Beyond Nausea: What Obstetric Providers should know about Oral Care For Patients with Hyperemesis Gravidarum

Translating existing evidence guidelines into a practical oral-care framework

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Background

Hyperemesis gravidarum (HG) affects an estimated 0.3-3% of pregnancies and is characterized by severe, persistent nausea and vomiting that may result in significant maternal morbidity including ≥5% pre-pregnancy weight loss, dehydration, electrolyte abnormalities, and nutritional deficiencies (StatPearls, 2025).

Current clinical management of HG focuses primarily on rehydration, antiemetic therapy, nutritional support, and correction of electrolyte abnormalities. Despite the potential oral consequences of recurrent vomiting, oral health is not addressed as a distinct component of HG management.

Pregnancy itself is associated with increased susceptibility to oral-health conditions. The American College of Obstetricians and Gynecologists (ACOG) recognizes gingival inflammation as common during pregnancy and emphasizes that necessary dental care is safe during pregnancy and should not be delayed.

For patients with HG, recurrent vomiting introduces an additional oral-health challenge: repeated exposure of the dentition to gastric acid. The American Dental Association (ADA) identifies chronic exposure to gastric acid from vomiting as a cause of dental erosion, in which repeated acid exposure can progressively weaken and demineralize tooth structure and have periodontal effects.

Introduction

Hyperemesis gravidarum (HG) is a severe form of nausea and vomiting of pregnancy that can result in dehydration, nutritional compromise, and electrolyte abnormalities. Current obstetric guidelines focus appropriately on these complications, but oral health is not routinely incorporated into HG assessment or management. This represents a potential clinical gap given the physiologically plausible pathway between recurrent vomiting, gastric-acid exposure, and oral complications including dental erosion and gingival inflammation.

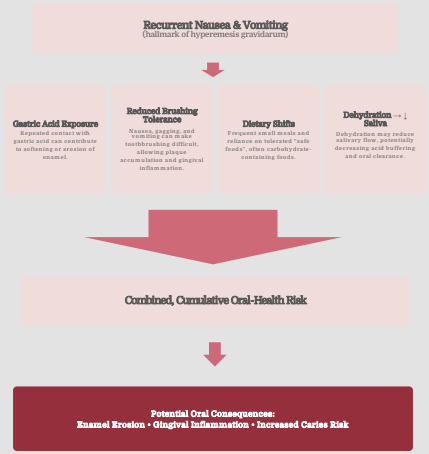
Although HG typically improves as pregnancy progresses, oral complications associated with repeated acid exposure or difficulty maintaining oral hygiene may persist beyond the acute illness and warrant early attention. Routine HG visits therefore provide a low-burden opportunity for oral-health screening, preventive counseling, and timely dental referral without requiring a separate medical appointment.

This project aims to synthesize existing obstetric and dental guidance, including recommendations from ACOG and the ADA, alongside HG reference literature, pregnancy-based oral-health evidence. The framework prioritizes areas of convergence across available evidence while distinguishing established pregnancy and dental evidence from the still-limited HG-specific literature.

The proposed approach focuses on four areas: (1) the physiologic pathways linking HG to oral-health risk, (2) what current evidence demonstrates, (3) low-cost preventive measures obstetric providers can recommend, and (4) a practical screening and referral pathway for routine HG care.

Pathophysiology of Oral Risk in HG

What recurrent vomiting does to the oral environment:



Evidence strength: The proposed mechanisms are supported by established obstetric and dental evidence; however, direct measurement of these outcomes in HG-specific cohorts remains limited. The 2025 scoping review by Coffey et al. highlights this gap in the current literature.

Oral Conditions Reported in HG

Condition	What the Evidence Shows
Dental erosion	Recurrent exposure to gastric acid provides a plausible mechanism for enamel erosion; however, direct measurement of erosion incidence in HG cohorts remains limited.
Gingival / periodontal changes	Pregnancy increases susceptibility to gingival inflammation and periodontal disease. In pregnant women generally, a validated salivary test using LDH, ALP and occult blood demonstrated 89.5% sensitivity, 62.4% specificity (Kugahara et al. 2008, n=221) for periodontitis.
Dental caries	HG may plausibly increase caries risk through altered eating patterns, frequent carbohydrate exposure, and challenges maintaining oral hygiene. However, HG specific caries incidence have not been established in literature.
Ptyalism	Excessive salivation may occur with nausea and vomiting of pregnancy. Its independent and net effects on oral health remain poorly characterized.
Overall	HG specific prevalence data remains limited across oral conditions. This represents an evidence gap in literature.

Clinical Algorithm of HG

A simple, guideline-based approach for routine HG visits:

ASK — At each HG visit: "How are you managing brushing and rinsing?" "Any new tooth sensitivity, enamel changes, or bleeding gums?" "Do you have a dentist, and have you been seen this pregnancy?"

