

CHAPTER 2

Oral Health Initiative

“ [My children have] gained weight since they had their teeth fixed. They’re growing up well.”

—OHI Parent



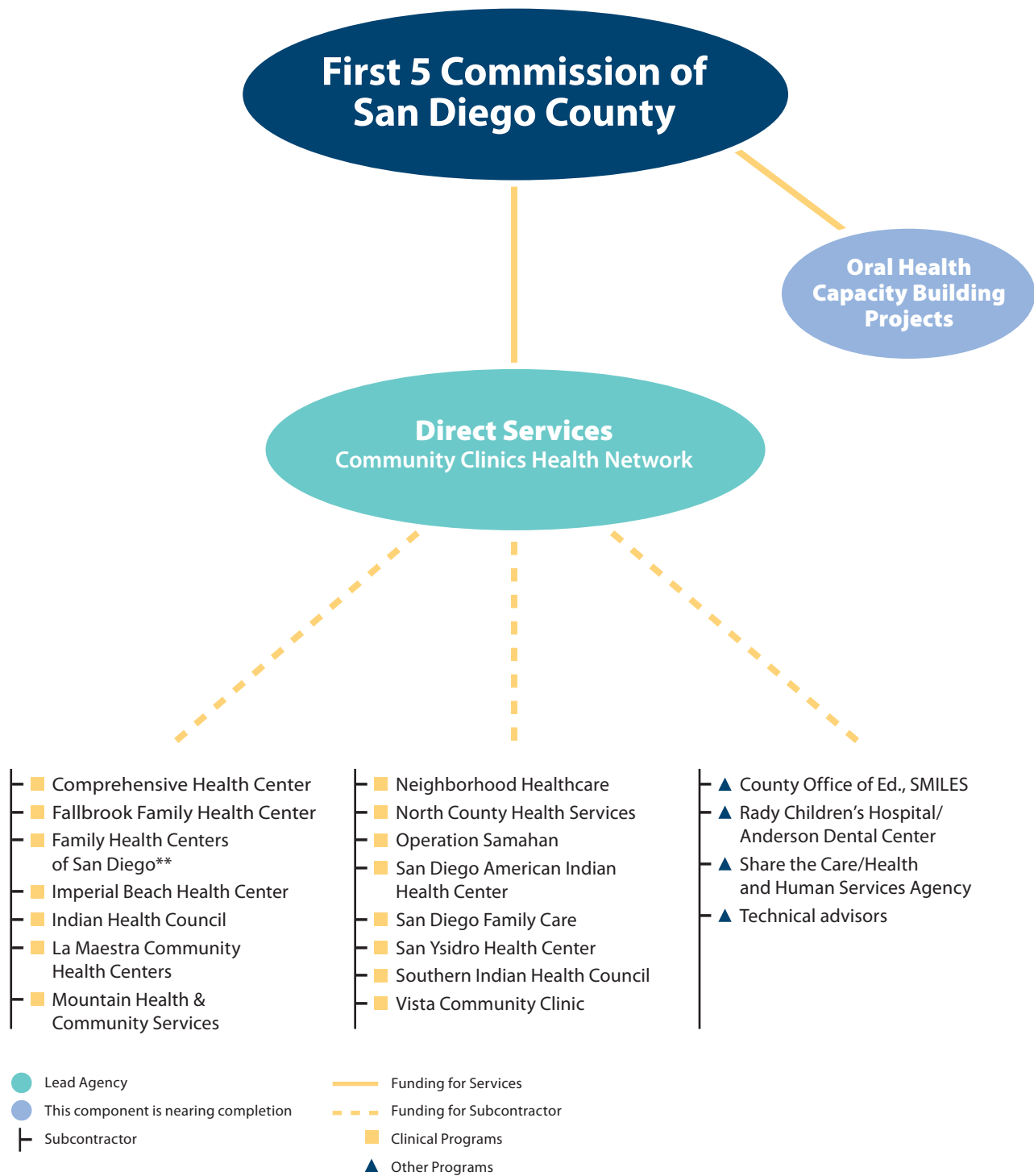
Key Results

- + **Increased specialty treatment for children ages 0-5 years.** From last fiscal year, the number of children ages 0-5 years who received specialty treatment increased by 18.1%.
- + **Care coordination increased.** In an attempt to ensure that the dental health system of care is seamless for children and pregnant women, OHI providers increased care coordination efforts for children ages 0-5 by 24.1% and pregnant women by 77.5%.
- + **Increased efforts to educate primary care and prenatal providers.** From last fiscal year, the number of primary care and prenatal care providers who received training about oral health issues increased by 620.0% and 485.7% respectively.
- + **Increased efforts to educate primary caregivers of children.** OHI also made a concerted outreach effort to educate parents, pregnant women, and child care providers.

Summing It Up

- + 13,092 children ages 0-5 years and 1,935 pregnant women participated in oral health screenings.
- + 11,525 children ages 0-5 years and 1,808 pregnant women received dental exams.
- + 13,946 children ages 0-5 years and 1,878 pregnant women obtained routine dental treatment. Additionally, 680 children ages 0-5 years obtained specialty dental treatment. These data reflect an increase from last fiscal year.
- + 8,987 children ages 0-5 years and 2,665 pregnant women participated in care coordination. These data reflect an increase from last fiscal year.
- + 23,280 parents, caregivers, pregnant women and child care providers received oral health education. These data reflect an increase from last fiscal year.
- + 428 dental and health care providers were trained about oral health issues. Primary care providers accounted for the majority of those trained.

Oral Health Initiative Structure*



* Includes First 5 funded Lead Agencies and Partners.

** This partner has an Oral Health Capacity Building Contract directly with First 5 San Diego.

Introduction

Early childhood caries and dental decay captured national attention in 2000 when the U.S Surgeon General published a report declaring dental diseases a “silent epidemic” among children, especially low income children. According to the Surgeon General’s report, tooth decay is “the single most common chronic childhood disease – five times more common than asthma.”²³ It affects more than a quarter of children ages two to five years old in the United States and more than a quarter of kindergarteners in California.^{24, 25}

Untreated dental disease may: cause pain, affect a child’s nutritional status, sleep patterns, or appearance; impair psychological status and social interaction; and cause problems with speech and language development.^{26,27, 28} The pain of untreated tooth decay can also cause children to miss school.²⁹ In short, poor oral health negatively affects children’s ability to function in school.³⁰ Addressing children’s oral health before they enter school helps to ensure that they arrive to kindergarten ready to learn. For pregnant women, the mother’s oral health has a direct relation to her unborn child’s health. Studies have demonstrated an association between gum disease and poor birth outcomes including preterm delivery and low birth weight babies.^{31, 32}

Ultimately, it is more economical to provide parents with comprehensive oral health education and children with preventive services than to treat a child with dental decay with painful and costly treatments. “Policy makers should consider subsidizing and promoting preventive interventions for early childhood caries for two reasons. First, the interventions will have a substantial impact of the oral health of a particularly vulnerable population of children, reducing early childhood caries by 40 to 80 percent. Second, part of the costs will be offset by savings in treatment costs.”³³ Due to the highly preventable nature of the disease, national, state and

²³ Satcher, D. Oral Health in America: A Report of the Surgeon General. Washington, DC: U.S. Department of Health and Human Services, 2000.

²⁴ Centers for Disease Control and Prevention. Oral Health: Preventing Cavities, Gum Disease and Tooth Loss. At a Glance 2008. Accessed 23 August 2008. <<http://www.cdc.gov/nccdphp/publications/factsheets/Prevention/oh.htm>>

²⁵ Dental Health Foundation. Mommy, It Hurts to Chew, the California Smile Survey; An Oral Health Assessment of California’s Kindergarten and 3rd Grade Children. Oakland, CA: Author, 2006.

²⁶ Centers for Disease Control and Prevention. Oral Health: Preventing Cavities, Gum Disease and Tooth Loss. At a Glance 2008. Accessed 23 August 2008. <<http://www.cdc.gov/nccdphp/publications/factsheets/Prevention/oh.htm>>

²⁷ Satcher, D. Oral Health in America: A Report of the Surgeon General. Washington, DC: U.S. Department of Health and Human Services, 2000.

²⁸ Centers for Disease Control and Prevention. Preventing Chronic Diseases: Investing Wisely in Health – Preventing Dental Caries. 2005. Accessed 13 July 2006. <<http://www.cdc.gov/nccdphp/publications/factsheets/Prevention/oh.htm>>

²⁹ Ibid.

³⁰ Satcher, D. Oral Health in America: A Report of the Surgeon General. Washington, DC: U.S. Department of Health and Human Services, 2000.

³¹ Garfield, M. L., B. J. Clooey-Gilbert, D. M. Malvitz and R. Romaguera. “Oral health during pregnancy: An analysis of information collected by the Pregnancy Risk Assessment Monitoring System.” *Journal of the American Dental Association*. 132.7 (2001): 1009-1016.

³² Offenbacher, S., V. Katz, G. Fertik, et al. “Periodontal infection as a possible risk factor for preterm low birth weight.” *Journal of Periodontology*. 67.10 (1996): 1103-13.

