Dental Policy

Subject: **Mucogingival Surgery and Soft Tissue Grafting**
Guideline #: 04 -204 **Publish Date: 03/15/2018**
Status: Revised **Last Review Date: 02/06/2018**

Description

This document addresses Anthem's clinical policy for mucogingival surgery and soft tissue grafting.

Note: Please refer to the following documents for additional information concerning related topics:

- Bone Grafts for Dental Surgical and Periodontal Services- 04-201, 07-901
- Scaling and Root Planing- 04-301
- Gingivectomy or Gingivoplasty – 04-202
- Osseous Surgery – 04-205
- Clinical Policy-01 Teeth with Poor or Guarded Prognosis

Clinical Indications

Mucogingival conditions that may require corrective surgery include progressive gingival recession or loss of attached gingiva with concomitant root exposure, absence of or reduced amounts of keratinized attached gingiva, periodontal pocket depth probing extending beyond the mucogingival junction, high frenum attachments and inadequate vestibular depth. Other clinical conditions which may influence the need for treatment include chronic marginal inflammation and root sensitivity.

As it applies to appropriateness of care, dental services are:

- provided by a Dentist, exercising prudent clinical judgment
- provided to a patient for the purpose of evaluating, diagnosing and/or treating a dental injury or disease or its symptoms
- in accordance with the generally accepted standards of dental practice which means:
  - standards that are based on credible scientific evidence published in peer-reviewed, dental literature generally recognized by the practicing dental community
  - specialty society recommendations/criteria
  - any other relevant factors
- clinically appropriate, in terms of type, frequency and extent
- considered effective for the patient's dental injury or disease
- not primarily performed for the convenience of the patient or Dentist
- not more costly than an alternative service.
- dependent on group contract provisions, cosmetic services may not qualify for benefit coverage even though the services may be clinically appropriate.

Clinical and experimental studies have demonstrated that as long as plaque buildup is maintained and is considered under control there is no minimum width of keratinized gingiva necessary to prevent the development of periodontal disease. Therefore, in the presence of good oral health where no plaque buildup is evident, mucogingival surgery and grafting are not appropriate.

Note: Whether a service is covered by the plan, when any service is performed in conjunction with or in preparation for a non-covered or denied service, all related services are also either not covered or denied.

Note:

A group may define covered dental services under either their dental or medical plan, as well as to define those services that may be subject to dollar caps or other limits. The plan documents outline covered benefits, exclusions and limitations. The health plan 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 the health plan. Some plans exclude coverage for services that the health plan considers either medically or dentally necessary. When there is a discrepancy between the health plan's clinical policy and the group's plan documents, the health plan will 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 the health plan will adhere to the applicable regulatory requirement.

Criteria

A. The following must be specifically documented prior to mucogingival surgery:
   1. Current, dated periodontal chart (within the previous 12 months) documenting:
      a. Millimeters of recession (CEJ to gingival margin)
      b. Millimeters of attached gingiva
      c. Pocket depth measurements (six points/tooth)
   2. History of progressive recession within 12 months prior to treatment.
   3. Notation related to the presence of high frenum attachments
   4. Number of teeth affected
   5. Photographic documentation of areas demonstrating recession may be required.
   6. Radiographs might be required dependent on prior dental history.
   7. Indication of root sensitivity
   8. Relationship to cervical caries/existing restorations.
   9. Statement procedure is not cosmetic.

B. In the absence of extraordinary circumstances (e.g. - frenum involvement, chronic inflammation), , mucogingival surgery for correction of recession defects will only be considered when periodontal charting indicates recession noting 2 mm of keratinized gingival tissue and one millimeter or less of attached gingiva remaining.

C. Mucogingival surgical procedures include all evaluation and post- operative care for three months and any surgical re-entry for three years.

D. Mucogingival surgery will be considered for treatment of periodontal defects on natural teeth only.

E. Benefits are group contract dependent but generally limited to one (1) periodontal surgical procedure in a [36/60] month period per single tooth or multiple teeth in the same quadrant.

F. In the presence of good oral health where no plaque buildup is evident, mucogingival surgery and grafting are not necessary.

G. Frenectomy or frenuloplasty is considered inclusive when performed in the same area on the same date as a soft tissue graft.

