Strategies for Improving the Oral Health of Children

Robert Compton, DDS
Executive Director
DentaQuest Institute
20 Million Members in 27 States
POLICY
- Oral Health is a key component of health policy
- Oral health policy consistent at local, state and federal levels
- Oral health measurement system 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

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

COMMUNITY
- Oral health integrated into education and social services
- Optimal oral health literacy
- Strong community prevention and care infrastructure
- Provider base representative of community

Four Main Systems Impacting Health
Optimal Oral Health
Patient Behavior

Change within Systems to Improve Outcomes

Change within Systems to Improve Outcomes

Four Main Systems Impacting Health
Optimal Oral Health
Patient Behavior

Change within Systems to Improve Outcomes

Four Main Systems Impacting Health
Optimal Oral Health
Patient Behavior

Change within Systems to Improve Outcomes

Four Main Systems Impacting Health
Optimal Oral Health
Patient Behavior

Change within Systems to Improve Outcomes

Four Main Systems Impacting Health
Optimal Oral Health
Patient Behavior

Change within Systems to Improve Outcomes

Four Main Systems Impacting Health
Optimal Oral Health
Patient Behavior

Change within Systems to Improve Outcomes
Traditionally, we focused on treating the symptom of dental caries by surgically removing the decay and placing a restoration.
Determinants of Health

- Environmental Exposure: 5%
- Social Circumstances: 15%
- Genetic Predisposition: 30%
- Behavioral Patterns: 40%
- Health Care: 10%

Adapted from: McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. Health Aff (Millwood) 2002;21(2):78-93
Chronic Disease

• A human health condition or disease that is persistent or otherwise long-lasting in its effects. The term *chronic* is usually applied when the course of the disease lasts for more than three months.[1]

• Chronic Disease is a long-lasting condition that can be controlled but not cured.[3]

• A growing body of evidence supports that prevention is effective in reducing the effect of chronic conditions; in particular, early detection results in less severe outcomes. [2]

1. World Health Organization
3. The Center for Managing Chronic Disease [http://cmcd.sph.umich.edu/what-is-chronic-disease.html](http://cmcd.sph.umich.edu/what-is-chronic-disease.html)
“The occurrence of caries in the permanent dentition is clustered: A quarter of the children and adolescents ages 5 to 17 with at least one permanent tooth accounted for about 80% of the caries experienced in permanent teeth. Differences in caries experience were found among race and race-ethnicity subpopulations.”

Untreated Decay in 5 to 19 Year Olds

**Income/Poverty Level**

- 200% or higher: 12.1%
- 100-199%: 19.3%
- Below 100%: 25.4%

**Race & Ethnicity**

- Non-Hispanic White: 13.3%
- Non-Hispanic Black: 22.6%
- Mexican American: 22.4%

Three Main Risk Factors

- **The presence of Mutans Streptococci**
  - Vertical transmission – most often from mother to child
  - Horizontal transmission – from other caregivers or family members

- **Frequent ingestion of fermentable carbohydrates**
  - Lowers the pH level in the mouth
  - Creates an acidic environment
  - Allows acidogenic bacteria to flourish

- **Sub-normal salivary flow**
  - Can be caused by systemic conditions and some medical treatments
  - Lowers the pH level in the mouth
  - Impairs the delivery of beneficial minerals to the teeth
Protective Factors

• **Factors that protect against dental caries include:**
  - Removal of biofilm
  - Anti-bacterial rinses
  - Xylitol supplements
  - Brushing twice a day
  - Fluoride

• **Fluoride:**
  - Inhibits bacterial metabolism
  - Inhibits demineralization
  - Promotes remineralization

• **Additional Protective Factors are:**
  - Fluoride varnish
  - Dental Sealants
Chronic Care Model

- Decision Support
- Clinical Information Systems
- Delivery System Design
- Health System
- Self-Management Support
- Community

- Prepared & Proactive
- Informed & Active

- Improved Outcomes

- Productive Interactions

- Practice Team
- Patient

http://www.improvingchroniccare.org
Chronic Care Model: Clinical Information Systems

