

Title: Dental Caries Risk Assessment: An Integral Approach for Early Detection and Prevention for Medicaid Recipients in New York State

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Abstract

- ❖ **Introduction:** Dental caries remains a significant oral health concern in New York State, particularly among Medicaid beneficiaries. Early detection and preventive measures are crucial to reduce the burden of caries and improve oral health outcomes. Incorporating a caries risk assessment tool that identifies factors that contribute to the development of caries in routine dental practice will serve as a vital approach to determining the likelihood of developing dental caries in the future. This assessment will help provide targeted interventions to prevent, halt, or reverse the disease at the earliest opportunity.
- ❖ **Aims:** This paper aims to highlight the relevance of the caries risk assessment protocol in routine dental practice. The goal, therefore, is to help inform policy and possibly support consideration for reimbursement by Medicaid in New York State.
- ❖ **Method:** A literature search was conducted using databases such as PubMed and Web of Science in order to evaluate the different caries risk assessment tools, protocols, the different strategies and approaches used by states for Medicaid reimbursements. A total of 17 articles were critically evaluated, and their key findings were summarized.
- ❖ **Results and Discussion of Findings:** Not all states reimburse dental providers for performing caries risk assessment; often leading to neglecting this crucial tool in routine dental practice, especially in private dental offices. Medicaid does not reimburse oral health care providers for providing this essential service to residents in New York State. According to the American Academy of Pediatric Dentistry (AAPD), only 16 states have adopted policies that allow reimbursement for caries risk assessment as a separate service [1]. Incorporating a caries risk assessment tool for each patient who visits the dental practice and providing individualized recommendations for prevention and treatment in these states have proven to reduce the incidence of dental caries considerably.
- ❖ **Conclusion** Including caries risk assessment as a mandatory reimbursable preventive service in the dental office will reduce the incidence and severity of dental caries, a common chronic disease among children and adults in New York State.

Background

- ❖ Caries management is best done on a personalized basis, building upon a reliable caries risk assessment (CRA) where detailed information about the specific risk factors of a patient can be utilized not only to establish the risk of developing future caries lesions.
- ❖ Evidence suggests that caries risk assessment protocols when efficiently used have been effective in predicting the risk of caries for all ages, and appropriately informing treatment interventions.
- ❖ Studies that evaluated different risk assessment tools, including their validity, have shown that using a Caries Risk Assessment in the dental clinic significantly reduces the risk of dental caries.
- ❖ Despite the usefulness of using caries risk assessment tools, not all states have adopted a Caries Risk Assessment protocol for its routine use. Furthermore, the few states that have included Caries Risk assessment in their routine dental examinations or preventive services are not fully reimbursed for these services.

Objective

- To propose a practical, tailored approach to Caries Risk Assessment for early detection and prevention of dental caries in routine dental practice.
- To provide evidence for policymakers to consider reimbursement for Caries Risk Assessment in routine dental practice by the New York State Medicaid Program.

Methods

- ❖ A comprehensive literature review was carried out to assess various caries risk assessment tools, protocols, and the diverse strategies and approaches adopted by states for Medicaid reimbursement.
- ❖ A search of reputable databases, PubMed and Web of Science was done, and a total of 17 scholarly articles were critically evaluated for their relevance and methodological rigor.
- ❖ The findings from these selected articles were subsequently evaluated and summarized to inform the overarching objectives of this study.

Fig. 1. CAMBRA Caries Balance Model (Featherstone et. al, 2019)

