

Updating Recommendations for School-based Sealant Programs

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Presentation Overview

- Review CDC's decision to convene an expert panel
- Describe objectives and methods
- Present major questions addressed
- *Focus on evidence-based approach*

Reasons for Updating Recommendations

- Request from ASTDD
- Current guidelines last revised in 1994
- New information available
 - Effectiveness of sealants in clinical and school programs (Systematic reviews)
 - Caries assessment techniques
 - Prevalence of caries and sealants in the U.S.

Reasons for Updating Recommendations

- Request from ASTDD
 - To assure that current guidelines reflect the state of the science
 - To address concerns expressed by some dentists about school programs, including
 - Lack of radiographs
 - Sealing “incipient” carious lesions
 - Use of toothbrush to clean pit-and-fissure surfaces

School Sealant Programs



Slide courtesy of Dr. Mark Siegal - ODH

Reasons for Updating Recommendations

- Caries prevalence is still high in children.
- Percent of children with sealants has increased, but disparities remain.
- Susceptibility of molars is much greater than for other teeth.

Expert Panel Convened

- To review 1994 guidelines for school-based sealant programs
- To ensure that these guidelines
 - Reflect current science
 - Support practices that are appropriate and evidence-based in school settings

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Sponsored by:
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Association of State and Territorial Dental Directors
New York State Health Department
Ohio Department of Health

April 29-30, 1994, Albany, New York

Official Journal
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of Public Health Dentistry



PURPOSE:

“The following guidelines are provided to assist practitioners in determining the appropriate use of sealants.”

Slide courtesy of Dr. Mark Siegal - ODH

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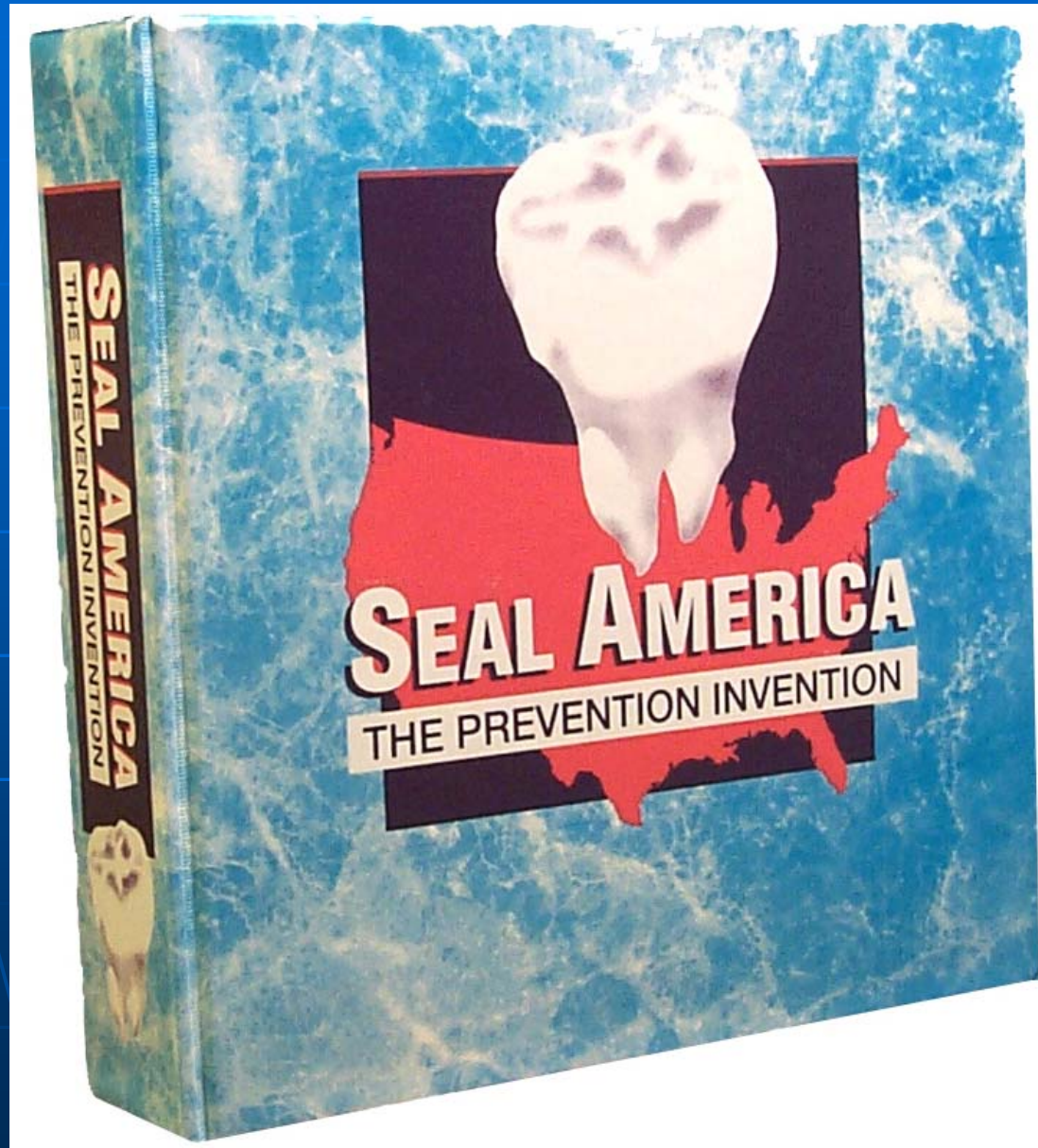
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of the American Association
of Public Health Dentistry



