Building a Community Dental Health Network
75% Cavity Free 5 Year Olds by 2020

UCSF DPH 175-February 28, 2017

Kim Caldewey, PA, MPH
Dental Health Program Manager
Dental Health: A Public Health Approach

• California Dental Health Data:
  – Children
  – Pregnant Women

• Sonoma County Data:
  – 2014 Sonoma Smile Survey
  – Dental Emergencies: ER and PDI

• Dental Health Network

• Strategic Plan

• Current Activities
Tooth Decay

- Tooth decay is the number one health problem for children in California – five times more prevalent than asthma; eight times more prevalent than hay fever; and nearly 13 times more prevalent than bronchitis.

- Poor children and children of color are much more likely to have tooth decay and suffer the consequences of untreated disease.

**Economic Impact to Schools**
California children miss 874,000 school days each year due to dental problems, costing schools more than $29 million in lost revenues.
Dental Caries Experience in Children: California vs. Healthy People 2020 Baseline and Targets

- Nearly 54 percent of kindergarten children and over 70 percent of third graders have a history of tooth decay
- Prevalence of tooth decay in California children is well above the targets set by HP 2020

Source: California Smile Survey (2006); Healthy People 2020

Upstream Problem: Over 50% of infants and toddlers 0–2 years of age have never been to the dentist
Oral Health of Women:
Special Populations – Pregnant Women

During pregnancy:

- Fifty-eight percent did not receive dental care
  ➢ Yet 53 percent of California women had a dental problem
- Less than half had a medical provider who addressed oral health care

Leading Reasons for Not Having a Dental Visit During Pregnancy

- A perceived lack of need for dental care: 42%
- Cost of dental care: 39%
- Inadequate dental insurance: 37%
- Logistical barriers: 30%
- A belief that it was unsafe: 30%
California women’s use of oral health care during pregnancy, 2002-2012

Percentage of women who had a dental visit during pregnancy, 2002-2012*

* Data for dental visits was not available 2010-2011

Data source: Maternal and Infant Health Assessment (MIHA) 2002-2012. Percentages are weighted to represent all women with a live birth in California.
A PORTRAIT OF
SONOMA COUNTY
SONOMA COUNTY HUMAN DEVELOPMENT REPORT 2014

COMMISSIONED BY
County of Sonoma
Department of Health Services
WHO ARE WE: KEY DEMOGRAPHIC DATA

Total population: 483,878

RACE & ETHNICITY
- 66.1% White
- 24.9% Latino
- 3.9% Some other race/races
- 3.7% Asian American
- 1.4% African American

AGE
- 25% 0-19
- 32% 20-44
- 29% 45-64
- 12% 65-84
- 2% 85+
A TALE OF TWO NEIGHBORHOODS

EAST BENNETT VALLEY
LIFE EXPECTANCY: 82.0 YEARS

• **1.2%** living in poverty
• **extensive** parks and green space
• **58.6%** at least bachelor’s degree
• **$68,967** median personal earnings
• **61%** management occupations
• **92%** housing occupied by owner

ROSELAND CREEK
LIFE EXPECTANCY: 77.1 YEARS

• **16.5%** living in poverty
• **limited** parks and green space
• **8.6%** at least bachelor’s degree
• **$21,699** median personal earnings
• **11.3%** management occupations
• **42.1%** housing occupied by owner
Dental Health of Children: 2014 Smile Survey

More than half of kindergarten and third grade children in Sonoma County have already experienced dental decay.

Figure 1. Percent of Sonoma County Kindergarten and Third Graders with Decay Experience

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Hispanic/Latino</th>
<th>Low Income School (FRLP ≥75%)</th>
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<tbody>
<tr>
<td></td>
<td>49.5%</td>
<td>36.3%</td>
<td>31.9%</td>
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<tr>
<td>No Decay Experience</td>
<td>50.5%</td>
<td>63.7%</td>
<td>68.1%</td>
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<td>Decay Experience</td>
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</table>

- Decay Experience
- No Decay Experience
A disproportionately large number of Latino, and children in low income schools need urgent treatment.