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COUNSEL — After vomiting, rinse first with plain water or a fluoride rinse; wait ~1 hour before brushing. Continue twice-daily brushing and daily flossing as tolerated and hygiene should adapt around symptoms.

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ASSESS — Reassure that pregnancy does not require deferring dental care: radiographs (with shielding), local anesthesia, and most restorative/preventive procedures are safe throughout pregnancy (ACOG CO 569).

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REFER — Refer to dentistry for visible enamel wear or sensitivity, gum bleeding/swelling, suspected caries, or no dental visit yet this pregnancy. Refer proactively.

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FOLLOW — Revisit the screening questions at subsequent HG visits; document referral and follow-up alongside standard HG management.

Severity-tiered response:

Tier	Presentation	OB/GYN Action	Dental Plan Recommended by American Academy of Periodontology
Mild	✓ Mild HG symptoms ✓ Oral hygiene is maintained ✓ No oral symptoms reported	Reinforce rinsing with water after vomiting, waiting before brushing, and brushing regularly with fluoride toothpaste. Confirm that the patient has established dental care.	Continue routine preventive dental care and reinforce oral-hygiene practices. AAP recommends regular periodontal evaluation and good at-home plaque control to prevent periodontal disease.
Moderate	✓ Difficulty maintaining oral hygiene ✓ Frequent vomiting or nausea interferes with brushing ✓ No reported or visible oral changes	Counsel the patient on the rinse → wait → brush routine and continued use of fluoride toothpaste. Consider recommending a fluoride mouthrinse and encourage a routine dental visit during pregnancy.	Assess oral hygiene and gingival health. Reinforce brushing and interdental cleaning. If gingival inflammation is present, provide appropriate professional cleaning and individualized preventive care.
Elevated	✓ Tooth sensitivity or oral discomfort ✓ Gingival bleeding ✓ Suspected or visible enamel changes	Recommend proactive dental evaluation and continue preventive oral-care counseling. Reassure the patient that necessary dental evaluation and treatment are safe during pregnancy.	Bleeding gums are an AAP-recognized warning sign of periodontal disease. Determine whether findings represent pregnancy-associated gingivitis or periodontitis. If periodontal disease is diagnosed, treatment may include professional periodontal therapy such as scaling and root planing; more advanced disease may require additional periodontal treatment.
High	✓ Severe or refractory HG ✓ Poor oral intake or significant dehydration ✓ Concurrent oral symptoms	Coordinate dental referral alongside ongoing HG management and communicate relevant HG symptoms, nutritional status, and oral concerns to the dental team.	Conduct comprehensive dental/periodontal assessment and establish treatment based on the diagnosis and severity. Periodontists may provide nonsurgical therapy such as scaling and root planing and, when indicated, additional surgical or adjunctive periodontal treatment. Coordinate ongoing periodontal maintenance.

Patient- Specific Modifications

Scenario	Recommendation
Severe ptyalism or gagging	Use a soft-bristle toothbrush with fluoride toothpaste. Encourage brushing at the time of day when nausea and gagging are least severe. If brushing triggers vomiting, prioritize gentle oral cleaning and fluoride exposure as tolerated rather than forcing brushing during severe symptoms. [2,3,4,6,9]
Cannot tolerate toothpaste flavor/foam	Consider a fluoride mouth rinse (swish and spit) as a temporary alternative when toothpaste cannot be tolerated. Resume fluoride toothpaste as symptoms improve. A mouth rinse should not be considered a replacement for routine brushing when brushing is tolerated. [2,3]
Frequent small, carbohydrate-heavy meals	Encourage water rinsing after meals or snacks to help clear food and reduce prolonged exposure to dietary acids. Emphasize maintaining daily fluoride exposure when twice-daily brushing is difficult to tolerate. [2,3,4,6,9]
Dehydration/dry mouth from antiemetics	Encourage frequent hydration as medically tolerated and use sugar-free gum to stimulate salivary flow when tolerated. Avoid frequent sugary drinks or candies for dry-mouth relief. [1,3,5,6,9]
NPO or IV-fluid-dependent inpatients	When toothbrushing is not feasible, provide basic oral care with water or an institution-approved oral-care product. If chlorhexidine is used, follow the hospital's specific indication and protocol rather than recommending routine chlorhexidine use for all patients. [2,9]

Discussion

Oral health is a physiologically plausible but under-studied dimension of hyperemesis gravidarum (HG) care. Vomiting, dehydration, and dry mouth (xerostomia) may increase the risk of enamel erosion, caries, and gingival inflammation. Existing OB/GYN and dental guidelines provide practical tools, including rinse-wait-brush counseling, reassurance that dental care is safe during pregnancy, and low-threshold dental referral. Incorporating a brief oral-health screen into routine HG visits is a low-cost way to address this gap while further research evaluates HG-specific oral outcomes.

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AI Use Disclosure

Generative AI (Claude, Anthropic) assisted with figures and citations. All clinical statements were reviewed and verified by the authors.