**Sealant Protocol-State of Kentucky**

**Public Health Registered Dental Hygiene Program**

**LICENSURE AND CREDENTIALS**

Dental hygienists in public health settings in Kentucky must adhere to the guidelines and regulations presented in the Kentucky Dental Practice Act and related regulations. All statutes, regulations, policies and procedures promulgated by the Commonwealth of Kentucky, the Cabinet for Health and Family Services, Department for Public Health, the Division for Maternal and Child Health and the appropriate local health departments and their governing Boards of Health will be followed.

Public Health Dental Hygiene Programs in a school environment are specialized areas of dental services performed by licensed certified registered Public Health Dental Hygienists that advance the oral health of a student that contributes to the well-being, academic success, and lifelong achievement of students. To that end, school Public Health Dental Hygienists facilitate positive student responses to normal oral development; promote health and prevention; intervene with actual and potential oral health problems; provide case management services; and actively collaborate with others to build student and family capacity for regular dental care through the establishment of a dental home.

The role of the school Public Health Dental hygienist will vary depending on individual needs of local school districts to facilitate the educational process by removal or modification of oral health related barriers to student learning. Listed below, but not all inclusive, are examples of roles and responsibilities in the school satellite clinic.

1. Assure that policies and procedures adhere to legal and regulatory statutes and ethical standards of dental hygiene practice.
2. Along with school nurses and other school personnel, establish and maintain a dental program that emphasizes oral assessment, preventive services and a referral system that results in care being completed for the child with dental needs beyond the scope of a school-based public health dental hygiene program.
3. Serve on advisory committees/consultation for individual health care plans, as appropriate.
4. All patients must be given an appropriate referral based on dental assessment of the oral cavity and its development.
5. Coordinate and assist with mandated oral health screenings, and referrals according to state and school policies.
6. Promote oral health education and anticipatory guidance
7. Serve as a liaison between the LHD, school, family, local healthcare providers and community.
8. Provide emergency care in the event of dental injury.
9. Data collection for Department of Education mandated reports related to health services.
10. Provide staff educational in-services, as requested by school administration.
11. Obtain parental consent for preventive oral health services.
12. Serve as a resource for students and staff related to oral disease and chronic oral conditions in students.
13. Serve in a leadership role for health, policies and programs, and promote a healthy school environment.

**PURPOSE STATEMENT**

The goal of the dental sealant program is to reduce the proportion of school-aged children who have dental caries experience in permanent teeth by increasing the number of dental sealants on their teeth and promoting oral health as part of the child’s total health. This is one primary prevention component of the health department’s oral health program. These programs promote working within the dental community to establish dental homes for children.

**PURPOSE AND RATIONALE**

Dental sealants are thin plastic coatings that are applied to the chewing surfaces of the molars (back teeth) to prevent dental decay by creating a physical barrier against bacterial plaque and food. When combined with fluoridated water, dental sealants have the potential to eliminate almost all dental caries. Dental caries is the most common chronic disease suffered by children. More than 50 percent of all children experience dental caries by the age of eight years, and about eighty percent of all children have dental caries by age 18. Eighty-four percent of caries in 5 to 17 year olds are on the tooth surfaces with pits and fissures.

**PROGRAM POLICY**

1. The Kentucky Public Health Dental Hygiene Program will serve in public and private school settings and other public health settings as deemed appropriate by guidelines

2. Signed HIPAA and Consent are required and valid for that school year.

3. The administration of the sealant program is the responsibility of each Health Department in the program under the direction of the State Dental Director and Program Administrator. Protocols are signed by Local Board of Health Dentists or his/her designee and the medical advisor(s).

4. Only a state-licensed certified Registered Public Health Dental Hygienist or dentist may apply dental sealants for the Kentucky Public Health Dental Hygiene Program.

A. A state-licensed certified Registered Public Health Dental Hygienist practices as an employee or independent contractor consistent with KRS 313.040(8).

B. A state-licensed dentist practices consistent with laws governing the practice of dentistry in KY.

5. It is the responsibility of Kentucky Public Health Dental Hygiene Program to assess the need for, plan, implement, and evaluate the dental sealant program.

6. The Agency Director/Health Officer will assign support staff as necessary.

**TARGET POPULATION**

1. The Kentucky Public Health Dental Hygienist will serve public and private school children with signed parental/legal custodian/guardian medical history/consent forms in the school districts they serve.

2. Signed medical history/consent forms represent a one-year agreement between parents/guardians and the PH RDH Program that provides the preventive services.