Figure 3. Percent of Sonoma County Kindergarten and Third Graders Who Need Dental Treatment
Emergency Department Utilization & Surgery under General Anesthesia
Consequences of Untreated Dental Disease

- Early childhood caries
- Infection, pain, meningitis, cardiac and respiratory complications
- Affect ability to eat, sleep, speak, learn and grow
- #1 Cause of School Absences in California
- #1 Reason for CPS referral in Sonoma County
- Each month Sonoma County ~100 children under 7 are operated on under general anesthesia for dental disease
Estimated Annual Cost to Treat 1-Surface Cavity in Sonoma County

- Estimated # of cavities/year: 450,000
- Cost for 1-surface restoration: $283
- Annual direct cost of dental disease: $127 million
Dental Health Focus Groups

Participant Demographics

- Mean age=28 (Median=30)
- Average of 2 children
- 32% were currently employed

Pie chart showing gender distribution:
- Female: 48
- Male: 2
Dental Health Focus Groups

Key Findings

• Parents believe that dental health is important
• Dental health problems have a negative social impact on children
• Participants are highly aware of dental disease prevention strategies, but face challenges in implementing them
• Tooth brushing and limiting sugary foods and beverages are most commonly identified as the best ways to prevent cavities
• Uncooperative children and lack of time limit tooth brushing
• Caregivers are a significant barrier to limiting sweets
• Parents receive mixed messages regarding the use of fluoride
Dental Health Focus Groups

What Parents Say...

“I think if they have cavities they’re not going to learn as well as other kids that have healthy teeth.”

“You don’t want your children to be in pain.”

“I don’t buy juice or soda, but my mother-in-law gives it to them.”

“In my house we don’t give it to them, but with their grandma, she gives them everything they ask for.”

“I think that a lot of people don’t believe it is as serious to relate teeth with life.”

“If you tell them ... it threatens lives ... they might be more careful about things that they give to their baby.”

“It’s a lot of work.”
Dental Health Focus Groups

Parents receive mixed messages regarding the use of fluoride

“It’s bad. I mean one doctor told me that it’s bad, another that it isn’t...I don’t know.”

“I used to use it, but I heard it’s bad.”
Dental Health Focus Groups

Recommendations

• Continue promoting prevention messages and tips
• Conduct motivational interviewing to overcome barriers to implementing prevention strategies
• Provide consistent messaging and education on the safety and benefits of fluoride
• Promote dental health facts:
  – Half of Sonoma County children have tooth decay
  – Dental health affects overall health
  – Dental health affects a child’s ability to learn and grow
  – Dental health problems can be life-threatening
A Chronic, Infectious, Preventable Disease

Dental decay is the most common chronic health problem in children in the U.S. and in California.

It is 5 times more common than asthma.

Untreated decay can lead to infection and pain, learning delays, nutritional risk and threatens overall health.
Sonoma County Dental Health Network

75% Cavity Free Kindergarteners by 2020
Oral Health 2020

**Policy**
- Oral health is a key component of health policy
- Oral health policy consistent at local, state and federal levels
- Oral health measurement systems in place
- Policy to allow expanded workforce

**Financing**
- Sufficient funding to support care, prevention and training
- Alignment of payment with evidence, prevention, disease management and outcomes

**Improving the oral health of all**

**Care**
- Dental workforce sufficient to meet needs efficiently and effectively
- Care based on evidence, prevention, disease management and outcomes
- Oral health integrated into all aspects of health care
- Consumer focused care delivery

**Community**
- Oral health integrated into education and social services
- Optimal oral health literacy
- Strong community prevention and care infrastructure
- Provider base representative of community
Who are We?

