

Delta Dental of Virginia Clinical Policy # 404
Subject
 Osseous Surgery

Originating Department
 Clinical Professional Services

Signature Authority
 Dental Director

Type: New Replacement Revision Clarification

Date: 11/15/2009 **Revision Date:** 11/15/2011

Preamble:

The Clinical Policy Bulletin is an expression of Delta Dental of Virginia's (DDVA) determination regarding whether certain services or supplies are medically or dentally necessary. DDVA bases its conclusions on a review of currently available clinical literature. This includes, but is not limited to, clinical outcome studies published in the peer-reviewed medical and dental literature, regulatory status of the technology, evidence-based guidelines of public health and health research agencies, evidence-based guidelines and positions of leading national health professional organizations, views of physicians and dentists practicing in relevant clinical areas, and other relevant factors. DDVA reserves the right to revise these policies as new clinical information is available and we welcome submission of further relevant information.

A group may define covered dental services under their dental plan, as well as those services that may be subject to dollar caps or other limits. The plan documents outline covered benefits, exclusions and limitations. DDVA advises dentists and enrollees to consult the plan documents to determine if there are exclusions or other benefit limitations applicable to the service request. The conclusion that a particular service is medically or dentally necessary does not constitute an indication or warranty that the service requested is a covered benefit payable by DDVA. Some plans exclude coverage for services that DDVA considers either medically or dentally necessary. When there is a discrepancy between DDVA's clinical policy and the group's plan documents, DDVA is to defer to the group's plan documents as to whether the dental service is a covered benefit. In addition, if state or federal regulations mandate coverage then DDVA will adhere to the applicable regulatory requirement.

History:

Periodontitis (peri = around, odont = tooth, -itis = inflammation) refers to a number of inflammatory diseases affecting the periodontium, which is comprised of the tissues that surround and support the teeth. Periodontitis involves progressive loss of the alveolar, or supporting, bone around the teeth, which, if left untreated, can lead to loosening and subsequent loss of teeth. Periodontitis is caused by a bacterial plaque or biofilm that adheres to the tooth and root surfaces at and under the gumline in association with an inflammatory immune response to these bacteria that causes loss of bone and soft tissue. A diagnosis of periodontitis is established by visual analysis, including measurements of the depth of "gum pockets" around the teeth with a periodontal probe. The "gum pocket" represents loss of attachment of bone and gum tissue to the tooth. Evidence of periodontal bone loss can also be documented by X-rays.

The need for osseous surgery is evaluated following completion of initial therapy, which includes removal of plaque, biofilm, calculus, and bacterial toxins from diseased root surfaces by adequate and meticulous periodontal scaling and root planing(18,19,20,21). Management of other local factors, such as defective

restorations and other dental and medical problems affecting treatment outcomes is completed, as well. An overall health review including consultation with appropriate medical providers is essential in identifying systemic diseases and medications which could compromise successful therapy(20,21).

Numerous studies show that in the presence of deep periodontal pockets, particularly with soft tissue pockets of 5mm or greater, scaling and root planing alone is not effective at complete removal of bacterial plaque and calculus deposits from root surfaces(1,2,3). Root furcation areas (exposure of the tooth surface between roots), variable root morphologies and distal surfaces of molars have proven to be especially difficult to debride(4,5,6,7). These residual deposits may, over time, induce a progressive disease process(8). If, in the clinical judgment of the treating practitioner, attempts of initial therapy fail to halt the progression of periodontal disease, osseous surgery becomes a viable adjunctive treatment option(9,10,11,12). Osseous surgery may be indicated for isolated areas in a particular quadrant or for all teeth in an entire quadrant. A quadrant of the dentoalveolar structures is defined as one of four equal divisions of the maxillary and mandibular arches(13,14). Further, a quadrant begins at the midline and extends distally to the last tooth(13,14).

Treatment for periodontal disease that affects the gingival attachment of the tooth to bone with loss of the supporting alveolar bone includes osseous surgery as a critical component in the overall management of the disease process. All patients diagnosed with periodontal disease must be educated about the concept of periodontal disease, as well as the home care and maintenance regimens necessary for disease stabilization after osseous surgery has been provided.

The osseous surgery procedure generally involves sulcular or inverse bevel incisions of the gingiva with full-thickness mucoperiosteal flap reflection that allows access to osseous defects and root surfaces of involved teeth. The bony support of the teeth is modified by reshaping the alveolar process to a more physiologic form. The surgery may or may not be resective in that supporting bone, as opposed to non-supporting bone, is usually not removed. Removal of supporting bone is defined as ostectomy/osteotomy, and removal of non-supporting bone as osteoplasty(15). Bone removal during osseous surgery is minimized, as bony defects will often exhibit some degree of natural fill on healing(16,17). Extensive bone removal may preclude spontaneous bone fill, as well as successful treatment with bone regenerative or replacement graft materials. Osseous contouring is often completed simply for management of replacement of the reflected full thickness flap.

Definitively, the aims of osseous surgery are to:

1. Provide access for management of defects in the alveolar bone
2. Provide access for root instrumentation and facilitate removal of etiologic or causative factors
3. Reduce the environment conducive to bacterial growth
4. Regeneration or reconstruction of the periodontal attachment apparatus, including bone, cementum and the periodontal ligament

Additionally, osseous surgery procedures should:

1. Maintain an adequate band of attached gingiva

	<ol style="list-style-type: none"> 2. Minimize loss of height of the alveolar crest 3. Improve levels of clinical attachment of the soft tissue 4. Reduce periodontal probing depths <p>Following completion of initial therapy, including scaling and root planing, indications for osseous surgery include:</p> <ol style="list-style-type: none"> 1. Areas of periodontal pocketing equal to or greater than 5mm 2. Areas of the periodontium that exhibit persistent bleeding, inflammation and progressive loss of soft tissue clinical attachment 3. Areas that may respond to placement of bone graft and/or soft and osseous tissue regeneration materials
Policy:	<p>DDVA Guidelines:</p> <p>Osseous surgery procedures may be approved following:</p> <ol style="list-style-type: none"> 1. Documentation of completion of periodontal initial therapy at least four weeks prior to a periodontal surgical procedure. 2. Documentation by pocket depth charting in the last 12 months of periodontal pocketing equal to or greater than 5mm. 3. Presentation of adequate and diagnostic radiographs, which demonstrate horizontal and/or vertical osseous defects. 4. Osseous surgery will be considered for treatment of periodontal disease defects on natural teeth only. 5. Osseous surgery includes all evaluations and postoperative care for three months and any surgical re-entry for three years.
Codes(15):	<p>D4260 – Osseous surgery (including flap entry and closure) - four or more contiguous teeth or bounded spaces per quadrant</p> <p>D4261 – Osseous surgery (including flap entry and closure) - one to three contiguous teeth or bounded spaces per quadrant</p>
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