Summary of clinical recommendations for the nonrestorative treatment of caries on primary teeth

GRADE Certainty in the Evidence

Before SDF Application

After SDF Application

RADE Certainty in the Evidence		GRADE Interpretation of Strength of Recommendations			
High	We are very confident that the true effect lies close to that of the estimate of the effect.	Implications	Strong Recommendations	Conditional Recommendations	
		For Patients Most individuals in this situation would want the	The majority of individuals in this situation would want the suggested		
Moderate	We are moderately confident in the effect estimate. The true effect is likely to be close to the estimate of the effect.		recommended course of action and only a small proportion would not.	course of action, but many would not.	
		For Clinicians	Most individuals should receive the intervention.	Recognize that different choices will be appropriate for individual patients	
Low	Our confidence in the effect estimate is limited.			and that you must help each patient arrive at a management decision consistent with his or her values and preferences.	
Very Low	We have very little confidence in the effect estimate.	For Policy Makers	The recommendation can be adapted as policy in most situations.	Policy making will require substantial debate and involvement of various stakeholders.	

	Expert Panel Recommendation	Certainty in the Evidence	Strength of Recommen	
	To arrest advanced cavitated carious lesions on any coronal surface of primary teeth, the expert panel recommends clinicians* prioritize the use of 38% silver diamine fluoride (SDF) solution (biannual application) over 5% sodium fluoride varnish (application once per week for 3 weeks). [†]	Moderate	Strong	
Ar .	To arrest or reverse noncavitated carious lesions on occlusal surfaces of primary teeth, the expert panel recommends clinicians* prioritize the use of sealants + 5% sodium fluoride varnish (application every 3-6 months) or sealants alone over 5% sodium fluoride varnish alone (application every 3-6 months), 1.23% acidulated phosphate fluoride gel (application every 3-6 months), resin infiltration + 5% sodium fluoride varnish (application every 3-6 months), or 0.2% sodium fluoride mouthrinse (once per week). [‡]	Moderate	Strong	
	To arrest or reverse noncavitated carious lesions on facial or lingual surfaces of primary teeth, the expert panel suggests clinicians* use 1.23% acidulated phosphate fluoride gel (application every 3–6 months) or 5% sodium fluoride varnish (application every 3–6 months). [‡]	Moderate to Low	Conditional	
	To arrest or reverse noncavitated carious lesions on approximal surfaces of primary teeth, the expert panel suggests clinicians* use 5% sodium fluoride varnish (application every 3-6 months), resin infiltration alone, resin infiltration + 5% sodium fluoride varnish (application every 3-6 months), or sealants alone. [‡]	Low to Very Low	Conditional	
	To arrest or reverse noncavitated carious lesions on coronal surfaces of primary teeth, the expert panel suggests clinicians* <i>do not use</i> 10% casein phosphopeptide-amorphous calcium phosphate paste if other fluoride interventions, sealants, or resin infiltration is accessible.	Low	Conditional	

SDF = silver diamine fluoride

- * "Clinicians" refers to the target audience for this guideline, but only those authorized/trained to perform the specified interventions should do so.
- + In keeping with the concept of informed consent, all nonrestorative and restorative treatment options and their potential side effects (such as blackened tooth surfaces treated with silver diamine fluoride) should be offered and explained to all patients.
- + The order of treatments included in this recommendation represents a ranking of priority defined by the panel when accounting for treatment effectiveness, feasibility, patients' values and preferences, and resource utilization. Considerations such as a particular patient's values and preferences, special needs, or insurance status should inform clinical decision making.

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Clinical Pathway for the Nonrestorative Treatment of Carious Lesions on Primary Teeth



radiographs) periodically throughout the course of treatment

NaF = sodium fluoride APF = acidulated phosphate fluoride SDF = silver diamine fluoride * Defined as International Caries Detection and Assessment System (ICDAS) 1 and 2 lesions.
 † Defined as ICDAS 5 and 6 lesions.
 ‡ Application every 3-6 months.

¶At-home use once per week.

Biannual application.

**In keeping with the concept of informed consent, all nonrestorative and restorative treatment options and their potential side effects (such as blackened tooth surfaces treated with SDF) should be offered and explained to all patients.

§ The order of treatments included in this recommendation represents a ranking of priority defined by the panel when accounting for treatment effectiveness, feasibility, patients' values and preferences, and resource utilization. Considerations such as a particular patient's values and preferences, special needs, or insurance status should inform clinical decision making.