PURPOSE:

Clinical
technique was
not the purpose.
In 1996, an
article by Wm.
Wagonner was
published in
JADA.

Slide courtesy of Dr. Mark Siegal - ODH



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Approach:

To assist in
selecting
communities;
strategies;
individuals;
teeth; and tooth
surfaces

Define the Community

Determinants of sealant delivery in **community sealant programs**, where programs select individuals

Assess Community Needs

Weigh Supports & Constraints

Define Specific Population

Identify Individuals

Obtain Consent

Individual/Patient

Determinants of sealant delivery in **individual care programs**

Patient Self-Selects Providers

Define the Community

Assess Community Resources

Supports & Constraints

Specific Population

Identify Individuals

Obtain Consent

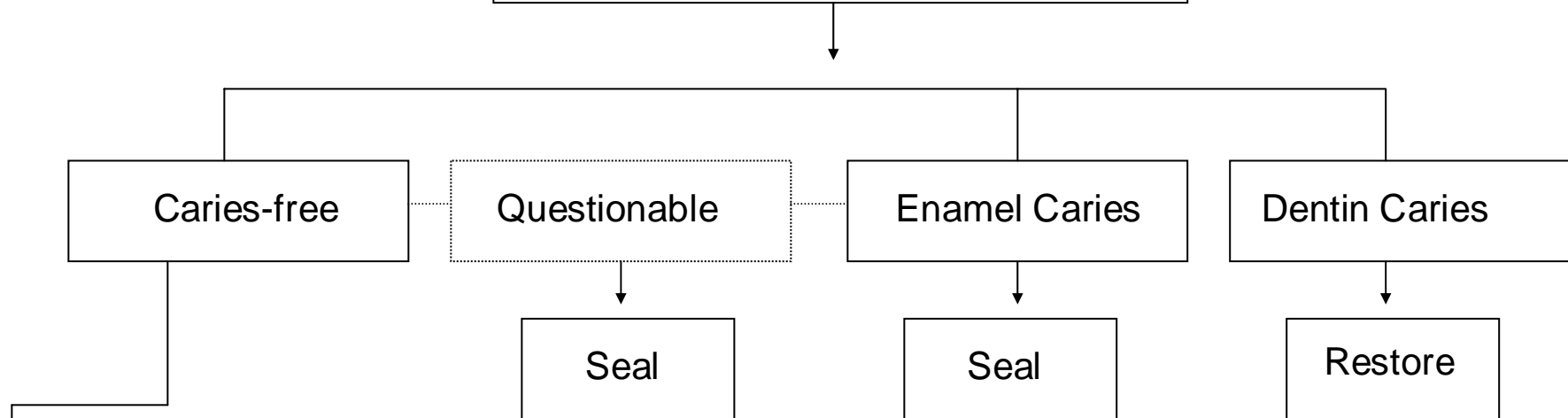
Individual/Patient

Methods of sealant delivery in community
where programs select
individuals

Determining methods of sealant
delivery for **individual**
care **programs**

Patient selects
providers

Evaluate Pit & Fissure Surfaces



SEAL

If at risk for caries based on an evaluation of

- pit & fissure morphology
- eruption status
- caries pattern
- patient's perception/desire for sealant