³³ Gomez-Ramos, F.J. “Cost Effectiveness Model for the Prevention of Early Childhood Caries.” *Journal of the California Dental Association*. (1999)

county level oral health groups have strongly advocated for dental coverage for all children, strategic education to the public focusing on the most vulnerable populations, and preventive dental services.

In 2005, The First 5 Commission of San Diego launched the Oral Health Initiative (OHI) to address oral health. In total, the Commission has dedicated up to \$5.1 million for OHI from its launch through FY 2009-10.³⁴ In FY 2007-08, the Oral Health Initiative expended \$1.4 million on a comprehensive, countywide approach to address the dental health prevention and treatment needs of young children and pregnant women.

Key Elements

The intent of OHI is to provide a network of care that meets the oral health needs of young children and pregnant women on a coordinated, comprehensive, countywide basis, while also meeting the unique needs of geographic and culturally diverse communities. OHI provides services from Alpine to Vista working to increase the number of children ages 0-5 years and pregnant women free from oral health disease. As the leads agency, the Council of Community Clinics (the Council) oversees the project and supports 15 community clinics as well as Rady Children's Hospital/Anderson Center for Dental Care, the County of San Diego Share the Care program, the County Office of Education SMILES program and private dental providers (referred to as "OHI partners") across the County. Some partners operate at more than one site, creating an expansive network of care and providing services in six areas:³⁵

1. **Oral health screenings for children ages 0-5 years and pregnant women:** Oral health screenings may be conducted in clinics as well as out in the community (i.e., at health fairs). Those screened may receive fluoride varnishes and/or sealants. Oral health education also occurs at screenings.
2. **Dental examinations for children ages 0-5 years and pregnant women:** Dental examinations are conducted by a dental practitioner and may include teeth cleaning, x-rays, fluoride treatments, sealants, and instruction on brushing and flossing teeth.
3. **Treatment services and follow-up for children ages 0-5 years and pregnant women:** Treatment services include routine treatment for both children and pregnant women in addition to specialty treatment for children (see textbox on the OHI Specialty Treatment Pool).
4. **Care coordination services for children ages 0-5 years and pregnant women:** Care coordination is the core of OHI. Dental Care Coordinators are employed at all 15 OHI clinic partners. The Dental Care Coordinators help families navigate the system; providing assistance with accessing dental

The OHI Specialty Treatment Pool

The specialty treatment pool was established in September 2006 and serves children who have severe dental needs. From September 2006 through July 18, 2008, the specialty treatment pool has:

- + Paid out a total of \$277,473
- + Treated 107 children
- + Conducted 2,726 procedures

Even with the pool, there are waiting lists for children who need oral surgery or need procedures which require anesthesia.

³⁴In addition to OHI, the Commission funded a health and oral health media campaign in FY 2005-06 and also funded oral health projects through its Capital Projects Initiative. This helped build oral health capacity in the County.

³⁵Not all OHI providers address all six areas. Some focus on one or two goals, while others offer a broader range of services, depending upon their capacity and expertise.

services and educating them about oral health issues and treatment recommendations. Dental Care Coordinators also conduct community outreach activities such as community screenings and education.

5. **Oral health education for parents and caregivers of children ages 0-5 years, pregnant women, child care providers and staff at community-based organizations (CBOs):** Dental Care Coordinators and other OHI partners provide education throughout the County at both the individual and community levels.
6. **Training for prenatal care providers, general dentists and primary care providers:** OHI provides training and education to health care providers and works to connect the medical and dental fields in order to improve oral health for young children and pregnant women.

Summing It Up

As Exhibits 3.1, 3.2 and 3.3 illustrate, OHI reached thousands of children ages 0-5 years, pregnant women, caregivers and providers across the County in FY 2007-08.³⁶ Overall, there were increases in exams, routine treatment, specialty treatments and care coordination. Additionally, there was a relatively large increase in training provided to primary care and prenatal care providers and a decrease in training provided to general dentists. Screenings for children and pregnant women decreased since FY 2006-07. See the textbox below for specific data.

Notable Numbers

Notable increases from FY 2006-07 to FY 2007-08 included:

- Specialty treatment for children ages 0-5 years increased 18.1%.
- Routine treatment increased for both children ages 0-5 years (11.9%) and pregnant women (34.1%).
- Care coordination services increased for both children ages 0-5 years (24.1%) and pregnant women (77.5%).
- Caregiver education increased for all target audiences: parents of children ages 0-5 years (17.1%), pregnant women (8.7%) and child care providers and staff of community organizations (50.6%).
- Training for primary care and prenatal care providers increased by 620.0% and 485.7%, respectively.

Notable decreases from FY 2006-07 to FY 2007-08 included:

- Oral health screenings decreased for both children ages 0-5 (38.4%) and pregnant women (11.6%)
- Training for general dentists decreased by 48.2% from FY 2006-07 to FY 2007-08.

³⁶OHI programs collect and report monthly unduplicated counts of the number of individuals served for each type of service under each goal area. The total number of individuals served may include duplicate counts if an individual accessed services in more than one goal area and/or month.

It is important to note that service totals from FY 2005-06 and FY 2006-07 data have been updated since the previous annual report³⁷. This report includes updated figures for those years.

Exhibit 2.1 Number of Children ages 0-5 Receiving Oral Health Services
FY 2005-06, FY 2006-07, and FY 2007-08

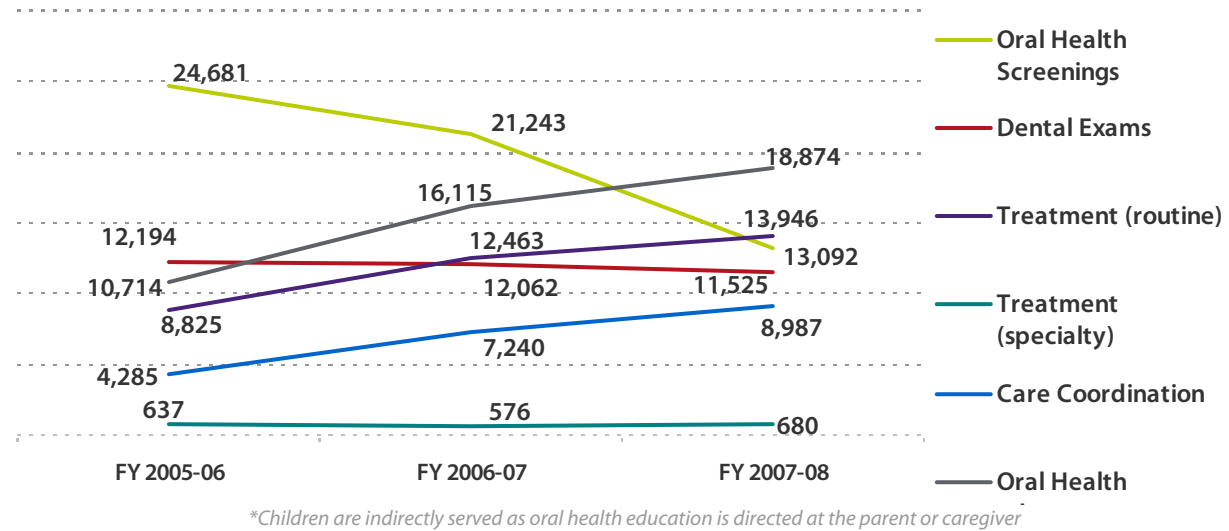
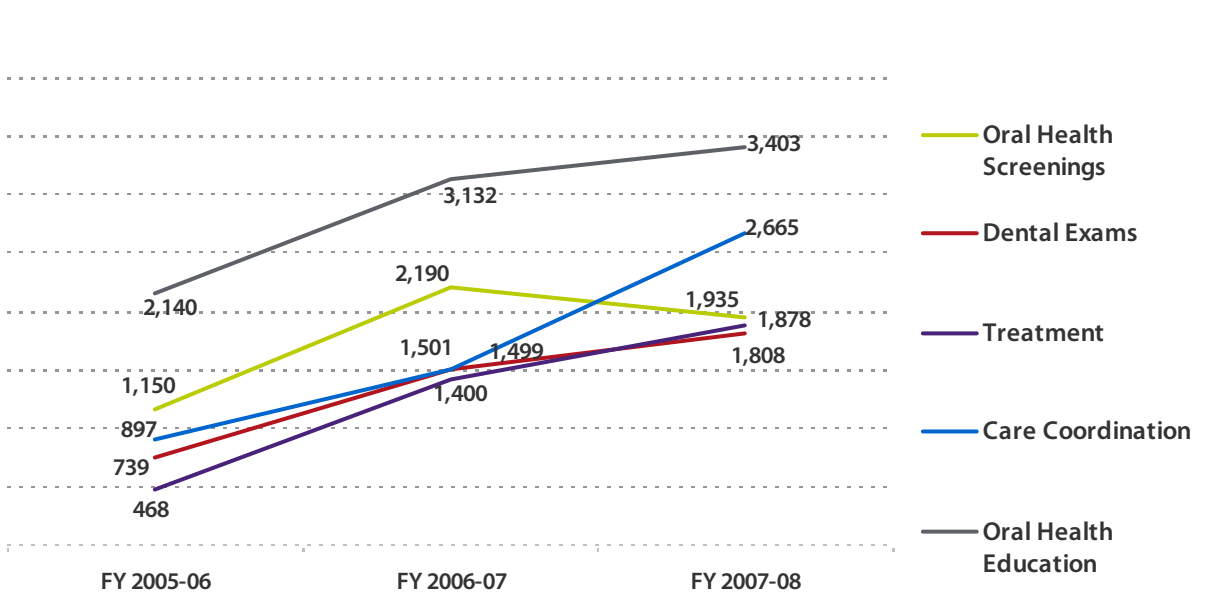


Exhibit 2.2 Number of Pregnant Women Receiving Oral Health Services
FY 2005-06, FY 2006-07, and FY 2007-08



³⁷ Updates are due to data discrepancies identified by OHI partners and resubmitted to First 5 after the publication of last year's report.