Summary of clinical recommendations for the nonrestorative treatment of caries on permanent teeth

GRADE Certainty in the Evidence

High	We are very confident that the true effect lies close to that of the estimate of the effect.	Implication	s Strong Recommendations	Conditional Recommendations
		For Patient	Most individuals in this situation would want the recommended course of action and only a small proportion would not.	The majority of individuals in this situation would want the suggested course of action, but many would not.
Moderate	We are moderately confident in the effect estimate. The true effect is likely to be close to the estimate of the effect.			
		For Clinicians	Most individuals should receive the	Recognize that different choices will be appropriate for individual patients and that you must help each patient arrive at a management decision consistent with his or her values and preferences.
Low	Our confidence in the effect estimate is limited.		intervention.	
Very Low	We have very little confidence in the effect estimate.	For Policy Makers	The recommendation can be adapted as policy in most situations.	Policy making will require substantial debate and involvement of various stakeholders.



Certainty in Strength of **Expert Panel Recommendation** the Evidence Recommendation To arrest advanced cavitated carious lesions on any coronal surface of permanent teeth, the expert panel suggests clinicians* prioritize the use of 38% silver diamine fluoride (SDF) solution (biannual application) over 5% sodium fluoride varnish Low Conditional (application once per week for 3 weeks).⁺ To arrest or reverse noncavitated carious lesions on occlusal surfaces of permanent teeth, the expert panel recommends clinicians* prioritize the use of sealants + 5% sodium fluoride varnish (application every 3-6 months) or sealants alone over 5% Moderate Strong sodium fluoride varnish alone (application every 3-6 months), 1.23% acidulated phosphate fluoride gel (application every 3-6 months), or 0.2% sodium fluoride mouthrinse (once per week).[‡] To arrest or reverse noncavitated carious lesions on facial or lingual surfaces of permanent teeth, the expert panel suggests Moderate clinicians* use 1.23% acidulated phosphate fluoride gel (application every 3-6 months) or 5% sodium fluoride varnish (application Conditional to Low every 3-6 months).* To arrest or reverse noncavitated carious lesions on approximal surfaces of permanent teeth, the expert panel suggests Low to clinicians* use 5% sodium fluoride varnish (application every 3-6 months), resin infiltration alone, resin infiltration + 5% Conditional Very Low sodium fluoride varnish (application every 3-6 months), or sealants alone.[‡] To arrest or reverse noncavitated and cavitated carious lesions on root surfaces of permanent teeth, the expert panel suggests clinicians* prioritize the use of 5,000 ppm fluoride (1.1% sodium fluoride) toothpaste or gel (at least once per day) over 5% Conditional Low sodium fluoride varnish (application every 3-6 months), 38% SDF + potassium iodide solution (annual application), 38% SDF solution (annual application), or 1% chlorhexidine + 1% thymol varnish (application every 3-6 months).^{+,+} To arrest or reverse noncavitated carious lesions on coronal surfaces of permanent teeth, the expert panel suggests clinicians* do not use 10% casein phosphopeptide-amorphous calcium phosphate paste if other fluoride interventions, sealants, Low Conditional

or resin infiltration is accessible.

SDF = silver diamine fluoride

ppm = parts per million

* "Clinicians" refers to the target audience for this guideline, but only those authorized/trained to perform the specified interventions should do so.

+ In keeping with the concept of informed consent, all nonrestorative and restorative treatment options and their potential side effects (such as blackened tooth surfaces treated with silver diamine fluoride) should be offered and explained to all patients.

+ The order of treatments included in this recommendation represents a ranking of priority defined by the panel when accounting for treatment effectiveness, feasibility, patients' values and preferences, and resource utilization. Considerations such as a particular patient's values and preferences, special needs, or insurance status should inform clinical decision making. Copyright ©2018 American Dental Association. All rights reserved. Adapted with permission. Photos courtesy of Jeanette MacLean, D.D.S. To see full text of this article, please go to JADA.ADA.org/article/S0002-8177(18)30469-0/fulltext. This page may be used, copied, and distributed for non-commercial purposes without obtaining prior approval from the ADA. Any other use, copying, or distribution, whether in printed or electronic format, is strictly prohibited without the prior written consent of the ADA.

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GRADE Interpretation of Strength of Recommendations

Before SDF Application Clii so



After SDF Application





Lesion(s) should be monitored (e.g., hardness/texture, color, radiographs) periodically throughout the course of treatment

NaF = sodium fluoride APF = acidulated phosphate fluoride SDF = silver diamine fluoride ppm = parts per million F = fluoride

* Defined as International Caries Detection and Assessment System (ICDAS) 1 and 2 lesions.
† Defined as ICDAS 5 and 6 lesions.
‡ Application every 3-6 months.

§ The order of treatments included in this recommendation represents a ranking of priority defined by the panel when accounting for treatment effectiveness, feasibility, patients' values and preferences, and resource utilization. Considerations such as a particular patient's values and preferences, special needs, or insurance status should inform clinical decision making. ¶ At-home use once per week.

Biannual application.

** In keeping with the concept of informed consent, all nonrestorative and restorative treatment options and their potential side effects (such as blackened tooth surfaces treated with SDF) should be offered and explained to all patients.

++ At-home use at least once per day.

‡‡ Annual application.