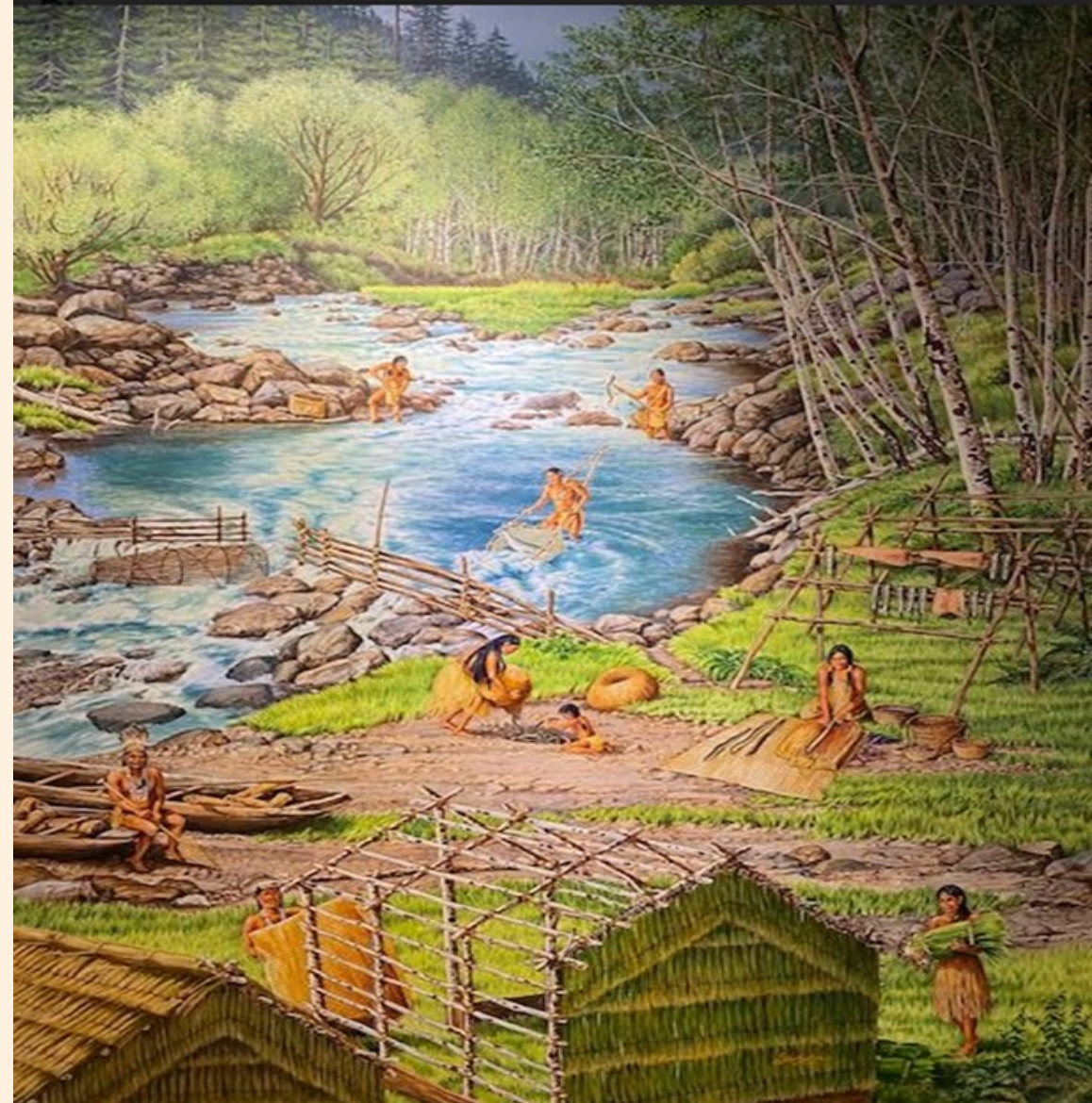


Indian Country Oral Health ECHO: Minimally Invasive Dentistry and Case Presentation

WELCOME!



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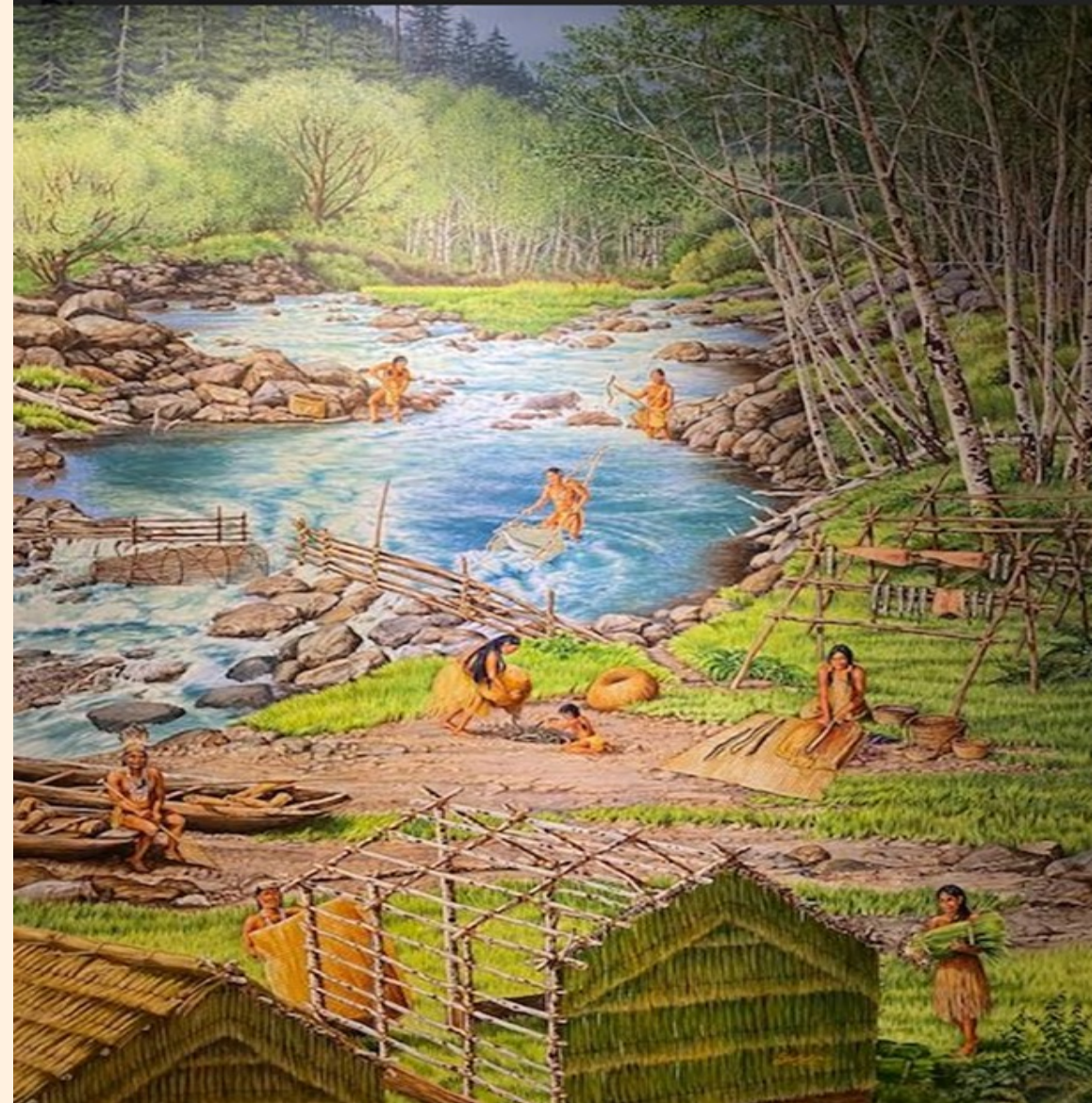
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Indian Country Oral Health ECHO: Minimally Invasive Dentistry and Case Presentation

Presented by:

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DISCLAIMER:

We have no financial disclosures or conflicts of interest with the information in this presentation.