A comparison of the data from FY 2006-07 and FY 2007-08 illustrates that the number of services for children ages 0-5 years and pregnant women continues to increase for the majority of services, with a notable decrease in oral health screenings for both children ages 0-5 years and pregnant women. The reason for this drop may be due to administrative processes. Providers had a 15-month contract period that included 15 month targets. While providers exceeded all service targets, many screenings for this 15-month period were performed and recorded during the last fiscal year. This demonstrates that there is a need for services beyond what OHI is budgeted to perform. In addition, providers far exceeded previous performance in two areas key to building service capacity and strengthening prevention:

- Provider training: 428 dental and health care providers were trained about oral health issues compared to 131 trained in FY 2006-07.
- Caregiver education: 23,280 caregivers (parents of children ages 0-5 years, pregnant women and child care providers and community based organization) educated about oral health issues compared to 19,657 educated in FY 2006-07.

Exhibit 2.3 Overview of OHI Results, Comparing FY 2006-07 to FY 2007-08

Results	Increase (+) or Decrease (-) in numbers served from FY 2006-07 and FY 2007-08		
	Children ages 0-5 years	Pregnant Women	Providers
Oral health screening of children ages 0-5 years coupled with parent education	- 38.4%	- 11.6%	n/a
Children ages 0-5 years and pregnant women who received dental exams	- 4.5%	+ 20.6%	n/a
Children ages 0-5 years and pregnant women with identified oral health issues receive appropriate treatment services/follow-up	+ 11.9% (routine treatment)	+ 34.1%	n/a
	+ 18.1% (specialty treatment)		
Oral health care coordination services to children ages 0-5 years and pregnant women	+ 24.1%	+ 77.5%	n/a
Caregiver education	+ 17.1%	+ 8.7%	+ 50.6%
Provider training	n/a	n/a	- 48.2% (general dentists)
			+ 485.7% (prenatal providers)
			+ 620.0% (primary care providers)

Making a Difference

Early Intervention for the County’s Youngest Children

Both the American Academy of Pediatrics and the American Academy of Pediatric Dentistry recommend that every infant should receive an oral health risk assessment from a qualified pediatric health professional by 6 months of age.^{38, 39, 40} Similarly, the American Academy of Pediatric Dentistry’s guidelines specify that children

³⁸ American Academy of Pediatrics. “Oral Health Risk Assessment Timing and Establishment of the Dental Home.” Pediatrics 111.5 (2003): 1113-1116.

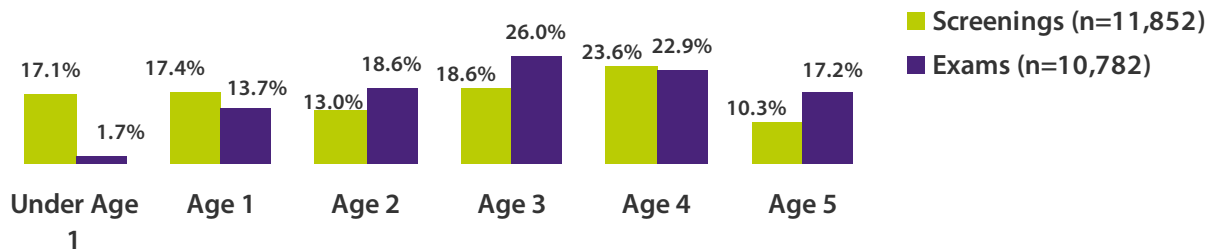
³⁹ American Academy of Pediatric Dentistry. “Guideline on Infant Oral Health Care.” Clinical Guidelines. Chicago, IL: Author, 2004. 68-71.

should visit a dentist for an exam no later than 1 year of age, and routine exams should be repeated every 6 months.⁴¹ Dental exams are a particularly important oral health service since these visits are the foundation of a child’s dental home.

“When I called for my youngest daughter, they gave me an appointment for the next day.”
 – OHI parent

Prior to OHI, the standard practice among OHI partners throughout the County was to initiate dental exams at 3 years of age. OHI has changed that practice within the community clinic system and among private providers as well. OHI also increased training of primary care and prenatal care providers to standardize the practice of initiating exams at 1 year of age. Yet, only 17.1% of children screened in FY 2007-08, whose ages were reported, were under 1 year of age (Exhibit 3.4) – a decrease of nearly 14% from the last fiscal year.^{42, 43} One reason for this large decrease in screenings of children under 1 year of age may be due to Assembly Bill 1433.⁴⁴ AB 1433 requires oral health assessments for children entering public school for the first time, typically children ages 4-5 years of age. There was an increase of 6.5% of children age 4 screened from last fiscal year.⁴⁵ This increase demonstrates OHI partners’ response to assisting families with the State requirement and indicates that the demand for screenings may be beyond what OHI is budgeted to perform. In contrast, the number of exams peak at 3 years of age. This peak is consistent with last fiscal year (24.3% at age 3). This is the age that providers and parents have generally considered to be the appropriate time to initiate dental exams. It may be that more parent education about the importance of a dental exam beginning at 1 year of age is needed.

Exhibit 2.4 Ages of Children Screened and Examined, FY 2007-08



⁴⁰ “Pediatric health practitioners” include pediatricians, family practitioners, nurse practitioners, and physician assistants; in general, any licensed Medi-Cal practitioner.

⁴¹ American Academy of Pediatric Dentistry. “Guideline on Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance, and Oral Treatment for Children.” Clinical Guidelines. Chicago, IL: Author, 2003. 84-86

⁴² OHI programs reported age data for 90.5% of children ages 0-5 years screened and 93.6% of children ages 0-5 years examined. The number of children who were less than 6 months of age at the time of screening was not reported.

⁴³ In FY 2006-07, 30.7% of children screened were under age one.

⁴⁴ Assembly Bill 1433 (effective September, 2006) requires oral health assessments for all children entering public school for the first time (kindergarten or first grade), with a goal of decreasing the number of children with dental disease through early intervention.

⁴⁵ In FY 2006-07, 17.1% of children screened were age 4.

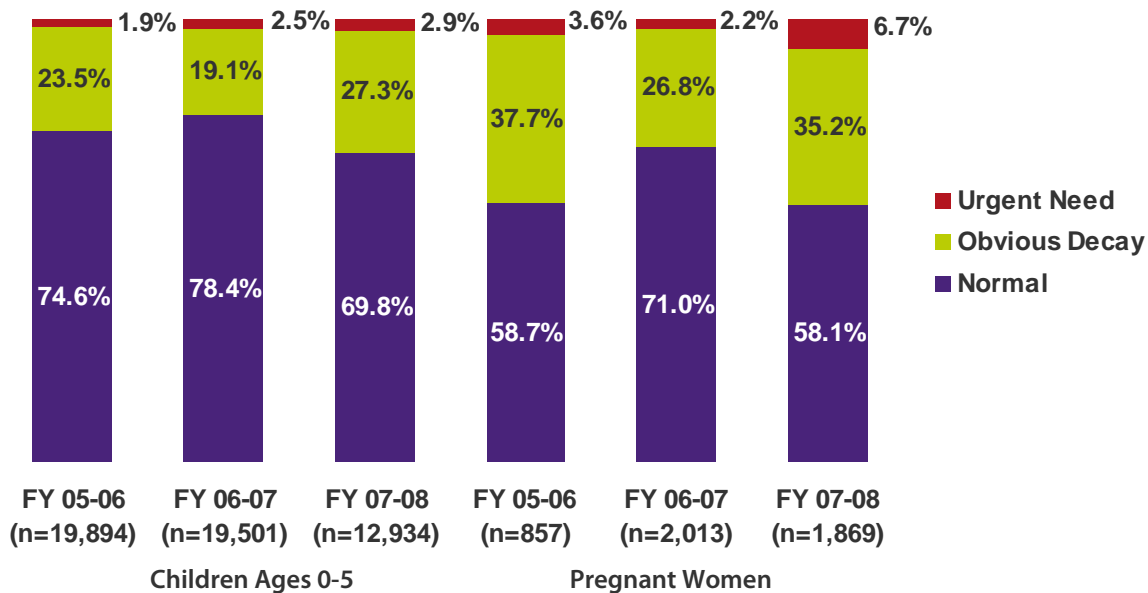
Detecting Previously Undetected Oral Health Concerns

Good oral health is vital for overall health and contributes to an individual's quality of life at any age. Early identification of oral health concerns through screenings and exams, coupled with early intervention is critical since dental decay can be reversed if detected and treated at an early age. Furthermore, providing education about the appropriate preventive and routine oral health care is key to reducing the risk of preventable dental/oral disease.⁴⁶

Results of oral health screenings

Oral health concerns were identified in thousands of children ages 0-5 years and pregnant women through the screenings OHI partners provided during FY 2007-08. OHI partners found obvious decay or urgent dental needs in 30.2% of children ages 0-5 years (an increase of 8.6% from FY 2006-07) and 41.9% of pregnant women (an increase of 12.9% from FY 2006-07) for whom OHI partners reported screening results (Exhibit 3.5).^{47, 48, 49,50}

Exhibit 2.5 Results of Oral Health Screenings
FY 2005-06, FY 2006-07, and FY 2007-08



Results of dental exams

⁴⁶ American Academy of Pediatric Dentistry. Policy on the Dental Home. 2004. Accessed 30 June 2008.

