

## SUPPLEMENT ARTICLE

**Parameters of Care for the Specialty of Prosthodontics**

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**PREAMBLE—Third Edition**

THE PARAMETERS OF CARE continue to stand the test of time and reflect the clinical practice of prosthodontics at the specialty level. The specialty is defined by these parameters, the definition approved by the American Dental Association Commission on Dental Education and Licensure (2001), the American Board of Prosthodontics Certifying Examination process and its population of diplomates, and the ADA Commission on Dental Accreditation (CODA) Standards for Advanced Education Programs in Prosthodontics. The consistency in these four defining documents represents an active philosophy of patient care, learning, and certification that represents prosthodontics.

Changes that have occurred in prosthodontic practice since 2005 required an update to the Parameters of Care for the Specialty of Prosthodontics. Advances in digital technologies have led to new methods in all aspects of care. Advances in the application of dental materials to replace missing teeth and supporting tissues require broadening the scope of care regarding the materials selected for patient treatment needs. Merging traditional prosthodontics with innovation means that new materials, new technology, and new approaches must be integrated within the scope of prosthodontic care, including surgical aspects, especially regarding dental implants. This growth occurred while emphasis continued on interdisciplinary referral, collaboration, and care.

The Third Edition of the Parameters of Care for the Specialty of Prosthodontics is another defining moment for prosthodontics and its contributions to clinical practice. An additional seven prosthodontic parameters have been added to reflect the changes in clinical practice and fully support the changes in accreditation standards. The parameters describe diagnoses related to prosthodontic practice and how contemporary prosthodontists manage those clinical conditions. Updates include the importance of (1) advances in digital technology as it relates to diagnosis, planning, prosthesis design, and care; (2) risk assessment and prognosis; (3) diagnoses affecting prosthodontic care; (4) ridge and site preparation to attain the indicated prosthetic support; (5) biomaterials selection and application; (6) recall, maintenance, and supportive care; and (7) leading care and collaborative practice.

The Terminal Dentition Parameter represents the full integration of knowledge, skill, and values associated with the remaining 20 parameters. This parameter recognizes the prosthodontist's unique ability to achieve pleasing esthetics and function beginning with initial presentation and assessment and ultimately progressing through diagnosis, treatment planning, adjunctive care, transitional prostheses, definitive prostheses, and supportive care. The care for the patient with a terminal dentition encompasses the full scope of prosthodontics and also provides the greatest improvement in the patient's quality of life.

The Parameters of Care for the Specialty of Prosthodontics were first developed in 1996 by a committee of ACP members and chaired by Dr. Thomas J. McGarry and then updated in 2005 by a committee guided by Dr. Robert Tupac. We appreciate the efforts of these individuals in creating the philosophy and format of this important guide for the practice of prosthodontics.

This edition of the parameters again highlights the importance of prosthodontists as leaders and collaborators in clinical practice. The prosthodontist's outcomes may be completed and complimented as indicated through support from other health care colleagues to optimize definitive care predictability. This is particularly important as patient care that includes the use of dental implants continues to evolve. Published research has recognized that prosthodontic care success depends on meeting the many patient-centered, oral health quality of life-related goals fully recognized by prosthodontists. These parameters highlight the relevant diagnoses and applicable procedures used by the prosthodontist to meet patient needs and goals.

The Parameters of Care for the Specialty of Prosthodontics continue to connect diagnosis with care and include the updated 2019 ICD-10-CM codes, the 2019 CDT codes, and the Prosthodontic Diagnostic Index (PDI) classification systems and the standards they entail. It is, therefore, a working document for clinical practice, educational settings, and patient presentations. It more thoroughly answers the call for guidance from all interested parties. This document also includes checklists and worksheets for everyday use. In summary, this document is the College's definition of the specialty of prosthodontics for its members, the profession, and the patients we serve.

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## Background Statement

The consolidation of the governance of the specialty of prosthodontics has conveyed many responsibilities to the American College of Prosthodontists. One of these responsibilities is the development and dissemination of the Parameters of Care for the Specialty of Prosthodontics. This document is written to help identify, define, and quantify many of the aspects of the delivery of prosthodontic specialty services to the public.

This document is intended to help clinicians in providing the highest quality level of clinical care, establish a consensus of professional opinion, and serve to constantly enhance clinical performance. In addition, parameters of care may be of help in risk management, education and testing, and third-party relations—appropriateness of care. The document provides a framework for quality assessment in prosthodontic specialty training programs. Thus, parameters of care are developed to improve patient care by providing clinicians first with a foundation and then with a broad framework or environment in which they can operate with predictable and favorable treatment outcomes. The National Academy of Medicine defines “parameters” as systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. The reasons for developing parameters of care are as follows:

1. Assessing and assuring the quality of care;
2. Assisting in patient and clinician decision making;
3. Educating individuals and groups;
4. Reducing the risk of legal liability for negligent care;
5. Guiding the allocation of health resources; and
6. Identifying clinical situations that are most appropriately treated by specialty-trained clinicians.

Practice parameters vary in the scope of the clinical problems they address and the specificity with which they can be applied. Through the process of developing such parameters, several critical characteristics of credible practice parameters have been identified. Among these characteristics are the following, which are most applicable to the ACP parameters:

1. Prepared in an objective manner;
2. Based on existing science;
3. Representative of clinical practice and professional consensus; and
4. Formulated to provide structured flexibility.

## The Process of Reaching a Consensus

The quality of care is best defined in objective terms and by a process that minimizes subjective, unsubstantiated opinion. The Parameters of Care for the Specialty of Prosthodontics were first developed with this in mind. The subcommittees responsible for the various sections reviewed and discussed the literature concerning the associated clinical and laboratory sciences. They reached a consensus that was shared with all other subcommittee members. For the first edition, when consensus was reached among the parameter committee as a whole, the document was distributed to the membership, which provided written comments and participated in an open forum held at the 1994 ACP Annual Session. The original document and the two subsequent revisions represent a consensus reflecting not only the deliberations of the expert subcommittee, but also a broad segment of the membership.

Clinical practice involves the management of patients who present with considerable biological variability. Parameters that do not account for this and are too rigidly structured are not clinically appropriate. The structured flexibility inherent in the parameters refers to a structure that defines the relevant dimensions of the care provided by prosthodontists. Such flexibility does not imply that these parameters are diluted, but rather that they incorporate the realities of the broad basis of clinical practice. It is important to recognize that practice parameters are designed to represent an objective interpretation of clinical practice and its associated science. Although the parameters for each of the clinical sections may vary in their specificity because of the variability of their science base, they do provide clear, focused guidance concerning patient management. Parameters also help identify gaps in scientific and clinical knowledge that warrant research and investigation.

## The Scope of the Parameters

The range of the clinical conditions treated by prosthodontists is as varied as any of the specialties. Thus, the development of parameters was a major undertaking. This revised and updated edition of the document is a continuation of the process of critical review and assessment of clinical practice. It is important to note that historically and traditionally the specialty of prosthodontics has defined itself by a listing and description of clinical techniques (i.e., fixed prosthodontics, removable prosthodontics, maxillofacial prosthodontics, and implant prosthodontics). This type of definition is restrictive in the constantly evolving specialty of prosthodontics. Prosthodontics is defined by the diseases and conditions presented by our patients, and the specialty is responsible for the diagnosis and treatment of complete and partial edentulism. These parameters begin the critical process of delineating those clinical conditions and diagnoses that prosthodontists most appropriately treat because of their advanced education and training. The patient’s underlying clinical condition that defines the need for treatment is the first critical factor that identifies the

scope of prosthodontic specialty care; the techniques used are the second factor. Thus, the Parameters of Care for the Specialty of Prosthodontics identify and define clinical conditions that require prosthodontic care:

1. Comprehensive clinical assessment
2. Limited clinical assessment
3. Completely dentate patient
4. Partial edentulism
5. Complete edentulism
6. Digital technology—diagnosis, planning, treatment, reevaluation, and supportive care\*
7. Risk assessment and prognosis\*
8. Diagnoses affecting prosthodontic care\*
9. Ridge and site preparation\*
10. Implant placement and restoration
11. Tooth preparation and modification
12. Esthetics
13. Biomaterials selection and application\*
14. Temporomandibular disorders (TMDs)
15. Upper airway sleep disorders (UASDs)
16. Maxillofacial prosthetics
17. Local anesthesia
18. Adjunctive therapies
19. Terminal dentition
20. Recall, maintenance, and supportive care\*
21. Leading care and collaborative practice\*

\*Parameters added in the third edition

By defining the clinical conditions to be addressed by each parameter, the clinician and patient are able to select an appropriate treatment sequence. The final judgment regarding care for any given patient rests with the treating prosthodontist. All members of the American College of Prosthodontists must realize that a parameter of care has direct influence on the practice of prosthodontics and that they must familiarize themselves with all aspects of this document.

This updated document also represents the union of the Parameters of Care for the Specialty of Prosthodontics and references the Prosthodontic Diagnostic Index (PDI). Therefore, the classifications (completely dentate, partially edentulous, and completely edentulous) are incorporated into each appropriate section. Thus, the document indicates diagnosis and treatment planning as a function of the complexity of the patient's condition.

## Introduction and Overview

This document is an acknowledgement by the American College of Prosthodontists of the need to be the leading force in the development and dissemination of the Parameters of Care for the Specialty of Prosthodontics. The ACP recognizes the current demand for a parameters document by other professional specialty societies, third-party payors, public interest groups, and many levels of government. By assuming the responsibility for a prosthodontics parameters of care document, the membership of the ACP will prevent untoward influence of outside groups in the practice of prosthodontic care to the public. The ACP, consisting of fellows and members, is the most appropriately trained and educated society to develop a parameters document. Solicitation of additional expertise from interaction with many prosthodontic-oriented societies ensures a balanced document that reflects the realities of the clinical environment.

“Parameters of Care” is a phrase used to describe an organized range of accepted patient management strategies, including guidelines, criteria, and standards. The establishment of parameters provides a means to assess the appropriate nature and quality of a selected treatment modality for application to an identified clinical condition in patients requiring prosthodontic care. The initial document reflected many areas of prosthodontic care amenable to parameter formations. Although these parameters cover a wide spectrum of prosthodontic practice, future development of additional parameters is foreseen. These parameters vary in their specificity and research base; thus, they represent an attempt to incorporate the best available knowledge about the diagnosis and treatment of clinical conditions requiring prosthodontic care. All available applicable research is not referenced. But a foundation of information that can be used as a resource is provided as the applicable publication knowledge base expands.

This document outlines areas of prosthodontic practice that reflect current clinical considerations that enhance the quality of care patients receive on a consistent basis. This document is developed for use by the fellows and members of the ACP and other members of the dental profession to increase the quality and reliability of prosthodontic care; however, the ultimate judgment regarding appropriateness of any specific procedure must be made by the prosthodontist in cooperation with the patient and in consideration of the limitations presented by the patient. It must be understood that adherence to the parameter does not guarantee a favorable outcome, nor does deviation from a parameter indicate less-than-acceptable care; however, when a prosthodontist,

in consultation with a patient, does elect to deviate from a parameter, it is highly recommended that the reason for deviation be recorded in the patient's record.

This document was developed to assist the educationally qualified prosthodontist of the ACP and other members of the dental profession to provide consistent, reliable, and predictable prosthodontic care to the public. The intents are to raise the level of care to the public and to develop measurable criteria so that outcome assessment criteria can be developed in the future. Whereas many prosthodontic procedures are routinely and appropriately performed by nonprosthodontists, it is incumbent for a dental practitioner providing prosthodontic care to recognize those clinical conditions that require the additional training and expertise of prosthodontic specialists so that the patient will receive the most reliable and predictable care.

## Summary Statement

The Parameters of Care for the Specialty of Prosthodontics were developed with the goal of being as inclusive as scientifically possible in recognizing variations in patients' clinical conditions and current therapeutic techniques. However, certain clinical conditions and procedures are associated with considerable uncertainty and variation in clinical outcome, especially in prosthodontic procedures in which patient cooperation and compliance are integral to favorable outcomes. In some instances, an inadequate amount of valid scientific information exists to thoroughly substantiate patient management procedures. However, when such situations were recognized, the parameters were developed using thorough and critical literature reviews, appropriateness criteria, and available clinical outcome data. As new information is developed, each parameter will be reviewed and revised on a regular schedule. This parameters document is the continuation of critical reassessment of evidence-based clinical practice. The Parameters of Care for the Specialty of Prosthodontics is a work in progress that requires timely nurturing and revision to maintain its credibility. The ACP is committed to continued attention to this document.

Thus, achieving quality is not a finite end but rather a continuous process driven by the discovery of new information and the changing expectations of practitioners, patients, and the public. The ACP is committed to the ongoing search for improved treatment procedures to enhance the prosthodontic health of the public.

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This document is a compilation of work by many groups and individuals both within and outside the field of dentistry. It is most appropriate to recognize the American Association of Oral and Maxillofacial Surgeons. Their pioneering work in the parameters of care field has led the way for the rest of dentistry. AAOMS was especially helpful and generous in the formative stages of the Parameters of Care for the Specialty of Prosthodontics.

Two other organizations deserving special recognition are The American Academy of Maxillofacial Prosthetics and The Academy of Prosthodontics.

The third edition was accomplished under the presidencies of Dr. Susan E. Brackett, Dr. Robert Taft, Dr. Nadim Baba, and Dr. Stephen Hudis. The Task Forces would like to acknowledge and thank Ms. Alethea Gerding and Mr. Mark Heiden, former ACP staff members and Dr. Linda Caradine-Poinsett, ACP Executive Director for their support and contributions to the Parameters of Care.

## Application of Parameters of Care to Clinical Practice

The ultimate utility of parameters of care in clinical practice is a key issue that must be considered in the process of introducing and further developing the Parameters of Care for the Specialty of Prosthodontics. To assist practitioners in the use of these parameters, the following approach to the document is suggested. This approach is designed to tailor the application of parameters to the procedures usually followed in the management of a patient, regardless of the presenting condition. In addition, the procedures apply whether the patient's presenting condition or the patient's presenting concerns are the reason for the initial contact. Six issues are considered in applying the parameters to each of the clinical conditions contained in the parameters document. Each of the clinical conditions within the 21 clinical areas is analyzed on the basis of these six issues, which are considered essential in determining the criteria for satisfactory clinical practice.

Following is a definition of these issues:

1. *Diagnoses and Indications for Care* delineate the reasons for prosthodontic management, including the symptoms of descriptive characteristics of patients who would be candidates for this type of prosthodontic care. For each condition, all or some of the indications may be applicable;
2. *Therapeutic Goals* describe the purpose of each treatment in terms of results desired both by the patient and the prosthodontist;
3. *Patient Factors Affecting Risk* are severity factors that increase the risk and potential for known complications. They are specific variables usually descriptive of the patient's characteristics or condition (e.g., age, factors in medical history, etc.) that may affect the outcome either favorably or unfavorably. These factors may present or impede achievement of the therapeutic goals, increase the potential for unfavorable outcomes, or may promote or facilitate favorable outcomes. For example, patient noncompliance may compromise the success of treatment, whereas compliance will enhance it;
4. *Standards of Care* outline the procedures followed in providing care that meets therapeutic goals, maximizes favorable outcomes, and minimizes risks and complications, based on the current state of knowledge;
5. *Specialty Performance Assessment Criteria*
  - (a) *Favorable Outcomes* consist of the clinical observations or other evidence that the usually expected results of treatment have been achieved. From these outcomes, measurable elements can be derived for entry into a computer program and compilation into a national database so that success rates for each procedure can be analyzed; and
  - (b) *Known Risks and Complications* are those conditions, circumstances, or outcomes known to be associated with the management of patients. Whether or not they are avoidable, data as to their frequency of occurrence will be useful for identifying preferred prosthodontic methods and practice patterns. These issues can be divided into three groups depending on when they occur in the continuum of patient care.

The following is a tabulation of this grouping and a discussion of how these issues can be applied to clinical conditions.

## Assessment

During the initial contact with the patient, presenting condition(s) are assessed, and the patient's concerns are acknowledged. This includes determining the indications for care and identifying the therapeutic goals to be achieved if such care is provided. The factors affecting risk are those severity factors that increase risks and the potential for known complications. These factors should be identified for the condition(s) being considered in the treatment planning process and their impact on care.