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Objectives:

Upon completion of this course, participants will be able to:

1. Build minimally invasive dentistry skills.
2. Recognize risk factors and apply preventive measures to reduce the occurrence of oral health disease.
3. Learn techniques on how to treat patients with holistic and culturally appropriate care.



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How:

1. Review Minimally Invasive Dentistry concepts.
2. Discuss Patient Caries Risk Assessments and their use for a “Prevention Plan”.
3. Review literature for establishing patient dental recall appointment intervals.
4. Identify potential changes that affect caries risk and recall scheduling.
5. Use a case presentation and group discussion.



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Outline:

1. Didactic Presentation
2. Case Presentation
3. Group Discussion and Q&A



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Didactic Presentation



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“The evidence-base for survival of restorations clearly indicates that restoring teeth is a temporary palliative measure that is doomed to fail if the disease that caused the condition is not addressed properly.”

<https://pubmed.ncbi.nlm.nih.gov/15646587/>




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> Oral Health Prev Dent. 2004;2 Suppl 1:287-92.

What is minimally invasive dentistry?

Dan Ericson ¹

Affiliations + expand

PMID: 15646587

Abstract

Minimally Invasive Dentistry is the application of "a systematic respect for the original tissue." This implies that the dental profession recognizes that an artifact is of less biological value than the original healthy tissue. Minimally invasive dentistry is a concept that can embrace all aspects of the profession. The common delineator is tissue preservation, preferably by preventing disease from occurring and intercepting its progress, but also removing and replacing with as little tissue loss as possible. It does not suggest that we make small fillings to restore incipient lesions or surgically remove impacted third molars without symptoms as routine procedures. The introduction of predictable adhesive technologies has led to a giant leap in interest in minimally invasive dentistry. The concept bridges the traditional gap between prevention and surgical procedures, which is just what dentistry needs today. The evidence-base for survival of restorations clearly indicates that restoring teeth is a temporary palliative measure that is doomed to fail if the disease that caused the condition is not addressed properly. Today, the means, motives and opportunities for minimally invasive dentistry are at hand, but incentives are definitely lacking. Patients and third parties seem to be convinced that the only things that count are replacements. Namely, they are prepared to pay for a filling but not for a procedure that can help avoid having one.

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MINIMALLY INVASIVE DENTISTRY AND ITS PRINCIPLES



- ❑ **Minimally invasive dentistry aims to preserve original tissue and conserve healthy tooth structure.** This proactive philosophy strives to detect caries (cavities) at the earliest level. In this way, dentists are better able to diagnose, intercept, and treat caries in a less invasive manner.
- ❑ **Prevention:** Preventative dentistry and oral healthcare routines remain paramount in establishing a healthy smile. **Prevention is a cornerstone of minimally invasive dentistry.**
- ❑ **Risk-assessment:** Dental exams continue to assess the risk of tooth decay and carious lesions with an increased focus on early disease detection and prevention.
- ❑ **Remineralization strategies:** Cutting-edge research confirms that **there are many strategies in which your original tooth structure can help repair itself.** New biocompatible materials allow dentists to fill lesions to prevent future cavity fillings.
- ❑ **The shift from “replacement” to “repair”:** There is now a re prioritization of respect for your original tissue. Drill-use and large fillings have become more of a last resort than a knee-jerk response.
- ❑ **Less invasive:** Perhaps the most exciting principle for patients, is that procedures are typically less invasive. Even as you lower your costs and anxiety, feel free to keep your expectations high.

<https://kitsapkidsdentistry.com/blog/a-complete-guide-to-minimally-invasive-dentistry-in-2020/>



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The Exam and Individualized Treatment Planning:

1. This includes documenting an individualized Prevention Plan for each patient.
2. Use Caries Risk Assessment as your tool to create a Prevention Plan.
3. What are the patient's risk factors for disease?
4. Document and create a plan considering each risk factor, prioritize each and address them, possibly through Motivational Interviewing.



Caries Risk Assessment:

<https://www.ada.org/resources/research/science-and-research-institute/oral-health-topics/caries-risk-assessment-and-management>



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The screenshot shows the ADA website's navigation menu with 'Resources' selected. Below the menu, there is a search bar and a notification about MyADA accounts. The main content area features a vertical sidebar with social media icons (Facebook, Twitter, Email, Link) and a main heading 'Caries Risk Assessment and Management'. Underneath the heading is a 'Key Points' section with three bullet points.

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• Members can now access their MyADA account and the ADA Store. Please send any other questions related to the cybersecurity incident to msc@ada.org.

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Caries Risk Assessment and Management

Key Points

- Dental caries is defined as a “biofilm-mediated, sugar-driven, multifactorial, dynamic disease that results in the phasic demineralization and remineralization of dental hard tissues.”
- The formerly practiced paradigm of “drill and fill,” that is drilling out pits and fissures or surgically removing decayed and diseased tissue and placing permanent restorations, does not address the full continuum of the caries disease process, including microbial activity and the balance between enamel remineralization and demineralization.
- Systematic methods of caries detection, classification, and risk assessment, as well as prevention/risk management strategies, can help to reduce patient risk of developing advanced disease and may even arrest the disease process.

Caries Risk Assessment:

<https://www.ihs.gov/doh/clinic-management/ohpg/ohpg.pdf>

Caries Diagnosis, Risk Assessment, and Management

Introduction

For many years the scientific literature has suggested that a risk-based assessment of an individual patient's dental caries history and oral health status is an important prerequisite for appropriate preventive and/or treatment actions (1-7, 55). In the IHS, program managers and clinicians also support this risk-based approach. A practical guide entitled "Caries Diagnosis, Risk Assessment and Management" was developed by a work group of senior clinicians, general practice and pediatric specialists, epidemiologists, and public health consultants. A risk classification table with preventive regimens and suggested recall interval appropriate to risk category was also developed (54). The information provided in this section is a summary of this IHS practical guide.

This risk-based model provides a framework for decision-making to determine a patient's risk of dental decay and appropriate preventive and treatment strategies. It considers the clinician's judgment as well as available resources. In a public health program, clinicians should also assess resources and activities such as community water fluoridation and school-based programs, including sealant screening and placement, and fluoride mouthrinse programs. The overall objective is to work with patients and communities to improve the oral health of AI/AN people in the most effective and efficient manner possible.



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Caries Risk Assessment:

https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/oral-health-topics/ada_caries_risk_assessment.pdf?rev=35c455eadb104d02aee629ed58513d0b&hash=B0DCCECEDB4349E9D67F75D77CA720AD



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ADA American Dental Association®
America's leading advocate for oral health

Caries Risk Assessment Form (Age 0-6)

Patient Name: _____

Birth Date: _____ Date: _____

Age: _____ Initials: _____

Contributing Conditions	Low Risk	Moderate Risk	High Risk
I. Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
II. Sugary Foods or Drinks (including juice, carbonated or non- or boric acid soft drinks, energy drinks, medicinal syrups)	Primarily at meal times <input type="checkbox"/>	Frequent or prolonged between meal exposures/day <input type="checkbox"/>	Bottle or sippy cup with anything other than water at bed time <input type="checkbox"/>
III. Eligible for Government Programs (WIC, Head Start, Medicaid or SCHIP)	<input type="checkbox"/> No		<input type="checkbox"/> Yes
IV. Caries Experience of Mother, Caregiver and/or other Siblings	No carious lesions in last 24 months <input type="checkbox"/>	Carious lesions in last 7-23 months <input type="checkbox"/>	Carious lesions in last 6 months <input type="checkbox"/>
V. Dental Home: established patient of record in a dental office	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

General Health Conditions Check or Circle the conditions that apply

I. Special Health Care Needs (developmental, physical, medical or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)	<input type="checkbox"/> No		<input type="checkbox"/> Yes
---	-----------------------------	--	------------------------------