<http://www.aapd.org/media/policies_guidelines/p_dentalhome.pdf>

⁴⁷ No population-based comparison data are available for pregnant women or for children ages 0-5 years at the County-level.

⁴⁸ In California, slightly more than 20% of kindergarteners screened needed early dental care and approximately 4% needed urgent dental care. Dental Health Foundation. Mommy, It Hurts to Chew, the California Smile Survey; An Oral Health Assessment of California's Kindergarten and 3rd Grade Children. Oakland, CA: Author, 2006.

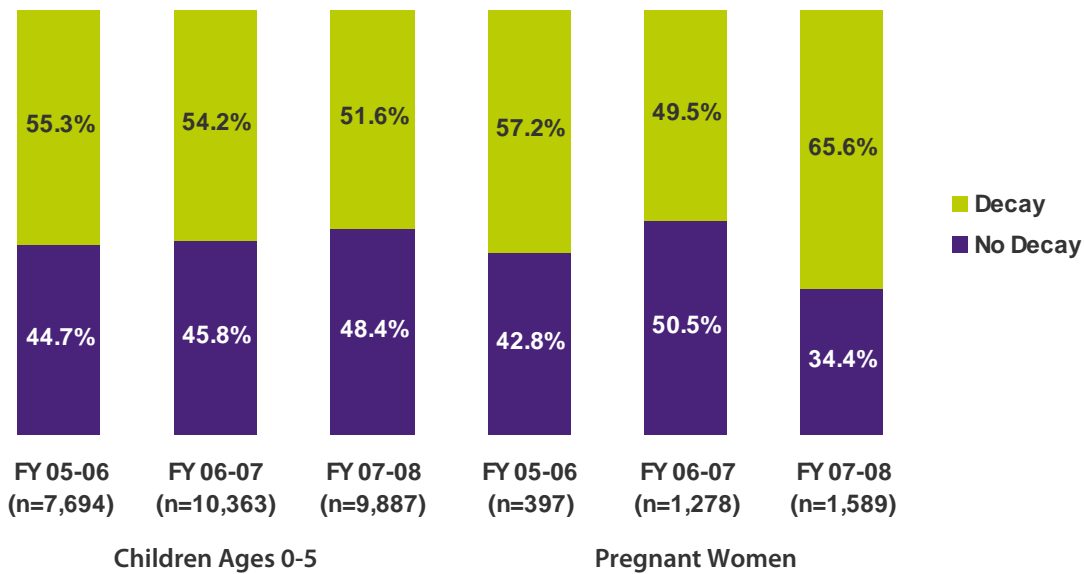
⁴⁹ Dental Health Foundation screenings and OHI screenings do not use the same protocol, but both use similar methods to screen children and categorize the extent of decay in three roughly analogous categories.

⁵⁰ In FY 2005-06 OHI programs reported age data for 80.6% of children ages 0-5 years and 74.5% of pregnant women screened. In FY 2006-07, OHI programs reported age data for 91.8% of children ages 0-5 years and 91.9% of pregnant women screened. In FY 2007-08 OHI programs reported age data for 98.8% of children ages 0-5 years and 96.6% of pregnant women screened.

Dental exams confirmed decay in a little more than half of children ages 0-5 years and a little less than two-thirds of pregnant women for whom OHI partners reported exam results.⁵¹ The number of children ages 0-5 years confirmed to have decay has declined over the last 3 years, while the number of pregnant women confirmed to have decay declined in FY 2006-07, but then increased in FY 2007-08.⁵² Without knowing how many individuals are “recall exams,” meaning how many individuals are returning patients, it is difficult to draw conclusions about why these figures have changed. This may be an area for further study for this initiative.

OHI Specialty Treatment Pool
 Two providers currently perform the treatment for the OHI specialty treatment pool and treated 63 unduplicated clients in FY 2007-08.

Exhibit 2.6 Results of Dental Exams
 FY 2005-06, FY 2006-07 and FY 2007-08



Bringing Patients into the Oral Healthcare System for the First Time or After a Delay

While clinical guidelines for pediatric care recommend children have a dental exam every 6 months, Healthy People 2010 sets the more modest goal of annual dental visits, aiming for 57% of children and adolescents to have visited the dentist within the past year.^{53, 54} To simplify data collection, OHI partners reported the length

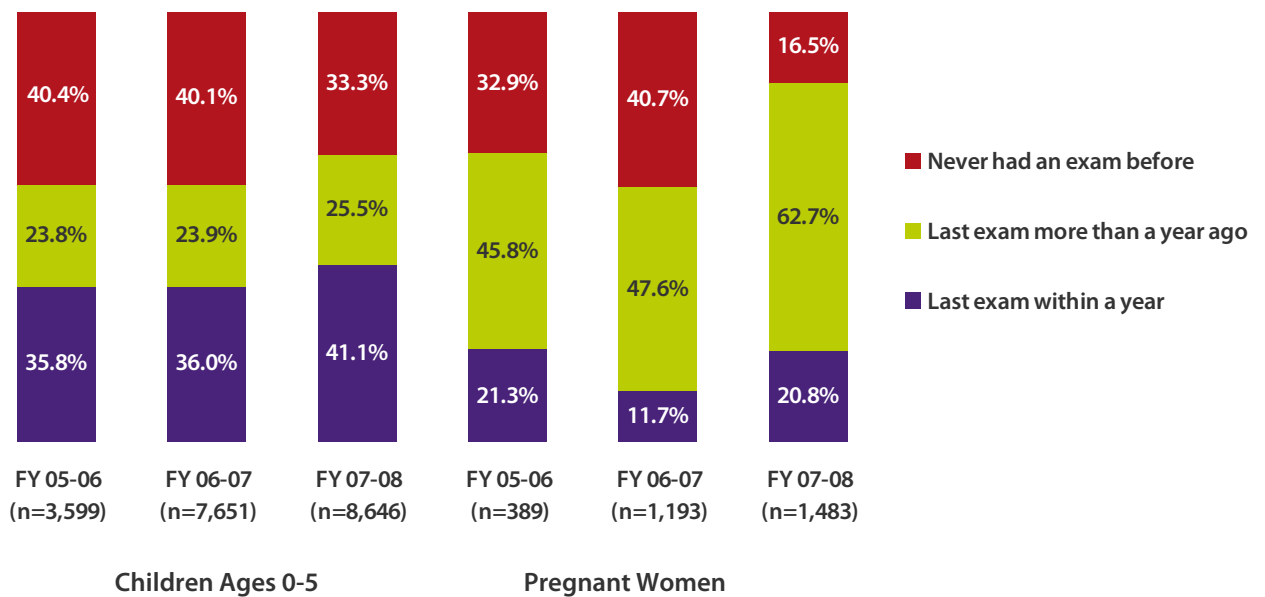
⁵¹ Individuals examined may or may not have had an oral health screening from an OHI partner prior to the exam.
⁵² In FY 2005-06 OHI programs reported age data for 63.1% of children ages 0-5 years and 53.7% of pregnant women examined, in FY 2006-07, OHI programs submitted results for 85.9% of children ages 0-5 years and 85.3% of pregnant women examined, and in FY 2007-08, OHI programs submitted results for 85.8% of children ages 0-5 years and 87.9% of pregnant women examined.
⁵³ Healthy People Objective 21-10 includes children over age two. Both the American Academy of Pediatric Dentistry and the American Academy of Pediatrics recommend children begin annual dental exams by their first birthday. Therefore, by age two, a child should have had an exam within the past year. For this reason, OHI programs do not report last dental exam data for children under age two.

of time since patients' last dental exams in the following three categories: (1) never visited the dentist; (2) last visited the dentist more than one year ago; (3) last visited the dentist within the past year. The findings presented below indicate that OHI is bringing dental services to children and women who need them, and who may not receive this necessary care in the absence of such an effort.

There was an increase for the second year among children ages 2-5 years who had an exam within the last year. This increase may indicate that OHI partners are having more success with recall visits. Additionally, for the second year, there was a decrease in the number of children ages 2-5 years who had never received an exam (Exhibit 3.7). These findings for children ages 2-5 are lower than figures for the county and state. In San Diego County, 60.5% of children ages 2-5 years had visited the dentist within the past year, according to the 2005 First 5 Family Survey.⁵⁵ A recent statewide study found that 69.9% of kindergartners had been to the dentist within the past year, 12.9% had been to the dentist before but it was more than a year ago and 17.2% had never been to a dentist.⁵⁶

There has been an increase in the number of pregnant women reported having an exam more that a year ago for the second year; however, those reported to have never had an exam before decreased substantially from 40.7% in FY 2006-07 to 16.5% in FY 2007-08. Additionally, pregnant women reported having an exam within the last year increased from 11.7% from FY 2006-07 to 20.8% in FY 2007-08. This increase may be attributed to the concerted outreach efforts to pregnant women and prenatal care providers.