DHN Member Agencies

- 4Cs of Sonoma County
- Alexander Valley Healthcare
- Alliance Medical Center
- Bellevue Union School District
- Community Action Partnership of Sonoma County
- Catholic Charities
- Child Parent Institute
- Cloverdale Unified School District
- First 5 Sonoma County
- North Bay Children’s Center
- PDI Surgery Center
- Petaluma Health Center
- Progressive Dental Partners
- Redwood Empire Dental Society
- Redwood Empire Dental Hygienists Society
- Santa Rosa City Schools
- Santa Rosa Community Health Centers
- Sonoma County Department of Health Services
- Sonoma County Human Services Department
- Sonoma County School Nurses Association
- St. Joseph Health
- Sutter Health
- West County Health Centers
- WIC
Introducing: the first-ever Strategic Plan for Dental Health in Sonoma County
Leadership and Sustainability
Integrated System of Services

Integrating Oral Health into Well Child and Perinatal visits
Community Engagement and Education
Evaluation

Graph 6. Consents Returned by Consent Model

Graph 7. Annual Consents Returned by School

The Costs of Dental Disease Prevention and Early Treatment Strategies in Sonoma County

April 2015

Steve Wamendam MS, Health Economist, Sonoma County DHE HS
Karen Millican MD MPH, Public Health Officer, Sonoma County DHE
Kim Calhoun PA MPH, Health Program Manager, Sonoma County DHE
Strategies for Prevention
Five Pillars of Dental Health

1. Access to Dental Care
2. Fluoride Varnish
3. Sealants
4. Community Water Fluoridation
5. Community Education
Community Education

- Reach: Potentially everyone in the county
- Cost: Ongoing, multi-sector activity
- Effectiveness: Must address community education needs

2016 Community Research Results

1. **Telephone Survey**: 600 Residents
   Majority favor Community Water Fluoridation

2. **Focus Groups**: 50 parents of young children
   Know how to prevent decay, encounter barriers
   Confusion about the benefits of Fluoride varnish, toothpaste, supplements
Community Water Fluoridation

- **Reach:** 330,000 in Sonoma County (67% of the population) and 61,000 in Marin County

- **Cost:** $3,400,000 capital  
  Yearly Cost: $587,000

- **Cost per person per year:** $1.77

- **Effectiveness:** The US Task Force on Community Preventative Services examined 21 studies and concluded in its 2000 report that fluoridated water reduces tooth decay by a median rate of 29% among children ages 4 to 17

*Return on Investment:* Each dollar spent on preventive CWF is estimated to save $30 or more in treatment for dental decay (Centers for Disease Control)
Fluoride Varnish

• Reach: All children 3-18, or 19% of population
• Cost: $7,500,000, or $80 per child
• Effectiveness: Cavity reduction of 20%.

Centers for Disease Control (2001) states that fluoride varnish is as effective as fluoride gel when given semiannually. (Van Rijkom 1998)
Sealants

- Reach: 10,500 children, applied to all 4 molars
- Cost: $2,400,000 *(Up to 88% return on investment)*
- Effectiveness: Prevent 80% of cavities for 2 years, 50% for up to 4 years.
  - School Children without sealants have almost 3 times more cavities than those with sealants

*Source: Centers for Disease Control*
Access to Preventive Dental Care

• Reach: Approximately half of all children under 20 living in Sonoma County qualify for Medi-Cal.

Providers:

• Federally Qualified Health Centers’ Dental Clinics (8)
  – Including SoCo Indian Health Project
• St. Joseph Dental Program
• Community-Based Programs
  – Mighty Mouth mobile clinic
  – WIC Dental Days
  – School based programs
Connecting Families to Services