Clinical Conditions Check or Circle the conditions that apply

I. Visual or Radiographically Evident Restoration/ Cavitated Carious Lesions	No new carious lesions or restorations in last 24 months <input type="checkbox"/>		Carious lesions or restorations in last 24 months <input type="checkbox"/>
II. Non-cavitated (incipient) Carious Lesions	No new lesions in last 24 months <input type="checkbox"/>		New lesions in last 24 months <input type="checkbox"/>
III. Teeth Missing Due to Caries	<input type="checkbox"/> No		<input type="checkbox"/> Yes
IV. Visible Plaque	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
V. Dental/Orthodontic Appliances Present (fixed or removable)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
VI. Salivary Flow	Visually adequate <input type="checkbox"/>		Visually inadequate <input type="checkbox"/>

Overall assessment of dental caries risk: Low Moderate High

Instructions for Caregiver:

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Caries Risk Assessment Form (Age 0-6)

Circle or check the boxes of the conditions that apply. Low Risk = only conditions in "Low Risk" column present; Moderate Risk = only conditions in "Low" and/or "Moderate Risk" columns present; High Risk = one or more conditions in the "High Risk" column present.

The clinical judgment of the dentist may justify a change of the patient's risk level (increased or decreased) based on review of this form and other pertinent information. For example, missing teeth may not be regarded as high risk for a follow up patient; or other risk factors not listed may be present.

The assessment cannot address every aspect of a patient's health, and should not be used as a replacement for the dentist's inquiry and judgment. Additional or more focused assessment may be appropriate for patients with specific health concerns. As with other forms, this assessment may be only a starting point for evaluating the patient's health status.

This is a tool provided for the use of ADA members. It is based on the opinion of experts who utilized the most up-to-date scientific information available. The ADA plans to periodically update this tool based on: 1) member feedback regarding its usefulness, and; 2) advances in science. ADA member-users are encouraged to share their opinions regarding this tool with the Council on Dental Practice.

Caries Risk Factors:

The caries risk assessment forms are not intended to include all possible risk factors.

https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/oral-health-topics/ada_caries_risk_assessment.pdf?rev=35c455eadb104d02aee629ed58513d0b&hash=B0DCCECEDB4349E9D67F75D77CA720AD

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Caries Risk Assessment Form (Age 0-6)

Patient Name: _____
 Birth Date: _____ Date: _____
 Age: _____ Initials: _____

Contributing Conditions	Low Risk	Moderate Risk	High Risk
I. Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
II. Sugary Foods or Drinks (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)	<input type="checkbox"/> Frequently <input type="checkbox"/> Sometimes <input type="checkbox"/> Rarely	<input type="checkbox"/> Frequent or prolonged between meal or snack intake <input type="checkbox"/> Rarely	<input type="checkbox"/> Bottle or sippy cup with anything other than water at bed time <input type="checkbox"/> No
III. Eligible for Government Programs (WIC, Head Start, Medicaid or SCHIP)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
IV. Caries Experience of Mother, Caregiver and/or other Siblings	<input type="checkbox"/> No carious lesions in last 24 months <input type="checkbox"/> No	<input type="checkbox"/> Carious lesions in last 7-24 months <input type="checkbox"/> No	<input type="checkbox"/> Carious lesions in last 24 months <input type="checkbox"/> Yes
V. Dental Home: established patient of record in a dental office	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

General Health Conditions

General Health Conditions	Low Risk	Moderate Risk	High Risk
I. Special Health Care Needs (developmental, physical, medical or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes

Clinical Conditions

Clinical Conditions	Low Risk	Moderate Risk	High Risk
I. Visual or Radiographically Evident Restorations/ Cavitated Carious Lesions	<input type="checkbox"/> No restorations or cavitated lesions in last 24 months <input type="checkbox"/> No	<input type="checkbox"/> No restorations or cavitated lesions in last 24 months <input type="checkbox"/> No	<input type="checkbox"/> Carious lesions or restorations in last 24 months <input type="checkbox"/> Yes
II. Non-cavitated (incipient) Carious Lesions	<input type="checkbox"/> No lesions in last 24 months <input type="checkbox"/> No	<input type="checkbox"/> No lesions in last 24 months <input type="checkbox"/> No	<input type="checkbox"/> New lesions in last 24 months <input type="checkbox"/> Yes
III. Teeth Missing Due to Caries	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
IV. Visible Plaque	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
V. Dental/Orthodontic Appliances Present (fixed or removable)	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
VI. Salivary Flow	<input type="checkbox"/> Adequate <input type="checkbox"/> Inadequate	<input type="checkbox"/> Adequate <input type="checkbox"/> Inadequate	<input type="checkbox"/> Adequate <input type="checkbox"/> Inadequate

Overall assessment of dental caries risk: Low Moderate High

Instructions for Caregiver:

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Contributing Conditions	
I.	Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)
II.	Sugary Foods or Drinks (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)
III.	Eligible for Government Programs (WIC, Head Start, Medicaid or SCHIP)
IV.	Caries Experience of Mother, Caregiver and/or other Siblings
V.	Dental Home: established patient of record in a dental office
General Health Conditions	
I.	Special Health Care Needs (developmental, physical, medical or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)
Clinical Conditions	
I.	Visual or Radiographically Evident Restorations/ Cavitated Carious Lesions
II.	Non-cavitated (incipient) Carious Lesions
III.	Teeth Missing Due to Caries
IV.	Visible Plaque
V.	Dental/Orthodontic Appliances Present (fixed or removable)
VI.	Salivary Flow



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Caries Risk Factors:

The IHS Oral Health Program Guide also provides a list of risk factors.

<https://www.ihs.gov/doh/clinicmanagement/ohpg/ohpg.pdf>

Other factors, or modifiers, that may predispose an individual to dental decay include the following (57, 58):

- Age
- Family's dental experience
- Diet
- White spot lesions
- Tooth morphology
- Fluoride exposure (both too much and not enough)
- Rate of caries progression
- Oral hygiene
- Socioeconomic status
- Frequency of dental visits
- Medical conditions and medications being taken
- Salivary flow
- Root exposure
- Mutans streptococci (MS) levels
- Special assistance requirements
- Orthodontics
- Removable appliances

The type and nature of modifiers applicable to an individual may indicate that he/she should be moved into a different risk category. No attempt was made to regulate the number of modifiers, which would move a person into a different risk category; this decision has been left up to the *clinician's judgment*. However, patients should be reassessed and reclassified at subsequent recall visits for the appropriate risk category. A patient initially classified as "high-risk" or "moderate-risk" may fall into a "low-risk" category at recall if no new lesions are found and modifying factors such as fluoride



Caries Risk Assessment:

https://www.aapd.org/media/Policies_Guidelines/BP_CariesRiskAssessment.pdf

BEST PRACTICES: CARIES-RISK ASSESSMENT AND MANAGEMENT

Caries-risk Assessment and Management for Infants, Children, and Adolescents

Latest Revision

2019

How to Cite: American Academy of Pediatric Dentistry. Caries-risk assessment and management for infants, children, and adolescents. The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry; 2021:252-7.



