Sealant quality improvement project

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Lynn Community Health Center has a long and rich history of providing excellent health care. Our mission is to provide Comprehensive Health Care of the highest quality for everyone in the Lynn community, regardless of ability to pay.

Our strongest commitment is to assure access to comprehensive health care for all populations in Lynn and surrounding communities on the North Shore, particularly medically underserved, poor, minority and immigrant populations, children and families, the elderly and others at high risk for health problems.
Once you establish your “culture of quality” you can then determine a course of action for quality improvement.

Quality Improvement

• QI processes use baselines established by Quality Assurance.
• Assess where you are.
• Find ways to improve your program.
• QI processes aim to improve the quality of the health care system and the health status of the target population.

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• Since the early 1970s, childhood dental caries in smooth tooth surfaces (those without pits and fissures) has declined markedly because of widespread exposure to fluorides. By 1986–87, approximately 90 percent of the decay in children’s teeth occurred in tooth surfaces with pits and fissures, and almost two-thirds were found in the chewing surfaces alone.
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- Pit-and-fissure sealants have been approved for use for many years and have been recommended by professional health associations and public health agencies.

- Placing sealants on the first permanent molars shortly after their eruption protects them from the development of caries in areas of the teeth where food and bacteria are retained. If sealants were applied routinely to susceptible tooth surfaces in conjunction with the appropriate use of fluoride, most tooth decay in children could be prevented.
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• Second permanent molars erupt into the mouth at about age 12 to 13 years. Pit-and-fissure surfaces of these teeth are as susceptible to dental caries as the first permanent molars of younger children. Therefore, young teens need to receive dental sealants shortly after the eruption of their second permanent molars.
Our First PDSA

• What are you trying to accomplish?
• How big is the gap?
• What contributes to the problem?
• How will we know the change is an improvement?
• What progress have you made that will result in improvement?
• How can you reach your goals?

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- Strong evidence shows that sealants are effective in preventing caries in children at varying degrees of risk. Despite this evidence of effectiveness, sealant prevalence among lower-income children (who are at higher risk of experiencing dental caries) remains at around 30 percent, well below the Healthy People 2010 objective of 50 percent. Documenting the effectiveness of placing sealants over existing caries, thus, is important, because such documentation could remove a barrier to providing a proven intervention.
- Documented barriers to increased sealant utilization include:
  - Lack of public awareness about the benefits of dental sealants.
  - Reluctance of dental providers to use dental sealants over non-cavitated lesions.
  - Reimbursement methods for one-surface restorations which may create disincentives for sealant use.
Opportunity for Improvement

What we do

Actual

Desired (Standards)

What we know

• Access to care
• Continuity of services
• Cost
• Adverse patient events
• Oral health outcomes

The Gap

## What We Know

<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>III</td>
<td>D</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>
<tr>
<td>Noncavitated Carious Lesions</td>
<td>Pit-and-fissure sealants should be placed on early (noncavitated) carious lesions, as defined in this document, in children, adolescents and young adults to reduce the percentage of lesions that progress.</td>
<td>Ia</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Pit-and-fissure sealants should be placed on early (noncavitated) carious lesions, as defined in this document, in adults to reduce the percentage of lesions that progress.</td>
<td>Ia</td>
<td>D</td>
</tr>
<tr>
<td>Resin-Based Versus Glass Ionomer Cement</td>
<td>Resin-based sealants are the first choice of material for dental sealants</td>
<td>Ia</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Glass ionomer cement may be used as an interim preventive agent when there are indications for placement of a resin-based sealant but concerns about moisture control may compromise such placement.</td>
<td>IV</td>
<td>D</td>
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<td>Placement Techniques</td>
<td>A compatible⁴ one-bottle bonding agent, which contains both an adhesive and a primer, may be used between the previously acid-etched enamel surface and the sealant material when, in the opinion of the dental professional, the bonding agent would enhance sealant retention in the clinical situation⁴</td>
<td>Ib</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Use of available self-etching bonding agents, which do not involve a separate etching step, may provide less retention than the standard acid-etching technique and is not recommended</td>
<td>Ib</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Routine mechanical preparation of enamel before acid etching is not recommended</td>
<td>IIb</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>When possible, a four-handed technique should be used for placement of resin-based sealants</td>
<td>III</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>When possible, a four-handed technique should be used for placement of glass ionomer cement sealants</td>
<td>IV</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>The oral health care professional should monitor and reapply sealants as needed to maximize effectiveness</td>
<td>IV</td>
<td>D</td>
</tr>
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</table>