## Therapy

Once the presenting condition has been assessed by the prosthodontist, a plan of treatment is established and agreed upon. The standards of care are those therapeutic interventions that have been identified as appropriate for the respective clinical condition(s). The specific standard of care selected by the prosthodontist is determined on the basis of the information reviewed at the assessment interval.

## Outcomes

The final determination made in applying the parameters is the outcome of the therapy that was employed to treat the clinical condition with which the patient presented and address the patient's concerns. The specialty performance assessment indices (i.e., favorable outcomes and the known risks and complications) are intended to provide the basis for an objective evaluation of the patient's condition after therapeutic intervention. Favorable outcomes and known risks and complications are indices used by the specialty to assess the appropriateness of the prosthodontic care provided. More than one outcome indicator may be identified in the course of this evaluation.

This analysis of prosthodontic practice by indications for care, therapeutic goals, risk factors, standards of care, and performance assessment indices provides the foundation for broad-based performance improvements in the practice of the specialty.

The selected references at the conclusion of each section acknowledge the sources of information used by the revision committee in its work. They are not intended to be an exhaustive list of information on the subject.

## Note

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## (1) Comprehensive Clinical Assessment Parameter

### Preface

The comprehensive clinical assessment is the critical step in achieving predictable and successful prosthodontic therapy. The identification and collection of clinical assessment data is necessary to accomplish the integration of that data into a diagnosis, treatment plan, and prognosis. The clinical data gathered form the foundation of the diagnostic process. With this diagnostic foundation, the treatment plan can be developed to address clinical conditions and patient desires. Risks associated with electing or declining care are identified. Thus, a prognosis can be offered to the patient based on the clinical assessment, diagnosis, and treatment plan. This sequence of treatment that integrates traditional and advanced technological assessment methods will increase the predictability of prosthodontic care. A standardized diagnostic criterion will enable the prosthodontist to offer an accurate prognosis and will enable the collection of outcome data for the treatment plan executed.

Evaluation of the patient's prosthodontic status requires obtaining and documenting relevant medical and dental history information, conducting a thorough clinical assessment of extraoral and intraoral structures, reviewing physical symptoms, and evaluating the patient's psychosocial status.

### Examination Criteria

- I. Chief complaint
- II. Identification of providers
  - A. Identification of primary dental care provider(s)
  - B. Identification of other adjunctive dental care providers
  - C. Identification of health care providers
- III. History
  - A. Medical
    1. Current medications
    2. Drug allergies/hypersensitivity
    3. Alterations in normal physiology
    4. Review of physical signs and symptoms
    5. Identification of medical conditions that affect dental care
    6. Identification of need for medical consultation and/or referral
  - B. Dental
- IV. Psychosocial factors
- V. Social factors
  - A. Alcohol use
  - B. Tobacco use
  - C. Drug use
  - D. Sexual activity
- VI. Extraoral examination

- A. TMD screening
- B. Maxillofacial defects
- C. Skeletal evaluation
- D. Soft tissue
- E. Esthetics
- VII. Intraoral examination
  - A. Periodontal screening
  - B. Maxillofacial defects
  - C. Occlusal
  - D. Dental
  - E. Soft tissue
  - F. Esthetics
  - G. Residual ridge qualities and dimensions
  - H. Edentulous space location and extent
- VIII. Records
  - A. Physical assessment documentation
  - B. Radiographs
  - C. Diagnostic imaging, including three-dimensional imaging for dental implant placement
  - D. Documentation of craniofacial anatomy and physiology related to prosthodontic therapy
  - E. Digital surface scanning as indicated—extraoral, intraoral, and laboratory
  - F. Diagnostic casts
  - G. Analog or virtual articulation as indicated for specialty-level prosthodontic care
  - H. Photographic and video imaging
  - I. Charting
  - J. Disease screening and patient education for prevention
    - 1. Systemic
    - 2. Infectious
    - 3. Neoplastic
- IX. Consultations with other health care providers

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factors that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacement/revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include the documentation of objective findings, diagnosis, reasonable care options, and patient management intervention. Digital documentation must be maintained according to guidelines for HIPAA compliance.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology © 2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

## Parameter Guidelines: (1) Comprehensive clinical assessment

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and teeth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K11 Diseases of the salivary glands  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting clinical assessment
<ol style="list-style-type: none"> <li>Clinical condition(s) requiring prosthodontic care as defined by Prosthodontic Diagnostic Index (PDI) [ACP Patient Classifications System] and other clinical conditions</li> <li>Professional referral [99201-99205 CPT-2019]</li> <li>Dental evaluation prior to medical treatment [99281-8 CPT-2019]</li> <li>Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]</li> <li>Patient concerns [99201-99205, 99211-99215 CPT-2019]</li> <li>Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care</li> </ol>	<ol style="list-style-type: none"> <li>Establish oral and systemic health status</li> <li>Accurate diagnosis</li> <li>Identify the factors that would influence diagnosis, treatment planning, and treatment completion, including risk assessment</li> <li>Develop an accurate prognosis for treatment of diagnosed condition(s)</li> <li>Develop alternative treatment plans</li> <li>Patient education—inform patient of findings, diagnosis, and care options, including risks and benefits of recommended care</li> <li>Address patient concerns</li> <li>Informed consent</li> </ol>	<ol style="list-style-type: none"> <li>Inability to record necessary data because of physical/psychological limitations</li> <li>Refusal of patient referral to additional health care providers</li> <li>Lack of patient understanding or unrealistic expectations</li> <li>Patient noncompliance</li> <li>Psychosocial factors</li> <li>Third-party barriers concerning patient's ability to receive indicated care</li> </ol>

## Specialty performance assessment criteria

Standards of care	Favorable outcomes	Known risks and complications
<ol style="list-style-type: none"> <li>Documentation of systemic and oral clinical findings and diagnoses</li> <li>Use of three-dimensional digital assessment methods as indicated to support diagnosis, planning, and care</li> <li>Presentation of diagnostic findings [D0100-D0999, D9310 CDT-2019]</li> <li>Discussion of treatment alternatives and consequences of treatment versus no treatment</li> </ol>	<ol style="list-style-type: none"> <li>Noninvasive or minimally invasive procedures that rarely have irreversible consequences</li> <li>Identify sufficient information to assist in the successful treatment of the patient's clinical condition</li> <li>Identify factors that might compromise the treatment outcome</li> </ol>	<ol style="list-style-type: none"> <li>Failure of patient to disclose information leading to an incomplete documentation of medical history or physical examination</li> <li>Patient-related factors that lead to inaccurate diagnosis, treatment plan, and/or treatment</li> <li>Temporary pain from necessary clinical examination</li> <li>Transient bleeding</li> <li>Dislodgment of existing restorations</li> <li>Hyperactive gag reflex</li> <li>Increased anxiety levels</li> <li>Extraction of mobile teeth during diagnostic impression making</li> <li>Aggravation of preexisting or unknown disease conditions</li> <li>Lack of patient understanding or unrealistic expectations</li> <li>Unplanned clinical care outcome</li> </ol>



### **Selected References (Comprehensive Clinical Assessment Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

In general, relevant references pertain to clinical factors associated with diagnosis, planning, treatment, and supportive care. Clinical assessments must lead to the recognition of indications, risks, benefits, and completion of care as described in numerous prosthodontic parameters. References from these parameters may be used to supplement this bibliography.

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## **(2) Limited Clinical Assessment Parameter**

### **Preface**

Many patients evaluated by prosthodontists do not require a comprehensive clinical assessment. There are multiple types of limited assessments:

1. Referral
2. Emergency
3. Second opinions
4. Other

### **Examination Criteria**

The dental history and clinical examination should focus on the limited problem or complaint identified by a health care provider and/or presented by the patient. It should also include a general survey of the oral cavity and related structures. The prosthodontist must use his or her discretion in identifying which of the examination criteria described in the comprehensive clinical assessment parameter must be evaluated to complete the limited assessment:

1. Chief complaint
2. Identification of primary care provider
3. Identification of all other health care providers
4. Identification of systemic and/or oral factors that could affect the completion of the limited assessment
5. Identification of necessary examination criteria to achieve a diagnosis

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, reasonable care options, and patient management intervention. Digital documentation must be maintained according to the guidelines for HIPAA compliance.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

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Parameter Guidelines: (2) Limited clinical assessment

ICD-10-CM

- G47.63 Sleep disorders, sleep-related bruxism
- Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding
- K00 Disorders of tooth development and eruption
- K02 Dental caries
- K03 Other diseases of hard tissues of teeth
- K04 Diseases of pulp and periapical tissues
- K05 Gingivitis and periodontitis
- K06 Other disorders of gingival and edentulous alveolar ridge
- K08 Other diseases and conditions of the teeth and supporting structures
- K11 Diseases of the salivary glands
- K12 Stomatitis and other oral lesions
- K13 Other diseases of lip and oral mucosa
- K14 Diseases of the tongue
- M26 Dentofacial anomalies, including malocclusion
- M27 Diseases of the jaws
- S01.8 Tooth (broken) uncomplicated or complicated
- S02.5 Fracture of tooth, traumatic

Indications	Therapeutic goals	Risk factors affecting clinical assessment
<ol style="list-style-type: none"> <li>1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions</li> <li>2. Professional referral [99201-99205 CPT-2019]</li> <li>3. Dental evaluation prior to medical treatment [99281-8 CPT-2019]</li> <li>4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]</li> <li>5. Patient concerns [99201-99205, 99211-99215 CPT-2019]</li> <li>6. Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care</li> </ol>	<ol style="list-style-type: none"> <li>1. Establish oral and systemic health status</li> <li>2. Accurate diagnosis</li> <li>3. Identify the factors that would influence diagnosis, treatment planning, and treatment completion, including risk assessment</li> <li>4. Develop an accurate prognosis for treatment of diagnosed condition(s)</li> <li>5. Develop alternative treatment plans</li> <li>6. Patient education—inform patient of findings, diagnosis, and care options, including risks and benefits of recommended care</li> <li>7. Address patient concerns</li> <li>8. Informed consent</li> </ol>	<ol style="list-style-type: none"> <li>1. Inability to record necessary data because of physical/psychological limitations</li> <li>2. Refusal of patient referral to additional health care providers</li> <li>3. Lack of patient understanding or unrealistic expectations</li> <li>4. Patient noncompliance</li> <li>5. Psychosocial factors</li> <li>6. Third-party barriers concerning patient's ability to receive indicated care</li> </ol>

Specialty performance assessment criteria:

Standards of care	Favorable outcomes of clinical assessment	Known risks and complications
<ol style="list-style-type: none"> <li>1. Documentation of systemic and oral clinical findings and diagnoses</li> <li>2. Use of three-dimensional digital assessment methods as indicated to support diagnosis, planning, and care</li> <li>3. Presentation of diagnostic findings [D0100-D0999, D9310 CDT-2019]</li> <li>4. Informed consent regarding consequences of no treatment and limited examination [D0100-D0999, D9310 CDT-2019]</li> <li>5. Patient education to include need for comprehensive assessment</li> <li>6. Inform patient of other observed pathology not part of the limited assessment</li> </ol>	<ol style="list-style-type: none"> <li>1. Noninvasive or minimally invasive procedures that rarely have irreversible consequences</li> <li>2. Identify sufficient information to assist in the successful treatment of the patient's clinical condition</li> <li>3. Identify factors that might compromise the treatment outcome</li> </ol>	<ol style="list-style-type: none"> <li>1. Failure of patient to disclose information leading to an incomplete documentation of medical history or physical examination</li> <li>2. Patient-related factors that lead to inaccurate diagnosis, treatment plan, and/or treatment</li> <li>3. Temporary pain from necessary clinical examination</li> <li>4. Transient bleeding</li> <li>5. Dislodgment of existing restorations</li> <li>6. Hyperactive gag reflex</li> <li>7. Increased anxiety levels</li> <li>8. Extraction of mobile teeth during diagnostic impression making</li> <li>9. Aggravation of preexisting or unknown disease conditions</li> <li>10. Lack of patient understanding or unrealistic expectations</li> <li>11. Unplanned clinical care outcome</li> </ol>

### **Selected References (Limited Clinical Assessment Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

In general, relevant references pertain to clinical factors associated with diagnosis, planning, treatment, and supportive care. Clinical assessments must lead to recognition of indications, risks, benefits, and completion of care as described in numerous prosthodontic parameters. References from these parameters may be used to supplement this bibliography.

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### (3) Completely Dentate Patient Parameter

#### Preface

The completely dentate patient is a patient with an intact continuous permanent dentition with no missing teeth or roots, excluding the third molars. This parameter is structured to accommodate the increasing levels of diagnostic and restorative complexity. All the disciplines of dentistry may be included in the classifications—surgical considerations, periodontal considerations, endodontic considerations, orthodontic considerations, oral pathology considerations, TMD considerations, operative considerations, and prosthodontic considerations.

The management of the myriad of variables in the completely dentate patient is the essence of specialty-level prosthodontic therapy. The prosthodontist serves as a leader and a collaborator in the treatment of the completely dentate patient through the integration of all of the above considerations. Classifying diagnostic categories enables the selection of appropriate treatment.

The PDI (ACP Patient Classifications System) for the completely dentate patient is delineated by two criteria. The classification is assigned based upon consideration and evaluation of these criteria:

1. Tooth condition
2. Occlusal scheme

By use of the PDI, diagnostic complexity is recognized, and patients will have the opportunity to have the most appropriate therapy selected to address their clinical conditions.

The four classes of the completely dentate patient are:

1. Class I—characterized by ideal or minimally compromised tooth condition and occlusal scheme. All criteria are favorable.
2. Class II—characterized by moderately compromised tooth condition and occlusal scheme. This class displays noted continuation of the physical degradation of one or both of the criteria.
3. Class III—characterized by substantially compromised tooth condition requiring the reestablishment of the occlusal scheme without a change in the occlusal vertical dimension (OVD), with or without substantial localized adjunctive therapy.
4. Class IV—characterized by severely compromised tooth condition requiring the reestablishment of the occlusal scheme with a change in the OVD, with or without extensive adjunctive therapy.

This diagnostic system will help identify those conditions that require clinical techniques associated with advanced prosthodontic training. These diagnostic categories will help standardize treatment regimens and provide outcome data for diagnosis/treatment combinations.

Terminal dentition describes a condition in which there are insufficient teeth to maintain function, and the arch, as a whole, will transition to the edentulous state. The example etiologies might be periodontal disease, caries, trauma, insufficient tooth structure to maintain function, prosthodontic discomfort, and/or patient desires. Transition to total edentulism should only be considered when the patient is fully informed of all variables (e.g., prognosis of teeth and chance of success measured against longevity of treatment) and consequences that affect the value of treatment. Treatment options designed to extend the time with the remaining teeth in an effort to postpone the transition to the edentulous state should be discussed with the patient. These options include but are not limited to dental implant-retained or -supported restorations. Patient desires and expectations must be considered in conjunction with the professional knowledge and judgment of the prosthodontist.

It must be noted that with the treatment of the completely dentate patient, patient attitude, cooperation, and compliance are of great importance in long-term success. Successful treatment for the completely dentate patient is a mutual effort between the prosthodontist and the patient. A refractory patient is one who presents with chronic complaints following appropriate therapy. In those instances where patient expectations exceed physical limitations, a mutually satisfactory result may not be possible through the completion of their treatment plan.

#### General Criteria and Standards

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the

procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, reasonable care options, and patient management intervention. Digital documentation must be maintained according to the guidelines for HIPAA compliance.