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Carries Risk Assessment:

https://www.aapd.org/media/Policies_Guidelines/BP_CariesRiskAssessment.pdf

Table 1. Caries-risk Assessment Form for 0-5 Years Old²⁴

Factors	High risk	Moderate risk	Low risk
<i>Risk factors, social/biological</i>			
Mother/primary caregiver has active dental caries	Yes		
Parent/caregiver has life-time of poverty, low health literacy	Yes		
Child has frequent exposure (>3 times/day) between-meal sugar-containing snacks or beverages per day	Yes		
Child uses bottle or non-spill cup containing natural or added sugar frequently, between meals and/or at bedtime	Yes		
Child is a recent immigrant		Yes	
Child has special health care needs		Yes	
<i>Protective factors</i>			
Child receives optimally-fluoridated drinking water or fluoride supplements			Yes
Child has teeth brushed daily with fluoridated toothpaste			Yes
Child receives topical fluoride from health professional			Yes
Child has dental home/regular dental care			Yes
<i>Clinical findings</i>			
Child has non-cavitated (incipient/white spot) caries or enamel defects	Yes		
Child has visible cavities or fillings or missing teeth due to caries	Yes		
Child has visible plaque on teeth	Yes		

Circle those conditions that apply to a specific patient helps the practitioner and parent understand the factors that contribute to or protect from caries. Risk assessment categorization of low, moderate, or high is based on preponderance of factors for the individual. However, clinical judgment may justify the use of one factor (e.g., frequent exposure to sugar-containing snacks or beverages, more than one decayed missing filled surfaces (dmfs)) in determining overall risk.

Overall assessment of the child's dental caries risk: High Moderate Low

Adapted with permission from the California Dental Association, Copyright © October 2007.

BEST PRACTICES: CARIES-RISK ASSESSMENT AND MANAGEMENT

Table 2. Caries-risk Assessment Form for ≥6 Years Old²⁵
(For Dental Providers)

Factors	High risk	Moderate risk	Low risk
<i>Risk factors, social/biological</i>			
Patient has life-time of poverty, low health literacy	Yes		
Patient has frequent exposure (>3 times/day) between-meal sugar-containing snacks or beverages per day	Yes		
Child is a recent immigrant		Yes	
Patient has special health care needs		Yes	
<i>Protective factors</i>			
Patient receives optimally-fluoridated drinking water			Yes
Patient brushes teeth daily with fluoridated toothpaste			Yes
Patient receives topical fluoride from health professional			Yes
Patient has dental home/regular dental care			Yes
<i>Clinical findings</i>			
Patient has ≥1 interproximal caries lesions	Yes		
Patient has active non-cavitated (white spot) caries lesions or enamel defects	Yes		
Patient has low salivary flow	Yes		
Patient has defective restorations		Yes	
Patient wears an intraoral appliance		Yes	

Circle those conditions that apply to a specific patient helps the practitioner and patient/parent understand the factors that contribute to or protect from caries. Risk assessment categorization of low, moderate, or high is based on preponderance of factors for the individual. However, clinical judgment may justify the use of one factor (e.g., interproximal lesions, low salivary flow) in determining overall risk.

Overall assessment of the dental caries risk: High Moderate Low

Adapted with permission from the California Dental Association, Copyright © October 2007.



Caries Risk Assessment:

https://www.aapd.org/media/Policies_Guidelines/BP_CariesRiskAssessment.pdf

Table 3. Example of a Caries Management Pathways for 0-5 Years Old

Risk Category	Diagnostics	Interventions			Restorative
		Fluoride	Dietary Counseling	Sealants	
Low risk	<ul style="list-style-type: none"> – Recall every six to 12 months – Radiographs every 12 to 24 months 	<ul style="list-style-type: none"> – Drink optimally fluoridated water – Twice daily brushing with fluoridated toothpaste 	Yes	Yes	– Surveillance
Moderate risk	<ul style="list-style-type: none"> – Recall every six months – Radiographs every six to 12 months 	<ul style="list-style-type: none"> – Drink optimally fluoridated water – Twice daily brushing with fluoridated toothpaste – Fluoride supplements – Professional topical treatment every six months 	Yes	Yes	<ul style="list-style-type: none"> – Active surveillance of non-cavitated (white spot) caries lesions – Restore of cavitated or enlarging caries lesions
High risk	<ul style="list-style-type: none"> – Recall every three months – Radiographs every six months 	<ul style="list-style-type: none"> – Drink optimally fluoridated water – Twice daily brushing with fluoridated toothpaste – Professional topical treatment every three months – Silver diamine fluoride on cavitated lesions 	Yes	Yes	<ul style="list-style-type: none"> – Active surveillance of non-cavitated (white spot) caries lesions – Restore of cavitated or enlarging caries lesions



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Refer to notes below Table 4.

Caries Risk Assessment:

https://www.aapd.org/media/Policies_Guidelines/BP_CariesRiskAssessment.pdf

Table 4. Example of a Caries Management Pathways for ≥6 Years Old

Risk Category	Diagnostics	Interventions			Restorative
		Fluoride	Dietary Counseling	Sealants	
Low risk	<ul style="list-style-type: none"> – Recall every six to 12 months – Radiographs every 12 to 24 months 	<ul style="list-style-type: none"> – Drink optimally fluoridated water – Twice daily brushing with fluoridated toothpaste 	Yes	Yes	– Surveillance
Moderate risk	<ul style="list-style-type: none"> – Recall every six months – Radiographs every six to 12 months 	<ul style="list-style-type: none"> – Drink optimally fluoridated water – Twice daily brushing with fluoridated toothpaste – Fluoride supplements – Professional topical treatment every six months 	Yes	Yes	<ul style="list-style-type: none"> – Active surveillance of non-cavitated (white spot) caries lesions – Restore of cavitated or enlarging caries lesions
High risk	<ul style="list-style-type: none"> – Recall every three months – Radiographs every six months 	<ul style="list-style-type: none"> – Drink optimally fluoridated water – Brushing with 0.5 percent fluoride gel/paste – Professional topical treatment every three months – Silver diamine fluoride on cavitated lesions 	Yes	Yes	<ul style="list-style-type: none"> – Active surveillance of non-cavitated (white spot) caries lesions – Restore of cavitated or enlarging caries lesions



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Caries Risk Assessment:

Google search results for "caries risk assessment form".

Search filters: All, Images, News, Videos, Shopping, More, Tools. Collections, SafeSearch.

Autocomplete suggestions: cambra, ada, american dental association, carious lesions, texas health steps, pediatric dentistry, fluoride varnish, assessment tool, dental risk factors, cambra.

Search results include:

- IHS-Caries Risk Assessment studylib.net
- IHS-Caries Risk Assessment studylib.net
- Data Brief IHS 6-9 Years... ihs.gov
- Caries Risk Assessment... uslegalforms.com
- Results of the 2014 IHS... ihs.gov
- BPA Early Childhood Update... astdd.org
- Dental Portal | Indian Health Service ihs.gov
- Early Childhood Caries ECC slidetodoc.com
- Oral Risk Assessment - ... pdffiller.com
- Dental Transformation Initiative Pilot for Medical and Dental Integration Jan Carver, MSHS, RDH Dental Project Coordinator ihs.gov
- Caries Risk Assessment dentalcare.ca
- Caries risk assessment... researchgate.net
- River Dentistry - Bemidj... greatriverdentistry.com
- ADA.org: Caries Risk As... aetnabetterhealth.com
- ADA.org: Caries Risk As... ada.org
- Caries Risk Assessment... studies.com
- Caries Risk Assessment... pocketdentistry.com
- Caries Risk Assessment form. (... researchgate.net
- Caries Risk Assessment ... pdffiller.com
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- Assessing and Document... txhealthsteps.com
- Fluoride Varnish | DC's HealthCheck ... dchealthcheck.net
- Original Article Caries R... jpd.com.pk
- Shaping the Future of Dentistry shapingthefutureofdentistry.org
- Dental Caries - A New L... aegidentalnetwork.com
- Caries Risk Assessment... pdffiller.com
- PDF] Caries risk assessm... semanticscholar.org



Caries Risk Assessment:

Development of Conservative Strategies of Treatment

The majority of a dental clinic's time is generally devoted to restorative dentistry. Half the restorative dentistry provided in this country is the replacement of existing restorations. The initial placement of a restoration statistically dooms the tooth to a future of repeated replacements with ever larger and more invasive restorations. Restorative dentistry is a destructive process, in that irreplaceable natural structure is lost to restorative materials that are poor substitutes for the natural tooth structure. When considering doing restorative dentistry, the risk of not doing it (the status of the existing disease and the destruction it is causing) clearly must be greater than the risk of placing restorations. For more information on this subject, see the "Dental Caries Risk Assessment" guidelines, which can be found in Chapter 4 of this manual.

