 Board Meeting, the First 5 LA Board of Commissioners approved staff to move forward with the preparation of a framework and allocation to include recommendations for ways in which the Commission can further invest and make a commitment to children’s oral health and nutrition through conducting strategies that enhance current efforts to promote good oral health and nutrition.

Since the early inception of the first strategic plan, First 5 LA has recognized that healthy nutrition and dental care are important for the health and well-being of the child. Health has been one of First 5 LA’s three priority areas, with the goal of improving access to and the quality of health resources for children and families. The Commission has committed to various obesity prevention and oral health promotion activities through several initiatives and special projects including Community-Developed Initiatives, Home Visitation, Healthy Kids, School Readiness, Healthy Births, collaboration with KCET and in partnership with New Schools/Better Neighborhoods.

Additionally, the Next Five Strategic Plan (FY 2004-2009) specifies Good Nutrition and Physical Activity as a core objective in improving and promoting child health and well-being. First 5 LA’s current $150 million investment toward health-related initiatives reflect First 5 LA’s understanding that good nutrition and physical activity have many benefits towards preventing obesity and increasing the child’s capacity for learning, along with minimizing their risk for chronic illness (US Department of Health and Human Services, 2002). Staff has also proposed oral health objectives (see Appendix A) to be included as part of the Next Five (FY 2004-2009) Strategic Plan.

Other policy considerations include the Commission approved revised Programmatic and Fiscal Policies in November 2005 that specified how funds remaining under the Next Five Strategic Plan would be allocated. To maximize outcomes and resources, staff will work collaboratively to ensure that the recently approved investment areas, including the Crosscutting Strategies (Capacity Building, Systems Improvement, Sustainability; Policy and Advocacy; and Data) and Open Grantmaking align with and leverage the proposed activities outlined in the framework to promote children’s oral health and well being.

In the development of this framework, staff conducted an extensive literature review, convened expert panels on oral health and nutrition bringing local leading experts from the fields of childhood obesity prevention and pediatric oral health respectively. Experts on children's health, representing foundations, research institutions, universities, community-based organizations, and county departments were convened recently by First 5 LA to provide their views on pressing priorities around positive early childhood oral health and nutrition outcomes (see Appendix B). The purpose of the dialogues was to share information with First 5 LA about the most critical issues in LA County relating to children's oral health and nutrition. The meetings also provided insights on how to maximize benefits of existing First 5 LA investments and potential funding in these areas. Staff continued dialogue with many of the key stakeholders to learn in-depth about programs and activities that address early childhood nutrition and oral health.

In addition, staff reviewed and considered First 5 LA’s previous commitments in both oral health and nutrition as outlined above to develop the framework and ensure that the proposed activities maximize our investments. The proposed framework design is based the identification of best practices within Los Angeles County and a consideration of how First 5 LA could potentially make the most significant contribution to children’s oral health and nutrition.
IMPORTANCE OF NUTRITION & ORAL HEALTH
An examination of research on oral health and nutrition issues for children prenatal through five and their families shows that early childhood carries (ECC) and good nutrition are major concerns and at the forefront of current efforts to address healthy developmental outcomes for young children. Diet and nutrition work together and affect a child’s health in many ways. For one, nutrition influences various oral infectious diseases. Dental diseases related to diet include dental caries, developmental defects of enamel, dental erosion and periodontal disease. The diet not only affects the number and kinds of carious lesions (cavities), but also is an important factor in the development of periodontal disease (gum disease). Among oral health issues are findings of distinctive patterns of severe tooth decay in infants and young children, one of the most common diseases in this age group (see Appendix C).

A primary issue for addressing ECC is access to preventive oral health services which is influenced by various factors. Some of the factors that impact access include fewer dentists per capita in particular geographic areas as well as negative attitudes and beliefs about dentists, dental care, and dental disease prevention.

Separate from nutrition’s impact on oral health are issues related to healthy eating and obesity prevention. Major areas that have been covered by investments by First 5 LA and others across the county address the general health aspects of having good nutritional behavior, emphasizing roles of family involvement and parental guidance. Additionally other programs have developed messages and activities that promote a rational and healthy diet encouraging the use of natural products with good nutritional values rather than refined, industrial food.