Organize patient and population data to facilitate efficient and effective care

- Provide timely reminders for providers and patients
- Identify relevant subpopulations for proactive care
- Facilitate individual patient care planning
- Share information with patients and providers to coordinate care
- Monitor performance of practice team and care system

http://www.improvingchroniccare.org/index.php?p=The_Chronic_Care_Model&s=2
Restorative Costs by Age and Tooth Type

- ECC Disease Management
- Disease Management
- Preventistry℠ Sealant Program
- Preventistry℠ Fluoride Program

D = Deciduous or primary teeth
- D 2nd Molar
- D 1st Molar
- D Canine
- D Lateral Incisor
- D Central Incisor

Age of Beneficiaries

Millions of Dollars

- $0.0
- $0.5
- $1.0
- $1.5
- $2.0
- $2.5
- $3.0
- $3.5
- $4.0
- $4.5

Preventistry℠ Sealant Program
- 1st Molars
- 2nd Premolars
- 1st Premolars
- Canines
- Lateral Incisors
- Central Incisors
**Summary of evidence-based clinical recommendations regarding pit-and-fissure sealants.**

The clinical recommendations in this table are a resource for dentists to use in clinical decision making. These clinical recommendations must be balanced with the practitioner’s professional judgment and the individual patient’s needs and preferences.

Dentists are encouraged to employ caries risk assessment strategies to determine whether placement of pit-and-fissure sealants is indicated as a primary preventive measure. The risk of experiencing dental caries exists on a continuum and changes across time as risk factors change. Therefore, caries risk status should be re-evaluated periodically. Manufacturers’ instructions for sealant placement should be consulted, and a dry field should be maintained during placement.

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>RECOMMENDATION</th>
<th>GRADE OF EVIDENCE</th>
<th>STRENGTH OF RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caries Prevention</td>
<td>Sealants should be placed in pits and fissures of children’s primary teeth when it is determined that the tooth, or the patient, is at risk of developing caries††</td>
<td>Ia</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Sealants should be placed on pits and fissures of children’s and adolescents’ permanent teeth when it is determined that the tooth, or the patient, is at risk of developing caries††</td>
<td>Ia</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Sealants should be placed on pits and fissures of adults’ permanent teeth when it is determined that the tooth, or the patient, is at risk of developing caries††</td>
<td>Ia</td>
<td>D</td>
</tr>
</tbody>
</table>
Effectiveness of Sealants

Evidence from ADA Dental Sealant Recommendation

• Reduction of caries incidence in children and adolescents after placement of resin-based sealants ranges from
  o 86 percent at one year
  o 78.6 percent at two years
  o 58.6 percent at four years.

• Sealants are effective in reducing occlusal caries incidence in permanent first molars of children by
  o 76.3 percent at four years, when reapplied as needed.
  o Caries reduction was 65 percent at nine years with no reapplication during the last five years

Restorations on First Molars

Percent of Restorations That Could Have Been Prevented with Sealant

- 97% for teeth 5, 6, 7
- 97% for teeth 8, 9
- 95% for tooth 10
- 91% for tooth 11
- 88% for tooth 12
- 86% for tooth 13
- 82% for tooth 14
- 79% for tooth 15
- 74% for tooth 16
- 68% for tooth 17
- 65% for tooth 18
- 63% for tooth 19
- 61% for tooth 20
- 60% for tooth 20

Legend:
- LO
- BO
- BLO
- Lingual
- Buccal
- Occlusal
- Total
CMS established national oral health goals that support the Healthy People oral health goals for the nation. These goals, which CMS announced in April 2010 at the National Oral Health Conference, are:

- To increase the rate of children ages 6-9 enrolled in Medicaid or CHIP who receive a dental sealant on a permanent molar tooth by 10 percentage points over a 5-year period.