Sonoma County Community and Safety-Net Dental Clinics

<table>
<thead>
<tr>
<th>Dental Office</th>
<th>Contact Info</th>
<th>Accepting New Patients</th>
<th>Insurance Payments</th>
<th>Languages Spoken</th>
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<tbody>
<tr>
<td>St. Joseph Dental Clinic</td>
<td>701 Linda Vista Court, Santa Rosa, CA 95407</td>
<td>707-547-3311</td>
<td>Yes, Age 0-14 and pregnant women</td>
<td>Medi-Cal</td>
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<tr>
<td>Santa Rosa Community Dental Center</td>
<td>1110 North Bennett Ave, Santa Rosa, CA 95407</td>
<td>707-503-5830</td>
<td>Yes, Children 0-12</td>
<td>Medi-Cal and sliding scale</td>
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<td>Sonoma County Indian Health Dental Clinic</td>
<td>166 Deer Point Rd, Santa Rosa, CA 95401</td>
<td>707-221-4500</td>
<td>Yes, Native Americans only</td>
<td>Medi-Cal and Medicare</td>
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<td>Russian River Dental Clinic</td>
<td>16810 1st Street, Sausalito, CA 94965</td>
<td>415-289-2023</td>
<td>Yes, Age 0-14 and pregnant women only</td>
<td>Medi-Cal</td>
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<tr>
<td>Petaluma Health Center Dental Office</td>
<td>1199 R. Woodrow Blvd, Petaluma, CA 94954</td>
<td>707-528-7550</td>
<td>Yes, Children 0-10, established adult medical patients</td>
<td>Medi-Cal and sliding scale</td>
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<td>Salinas Park Dental Center</td>
<td>5000 State Park Dr, Salinas, CA 93906</td>
<td>707-529-7052</td>
<td>Yes, Children 0-12, established adult medical patients</td>
<td>Medi-Cal and sliding scale</td>
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<td>Alliance Medical Center Dental Clinic</td>
<td>1335 University Street, Rohnert Park, CA 94928</td>
<td>707-547-5454</td>
<td>Yes, Children 0-12, established adult medical patients</td>
<td>Medi-Cal and sliding scale</td>
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<td>Sonoma Valley Community Dental Center</td>
<td>11930 Solano St, Santa Rosa, CA 95407</td>
<td>707-885-6076</td>
<td>Yes, Age 0 through adult</td>
<td>Medi-Cal and sliding scale</td>
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<tr>
<td>Alexander Valley Dental Center</td>
<td>1308 West 3rd Street, Ceres, CA 95307</td>
<td>707-547-2246</td>
<td>No new patients at this time</td>
<td>Medi-Cal and sliding scale</td>
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<td>Santa Rosa Junior College Dental Hygiene Clinic</td>
<td>1691 Hospital Skye, Santa Rosa, CA 95401</td>
<td>707-547-2244</td>
<td>Yes, Age 0 through adult</td>
<td>Medi-Cal and sliding scale</td>
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<td>Other Dental Services</td>
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<td>No Medi-Cal</td>
<td>English and Spanish</td>
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<td>WIC Dental Days</td>
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<td>Yes, WIC-eligible children 0-6</td>
<td>Medi-Cal</td>
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<td>OHS Surgery Center*</td>
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<td>Yes, O&amp;G for women 0-5</td>
<td>Medi-Cal</td>
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<tr>
<td>Redwood Empire Dental Society (RDDS)</td>
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<td>Yes, Age 6 &amp; older, non-amended disabled adults</td>
<td>Medi-Cal</td>
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</tbody>
</table>

Contact Martin Van Tassel at REDS if you are interested in a referral for a private dentist.
School-Based Programs in Sonoma County

School Smile Program (Since 2013)
2nd, 5th and 6th Grades
Assessments, Classroom Education, Fluoride Varnish and Sealants

- 6544 Students Educated
- 2999 Students assessed
- 2624 Students varnished
- 1505 Students sealed
- 12 Schools in 2016/17
School-Based Programs in Sonoma County

Kindergarten Assessment Pilot Project (2017)

Volunteer providers, Assessment & Fluoride Varnish

- Pilot project in 6 schools
- Reaching up to 500 children
- February to March, 2017
Early childhood home visiting programs, focused on the health and development of pregnant women and young children, can play a critical role in getting children off to a good start when it comes to oral health.
SoCo School Nurses Association

What support do you need to promote dental health?

What opportunities exist to engage parents and educators in dental disease prevention?

Will you partner with us to evaluate school-based dental health programs?

Are there policies in place to encourage drinking water, eating healthy foods and brushing teeth?
Dental Health Champions
Sonoma County Dental Health Program Contact

Kim Caldewey, PA, MPH

707-565-6671

Kim.Caldewey@Sonoma-County.org