Both childhood obesity and dental carries are pressing issues being addressed by various agencies in Los Angeles County through direct services, advocacy and policy efforts. The framework presented below intends to maximize and leverage these existing efforts by building on the assets and momentum of what already exists and is the result of the literature review, expert panels and interviews with individual experts and key stakeholders of these existing efforts.
ENHANCEMENT STRATEGIES FRAMEWORK

The issues affecting children’s nutrition and oral health outcomes are complex and varied supporting the need for First 5 LA to focus on developing partnerships with other organizations, leveraging existing efforts and prioritizing strategies to address these issues. Similar to the strength of previous First 5 LA frameworks, staff is proposing an oral health and nutrition multi-strategy framework that includes Access, Public Education, Policy and Advocacy, as illustrated below, to strategically address the areas that strongly emerged from the expert panels, stakeholder discussions and literature reviews. A multi-strategy framework will allow First 5 LA to focus on: ACCESS – Direct Services for the community that address need and build on the strengthening of parents, providers and community capacity; Public Education will address the need to increase the messaging around communicating the importance of oral health and nutrition for optimal child development; and Policy convenings will address the need to advocate and affect these issues more broadly in terms of addressing systems and related public/private policies that underlie these issues.

The strategies to improve the nutritional status and oral health of children and their families presented as part of this framework intend to integrally focus on the emergent areas found to be both critical and feasible. The proposed framework is intended to provide the Board with a scope of potential activities to be rolled-out incrementally to achieve First 5 LA’s oral health and nutrition objectives. The development and roll-out of these strategies involve short term, intermediate and long term activities to build upon and coordinate both the work of the First 5 LA and other agencies, which will require a phased-in approach to execute. As with other initiatives, the details of the development for the proposed strategies require a more in-depth assessment of each to determine the most appropriate approaches and partners. While the overall Multi-Strategy will be managed internally and some of the work can be done by staff including the development of partnerships and performance measures, based upon current staff resources it will be necessary to examine existing internal resources and make assessments on appropriate and reasonable external resources. It may be necessary to contract with consultants with expertise in oral health and/or nutrition content areas to assist with the continued development of the framework.

Focusing on leveraging existing efforts and maximizing proven results demonstrated through program evaluation reports, this framework will draw from existing investments that may include those of First 5 LA, for example:

**Obesity Prevention Activities.** First 5 LA has supported obesity prevention through various nutrition health promotion and prevention activities. These investments have led to: workshops for providers and parents that incorporate the importance of proper nutrition; teaching basic parenting skills in the areas of nutrition and feeding along with health, safety and early learning; health education of children on health issues; and providing and coordinating referrals and resources for parents to improve their child’s health through improved nutrition and regular care visits. Additionally, through some of the activities of the Commission’s strategic partnerships, there have been efforts to promote the use of open, green space as well as increase recreational opportunities for infants, toddlers, and preschoolers at public parks through the purchase and installation of new playground equipment as well as community outreach for utilization.

**Oral Health Promotion & Intervention Activities.** Similar to the variety of activities around obesity prevention, oral health promotion and intervention activities have ranged from health education of children, parents and providers on the health issues of dental care to performing comprehensive free preventative dental screening as well as treatment for children with dental problems. Many of these activities have been in partnership and support of local providers and schools of dentistry to help promote proper oral health care and prevent dental
Other Commission funded activities around the prevention of oral tooth decay have included:

- Tooth brushing taught to early childhood center teachers, family childcare providers and parents
- Comprehensive oral examinations
- Free dental exams
- On-site dental care coordination with other health, early education and safety services

Multi-Strategy Framework

Taking into consideration existing activities across the county and potential partnerships, the collected information has been synthesized and reflects the proposed Oral Health & Nutrition Multi-Strategy Framework. The chart below illustrates the proposed multi-strategy framework and outlines the various strategies and general timeframes in which staff anticipates their development. Following the graph is a brief description of each activity grouped according to strategy providing potential partnerships, estimated funding information based upon existing programs and next steps. The strategies of Access-Direct Services, Public Education, Policy and Advocacy have key strategic partnership leveraging activities that are anticipated to have varying planning and roll-out timelines. The timelines are incrementally spaced out in short, intermediate and long term periods with approximate timeframes reflecting respective intensity and duration of partnership building that is expected. The evaluation design will be specific to each activity using performance measures. As stated in the Revised Evaluation and Accountability Framework, these performance measures will be the same measures used for program improvement evaluation and will also be guided by the Commission adopted strategies.