Exhibit 2.7 Lapse of Time Since Last Dental Exam,



⁵⁴ Office of Disease Prevention and Health Promotion. "With Understanding and Improving Health and Objectives for Improving Health." Healthy People 2010: Volume II. Washington, DC: U.S. Department of Health and Human Services, 2000. Accessed 13 July 2006. <www.healthypeople.gov>

⁵⁵ First 5 San Diego. San Diego Family Survey. San Diego, CA: Author, 2005.

⁵⁶ Dental Health Foundation. Mommy, It Hurts to Chew, the California Smile Survey: An Oral Health Assessment of California's Kindergarten and 3rd Grade Children. Oakland, CA: Author, 2006.

Making the Connection

Providing dental services is core to the design of the Commission oral health efforts. Significantly, OHI has also been the catalyst for important system-wide changes that have the potential to affect the oral health of entire populations in San Diego County. While the local oral health community has pressed for these changes for many years, OHI has helped spark the system-wide collaboration needed to affect these changes.

The Context: OHI's Systems-Level Impact

OHI's six areas are interrelated – activities in one area can strengthen outcomes in other areas. OHI is notable in that it has both breadth and depth. With these advantages, OHI reaches thousands of individuals each year and addresses oral health issues at many levels – in prevention and treatment, as well as improving the platform for oral health services. It is useful to look at OHI in terms of a model called the “Spectrum of Prevention” (Exhibit 3.8). The Spectrum is a framework for discussing the multiple components necessary for a robust prevention system. It identifies six complementary levels for strategy development, that, when used together, “produce a synergy that results in greater effectiveness than would be possible by implementing any single activity or linear initiative.”⁵⁷ The Spectrum asserts that activities at one level will lead to interrelated actions and outcomes at other levels. For example, strengthening parents' knowledge of the importance of children's oral health (level 1 on the Prevention Spectrum) can lead to an increased demand for dental exams, which requires more providers to be educated about how to manage the behavior of young children (level 3). In turn, an increased need for treatment services that some families cannot afford necessitates policies and legislation to fund low-cost services (level 6). The table demonstrates how the Commission's oral health projects align with the Spectrum model for a comprehensive prevention system.⁵⁸

This prevention spectrum, when added to the treatment services that are also funded by First 5, are the foundation for developing a strong pediatric oral health system of care in San Diego County. In FY 2007-08, the Commission and OHI have taken steps, on a systems level, towards strengthening the existing framework of care, particularly in the areas of community water fluoridation, implementation of a Caries Risk Assessment (CRA), implementation of the Contract Monitoring and Evaluation Data System (CMEDS) database, and training to general dentists as well as primary care and prenatal care providers, all of which increases the clinics capacity to provide a dental safety net for young children and pregnant women. The below section highlights what strides have been made in these areas.

⁵⁷ Prevention Institute, “Spectrum of Prevention”,

http://www.preventioninstitute.org/pdf/1PGR_spectrum_of_prevention_web_020105.pdf, Accessed August 30, 2007.

⁵⁸ Cohen L, Swift S. The spectrum of prevention: developing a comprehensive approach to injury prevention. *Injury Prevention*. 1999;5:203-207

Exhibit 2.8 The Spectrum of Prevention

The Spectrum of Prevention	Oral Health Initiative Examples
6. Influencing Policy & Legislation: Developing strategies to change laws and policies to influence outcomes	→ Commission exploration of community water fluoridation
5. Changing Organizational Practices: Adopting regulations & shaping norms to improve Health	→ Implementation of a Caries Risk Assessment at dental exams; Implementation of the CMEDS database for individual client level data collection; → Dentists providing exams at age one; Pediatricians providing dental screenings and referrals beginning at age 1; OB/GYNs providing dental screenings and referrals to pregnant women
4. Fostering Coalitions & Networks: Convening groups & individuals for broader goals and greater impact	→ OHI Care Coordinator meetings; OHI Dental Director meetings
3. Educating Providers: Informing providers who will transmit skills and knowledge to others	→ Training for prenatal and primary care providers, general dentists
2. Promoting Community Education: Reaching groups of people with information and resources to promote health	→ Education for parents/caregivers of children ages 0-5 years, pregnant women, and child care providers
1. Strengthening Individual Knowledge and Skills: Enhancing an individual's capability of preventing illness	→ Education for parents/caregivers of children ages 0-5 years, pregnant women, and child care providers

Community Water Fluoridation

Many studies have established that fluoridating public water supplies is the most effective way to prevent and reduce tooth decay at the community level.⁵⁹ In 1999, the Surgeon General listed fluoridation as one of the 10 greatest public health successes of the 20th century.⁶⁰ Despite being one of the most populated states in the country, California ranks 45th in fluoridated public water systems. San Diego County is the largest metropolitan area in the United States that does not have a completely fluoridated water system.^{61, 62, 63}

Members of the local oral health community have advocated for decades to implement community water fluoridation to the San Diego area. With its commitment to children's oral health, the Commission allocated a \$5.4 million investment in community water fluoridation, and was supported by an additional \$1 million grant from The California Endowment.

⁵⁹ American Dental Association. Fluoridation Facts: Celebrating 60 Years of Water Fluoridation. 2005.

⁶⁰ American Dental Hygienists' Association. CDC Releases Guidelines on Fluoride Use to Prevent Tooth Decay. 2005. http://www.adha.org/profissues/cdc_fluoride_guidelines.htm

⁶¹ Most populous state & least populous state. People. Populations Estimates and Projections. 2005. <https://ask.census.gov>

⁶² Centers For Disease Control. Fluoridation Statistics 2002: Status of Water Fluoridation by State. <www.cdc.gov/fluoridation/fact_sheets/states_stats2002.htm>

⁶³ Fluoridation of San Diego County Water Supply. County of San Diego 1999/2000 Grand Jury Reports. 2000. www.sdcounty.ca.gov/grandjury/reports/1999_2000/flouride.html

Key to the timing of this project is the fluoridation of the drinking supply treated by the Metropolitan Water District (MWD). As a result of the complex water supply system of this area, San Diego County was to become a patchwork of fluoridated communities, with varying fluoride levels from water district to water district and resulting in communities with suboptimal, unregulated levels of fluoride.⁶⁴

This fluoridation effort will begin in the City of San Diego which would benefit the greatest number of children 0-5 years in the County (approximately 112,210 children 0-5 years or 41.2% of total 0-5 population in the County).⁶⁵ The effort will then move to other areas of the county, as funds are available.

“We have so many water districts and it’s only the main district [that is fluoridating]. I am thinking a lot of our patients are not getting it [fluoridated water]. [In] most of the areas we serve, there is no fluoridated water.”

–OHI Dental Director

While most dental directors interviewed were familiar with the fluoridation efforts by MWD and augmented by First 5 San Diego, some expressed concern and some frustration about the areas being fluoridated, especially concerning the unmet needs. As one OHI Dental Director stated, “I don’t think South Bay or parts of Chula Vista are ever going to have fluoridated water at this time. The push is out there, but I don’t think that our areas are being addressed appropriately.”

