

# Fixed Prosthodontics Veneers, Crowns and Fixed Bridges

---

## General Guidelines

Fixed prosthetics includes the following acceptable restorations: full crowns, seven-eighths crowns, three-quarter crowns, onlays and veneers. Materials include porcelain or plastic hybrids used as a single material or in combination with acceptable cast metals.

A thorough history and clinical examination leading to the diagnosis of the patient's general and oral condition must be completed before establishing a treatment plan. Care must be exercised when placing restorations so that the hardness of the material used is compatible with that of the opposing dentition.

Since many of the features of evaluation in fixed prosthodontics are common to all of dental practice, they will not be discussed in detail in this section. Only those aspects that have specific importance for this area will be included.

A conservative treatment plan should be considered prior to providing a patient with one or more units. Amalgam or composite restorations may be inappropriate for the following reasons:

1. The restoration will receive excessive masticatory force that might fracture the remaining tooth structure or restorations.
2. There is a fractured or missing cusp or incisal edge.
3. Significant amount of the tooth surface is a series of restorations (amalgam, silicate or composite) one or more of which is defective or an additional carious lesion is present.
4. There is gross decay on all tooth surfaces.
5. Tooth with completed root canal therapy that cannot be restored and maintained with amalgam, silicate or composite materials.
6. Patient has a significant loss of vertical dimension of tooth structure with heavily abraded occlusal surfaces and corrective equilibration will not stop further loss of tooth structure.
7. Patient has a failing crown, which can only be restored by another crown.
8. The teeth are to be splinted.

A final restoration of a tooth or teeth that require endodontic and/or periodontal treatment should be postponed until a favorable prognosis for the retention of the tooth or teeth has been established.

The patient's age, health and general condition of the oral cavity, as well as the patient's wishes and attitude must also be considered. Fixed restorations must be incorporated in the treatment plan in the appropriate sequence in relation to endodontic, periodontic and surgical procedures.

When serious, unsightly tooth appearance exists, veneers, porcelain or plastic jacket crowns often combined with metal may be used to improve esthetics and are acceptable restorations when esthetics is the primary concern.

Restorations should exhibit contours that are in functional harmony with adjacent teeth and soft tissues, exhibiting good individual anatomic form; no food traps or soft tissue irritation are present and design should facilitate good oral hygiene.

Fixed partial prostheses (bridges) are indicated for replacement of one or more missing teeth when abutment teeth can be expected to have a minimum prognosis of five years of service.

Crowns as well as fixed partial prostheses (bridges) are contraindicated when:

1. The necessary operative procedures impair the patient's oral health.
2. The necessary operative procedures inhibit growth and development.
3. When there is no clear rationale for improving or stabilizing present dental function.
4. When the patient is under 16 years of age unless unusual conditions prevail.

Esthetic treatment of anterior dentition is predicated upon case selection and treatment planning. It is of critical importance that the case selection have a determination involving periodontal health, caries incidence, occlusion, orthodontic considerations, dental habits, prior esthetic evaluation, and realistic patient expectations.

Treatment planning should consider most of the following:

1. Diagnosis
2. Radiographs
3. Diagnostic models/photographs, if necessary
4. Periodontal considerations should include:
  - a. Minimal pocket depth
  - b. Oral hygiene instructions
  - c. Generalized good periodontal health
  - d. Areas to be treated should be scaled thoroughly prior to bonding and veneering
  - e. Any periodontal treatment anticipated should be completed prior to bonding and veneering
5. Caries incidence considerations:
  - a. High caries – contraindication for veneers due to possibility of secondary caries
  - b. Low caries – acceptable for treatment with veneers

6. Occlusion:
  - a. Possible contraindications include bruxism, clenching, wear facets, fractured teeth, tooth mobility, temporomandibular joint dysfunction. If these contraindications are considered and acceptable treatment is applied, then the degree of contraindication is diminished.
  - b. The type of restoration selected should anticipate occlusal disharmonies/harmonies to the extent that the bonding, veneering, porcelain crown, or porcelain/metal crown are clearly indicated as an appropriate treatment for the current condition.
7. Orthodontic considerations:
  - a. It is to be understood that bonding and veneers are esthetic enhancements and not orthodontic treatment. Malocclusions remain malocclusion, but can be made more esthetic. The treatment of malocclusions should involve orthodontic therapy as indicated.
8. Treatment must be incorporated into the treatment plan in the appropriate sequence in relation to endodontic, periodontic, orthodontic, and any surgical procedures.
9. The restorations, whether bondings or veneers, should exhibit contours that are in functional harmony with the adjacent teeth and soft tissues, and should exhibit good individual anatomic form. Minimal food traps or soft tissue irritation should be present. The design should facilitate good oral hygiene.