DO NOT SEAL

Monitor if the individual and teeth are not at risk

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

Objectives

- **Consistent with 1994 guidelines CDC's Expert Panel reviewed:**
 - Methods of assessing tooth surface status
 - Indications for sealant application based on findings of the assessment
 - Evaluation of sealed teeth

Objectives

- **In contrast to the 1994 guidelines CDC's Panel:**
 - **Reviewed selected sealant placement techniques**
 - **Limited focus to school-based programs**

Panel Members

Chair –

- **Gary Rozier, DDS, MPH**
University of North Carolina at Chapel Hill

Panelists –

- **Diane Brunson, RDH, MPH**
Colorado Dept. of Public Health/Environ
- **David K. Curtis, DMD**
American Academy of Pediatric Dentistry
- **Margherita Fontana, DDS, PhD**
Indiana University School of Dentistry
- **Harold Haering, DMD**
American Dental Association
- **Larry Hill, DDS, MPH**
Cincinnati Health Department
- **Jayanth Kumar, DDS, MPH**
New York State Department of Health

Panelists (continued) –

- **Mark Mallatt, DDS, MSD**
Indiana State Department of Health
- **Daniel M. Meyer, DDS**
American Dental Association
- **Wanda R. Miller, RN, MA, NCSN, FNASN**
National Association of School Nurses
- **Susan M. Sanzi-Schaedel, RDH, MPH**
Multnomah County Health Department
- **Mark Siegal, DDS, MPH**
Ohio Department. of Health
- **Richard Simonsen, DDS, MS**
Arizona College of Dentistry and Oral Health
- **Benedict I. Truman, MD, MPH**
Centers for Disease Control and Prevention
- **Domenick T. Zero, DDS, MS**
Indiana University School of Dentistry

Methods

- **Expert Panel convened twice**
 - Focused review of state of science and practice
 - Engaged in discussions
 - Drafted recommendations based on science and expert opinion

Methods

- **Documenting the strength of evidence**
 - Relied on published findings of systematic reviews
 - “Mined” additional information from studies included in major systematic reviews (multivariate analyses)
 - Completed CDC systematic review of sealant effectiveness in managing caries

Major Questions:

1. What is the effectiveness of sealants in:
 - a. preventing caries initiation?
 - b. managing caries progression? (Dr. Griffin)
2. Which surfaces (sound; carious – early; carious – frank) are indicated for sealant placement? (Dr. Griffin)

Major Questions:

1. What is the effectiveness of sealants in:
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Findings of Systematic Reviews

Strong evidence for sealant effectiveness for prevention of caries initiation on “sound” surfaces

- Effect of large magnitude
- Positive effect across included studies

Major Questions:

1. What is the effectiveness of sealants in:
 - a. Preventing caries initiation?
 - b. Managing caries progression? (Dr. Griffin)**
2. Which surfaces (sound; carious – early; carious – frank) are indicated for sealant placement?

Major Questions:

3. What caries assessment methods are necessary to determine which surfaces should be sealed? (Dr. Fontana)
4. What factors are associated with retention? (Dr. Griffin)
5. Are teeth that lose sealants at higher risk of caries than teeth that were never sealed? (Dr. Griffin)

Evidence-based Approach

Strengths:

- Objectively documents level of evidence supporting each recommendation
- Increases evidence available for guideline development by external groups
- Promotes PH perspective if CDC panel members or staff participate in activities of external groups

Evidence-based Approach

Weaknesses:

- Delayed release of CDC recommendations for school-based programs
- Resource and time intense



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Oral Health
RESOURCES