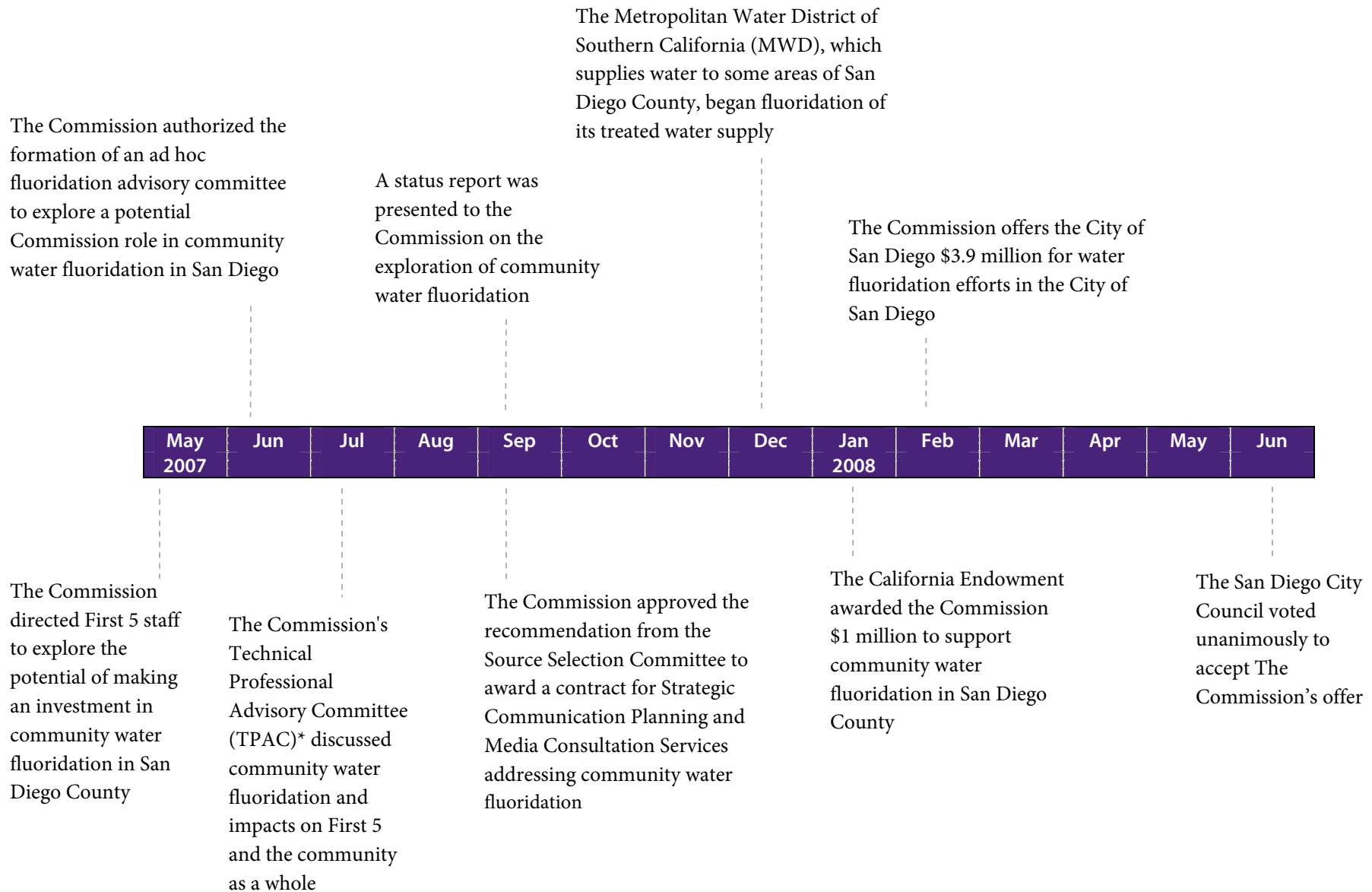
Exhibit 3.9 illustrates the Commission’s history of involvement in regards to community water fluoridation in San Diego County.

⁶⁴ First 5 San Diego. Community Water Fluoridation. San Diego, CA: Author, 2007.

⁶⁵ San Diego Association of Governments. Accessed 27 August 2008.

<<http://www.sandag.org/index.asp?fuseaction=home.home>>

Exhibit 2.9 Community Water Fluoridation Timeline



*The committee includes a technical expert (such as a water engineer), members of First 5's Technical and Professional Advisory Committee (TPAC), individuals from the public health sector, and experts in community water fluoridation

Caries Risk Assessment: a New Tool for Care Coordination

Dental caries is an infectious disease in which acid-forming bacteria (found in dental plaque) damage teeth. If treated, dental caries can be reversed before a cavity forms on the tooth.⁶⁶ One way to ensure early identification of dental caries risk is to implement a Caries Risk Assessment (CRA), a process recognized by the American Academy of Pediatric Dentistry (AAPD) as an essential element of contemporary clinical care for infants, children, and adolescents.⁶⁷ The concept of caries risk assessment as a strategy for managing dental caries has evolved over the past 20 years and implementation of a CRA will provide OHI clinics with a standard risk tracking mechanism for children ages 0-5 years and pregnant women. Ultimately, preventing caries through risk assessment is a more efficient method to address the issue of dental disease than having to provide children with painful and costly treatments.

The advent of the CMEDS data system was the perfect opportunity to implement the CRA because the database will allow for tracking of individual client level data. Beginning in FY 2008-09, OHI partners will implement a standard CRA protocol modeled after existing processes.⁶⁸ The CRA will be administered at all dental exams and clients will be classified as having a low, moderate, or high risk. Those identified as high risk will be referred to the OHI Dental Care Coordinators for intensive care coordination and tracked in the CMEDS database.

The CRA will enable OHI to focus on and take a deep look at the population with the most significant costs to the oral health care system. Through the care coordinator network, trends and best practices will be identified and discussed. OHI is a national leader in implementing the Caries Risk Assessment to manage oral health care and improve outcomes for children and pregnant women most affected by dental disease.

“I am excited that our Evidence-Based work on the Caries Management by Risk Assessment [CAMBRA]* is trickling down to the safety net of providers. CAMBRA is a timely and innovative model in Oral Health across the country and I am pleased about the direction of San Diego County’s [First 5] Oral Health Initiative. It’s definitely headed down the right path of disease prevention management model by including an individual risk tracking mechanism for the patients in their clinics.”

– Dr. Francisco Ramos-Gomez,
Professor, Section of Pediatric Dentistry,
UCLA School of Dentistry and Researcher for the UCSF/UCLA
Center to Address Disparities in Children’s Oral Health,
Diplomat of the American Board of Pediatric Dentistry,
President Elect Hispanic Dental Association

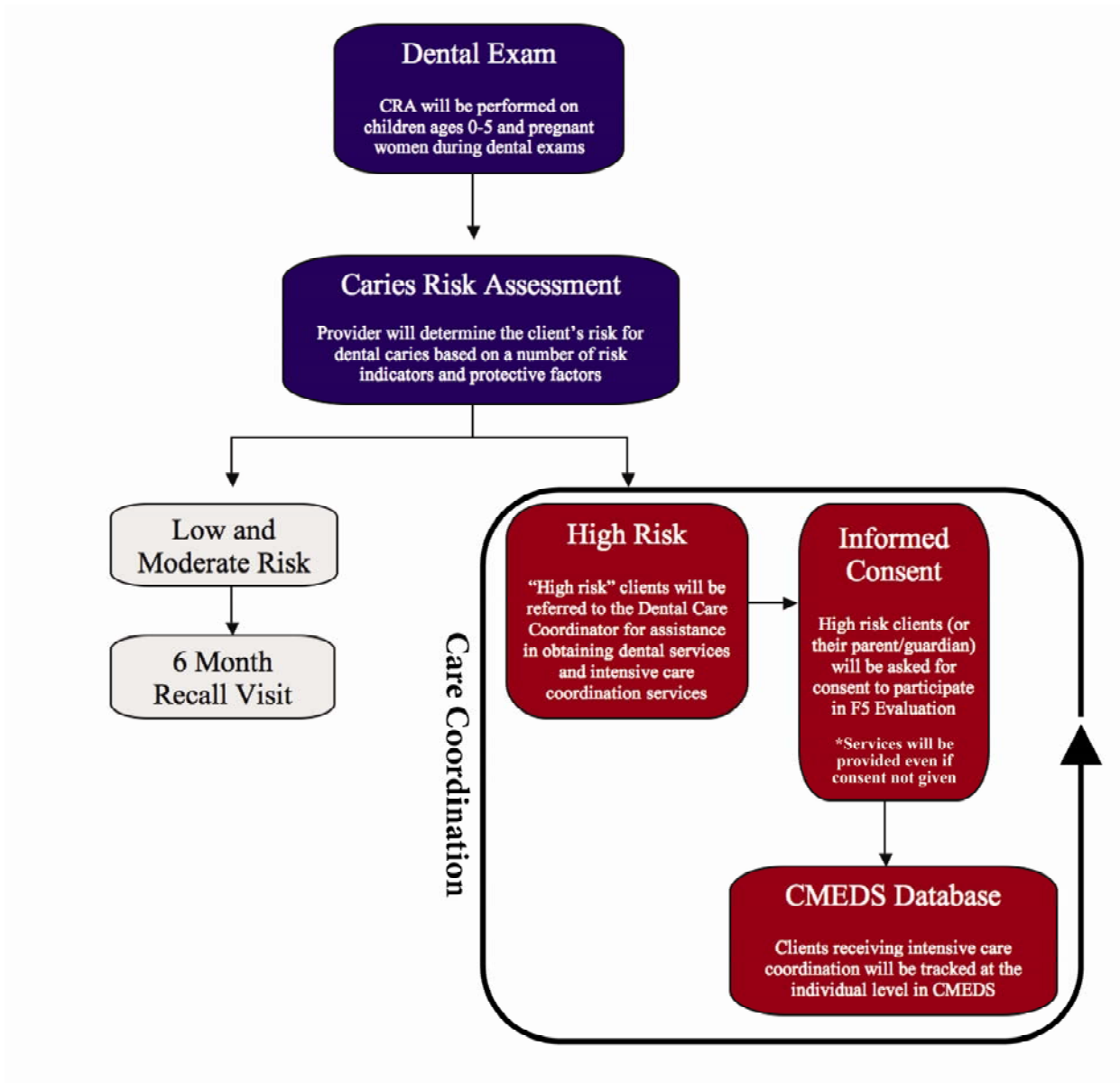
*The CRA is based on the CAMBRA model

⁶⁶ Pediatric Dental Health. “Management and Prevention of Dental Caries in Children,” 2004. Accessed 30 June 2008. <<http://dentalresource.org/topic54denatlcaries.html>>

⁶⁷ American Academy of Pediatric Dentistry. Policy Statement on the use of a Caries-Risk-Assessment Tool, 2002. Accessed 30 June 2008. <<http://www.aapd.org/pdf/policycariesriskassessmenttool.pdf>>

⁶⁸ Existing tools and processes include those developed by: Francisco Ramos-Gomez, DDS, MS, MPH; James Crall, DDS, SCD; First Smiles Program; and Pacific School of Dentistry.