H. Pedicle soft tissue grafts code D4270, subepithelial connective tissue grafts code D4273, D4275-D4278 and combined connective tissue and double pedicle grafts code D4276 may be benefited for graft procedures encompassing a single tooth dependent on group contract provisions.

I. Dermal matrix materials are denied when used for soft tissue grafting.

J. If the implant(s) is/are approved as necessary and appropriate, then the additional procedures should be assessed based upon submitted diagnostics; narrative/rationale and photographs for necessity and appropriateness.

Coding

The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

CDT

	Including, but not limited to, the following:
D4270	Pedicle soft tissue graft procedure
D4273	Subepithelial connective tissue graft procedures, per tooth
D4283	Autogenous connective tissue graft procedure (including donor and recipient surgical sites) – each additional contiguous tooth, implant or edentulous tooth position in same graft site
D4275	Non - autogenous connective tissue graft procedure (including recipient site and donor material) first tooth, implant or edentulous tooth position in graft
D4285	Non-autogenous connective tissue graft procedure (including recipient surgical site and donor material) – each additional contiguous tooth, implant or edentulous tooth position in same graft site
D4276	Combined connective tissue and double pedicle graft, per tooth
D4277	Free soft tissue graft procedure (including recipient and donor surgical sites) first tooth, implant or edentulous tooth position in graft
D4278	Free soft tissue graft procedure (including recipient and donor surgical sites) each additional contiguous tooth, implant or edentulous tooth position in same graft site
D7340	Vestibuloplasty – ridge extension (secondary epithelialization)
D7350	Vestibuloplasty – ridge extension (including soft tissue grafts, muscle reattachment, revision of soft tissue attachment and management of hypertrophied and hyperplastic tissue)

ICD-10 Diagnosis

K06.0	Gingival recession

CPT

41820	Gingivectomy, excision gingiva, each quadrant
41870	Periodontal mucosal grafting
41872	Gingivoplasty, each quadrant (specify)
15275	Application of skin substitute graft to face, scalp, eyelids, mouth, neck , ears, orbits, genitalia, hands, feet and/or multiple digits , total wound surface up to 100 sq. cm or less wound surface area
15276	Each additional 25 sq. cm wound surface area, or part thereof (list separately in addition to code for primary procedure)
15115	Epidermal autograft, face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet and/or multiple digits; first 100 sq. cm or less, or 1% of body area of infants and children
15116	Each additional 100 sq. cm wound surface area, or each additional 1% of body area of infants and children; or part thereof (list separately in addition to code for primary procedure)
15120	Split thickness autograft, face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits
15121	Each additional 100 sq. cm, or each additional 1% of body area of infants and children, or part thereof (list separately in addition to code for primary procedure)

15135	Dermal autograft, face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet and/or multiple digits; first 100 sq. cm or less, or 1% of body area of infants and children
15155	Tissue cultured skin autograft, face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits; first 25sq cm or less
15240	Full thickness graft, free, including direct closure of donor site, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands, and/or feet; 20 sq. cm or less

Discussion/General Information

Mucogingival Surgery describes surgical procedures designed to preserve attached gingiva, to remove high muscle attachment/s, and to increase the depth of the vestibule". The aim of this type of surgery is directed at maintaining an adequate amount of attached gingiva and preventing continuous loss of attachment. Abnormal mucogingival conditions include deviations from the normal anatomic relationship between the attachment of the gingival margin and the cemento- enamel junction of the affected tooth also called the gingival margin and the mucogingival junction. Common mucogingival conditions are recession, absence or reduction of keratinized tissue, and probing depths extending beyond the mucogingival junction (MGJ). Mucogingival conditions that may require corrective surgery include progressive gingival recession or loss with concomitant root exposure, absence or reduced amounts of keratinized attached gingiva, periodontal pocket depth probing extending beyond the mucogingival junction, high frenum attachments and inadequate vestibular depth. Other clinical conditions which may influence the need for treatment include chronic marginal inflammation and root sensitivity.

Factors predisposing mucogingival problems include tooth malposition, underlying alveolar bone dehiscence (e.g. – associated with parafunction), thin marginal soft tissue, trauma, frenum attachments, iatrogenic influences of restorative, orthodontic or periodontal treatment, and localized inflammatory problems secondary to plaque accumulation, viral eruption and recurrent aphthous ulceration.