### **Coding and Nomenclature**

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Parameter Guidelines: (3) Completely dentate patient

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ICD-10-CM

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*The specific determinants of all classifications for the Prosthodontic Diagnostic Index (PDI) for Completely Dentate can be found in the ICD-10-CM; some disease categories and specific examples are listed below:*

*F50.2 Bulimia nervosa*

*G47.63 Sleep disorders, sleep-related bruxism*

*Z65.9 Problems related to unspecified psychosocial circumstances: Bruxism, Teethtooth grinding*

*K00 Disorders of tooth development and eruption*

*K02 Dental caries*

*K03 Other diseases of hard tissues of teeth*

*K04 Diseases of pulp and periapical tissues*

*K05 Gingivitis and periodontitis*

*K06 Other disorders of gingival and edentulous alveolar ridge*

*K08 Other diseases and conditions of the teeth and supporting structures*

*K11 Diseases of the salivary glands*

*K12 Stomatitis and other oral lesions*

*K13 Other diseases of lip and oral mucosa*

*K14 Diseases of the tongue*

*M26 Dentofacial anomalies, including malocclusion*

*M27 Disorders of the jaws*

*S01.80 Tooth (broken) uncomplicated or complicated*

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Indications for care	Therapeutic goals	Risk factors affecting quality of care
1. Caries [K02.1-K02.9 ICD-10-CM]	1. Improved mastication	1. Healing potential of patient
2. Attrition [K03.0 ICD-10-CM]	2. Improved speech	2. Altered motor and/or sensory nerve function
3. Erosion [K03.2 ICD-10-CM]	3. Improved esthetics	3. Altered/impaired salivary flow
4. Abrasion [K03.1 ICD-10-CM]	4. Improved swallowing	4. Compromised TM joint and orofacial muscle support
5. Abfraction	5. Restoration of facial height	5. Adaptability of patient
(a) Root pathology; external and internal root resorption	6. TM joint and orofacial muscle support	6. Anatomic restrictions to airway
(b) Congenital/developmental tooth malformation	7. Positive psychosocial response	7. Unmanageable protective reflexes
6. Fractures/microfractures/cracks [S01.80, S02.5, K03.81 ICD-10-CM]	8. Improved airway support	8. Compromised periodontal health and/or supporting structures
(a) Root pathology; external and internal root resorption [K03.3 ICD-10-CM]	9. Improved comfort	9. Patient concerns incongruent with appropriate care
(b) Congenital/developmental tooth malformation [K00.1-K00.9 ICD-10-CM]	10. Improved tooth form and function	10. Parafunctional forces related to trauma, medication, gastroesophageal reflux
7. Endodontic therapy or pathology	11. Tooth stabilization	11. Patient noncompliance with at home maintenance recommendation
8. Intra-arch and interarch integrity [M26.0-M26.3 ICD-10-CM]	12. Restore intra-arch and interarch integrity and stability	12. Patient noncompliance with professional maintenance recommendations
9. Tooth mobility	13. Improved periodontal health	13. Limited mouth opening
10. Diastemas	14. Address patient concerns	14. Presence of associated pathologic disease
11. Tooth malposition	15. Improved structural integrity of dentition	15. Unanticipated tissue loss or damage to adjacent vital structures
12. Loss of occlusal vertical dimension [M26.25, M26.37 ICD-10-CM]	16. Prevention and/or elimination of etiology	16. Adverse systemic sequelae
13. Esthetic concerns	17. Assessment and management of coexisting systemic disease (e.g., GERD)	17. Acute and/or chronic infection
14. Pathogenic occlusion [K08.81, K08.82, M26.4 ICD-10-CM]	18. Preservation of existing structures	18. Presence of behavioral, psychological, motor, neurologic, and/or psychiatric disorders, including habits (e.g., substance abuse, including tobacco and alcohol), seizure disorders, self-mutilation that may affect healing, and/or response to therapy
15. Failed or failing existing restorations		19. Allergy to biomaterials
16. Correction of congenital abnormalities		20. Psychological factors
17. Compromised mastication and/or swallowing		21. Maxillomandibular relationship
18. Impaired speech		22. Financial constraints
19. Lack of TM joint and orofacial muscle support		
20. Psychosocial factors		
21. Airway restriction		
22. Lack of intra and interarch integrity and stability		
23. Patient concerns		
24. Pathology of supporting structures; bone or soft tissues		
25. Compromised retention and resistance form		

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Patient education/medical and dental history	1. Reduction and/or elimination of etiology	1. Refractory patient response or compromised healing response
2. Informed consent	2. Improved mastication and/or swallowing	2. Speech alterations
(a) Medical consultation when needed	3. Improved speech	3. Unacceptable esthetics
(b) Use of imaging modalities	4. Improved esthetics	4. Unrealistic patient expectations
3. Preprosthetic preparation	5. Establishment of therapeutic occlusal vertical dimension	5. Materials failure/incompatibility (remake vs. repair distinction)
(a) Nonsurgical	6. Restored TM joint and orofacial muscle support	6. Functional limitations
(b) Surgical	7. Improved distribution of occlusal forces	7. Difficult mastication and swallowing
(c) Endodontic	8. Address patient concerns	8. Temporomandibular joint (TMJ) and/or orofacial muscle dysfunction
(d) Periodontal	9. Positive psychosocial response	9. Periodontal complications
(e) Orthodontic	10. Improved airway support	10. Endodontic complications
(f) TMD	11. Improved comfort	11. Alterations in taste perception
(g) Other referral	12. Satisfactory patient adaptation to current condition	12. Allergic response
4. Class I completely dentate patient [D2000-D2999 CDT 2019]	13. Improved intra-arch and interarch integrity and stability	13. Unknown longevity of materials
(a) Treatment of etiologic factors	14. Healthy supporting structures	14. Increased caries susceptibility
(b) Intracoronal and extracoronal restorative procedures	15. Verified patient compliance	15. Dentinal sensitivity
(c) Partial or complete arch impression/ digital scan		16. Tongue/cheek biting
(d) Articulation in maximum intercuspation on an articulator/digital articulation based on anatomic landmarks		17. Pain
(e) Insertion of prosthesis		18. Alteration in sensory and/or motor nerve function
(f) Post-treatment follow-up		19. Biomechanically induced complications to supporting structures
(g) Metal or porcelain try-in and assessment		
5. Class II completely dentate patient [D2000-D2999 CDT 2019]		
(a) Treatment of etiologic factors		
(b) Intracoronal and extracoronal restorative procedures		
(c) Partial or complete arch impression/digital scan		
(d) Articulation in maximum intercuspation on an articulator/digital articulation based on anatomic landmarks		
(e) Insertion of prosthesis		
(f) Post-treatment follow-up		
(g) Metal or porcelain try-in and assessment		
6. Class III completely dentate patient [D2000-D2999 CDT 2019]		
(a) Treatment of etiologic factors		
(b) Intracoronal and extracoronal restorative procedures		
(c) Complete arch impression/digital scan		
(d) Maxillomandibular record at the existing occlusal vertical dimension/digital scan		
(e) Facebow record and articulation on a semiadjustable articulator/digital articulation based on anatomic landmarks		
(f) Insertion of prosthesis		
(g) Post-treatment follow-up		
(h) Metal or porcelain try-in and assessment		
7. Class IV completely dentate patient [D2000-D2999 CDT 2019]		
(a) Accommodation to systemic conditions		
(b) Treatment of etiologic factors		
(c) Establish therapeutic occlusal vertical dimension		
(d) Intracoronal and extracoronal restorative procedures		
(e) Complete arch impression/digital scan		
(f) Maxillomandibular record at the confirmed therapeutic occlusal vertical dimension and eccentric records as necessary/digital scan		
(g) Facebow record and articulation on a semi or fully adjustable articulator/digital articulation based on anatomic landmarks		
(h) Metal or porcelain try-in and assessment		
(i) Insertion of prosthesis		
(j) Post-treatment follow-up		



### **Selected References (Completely Dentate Patient Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

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## **(4) Partial Edentulism Parameter**

### **Preface**

The assessment of partial edentulism encompasses everything from the loss of a single tooth to the loss of all teeth but one. All the disciplines of dentistry may be involved—surgical considerations, periodontal considerations, endodontic considerations, orthodontic considerations, oral pathology considerations, TMD considerations, operative considerations, and prosthodontic considerations.

In the treatment of partial edentulism, the integration of all of the above considerations is where the specialty of prosthodontics has the most to offer a patient. The management of the myriad variables in partially edentulous conditions is the essence of specialty-level prosthodontic therapy. Classifying diagnostic categories enables the selection of appropriate treatment.

The PDI (ACP Patient Classifications System) for Partial Edentulism is delineated by four criteria. The classification is assigned based upon consideration and evaluation of the following criteria:

1. Location and extent of the edentulous area(s)
2. Condition of abutments
3. Occlusion
4. Residual ridge characteristics

With the use of the PDI, patients will have the opportunity to have the most appropriate therapy selected to address their clinical conditions. The four classes of partial edentulism are:

1. Class I—characterized by ideal or minimally compromised teeth and supporting anatomic structures. All criteria are favorable.
2. Class II—characterized by moderately compromised teeth and supporting anatomic structures. This class displays noted continuation of the physical degradation of one or more of the four criteria.
3. Class III—characterized by substantially compromised teeth and supporting anatomic structures. This class requires the reestablishment of the entire occlusal scheme without a change in the OVD with or without substantial localized adjunctive therapy.
4. Class IV—characterized by severely compromised teeth and supporting anatomic structures requiring a reestablishment of the entire occlusal scheme with a change in the OVD.

This diagnostic system will help identify those conditions that require clinical techniques associated with advanced prosthodontic training. These diagnostic categories will help standardize treatment regimens and provide outcome data for diagnosis/treatment combinations.

Terminal dentition describes a condition in which there are insufficient teeth to maintain function, and the arch, as a whole, will transition to the edentulous state. The example etiologies might be periodontal disease, caries, trauma, insufficient tooth structure to maintain function, prosthodontic discomfort, and/or patient desires. Transition to total edentulism should only be considered when the patient is fully informed of all variables (e.g., prognosis of teeth and chance of success measured against longevity of treatment) and consequences that affect the value of treatment. Patient desires and expectations must be considered in conjunction with the professional knowledge and judgment of the prosthodontist.

Dental implant therapy offers an alternative to the maintenance of a failing dentition and its associated sequelae. The significant transition to edentulism involves special treatment considerations. Immediate dentures are measured by different criteria than definitive prostheses. The initial goals are immediate replacement of form and function and management during the healing phase. When an approximate state of stability is achieved, the goals shift to restoration of long-term form and function.

It must be noted that with the treatment of partial edentulism, patient attitude, cooperation, and compliance are of great importance in long-term success. Successful treatment for the partially dentate patient is a mutual effort between the prosthodontist and the patient. A refractory patient is one who presents with chronic complaints following appropriate therapy. In those instances where patient expectations exceed physical limitations, a mutually satisfactory result may not be possible through the completion of their treatment plan.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, reasonable care options, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and

should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

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Parameter Guidelines: (4) Partial edentulism

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ICD-10-CM

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*K08.4, Partial loss of teeth (Partial edentulism)*

*K08.401 Partial loss of teeth, unspecified cause, class I (Partial Edentulism Class I)*

*K08.402 Partial loss of teeth, unspecified cause, class II (Partial Edentulism Class II)*

*K08.403 Partial loss of teeth, unspecified cause, class III (Partial Edentulism Class III)*

*K08.404 Partial loss of teeth, unspecified cause, class IV (Partial Edentulism Class IV)*

*K08.409 Partial loss of teeth, unspecified cause, unspecified class*

*The specific determinants of all classifications for the Prosthodontic Diagnostic Index (PDI) for Partial Edentulism can be found in the ICD-10-CM; some disease categories and specific examples are listed below:*

*F50.2 Bulimia nervosa*

*G47.63 Sleep disorders, sleep-related bruxism*

*Z65.9 Problems related to unspecified psychosocial circumstances: Bruxism, Teeth-tooth grinding*

*K00 Disorders of tooth development and eruption*

*K02 Dental caries*

*K03 Other diseases of hard tissues of teeth*

*K04 Diseases of pulp and periapical tissues*

*K05 Gingivitis and periodontitis*

*K06 Other disorders of gingival and edentulous alveolar ridge*

*K08 Other diseases and conditions of the teeth and supporting structures*

*K11 Diseases of the salivary glands*

*K12 Stomatitis and other oral lesions*

*K13 Other diseases of lip and oral mucosa*

*K14 Diseases of the tongue*

*M26 Dentofacial anomalies, including malocclusion*

*M27 Disorders of the jaws*

*S01.80 Tooth (broken) uncomplicated or complicated*

*The ICD-9-CM codes consistent with the PDI that were previously used for partial edentulism were:*

*525.50 Partial edentulism, unspecified*

*525.51 Partial edentulism, Class I*

*525.52 Partial edentulism, Class II*

*525.53 Partial edentulism, Class III*

*525.54 Partial edentulism, Class IV*

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Indications for care	Therapeutic goals	Risk factors affecting quality of care
1. Lack of mastication and/or impaired swallowing	1. Improved mastication and/or improved swallowing	1. Healing potential of patient
2. Impaired speech	2. Improved speech	2. Altered motor and/or sensory nerve function
3. Esthetic concerns	3. Improved esthetics	3. Altered/impaired salivary flow
4. Reduction of facial height	4. Restored facial height	4. Alveolar ridge height
5. Lack of TM joint and orofacial muscle support	5. TMJ and orofacial muscle support	5. Alveolar ridge thickness
6. Psychosocial factors	6. Positive psychosocial response	6. Compromised TMJ and/or orofacial muscles
7. Airway restriction	7. Improved airway support	7. Adaptability of the patient
8. Biomaterial breakdown	8. Improved adaptability to existing prostheses	8. Anatomic restrictions to airway
9. Lack of intra and interarch integrity and stability	9. Improved intra and interarch integrity and stability	9. Unmanageable protective reflexes
10. Patient concerns	10. Patient concerns addressed appropriately	10. Compromised supporting structures
11. Unsatisfactory prosthesis	11. Improved retention and stability	11. Patient concerns incongruent with appropriate care
12. Compromised retention and resistance form	12. Healthy supporting structures	12. Patient noncompliance with at-home maintenance recommendations
13. Compromised supporting structures		13. Patient noncompliance with professional maintenance recommendations

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Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Patient education	1. Improved mastication and/or improved swallowing	1. Refractory patient response or compromised healing response
2. Informed consent		2. Ulcerations
3. Preprosthetic preparation	2. Improved speech	3. Speech alterations
(a) Nonsurgical	3. Improved esthetics	4. Unacceptable esthetics
(b) Surgical	4. Improved swallowing	5. Materials failure/incompatibility (repairable vs. remake distinction)
(c) Endodontic	5. Restoration of facial height	6. Biomechanically induced complications to supporting structures
(d) Periodontal	6. Restored TMJ and orofacial muscle support	7. Difficulty chewing and/or swallowing
(e) Orthodontic	7. Positive psychosocial response	8. TMJ and/or orofacial muscle dysfunction
(f) TMD	8. Improved airway support	9. Alterations in taste perception
(g) Other referral	9. Improved comfort	10. Allergic response
4. Class I partially edentulous patient [K08.401 ICD-10-CM]	10. Satisfactory patient adaptation to current condition	11. Degradation of supporting structures
(a) Removable partial denture [D5000-D5899 CDT-2019]	11. Improved intra-arch and interarch integrity and stability	
1. Treatment of etiologic factors	12. Healthy supporting structures	
2. Diagnostic survey and design	13. Verified patient compliance	
3. Abutment preparation (i.e., rest preparations, guide planes, etc.)		
4. Complete arch impression technique/digital scan		
5. Articulation in maximum intercuspation on an articulator/digital scan		
6. Insertion of prosthesis		
7. Post-treatment follow-up		
(b) Fixed partial denture [D6200-D6999 CDT-2019]		
1. Treatment of etiologic factors		
2. Abutment preparation		
3. Impression—partial, complete arch, and digital scan		
4. Articulation in maximum intercuspation on an articulator/digital articulation based on anatomic landmarks		
5. Insertion of prosthesis		
6. Post-treatment follow-up		
(c) Implant supported/retained restoration (see Implant Placement & Restoration Parameter) [D6000-D6199 CDT-2019]		
5. Class II partially edentulous patient [K08.402 ICD-10-CM]		
(a) Removable partial denture [D5000-D5899 CDT-2019]		
1. Treatment of etiologic factors		
2. Diagnostic survey and design		
3. Abutment preparation (i.e., intra and extracoronal restorations, rest preparations, guide planes, etc.)		
4. Complete arch impression technique/digital scan		
5. Articulation in maximum intercuspation on an articulator/digital articulation based on anatomic landmarks		
6. Insertion of prosthesis		
7. Post-treatment follow-up		
(b) Fixed partial denture [D6200-D6999 CDT-2019]		
1. Treatment of etiologic factors		
2. Abutment preparation		
3. Complete arch impression/digital scan		
4. Articulation in maximum intercuspation on an articulator/digital articulation based on anatomic landmarks		
5. Insertion of prosthesis		
6. Post-treatment follow-up		
(c) Implant supported/retained restoration (see Implant Placement & Restoration Parameter) [D6000-D6199 CDT-2019]		

