DELTA DENTAL

Delta Dental of Virginia Clinical Policy # 203

Subject	**Originating Department**
Inlay and Onlay Restorations	Clinical Professional Services
	Signature Authority
	Dental Director

Type: ☐ New ☐ Replacement ☒ Revision ☐ Clarification

Date: 11/09/2009 **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:	An inlay is an indirect restoration or filling consisting of a solid substance, such as gold, indirect resin material or porcelain that is fabricated to fit a preparation in a tooth and cemented into place. An onlay is the same restoration as an inlayexcept an onlay is extended to replace or cover one or more cusps of the tooth. Full crowns are essentially onlays that completely cover all surfaces of a tooth. Inlays and onlays are fabricated extraorally (outside of the mouth) and are subsequently cemented into the tooth preparation. An inlay is an entirely intracoronal (within the tooth) restoration(1,2,3,4) with incomplete coverage of any cusps and it offers no protection to the cusp of a tooth. An onlay restores or overlays one or more cusps and the adjoining occlusal surface of the tooth(1,2,3,4). An onlay extends to the facial, lingual and/or proximal surfaces of the covered cusps, and affords protection of tooth structure from fracture during mastication (lateral and protrusive occlusal forces(1,4). Inlay and onlay restorations, where applicable, are generally considered more conservative restorative alternatives to the placement of full crowns. These types of restorations are used where the loss of tooth structure due to caries or fracture

	is limited. Inlays and onlays are also generally considered to have superior longevity to silver amalgam restorations, although research indicates no clear superiority for individual restorations.(5,6) Cast metal inlay or onlay restorations, when compared to ceramic restorations, have several distinct advantages. The cast metal restorations can have fewer laboratory demands, have a reduced incidence of fracture, have a greater longevity, result in less wear to the opposing teeth, and have superior marginal adaptability(7,8,9). Ceramic restorations require a greater material thickness, which demands more aggressive tooth reduction to compensate for the reduced strength(10,11), and have a comparatively decreased long-term success rate due to the inherent brittleness of the material(11,12). The advantages of the ceramic materials are primarily the obvious ability to closely match tooth color and the capability of placing some types of ceramic restorations in a single appointment.
Policy:	DDVA Guidelines: 1. Onlays are appropriate only if the tooth would otherwise qualify for full crown placement based on the degree of breakdown (see DDVA Clinical Policy #200 on Full Crown Placement at www.deltadentalva.com). 2. An onlay is appropriate when the restoration restores or replaces one or more cusps as well as a portion of the occlusal surface, and must extend to the proximal and facial or lingual surfaces of the restored cusp or cusps. 3. Restorations that cover only the occlusal inclines of cusps are not considered an onlay regardless of the percentage of cusp incline coverage. 4. Teeth to be restored with inlays and onlays must not have a clinically poor or unfavorable prognosis due to inadequate periodontal bone support. 5. Documentation of the need for inlays and onlays must include a detailed narrative if a diagnostic radiograph or intraoral photograph do not demonstrate clinical necessity. 6. Restorative procedures for repair of complications from wear, attrition, abrasion, erosion, and abfraction do not meet criteria for treatment. A tooth must exhibit significant structural loss from decay, failing large restorations, or fracture not attributable to the aforementioned causes. 7. An inlay or onlay does not qualify for a core buildup, as, for these procedures, buildups constitute pulp capping, insulation or protection of pulp, block-out of undercuts, enhancement of box form, fillers for reduction of final restorative materials, etc. 8. The delivery date of inlays/onlays is considered the date that the completed restoration is first cemented in the mouth. The type of cement is not a determining factor of the date of delivery.
Codes(1):	D2510 – Inlay – metallic – one surface D2520 – Inlay – metallic – two surfaces D2530 – Inlay – metallic – three or more surfaces D2542 – Onlay – metallic – two surfaces D2543 – Onlay – metallic – three surfaces D2544 – Onlay – metallic – four or more surfaces D2610 – Inlay – porcelain/ceramic – one surface D2620 – Inlay – porcelain/ceramic – two surfaces

	D2630 – Inlay – porcelain/ceramic – three or more surfaces D2642 – Onlay – porcelain/ceramic – two surfaces D2643 – Onlay – porcelain/ceramic – three surfaces D2644 – Onlay – porcelain/ceramic – four or more surfaces D2650 – Inlay – resin-based composite – one surface D2651 – Inlay – resin-based composite – two surfaces D2652 – Inlay – resin-based composite – three or more surfaces D2662 – Onlay – resin-based composite – two surfaces D2663 – Onlay – resin-based composite – three surfaces D2664 – Onlay – resin-based composite – four or more surfaces
References:	1. American Dental Association. *Current Dental Terminology. CDT 2011-2012*;15 (©ADA 2010). 2. American Association of Dental Consultants. Greenville IN. AADC Positions Committee. Position Statement. Defining and differentiating inlays and onlays. Feb 2008. 3. Dorland. Dorland' Illustrated Medical Dictionary, 30th Ed. Elsevier; 2003. 4. Limoli and Associates. Atlanta Dental Consultants, Inc. Dental Insurance and Reimbursement -- Coding and Claim Submission. 3rd Ed. 2003. 5. Christensen GJ. Longevity of posterior tooth dental restorations. J Amer dent Assoc 2005;136:201-203. 6. Rosenstiel SF, Land MF, Rashid RG. Dentists' molar restoration choices and longevity: a web-based survey. J Prosthet Dent 2004;91:363-367. 7. Christensen GJ. The coming demise of the cast gold restoration? J Amer Dent Assoc 1996;127:1233-1236. 8. Christensen GJ. Marginal fit of gold inlay castings. J Prosthet Dent 1966;16:297-305. 9. Morris HF, Manz M, Stoffer W and Weir D. Casting alloys: the materials and "the clinical effects". Advan Dent Res 1992;6:28-31. 10. Farah JW, Dennison JB and Powers JM. Effects of design on stress distribution of intracoronal gold restorations. J Amer Dent Assoc 1977;94:1151-1154. 11. American dental association. ADA Affairs on Scientific Affairs. Direct and indirect restorative materials. J Amer Dent Assoc 2003;134:463-472. 12. Rosenstiel SF, Land MF and Fujimoto J. Contemporary Fixed Prosthodontics. 3rd Ed. St Louis: Mosby; 2001. For additional information on placement of inlay onlay restorations, refer to: 1. Summit JB. Fundamentals of Operative Dentistry: A Contemporary Approach. 3rd ed. 2006. Quintessence Publ Co Inc. 2. Shillingburg HT, et al. Fundamentals of Fixed Prosthodontics. 3rd Ed. 1997. Quintessence, 1997.