Indian Health Service
Oral Health Program Guide
2007
Chapter 8, Appendix III, page 287



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Caries Risk Assessment:

The ADA Caries Classification System















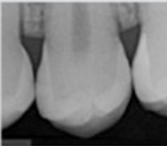

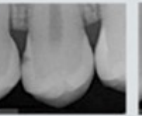

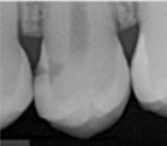

[https://jada.ada.org/article/S0002-8177\(14\)00029-4/pdf](https://jada.ada.org/article/S0002-8177(14)00029-4/pdf)



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TABLE 2

American Dental Association Caries Classification System.

AMERICAN DENTAL ASSOCIATION CARIES CLASSIFICATION SYSTEM									
	Sound	Initial		Moderate	Advanced				
Clinical Presentation	No clinically detectable lesion. Dental hard tissue appears normal in color, translucency, and gloss.	Earliest clinically detectable lesion compatible with mild demineralization. Lesion limited to enamel or to shallow demineralization of cementum/dentin. Mildest forms are detectable only after drying. When established and active, lesions may be white or brown and enamel has lost its normal gloss.		Visible signs of enamel breakdown or signs the dentin is moderately demineralized.	Enamel is fully cavitated and dentin is exposed. Dentin lesion is deeply/severely demineralized.				
Other Labels	No surface change or adequately restored	Visually noncavitated		Established, early cavitated, shallow cavitation, microcavitation	Spread/disseminated, late cavitated, deep cavitation				
Infected Dentin	None	Unlikely		Possible	Present				
Appearance of Occlusal Surfaces (Pit and Fissure)*,†	ICDAS 0 	ICDAS 1 	ICDAS 2 	ICDAS 3 	ICDAS 4 	ICDAS 5 	ICDAS 6 		
Accessible Smooth Surfaces, Including Cervical and Root‡									
Radiographic Presentation of the Approximal Surface§	 E0 [¶] or RO [¶] No radiolucency	 E1 [¶] or RA1 [¶]	 E2 [¶] or RA2 [¶]	 D1 [¶] or RA3 [¶]	 D2 [¶] or RB4 [¶]	 D3 [¶] or RC5 [¶]	Radiolucency may extend to the dentinoenamel junction or outer one-third of the dentin. Note: radiographs are not reliable for mild occlusal lesions.	Radiolucency extends into the middle one-third of the dentin	Radiolucency extends into the inner one-third of the dentin

* Photographs of extracted teeth illustrate examples of pit-and-fissure caries.

† The ICDAS notation system links the clinical visual appearance of occlusal caries lesions with the histologically determined degree of dentinal penetration using the evidence collated and published by the ICDAS Foundation over the last decade; ICDAS also has a menu of options, including 3 levels of caries lesion classification, radiographic scoring and an integrated, risk-based caries management system ICCMS. (Pitts NB, Ekstrand KR. International Caries Detection and Assessment System [ICDAS] and its International Caries Classification and Management System [ICCMS]: Methods for staging of the caries process and enabling dentists to manage caries. *Community Dent Oral Epidemiol* 2013;41[1]:e41-e52. Pitts NB, Ismail AI, Martignon S, Ekstrand K, Douglas GAV, Longbottom C. ICCMS Guide for Practitioners and Educators. Available at: https://www.icdas.org/uploads/ICCMS-Guide_Full_Guide_US.pdf. Accessed April 13, 2015.)

‡ "Cervical and root" includes any smooth surface lesion above or below the anatomical crown that is accessible through direct visual/tactile examination.

§ Simulated radiographic images.

¶ E0-E2, D1-D3 notation system.³³

RO, RA1-RA3, RB4, and RC5-RC6 ICCMS radiographic scoring system (RC6 = into pulp). (Pitts NB, Ismail AI, Martignon S, Ekstrand K, Douglas GAV, Longbottom C. ICCMS Guide for Practitioners and Educators. Available at: https://www.icdas.org/uploads/ICCMS-Guide_Full_Guide_US.pdf. Accessed April 13, 2015.)

Caries Risk Assessment:

Q: Are dentist tempted to restore lesions that have “initial mineral loss/non-cavitated”, even though such lesions are “unlikely” to have “infected dentin”?

[https://jada.ada.org/article/S0002-8177\(14\)00029-4/pdf](https://jada.ada.org/article/S0002-8177(14)00029-4/pdf)

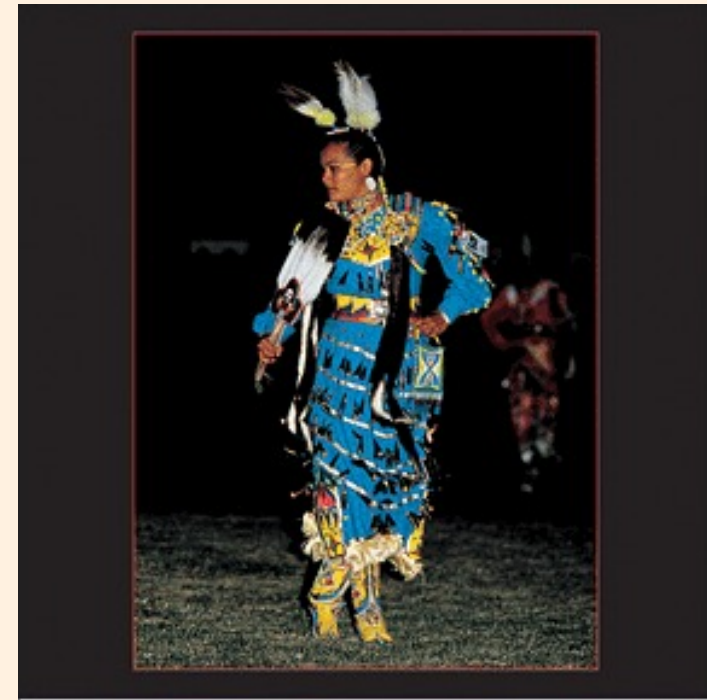


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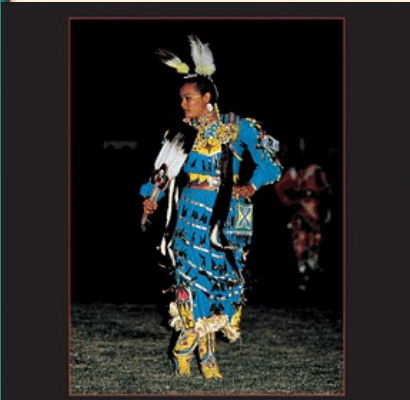
AMERICAN DENTAL ASSOCIATION CARIES		
Initial		
Earliest clinically detectable lesion compatible with mild demineralization. Lesion limited to enamel or to shallow demineralization of cementum/dentin. Mildest forms are detectable only after drying. When established and active, lesions may be white or brown and enamel has lost its normal gloss.		
Visually noncavitated		
Unlikely		
ICDAS 1	ICDAS 2	
E1 [§] or RA1* Radiolucency may extend to the dentinoenamel junction or outer one-third of the dentin. Note: radiographs are not reliable for mild occlusal lesions.	E2 [¶] or RA2*	D1 [¶] or RA3*

Individualized Recall:

1. Based on individual risk for future disease (caries, periodontal disease, oral cancer...).
2. Based on patient compliance.
3. Based on dental clinic patient load and resources.
4. Based on.....?????



Individualized Recall:



The underlying principle of a caries risk protocol is to approach dental caries as an infectious disease (8-12, 56). Most resources in our dental clinics are invested in the diagnosis, treatment, and prevention of this infection. These resources are maximized by appropriately addressing the diagnosis, prevention, and treatment of dental caries. Studies have shown that flexible recall systems and targeted care are cost-effective and time-effective, providing the greatest health benefits to defined populations (4, 13-15).