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6. Class III partially edentulous patient  
[K08.403 ICD-10-CM]
- (a) Removable partial denture  
[D5000-D5899 CDT-2019]
1. Treatment of etiologic factors
  2. Diagnostic survey and design
  3. Abutment preparation (i.e., intra and extracoronal restorations, rest preparations, guide planes, intra and extracoronal attachments, etc.)
  4. Dual-stage impression technique/digital scan
  5. Maxillomandibular record at the presenting occlusal vertical dimension/digital scan
  6. Facebow record and articulation on a semiadjustable articulator/digital articulation based on anatomic landmarks
  7. Framework try-in and assessment
  8. Trial placement
  9. Insertion of prosthesis
  10. Post-treatment follow-up
- (b) Fixed partial denture [D6200-D6999 CDT-2019]
1. Treatment of etiologic factors
  2. Abutment preparation
  3. Complete arch impression/digital scan
  4. Maxillomandibular record at the presenting occlusal vertical dimension/digital scan
  5. Facebow record and articulation on a semiadjustable articulator/digital articulation based on anatomic landmarks
  6. Insertion of prosthesis
  7. Post-treatment follow-up
- (c) Implant supported/retained restoration (see Implant Placement & Restoration Parameter) [D6000-D6199 CDT-2019]
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7. Class IV partially edentulous patient  
[K08.404 ICD-10-CM]
- (a) Removable partial denture  
[D5000-D5899 CDT-2019]
1. Accommodation to systemic conditions
  2. Treatment of etiologic factors
  3. Diagnostic survey and design
  4. Establishment of therapeutic occlusal vertical dimension
  5. Abutment preparation (i.e., intra and extracoronal restorations, rest preparations, guide planes, intra and extracoronal attachments, etc.)
  6. Dual or multistage impression technique/digital scan
  7. Maxillomandibular record at the confirmed therapeutic occlusal vertical dimension and eccentric records as necessary/digital scan
  8. Facebow record and articulation on a semiadjustable articulator/digital articulation based on anatomic landmarks
  9. Framework try-in and assessment
  10. Trial placement
  11. Insertion of prosthesis
  12. Post-treatment follow-up
- (b) Fixed partial denture [D6200-D6999 CDT-2019]
1. Accommodation to systemic conditions
  2. Treatment of etiologic factors
  3. Abutment preparation
  4. Complete arch impression/digital scan
  5. Maxillomandibular record at the established occlusal vertical dimension and eccentric records as necessary/digital scan
  6. Facebow record and articulation on a semi or fully adjustable articulator/digital articulation based on anatomic landmarks
  7. Framework try-in and assessment
  8. Insertion of prosthesis
  9. Post-treatment follow-up
- (c) Implant supported/retained restoration  
(see Implant Placement & Restoration Parameter) [D6000-D6199 CDT-2019]
- (d) Treatment of terminal partial edentulism
1. Documentation of existing conditions
  2. Informed consent
  3. Long-term provisional restoration
  4. Post-treatment follow-up
  5. Patient education
-

### **Selected References (Partial Edentulism Parameter)**

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(Note: Additional references addressing fixed restorative techniques are contained in the Tooth Morphology Preparation & Modification Parameter. References for implant restorations are included in the Implant Placement & Restoration Parameter.)

## **(5) Complete Edentulism Parameter**

### **Preface**

The diagnosis of complete edentulism establishes that total debilitation of the dental apparatus has occurred. The complete loss of dentition affects a myriad of normal and essential human functions:

1. Inability to masticate
2. Reduction in digestive process
3. Reduction in mastication/enjoyment of food varieties and textures
4. Speech aberrations
5. Inability to incise
6. Absence and/or reduction in tooth display during smiling
7. Reduction in emotional display—happiness/sadness
8. Loss of self-esteem
9. Sexual dysfunction and avoidance
10. Increased effects of aging
11. Loss of support for orofacial musculature
12. Continual reduction in alveolar bone
13. Decrease in airway maintenance
14. Decrease in nutritional status

Historically, all patients who are completely edentulous have been grouped into a single diagnostic category and thus have been assigned a single therapeutic technique. This incorrect assumption has limited the treatment available to these patients. Classifying diagnostic categories enables the selection of appropriate treatment.

The PDI (ACP Patient Classification System) for Complete Edentulism delineates four levels. The classification is assigned based upon consideration and evaluation of the following criteria:

1. Bone height—mandibular
2. Maxillomandibular relationship

3. Residual ridge morphology
4. Muscle attachments

By integrating the PDI, patients will have the opportunity to have the most appropriate therapy selected to address their clinical conditions. The four classes of complete edentulism are:

1. Class I—characterized by ideal or minimally compromised anatomic structures. All criteria are favorable.
2. Class II—characterized by moderately compromised supporting anatomic structures. This class is a continuation of the physical degradation of the denture-supporting structures and, in addition, is characterized by the early onset of systemic disease interactions, localized soft tissue factors, and patient management/lifestyle considerations.
3. Class III—characterized by substantially compromised supporting anatomic structures. This class displays the need for surgical revision of the denture-supporting structures to allow for adequate prosthodontic function. Additional factors now play a significant role in treatment outcomes.
4. Class IV—characterized by severely compromised supporting anatomic structures. This class displays the most debilitated edentulous condition wherein surgical reconstruction is indicated; but cannot always be accomplished due to the patient's health, desires, and past dental history. When surgical revision is not selected, prosthodontic techniques of a specialized nature must be used to achieve an adequate treatment outcome.

Patient attitude, cooperation, and compliance are of great importance for long-term success in the treatment of complete edentulism. The successful treatment for complete edentulism is a mutual effort between the prosthodontist and the patient. A refractory patient is one who presents with chronic complaints following appropriate therapy. In those instances where patient expectations exceed physical limitations, a mutually satisfactory result may not be possible through the completion of their treatment plans.

Implant therapy must be considered for the treatment of the completely edentulous mandibular arch. Clinical evidence demonstrates that significant reduction in alveolar atrophy/resorption can be achieved with dental implant therapy. In addition, implant therapy enhances the patient's ability to use the prosthesis successfully.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

### **Documentation**

Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

Parameter Guidelines: (5) Complete Edentulism

ICD-10-CM

- K08.1, Complete loss of teeth (Partial edentulism)*
- K08.101 Complete loss of teeth, unspecified cause, class I (Complete Edentulism Class I)*
- K08.102 Complete loss of teeth, unspecified cause, class II (Complete Edentulism Class II)*
- K08.103 Complete loss of teeth, unspecified cause, class III (Complete Edentulism Class III)*
- K08.104 Complete loss of teeth, unspecified cause, class IV (Complete Edentulism Class IV)*
- K08.109 Complete loss of teeth, unspecified cause, unspecified class*

The specific determinants of all classifications for the Prosthodontic Diagnostic Index (PDI) for Complete Edentulism can be found in the ICD-10-CM; some disease categories and specific examples are listed below:

- K00 Disorders of tooth development and eruption*
- K06 Other disorders of gingival and edentulous alveolar ridge*
- K08 Other diseases and conditions of the teeth and supporting structures*
- K11 Diseases of the salivary glands*
- K12 Stomatitis and other oral lesions*
- K13 Other diseases of lip and oral mucosa*
- K14 Diseases of the tongue*
- M26 Dentofacial anomalies, including malocclusion*
- M27 Disorders of the jaws*

The ICD-9-CM codes consistent with the PDI that were previously used for complete edentulism were:

- 525.40 Complete edentulism, unspecified*
- 525.41 Complete edentulism, Class I*
- 525.42 Complete edentulism, Class II*
- 525.43 Complete edentulism, Class III*
- 525.44 Complete edentulism, Class IV*

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Impaired swallowing	1. Improved mastication	1. Healing potential of patient
2. Lack of mastication	2. Improved speech	2. Quality of oral tissues
3. Impaired speech	3. Improved esthetics	3. Salivary flow
4. Reduction of facial height	4. Improved swallowing	4. Alveolar ridge height
5. Lack of TMJ and orofacial muscle support	5. Restoration of facial height	5. Alveolar ridge thickness
6. Psychosocial factors	6. TM joint and orofacial muscle support	6. TMJ and orofacial muscle support
7. Airway restriction	7. Positive psychosocial response	7. Adaptability of patient
8. Esthetics –	8. Improved airway support	8. Anatomic restrictions to airway
9. Unsatisfactory existing prostheses	9. Improved comfort	9. Esthetic goals of patient
10. Chronic pain	10. Address patient concerns	10. Patient concerns incongruent with appropriate care
11. Patient concerns (generalized disease, structural)		11. Unmanageable protective reflexes

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Class I edentulous patient [K08.101 ICD-10-CM]		
(a) Complete dentures [D5000-D5899 CDT-2019]		
1. Treatment of etiologic factors	1. Improved mastication	1. Refractory patient or compromised healing response
2. Single stage impression technique/digital scan	2. Improved speech	2. Ulcerations
3. Maxillomandibular record in centric relation at the occlusal vertical dimension/digital scan	3. Improved esthetics	3. Speech alterations
4. Articulation on a non-adjustable articulator/digital articulation based on anatomic landmarks	4. Improved swallowing	4. Unacceptable esthetics
5. Maximum intercuspation in centric relation/digital scan	5. Restoration of facial height	5. Unrealistic patient expectations
6. Trial placement	6. Restored TM joint and orofacial muscle support	6. Materials failure (repairable vs. remake distinction)
7. Insertion of prosthesis	7. Positive psychosocial response	7. Biomechanically induced complications to supporting structures
8. Post-treatment follow-up	8. Improved airway support	8. Difficulty chewing and/or swallowing
(b) Implant-supported or -retained complete dentures – see criteria for Class III or IV complete edentulism. [D6000-D6199 CDT-2019]	9. Improved comfort	9. TMJ and/or orofacial muscle support
(c) Maintenance of existing prosthesis [D5400-D5899 CDT-2019]	10. Satisfactory patient adaptation	10. Alterations in taste perceptions
(d) Patient Education	11. Healthy supporting structures	11. Patient non-compliance with at-home maintenance recommendation
	12. Patient adaptation to current condition	12. Patient non-compliance with professional maintenance recommendations
	13. Verified patient compliance	
2. Class II edentulous patient [K08.102 ICD-10-CM]		
(a) Complete dentures [D5000-D5899 CDT-2019]		
1. Treatment of etiologic factors		
2. Dual stage impression technique using a custom impression tray/digital scan		
3. Maxillomandibular record in centric relation at the occlusal vertical dimension/digital scan		
4. Facebow record and articulation on a semi-adjustable articulator/digital articulation based on anatomic landmarks		
5. Maximum intercuspation in centric relation/digital scan		
6. Trial placement		
7. Clinical remount to finalize planned occlusal scheme		
8. Insertion of prosthesis		
9. Post-treatment follow-up		
(b) Implant-supported or -retained complete dentures – see criteria for Class III or IV complete edentulism [D6000-D6199 CDT-2005]		
(c) Maintenance of existing prosthesis [D5400-D5899 CDT-2005]		
(d) Patient Education		

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3. Class III edentulous patient [K08.103 ICD-10-CM]
    - (a) Conditions requiring preprosthetic preparation
      1. Nonsurgical
      2. Surgical
      3. Implants
    - (b) Complete dentures [D5000-D5899 CDT-2019]
      1. Treatment of etiologic factors
      2. Dual stage impression technique using a custom impression tray/digital scan
      3. Maxillomandibular record in centric relation at the occlusal vertical dimension/digital scan
      4. Facebow record and articulation on a semi-adjustable articulator/digital articulation based on anatomic landmarks
      5. Maximum intercuspation in centric relation/digital scan
      6. Trial placement
      7. Clinical remount to finalize planned occlusal scheme
      8. Insertion of prosthesis
      9. Post-treatment follow-up
    - (c) Implant-supported/retained dentures (see Implant Placement & Restoration Parameter) [D6000-D6199 CDT-2019]
    - (d) Patient education
  4. Class IV edentulous patient [K08.104 (ICD-10-CM)]
    - (a) Conditions requiring preprosthetic preparation
      1. Nonsurgical
      2. Surgical
      3. Implants
    - (b) Complete dentures [D5000-D5899 CDT-2019]
      1. Treatment of etiologic factors
      2. Multi-stage impression technique using a modified custom impression tray, if needed/digital scan
      3. Maxillomandibular record in centric relation at the occlusal vertical dimension/digital scan
      4. Facebow record and articulation on a semi-adjustable articulator/digital articulation based on anatomic landmarks
      5. Maximum intercuspation in centric relation/digital scan
      6. Trial placement
      7. Clinical remount to finalize planned occlusal scheme
      8. Insertion of prosthesis
      9. Post insertion modification (functional relines, processed soft liners, occlusal correction procedures, etc.)
      10. Extended post-treatment follow-up
    - (c) Implant-supported/retained dentures (see Implant Placement & Restoration Parameter) [D6000-D6199 CDT-2019]
    - (d) Patient education
- 

### ***Selected References (Complete Edentulism Parameter)***

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

Care for patients who are completely edentulous is the summation of all factors associated with diagnosis, planning, treatment, and supportive care associated with traditional removable prosthodontic principles that are mucosa borne, as well as advances associated with fixed and removable prosthetics, which are dental implant supported and retained. References from parameters, including digital technology, ridge and site preparation, implant placement and restoration, and recall, maintenance, and supportive care, and others, may be used to supplement this bibliography.

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## (6) Digital Technology Parameter

### Preface

The fundamental aspects of patient assessment and diagnosis for the prosthetic patient rely on the collection and analysis of critical information augmented through the use of digital technologies. Numerous categories provide useful information for the various aspects of care. These categories include but are not limited to:

1. Photographs and videography
2. Intraoral optical scans of teeth, edentulous ridges, and supporting structures
3. Extraoral optical scans of diagnostic casts
4. 3D radiography
5. 3D facial scans
6. 3D jaw movement tracking/recording
7. Computer-aided manufacturing (CAM) of diagnostic casts
8. Virtual articulation of pre or post-treatment records in maximum intercuspation
9. Computer-aided design (CAD) and CAM
10. Virtual planning associated with existing osseous support and determined augmentation parameters associated with implant placement

The prosthodontist integrates these methods in a patient-specific, meaningful way to utilize all relevant core information required for various aspects of patient care. The goal is to gather all necessary information in an effective way to provide predictable comprehensive care outcomes and then apply the gathered information to improve patient predictability. Information is gathered for differing intents:

1. *Baseline library*—photography, videography, and surface scanning during the comprehensive, limited, or periodic examinations may be performed to provide surface information of teeth, supporting structures, and facial structures to be possibly used for future assessment and care. These situations include but are not limited to surface recording of the status of the

existing dentition and definitive restoration. The goal is to gather a record of dental and arch relationships for potential future use associated with conditions requiring prosthodontic care.

2. *Active care library*—all digital data associated with patient-indicated diagnostic information that supports a meaningful understanding of patient structures in static and dynamic movements and facilitates patient assessment, planning, digital design, and digital manufacture that supports prosthodontic care with fixed or removable prosthetics.
3. *Supportive care library*—all digital data that document ongoing development of complications associated with the patient after definitive care completion (e.g., occlusal wear patterns documented over time through surface scanning, or peri-implant bone loss documented via computed tomography [CT]). The integration of these methods in a patient-specific, meaningful way provides the information necessary for assessing the outcomes of treatment and provides extended documentation of care status. The ultimate goal is to gather all necessary information in an effective way to predictably provide supportive patient care related to expected or unexpected complications. Meaningful information is gathered for purposes of prevention, diagnosis, or expedient resolution for potential biologic or prosthetic complications that may develop.

Collection of this digital information is used to augment the application of fundamental principles associated with traditional prosthodontics. As these methods are fully incorporated in a prosthodontist's practice, core prosthodontic and gnathological concepts are maintained. The prosthodontist integrates all information from digital and analog sources in a meaningful way to make accurate patient-centered diagnoses to optimize esthetics and function.

Assessment and digital analysis of 3D radiographic information in the form of CT is particularly important in the full understanding of supporting structures of teeth, or potential supporting structures for dental implants. Three-dimensional planning software for implant placement, implant post placement status, and prosthesis design is available. As this diagnostic information is collected and integrated with analog or digitally determined tooth position, the prosthodontist is responsible for review of all associated information as it relates to implant placement that best supports the definitive prosthetic plan. This includes planning for any static or dynamic implant guiding information, including various surgical guides associated with implant placement, prosthesis fabrication, and prosthesis insertion, as well as how the information guides all indicated adjunctive care and collaborative interactions with other health care professionals.