It should be noted that many studies showing root exposure associated with gingival recession may not be a progressive pathologic process where the decision for surgical intervention cannot be made solely on the basis of the presence or absence of “adequate” amounts of keratinized attached gingiva.

Furthermore, it is well documented that in the presence of good oral hygiene and routine prophylactic maintenance most areas of recession remain stable over long periods of time. The therapeutic goal of surgical treatment is the reestablishment as nearly as possible of the normal tooth to mucogingival relationship. Specific goals of surgery include reestablishment of an increased zone of attached gingiva, elimination of high active frenum or muscle attachments, root coverage, and where indicated, extension of oral vestibular depth. Surgical procedures include pedicle soft tissue grafts, free gingival grafts, subepithelial connective tissue grafts and soft tissue allografts.

Several surgical procedures for the treatment of gingival recession directed at increasing the width of attached gingiva are available. These surgical procedures include pedicle soft tissue flaps, autogenous free soft tissue grafts, combination free/pedicle soft tissue grafts for treatment of recession and periosteal retention, denudation procedures, and free gingival grafts for gain in the width of keratinized gingiva. Research has demonstrated superior esthetics and predictable outcomes in treating gingival recession in terms of the percentage of root coverage when a free autogenous connective tissue graft is utilized. While a free gingival graft is the chosen method to augment the zone of keratinized gingiva, there are many disadvantages to this procedure as it involves harvesting of soft tissue in other areas of the mouth. One of the major issues occurs with the postoperative discomfort associated with the additional surgical site, as well as the limitations of available, acceptable donor tissue.

Therefore, several non-vital allograft alternatives have been introduced that includes a preserved sclera tissue graft, lyophilized homologous dura mater, and absorbable and non-absorbable membranes. An acellular dermal matrix (ADM) allograft has been approved as a substitute for autogenous grafts in mucogingival surgeries. Acellular dermal matrix allograft is processed from human donor skin obtained from approved tissue banks. The donor tissue is prepared by removing the epidermis and cellular components of the skin. The remaining dermal layer is washed in detergent solutions to inactivate viruses and reduce rejection. The remaining acellular collagen matrix is then cryoprotected and rapidly freeze-dried to preserve the biochemical and structural integrity. In the oral cavity, ADM has since been used in a wide range of dental applications such as soft tissue augmentation, augmentation of keratinized gingiva, as a barrier membrane, as a soft tissue grafting material to cover amalgam tattoos, and for root coverage procedures. ADM appears to be an easily handled material that is integrated and completely re-

epithelialized within 10 weeks post placement. Post-operative analysis of ADM grafts demonstrated that wound healing proceeded without adverse effects and with complete integration of the ADM by the host's gingival tissue.

Risk factors for unsuccessful treatment of mucogingival defects include:

1. Smoking
2. Use of smokeless tobacco
3. Poor oral hygiene
4. Unacceptable anatomic features such as shallow vestibular height associated with the zygomatic arch or the buccal shelf

Evaluation of abnormal mucogingival conditions should include:

1. A medical history to identify systemic problems or medications that may affect treatment
2. A dental history and oral examination which may identify local, factual or iatrogenic factors affecting treatment.

The American Academy of Periodontology recommends evaluation of the following factors prior to treatment of mucogingival defects:

1. Gingival recession of 2mm or more with inadequate keratinized tissue. Inadequate keratinized tissue is defined as <2mm in width of which less than 1mm is attached gingival
2. Less than 1mm of attached gingival
3. Root abrasion
4. Class V caries or defective restorations
5. Aberrant frenum attachments
6. Inability to maintain the marginal tissue in periodontal health (minimal probing depth with no bleeding or inflammation)
7. Planned, current or completed orthodontic treatment
8. Need for restorative care of the tooth
9. Progression of recession
10. Root sensitivity
11. Age of the patient
12. Presence of periodontitis
13. Abnormal tooth position relative to the alveolar ridge

Gingival grafting is considered cosmetic when the above parameters are absent.

Definitions

Allograft - a tissue graft from a donor of the same species as the recipient but not genetically identical.