Sealant quality improvement project

Percentage of 3rd grade students with dental sealants on at least one permanent molar tooth

Quality Improvement Plan

- Responds to a particular goal
- Milestones, measurements, timelines
- Needs to define data collection method and frequency
- QI team - representative of all staff involved in this particular issue.

Plan-Do-Study-Act Cycle

• Ideas → Action → Learning → Improvement

Demonstrate improvement
What changes are to be made?
What is the next cycle?

Identify problems and create
A plan

Implement the plan
Monitor and document results
Begin analysis of the data

Complete the data analysis
Compare data to predictions
Summarize what was learned

Source: Quality Assessment, Quality Improvement & HRSA’s Oral Health Measures.
Dan Watt, DDS; Marty Lieberman, DDS. October 27, 2010.NNOHA.
Using the Cycle to Improve

Source: Quality Assessment, Quality Improvement & HRSA’s Oral Health Measures.
Dan Watt, DDS; Marty Lieberman, DDS. October 27, 2010.NNOHA.
Sealant quality improvement project

• **Project Goals:** By 2012 increase the percentage of children ages 5 to 14 years old who receive one or more sealant on permanent posterior tooth by 50%. Increase access to dental care to children. Establish dental home. Promote integration of services.

• **Population of Focus:** Children ages 5-14 years of age who have a dental check up at the WIC program or a dental Hygiene appointment at the LCHC Dental clinic.
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• **Project Team Leaders:** Dental Directors and Office manager.

• **Project Team:** Dental Providers, Dental Assistants and Front Desk.

• **Process measures:** We have two separate process measures: one for the dental clinic and one for WIC program.

• **Numerator:** number of children seen each month who needed sealants who received all indicated sealants within 3 months period.

• **Denominator:** number of children seen that month who has sealants indicated in their treatment plan.
# Sealant quality improvement project

<table>
<thead>
<tr>
<th>Measure Number</th>
<th>Measure</th>
<th>Type of Measure</th>
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<th>Denominator</th>
<th>Desire Change</th>
<th>Goal</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Percent of children ages 5 to 14 years old who received one or more dental sealants on a permanent posterior tooth</td>
<td>Process</td>
<td>Count of Children ages 5 to 14 years old who received one or more dental sealants on a permanent posterior tooth</td>
<td>Count of Children ages 5 to 14 years old indicated to receive one or more dental sealants on permanent posterior teeth</td>
<td>Increase the Percent of children ages 5 to 14 years old who received one or more dental sealants on a permanent posterior tooth whose assessment indicated dental sealants should be placed</td>
<td>Increase By 50%</td>
</tr>
</tbody>
</table>
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<tr>
<th>Measure Number</th>
<th>Measure Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Percent of dental practitioners who receive regular monthly reports on sealant placement over time and progress toward goal</td>
<td>Process</td>
<td>Number of dental practitioners who receive regular individualized report on sealant rate over time</td>
<td>Number of dental practitioners who are qualified to/should be applying dental sealant</td>
<td>Increase the percentage of dental practitioners’ who are providing sealant</td>
<td>100%</td>
</tr>
</tbody>
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<tr>
<td>3</td>
<td>Percent of children ages 5 to 14 years old who dental sealants are indicated who have an appropriate electronic notification in the dental chart</td>
<td>Process</td>
<td>Number of children ages 5 to 14 years old who dental sealants are indicated who have an appropriate electronic notification in the dental chart</td>
<td>Number of children ages 5 to 14 years old whom dental sealants are indicated</td>
<td>Increase provider awareness through reminders about children who need sealants</td>
<td>Increase By 50%</td>
</tr>
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<tr>
<td>4</td>
<td>Percentage of all appointments for which a patient 5 to 14 years old does not show up</td>
<td>Process</td>
<td>Count all of dental appointments for patients 5 to 14 years old does not show up</td>
<td>Count all of dental appointments for patients 5 to 14 years old</td>
<td>Decrease appointments for which patients 5 to 14 do not show up</td>
<td>Decrease by 20%</td>
</tr>
</tbody>
</table>
Benefits of Providing Dental Preventive Service at WIC