As new, advanced digital technologies become available, the prosthodontist and the specialty will provide a leadership role in the applicability of the specified technology in patient assessment, diagnosis, planning, prosthesis design and fabrication, patient postcare reevaluation, and subsequent supportive care.

The digital technology parameter consists of four subparameters:

1. Diagnosis
2. Treatment planning
3. Definitive patient care
4. Reevaluation and supportive care

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention. Digital documentation must be maintained according to the guidelines for HIPAA compliance.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve only as practice guidelines. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and



should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

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Parameter Guidelines: (6a) Digital technology parameter—diagnosis

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ICD-10-CM

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*G47.63 Sleep disorders, sleep-related bruxism*

*Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding*

*K00 Disorders of tooth development and eruption*

*K02 Dental caries*

*K03 Other diseases of hard tissues of teeth*

*K04 Diseases of pulp and periapical tissues*

*K05 Gingivitis and periodontitis*

*K06 Other disorders of gingival and edentulous alveolar ridge*

*K08 Other diseases and conditions of the teeth and supporting structures*

*K11 Diseases of the salivary glands*

*K12 Stomatitis and other oral lesions*

*K13 Other diseases of lip and oral mucosa*

*K14 Diseases of the tongue*

*M26 Dentofacial anomalies, including malocclusion*

*M27 Diseases of the jaws*

*S01.8 Tooth (broken) uncomplicated or complicated*

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Indications	Therapeutic goals	Risk factors affecting quality of care
1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions	1. Establish oral and systemic health status	1. Inability to record necessary data because of physical/psychological limitations
2. Professional referral [99201-99205 CPT-2019]	2. Accurate diagnosis	2. Refusal of patient referral to additional health care providers
3. Dental evaluation prior to medical treatment [99281-8 CPT-2019]	3. Identify the factors that would influence diagnosis, treatment planning, and treatment completion	3. Lack of patient understanding or unrealistic expectations
4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]	4. Patient education	4. Patient noncompliance
5. Patient concerns [99201-99205, 99211-99215 CPT-2019]	5. Develop an accurate prognosis for treatment of diagnosed condition(s)	5. Psychosocial factors
6. Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care	6. Develop alternative treatment plans	6. Physical factors (gag reflex and small mouth opening)
7. Caries [K02.1-K02.9 ICD-10-CM]	7. Address patient concerns	7. Third-party barriers concerning patient's ability to receive indicated care
8. Attrition [K03.0 ICD-10-CM]	8. Improve mastication	
9. Erosion [K03.2 ICD-10-CM]	9. Improve speech	
10. Abrasion [K03.1 ICD-10-CM]	10. Improve esthetics	
11. Abfraction	11. Improve swallowing	
12. Fractures/microfractures/cracks [K00.x, S01.80, S02.5, K03.81 ICD-10-CM]	12. Restoration of facial height	
13. Intra and interarch integrity [K00.x M26.2 ICD-10-CM]	13. TMJ and orofacial muscle support	
14. Tooth mobility	14. Positive psychosocial response	
15. Diastemas	15. Airway support	
16. Tooth malposition	16. Improve comfort	
17. Loss of OVD [M26.25, M26.37 ICD-10-CM]	17. Improve tooth form and function	
18. Esthetics	18. Tooth stabilization	
	19. Restore intra and interarch integrity and stability	
	20. Improve periodontal health	

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Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Standards of care associated with completely dentate, partial edentulism, and complete edentulism parameters 2. Patient education 3. Informed consent 4. Diagnosis and pretreatment records (a) Photographs and videography (b) Intraoral optical scan of teeth, edentulous ridges, and supporting structures (c) Extraoral optical scan of diagnostic casts (d) 3D radiography (e) 3D facial scans (f) 3D jaw movement tracking/recording (g) CAM of diagnostic casts (h) Virtual articulation of records as indicated	1. Favorable outcome(s) associated with comprehensive assessment, and limited assessment parameters, and prosthodontic care as described in completely dentate, partial edentulism, and complete edentulism parameters 2. Reduction and/or elimination of etiology 3. Improved mastication 4. Improved speech 5. Improved esthetics 6. Improved swallowing 7. Establishment of therapeutic OVD 8. Restored TMJ and orofacial muscle support 9. Improved tooth stability 10. Address patient concerns 11. Positive psychosocial response 12. Improved airway support 13. Improved comfort 14. Satisfactory patient adaptation 15. Improved intra and interarch integrity and stability 16. Improved predictability and prognosis of prostheses	1. Temporary pain from necessary clinical examination 2. Transient bleeding 3. Dislodgment of existing restorations 4. Hyperactive gag reflex 5. Increased anxiety levels 6. Aggravation of preexisting or unknown disease conditions 7. Lack of patient understanding or unrealistic expectations 8. Patient-related factors that lead to inaccurate diagnosis, treatment plan, and/or treatment

## Parameter Guidelines: (6b) Digital technology parameter—treatment planning

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions</li> <li>2. Professional referral [99201-99205 CPT-2019]</li> <li>3. Dental evaluation prior to medical treatment [99281-8 CPT-2019]</li> <li>4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]</li> <li>5. Patient concerns [99201-99205, 99211–99215 CPT-2019]</li> <li>6. Caries [K02.1-K02.9, ICD-10-CM]</li> <li>7. Attrition [K03.0 ICD-10-CM]</li> <li>8. Erosion [K03.2 ICD-10-CM]</li> <li>9. Abrasion [K03.1 ICD-10-CM]</li> <li>10. Abfraction</li> <li>11. Fractures/microfractures/cracks [K00.x, S01.80, S02.5, K03.81 ICD-10-CM]</li> <li>12. Intra and interarch integrity [K00.x M26.2 ICD-10-CM]</li> <li>13. Tooth mobility</li> <li>14. Diastemas</li> <li>15. Tooth malposition</li> <li>16. Loss of OVD [M26.25, M26.37 ICD-10-CM]</li> <li>17. Esthetics</li> <li>18. Pathogenic occlusion [K08.81, K08.82, M26.4 ICD-10-CM]</li> <li>19. Failed existing restorations</li> <li>20. Correction of congenital abnormalities</li> <li>21. Lack of mastication</li> <li>22. Impaired speech</li> <li>23. Impaired swallowing</li> <li>24. Lack of TMJ and orofacial muscle support</li> <li>25. Psychosocial factors</li> <li>26. Airway restriction</li> <li>27. Lack of intra and interarch integrity and stability</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the factors that would influence diagnosis, treatment planning, and treatment completion</li> <li>2. Patient education</li> <li>3. Develop an accurate prognosis for treatment of diagnosed condition(s)</li> <li>4. Develop alternative treatment plans</li> <li>5. Address patient concerns</li> <li>6. Improve mastication</li> <li>7. Improve speech</li> <li>8. Improve esthetics</li> <li>9. Improve swallowing</li> <li>10. Restoration of facial height</li> <li>11. TMJ and orofacial muscle support</li> <li>12. Positive psychosocial response</li> <li>13. Airway support</li> <li>14. Improve comfort</li> <li>15. Improve tooth form and function</li> <li>16. Tooth stabilization</li> <li>17. Restore intra and interarch integrity and stability</li> <li>18. Improve periodontal health</li> </ol>	<ol style="list-style-type: none"> <li>1. Inability to record necessary data because of physical/psychological limitations</li> <li>2. Refusal of patient referral to additional health care providers</li> <li>3. Lack of patient understanding or unrealistic expectations</li> <li>4. Patient noncompliance</li> <li>5. Psychosocial factors</li> <li>6. Physical factors (gag reflex and small mouth opening)</li> <li>7. Third-party barriers concerning patient's ability to receive indicated care</li> </ol>

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Standards of care associated with completely dentate, partially edentulous patient, and completely edentulous patient parameters	1. Reduction and/or elimination of etiology	1. Temporary pain from necessary clinical examination
2. Patient education	2. Improved mastication	2. Transient bleeding
3. Informed consent	3. Improved speech	3. Dislodgment of existing restorations
4. Treatment planning	4. Improved esthetics	4. Hyperactive gag reflex
(a) Fusion of 3D intra or extraoral scan with 3D radiographic records	5. Improved swallowing	5. Increased anxiety levels
(b) CAD of desired restorations including:	6. Establishment of therapeutic OVD	6. Aggravation of preexisting or unknown disease conditions
1. Partial-coverage restorations	7. Restored TMJ and orofacial muscle support	7. Lack of patient understanding or unrealistic expectations
2. Full-coverage restorations	8. Improved tooth stability	8. Patient-related factors that lead to inaccurate diagnosis, planning, or care
3. Surgical planning for endosseous implants	9. Address patient concerns	
4. Prosthodontic planning for endosseous implants	10. Positive psychosocial response	
(c) Virtual articulation of planned restorations in maximum intercuspation at the planned OVD	11. Improved airway support	
	12. Improved comfort	
	13. Satisfactory patient adaptation	
	14. Improved intra and interarch integrity and stability	
	15. Improved predictability and prognosis of prostheses	

## Parameter Guidelines: (6c) Digital technology parameter—definitive patient care

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K11 Diseases of the salivary glands  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions	1. Identify the factors that would influence diagnosis, treatment planning, and treatment completion	1. Inability to record necessary data because of physical/psychological limitations
2. Professional referral [99201-99205 CPT-2019]	2. Patient education	2. Refusal of patient referral to additional health care providers
3. Dental evaluation prior to medical treatment [99281-8 CPT-2019]	3. Develop an accurate prognosis for treatment of diagnosed condition(s)	3. Lack of patient understanding or unrealistic expectations
4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]	4. Develop alternative treatment plans	4. Patient noncompliance
5. Patient concerns [99201-99205, 99211–99215 CPT-2019]	5. Address patient concerns	5. Psychosocial factors
6. Caries [K02.1-K02.9 ICD-10-CM]	6. Improve mastication	6. Physical factors (gag reflex and small mouth opening)
7. Attrition [K03.0 ICD-10-CM]	7. Improve speech	7. Third-party barriers concerning patient's ability to receive indicated care
8. Erosion [K03.2 ICD-10-CM]	8. Improve esthetics	
9. Abrasion [K03.1 ICD-10-CM]	9. Improve swallowing	
10. Abfraction	10. Restoration of facial height	
11. Fractures/microfractures/cracks [K00.x, S01.80, S02.5, K03.81 ICD-10-CM]	11. TMJ and orofacial muscle support	
12. Intra and interarch integrity [K00.x M26.2 ICD-10-CM]	12. Positive psychosocial response	
13. Tooth mobility	13. Airway support	
14. Diastemas	14. Improve comfort	
15. Tooth malposition	15. Improve tooth form and function	
16. Loss of OVD [M26.25, M26.37 ICD-10-CM]	16. Tooth stabilization	
17. Esthetics	17. Restore intra and interarch integrity and stability	
18. Pathogenic occlusion [K08.81, K08.82, M26.4 ICD-10-CM]	18. Improve periodontal health	
19. Failed existing restorations		
20. Correction of congenital abnormalities		
21. Lack of mastication		
22. Impaired speech		
23. Impaired swallowing		
24. Lack of TMJ and orofacial muscle support		
25. Psychosocial factors		
26. Airway restriction		
27. Lack of intra and interarch integrity and stability		

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Standards of care associated with completely dentate, partially edentulous patient, and completely edentulous patient parameters 2. Patient education 3. Informed consent 4. Prosthetic design and treatment <ul style="list-style-type: none"> <li>(a) Intraoral scan of prepared teeth, abutments, edentulous ridges, and supporting structures</li> <li>(b) Extraoral scan of final impressions/definitive casts of prepared teeth, abutments, edentulous ridges, and supporting structures</li> <li>(c) CAD/CAM of:               <ul style="list-style-type: none"> <li>1. Static surgical guides for bone reduction, bone augmentation, and/or surgical placement of endosseous implants</li> <li>2. Full coverage or partial coverage restorations</li> <li>3. Metal frameworks for RPDs</li> <li>4. Complete/partial dentures and overdentures</li> <li>5. Implant abutments</li> <li>6. Implant-retained bars</li> <li>7. Implant-retained prostheses</li> <li>8. Occlusal devices</li> <li>9. Sleep apnea devices</li> <li>10. Surgical guides for maxillofacial patients</li> <li>11. Facial/maxillofacial prosthetics</li> <li>12. Duplicate prosthesis</li> <li>13. Conversion prosthesis</li> </ul> </li> <li>(d) Dynamic 3D surgical placement of endosseous implants</li> <li>(e) Virtual articulation of digitally designed prostheses</li> </ul>	1. Reduction and/or elimination of etiology 2. Improved mastication 3. Improved speech 4. Improved esthetics 5. Improved swallowing 6. Establishment of therapeutic OVD 7. Restored TMJ and orofacial muscle support 8. Improved tooth stability 9. Address patient concerns 10. Positive psychosocial response 11. Improved airway support 12. Improved comfort 13. Satisfactory patient adaptation 14. Improved intra and interarch integrity and stability 15. Improved predictability and prognosis of prostheses	1. Temporary pain from necessary clinical examination 2. Transient bleeding 3. Dislodgment of existing restorations 4. Hyperactive gag reflex 5. Increased anxiety levels 6. Aggravation of preexisting or unknown disease conditions 7. Lack of patient understanding or unrealistic expectations 8. Patient-related factors that lead to inaccurate diagnosis, planning, or care

## Parameter Guidelines: (6d) Digital technology parameter—reevaluation and supportive care

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K11 Diseases of the salivary glands  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions	1. Identify the factors that would influence diagnosis, treatment planning, and treatment completion	1. Inability to record necessary data because of physical/psychological limitations
2. Professional referral [99201-99205 CPT-2019]	2. Patient education	2. Refusal of patient referral to additional health care providers
3. Dental evaluation prior to medical treatment [99281-8 CPT-2019]	3. Develop an accurate prognosis for treatment of diagnosed condition(s)	3. Lack of patient understanding or unrealistic expectations
4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]	4. Develop alternative treatment plans	4. Patient noncompliance
5. Patient concerns [99201-99205, 99211–99215 CPT-2019]	5. Address patient concerns	5. Psychosocial factors
6. Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care	6. Improve mastication	6. Physical factors (gag reflex and small mouth opening)
7. Caries [K02.1-K02.9, ICD-10-CM]	7. Improve speech	7. Third-party barriers concerning patient's ability to receive indicated care
8. Attrition [K03.0 ICD-10-CM]	8. Improve esthetics	
9. Erosion [K03.2 ICD-10-CM]	9. Improve swallowing	
10. Abrasion [K03.1 ICD-10-CM]	10. Restoration of facial height	
11. Abfraction	11. TMJ and orofacial muscle support	
12. 12 Fractures/microfractures/cracks [K00.x, S01.80, S02.5, K03.81 ICD-10-CM]	12. Positive psychosocial response	
13. Intra and interarch integrity [K00.x M26.2 ICD-10-CM]	13. Airway support	
14. Tooth mobility	14. Improve comfort	
15. Diastemas	15. Improve tooth form and function	
16. Pathogenic occlusion [M26.4 ICD-10-CM]	16. Tooth stabilization	
17. Failed existing restorations	17. Restore intra and interarch integrity and stability	
18. Correction of congenital abnormalities	18. Improve periodontal health	
19. Lack of mastication		
20. Impaired speech		
21. Impaired swallowing		
22. Lack of TM joint and orofacial muscle support		
23. Psychosocial factors		
24. Airway restriction		
25. Lack of intra and interarch integrity and stability		

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Post-treatment care and reevaluation	1. Reduction and/or elimination of etiology	1. Temporary pain from necessary clinical examination
(a) Intraoral optical scan of teeth, edentulous ridges, and supporting structures	2. Improved mastication	2. Transient bleeding
(b) Extraoral optical scan of diagnostic casts	3. Improved speech	3. Dislodgment of existing restorations
(c) 3D radiography	4. Improved esthetics	4. Hyperactive gag reflex
(d) 3D facial scans	5. Improved swallowing	5. Increased anxiety levels
(e) 3D jaw movement tracking/recording	6. Establishment of therapeutic OVD	6. Aggravation of preexisting or unknown disease conditions
(f) CAM of casts	7. Restored TMJ and orofacial muscle support	7. Lack of patient understanding or unrealistic expectations
(g) Virtual articulation of post-treatment records in maximum intercuspation	8. Improved tooth stability	8. Patient-related factors that lead to inaccurate diagnosis, planning, or care
	9. Address patient concerns	
	10. Positive psychosocial response	
	11. Improved airway support	
	12. Improved comfort	
	13. Satisfactory patient adaptation	
	14. Improved intra and interarch integrity and stability	
	15. Improved predictability and prognosis of prostheses	

### **Selected References (Digital Technology Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information. The original references were included in an American College of Prosthodontists publication, *Defining Digital Dentistry – A Survey of Recent Literature, Version 3* published November 2017.