**Exhibit 2.10 Caries Risk Assessment & Focused Care Coordination:
The Intensive Care Coordination Model**



The Care Coordination model was created by OHI Dental Care Coordinators in collaboration with the Council and First 5

Connecting the Specialties: Increasing the Capacity to Treat Young Children and Pregnant Women

As part of its role, OHI sponsors an annual conference for oral health professionals. This year, a special outreach was done to include medical providers, including physicians and nurses. Ensuring a clear connection between medical and dental providers is critical for early prevention as medical doctors often see clients more regularly at well-child and maternity visits. Physicians and nurses can reinforce the importance of early dental care to their patients, while dental providers can provide critical preventive care services for the medical establishment.

In all, more than 100 professionals participated.⁶⁹ Conference topics included dental emergencies, pregnant women treatment myths and considerations, prenatal oral health and behavior management techniques. 19.6% of conference survey participants were from the medical field. Participant evaluations revealed: (n=84)^{70,71}

- **Building a foundation to treat children ages 0-5 and pregnant women:** 66.0% gained knowledge about providing treatment to pregnant women, 92.6% gained knowledge about providing infant/child oral health education to parents and caregivers, 94.0% of medical providers gained knowledge about when to refer children ages 0-5 years and 93.9% of dental providers gained knowledge about when to treat children ages 0-5 years.

Reflecting on Results

Over a quarter of survey respondents from the April 2008 training also attended the February 2007 OHI-sponsored provider training. These repeat attendees commented about how they and their practices have changed since attending the first training a year ago:

- “[I] changed [the method] of treatment planning [for] prenatal patients”
- “[I know] how to motivate parents to listen”
- “[I] am more comfortable treating children”
- “I just feel more confident giving advice and attending to pregnant women”
- “I provided better treatment to the kids 0-5 and the pregnant women”
- “I see more kids in the clinic”
- “[I] spend more time about patient education and improved my management behaviors for kids”

These actual changes speak powerfully to the importance of provider training as a strategy to improve the oral health care system in San Diego County for children ages 0-5 years and pregnant women.

“Medical and dental need to practice teaching patient information from both fields.”

– OHI Provider Training Attendee

⁶⁹ Additional dental, primary care and prenatal providers participated in smaller training events during the fiscal year.

⁷⁰ Participants completed a survey following the training. There was no initial survey or pre-test to compare post-training survey results. This approach was employed due to the limited time available to complete the survey during the training.

⁷¹ Valid percents are reported. ‘Not applicable’ responses were coded as invalid and not reported. Additionally, some questions were only asked on dental providers.

- **Planning to increase services to children ages 0-5 years and pregnant women:** 92.5% of dental providers indicated they were more likely to encourage treatment in pregnant women and 92.9% of dental providers indicated they were more likely to treat children ages 0-5 years.

Providing a dental safety net for San Diego County’s children and pregnant women

“[Specialty treatment] is a necessity for people with low incomes. [My daughter’s] work would have cost me thousands of dollars!”

–OHI Parent

The majority of OHI clinics are Federally Qualified Health Centers (FQHCs), also referred to as Community Health Centers, which serve the underinsured and uninsured populations in San Diego County. OHI clinics rely on funding sources such as Denti-Cal and First 5 in order to provide a dental safety net for young children and pregnant women.

According to the California HealthCare Foundation, “California’s reimbursement rates for publicly funded dental care are among the lowest in the nation, which is well below the fees charged by most dentists. As a result,

less than half of dental practices accept Denti-Cal patients, and access to specialty care, such as pediatric dentistry and orthodontics, is very limited.”⁷² These low reimbursement rates coupled with the immediate threat of cuts to adult Denti-Cal discourage dentists in private practice from treating Denti-Cal enrollees.⁷³

These low reimbursement rates and threats of cuts impact OHI partners and the populations they serve in many ways:

- OHI partners rely on income from Denti-Cal (in addition to funding from other sources such as First 5) to sustain clinic operations (i.e., staffing and office hours).
- Patients currently being treated by private dentists (who accept Denti-Cal) will likely turn to OHI partners for their care as more private dentists stop accepting Denti-Cal. Interviews with OHI Dental Directors revealed how OHI clinics are affected by the shortage of dentists who accept Denti-Cal and serve young children within San Diego County:

- There are few pediatric dentists and specialists who will accept referrals of Denti-Cal clients.
- There are limited numbers of clinics in San Diego that accept Denti-Cal and many are not conveniently located requiring patients to travel. This increases waiting periods.
- Two Dental Directors stated that they often need to refer Denti-Cal clients to practices in other counties.

“We don’t have a pediatric dentist [on staff]. Our general dentists have experience with children. When we have to refer out, there are very few that will take our patients and most of them are down South. Our patients don’t have transportation to the more extensive treatment that they need.”

–Health Center Administrator

⁷² California HealthCare Foundation. Denti-Cal Facts and Figures: A Look at California’s Medicaid Dental Program. 2007. Accessed 30 June 2008. <<http://www.chcf.org/topics/medi-cal/index.cfm?itemID=131431>>

⁷³ California HealthCare Foundation. Expanding Access to Dental Care Through California’s Community Health Centers. 2008. Accessed 20 August 2008. <<http://www.chcf.org/topics/view.cfm?itemID=133725>>

OHI funding benefits clinic operations (see textbox) and also allows clinics to increase their capacity as a dental safety net in their role of providing an integrated model for the oral health care of children ages 0-5 years and pregnant women.

Reflecting on Results How OHI Benefits Clinics

When asked how participating in OHI has benefited their clinic, Dental Directors' responses included:

- “[OHI has] benefitted the clinic a lot. It is an integrated model – patients are receiving comprehensive health care. We find that they are taking care of themselves overall.”
- “We give free screenings and that draws patients in. And we do community events, and this offers the opportunity to get this population into the clinic.
- “The tertiary funds to help kids where there was never a funding source [before].”
- “OHI has helped by bounding other community health centers to each other. It’s helpful to know what works for them and what doesn’t.”
- “Children have more access to dental care. [There is more] dental education to the children and the parents. [We have] increased our visits, which increase our financial ability. [OHI] has been an excellent thing – I believe a very positive thing.”
- “I think it’s benefitted the community. I think it’s a great program.”

A recent study conducted by the California HealthCare Foundation with six community health centers in California revealed that, although these clinics have the potential to expand dental care for low income Californians, they do not have the capacity to meet the dental care needs of their populations. Barriers ranged from insufficient capital resources to difficulties hiring high quality professional staff and a patient-payer mix that does not allow for adequate reimbursement. The study specified six recommendations for overcoming these barriers (exhibit 3.11).⁷⁴ Significantly, the OHI system currently addresses five out the six recommendations, which helps strengthen the safety net for oral health services in San Diego County.

⁷⁴ California HealthCare Foundation. Expanding Access to Dental Care Through California’s Community Health Centers, 2008. Accessed 20 August 2008. <<http://www.chcf.org/topics/view.cfm?itemID=133725>>

Exhibit 2.11 OHI's Alignment to Dental Safety Net Recommendations

CHF Recommendation	The OHI System
Creation of a peer networking program that would allow clinic dental directors and executives to discuss clinical, operational, administrative, financial, and policy issues.	The OHI lead agency (the Council) fosters peer networks by conducting meetings with OHI Dental Directors, OHI Dental Care Coordinators and clinic administrators.
Wider dissemination of "best practices" for clinic efficiency and cost saving, such as bulk purchasing of supplies and services.	The OHI lead agency maintains a group purchasing program, which allows OHI clinics to purchase supplies at a discounted rate.
Clarifications of reimbursement policies for FQHCs on allowable services, billing rules and procedures, and location of services.	The OHI lead agency holds trainings for community health center staff to address billing issues with the State of California Denti-Cal program.
Greater funding for capital funds and start up costs.	OHI's Oral Health Capacity Building Projects has provided capital funding for OHI clinics.
Support for programs which encourage dental student professionals to practice in a clinical setting, such as externships, residencies, and loan repayment.	One OHI partner has collaborated with other oral health agencies to establish a Pediatric Residency Program.
Further research on the ability of health centers to provide inducement to attract qualified dentist through partnerships with other oral health centers, use expanded-scope dental professionals, and streamline licensing and regulatory requirements for expanding or opening new clinics.	No action currently planned.

Update on Recommendations from FY 2006-07

The following actions were recommended in the Commission's Annual Evaluation Report for FY 2006-07. As described below, OHI has taken strides to address many of these areas.

Recommendation 1: Play a lead role in organizing key players to respond to AB 1433 requirements.