<table>
<thead>
<tr>
<th>Age</th>
<th>Healthy People 2010</th>
<th>Healthy People 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>23%</td>
<td>25.5%</td>
</tr>
<tr>
<td>14</td>
<td>15%</td>
<td>19.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Healthy People 2010</th>
<th>Healthy People 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>23%</td>
<td>25.5%</td>
<td>19.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target</th>
<th>Healthy People 2010</th>
<th>Healthy People 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>28.1%</td>
<td>21.9%</td>
</tr>
</tbody>
</table>
2011 CMS 416 12d: Dental Sealant

US National Average

17%
Monitor Performance of Practice Teams

Percent of 6 and 7 Year Olds Receiving Dental Sealant on First Molars

Count of Ages 5, 6 & 7  Percent 5-7 w/ Seal

DentaQuest®
Identify Subpopulation – Provide Timely Reminders

### Preventistry Member Roster
Members Who May Benefit from Sealants During the Period of January 1 thru December 31, 2011

<table>
<thead>
<tr>
<th>Member ID</th>
<th>Name</th>
<th>DOB</th>
<th>Potential Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>x00000x1</td>
<td>Child 1</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x2</td>
<td>Child 2</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x3</td>
<td>Child 3</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x4</td>
<td>Child 4</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x5</td>
<td>Child 5</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x6</td>
<td>Child 6</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x7</td>
<td>Child 7</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x8</td>
<td>Child 8</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x9</td>
<td>Child 9</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x10</td>
<td>Child 10</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x11</td>
<td>Child 11</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x12</td>
<td>Child 12</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x13</td>
<td>Child 13</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x14</td>
<td>Child 14</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x15</td>
<td>Child 15</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
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<tr>
<td>x00000x16</td>
<td>Child 16</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
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<td>x00000x17</td>
<td>Child 17</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
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<td>x00000x18</td>
<td>Child 18</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x19</td>
<td>Child 19</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
<tr>
<td>x00000x20</td>
<td>Child 20</td>
<td>xx/xx/20xx</td>
<td>$100.00</td>
</tr>
</tbody>
</table>

If you have questions about your Preventistry Member Roster, please contact your DentaQuest Professional Relations representative at 800-516-0124.

* Patients with at least one dental sealant placed on their first molars (ages 6-7) or second molars (ages 12-13) are not included.
Monitor Performance of Care System

Impact of Preventistry Sealant Program on Sealant Placement Rates

Overall Increase of 17.7%

**Number of Sealants per 100 Patients**

- Sealants per 100 Patients before Sealant Program
- Sealants per 100 Patients after Sealant Program
- Percent Increase

**Age of Children**

- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

**Percent Increase in Sealant Rate**

- 20.6%
- 18.4%
- 23.2%
- 13.0%
- 17.9%
- 17.1%
- 20.6%
- 24.5%
- 16.6%
- 16.7%
- 9.1%
- 3.6%
- 43.9%

Percent Increase in Sealant Rate:

- 0%
- 4%
- 8%
- 12%
- 16%
- 20%
- 24%
- 28%
- 32%
- 36%
- 40%
- 44%
- 48%
<table>
<thead>
<tr>
<th>RISK CATEGORY</th>
<th>AGE CATEGORY FOR RECALL PATIENTS</th>
<th>&lt; 6 Years</th>
<th>6 to 18 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recommendation</td>
<td>Grade of Evidence</td>
<td>Strength of Recommendation</td>
</tr>
<tr>
<td>Low</td>
<td>May not receive additional benefit from professional topical fluoride application*</td>
<td>Ia</td>
<td>B</td>
</tr>
<tr>
<td>Moderate</td>
<td>Varnish application at 6-month intervals</td>
<td>Ia</td>
<td>A</td>
</tr>
<tr>
<td>High</td>
<td>Varnish application at 6-month intervals OR Varnish application at 3-month intervals</td>
<td>Ia</td>
<td>A</td>
</tr>
</tbody>
</table>

Professional applied topical fluoride: Evidence-based clinical recommendations. ADA Council on Scientific Affairs. JADA 2006;137;1151-1159

DentaQuest®
Many patients presenting with recurrent gingivitis without additional attachment loss after definitive periodontal therapy may be adequately maintained with PM performed semiannually. However, for most patients with a history of periodontitis, numerous clinical studies suggest that PM should be performed at intervals of less than 6 months.