- Often first oral health visit for child.
- More friendly environment.
- Does not interfere with provision of WIC services.
- Parents participate in the oral health education of their children.
Benefits of Providing Dental Preventive Service at WIC

• Contribute to cover the oral health portion of the WIC program.
• Preventive treatment.
• Connection with a dentist.
• Integrate patients to dental care services.
• Referral to the Dental Clinic for Dental Home and Follow-Up Care.
Dental Days at WIC!

Your Child Can Be Cavity Free!

Bring your children ages 9 months to 5 years to meet The Dental staff and get a free Dental Screening
Held weekly at
Sign Up now or when you arrive!
Please bring your Medi-Cal card with you if you have one.

Your Child is Special

Learn how to protect your child's teeth
After the WIC class, your child can see the dentist for a free dental screening. We will talk to you about your child's teeth and apply fluoride varnish to prevent cavities.

It is fun, easy, and painless!
Dental Sealant Goals

• During a 6 month period, for children ages 5-14, who need sealants, increase the percentage by 50%.
Dental Sealant

• Five (5) FQHCs in FL and MA looking to better understand
  – how to facilitate parent education around sealants
  – how to keep providers accountable to applying necessary sealants within 3 months
  – How to work on improved patient integration between medical and dental
Lynn Dental Clinic

Percent of Children 5-14yrs old seen each month who needed sealants who received all indicated sealants within 3 mths

Percent


Median
Goal
Lynn WIC Program

Percent of Children 5-14yrs old seen each month who needed sealants who received all indicated sealants within 90 days
Mission

The mission of the DentaQuest Institute is to promote optimal oral health through efficient and effective care and prevention.
Methods and Approach

Knowledge

- Basic Research: Developing new knowledge on the etiology and epidemiology of disease
- Think Tank: Compiling, processing and disseminating information to inform practice and policy

Routine Practice

- Quality Improvement: Overcoming clinical and process barriers to make care more efficient and effective
- Technical Assistance: Supporting practitioners in making practice changes to improve care

Institute – Oral Health Center Approach
Programs

**Improvement Initiatives**
- Dental Sealants
- Early Childhood Caries
- Elimination of Dental Disease

**Oral Health Center**

**Technical Assistance**
- Safety Net Solutions
Early Childhood Caries Goals

• Reduce the percent of patients with new cavitation
• Reduce the percent of patients who are referred to the OR and/or to sedation
• Reduce the percent of patients complaining of pain on most recent visit
Elimination of Dental Disease

Goals

• Measure and assure that health centers routinely and systematically deliver comprehensive, quality oral health services

• Ensure patient treatment is completed within a reasonable amount of time to improve the oral health status of the population served.
Oral Health Center

- Multi-specialty group practice located in Westborough, MA
- 13 chairs
- 14,500 patients of record
- Accept all insurances
- Growth
- Prevention oriented
- Evidence-based
Safety Net Solutions Goals

• Increase efficiency, effectiveness, and quality of Safety Net Dental programs through technical assistance
  – Customized practice improvement plans
  – Supported implementation, data collection and evaluation
THANK YOU