**The following quality-evaluation criteria should be considered merely as AIDS for the discrimination between the four ratings for each characteristic. The determination of the rating of any given dental service is dependent upon the sound JUDGMENT of the peer review examiners.**

# FIXED PROSTHODONTICS VENEERS, CROWNS AND FIXED BRIDGES

QUALITY EVALUATION RATING SYSTEM			
	Rating	Operational Evaluation	Code                      Indications
S A T I S F A C T O R Y	<b>R</b> Range of Excellence  <b>ROMEO</b> Code: R Call: Romeo	The restoration is of satisfactory quality and is expected to protect the tooth and the surrounding tissue.	Crown or fixed partial prosthesis is the optimal restoration of choice.   (Refer to General Guidelines.)
	<b>S</b> Range of Acceptability  <b>SIERRA</b> Code: S Call: Sierra	The restoration is of acceptable quality, but exhibits one or more features which deviate from the ideal.	<b>SCA</b> A <b>more conservative</b> restoration could be placed, but a crown or fixed partial prosthesis is acceptable.
N O T S A T I S F A C T O R Y	<b>T</b> Not Acceptable Rationale Questionable  <b>TANGO</b> Code: T Call: Tango	The restoration is not of acceptable quality. Future damage to the tooth and/or its surrounding tissues is likely to occur.	<b>TNI</b> <b>No clear indication</b> for crown, or fixed partial prosthesis. Restorations may <b>cause damage</b> or adversely affect the <b>prognosis</b> for tooth or teeth.  <b>TDM</b> <b>TPR</b>
	<b>V</b> Not Acceptable Inadequate  <b>VICTOR</b> Code: V Call: Victor	The restoration is not of acceptable quality. Damage to the tooth and/or its surrounding tissue is now occurring.	<b>VOT</b> <b>VCND</b> Crowns are made without consideration of <b>other treatment</b> possibilities, or <b>Special conditions</b> requiring reevaluation are <b>not discovered</b> or taken into consideration.

c&ppp.tbl

## FIXED PROSTHODONTICS VENEERS, CROWNS AND FIXED BRIDGES

QUALITY EVALUATION CRITERIA AND ABBREVIATIONS			
Code	Surface and Color	Code    Anatomic Form	Code    Margin Integrity
	<p>The surface of the restoration(s) is smooth. No irritation of adjacent tissue is occurring. There is no mismatch in color shade and/or translucency between the restoration(s) and adjacent teeth.*</p> <p>(Refer to General Guidelines.)</p>	<p>Restoration contour is in functional harmony with adjacent teeth and soft tissues with good individual anatomic form.</p> <p>(Refer to General Guidelines)</p>	<p>No visible evidence of a crevice along margin into which explorer will penetrate. Satisfies operative dentistry principles of margin placement wherever possible. No discoloration on the margin between the restoration and the tooth structure.*</p> <p>(Refer to General Guidelines.)</p>
<p><b>SRO</b></p> <p><b>SMM</b></p>	<p>Surface or restoration is slightly <b>rough</b> or pitted; can be polished.</p> <p><b>Slight mismatch</b> between shade of restoration(s) and adjacent tooth or teeth.*</p>	<p><b>SOCO</b> Restoration is <b>slightly over contoured</b>, or Restoration <b>SUCO</b> <b>slightly under-countoured</b>, or <b>SOH</b> <b>Occlusion</b> is not totally functional, or <b>SMR</b> <b>Marginal ridges</b> slightly under-contoured, or <b>SCO</b> <b>Contact</b> <b>slightly open</b>, or <b>SFA</b> <b>Facial flattening</b> is present, or <b>SLG</b> <b>Lingual flattening</b> is present. <b>SAF</b> <b>Anatomic form</b> of pontic may cause food retention: No irritation of soft tissue.</p>	<p><b>SCR</b> Visible evidence of slight <b>marginal discrepancy</b> with no evidence of decay; repair can be made or is unnecessary.</p> <p><b>SDIS</b> <b>Discoloration</b> on the margin between the restoration and the tooth structure.*</p>
<p><b>TGI</b></p> <p><b>TMM</b></p>	<p>Surface <b>grossly irregular</b> not related to anatomy and not subject to correction.</p> <p><b>Mismatch</b> between restoration(s) and adjacent tooth or teeth outside the normal range of color, shade, and/or translucency.*</p>	<p><b>TUCO</b> Restorations <b>grossly under-contoured</b>, or <b>TOCO</b> Restorations <b>grossly over-contoured</b>, or <b>TET</b> <b>Occlusion</b> is affected, or <b>TCO</b> <b>Contact</b> is faulty, or <b>TVO</b> There is <b>marginal overhang</b>, or <b>TAF</b> <b>Anatomic form</b> of pontic is likely to result in food retention causing irritation to soft tissue and/or caries in abutment teeth.</p>	<p><b>TFAM</b> <b>Faulty margins</b> that cannot be properly repaired.</p> <p><b>TPEN</b> <b>Penetrating discoloration</b> along the margin of the restoration in pulpal direction.*</p> <p><b>TCEM</b> Retained <b>excess cement</b>.</p>
<p><b>VSF</b></p> <p><b>VGP</b></p> <p><b>VSD</b></p>	<p>Surface is <b>fractured</b>, <b>porosities</b> in the crown material.</p> <p>Shade in <b>gross disharmony</b> with adjacent teeth.*</p>	<p><b>VTO</b> <b>Traumatic occlusion</b>, or <b>Gross under-occlusion</b>, or Restoration causes unremitting <b>pain</b> in tooth or adjacent tissue, or <b>Damage</b> is now occurring to tooth, soft tissue or supporting bone.</p>	<p><b>VMO</b> <b>Mobile</b> restoration, or <b>VFR</b> <b>Fractured</b> restoration, or <b>VCAR</b> <b>Caries</b> continuous with margin of restoration, or <b>Tooth structure fractured</b>.</p>

\* Criteria apply to anterior restorations

c&ppp.tbl