Attached Gingiva - the part of the oral mucosa that is firmly bound to the tooth and alveolar process (bone)

Dehiscence - loss of alveolar bone on the facial (rarely lingual) aspect of a tooth leaving an oval, root-exposed defect from the cemento-enamel (point where the enamel of the crown meets the cementum of the root) junction apically (towards the root).

Gingival Recession – known as receding gums, is the exposure of the roots of the teeth caused by loss of gingival tissue and/or retraction of the gingival margin from the crown of the teeth. It is essentially the gingiva pulling away from the teeth.

References

Peer Reviewed Publications:

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3. Alterations in Location of the Mucogingival Junction 5 Years After Coronally Repositioned Flap Surgery Dr. Cem A. Gürgan, A. Murat Oruç and Murat Akkaya; Journal of Periodontology Jun 2004, Vol. 75, No. 6, Pages 893-901.
4. A 10-year longitudinal study of untreated mucogingival defects. Freedman AL, Salkin LM, et al. J Perio 1992; 63:71-72.
5. Lack of association between width of attached gingiva and development of soft tissue recession. A 5-year longitudinal study. Wennstrom JL. J Clin Perio 1987; 14:181-184.
6. When not to perform root coverage procedures. Gray JL. J Perio 2000; 71:1048-1050.
7. Longitudinal evaluation of free autogenous gingival grafts. A four year report. Dorfman HS, Kennedy JE, Bird WC. J Perio 1982; 53:349-352.
8. Proceedings of the World Workshop in Clinical Periodontics: Gingival augmentation/mucogingival surgery. Amer Acad Perio 1989; VII-1 to VII-21.
9. Guided Tissue Regeneration in Mucogingival Surgery; Carlo Tinti, Giampaolo Vincenzi and Roberto Cocchetto; Journal of Periodontology Nov 1993, Vol. 64, No. 11s, Pages 1184-1191.
10. Kennedy JE, Bird WC, et al. A longitudinal evaluation of varying widths of attached gingiva. J Clin Perio 1985; 12:667-675.
11. An 18-year longitudinal study of untreated mucogingival defects Freedman AL, Green K, et al... J Perio 1999; 70:1174-1176.
12. A clinical study comparing width of attached gingiva and the prevalence of gingival recession Tennenbaum H. J Clin Perio 1982: 9:86-92.

Government Agency, Medical Society, and Other Authoritative Publications:

1. A Comparative Study of Root Coverage Using Two Different Acellular Dermal Matrix Products Thomas S. Barker, Marco A. Cueva, Francisco Rivera-Hidalgo, M. Miles Beach, Jeffrey A. Rossmann, David G. Kerns, T. Bradley Crump and Jay D. Shulman; Journal of Periodontology Nov 2010, Vol. 81, No. 11, Pages 1596-1603.
2. Parameters of Soft Tissue Grafting: Position Statement; American Association of Dental Consultants; AADC Positions Committee; @2014 American Association of Dental Consultants.
3. Acellular Dermal Matrix for Mucogingival Surgery: A Meta-Analysis Ricardo Gapski, Christopher Allen Parks and Hom-Lay Wang Journal of Periodontology Nov 2005, Vol. 76, No. 11, Pages 1814-1822.

History

Revision History	Version	Date	Nature of Change	SME
	initial	7/10/17	creation	Rosen
	Revision	2/5/18	Related dental policies, criteria	M Kahn
	Revision	2/6/18	Appropriateness and medical necessity	

Federal and State law, as well as contract language, and Dental Policy take precedence over Clinical UM Guidelines. We reserve the right to review and update Clinical UM Guidelines periodically. Clinical guidelines approved by the Clinical Policy Committee are available for general adoption by plans or lines of business for consistent review of the medical or dental necessity of services related to the clinical guideline when the plan performs utilization review for the subject. Due to variances in utilization patterns, each plan may choose whether to implement a particular Clinical UM Guideline. To determine if review is required for this Clinical UM Guideline, please contact the customer service number on the member's card.

Alternatively, commercial or FEP plans or lines of business which determine there is not a need to adopt the guideline to review services generally across all providers delivering services to Plan's or line of business's members may instead use the clinical guideline for provider education and/or to review the medical or dental necessity of services for any provider who has been notified that his/her/its claims will be reviewed for medical or dental necessity due to billing practices or claims that are not consistent with other providers, in terms of frequency or in some other manner.

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