Update: AB 1433¹ has benefited OHI partners. Interviews with OHI Dental Directors revealed that AB 1433 has affected many of the clinics in a positive way. It brings more children into the clinics, helping to establish a dental home and getting children into the system. Outreach was conducted in FY 2007-08 to help with the completion of the required form. Although there has been challenges working with the school districts, OHI clinics have created partnerships with some schools and agencies (i.e., Head Start) to provide the required screening. However, AB 133 is an unfunded mandate, and OHI services have been critical in helping families meet this requirement.

Recommendation 2: Sustain and expand provider capacity building efforts.

Update: In FY 2007-08, OHI provided a number of professional development opportunities including a conference and numerous training programs provided by the Council, including training sessions on the California State Denti-Cal program to address billing issues and sealant trainings for Registered Dental Assistants. The Dental Director and Care Coordinator meetings are forums for sharing best practices and improving care in a collaborative fashion.

Recommendation 3: Maximize the potential benefits of community water fluoridation and expand the circle of local support for oral health services.¹

Update: The Commission has allocated \$6.4 million toward this effort, and completed a technical study of all water districts needing fluoridation. The Commission authorized funds for the capital costs of water fluoridation and 2 years of operations and maintenance funds for the City of San Diego. It will be crucial to secure a commitment from the City of San Diego to fund ongoing operations and maintenance for up to 20 years.

Recommendation 4: Explore how to offer pregnant women more individualized, one-on-one education about the importance of oral health and low-cost dental services.

Update: In FY 2007-08, OHI increased outreach to primary and prenatal care providers to better serve this population, and the annual OHI conference also invited OBGYN's to attend. Additionally, OHI Dental Care Coordinators partnered with prenatal education providers to provide oral health education to expecting parents.

Recommendation 5: Consider a treatment pool or other funding mechanism for pregnant women. Update: Due to limited funding, a treatment pool for pregnant women was not established in FY 2007-08 and will continue to be explored by OHI.

Recommendations

In the future, the Commission may wish to consider the following recommendations:

- + **Continue to consider a treatment pool or other funding mechanism for pregnant women.** Even when they know the benefits and where to go for dental health care, many pregnant women are unable to access dental treatment because they cannot afford the costs of treatment, or the scope of services for pregnant women covered by Medi-Cal is too limited. First 5 San Diego may continue to explore how Medi-Cal funds dental care for pregnant women and identify how to align its funds to maximize pregnant women's access to dental care. It may also wish to explore advocating at the state level for Medi-Cal funding that is more responsive to the oral health needs of pregnant women.
- + **Expand the pool of specialty providers that contract with the treatment pool for children ages 0-5 years.** OHI Dental Directors and Dental Care Coordinators expressed the need for an expanded pool of specialty providers for referrals to the OHI treatment pool. This is of particular concern for clinics located in North San Diego County where distance is the largest barrier to treatment.
- + **Investigate strategies to recruit and retain dentists or other dental professionals in Community Health Centers.** Staff turnover and the shortage of dentists impact OHI clinics and the patients they serve. It would be beneficial for OHI to investigate ways of recruiting and retaining dental professionals to practice in community health centers, such as partnering with dental schools or providing externships and loan repayments.
- + **Finalize the caries risk assessment tool and intensive care coordination model and provide ongoing training and technical assistance for CMEDS to maximize the capability of the database.** To successfully implement this groundbreaking practice at OHI clinics countywide, it will involve a pilot phase, ongoing feedback, training, and improvement.
- + **Connect Dental Care Coordinators to other First 5 programs.** Interviews with OHI Dental Directors revealed the majority were either not aware of, or not certain if, their clinic receives funding for, or works with, other First 5 initiatives. The Dental Care Coordinators are well positioned to share information about other First 5 initiatives with their clients and with other professionals in the clinic. At minimum, Care Coordinators should utilize the First 5 warmline at 211 San Diego for referring families of these high risk children who may benefit from other important health or early education services funded by First 5.
- + **Continue to foster partnerships with the medical community.** In FY 2007-08, OHI made strides in connecting with the medical community. The medical community has been responsive to OHI's outreach and partnerships between the medical and dental community should continue to be explored and strengthened. "The medical-dental partnership is crucial because when physicians recommend a dental visit, patients are more likely to follow up."⁷⁵
- + **Implement a social marketing campaign to change community norms around oral health.** In FY 2007-08, OHI continued to provide oral health education and training. Education on community water fluoridation is of particular importance at this time as the City of San Diego moves forward with its water fluoridation efforts. Many families, particularly members of various immigrant communities, will need information concerning the safety benefits of community drinking water. Continued education efforts coupled with a social marketing campaign will help change community norms around oral health.

⁷⁵ California HealthCare Foundation. The Good Practice: Treating Underserved Dental Patients While Staying Afloat, 2008. Accessed 20 August 2008. <<http://www.chcf.org/topics/view.cfm?itemid=133706>>

- + **Explore the possibility of tracking and reporting recall exams.** It is difficult to draw conclusions about why results of dental exam figures have changed from year to year without knowing how many individuals are returning patients (recalls). It would be beneficial to explore tracking these returning patients as well as the reason for the return visit. CMEDS may begin to explore this possibility for high risk patients.

A Final Word about the Oral Health Initiative

In FY 2007-08, OHI programs delivered crucial preventive and restorative dental services to over 10,000 children ages 0-5 years and thousands of pregnant women. One of OHI's greatest accomplishments this fiscal year is the increase of care coordination services particularly for pregnant women. OHI providers increased care coordination efforts for children ages 0-5 years by 24.1% and pregnant women by 77.5%. Direct services, remained central in FY 2007-08 and there was a focus on increasing outreach to the medical community.

OHI partners also provide a dental safety net for young children and pregnant women in San Diego County and their scope extends far beyond the provision of direct services (i.e., screenings, exams and treatment). As the Initiative moves into its fourth year, it is notable that OHI's system level improvements have raised community knowledge about oral health. These improvements include care coordination, parent and caregiver education, provider education, capacity building efforts, capital projects, and a specialty treatment pool for children. San Diego County's First 5 Oral Health Initiative offers a ready platform for any intervention or services that may be necessary to compliment and enhance the community-wide changes that are taking place in the oral health arena.

Case Study 2

Learning the Importance of Oral Health*

Rosario's Family

Rosario is a grandmother in her sixties and has raised seven children of her own. They have all grown into adults and lead their own lives, living in either San Diego or Mexico. Rosario thought she was finished raising children until her daughter was deported to Mexico and she took in three of her sixteen grandchildren ages 4, 5, and 11. Soon after Rosario received the children, she attempted to enroll the younger children, Lola and Oscar, into Head Start. It was here that she faced some unexpected health barriers and turned to First 5 San Diego funded services for help.

Oral Health Prerequisites

To be enrolled in Head Start, a physical exam is required for the children. To obtain this physical exam, Head Start referred Rosario to La Maestra, a First 5 San Diego funded clinic, for a routine physical. The results showed that both children had poor dental health. Lola had nine cavities, while Oscar had six. Oscar's cavities

“What a problem that a child has his teeth bad...And people with low resources, we need. Because it wasn't \$500. It was thousands.”

- Rosario, First 5 Parent

were easy for the dental health provider to fix because he was relaxed during the procedures. Rosario enrolled him in Head Start shortly thereafter. However, Lola, the younger of the two, was so tense that the health providers tried unsuccessfully three different times to fix her cavities. After these fruitless attempts to treat Lola, La Maestra staff coordinated a meeting between Rosario and the clinic's dental coordinator, Selma. Shortly thereafter, Rosario learned of the First 5 funded Oral Health Initiative (OHI) specialty treatment pool that could assist Lola.

Hospitality at the Hospital

When Rosario voiced to Selma, “I don't know what I am going to do because I don't have insurance or anything and the girl is not well.” Selma began the process of enrolling Lola into the (OHI) specialty treatment pool. Rosario recalls that Selma “...did all my paperwork” and was able to get Lola transferred to a specialist at a hospital. At the hospital, Rosario received an appointment for Lola very quickly. “...They attended [to] me quickly because to be able to go into Head Start she had to have a clean health record,” Rosario said. With First 5 funding, Lola received sedation and the specialists were able to complete all of the work she needed without having to remove any of her teeth.

Rosario was so grateful for Selma's help:

“Thank God Selma contacted me and that's it. They can help her and, yes, thank God, they could. The girl is doing very well... What a great heart Selma has because she worried about [the] kids! ...she's the one who helped me a lot to get into that program.”

After Lola completed the procedure at the hospital, Rosario received additional health information for the children on behalf of First 5 from the La Maestra clinic. The information taught the children how to brush their teeth in the morning and at night, and they also provided them with tooth brushes.

Moving Forward

Rosario noted that an ongoing concern for her is the lack of dental insurance for her grandchildren. This is primarily a result of the legal barriers she faces to enrolling the children in Medi-Cal, since she does not have legal custody, coupled with a low-income that restricts her from purchasing health insurance for all three children. Rosario intends to schedule a follow-up appointment for Lola. She feels very comfortable at the clinic because there are no language barriers. Overall, Rosario has had a positive experience at La Maestra. She finds them to be “very humane,” providing services for her when she had no other options.

**All names were changed to protect confidentiality*

“Those people in those clinics help people very much. . Just like us with low-resources that...any little thing, any doctor...one makes the sacrifice and with little payments, one can pay. . But they have been able to help me”

- Rosario, First 5 Parent