Delta Dental of Virginia Clinical Policy #400

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**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:**

Bone grafts may be necessary for a variety of reasons that include, but are not limited to, pathologic tooth related bone loss and loss of the alveolar (tooth bearing) ridges.

A bone replacement graft is utilized to replace or stimulate the re-growth of alveolar bone (supporting bone around the teeth) that is lost due to a pathologic disease process resulting in a periodontal defect. Gifts may be osseous (bone) autografts, osseous allografts, osseous xenografts, or alloplasts(1). Autografts use the patient’s own bone, as opposed to allografts which are derived from a same-species host. Xenografts are osseous materials processed from a different species, the most common being bovine-derived particulates. Alloplasts are synthetically prepared graft materials and historically represent the first preparations used in an attempt to restore lost alveolar bone. The earliest attempts using alloplastic grafts were reported...
well over 100 years ago\(^2\). Calcium phosphate, calcium sulfate, and hydroxyapatite are among materials which have been investigated for use as bone grafts\(^1,3\).

The biological rationale for the use of bone grafts is the various graft materials contain either bone forming cells or bone-inducing substances, or serve as a scaffolding structure for new bone formation\(^1\). Consequently, the desired property of a graft material is either an osteogenic (producing bone), osseinductive (inducing new bone formation), or osseoconductive (creates environment conducive to new bone formation) potential.

Bone replacement grafts have been shown to increase bone levels, reduce crestal bone loss, increase clinical attachment levels and reduce periodontal pocket probing depths\(^3\). Some Class II molar tooth furcation defects respond to bone grafting, as well\(^3\). Studies show the repair process to be one of either formation of a new attachment apparatus or a long junctional epithelial attachment\(^4,5\). The healing with alloplastic grafts almost universally shows junctional periodontal repair rather than regeneration of a new connective tissue attachment.

Research literature clearly indicates bone replacement grafts result in relatively improved clinical parameters when compared to unenhanced surgical flap procedures\(^1,3,4,5,6,7,8\).

There are several additional indications for bone grafting procedures other than for correction of periodontal defects. Bone grafts may be utilized for edentulous ridge augmentation or reconstruction procedures that increase height, width and/or volume of a residual alveolar ridge. Augmentation of the sinus cavity may also be necessary to increase alveolar height either for the reconstruction of edentulous portions of the maxilla or to close an oro-antral opening (sinus opening into the oral cavity). An osseous autograft, allograft or non-osseous graft can be placed into an extraction site at the time of an extraction to preserve the ridge integrity. Reconstruction of surgical, traumatic or congenital defects of the facial bones, including the mandible or maxilla, may use an autograft, allograft or alloplastic material in conjunction with soft tissue procedures to repair, replace and restore the facial bones to form and function.

**Policy/Therapy Guidelines:**

1. A patient’s medical history and current physical and dental status should be reviewed. Patients with medical complications, poor oral hygiene, or habits that compromise the healing process, such as smoking, are not candidates for bone graft procedures.

2. Bone graft replacement should generally be confined to vertical, multi-walled or narrow defects, as areas of horizontal bone loss, class III furcation involvements and broad interproximal defects do not respond well to bone graft procedures.

3. Bone graft procedures are generally limited to treatment of periodontal disease defects around natural teeth only and may not be considered for endodontics or periradicular surgery.
4. Documentation for the necessity of bone grafting must include appropriate X-rays and a current periodontal charting. The periodontal charting must indicate minimal pocket depths of 5mm.

5. Bone grafts will not be considered in conjunction with soft tissue grafting procedures.

6. The use of biologic materials for soft or osseous tissue regeneration will not be considered in conjunction with bone grafts.

7. Bone graft procedures include all postoperative care and evaluations for three months and any surgical re-entry procedures for three years.

**ADA/CDT Codes (9):**

- D4263 – Bone replacement graft - first site in quadrant
- D4264 – Bone replacement graft - each additional site in quadrant
- D7950 – Osseous, osteoperiosteal, or cartilage graft of the mandible or maxilla – autogenous or non-autogenous, by report
- D7951 – Sinus augmentation with bone or bone substitutes
- D7952 – Sinus augmentation with bone or bone substitutes via a lateral open approach
- D7953 – Bone replacement graft for ridge preservation – per site
- D7955 – Repair of maxillofacial soft and/or hard tissue defect

**References:**