**DENTAL SEALANT PROGRAM PROCEDURES**

**PURPOSE STATEMENT:**

The goal of the dental sealant program is to reduce the proportion of school-aged children who have dental caries experience in permanent teeth by increasing the number of dental sealants on their teeth and promoting oral health as part of the child’s total health.

**AUTHORIZED PROVIDERS:**

1. Only a state-licensed certified registered Public Health Dental Hygienist or dentist may apply dental sealants for The Kentucky Public Health Dental Hygiene Program.

2. A state-licensed certified registered Public Health Dental Hygienist practices as an employee or independent contractor consistent with rules and regulations related as directed by Kentucky law.

3. A state-licensed dentist practices consistent with rules and regulations as directed by Kentucky law.

**SUPPLIES/EQUIPMENT/FORMS:**

1. Program consent forms and screening forms are available by the Kentucky Oral Health staff.

2. This program uses sealant material that is an approved United States Food and Drug Administration device.

**STANDARDS TO FOLLOW:**

**1. Record Keeping:**

A. A signed copy of informed consent, a signed and dated medical history and screening form must be kept in the individual’s health record (school based programs offer copies for the school health record).

B. Using the medical history, prior to sealant placement, caries risk assessment and oral screening is conducted by a state-licensed dentist or Public Health Dental Hygienist.

i. name, date, birth date, grade, confirmation of ASA I or II Classification as deemed by protocol

ii. caries experience, the presence of changes in color, consistency and contour suggestive of underlying decay, dental sealants, treatment urgency (urgent, early or no treatment needs)

iii. individual teeth indicated for dental sealant placement

iv. teeth and surfaces that have received sealants

v. name of licensed individual conducting assessment and sealant placement

vi. comments and indication of referral with associated follow up

C. The need for dental sealant placement by a certified state-licensed Public Health Registered Dental Hygienist or dentist will be determined consistent with current research and published best practices. *Contraindications are listed on page 6 of this protocol and page 8 of the Manual Kentucky Public Health Preventive Dental Hygiene Program*

D. All applicable federal and state occupational safety and health records will be maintained at the Local Health Departments participating in this program.

E. All applicable confidentiality requirements will be met.

**2. Dental Sealant Placement Standards:**

According to the Quality Control standards as set by the KY Oral Health Program Quality Assurance Plan as outlined in the Manual.

**3. Occupational Safety and Health:** Program follows current CDC recommendations and guidelines as well as OSAP guidance and related published standards.

**4. Adverse Event Protocol:**

A. Sealant contains methylacrylates, which may be irritating to the skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention. After contact with skin, wash immediately with plenty of soap and water. The product may cause sensitization by skin contact in susceptible persons. If skin sensitization occurs discontinue use.

B. Sealant etchant contains phosphoric acid, which may cause burns. Avoid contact with oral tissues, eyes and skin. If accidental contact occurs, flush affected area with generous amounts of water. In case of contact with eyes, immediately rinse with plenty of water and seek medical attention.

C. Retention of the dental sealant is essential to preventing caries. A sealant is virtually 100 percent effective if it is fully retained on the tooth (NIH 1984). Studies have demonstrated good retention rates in school-based dental sealant programs. It is recommended that limited resources be spent on placing sealants rather than doing additional retention studies. A sample of the children sealed will provide the program with adequate retention information. Reasons for tracking retention rates should be based on:

i. program evaluation of a new sealant material

ii. monitoring of a new practitioner’s technique.

D. If a sealant is not retained, it should be reapplied.

**5. Safety Precautions**

A. Follow manufacturer’s directions for application of pit and fissure sealants

B. Use CDC Guidelines for infection control.

C. ***Sealant Precautions:*** A small percentage of the population is known to have an allergic response to acrylate resins. To reduce the risk of allergic reaction, minimize exposure to uncured resins. When resins are in prolonged contact with oral soft tissue, or in case or accidental prolonged exposure, flush with copious amounts of water. Wash skin with soap and water when skin contact occurs.

D. ***Etchant Precautions:*** Conditioner (etch) contains phosphoric acid. Protective eyewear is recommended for both provider staff and individuals receiving services while using etchants. Contact with oral soft tissue, eyes and skin should be avoided. If accidental contact occurs, flush immediately with copious amounts of water and consult a physician.

E. Providers and individuals receiving services are required to wear safety glasses.

F. Do not place dental sealants on individuals with a known allergy to components found in dental sealant (example: methylacrylate).