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Strategy: Access – Direct Services

Preventive Dental Services:
Though experts acknowledge that therapeutic interventions may be necessary in some cases perceived as critical, it is agreed that addressing oral health in young children is best done through preventive dental services which are found to have the greatest impact with minimal resources. Additionally, there is consensus among leading dental practitioners that the most effective services that can be provided for young children ages 0-5 is focused on prevention. Since preventive dental services can be made easily accessible, they can promote early identification of the signs of dental decay for prompt referral for treatment. Staff proposes to leverage existing information and efforts by focusing on strategic partnerships to provide directed preventive dental services to help young children and their families maintain good oral health as they enter school and beyond.

Based on a review of local programs and opportunities for enhancement activities to promote prevention, a major opportunity for the potential to leverage resources, results and lessons learned is the Children’s Dental Health Initiative (CDHI) an elementary school-based Dental Program. The CDHI program is a three-year project funded by the California Endowment, whose primary purpose was to improve access to dental services by providing dental screenings, delivering preventive dental services and referring elementary school-aged children through the use of portable dental equipment. This demonstration program focused on school-age children and was designed to provide information on the success of different school-based dental delivery systems in providing care to high-risk children. The program showed increased access to preventive dental services including dental sealants, topical fluorides and oral hygiene instructions.

Utilizing this research-to-practice opportunity from the CDHI’s results, staff proposes demonstration sites of this model at a preschool and/or child care setting. For the purposes of this framework, preventive dental services for children 0-5 years of age is defined as oral hygiene instruction, dental screenings, fluoride varnishes, sealants and referrals for comprehensive and regular dental care treatments. These services will be made accessible through mobile dental teams which include: mobile dental units or teams of oral health providers who travel from childcare settings, schools or community events to do screenings and other preventive dental services. Mobile dental teams have a unique utility based upon barriers to accessing services which may include transportation, geography and other environmental limitations.

In order to successfully roll-out preventive dental services as described, the Commission anticipates working with organizations that have existing programs that may be expanded or enhanced to serve children ages 0-5. Potential strategic partners based upon their existing programs and services are:

- University of Southern California, School of Dentistry
- University of California, Los Angeles, School of Dentistry
- CA DHS - California Children’s Dental Disease Prevention Program

- Funding Source: Open Grantmaking
- Estimated Number of Sites: To Be Determined
- Number of Children to Be Served: 1,500-3,000
- Period of Funding: 3 years
- Amount: $1-2 million
Next Steps (1 year):
(1) Identify interested sites that have an infrastructure for community involvement
(2) Develop relationship with early childhood educators at interested sites to increase their knowledge and support for the program
(3) Grow champions within the child-care/preschool setting for long-term sustainability of interest and results
(4) Secure and coordinate with existing mobile dental teams to determine partnership viability
(5) Identify and train site coordinators to inform and engage families and community groups about this opportunity
(6) Research appropriate referral source for children in need of dental care with thorough follow-up and assistance in overcoming barriers to keeping appointments for advanced care

Parent Education Classes:
Since parental involvement in any prevention program aimed to have a positive impact for children has been found to be necessary for maintaining healthy weight and good oral health, these activities will be coordinated with the access activities. A critical factor for childhood success is parent knowledge of parental reinforcement techniques (i.e. parental praise) and support of the child that can help to promote positive nutrition and oral health outcomes. Funding in parent education will fund programs with existing parent education curricula of a sufficient intensity and duration focusing on oral health and/or nutrition. There are existing programs in Los Angeles County that recognize the importance of the parental role and have established comprehensive curricula that not only educate parents about nutrition and oral health to impact an individual household but some programs also support them to become advocates to share and promote the information about good nutrition and proper oral health care in their communities.

In order to successfully provide parent education, the Commission anticipates working with organizations that have existing programs that may be expanded or enhanced to serve children ages 0-5. Potential strategic partners based upon their existing programs and services are:

- Children’s Hospital Los Angeles (CHLA)
- University of Southern California, School of Dentistry
- PHFE-WIC
- Head Start

Funding Source: Open Grantmaking
Number of Grants: To Be Determined
Period of Funding: 3 years
Amount: $2-3 million
e.g. $250,000 per program per year