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## **(7) Risk Assessment and Prognosis Parameter**

### **Preface**

As an important member of the patient's health care team, the prosthodontist has an opportunity to recognize and monitor patient systemic and/or oral health issues. The goal is health promotion and disease prevention. From a systemic disease perspective, goals are to promote preventive measures, monitor the status of diagnosed disease, and ensure that the patient is capable of tolerating prosthodontic care. From an oral health perspective, goals are to provide and recognize the risk related to oral and systemic health, identify preventive measures, monitor or manage disease through care or indicated referral, and determine how patient conditions affect the outcome of prosthodontic care. These concepts are consistent with the comprehensive assessment parameter. Numerous methods are available to assess and detect patient systemic health status. The prosthodontist must determine how the health issue is best managed as the issue relates to treatment planning, treatment, and prognosis. Referral to the appropriate health care colleague may be indicated, and the prosthodontist must lead and collaborate to meet the patient's prosthodontic care goal.

Systemic health status and the impact on care must be assessed. Assessments include but are not limited to the following:

1. Systemic health history
2. Cardiovascular system status
3. Respiratory system status
4. Bleeding disorders and anticoagulative therapy
5. Endocrine system status
6. Central nervous system
7. Current medications compliance
8. Allergies
9. Oral cancer screening
10. Oncologic status and history
11. Family history
12. Social/environmental
13. Other

Oral health status and impact on care prognosis must also be assessed. Issues may be from disease, trauma, neoplastic, or genetic origin. Assessments include but are not limited to the following:

1. Oral health history
2. Caries risk
3. Periodontal disease risk
4. Family history
5. Social/environmental
6. Oral habits
7. Specific oral factors that risk prosthodontic outcomes
8. Other

Within the medical field, prognosis relates to the status of disease and its possibility of progression with or without care. Within prosthodontics, prognosis also relates to an estimate of post-therapy prosthodontic care predictability and/or complications that relate to prostheses and all associated supporting structures. These complications may be biological or biomechanical. Evidence-based systematic reviews from many sources provide predictions for disease risk, complications, and/or failure related to a specified time period. Predicted outcomes for prosthodontic care may be estimated using clinical evidence that reports esthetic, biological, or biomechanical complications. Strength of the identified evidence and its applicability must be recognized as it applies to the individual patient.

Outcomes categories associated with prosthodontic care prognosis may include:

1. Biological
  - (a) Systemic
  - (b) Hard tissue
  - (c) Soft tissue
  
2. Biomechanical
  - (a) Prostheses
  - (b) Supporting structures

In summary, the goals associated with the risk assessment and prognosis parameter relate to identifying patient systemic and oral status, recognizing disease, developing a relevant and patient-individualized prosthodontic care plan, and establishing predicted prognoses based on patient presentation and relevant treatment plans. The emphasis is on health promotion, disease prevention, and prosthodontic rehabilitation for improved patient esthetics, function, and oral health-related quality of life.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

### **Documentation**

Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention. Digital documentation must be maintained according to the guidelines for HIPAA compliance.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve only as practice guidelines. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

Parameter Guidelines: (7) Risk assessment and prognosis

ICD-10-CM

- G47.63 Sleep disorders, sleep-related bruxism
- Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding
- K00 Disorders of tooth development and eruption
- K02 Dental caries
- K03 Other diseases of hard tissues of teeth
- K04 Diseases of pulp and periapical tissues
- K05 Gingivitis and periodontitis
- K06 Other disorders of gingival and edentulous alveolar ridge
- K08 Other diseases and conditions of the teeth and supporting structures
- K11 Diseases of the salivary glands
- K12 Stomatitis and other oral lesions
- K13 Other diseases of lip and oral mucosa
- K14 Diseases of the tongue
- M26 Dentofacial anomalies, including malocclusion
- M27 Diseases of the jaws
- S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions</li> <li>2. Professional referral [99201-99205 CPT-2019]</li> <li>3. Dental evaluation prior to medical treatment [99281-8 CPT-2019]</li> <li>4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]</li> <li>5. Patient concerns [99201-99205, 99211-99215 CPT-2019]</li> <li>6. Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify ongoing disease processes that influence prosthodontic care</li> <li>2. Patient education</li> <li>3. Develop an accurate prognosis for treatment of diagnosed condition(s) with and without care</li> <li>4. Develop alternative treatment plans</li> <li>5. Address patient concerns</li> </ol>	<ol style="list-style-type: none"> <li>1. Inability to record necessary data because of physical/psychological limitations</li> <li>2. Refusal of patient referral to additional health care providers</li> <li>3. Lack of patient understanding or unrealistic expectations</li> <li>4. Patient noncompliance</li> <li>5. Psychosocial factors</li> </ol>

Specialty performance assessment criteria

Standards of care	Favorable outcomes	Known risks and complications
<ol style="list-style-type: none"> <li>1. Complete edentulism (see Complete Edentulism Parameter) [K08.101-K08.109 ICD-10-CM]</li> <li>2. Partial edentulism (see Partial Edentulism Parameter) [K08.401-K08.409 ICD-10-CM]</li> <li>3. Completely Dentate (see Completely Dentate Patient Parameter)</li> <li>4. Patient education</li> <li>5. Informed consent</li> <li>6. Preprosthetic considerations risk assessment/management/risk reduction as pertaining to disease prognosis and future prosthodontic therapy                             <ol style="list-style-type: none"> <li>(a) Caries</li> <li>(b) Periodontal</li> <li>(c) Endodontic</li> <li>(d) TMD</li> <li>(e) Oral cancer screening</li> <li>(f) Other referrals</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Patients tolerate procedures comfortably and safely</li> <li>2. Develop alternative prosthodontic plans, including adjunctive therapies, based on factors that influence care success</li> <li>3. Develop and implement recall and maintenance plans that improve prognosis (see Maintenance and Supportive Care Parameter)</li> </ol>	<ol style="list-style-type: none"> <li>1. Temporary pain from necessary clinical examination</li> <li>2. Transient bleeding</li> <li>3. Dislodgment of existing restorations</li> <li>4. Hyperactive gag reflex</li> <li>5. Increased anxiety levels</li> <li>6. Aggravation of preexisting or unknown disease conditions</li> <li>7. Lack of patient understanding or unrealistic expectations</li> <li>8. Biological complications associated with prosthodontic care</li> <li>9. Biomechanical complications associated with prosthodontic care</li> </ol>

### **Selected References (Risk Assessment and Prognosis Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

Risk may relate to the ability of an individual patient based on their individual health to safely undergo a procedure. Risk may also relate to probability, existence, or progression of existing disease. In prosthodontic context, risk also relates to probability of biologic or mechanical complications based on prognostic factors. The latter context is addressed in other prosthodontic parameters.

In general, relevant references pertain to clinical factors associated with diagnosis, planning, treatment, and supportive care. Clinical assessments must lead to recognition of indications, risks, benefits, and completion of care as described in numerous prosthodontic parameters. References from these parameters may be used to supplement this bibliography.

American Academy of Oral and Maxillofacial Surgery Parameters of Care: Clinical Practice Guidelines for Oral and Maxillofacial Surgery (AAOMS ParCare 2012). Patient Assessment

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## **(8) Diagnoses Affecting Prosthodontic Care Parameter**

### **Preface**

The prosthodontist must have in-depth knowledge of the diagnosis of diseases affecting prosthodontic treatment, including caries risk assessment and intervention. The prosthodontist must have knowledge regarding diagnostic and treatment planning aspects of other recognized dental specialties as they relate to assessment, referral, patient care, and prosthodontic outcomes. This knowledge provides the framework for understanding risk assessment and disease prognosis and thereby supports the clinician's ability to identify the important prognostic factors that could impact prosthesis design, patient care, and the relevant potential specialty-level care outcomes. These knowledge areas provide the necessary background for decision making as an individual clinician and as a leader and a collaborator with a health care team.

The clinician must have knowledge of disease factors associated with the complications relating to prosthodontic care for dentate, partially edentulous, and completely edentulous patients. With two examples, caries and periodontal disease, knowledge of the initial patient presentation, etiology, and physiologic mechanisms are associated with progression of the disease guide, the necessary decisions for disease prevention, recognition, control, and supportive care. In a similar way, the patient's social habits (e.g., smoking) can provide an indicator of disease resistance, healing potential, and long-term prosthodontic care outcomes. When prosthetic design is considered, applying this fundamental knowledge also identifies favorable tooth or implant prosthetic support, determines the required sites for implant support, indicates potential sites for ridge or site development, and promotes a more favorable comprehensive care outcome.

As ongoing maintenance and supportive care occurs, disease processes may redevelop and present again. The prosthodontist recognizes the rationale for disease presentation based on this knowledge, diagnostic information, and patient history. The prosthodontist provides intervention for disease prevention and disease control based on the individual patient's history and need.

This parameter also includes all systemic diseases for which the prosthodontist screen, manage, and/or refer. Assurance that patients can safely tolerate the range of indicated prosthodontic care procedures is ascertained before care initiation.

All examples of complex disease processes about which the prosthodontist must have knowledge, recognize, manage, or refer are too numerous to list in this parameter. The described examples highlight the in-depth knowledge clinicians must have at the prosthodontist specialty level to promote systemic and oral health, provide preventive measures, and resolve patient issues with predictability.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention. Digital documentation must be maintained according to the guidelines for HIPAA compliance.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

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## Parameter Guidelines: (8) Management of diagnoses affecting prosthodontic care

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K11 Diseases of the salivary glands  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated  
 S02.5 Fracture of tooth, traumatic

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classifications System) and other clinical conditions 2. Professional referral [99201-99205 CPT-2019] 3. Dental evaluation prior to medical treatment [99281-8 CPT-2019] 4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019] 5. Patient concerns [99201-99205, 99211-99215 CPT-2019] 6. Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care	1. Identify the factors that would influence diagnosis, treatment planning, and treatment completion based on etiology (a) Disease (b) Trauma (c) Neoplastic (d) Genetic  2. Patient education 3. Develop an accurate prognosis for treatment of diagnosed condition(s) 4. Develop alternative treatment plans 5. Address patient concerns	1. Inability to record necessary data because of physical/psychological limitations 2. Refusal of patient referral to additional health care providers 3. Lack of patient understanding or unrealistic expectations 4. Patient noncompliance 5. Psychosocial factors

## Specialty performance assessment criteria

Standards of care	Favorable outcomes	Known risks and complications
1. Complete edentulism (see Complete Edentulism Parameter) [K08.1x; K08.101-K08.109 ICD-10-CM] 2. Partial edentulism (see Partial Edentulism Parameter) [K08.4x; K08.401-K08.409 ICD-10-CM] 3. Completely dentate (see Completely Dentate Patient Parameter) 4. Patient education 5. Informed consent 6. Preprosthetic preparation (a) Nonsurgical (b) Surgical (c) Endodontic (d) Periodontal (e) Orthodontic (f) TMD (g) Other referral	1. Control active disease 2. Develop plans, including adjunctive therapies that facilitate prosthodontic patient care 3. Develop and implement recall and maintenance plans that improve prognosis	1. Temporary pain from necessary clinical examination 2. Transient bleeding 3. Dislodgment of existing restorations 4. Hyperactive gag reflex 5. Increased anxiety levels 6. Extraction of mobile teeth during diagnostic impression making 7. Aggravation of preexisting or unknown disease conditions 8. Lack of patient understanding or unrealistic expectations

### **Selected References (Diagnoses Affecting Prosthodontic Care)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

Risk may relate to the ability of an individual patient based on their individual health to safely undergo a procedure. Risk is also related to probability, existence, or progression of existing disease. In the prosthodontic context, risk also relates to the probability of biological or mechanical complications. The latter context is addressed in other prosthodontic parameters.

In general, relevant references pertain to clinical factors associated with diagnosis, planning, treatment, and supportive care. Clinical assessments must lead to the recognition of indications, risks, benefits, and completion of care as described in numerous prosthodontic parameters. References from prosthodontic parameters may be used to supplement this bibliography as a predictor of prosthodontic care outcome.

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## **(9) Ridge and Site Preparation Parameter**

### **Preface**

Prosthodontic care involves the careful management of ridge volume and form in preparation for implant placement. The prosthodontist is responsible for the correct positioning of the dental implant. The prosthodontist, through the prosthetic plan, determines esthetic and functional goals, which define required maxillary and/or mandibular prosthesis position, morphology, planned articulation, and occlusal plane. When a comprehensive prosthodontic plan is initiated, these factors determine the required and available prosthetic space, and also indicate the requirements for tooth removal, alveoloplasty, osseous augmentation, or soft tissue augmentation.

The prosthodontist may provide adjunctive care in the form of extractions, ridge preservation, as well as soft tissue or osseous surgeries that support the definitive care plan. The prosthodontist further recognizes the importance of interspecialty collaboration that provides required care outside of the individual prosthodontist's scope of practice. Through both pathways, patients receive care that meets their individual needs.

The prosthodontist identifies the prosthetic tooth position and the establishment of ridge form that optimizes esthetics and function related to tooth-, mucosa-, or implant-supported prostheses. Ridge preparation for the replacement of missing teeth and supporting structures includes preservation and ridge development procedures. Risks associated with this care relate to a patient's potential adverse or undesirable biologic responses to care and healing. These risks may lead to the loss of planned osseous and soft tissue volume and could require additional surgery to obtain the desired support. If the tissue volume is not obtained, implant position and the definitive esthetic and/or function outcome for comprehensive care may be less favorable. The goal is an ideal outcome; however, the prosthodontist and patient must be flexible in the prosthetic plan to account for surgical and healing variability, as well as anatomic limitation.

Ridge preparation may involve the extraction of teeth due to undesirable tooth position, caries, periodontal disease, or other reasons. Autograft or substitutes may be placed into the extraction site with or without a membrane to preserve bone dimension as the facial plate resorbs. Evidence does not indicate a particular method that is most predictable in maintaining ridge form. Variability exists in reported clinical study outcomes.

With the healed edentulous ridge, additional bone volume may be obtained through augmentation procedures using a variety of autograft and/or bone substitute materials either using or not using a membrane. Evidence does not indicate a particular method that is most predictable in obtaining ridge form due to variability in reported clinical study outcomes.

Prosthodontic patient care philosophy establishes that in-depth patient assessment and planning leads to the selected prosthesis design that guides comprehensive care decisions. The prosthodontist is responsible for the placement of the dental implant according to the prescription of the prosthodontist or referring dentist (see Implant Placement Parameter). The prosthodontist is, therefore, also responsible for the augmentation sites required to establish proper prosthetic support. The prosthodontist must have a didactic and clinical knowledge of graft materials and techniques in order to meaningfully communicate their intricacies and capabilities. The prosthodontist must have knowledge about any methods recommended and/or used for patient treatment.

This parameter is divided into two specific areas detailing the guidelines for each segment. The evaluation and treatment of all patients utilize the comprehensive clinical assessment, completely dentate, partial edentulism, and complete edentulism parameters where appropriate. The majority of these patients would be classified as Class IV (most complex) using the PDI.

The ridge preparation subparameters include:

- A. Extraction (with or without ridge preservation)
- B. Ridge augmentation (osseous and/or soft tissue)

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention. Digital documentation must be maintained according to the guidelines for HIPAA compliance.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve only as practice guidelines. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

### **9A) Extraction (with or without ridge preservation)**

Evidence suggests that tooth extraction is followed by resorption of the facial plate of the alveolus. Such resorption leads to a variable but significant loss of facial bone height in the horizontal and vertical dimensions. This resorption compromises ridge contour and bone volume; and can limit the implant placement to a less favorable position.

Following a minimally traumatic tooth extraction technique, osseous grafting at the time of extraction may assist in preserving horizontal and vertical facial bone height. The height and thickness of the facial bone at the time of tooth extraction, which varies within and among patients, can influence the degree of horizontal and vertical ridge preservation that is achieved. Flapped surgical



procedures followed by the use of graft materials and barrier membrane have also been recommended. Additional grafting of the healed edentulous ridge may be necessary to optimize the site for implant placement.

