Fixed Prosthodontic Treatment

- **Fixed prosthodontic treatment** is dental treatment involving fixed restorations that are permanently attached to teeth or implants. Its scope may range from **restoring a single tooth to rehabilitating the entire occlusion**. It can restore function, improve esthetics, replace missing teeth, improve patient comfort and mastication, and help maintain the health and integrity of the dental arches.

1. Single Tooth Restoration

Fixed prosthodontics can restore a **single tooth to full function** and can also improve its esthetics.

2. Missing Teeth

Missing teeth can be replaced with **fixed prostheses**, which can improve patient comfort and masticatory ability and help maintain the health and integrity of the dental arches.

3. Fixed Partial Denture (FPD) or Bridge

A **fixed partial denture (FPD)** is a prosthetic appliance that is permanently attached to remaining teeth or implants and replaces **one or more missing teeth**. The book notes that the older term **"bridge"** has fallen from favor and is no longer used.

4. Crown

A **crown** is a cemented or permanently affixed **extracoronal restoration** that covers or veneers the outer surface of the clinical crown. It reproduces the morphology and contours of the damaged coronal portions, performs its function, and protects the remaining tooth structure from further damage.

5. Full or Complete Veneer Crown

When a crown covers the **entire clinical crown**, it is called a:

- Full veneer crown
- Full coverage crown
- Complete crown
- Full crown

It may be made from metal, metal-ceramic, all-ceramic, resin and metal, or resin.

6. Partial Veneer Crown

When only **portions of the clinical crown** are veneered, it is called a **partial coverage or partial veneer crown**.

(7/8 crown on premolars are most important)

(3/4 crown only covering the mesial, distal, and lingual surface)

7. Intracoronal Cast Restoration

Intracoronal restorations fit within the anatomical contours of the clinical crown of a tooth.

8. Inlays

An **inlay** is an intracoronal restoration used as a single-tooth restoration for **Class II proximo-occlusal or Class V gingival lesions with minimal to moderate extensions**.

It may be made of:

- Gold alloy
- Ceramic
- Processed resin

9. Onlays

An **onlay** is an intracoronal restoration **modified with occlusal coverage**. It is useful for restoring more extensively damaged posterior teeth requiring wide **mesio-occlusodistal (MOD) restorations**.

10. Laminates or Facial Veneer

An **all-ceramic laminate veneer, or facial veneer**, is used on **anterior teeth that require improved esthetics but are otherwise sound**.

It consists of a thin layer of dental porcelain or cast ceramic bonded to the facial surface of the tooth with an appropriate resin.

Components of a Fixed Partial Denture

11. Abutment

An **abutment** is a **tooth or implant serving as an attachment for a fixed partial denture**.

12. Pontic

A **pontic** is the **artificial tooth suspended from the abutments**.

13. Retainer

A **retainer** is an **extracoronal restoration** that is cemented to or otherwise attached to the abutment teeth or implants.

Important: Intracoronal restorations do not have sufficient retention and resistance to serve as FPD retainers.

14. Connectors

Connectors join the pontic and retainer.

They may be:

- **Rigid** — solder joints or cast connectors
- **Nonrigid** — precision attachments or stress breakers, when the abutments are teeth

As a rule, **only rigid connectors are used with implant abutments**.

Diagnosis

A thorough diagnosis considers both **hard and soft tissues** and correlates the findings with the patient's overall physical health and psychological needs. The diagnostic information is then used to formulate the treatment plan.

5 Elements of a Good Diagnostic Work-Up for FPD Treatment

1. **Health history**
2. **TMJ and occlusal evaluation**
3. **Intraoral examination**
4. **Diagnostic casts**
5. **Full-mouth radiographs**

1. Health History

A good health history is taken before treatment to determine whether **special precautions** are necessary. It includes consideration of physical and emotional health, medications, allergies, and infectious diseases.

2. TMJ and Occlusal Evaluation

Before fixed prosthodontic procedures, the patient's **occlusion and TMJs must be evaluated** to determine whether they are healthy enough for restoration.

- If normal → treatment should maintain the existing relationship.
- If dysfunctional → further evaluation is necessary before restorations are placed.

Evidence of pain or dysfunction in the TMJs or associated head and neck muscles requires further evaluation before fixed prosthodontic treatment.

3. Intraoral Examination

The examination includes:

- Attached gingiva
- Gingival inflammation and architecture
- Periodontal pockets
- Tooth mobility
- Edentulous ridges
- Condition of prospective abutment teeth
- Caries
- Previous restorations and prostheses
- Occlusion and wear facets

- Nonworking interferences
- Centric relation to maximal intercuspal position
- Anterior guidance

4. Diagnostic Casts

Diagnostic casts should be **accurate reproductions of the maxillary and mandibular arches** and should be free from distortion and defects.

They should preferably be mounted on a **semi-adjustable articulator**. They help evaluate edentulous spaces, span length, occlusogingival dimensions, abutment teeth, tooth inclination, occlusion, and other treatment-planning factors.

5. Full-Mouth Radiographs

Radiographs help correlate information from the patient's history, clinical examination, and diagnostic casts.

They are examined for:

- Caries
- Periapical lesions
- Previous endodontic treatment
- Alveolar bone levels
- Crown-root ratio
- Root length, configuration, and direction
- Periodontal membrane widening
- Cortical bone thickness
- Trabeculation
- Retained root tips
- Pathology in edentulous areas

Protection Against Infectious Diseases

The PDF specifically discusses:

1. **Hepatitis B virus (HBV)**
2. **Hepatitis C virus (HCV)**
3. **Human immunodeficiency virus (HIV)**

Patients should be questioned about a history of these infections. Hepatitis is identified as a major infectious occupational hazard for health-care professionals.

The book also states that **every patient should be treated as potentially infectious**, because dental procedures can involve contact with blood and tissues.

Centers for Disease Control

The PDF states that a safe and effective **HBV vaccine** is available and is recommended by the **Centers for Disease Control** and the ADA Council on Dental Therapeutics for dental personnel who have contact with patients.

Note: The pages you specified were written before COVID-19 and **do not discuss COVID-19**. Therefore, I would not include COVID-19 as a PDF-derived answer for this particular question.

Protective Gear / Personal Protective Equipment (PPE)

According to the PDF, the recommended protective equipment for the dentist and other office personnel in contact with the patient during treatment includes:

1. **Rubber gloves**
2. **Surgical mask OR full-length plastic face shield**
3. **Protective eyeglasses** — if a face shield is not used
4. **Protective uniform**