Indian Health Service
Oral Health Program Guide
2007
Chapter 4-E, page 167



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Individualized Recall:



1. The recommended interval between oral health reviews should be determined specifically for each patient and tailored to meet his or her needs, on the basis of an assessment of disease levels and risk of or from dental disease. [D]
2. This assessment should integrate the evidence presented in this guideline with the clinical judgement and expertise of the dental team, and should be discussed with the patient. [GPP]
3. During an oral health review, the dental team (led by the dentist) should ensure that comprehensive histories are taken, examinations are conducted and initial preventive advice is given. This will allow the dental team and the patient (and/or his or her parent, guardian or carer) to discuss, where appropriate:

<https://www.ncbi.nlm.nih.gov/books/NBK54533/>



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Individualized Recall:



4. The longest interval between oral health reviews for patients aged 18 years and older should be 24 months. [GPP] Recall intervals for patients who have repeatedly demonstrated that they can maintain oral health and who are not considered to be at risk of or from oral disease may be extended over time up to an interval of 24 months. Intervals of longer than 24 months are undesirable because they could diminish the professional relationship between dentist and patient, and people's lifestyles may change.

5. For practical reasons, the patient should be assigned a recall interval of 3, 6, 9 or 12 months if he or she is younger than 18 years, or 3, 6, 9, 12, 15, 18, 21 or 24 months if he or she is aged 18 years or older. [GPP]

6. The dentist should discuss the recommended recall interval with the patient and record this interval, and the patient's agreement or disagreement with it, in the current recordkeeping system. [GPP]

7. The recall interval should be reviewed again at the next oral health review, to learn from the patient's responses to the oral care provided and the health outcomes achieved. This feedback and the findings of the oral health review should be used to adjust the next recall interval chosen. Patients should be informed that their recommended recall interval may vary over time. [GPP]



Individualized Recall:



Purpose: The American Academy of Pediatric Dentistry (AAPD) intends these recommendations to help practitioners make clinical decisions concerning preventive oral health interventions, including anticipatory guidance and preventive counseling, for infants, children, and adolescents.

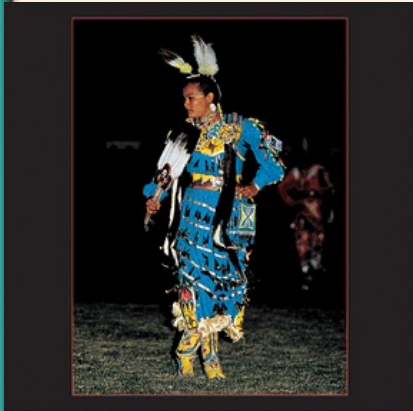
1. These preventive recommendations may be applied for the following age groups: six to 12 months, 12 to 24 months, 24 months to six years, six to 12 years, and 12 years and older. This guidance emphasizes the importance of very early professional intervention and continuity of care based on the individualized needs of the child. This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and recommendations regarding oral health services and counseling for pediatric dental patients.

https://www.aapd.org/globalassets/media/policies_guidelines/bp_periodicity.pdf



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Individualized Recall:



Professional dental care is necessary to maintain oral health.¹ The AAPD emphasizes the importance of initiating professional oral health intervention in infancy and continuing through adolescence and beyond.² The periodicity of professional oral health intervention and services is based on a patient's individual needs and risk indicators.³⁻⁸ Each age group, as well as each individual child, has distinct developmental needs to be addressed at specific intervals as part of a comprehensive evaluation.^{2,9-11} Continuity of care is based on the assessed needs of the individual patient and assures appropriate management of all oral conditions, dental disease, and injuries.¹²⁻¹⁸ The early dental visit to establish a dental home provides a foundation upon which a lifetime of preventive education and oral health care can be built.

https://www.aapd.org/globalassets/media/policies_guidelines/bp_periodicity.pdf



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Individualized Recall:



Each patient is placed in a recall program based on his/her individual risks (see Caries Risk) rather than arbitrary time intervals such as a 6-month recall. The patient's recall category is consistent with the diagnosis, treatment received, and medical condition, e.g., diabetes, rampant caries, pregnancy, and perio status.



Indian Health Service
Oral Health Program Guide
2007
Chapter 8, Appendix III, page 517

Case Presentation



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A Mismanaged Case of Early Childhood Caries?

Indian Country Oral Health
ECHO

Joseph Churchill, DDS
Lower Elwha Dental Clinic



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Background information:

- Patient's Main concern: (July 2020) worried about needles, no concerns about teeth
- Demographics: 6-year-old male (2022)
- Social: at 2.5 years old (August 2018) grandparents gained custody. Mom regained custody around 5 years of age (approximately December 2020)
- Medical: no medical conditions



Background information (continued) :