Various regenerative methods have been used for ridge preservation:

1. Bone substitutes
2. Bone substitutes with resorbable or nonresorbable barrier membranes
3. Bone substitutes with soft tissue grafts
4. Resorbable or nonresorbable barrier membranes only

Systematic reviews have assessed the degree of resorption associated with these methods when utilized immediately following extraction. Results indicated that the degree of bone dimensional changes may be reduced, but that bone dimensional changes must be expected. Due to the variability in outcome associated with these procedures, the patient must be informed of the probability of additional ridge augmentation procedures subsequent to healing following extraction.

Implant placement at the time of tooth extraction, with or without bone substitutes, has been used as a method to reduce the degree of bone resorption. Immediate implant placement reportedly has positive esthetic and functional outcomes in carefully selected patients, but immediate implant placement does not counteract alveolar crest resorption. Immediate implant placement with graft and/or barrier membrane and/or soft tissue graft has been used. Immediate implant placement followed by immediate provisionalization is also an option. Careful patient selection, including informed consent, is critical. There is a risk for facial dehiscence when facial plate thickness is <1 mm, or when the implant is <1 mm from the facial plate. This dehiscence compromises that esthetics may increase the risk of peri-inflammation due to the exposed implant microsurface and decreases implant coronal surface area serving to resist occlusal loading.

## Parameter Guidelines: (9A) Extraction (with or without ridge preservation)

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K11 Diseases of the salivary glands  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>Clinical condition(s) requiring prosthodontic care as defined by PDI [ACP Patient Classification System] and other clinical conditions</li> <li>Professional referral [99201-99205 CPT-2019]</li> <li>Dental evaluation prior to medical treatment [99281-8 CPT-2019]</li> <li>Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]</li> <li>Patient concerns [99201-99205, 99211-99215 CPT-2019]</li> <li>Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care</li> </ol>	<ol style="list-style-type: none"> <li>Identify the factors that would influence diagnosis, risk, treatment planning, and treatment completion</li> <li>Develop an accurate prognosis for treatment of diagnosed condition(s)</li> <li>Patient education</li> <li>Develop alternative treatment plans</li> <li>Address patient concerns</li> <li>Prevention of pathology</li> <li>Improved esthetics</li> <li>Optimization of occlusion</li> <li>Optimization of prosthetic rehabilitation</li> <li>Optimization of healing of osseous fractures</li> <li>Maintenance of functional teeth</li> <li>Enhanced orthodontic results</li> <li>Normal eruption pattern of teeth</li> <li>Healthy oral and maxillofacial environment for patient undergoing head and neck radiation therapy</li> <li>Healthy oral and maxillofacial environment for patient undergoing systemic therapy (e.g., chemotherapy, bisphosphonate drugs, organ transplantation, or heart valve replacement)</li> <li>Elimination of hard and/or soft tissue pathology</li> <li>Adequate soft and hard tissue base for prosthetic reconstruction and rehabilitation</li> <li>Optimize bone volume for implant placement</li> </ol>	<ol style="list-style-type: none"> <li>Inability to record necessary data because of physical/psychological limitations</li> <li>Refusal of patient referral to additional health care providers</li> <li>Lack of patient understanding or unrealistic expectations</li> <li>Patient noncompliance</li> <li>Psychosocial factors</li> <li>Clinical factors</li> <li>Anatomic limitations/considerations</li> <li>Presence of associated pathologic disease</li> <li>Presence of acute and/or chronic infection</li> <li>Existing active dental, endodontic, or periodontal diseases</li> <li>Presence of adjacent tooth or teeth</li> <li>Presence of extensive dental caries</li> <li>Presence of large restoration in adjacent teeth</li> <li>Presence of associated jaw fracture</li> <li>Size and density of supporting bone (e.g., maxilla and mandible)</li> <li>History of endodontic therapy</li> <li>Relationship of tooth or teeth to maxillary antrum</li> <li>Approximation of tooth or teeth to inferior alveolar nerve, lingual nerve, mental nerve, maxillary sinus, or other significant structures</li> <li>Root anatomy (e.g., size, shape, number, dilaceration, and divergence)</li> <li>Root-to-crown ratio</li> <li>Accessibility (e.g., compromised by ectopic eruption or positioning of adjacent teeth)</li> <li>Limited access to oral cavity (e.g., trismus and inadequate oral orifice)</li> </ol>

Standards of Care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Completely dentate (see Completely Dentate Patient Parameter)	1. Completely edentulous patient (see Complete Edentulism Parameter)	1. Temporary pain from necessary clinical examination
2. Complete edentulism (see Complete Edentulism Parameter) [K08.1x; K08.101-K08.109 ICD-10-CM]	2. Partially edentulous patient (see Partial Edentulism Parameter)	2. Transient bleeding
3. Partial edentulism (see Partial Edentulism Parameter) [K08.4x; K08.401-K08.409 ICD-10-CM]	3. Therapy-specific goals	3. Dislodgment of existing restorations
4. Pretreatment and treatment planning procedures that ensure standards of care are met for completely edentulous and partially edentulous patients	(a) Bone preservation	4. Hyperactive gag reflex
(a) Radiographic evaluation	(b) Soft tissue preservation	5. Increased anxiety levels
(b) Virtual planning	(c) Guided tissue regeneration	6. Extraction of mobile teeth during diagnostic impression making
(c) Articulated casts when indicated	(d) Prosthetic support and retention	7. Aggravation of preexisting or unknown disease conditions
(d) Diagnostic wax-up	(e) Improved form and function	8. Lack of patient understanding or unrealistic expectations
(e) Surgical template (see surgical standards) [D6190, D6199 CDT-2019]	(f) Improved esthetics	9. Acute and/or chronic infection
5. Conditions requiring preprosthetic preparation	(g) Provision of adequate bone-borne occlusal support stops	10. Loss of hard and/or soft tissues
(a) Nonsurgical [D5850-D5851, D5875, D5899 CDT-2019]	(h) Limited pain	11. Neuropathy
(b) Surgical [D4263-D4276 CDT-2019]	(i) Limited period of disability	12. Loss of graft
6. Develop or maintain anatomic architecture for implant placement	(j) Achievement of uncomplicated healing	13. Bone resorption
(a) Inadequate host bone [K08.20-K08.26 ICD-10-CM]	(k) Appropriate understanding and acceptance of diagnosis, treatment plan, and possible outcomes	14. Injury to adjacent teeth and/or hard and/or soft tissue
(b) Inadequate soft tissue [K06.2-K06.9 ICD-10-CM]	(l) Minimally invasive surgery (no removal of nonregenerable tissues)	15. Damage to adjacent restorations
(c) Prosthetic need [K08.101-K08.109, K08.401-K08.409 ICD-10-CM]		16. Presence of foreign body in surgical site
(d) Maintenance of soft tissue architecture		17. Condition that requires unplanned additional surgery (e.g., incision and drainage, curettage)
(e) Ridge preservation		18. Oroantral and/or nasal fistula formation
(f) Alveoloplasty		19. Maxillary sinus infection
(g) Indicated protocols		20. Displacement of tooth, tooth fragments, or foreign bodies into adjacent anatomical sites (e.g., airway, gastrointestinal tract, maxillary sinus, inferior alveolar canal, and contiguous soft tissues)
i. Aseptic technique		21. Osteonecrosis related to systemic bisphosphonate therapy
ii. Appropriate surgical protocol		22. Persistent or new pathology
iii. Informed consent		23. Acute and/or chronic osteomyelitis
iv. Postoperative instructions		24. Onset or exacerbation of symptom(s) related to the TMJ and surrounding structures

## 9B) Ridge Augmentation

Depending upon the prosthetic care goal, edentulous ridge volume may not be adequate subsequent to tooth extraction and healing. Ridge augmentation procedures are used to predictably obtain horizontal or vertical dimensions of the osseous ridge. In the optimum situation, coronal bone volume resists occlusal forces and also supports soft tissues. These soft tissues provide the peri-implant seal, contribute to esthetics, and may reduce the degree of midfacial recession over time.

The prosthodontist is responsible for determining prosthesis design, necessary prosthetic support, implant position, and augmentation sites based on all relevant clinical information. This may be completed in collaboration with other health care professionals. The goal of these augmentation procedures is to place the implant platform in the best position and angulation for predictability.

Three-dimensional CT images and relevant planning software that integrates the prosthetic design are necessary for meaningful assessment of the required prosthesis position and dimension for esthetics and function.

When platform position is determined, the required augmentation methods are selected to achieve the necessary horizontal and vertical bone volume for the required implant position. Biological and biomechanical considerations are used to reduce the risk of prosthodontic care complications at implant and prosthesis levels. Osseous dimension at the coronal portion of the implant provides implant primary stability during surgery and later also resists occlusal loading. Osseous dimension at the apical portion of the implant is critical for primary stability and may also resist occlusal loading.

Adequate soft tissue thickness and the presence of keratinized tissue positively influence prosthesis contours and peri-implant health. Use of subepithelial connective tissue grafts with edentulous ridges may improve the design and contour of prosthetic pontics. To improve peri-implant mucosa health and esthetics, subepithelial connective tissue graft, or other soft tissue procedures may be useful in transforming the thin soft tissue phenotype to a thick phenotype.

Biological advances in tissue engineering are evolving to understand growth factors, healing factors, cells, and scaffolds to provide a favorable and predictable method for improved healing and ridge augmentation. The prosthodontist must have a didactic and clinical knowledge with regard to advances in materials and techniques in order to meaningfully communicate regarding the intricacies and capabilities of care to the patient and fellow health care colleagues. The prosthodontist must have knowledge of any methods recommended and/or used for patient treatment.

## Parameter Guidelines: (9B) Ridge augmentation (hard or soft tissue)

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K11 Diseases of the salivary glands  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions</li> <li>2. Professional referral [99201-99205 CPT-2019]</li> <li>3. Dental evaluation prior to medical treatment [99281-8 CPT-2019]</li> <li>4. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]</li> <li>5. Patient concerns [99201-99205, 99211–99215 CPT-2019]</li> <li>6. Comprehensive, periodic, or follow-up assessment of outcomes of prosthodontic care and/or adjunctive care</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the factors that would influence diagnosis, risk, treatment planning, and treatment completion               <ol style="list-style-type: none"> <li>(a) Prevention of pathology</li> <li>(b) Improved esthetics</li> <li>(c) Optimization of occlusion</li> <li>(d) Optimization of prosthetic rehabilitation</li> <li>(e) Optimization of healing of osseous fractures</li> <li>(f) Maintenance of functional teeth</li> <li>(g) Enhanced orthodontic results</li> <li>(h) Normal eruption pattern of teeth</li> <li>(i) Healthy oral and maxillofacial environment for patient undergoing head and neck radiation therapy</li> <li>(j) Healthy oral and maxillofacial environment for patient undergoing systemic therapy (e.g., chemotherapy, bisphosphonate drugs, organ transplantation, or heart valve replacement)</li> <li>(k) Elimination of hard and/or soft tissue pathology</li> <li>(l) Optimize implant placement</li> </ol> </li> <li>2. Develop an accurate prognosis for treatment of diagnosed condition(s)</li> <li>3. Patient education</li> <li>4. Develop alternative treatment plans</li> <li>5. Address patient concerns</li> </ol>	<ol style="list-style-type: none"> <li>1. Inability to record necessary data because of physical/psychological limitations</li> <li>2. Refusal of patient referral to additional health care providers</li> <li>3. Lack of patient understanding or unrealistic expectations</li> <li>4. Patient noncompliance</li> <li>5. Psychosocial factors               <ol style="list-style-type: none"> <li>(a) Anatomic limitations</li> <li>(b) Presence of associated pathologic disease</li> <li>(c) Presence of acute and/or chronic infection</li> <li>(d) Existing active dental, endodontic, or periodontal diseases</li> <li>(e) Presence of adjacent tooth or teeth</li> <li>(f) Presence of extensive dental caries</li> <li>(g) Presence of large restoration in adjacent teeth</li> <li>(h) Presence of associated jaw fracture</li> <li>(i) Size and density of supporting bone (e.g., maxilla and mandible)</li> <li>(j) History of endodontic therapy</li> <li>(k) Relationship of tooth or teeth to maxillary antrum</li> <li>(l) Approximation of tooth or teeth to inferior alveolar nerve, lingual nerve, mental nerve, maxillary sinus, or other significant structures</li> <li>(m) Root anatomy (e.g., size, shape, number, dilaceration, and divergence)</li> <li>(n) Root-to-crown ratio</li> <li>(o) Accessibility (e.g., compromised by ectopic eruption or positioning of adjacent teeth)</li> <li>(p) Limited access to oral cavity (e.g., trismus and inadequate oral orifice)</li> </ol> </li> </ol>

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Completely dentate (see Completely Dentate Parameter)	1. Completely edentulous patient (see Complete Edentulism Parameter)	1. Temporary pain from necessary clinical examination
2. Complete edentulism (see Complete Edentulism Parameter) [K08.1x; K08.101-K08.109 ICD-10-CM]	2. Partially edentulous patient (see Partial Edentulism Parameter)	2. Transient bleeding
3. Partial edentulism (see Partial Edentulism Parameter) [K08.4x; K08.401-K08.409 ICD-10-CM]	3. Therapy-specific goals	3. Dislodgment of existing restorations
4. Pretreatment and treatment planning procedures that ensure standards of care are met for completely edentulous and partially edentulous patients	(a) Bone preservation	4. Hyperactive gag reflex
(a) Radiographic evaluation	(b) Soft tissue preservation	5. Increased anxiety levels
(b) Virtual planning	(c) Guided tissue regeneration	6. Extraction of mobile teeth during diagnostic impression making
(c) Articulated casts when indicated	(d) Prosthetic support and retention	7. Aggravation of preexisting or unknown disease conditions
(d) Diagnostic wax-up	(e) Improved form and function	8. Lack of patient understanding or unrealistic expectations
(e) Surgical template (see surgical standards) [D6190, D6199 CDT-2019]	(f) Improved esthetics	9. Acute and/or chronic infection
5. Conditions requiring preprosthetic preparation	(g) Provision of adequate bone-borne occlusal support stops	10. Alveolar osteitis
(a) Nonsurgical [D5850-D5851, D5875, D5899 CDT-2019]	(h) Limited pain	11. Injury to adjacent teeth and/or hard and/or soft tissue
(b) Surgical [D4263-D4276 CDT-2019]	(i) Limited period of disability	12. Damage to adjacent restorations
6. Develop or maintain anatomic architecture for implant placement	(j) Achievement of uncomplicated healing	13. Presence of foreign body in surgical site
(a) Inadequate host bone [K08.20-K08.26 ICD-10-CM]	(k) Appropriate understanding and acceptance of diagnosis, treatment plan, and possible outcomes	14. Presence of portion of tooth intentionally left in alveolus
(b) Inadequate soft tissue [K06.2-K06.9 ICD-10-CM]	(l) Minimally invasive surgery	15. Presence of portion of tooth unintentionally left in alveolus
(c) Prosthetic need [K08.101-K08.109, K08.401-K08.409 ICD-10-CM]	(m) Reduced overloading or movement of remaining teeth	16. Presence of unattached bone fragment intentionally or unintentionally left in surgical site
(d) Maintenance of soft tissue architecture		17. Foreign body in surgical site
(e) Alveolar bone preservation		18. Mandibular and/or maxillary fractures
(f) Alveoplasty		19. Condition that requires unplanned additional surgery (e.g., incision and drainage, curettage)
(g) Guided bone regeneration		20. Oroantral and/or nasal fistula formation
(h) Soft tissue grafts		21. Displacement of tooth, tooth fragments, or foreign bodies into adjacent anatomical sites (e.g., airway, gastrointestinal tract, maxillary sinus, inferior alveolar canal, and contiguous soft tissues)
(i) Sinus augmentation		22. Persistent or new pathology (e.g., recurrent or residual cyst or tumor)
(j) Osseous or soft tissue grafting at time of implant placement		23. Osteonecrosis related to systemic bisphosphonate therapy
(k) Indicated protocols		24. Persistent or new pathology
i. Aseptic technique		25. Acute and/or chronic osteomyelitis
ii. Appropriate surgical protocol		26. Damage to lingual or inferior alveolar nerve
iii. Informed consent		27. Onset or exacerbation of symptom(s) related to the TMJ and surrounding structures
iv. Postoperative instructions		28. Unplanned loss of hard and/or soft tissues
		29. Inability to complete the planned next stage of treatment without additional grafting surgery

### **Selected References (Ridge and Site Preparation Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information.

### **Local and Systemic Risk Considerations**

- American Association of Oral and Maxillofacial Surgery Parameters of Care: Clinical Practice Guidelines for Oral and Maxillofacial Surgery. Dentoalveolar Surgery (AAOMS ParCar 2012)
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## **(10) Implant Placement and Restoration Parameter**

### **Preface**

The specialty of prosthodontics is the specialty responsible for the diagnosis and treatment of complete and partial edentulism. The prosthodontist is responsible for preparing a patient preprosthodontically for subsequent prosthodontic procedures. The prosthodontist not only replaces or repairs teeth, but also prepares the patient to receive artificial teeth and tissue replacements. Prosthodontists are responsible for managing all aspects of the treatment of complete and partial edentulism regardless of the complexity of any adjunctive preprosthodontic procedures required. When a tooth is or teeth are lost, the well-documented sequelae of loss of adjacent alveolar structures and the concomitant decrease in prosthetic function can now be delayed along with an increase in function versus conventional tissue-borne appliances. Dental implant therapy can be used to replace missing teeth and preserve alveolar bone.