In general, data suggest that most patients with a previous history of periodontitis should obtain PM at least four times per year, since that interval will result in a decreased likelihood of progressive disease, compared to patients receiving PM on a less frequent basis.

### The Preventistry℠ Incentive

**Preventistry Patient Report for Higher-Risk Children and Adults**  
**Erica Martin DMD PC**  
662-887-9390 - 31  
Treatment from January 1, 2011, through June 30, 2011

#### Children at Higher Risk for Caries

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Date of Birth</th>
<th>Treatment</th>
<th>Date of Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arenas</td>
<td>Maria</td>
<td>3/3/95</td>
<td>Fluoride Treatment</td>
<td>6/20/10</td>
</tr>
<tr>
<td>Barstow</td>
<td>Jessica</td>
<td>3/8/96</td>
<td>Fluoride Treatment</td>
<td>2/10/10</td>
</tr>
<tr>
<td>Connors</td>
<td>Owen</td>
<td>3/13/94</td>
<td>Fluoride Treatment</td>
<td>6/11/10</td>
</tr>
<tr>
<td>Dustin</td>
<td>Harry</td>
<td>11/2/91</td>
<td>Fluoride Treatment</td>
<td>5/30/10</td>
</tr>
<tr>
<td>Gleason</td>
<td>Michael</td>
<td>12/3/92</td>
<td>Fluoride Treatment</td>
<td>3/1/10</td>
</tr>
<tr>
<td>Harrison</td>
<td>Samuell</td>
<td>11/29/91</td>
<td>Fluoride Treatment</td>
<td>4/2/10</td>
</tr>
<tr>
<td>Harrison</td>
<td>Trevor</td>
<td>9/15/92</td>
<td>Fluoride Treatment</td>
<td>3/20/10</td>
</tr>
<tr>
<td>Hellman</td>
<td>Evelyn</td>
<td>9/15/91</td>
<td>Fluoride Treatment</td>
<td>12</td>
</tr>
<tr>
<td>Lewisohn</td>
<td>David</td>
<td>10/7/99</td>
<td>Fluoride Treatment</td>
<td>8</td>
</tr>
<tr>
<td>Remy</td>
<td>Eugene</td>
<td></td>
<td></td>
<td>67%</td>
</tr>
</tbody>
</table>

**Number of Higher Risk Children Treated:** 8  
**Percent of Higher Risk Children Treated:** 67%

---

#### Adults at Higher Risk for Periodontal Disease

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Date of Birth</th>
<th>Treatment</th>
<th>Date of Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelyn</td>
<td>Vanessa</td>
<td>7/31/72</td>
<td>Maintenance</td>
<td>3/11/10</td>
</tr>
<tr>
<td>D'Antos</td>
<td>Steven</td>
<td>5/18/65</td>
<td>Maintenance</td>
<td>5/12/10</td>
</tr>
<tr>
<td>Gregolo</td>
<td>Vladimir</td>
<td>5/12/77</td>
<td>Maintenance</td>
<td>3/25/10</td>
</tr>
<tr>
<td>Kozentsov</td>
<td>Megan</td>
<td>5/18/77</td>
<td>Maintenance</td>
<td>6/17/10</td>
</tr>
<tr>
<td>Kelly</td>
<td>Michael</td>
<td>1/4/53</td>
<td>Maintenance</td>
<td>1/25/10</td>
</tr>
<tr>
<td>Mazozzia</td>
<td>Barbara</td>
<td>6/19/56</td>
<td>Maintenance</td>
<td></td>
</tr>
<tr>
<td>Mellon</td>
<td>Maria</td>
<td>10/10/43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oestephaus</td>
<td>Maureen</td>
<td>12/14/81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pratt</td>
<td>Helen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stoodard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Number of Adults at Risk for Periodontal Disease Treated:** 10  
**Percent of Adults at Risk for Periodontal Disease Treated:** 69%