Next Steps (1 year):
(1) Identify viability and secure partnership with existing programs
(2) With identified partners, identify interested sites for program growth
(3) Develop relationships in identified program communities to determine interest and leadership opportunities for community members.
(4) Develop appropriate process measures to ensure program objectives may be met
(5) Determine if the program can be integrated with existing investments or with other activities as proposed in the oral health and nutrition framework
**Provider Training:**
As expressed strongly through the oral health expert panel proceedings as well as echoed throughout the data and interviews with stakeholders and experts, there is a need for professionals trained to conduct preventive screenings, examine and treat children’s oral health. To support the preventive dental services, staff recommends funding specific trainings to increase the capacity of the professional population that include paraprofessionals in the community and childcare fields, dentists and others in the dental profession and non-dental health professionals which include pediatricians, nurse practitioners and community health workers. Trainings will be comprehensive and comprised of a sufficient duration and intensity determined to be an appropriate curriculum. Some existing curriculum that have been shown to increase providers’ skills have been presented in various formats including 1- and 2-our in-person trainings, full-day trainings at major meetings and conferences as well as a web-cast training option with modules for distance learning. There are also other trainings that incorporate a didactic component along with hands-on training, mentoring and strongly encourage provision of pro bono dental services.

In order to successfully provide professional education, the Commission anticipates working with organizations that have existing programs that may be expanded or enhanced to serve children ages 0-5. Potential strategic partners based upon their existing programs and services are:

- **California Dental Foundation**
- **Dental Health Foundation**
- **University of Southern California, School of Dentistry**

- **Funding Source:** Capacity Building or Open Grantmaking
- **Number of Providers to Be Trained:** 400-600 providers
  - e.g. based upon an existing comprehensive program that trains 50 dentists per cohort=\$150K
- **Number of Children to Have Services:** 7000
- **Period of Funding:** To Be Determined
- **Amount:** \$2-3 million

**Next Steps (1-2 years):**
1. Identify viability and secure partnership with existing programs
2. With identified partners, identify interested sites for program growth
3. Develop relationships in identified program communities to determine interest and leadership opportunities for community members.
4. Develop appropriate process measures to ensure program objectives may be met
5. Determine if the program can be integrated with existing investments or with other activities as proposed in the oral health and nutrition framework

**Community Kitchens:**
For long term planning and to leverage plans in ongoing development as presented in the Prenatal through Three Focus Area, the communities of First 5 LA Baby Zones may determine the need to include existing or develop new community kitchens as part of the Baby Zone’s array of baby friendly accessible resources to promote nutrition. The community kitchen is designed to be a community-centered place of activities such as community facilitated nutrition courses that provide instructions on how to prepare nutritious meals as well as space to prepare food for community events. Additionally community kitchens can be a venue for the community to organize and plan the development of a local
Farmers’ Market to provide reliable access to fresh produce. The activities that take place at community kitchens vary from community to community and range from preparation of community meals whereby participants work cooperatively in the menu selection shopping, preparation, and cooking to learning new recipes and introduction to new foods. However, what is common across the community kitchens examined by staff is that good nutrition plays a key role in each community kitchen and participation supports not only a healthy eating and lifestyle but also the spirit of community. Community kitchens aim to serve the nutritional needs of the community by providing a safe and sanitary location for food preparation and are an ideal fit to the community-driven process detailed in the First 5 LA Baby Zone concept.

- Funding Source: Potential to leverage the Prenatal through Three Focus Area investment activities
- Number of Grants: To Be Determined
- Period of Funding: To Be Determined
- Amount: To Be Determined

Next Steps (1-3 years):
(1) Align with Prenatal through Three Focus Area and other investments’ timelines
(2) Provide support to the ongoing development of the Focus Area, ensuring inclusion of oral health and nutrition related issues are taken into consideration
(3) Assist with coordination and integration of oral health and nutrition resources for the Focus Area’s Baby Zones
**Strategy: Public Education**

**Health Education - Promotion Activities:**
The Public Affairs department led public education campaign; “They Do Everything You Do” which focuses on a healthy lifestyle was unveiled at the September Board meeting. As shown through the examples of print, television and radio spots, the campaign focuses on key messages around oral health, nutrition and general health in several languages including Korean, Vietnamese, Spanish and English. Though this campaign has been implemented and positively received by experts and key stakeholders, there are other activities that may be performed to create consistent messaging across the county, including the convening of stakeholder groups that may discuss and achieve accord on key messages and guidelines for parents and community resource providers.

- **Status:** Ongoing - Alignment with ongoing and in-development activities of policy and advocacy

**Parent – Community Outreach:**
To support the Access-Direct Services, experts and key stakeholders strongly recommended that outreach activities are key in informing and engaging parents and the larger community about meeting the oral health and nutritional needs of young children. Based upon these recommendations, staff proposes ongoing parent and community outreach through engagement at community events, grantee convenings, et. al. to distribute collateral and convey the consistent messaging on the importance of oral health and nutrition. These activities will complement the Access-Direct Services and leverage the health education-promotion activities to increase parent and community involvement with First 5 LA programs and activities as well as enhance the existing Public Affairs department led Health Education Campaign mentioned above.