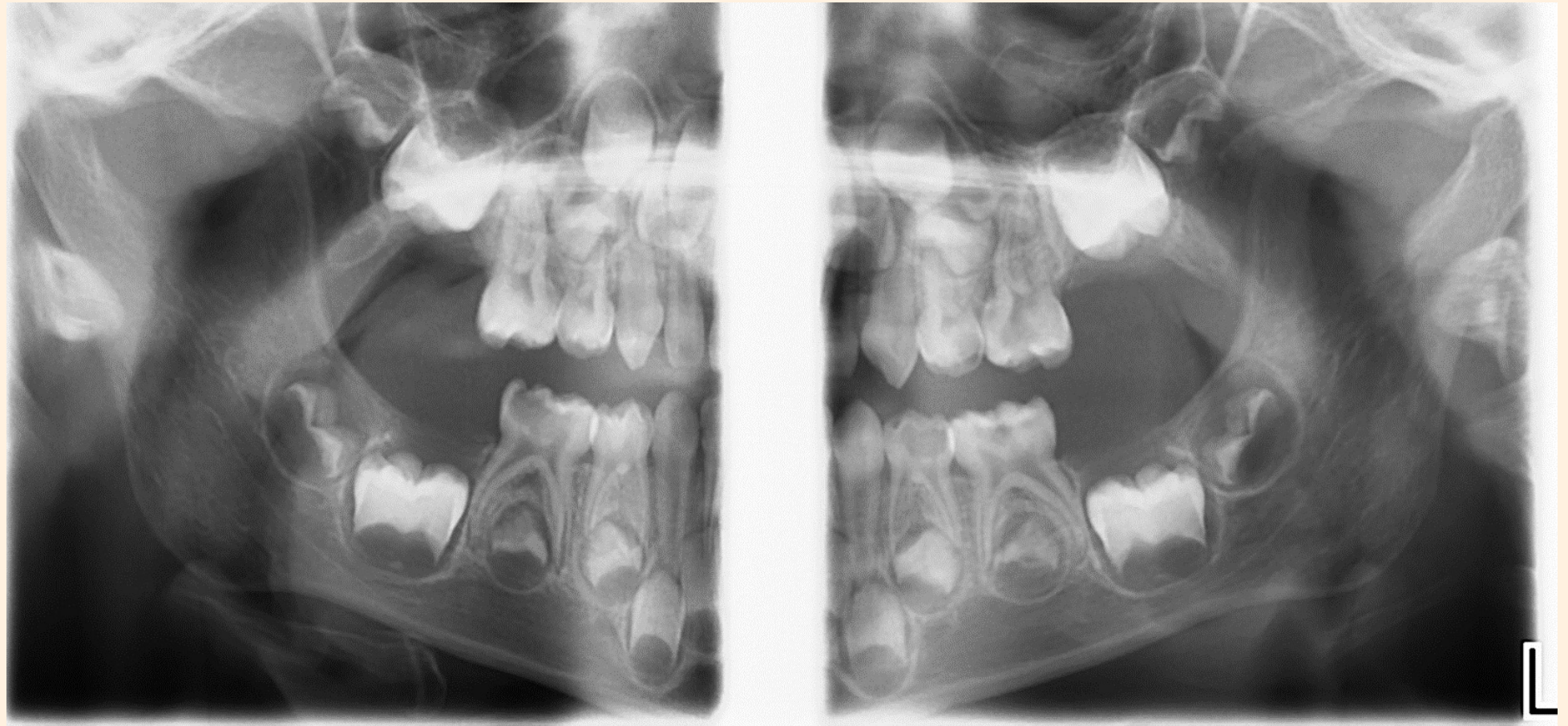
- **Dental:**

- August 2018 – exam and cleaning, no caries (2.5 years old – grandparents have custody)
- October 2019 – came in for exam, hesitant to open mouth, but no caries detected
- July 2020 – exam, no complaints, caries noted #E-F #I-J #K-L and #T
 - We were able to treat with 3 applications of SDF by August 2020 (7/27, 8/10 and 8/24) (patient is now 4.5 years old) (Mom regains custody around Dec. 2020)
- January 2022 – emergency visit with complaint of pain from lower left. Noted abscess secondary to caries #K-L, prescribed amoxicillin and referred to pediatric dentist
- April 2022 – comprehensive oral rehabilitation performed under general anesthesia with extraction #E-F #I-J #K-L and #T. SSCs placed on #A-B and #S



Dental findings:

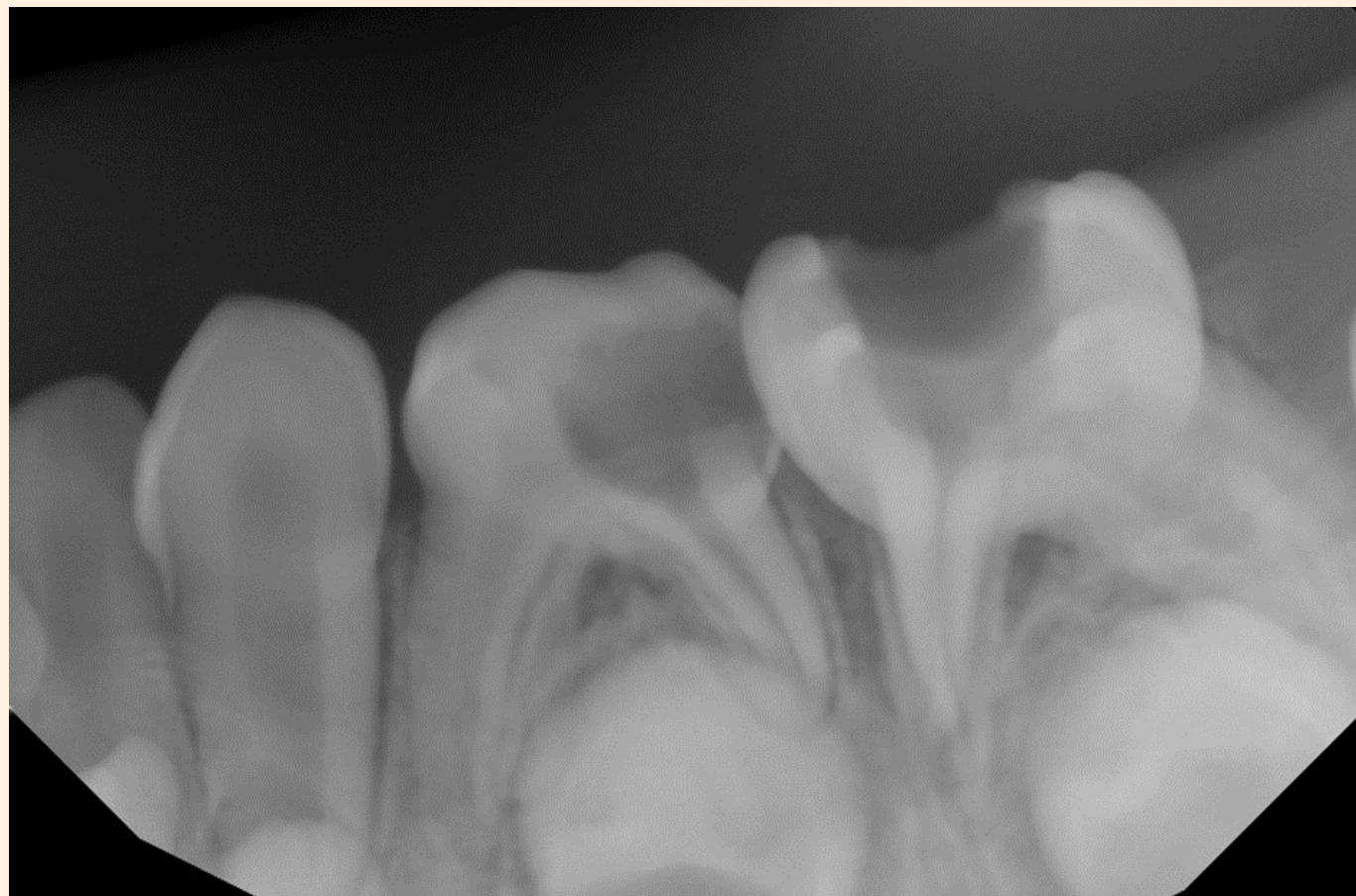
7/27/2020



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Dental findings:

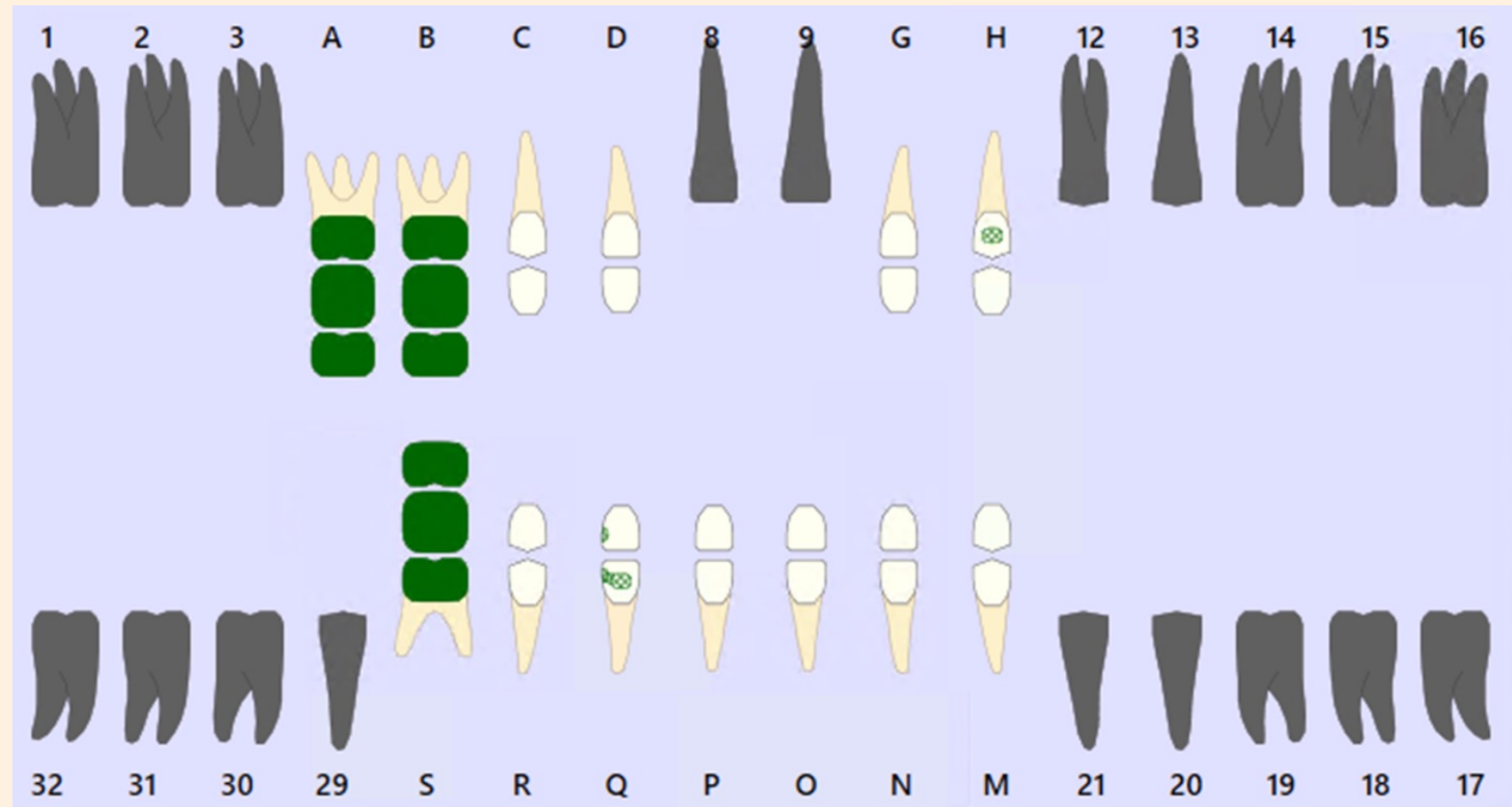
1/8/2022



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Dental findings:

Odontogram following comp oral rehab
on 4/14/2022



Dental findings:

Chart Note from
7/27/2020

▲ Exam - Periodic

Patient is concerned about nothing.

Exam:

Radiographs - 2 Bitewings.

Extraoral - WNL

Intraoral - WNL

AAP Classification - I. Plaque Induced Gingivitis . Oral Hygiene - fair, generalized plaque, localized calculus.

Teeth - Caries Risk Assessment - not done today. Occlusion - primary dentition developmentally WNL. Restorations - none. Caries - noted on #E ML #F ML #I DO #J OL #K O #L DOL and #T O.

Plan: Recommend application of SDF to attempt to arrest caries progress. Pt's mom understands that it may be too late for #T, but hopefully not. Explained that if he does well with the treatments that we can eventually place restorations to keep carious lesions from trapping food.

▲ Radiograph Evaluation

Radiographs taken - BWX (extraoral). Findings - primary dentition developmentally WNL, caries noted #ID #J O #K O #L O and #T O.



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No photographs taken

Group Discussion and Q&A



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Indian Country Oral Health ECHO: Minimally Invasive Dentistry and Case Presentation

Today's Faculty:



Sean Kelly, DDS, MSHS
NTDS
Clinical Consultant



Martin Lieberman, DDS, MA
VP, Graduate Dental Education,
NYU-Langone
Arcora Foundation Consultant



Miranda Davis, DDS, MPH
TCHPP
NDTI Project Director



Pam Ready (Puyallup)
RDH, MSDH
TCHPP
DHA Education Manager



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Additional Information




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Additional Information

Webinar]			
DE0436	USPHS Quarterly CDE Webinar: How to Manage Tooth Decay Without Needles or Drills! [RECORDED WEBINAR]	10/1/2021 - 9/30/2022	Online
DE0438	Minimally Invasive Dentistry Restorations and Topicals [Recorded Webinar]	5/12/2021 - 5/19/2021	Online
DE0439	Diabetes Online CDE: Make every bite count with the Dietary Guidelines: Supporting Healthy Eating Across the Lifespan	10/1/2021 - 9/30/2022	Online
DE0440	Diabetes Online CDE: Putting Prevention and Treatment of Childhood Obesity in Context	10/1/2021 - 9/30/2022	Online
DE0442	IHS Monthly EDR Series: Online Training Videos & Resources for IHS	10/1/2021 - 9/30/2022	Online



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Continuing Dental Education

Home > Catalog > All > DE0438

2022 Catalog: All Courses

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DE0438: Minimally Invasive Dentistry Restorations and Topicals [Recorded Webinar]

[Select Course](#)

Date: 5/12/2021 - 5/19/2021 Course Status: Available
Facility: Online Location: Online
Instructor: [Jeremy Horst](#) Director: [Tacey Mason](#)
Level: Review Audience: Dentists, Hygienists, DHA, Assistants
Quota: 5 - 400 students Tuition: \$0.00
Hours: 4.00 (Total CDE); 4.00 (DANB Non-Clinical); 4.00 (AGD - 430)

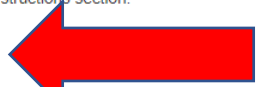
lecture Q & A discussion

Instructions:

After you've watched the sessions below, you'll need to return to this course page to select your sessions and gain credit using the link at the bottom of this Instructions section.

- Session 1: [Minimally Invasive Dentistry - Prevention](#)
- Session 2: [Minimally Invasive Dentistry - Restorative](#)

To obtain credit for this course please be sure to watch all the recordings you intend to view before [clicking here and selecting the sessions you viewed](#) throughout this course.



Tools

2022 Selected Courses

Sean Kelly, you do not have any selected courses.

Completed Courses

8/25/2021 - [DE0487](#): 2021 Portland Area Dental Meeting

7/29/2021 - [DE0455](#): IHS Monthly CDE Webinar: Population Health Management - Accomplishing the End Result [Live Webinar]

7/1/2021 - [DE0448](#): Diabetes Online CDE: Diabetes and Oral Health: What's the Connection?

[View all Completed Courses](#)

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2022 Catalog: All Courses

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Previous Course

328 of 356 [All Courses](#)

Next Course

DE0626: Maximally Effective Dentistry! What's New? [Recorded Webinar from Feb. 9, 2022]

Select Course

Date: 3/09/2022 - 9/30/2022

Facility: Online

Instructor: [Jeremy Horst](#)

Level: Basic

Quota: 1 - 1000 students

Hours: 2.00 (Total CDE); 2.00 (DANB Non-Clinical); 2.00 (AGD - 430)

Course Status: Available

Location: Online

Director: [Tacey Mason](#)

Audience: Dentists, Hygienists, Assistants, Support Staff

Tuition: \$0.00



lecture



Q & A

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Additional Information

YouTube Search

Non-invasive dentistry clinical decision tree

```

graph TD
    CL[Caries Lesion] --> Q1{Active?}
    Q1 -- arrested --> AG[Activity guide]
    Q1 -- active --> DC[Disease control*]
    AG --> CR{Caries risk?}
    CR -- low --> M[Maintain Reinforce]
    CR -- elevated --> P[Prevent Disease control*]
    DC --> Q2{Is there a hole (cavitation to dentin)?}
    Q2 -- no: initial --> TA1[Topical Arrest  
F varnish  
SDF  
P11-4  
GI sealant]
    Q2 -- yes --> Q3{Is pulp therapy indicated?}
    Q3 -- no --> Q4{Does plaque accumulate in the lesion?}
    Q4 -- no: self-cleaning --> TA2[Topical Arrest  
SDF]
    TA2 --> OAI1[Or as indicated:  
2-visit SMART  
Hall technique  
Minimally-invasive restoration]
    Q4 -- yes: plaque trap --> Q5{Are all cavity margins visible?}
    Q5 -- yes: accessible --> RA1[Restorative arrest  
2-visit SMART]
    RA1 --> OAI2[Or as indicated:  
Hall technique  
Minimally-invasive restoration]
    Q5 -- no: hidden --> RA2[Restorative arrest  
Hall technique]
    RA2 --> MIR2[Minimally-invasive restoration]
    Q3 -- yes --> PP[Pulpal procedures  
Indirect pulp therapy (Clove oil, SDF),  
Partial pulpotomy, Regeneration, LSTR,  
Root canal therapy, Antibiotics, I+D, Extraction.]
    
```

***Disease control:**
Motivational interviewing,
Nutritional improvement,
F toothpaste, SDF,
F varnish, Iodine

CareQuest
Innovation Partners.



Thank You!



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Questions?

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