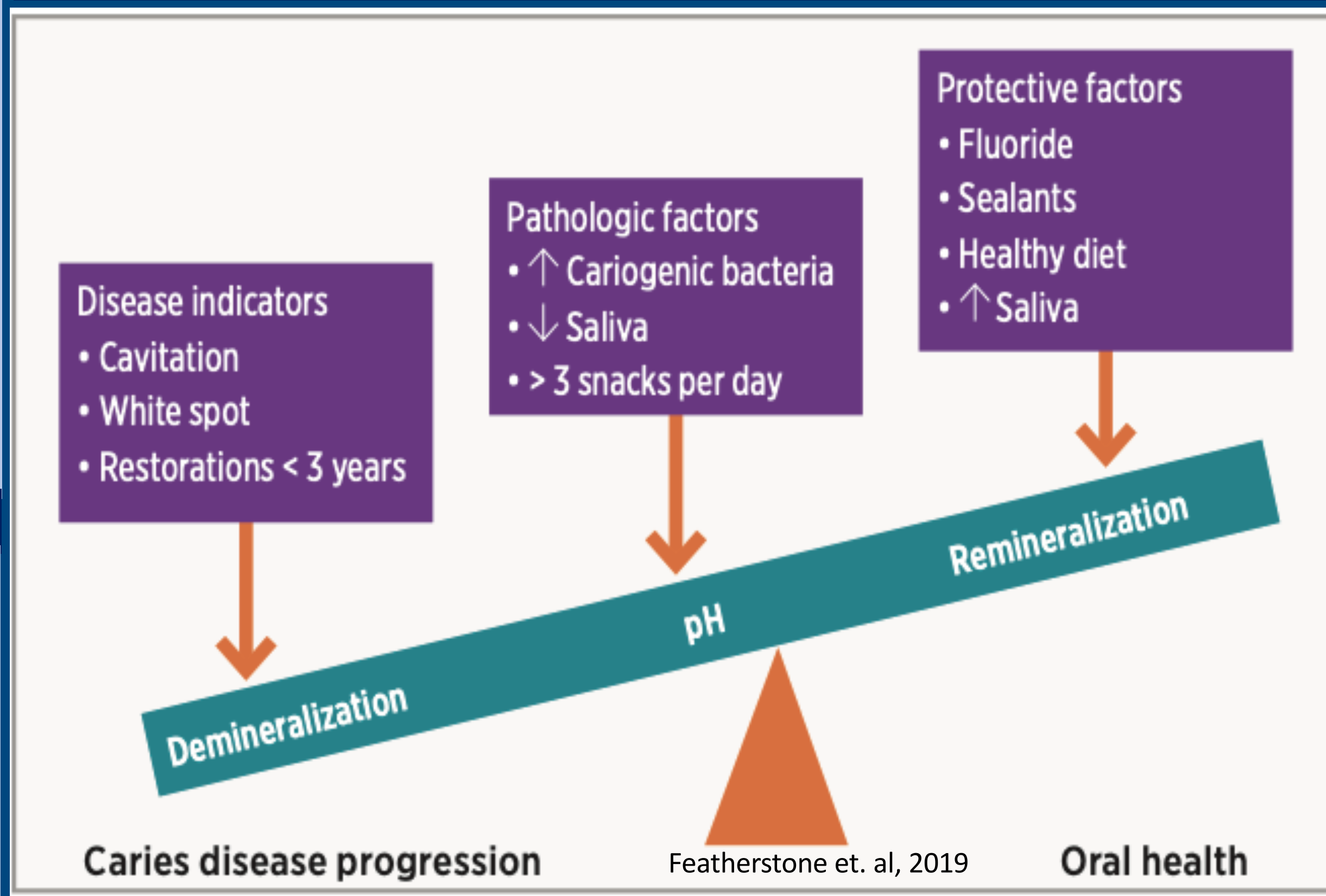
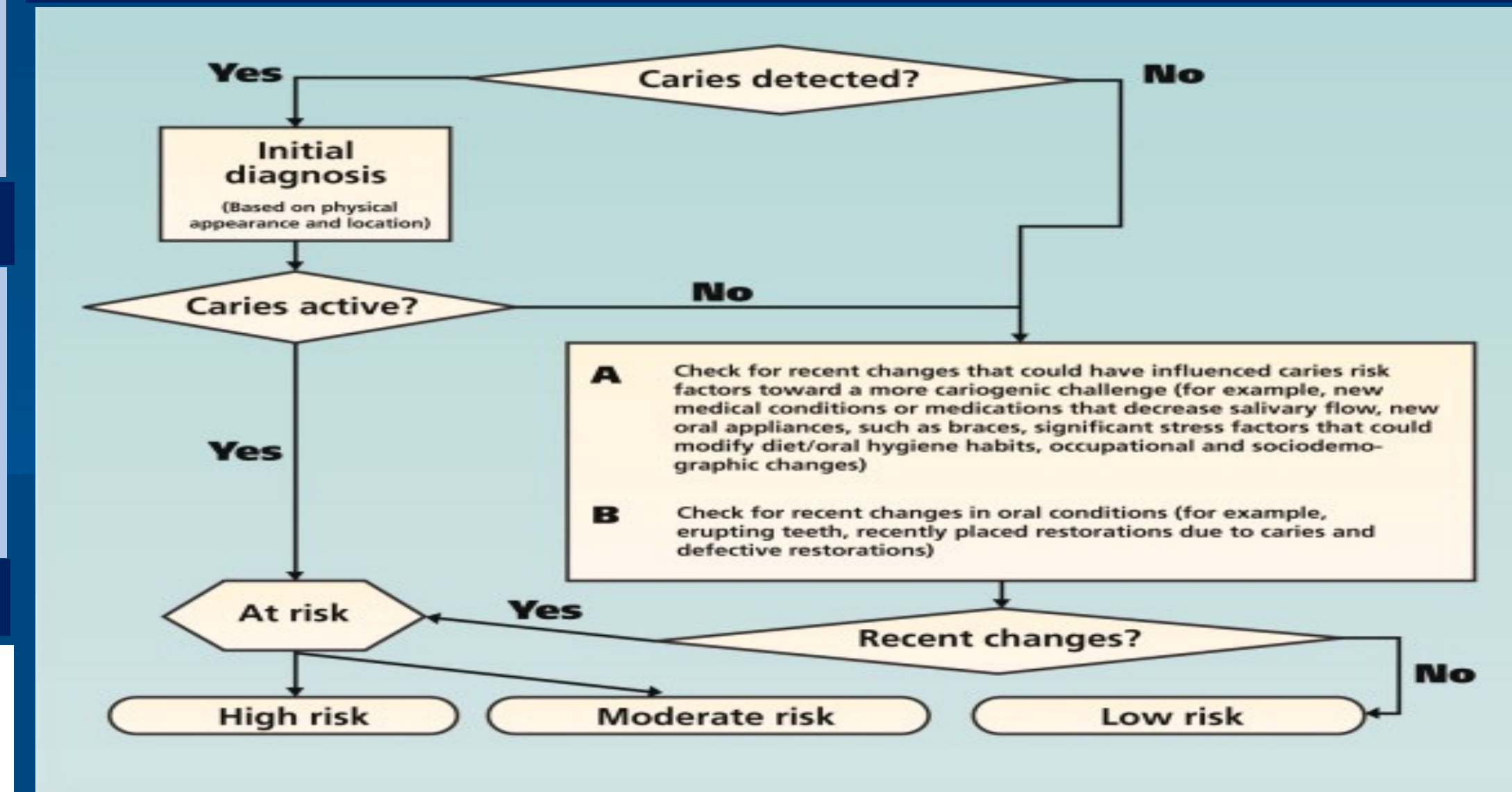