- **Funding Source:** Capacity Building
- **Period of Funding:** 3 years
- **Amount:** $500,000 - 1 million

**Next Steps (1-2 years):**
1. Identify existing programs, outreach or programmatic, that have a strong interest in promotion of oral health and nutrition as well as an infrastructure for community engagement
2. Develop relationship and process for determining key messages and outreach strategies
3. Outreach to employers, media, community leaders, and others to promote good nutrition oral health
4. Determine if the program can be integrated with existing investments or with other activities as proposed in the oral health and nutrition framework
5. To the extent possible, identify leveraging partners to maximize the investment to ensure seamless and ongoing parent-community outreach across various communities
Strategy: Policy and Advocacy

Oral Health & Nutrition Policy:
An awareness of the limitations of traditional health education that focus on knowledge and an individual behavior change approach, this requires us to consider the many socio-environmental factors that intervene between knowledge and appropriate health behaviors. Many socio-environmental factors are structural and can only be addressed through policy changes and other forms of ‘rule-making.’ Such approaches have been successful in other areas of health promotion and public health, for example traffic safety, tobacco control, immunization and food safety. Relying on knowledge acquisition strategies, for example teaching about healthy eating, will have little impact on eating behavior. Unhealthy foods are too attractive, cheap, accessible, convenient, culturally normative and persuasively promoted and marketed and therefore for children, and many adults, there is no contest when it comes to food choice.

Given the need for policy changes as specifically stated through reviews of policy analysis briefs and supported by leading childhood nutrition and oral health experts, staff proposes that First 5 LA take both an internal and external approach to changing policy. Internally, First 5 LA will develop a process to convene grantees, strategic partners and stakeholders to begin conversations on the feasibility of establishing and enacting policies that address oral health and nutrition for organizations that receive First 5 LA funding. Looking to the development efforts and policies laid out in the Los Angeles County Food Policy as an example, First 5 LA can begin to develop policies to address nutrition and/or oral health. Externally, in order to create broad and sustainable impact across state and local communities, First 5 LA will serve as convener and facilitator for county-wide roundtables that can support establishment and promotion of a common policy agenda for like-minded organizations who would like to develop and galvanize support of local, state and federal level policies, norms and incentives that support and promote healthy nutrition and good oral health practices. Additionally, these activities can build upon the Prenatal through Three Focus Area policy activities. In the coming months a policy department will be established at First 5 LA with the expertise to facilitate the many key stakeholder organizations that will include existing First 5 LA networks involved in developing a common policy agenda. The Policy Department will also be key in guiding the activities that will follow establishing a policy agenda which may include participation in First 5 LA’s Advocacy Day in Sacramento each Fall as well as informing key decision makers at different levels of influence of the importance of healthy nutrition and good oral health in the development of young children.

- Funding Source: Policy
- Period of Funding: 3 years
- Amount: $500,000-1 million

Next Steps (1-3 years):
(1) Develop a policy agenda that includes key issues related to nutrition, obesity prevention and oral health that may include but are not limited to: requirements of the USDA Child Care Food Program; food assistance programs to increase availability of fresh fruits and vegetables; dental screening requirements for school-age children; and Denti-Cal and other third party payers’ reimbursement of preventive dental services
(2) Collaborate and convene with community partners and stakeholders to outline a broader policy agenda and strategies with the parameters of the oral health and nutrition objectives in the Next Five Strategic Plan
(3) Continue research of pertinent local, state and federal policies
INTEGRATION
For all of the activities outlined above where possible, activities may be combined and conducted together in order to help support mutual outcomes of better oral health and nutrition will be considered to maximize the effects. For example, staff has found that many existing preventive dental care programs are combined with a parent education component focusing on anticipatory guidance so that the parents can help to promote the child’s exposure to preventive care practices.