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*Includes claims processed through July 31, 2011*
## Preventistry Incentive Results

### For the Period January 1 Thru June 30, 2012

**Topical Fluoride for Higher Risk Children**

<table>
<thead>
<tr>
<th></th>
<th>Goal</th>
<th>Potential</th>
<th>Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Higher Risk Children</td>
<td>152</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number Treated</td>
<td>105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage Treated</td>
<td>69.1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bonus Calculation**

- **Level 1**: 45% - $684.00 - $684.00
- **Level 2**: 65% - $684.00 - $684.00
- **Fluoride Bonus**: $1,368.00 - $1,368.00

**Perio Maintenance for Adults with Periodontal Disease**

<table>
<thead>
<tr>
<th></th>
<th>Goal</th>
<th>Potential</th>
<th>Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Adults with Perio Disease</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number Treated</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage Treated</td>
<td>70.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bonus Calculation**

- **Level 1**: 50% - $200.00 - $200.00
- **Level 2**: 75% - $200.00 - $0.00
- **Perio Bonus**: $400.00 - $200.00

**Total Bonus**: $1,768.00 - $1,568.00

**Percent of Potential**: 88.7%

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The Preventistry Program rewards dentists with financial incentives for achieving or exceeding specific goals based on the percentage of higher risk children and/or adults with periodontal disease who received the recommended preventive treatment. The results for your practice are above. Please note that we respect the confidentiality of your office’s data and will not share this information.

We would like to thank you for your participation in and dedication to the Preventistry Program. Our goal is to ensure that our higher risk members receive the preventive care that will help to keep them healthy. With your continued support we can achieve that goal. We look forward to sharing your results for the next six month time frame with you.

A check is enclosed in the amount of **$1,568.00**
Program Performance Score Improvement

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride</td>
<td>46.3%</td>
<td>59.9%</td>
<td>61.0%</td>
</tr>
<tr>
<td>Perio Maintenance</td>
<td>49.1%</td>
<td>61.8%</td>
<td>63.6%</td>
</tr>
</tbody>
</table>
Monitor Performance of Practice Teams for Fluoride

Names of Providers on X Axis
Monitor Performance of Practice Teams for Perio

Names of Providers on X Axis
Overall Results for Practice Teams

- The highest bonuses were in $7,000 - $8,000 range
- Around 60% of dentists achieve the fluoride goal
- Around 75% of dentists achieve the perio goal
- Around 85% of dentists receive a financial bonus

- Improved quality of care
- Improved DentaQuest Program Performance Score
- Reimbursed for value not just volume (P4P)
Chronic Care Model: Self Management Support

Empower and prepare patients to manage their health and health care

• Emphasize the patient’s central role in managing their health
• Use effective self-management support strategies that include assessment, goal-setting, action planning, problem-solving and follow-up
• Organize internal and community resources to provide ongoing self-management support to patients
Early Childhood Caries and Severe ECC

ECC Disease Management

D = Deciduous or primary teeth

- D 2nd Molar
- D 1st Molar
- D Canine
- D Lateral Incisor
- D Central Incisor

Age of Beneficiaries

 Millions

- $0.0
- $0.5
- $1.0
- $1.5
- $2.0
- $2.5
- $3.0
- $3.5
- $4.0
- $4.5

DentaQuest©
AAPD Definition of Early Childhood Caries

• The disease of ECC is the presence of **1 or more** decayed (noncavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any **primary tooth in a child under the age of 6**.

• In children younger than 3 years of age, **any sign of smooth-surface caries is indicative of severe early childhood caries (S-ECC)**.