Fig. 2. Flowchart depicting clinician's initial decision-making process in determining a patient's caries risk (Fontana & Zero, 2006)



Results

- ❖ Successful management of dental caries requires the use of a reliable CRA tool, which then leads to the formulation of an individualized treatment plan that is derived from the caries' risk level and the information learned during the CRA process.
- ❖ According to a report by the American Academy of Pediatric Dentistry (AAPD), only 16 states (Alaska, Arizona, California, Colorado, Connecticut, Hawaii, Idaho, Iowa, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Mexico, Oregon, and Washington) have adopted policies that allow reimbursement for caries risk assessment as a separate service.
- ❖ There are four well-known caries risk assessment tools used by various states: CAMBRA (Caries management by risk assessment), Cariogram, American Dental Association (ADA) CRA, and American Academy of Pediatric Dentistry (AAPD) CRA.
- ❖ CAMBRA is the most validated CRA tool and has been shown to be highly predictive of future caries among these tools. CAMBRA includes both risk assessment and caries management.
- ❖ CAMBRA has been used for its reliability in identifying patients at increased risk in predoctoral adult clinics at the University of California, San Francisco (UCSF).
- ❖ This study found that the CAMBRA protocol has been effective in detecting patients indicated for moderate, high and extreme risk for dental caries. Its adaptation has been shown to give clinicians a better approach to reducing caries risk among patients.

Conclusion

- ❖ Incorporating a comprehensive approach that considers both individual risk factors and systemic determinants can significantly enhance the efficacy of preventive measures. Based on our findings, It is imperative that state Medicaid considers reimbursement of caries risk assessment in the dental clinic. An expert panel should be convened to investigate the introduction and implementation of an integrated dental caries risk assessment in routine dental practice in New York State.