Furthermore, First 5 LA will continue to integrate and support the ongoing activities around oral health, nutrition promotion and obesity prevention in the development of on-going and future investments. For example, in the development of the Prenatal through Three Focus Area, the importance of healthy nutrition and oral health is included in the holistic vision of the Focus Area and is inclusive of community providers and residents who support good oral health and nutrition. At this point, as the design of the Prenatal through Three Focus Area unfolds, the approach calls for targeting the parents and caregivers in messages that incorporate the importance of proper nutrition and oral health among the various messages that aim to increase parents’ and caregivers’ awareness and role in the optimal development of the child. The expansion and enhancement activities of oral health and nutrition will help to provide support for the Commission’s vision for the Prenatal through Three Focus Area and the Next Five Strategic Plan.
**ATTACHMENT A: Oral Health Objectives**

By June 30, 2009, improve the oral health status of children and families participating in First 5 LA programs.

...Increase from baseline* the percent of children 0 through 5 years of age who have access to oral health care resources

...Increase from baseline* the percent of children 0 through 5 years of age who receive preventive dental services

...Increase from baseline* the percent of children 0 through 5 years of age who receive therapeutic dental services

...Increase percentage of providers who are trained to conduct preventive screening, assessment and therapeutic dental services to children 0-5 years of age

...Increase the percentage of parents/families’ knowledge of early childhood oral health needs & milestones.

* Following the development of a baseline report for this goal area, the Commission will work with the appropriate First 5 LA funded partner(s) to determine specific measurable targets for this objective.
ATTACHMENT B: Expert Stakeholders

- California Dental Association*
- California Food Policy Advocates*
- Central City Neighborhood Partners, Women and Community Project
- Child Care Resource Center*
- Children's Hospital Los Angeles*
- Community Clinic Association of California*
- Dental Health Foundation*
- Eisner Pediatric and Family Medical Center*
- Foothill Family Services
- LA Care*
- Latino 5-a-Day*
- Los Angeles Best Babies Network (LABBN)*
- Los Angeles Universal Preschool (LAUP)*
- Los Angeles County Department of Public Health, Maternal, Child and Adolescent Health Program*
- Los Angeles County Department of Public Health, Nutrition Program
- Los Angeles County Department of Public Health, Oral Health Program*
- Los Angeles Oral Health Foundation*
- Mexican American Opportunity Foundation
- Northridge Hospital, Center for Healthier Communities
- Public Health Foundation Enterprises; Women, Infants and Children Program*
- Southland Farmer's Market Association*
- Supervisor Antonovich's Office, Deputy*
- Talk About Parenting with Shirlee Smith, Inc.
- UCLA Center for Healthier Children, Families & Communities*
- UCLA School of Dentistry*
- USC School of Dentistry*

* Denotes Participant Agencies at Expert Panels
**ATTACHMENT C: Rationale/Literature Review**

**Oral Health**

Early childhood caries (ECC) is an infectious disease that can start as soon as an infant’s teeth erupt. ECC can progress rapidly and may have a lasting detrimental impact on a child’s health and well-being. Early tooth loss caused by dental decay can result in impaired speech development, failure to thrive, absences from preschool, inability to concentrate, reduced self-esteem, and other psychosocial problems. For children to develop optimally, they must be able to eat nutritious foods. They cannot do this if their ability to eat is compromised by the pain and infection associated with ECC. Early childhood caries is associated with diminished physical growth in toddlers. Providing dental treatment for children with this condition during early childhood has been shown to result in significant gains toward achieving a normal growth curve.

In the face of this disease, the level of access to preventive and therapeutic services for children 0-5 years old does not meet the needs experienced by families. Many factors act as barriers to access to dental care, including: lack of dental insurance; the fact that higher-income areas have more dentists per capita than low-income areas; language and cultural barriers; attitudes and beliefs about dentists, dental care, and the value of dental disease prevention; residence in a rural area; and problems of child care and transportation.

One of the most pressing areas of access is that of geography. Rural residents face considerable barriers to accessing dental services. Not only is insurance coverage lower in rural areas, but the distance to reaching services may also be problematic. Another major issue is the number of dentists who are comfortable and/or qualified to treat children. There are very few pediatric dental specialists in Los Angeles County and of that number; there are even less who will provide care for children who receive free or low-cost health insurance such as Medi-Cal, Healthy Families or Healthy Kids.

