

The need for updated treatment- and outcomes-based guidelines for periodontal therapy

Stephen K. Harrel, DDS; Charles M. Cobb, DDS, MS, PhD

Periodontitis is a tissue-destructive chronic inflammatory condition that affects approximately 42% of the US population aged 30 through 75 years.¹ Based on US Census numbers, this prevalence rate extrapolates to roughly 80,858,400 people. A growing body of evidence indicates the disease to be a significant, yet controllable, risk factor for stroke, atherosclerosis, and Alzheimer disease.² There is a need for basic clinically-based guidelines to assist in determining appropriate treatment and in evaluation of treatment outcomes.

Guidelines serve multiple purposes. They establish a procedural framework with the potential to reduce unwarranted treatment variations, enhance adaptation of emerging research into practice, and improve health care quality and safety. They guide best practice recommendations for the treatment and care of patients by health care professionals, assist in development of standards for the assessment of the clinical practice of health care professionals, guide health care organizations, help educate and train health care professionals, and help patients make informed decisions.³ It is crucial that guidelines incorporate treatment methodology as well as standards for the assessment of therapeutic outcomes.

In 2015, the American Dental Association (ADA) published a systematic review and clinical guidelines for nonsurgical periodontal therapy.^{4,5} As coauthors of these articles, we are aware that these method-based guidelines are outdated and of limited value, as they do not include advanced technology or relevant therapeutic advances. The published ADA nonsurgical guidelines stated that these guidelines were to be updated in 5 years. It has now been 9 years since publication, and neither the ADA nor the American Academy of Periodontology have made updates. The European Federation of Periodontology (EFP) published clinical practice guidelines for stage I through stage III periodontitis in 2020⁶ and stage IV periodontitis in 2022.⁷ Although these documents are exhaustive systematic reviews of periodontal treatment methods and represent an excellent reference source for academicians, they would be difficult for most practitioners to use as a decision matrix in clinical practice. A deficiency in both the ADA's and EFP's technique guidelines was a lack of emphasis on the need for continuous and thorough reevaluation of the response to periodontal therapy. The most important aspect of periodontal therapy—the outcome of the therapy—was not emphasized.

Initial therapy for periodontitis, as recommended by both the ADA and EFP, is similar: a comprehensive examination and documentation, instruction in patient-delivered oral hygiene, scaling and root planing (SRP) to remove calculus and biofilm, and determination of the patient's response to therapy (that is, the outcomes of therapy). A properly performed SRP removes most of the accumulated biofilm and calculus. Thus, the clinician should expect reductions in inflammation, bleeding on probing, and probing depth. Although these clinical responses are an indication of improvement, it is the long-term stability of these clinical indicators that determines the outcome of therapy. Researchers have reported that return of bleeding on probing and continued presence of deeper pockets (usually ≥ 4 mm) are the most reliable indicators of continuing periodontal degeneration.^{8,9} The only way that these factors can be assessed is by means of complete and continued reevaluation of the patient's periodontal condition over an extended period after treatment. Initial favorable responses in clinical findings will often rebound to original levels, which will only be noted if the patient undergoes a periodontal reevaluation 3 through 6 months after SRP. If symptoms persist or return to baseline at reevaluation, having the patient undergo periodontal maintenance is not indicated. A second SRP is usually of limited benefit.¹⁰ In most cases, if the patient's periodontal disease does not fully respond to initial therapy, advanced therapy beyond SRP and periodontal maintenance is indicated.

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Proposed outcomes-based guidelines for periodontal therapy have been published.¹¹ The goals of these expert opinion–based guidelines were to be easily understood, practical, and applied to the daily practice of dentistry. Periodontal outcome guidelines, at the simplest level, state that if bleeding on probing and deep (≥ 5 mm) or increasing probing depths are present, the patient must be informed that advanced therapy is likely indicated to control their disease. Advanced therapy covers many techniques from endoscope or videoscope nonsurgical scaling to bone regeneration surgery or laser therapy. A detailed listing of advanced therapy is beyond the scope of this article. Advanced therapy can be provided by anyone who is qualified to perform the therapy and does not necessarily require a specialty referral. Patients must be informed of the availability and potential benefit of advanced therapy. The clinical findings at the reevaluation appointment and discussion of indicated advanced therapy with the patient should be entered clearly in the patient's chart. This allows the patient to make an informed decision. To not fully inform the patient of their ongoing disease or to imply their active disease is being controlled with a maintenance program is unacceptable.

Unfortunately, patients' periodontal disease is frequently treated using a formulaic method-based approach as opposed to an outcomes-based approach. Some advocated programs follow a cookbook approach, meaning that regardless of disease severity, all patients receive oral hygiene instruction, 4 quadrants of SRP, and assignment to the recall bank. Many soft-tissue programs are designed to treat gingival inflammation and stage I periodontitis only. Such programs are rarely adequate to treat the more advanced stages of periodontitis, which are characterized by furcation involvement, gingival recession, advanced levels of bone loss, and tooth mobility (stages II, III, IV). These levels of periodontal involvement frequently require advanced therapy and can only be detected by means of meticulous reevaluation of the patient's periodontal status after SRP. Long-term reevaluation of treatment outcomes is essential. The patient should not undergo a maintenance program while they still have active disease. This is unacceptable both ethically and medicolegally. A critical evaluation of the long-term outcomes of therapy and a recommendation for advanced therapy, when indicated, will avoid the inadequate treatment that often leads to unnecessary loss of bone and teeth.

It is imperative that organized dentistry establish updated periodontal guidelines that include both treatment methods and determination of treatment outcomes. These guidelines should emulate similar guidelines in clinical medicine and most dental specialties. Such guidelines are necessary for the proper care of patients and to avoid inadequate periodontal therapy. ■

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Dr. Harrel is a clinical professor, Department of Periodontics, Texas A&M College of Dentistry, Dallas TX. Address correspondence to Dr. Harrel, 3302 Gaston Ave, Dallas, TX 75246, email skharrel@gmail.com.

Dr. Cobb is a professor emeritus, Department of Periodontics, School of Dentistry, University of Missouri-Kansas City, Kansas City, MO.

ORCID Numbers. Stephen K. Harrel: <https://orcid.org/0000-0002-2426-2625>; Charles M. Cobb: <https://orcid.org/0000-0003-0844-2738>. For information regarding ORCID numbers, go to <http://orcid.org>.

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