• From ages 3 through 5, 1 or more cavitated, missing (due to caries), or filled **smooth surfaces in primary maxillary anterior teeth** or a decayed, missing, or filled **score of ≥4 (age 3), ≥5 (age 4), or ≥6 (age 5) surfaces also constitutes S-ECC.**
**Risk-Based Disease Management Protocols**

**INITIAL OR RECALL APPT**
- Medical history
- Caries Risk Assessment (CRA)
- Exam/X-rays
- Behavioral assessment

**VISIT 1**
- Self-management goals (diet, oral hygiene, home fluoride)
- Fluoride varnish
- Indicated clinical care

**DISEASE MANAGEMENT VISIT**
- Caries Risk Assessment
- Clinical/X-ray exam
- Fluoride varnish
- Re-define or re-emphasize self-management goals
- Behavioral assessment

**RESTORATIVE ITR VISIT(S)**
- Provide restorative care as indicated
- Provide ITR as indicated
- Schedule OR time if indicated

**CHILDREN AT HIGH RISK**
- Schedule next Disease Management visit in 1 month

**CHILDREN AT MEDIUM RISK**
- Schedule next Disease Management visit in 3 months

**CHILDREN AT LOW RISK**
- Schedule next Disease Management visit in 6 months
Circles of Influence in Self Management

Center for Managing Chronic Disease
[http://cmcd.sph.umich.edu/what-is-chronic-disease.html](http://cmcd.sph.umich.edu/what-is-chronic-disease.html)
Goals for Healthy Teeth (Age 5 and younger)

Patient Name: __________________________
Date of Visit: _______________________
Dentist: ____________________________
Hygienist: __________________________

Your child has been assessed to have the following for caries (cavities):
- High
- Medium
- Low

Between today and your next visit, please work on the Goals checked (✓) below:

- Next fluoride visit in ____ months
- Healthy snacks such as fruit, carrot sticks, yogurt, low fat cheese, pretzels, whole grain crackers
- No soda/energy drinks
- No juice
- Juice only with meals
- Less or no candy & junk food
- Chew Sugar-free gum (e.g. Trident, Extra)
- No sippy cup/bottle
- Only plain milk or water in cup or bottle
- If bottle to bed, use only water
- Drink fluoridated water, tap water
- Daily flossing with floss string or pick
- Brush morning and before bed with fluoride toothpaste:
  - Thin smear (~2 years old)
  - Pea-size amount (2-5 years old)
- Use Gel-Kam ___ a day
  - Apply thin smear to all teeth
  - Wait 30 minutes before eating, drinking or brushing after
- Fluoride varnish was applied in clinic today.
  - Wait until tomorrow to brush/floss. Avoid hard, crunchy, and sticky foods.

IMPORTANT:
The last thing that touches your child’s teeth before bedtime is the toothbrush with fluoride toothpaste.

On a scale of 1-5, how likely do you think you can help your child meet these goals?

1. Not very likely
2. Not sure
3. Very likely

Clinician’s Comments:

Next visit:
- Date: __________

- Preventative
- 1 month follow-up
- 3 month follow-up
- Restorative
- 6 month checkup
Environment: Acid Dissolves Teeth Promotes Strep

Battery Acid
Stomach acid
Lemon juice
Gatorade Clear
Sunny Delight
Vinegar
Cranberry Juice, canned
Cola
Country Time Lemonade
Capri Sun
Hi-C Blast Fruit Punch
Orange Crush
Welch’s White Grape
Powerade
Gatorade
Dr Pepper
Cranberry Juice, white
Grapefruit Juice, canned
Nestea
Sierra Mist
Grapefruit Juice
Orange Slice
V8 Splash Berry Blend
Mountain Dew
Snapple Tea
Dole (orange strawberry banana)
Sprite
Diet Dr Pepper
Apple Juice
Diet Coke
Orange Juice, Florida
Diet 7UP
Vegetable Juice
Milk, Acidophilus
A&W Root Beer
Brewed Coffee
Milk, skim
Milk, 2%
Water
Tea (brewed)

Acid
pH = 5.5
Neutral

Demineralization
Remineralization

pH = 5.5

pH = 3.4

pH = 3.1

pH = 3.2

pH = 3.4

pH = 3.4

pH = 3.7

pH = 4.0

pH = 4.2

pH = 4.3

pH = 5.5

pH = 6.8

pH = 7.2
Risk Factor #2: Frequent Carbohydrate Consumption

Soda Consumption

- 56% to 85%
- At least 20% consume 4 or more per day
The Caries Balance

Caries Risk Assessment:

- Extreme
- High
- Moderate
- Low

Disease Indicators

Risk Factors

Protective Factors

Caries Progression

No Caries
ECC disease management approach based on premise that a patient’s caries risk status is not static, but can be managed and improved over time.
Improved Outcomes and Patient Experience

Refer to OR
- CHB: 48%
- SJH: 40%
- Phase II: 36%

New Cavitation
- CHB: 65%
- SJH: 42%
- Phase II: 28%

Pain
- CHB: 38%
- SJH: 77%
- Phase II: 27%

Refer to OR
New Cavitation
Pain
Figure 1: Estimated mean per patient charges and costs (regression-adjusted) over different evaluation periods (2011 dollars)
## Financial Analysis from Boston Children’s Hospital

<table>
<thead>
<tr>
<th>Length of Evaluation</th>
<th>Baseline Costs</th>
<th>ECC Costs</th>
<th>Net Savings</th>
<th>Additional ECC Costs</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months</td>
<td>$699</td>
<td>$669</td>
<td>$30</td>
<td>$30.90</td>
<td>$0.99</td>
</tr>
<tr>
<td>6 months</td>
<td>$1,092</td>
<td>$880</td>
<td>$212</td>
<td>$47.30</td>
<td>$4.48</td>
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<tr>
<td>9 months</td>
<td>$1,660</td>
<td>$1,097</td>
<td>$563</td>
<td>$60.90</td>
<td>$9.23</td>
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<tr>
<td>12 months</td>
<td>$2,025</td>
<td>$1,262</td>
<td>$762</td>
<td>$70.40</td>
<td>$10.83</td>
</tr>
<tr>
<td>24 months</td>
<td>$2,678</td>
<td>$1,834</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Four Systems for Improvement

- National Impact
- State-Based, Local Impact

### Need to change Policy & Finance Systems

- Should cover 3 or 4 fluoride treatments
- Should cover disease management
  - Educating caregivers
  - Setting goals
  - Lower risk status
Early Childhood Caries (ECC) Collaborative

The DentaQuest Institute Announces the Launch of ECC Phase III
The DentaQuest Institute is pleased to release a Request for Applications (RFA) for the Early Childhood Caries (ECC) Collaborative. If you are interested in applying to participate in this collaborative please review the information below and click on the link to apply.

In Phase III of ECC, the chronic disease management approach to ECC will be expanded to up to 40 sites from across the country in a Breakthrough Series Collaborative beginning August 2013 and extending through February 2015. Building on the work of the Phase II...
Course Overview

Module 1 Dental Caries
Module 2 Dental Caries Risk Assessment
Module 2a General Principles of Caries Management by Risk Assessment
Module 3 Dental Caries Management - Perinatal
Module 4 Dental Caries Management – Newborn to Age 5
Module 5 Dental Caries Management – Age 6 through Adult
Module 6 Establishing a Culture of Disease Management

ADA Continuing Education Recognition Program (CERP) credits

Modules 1, 2, 3 = 1.5 CEU
Modules 4, 5 = 1.0 CEU
Modules 6, 7 = 1.0 CEU
Self Assessment Survey

Module 1 Developing Billing Excellence: Getting Paid for What You Do
Module 2 Fee Schedules, Sliding Fee Scales, & Management of the Self-Pay Patient
Module 3 Financial & Productivity Goals: Predict and Monitor Financial Performance
Module 4 Front Desk Customer Service
Module 5 The Front Desk: Creating Your Dream Team
Module 6 Managing Chaos in the Dental Program
Module 7 Scheduling by Design

ADA Continuing Education Recognition Program (CERP) credits

Modules 1, 2, 3 = 1.5 CEU
Modules 4, 5 = 1.0 CEU
Modules 6, 7 = 1.0 CEU
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Executive Director
DentaQuest Institute