It is evident that the barriers far exceed the resources that are needed to address them in a meaningful way and so providers, researchers and policymakers strongly encourage that early preventive care, starting at age 6 months (when the first teeth are erupting) should be the cornerstone of any program or initiative that addresses early childhood caries. One approach is to increase awareness among those who most interact with young children who include their parents, pediatricians and other medical providers, childcare providers and dental health practitioners. As parents are the child's primary teachers of healthy habits, interactions within the family can have a major impact on oral health. Also, since physicians, nurses, and other health care professionals are far more likely to see new mothers and infants than are dentists, it is essential that they be aware of the importance of early oral health and signs of early tooth decay. An oral health risk assessment by a qualified health professional for infants by 6 months of age would allow application of appropriate preventive strategies as the first teeth begin to emerge. In support of the health professionals’ critical role in oral care, the American Academy of Pediatrics (AAP) has developed materials which can be used to determine the patient’s relative risk for caries. In addition to tools, the AAP has also put out a policy statement emphasizing the infectious nature of early childhood caries and their intent to become involved in managing infant and early childhood oral health. Oral health providers also play an important role in teaching parents how to encourage their young children to brush and floss their teeth. Similar to the role of medical professionals, oral health providers can serve to promote good oral health and the early establishment of a dental home. With the support of professional organizations such as AAP, ultimately medical and dental professionals promote and see the goal of early oral health assessment is the timely delivery of educational materials to populations at high risk for developing caries to prevent more costly and intensive procedures. It is recommended that whenever possible, the ideal approach to infant oral health, including early childhood caries prevention and management, is the early establishment of a dental home.
Activities that support critical policy changes is another approach to addressing prevention of early childhood caries by making preventive dental services more accessible. One example of a recent policy change was in 2003, whereby in California registered dental hygienists who were working in public health settings are now authorized to provide preventive services (e.g. cleanings, topical fluoride applications, sealants) without having a licensed dentist examine the children first. Though there have not been any evaluation to determine the impact of this policy change, it is anticipated that this will increase the number of children who receive preventive dental services by minimizing the need for dentists to be on-site, who are already in shortage. Furthermore, there have been policy changes at the federal level that allow MediCal fee-for-service (FFS) beneficiaries to receive fluoride varnishes from their primary physician. Under the new regulations, physicians can now receive reimbursement for this service, thereby expanding the number of qualified providers who come into contact with young children able to provide preventive services.

**Nutrition**

Over the past three decades, the share of children who are considered overweight or obese has doubled, from 15 percent in the 1970s to nearly 30 percent today, while the share of children who are considered obese has tripled. Increasingly policymakers are recognizing the need for action. In 2004, the Institute of Medicine released a report calling the prevention of childhood obesity a national priority and that obesity in general and childhood obesity in particular, has serious adverse health consequences. Heart disease, high blood pressure, hardening of the arteries, type 2 diabetes, metabolic syndrome, high cholesterol, asthma, sleep disorders, liver disease, orthopedic complications, and mental health problems are just some of the health complications of carrying excess weight. The difficulty for children is twofold. First, many obese children today are developing health problems that once afflicted only adults. Subsequently, these children have to cope with chronic illnesses for an unusually extended period of time. As compared to adult onset of the disease, living with type 2 diabetes from childhood is much more debilitating. Second, in obese children, such health problems as heart disease begin, almost invisibly, earlier in life than they do in normal-weight children. Even if the disease is not diagnosed until adulthood, it begins taking its physical toll sooner, perhaps resulting in more complications and a less healthy life. The possibility has even been raised that given the increasing prevalence of severe childhood obesity, children today may live less healthy and shorter lives than their parents.

The increase in obesity is an economic issue as well. Estimates of the costs of treating obese children are relatively small but rising rapidly. Research estimates that hospital costs of treating children for obesity-associated conditions rose from $35 million to $127 million (in 2001 constant dollar values) from 1979–81 to 1997–99. The extent of these cost projections call for a stronger emphasis on prevention programs, particularly geared towards parents and providers to help support the healthy development of children.

In addition to parents and providers, the environments in which children interact such as childcare settings, can be a major force in shaping children's dietary intake, physical activity, and energy balance—and thus in combating the childhood obesity epidemic. Little is now specifically about either the nutrition or the physical activity environment in the nation's child care facilities. What research exists suggests that the nutritional quality of meals and snacks may be poor and activity levels may be inadequate. Few uniform standards apply to nutrition or physical activity offerings in the nation's child care centers. With the exception of the federal Head Start program, child care facilities are regulated by states, and state rules vary widely. Although many child care settings fall short in their nutritional and physical activity offerings, they offer untapped opportunities for developing and evaluating effective obesity-prevention strategies to reach both children and their parents. Although much has been written on the role of schools in obesity prevention, surprisingly little has been written on how child care settings can help combat childhood obesity. With so many
preschool children in attendance, child care settings can be a major force in shaping children’s dietary intake, physical activity, and energy balance.