G. Sealant and sealant etchant should be tightly closed immediately after use, keep out of direct sunlight, store at 40-70 degree F and use at room temperature.

**6. Contraindications-** Sealants should not be used under the following circumstances;

1. Changes in color, consistency or contour suggesting underlying decay of the teeth; or
2. Teeth with an occlusal table not fully erupted.

**7. Sealant Material--** This program uses sealant materials that are United States Food and Drug Administration approved devices.

**Procedure Step-by-step guide**

1. As per the *Kentucky Public Health Preventive Dental Hygiene Program Manual* and Guidelines

A. Obtain informed consent from parent/legal custodian/guardian

B. Review the medical history for contraindications (methylacrylate allergy). Confirm patient is within ASA I or II guidelines

C. Provide client protective eyewear.

D. Conduct risk assessment of the individual

i. caries experience

ii. dental care utilization pattern

iii. use of preventive services

iv. medical history (e.g. xerostomia)

C. Conduct risk assessment of individual teeth (pit and fissure morphology, level of caries activity, caries pattern) Do not seal if:

1. Dental sealants are contraindicated for individuals with a known allergy to

components in dental sealant (example: methylacrylate).

2. Presence of changes in color and contour suggestive of underlying decay.

3. Occlusal table is not fully erupted.

D. Evaluate pit and fissure surfaces

i. caries free - seal in accordance with manufacturer directions if at risk based on:

a. deep pits and fissure morphology

b. sufficiently erupted to allow adequate isolation

c. caries pattern

d. individual perception/desire for sealant

~~ii. Stained – seal in accordance with manufacturer directions~~

~~iii. Suspected enamel caries (incipient with no evidence of undermining) –referral for questionable, if possible~~

~~iv. Dentin cavitation (frank, overt with evidence of undermining) refer for restoration~~

E. Prepare teeth by cleaning with the method of your choice.

• It is absolutely necessary to remove plaque and debris from the enamel and the pits and fissures of the tooth. Any debris that is not removed will interfere with the proper etching process and the sealant penetration into the fissures and pits.

F. Isolate the teeth.

• For most sealant material, it is absolutely imperative to keep the tooth free from salivary contamination.

G. Dry the surfaces.

H. Etch the surfaces.

• The etchant should be applied to all the pits and fissures. In addition, it should be applied at least a few millimeters beyond the final margin of the sealant and in accordance with manufacturer directions. Do not allow the etchant to come into contact with the soft tissue. If this occurs, rinse the soft tissue thoroughly.

I. Rinse and dry the teeth.

• Rinse all the etchant material from the tooth in accordance with manufacturer directions. The tooth is dried until it has a chalky, frosted appearance. If it does not, the tooth should be re-etched in accordance with manufacturer directions. It is imperative to avoid salivary contamination. There is agreement that moisture contamination at this stage of the process is the most common cause of sealant failure.

J. Apply the material and evaluate for voids, marginal discrepancies or retention problems. If noted return to step E.

• Be careful not to incorporate air bubbles in the material.

• Follow protocol for light cured or self-cure dental sealant material in accordance with manufacturer directions

• After the sealant has set, the operator should wipe the sealed surface with a wet cotton pellet. This allows for the removal of the air-inhibited layer of the non-polymerized resin. Failure to perform this step may leave an objectionable taste in the individual’s mouth.

K. Evaluate the sealant.

• The sealant should be evaluated visually and tactically. Attempt to dislodge it with an explorer. If there are any deficiencies in the material, more sealant material should be applied.

L. Evaluate the occlusion.

• Unfilled resins will wear down naturally and do not require occlusal adjustment

M. Inform the parent/legal custodian/guardian of procedures that have been completed and the referral status. Encourage parent to establish ‘dental home’ for every patient seen in program.

N. Evaluate sealed teeth for sealant integrity and retention and caries progression

2. Sealant placement guidelines are consistent with and subject to individual sealant material manufacturer directions.

**RESOURCES**

American Dental Association Council on Access, Prevention and Interprofessional Relations: ADA Council on Scientific Affairs. 1997. Dental Sealants, Journal of the American Dental Association 128 (4):485-488.

Association of State and Territorial Dental Directors, Basic Screening Survey.

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United States Centers for Disease Control and Prevention (2003). *Guidelines for Recommended Infection Control Practices in Dentistry*, MMWR, December 19, 2003:52(RR-17).

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