Along with physical inactivity, poor diet is a major contributor to the rising rates of obesity. To reverse the trend toward obesity, children must have access to and consume such healthful foods as fruits and vegetables, consume adequate portion sizes, limit intake of fats and added sugars, and get plenty of physical activity. The diets of most U.S. children do not meet the Dietary Guidelines. The overall diets of children must be improved. Early attention to diet would have immediate nutritional benefits, would help prevent obesity, and could reduce chronic disease risk if healthful habits are carried into adulthood. Establishing healthful dietary and physical activity behaviors beginning in childhood is one step in the right direction. Child care settings can lay the foundations for health and create an environment to ensure that young children are offered healthful foods and regular physical activity.

As researchers continue to analyze the role of parenting both in the development of childhood overweight and in obesity prevention, studies of child nutrition and growth are detailing the ways in which parents affect their children’s development of food- and activity-related behaviors. This growing body of research points to interventions aimed at preventing childhood overweight and obesity that involve parents as important forces for change in their children’s behaviors. Parents can help their children develop and maintain healthful eating and physical activity habits, thereby ultimately helping prevent childhood overweight and obesity. It is for parents to understand how their roles in preventing obesity change as their children move through critical developmental periods, from before birth and through adolescence.

Parents are key to developing a home environment that fosters healthful eating and physical activity among children and adolescents. Parents shape their children’s dietary practices, physical activity, sedentary behaviors, and ultimately their weight status in many ways. Parents’ knowledge of nutrition; their influence over food selection, meal structure, and home eating patterns; their modeling of healthful eating practices; their levels of physical activity; and their modeling of sedentary habits including television viewing are all influential in their children’s development of lifelong habits that contribute to normal weight or to overweight and obesity. Because the parents’ roles at home in promoting healthful eating practices and levels of physical activity—and thus in preventing obesity—are so critical, they should also be central to collective efforts to combat the nation’s childhood obesity epidemic. Parents serve as models and reinforce and support the eating and exercise behaviors. Finally, to produce the best outcomes for children, it may be necessary to teach parents to use specific behavior-change strategies such as positive reinforcement. As toddlers and preschoolers develop habits related to eating and physical activity, parents can shape their early environments in ways that encourage them to be more healthful.

Current data, although limited, suggest that the way parents feed their children contributes to individual differences in how well children can regulate their food intake and perhaps to the origins of energy imbalance. Especially in the early years of a child’s life, parents have a direct role in providing experiences that encourage the child’s control of food intake. Around preschool age, when children particularly dislike new foods, it is important for parents to model healthful eating habits and to offer a variety of healthful foods to their children. When parents provide early exposure to nutritious foods, even fruits and vegetables, children like and eat more of such foods. Another important influence on the types of food young children consume is a household’s food choices. At an early age children will eat what their parents, especially their mothers, eat. And if parents overeat, their children may too. Thus the parents’ own eating behaviors may contribute to the development of overweight in their children. The types of food available and accessible in the home are also linked with the weight status of preschool children. Research suggests, for example, that increased consumption of sugar sweetened drinks, like fruit juice, might raise the risk of overweight among preschool children.
Most interventions aimed at preventing overweight and obesity have been school-based, and all have improved health knowledge and health-related behaviors to some extent. Some of the most successful school-based interventions, however, have included a parenting component. These interventions have resulted in dramatic changes in health behaviors associated with child obesity and overweight as well as in changes in body mass index or obesity. Parents play a critical role at home in preventing childhood obesity, with their role changing at different stages of their child's development. By better understanding their own role in influencing their child's dietary practices, physical activity, sedentary behaviors, and ultimately weight status, parents can learn how to create a healthful nutrition environment in their home, provide opportunities for physical activity, discourage sedentary behaviors such as TV viewing, and serve as role models themselves. Obesity-related intervention programs can use parental involvement as one key to success in developing an environment that fosters healthy eating and physical activity among children and adolescents. Although few interventions solely target parents, current evidence suggests that parenting interventions may work best as a component of comprehensive interventions within a variety of settings, including schools, health services, or other community-based programs. Achieving the goal of preventing and controlling the childhood obesity epidemic requires multifaceted and community-wide programs and policies. But even in such broad and comprehensive programs, parents have a critical and influential role to play. Interventions should involve and work directly with parents from the very earliest stages of child development and growth both to make healthful changes at home and to reinforce and support healthful eating and regular physical activity.