A dental implant is a medical device of alloplastic material implanted into the oral tissues to provide retention and support of fixed or removable prostheses. Endosteal implants are the most common type of dental implants in modern oral and craniofacial rehabilitation and are defined as prefabricated or customized medical devices implanted within bone to provide retention and support for a fixed or a removable dental/maxillofacial prosthesis. The placement of a dental implant is part of a prosthodontic treatment plan that addresses the diagnosis of a missing tooth or teeth, and the treatment is the replacement of a tooth, multiple teeth, and/or contiguous structures surrounding the oral and facial region along with many extraoral applications. The diagnosis for the need of a dental implant is a prosthodontic diagnosis that reflects all the usual criteria for tooth and contiguous structure replacement. Only after a prosthodontic need has been established is the surgical diagnosis made to determine if the prosthodontic need can be satisfied. The therapeutic purpose and value of a dental implant is to support and retain teeth and preserve remaining bone.

Thus, dental implant restoration is a prosthodontically driven procedure that requires extensive presurgical consultations and treatment planning. The prosthodontist is responsible for the placement of the dental implant according to the prescription of the prosthodontist or referring dentist. The prosthodontist is responsible for acquiring and/or conveying sufficient diagnostic information to ensure the accurate placement of dental implant(s) to maximize prosthodontic function. This includes osseous and soft tissue presentation, osseous and soft tissue requirements, and the influence of these needs on clinical care logistics, such as ridge preparation, timing of implant placement, timing of provisionalization, and timing of definitive prosthesis insertion. Sufficient presurgical consultations should identify alternative implant sites so that surgical flexibility is maintained to deal with unforeseen anatomic limitations. With the continued rapid advancements in soft tissue and bone augmentation, the placement of implants outside the normal anatomic location to support prosthodontic replacement is less acceptable, unless there has been informed consent by the patient for alternative implant location and angulation. Prosthodontists have the unique educational background and experience in both placement and restoration at the specialty level of education. By planning and creating the restoration, the prosthodontist has the advantage of placing the implant in the most favorable location to fulfill the patient's needs.

Because prosthodontists are the recognized specialists in tooth and contiguous structure replacement, prosthodontists must strive to position the implants in the most advantageous location and angulation for future prosthodontic procedures. The prosthodontist must evaluate the patient to determine the number, type, length, diameter, location, and angulation of the dental implants so that the prosthodontic restoration will remain healthy and functional. The prosthodontist, in cooperation with the patient, must remain flexible in the final prosthodontic reconstruction to account for surgical variability and anatomic limitations. It is the responsibility of the prosthodontist to be familiar with the different types of implants, because each system has its own intricacies and capabilities. The prosthodontist should be knowledgeable about any implant system recommended and/or used in patient treatment.

Prosthodontic restorations supported and/or retained by implants have had the greatest impact on completely edentulous patients. In fact, the McGill Consensus Statement declared the two-implant mandibular overdenture as the first choice for the completely edentulous patient. Resin-metal or zirconia fixed complete dentures are preferred by many. Implants are used in the partially edentulous patient for a variety of applications. Whether it is the conservation of healthy abutment teeth by using single or multiple implant replacements of teeth instead of conventional fixed prosthodontics, or perhaps the reduction in prosthetically influenced alveolar resorption by implant-supported/retained complete dentures, the impact of implant prosthodontics continues to improve the health and comfort of patients. Treatment of only the area of pathology without sacrificing or jeopardizing adjacent healthy tissues is now a reality.

A refractory patient is one who presents with chronic complaints following appropriate therapy. In those instances where patient expectations exceed physical limitations, a mutually satisfactory result may not be possible through the completion of their treatment plan.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient-management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve only as practice guidelines. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

## Parameter Guidelines: (10) Implant Placement and Restoration

## ICD-10-CM

G47.63 Sleep disorders, sleep-related bruxism  
 Z65.9 Problems related to unspecified psychosocial circumstances: Bruxism, tooth grinding  
 K00 Disorders of tooth development and eruption  
 K02 Dental caries  
 K03 Other diseases of hard tissues of teeth  
 K04 Diseases of pulp and periapical tissues  
 K05 Gingivitis and periodontitis  
 K06 Other disorders of gingival and edentulous alveolar ridge  
 K08 Other diseases and conditions of the teeth and supporting structures  
 K11 Diseases of the salivary glands  
 K12 Stomatitis and other oral lesions  
 K13 Other diseases of lip and oral mucosa  
 K14 Diseases of the tongue  
 M26 Dentofacial anomalies, including malocclusion  
 M27 Diseases of the jaws  
 S01.8 Tooth (broken) uncomplicated or complicated

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Complete edentulism (see Complete Edentulism Parameter) [K08.1x; K08.101-K08.109 ICD-10-CM] 2. Partial edentulism (see Partial Edentulism Parameter) [K08.4x; K08.401-K08.409 ICD-10-CM] 3. Professional referral [99201-99205 CPT-2019] 4. Implant-specific indicators (a) Adequate host bone [K08.20-K08.26 ICD-10-CM] (b) Adequate soft tissue [K06.2-K06.9 ICD-10-CM] (c) Prosthetic need [525.40-525.44, 525.50-525.54 ICD-10-CM] (d) Maintenance of soft tissue architecture (e) Alveolar bone preservation (f) Improved function	1. Complete edentulism (see Complete Edentulism Parameter) 2. Partial edentulism (see Partial Edentulism Parameter) 3. Implant-specific goals (a) Bone preservation (b) Soft tissue preservation (c) Prosthetic support and retention (d) Improved form and function (e) Improved esthetics (f) Provision of adequate bone-borne occlusal support stops (g) Limited pain (h) Limited period of disability (i) Achievement of uncomplicated healing (j) Appropriate understanding and acceptance of diagnosis, treatment plan, and possible outcomes (k) Minimally invasive surgery (no removal of non-regenerable tissues)	1. Complete edentulism (see Complete Edentulism Parameter) 2. Partial edentulism (see Partial Edentulism Parameter) 3. Risks associated with the tooth extraction (see Ridge Preparation Parameter) 4. Implant-specific risk factors (a) Bone factors (quantity and quality) (b) Surgical (c) Implant characteristics (d) Anatomical considerations (e) Presence of active periodontal disease (f) Number of implants relative to number of teeth to be replaced (g) Interarch distance (h) Biomechanical loading factors (i) Presence of local or systemic conditions that affect healing (e.g., history of radiation therapy, diabetes, etc.) (j) Peri-implant tissue quality and contour (k) Proximity of implant site to adjacent structures (l) Existing and proposed occlusal factors (m) Tobacco use (n) Current and past pharmacological therapies (o) Timing of implant placement (p) Timing of implant provisionalization and/or definitive restoration (q) Genetic

Standards of care	Specialty Performance Assessment Criteria	
	Favorable outcomes	Known risks and complications
1. Completely edentulous patient [K08.101-K08.104 ICD-10-CM] <ul style="list-style-type: none"> <li>(a) Pretreatment procedures               <ul style="list-style-type: none"> <li>1. Radiographic evaluation (2D and 3D)</li> <li>2. Articulated diagnostic casts, when indicated</li> </ul> </li> <li>(b) Conditions requiring preprosthetic preparation               <ul style="list-style-type: none"> <li>1. Nonsurgical [D5850-D5851, D5875, D5899 CDT-2019]</li> <li>2. Surgical [D4263-D4276 CDT-2019]</li> </ul> </li> <li>(c) Placement procedures [D6010, D6040, D6050 CDT-2019]               <ul style="list-style-type: none"> <li>1. Aseptic technique</li> <li>2. Appropriate surgical protocol</li> <li>3. Preoperative instructions</li> </ul> </li> <li>(d) Removable complete denture [D6053, D6055 CDT-2019]               <ul style="list-style-type: none"> <li>1. Treatment of etiologic factors</li> <li>2. Dual-stage impression technique using a custom impression tray</li> <li>3. Abutment selection [D6056-D6057 CDT-2019]</li> <li>4. Maxillomandibular record in centric relation (CR) at the occlusal vertical dimension (OVD)</li> <li>5. Facebow record and articulation on a semi-adjustable articulator, or virtual articulation</li> <li>6. Maximum intercuspation in CR</li> <li>7. Assessment of implant components and/or framework</li> <li>8. Trial denture evaluation</li> <li>9. Surgical template [D6190, D6199 CDT-2019]</li> <li>10. Clinical remount to finalize planned occlusal scheme</li> <li>11. Insertion of prosthesis</li> <li>12. Post-treatment follow-up</li> <li>13. Patient education</li> </ul> </li> <li>(e) Fixed complete denture (metal-resin hybrid, metal-ceramic, zirconia) [D6056-D6067 CDT-2019]               <ul style="list-style-type: none"> <li>1. Treatment of etiologic factors</li> <li>2. Impression</li> <li>3. Abutment selection</li> <li>4. Maxillomandibular record in CR at the OVD</li> <li>5. Facebow record and articulation on a semi-adjustable articulator</li> <li>6. Maximum intercuspation in CR</li> <li>7. Surgical template [D6190, D6199 CDT-2019]</li> <li>8. Assessment of implant components and/or framework</li> <li>9. Prosthesis try-in and assessment</li> <li>10. Insertion of prosthesis</li> <li>11. Post-treatment follow-up and supportive care</li> <li>12. Patient education</li> </ul> </li> </ul>	1. Completely edentulous patient (see Complete Edentulism Parameter) 2. Partially edentulous patient (see Partial Edentulism Parameter) 3. Implant specific <ul style="list-style-type: none"> <li>(a) Long-term preservation of supporting bone</li> <li>(b) Establish bone-borne support stops</li> <li>(c) Soft tissue preservation</li> <li>(d) Improved prosthetic support and retention</li> <li>(e) Improved form and function</li> <li>(f) Implant(s) capable of supporting a prosthesis for a minimum of 5 years</li> <li>(g) Bone height loss &lt; 0.2 mm annually following the first year of service</li> <li>(h) No evidence of peri-implant radiolucency</li> <li>(i) Ease of maintenance</li> <li>(j) Improved esthetics</li> </ul>	1. Completely edentulous patient (see Complete Edentulism Parameter) 2. Partially edentulous patient (see Partial Edentulism Parameter) 3. Risks and complications associated with tooth extraction and ridge augmentation (see Ridge Preparation Parameter) 4. Implant- specific <ul style="list-style-type: none"> <li>(a) Surgical</li> <li>(b) Anesthesia, paresthesia, hyperesthesia, hypoesthesia</li> <li>(c) Acute and/or chronic infection</li> <li>(d) Unanticipated bony deficiency</li> <li>(e) Dental injury during surgery</li> <li>(f) Injury to adjacent teeth</li> <li>(g) Nasal or sinus fistula</li> <li>(h) Hemorrhage</li> <li>(i) Prolonged period of disability</li> <li>(j) Unanticipated repeat oral surgery</li> <li>(k) Loss of implant prior to restoration</li> <li>(l) Loss of implant after restoration</li> <li>(m) Loss of supporting bone</li> <li>(n) New or increased pain</li> <li>(o) Neuropathy and/or paresthesia</li> <li>(p) Implant placement in an unfavorable prosthodontic location</li> <li>(q) Materials failure</li> <li>(r) Biomechanical implant overload</li> <li>(s) Compromised phonetics</li> <li>(t) Compromised esthetics</li> <li>(u) Peri-implant mucositis</li> <li>(v) Periimplantitis</li> <li>(w) Increased probing depths</li> <li>(x) Reduction and/or loss of use of current prosthesis during entire healing phase</li> <li>(y) Inability of patient to adapt to new implant-supported/retained prosthesis</li> </ul>

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2. Partially edentulous patient [K08-401-K08-404 ICD-10-CM]
- (a) Pretreatment procedures
    1. Radiographic evaluation
    2. Articulated diagnostic casts or virtual articulation
    3. Diagnostic wax-up or virtual design
    4. Surgical template (see surgical standards) [D6190, D6199 CDT-2019]
  - (b) Conditions requiring preprosthetic preparation
    1. Nonsurgical [D5850-D5851, D5875, D5899 CDT-2019]
    2. Surgical [D4263-D4276 CDT-2019]
  - (c) Removable partial denture (implant RPD) [D6054 CDT-2019]
    1. Treatment of etiologic factors
    2. Diagnostic survey and design
    3. Tooth abutment preparation (i.e., intra- and extracoronary restorations, rest preparations, guide planes, intra- and extracoronary attachments, etc.)
    4. Implant abutment selection [D6055-D6067 CDT-2019]
    5. Dual or multi-stage impression technique
    6. Maxillomandibular record in CR
    7. Facebow record and articulation on a semi-adjustable articulator
    8. Implant component try-in
    9. Framework try-in and assessment
    10. Trial placement
    11. Insertion of prosthesis, including clinical remount as indicated
    12. Post-treatment follow-up and supportive care
  - (d) Fixed partial denture [D6056-D6077, D6079 CDT-2019]
    1. Treatment of etiologic factors
    2. Abutment selection [D6056, D6057 CDT-2019]
    3. Complete arch impression
    4. Maxillomandibular record at the established OVD and eccentric records as necessary
    5. Facebow record and articulation on a semi- or fully adjustable articulator, or virtual articulation
    6. Framework try-in and assessment
    7. Insertion of prosthesis
    8. Post-treatment follow-up and supportive care
    9. Patient education
  - (e) Single tooth restoration [D6058-D6067 CDT-2019]
    1. Treatment of etiologic factors
    2. Abutment selection [D6056, D6057 CDT-2019]
    3. Impression
    4. Maxillomandibular record
    5. Try-in and assessment
    6. Insertion of prosthesis
    7. Post-treatment follow-up and supportive care
    8. Patient education
-

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This list of selected references is intended only to acknowledge some of the sources of information drawn on in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

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## **(11) Tooth Preparation and Modification Parameter**

### **Preface**

The preparation and modification of teeth are essential parts of the specialty of prosthodontics. Teeth are the foundation of many prosthodontic therapies; thus, the diagnosis and treatment of individual tooth structure must be accomplished within the scope of the overall prosthodontic therapy. Over the years, there have been many improvements in the technology of restoring teeth from the introduction of high-speed handpieces, which allowed a more efficient method of removing tooth structure, to the current use of digital scans, milling, or printing to fabricate a restoration. From the beginning, restorative dental procedures have been limited far more by the technology available than a lack of ingenuity on the part of dental professionals.

These technological improvements have not decreased the need for skills and knowledge of the fundamentals of tooth preparation and restoration. On the contrary, these improvements require thoughtful application of fundamental knowledge and skill at a new, more critical level. Technology in the hands of a skilled clinician makes it possible to do more work of an even higher quality. But in the hands of one who has not mastered the skills of his or her profession, that technology merely enables one to do tremendous damage.

The design and preparation of a tooth for a restoration are governed by the following principles:

- Preservation of tooth structure
- Retention and resistance form
- Structural durability
- Marginal integrity
- Preservation of the periodontium

At times, it may be necessary to compromise one or more of these principles for the sake of another. With the advent of bonded restorations, many practitioners deviated from following many of these principles and learned the hard way that they still matter and contribute to the long-term success of the restoration.

Tooth preparation is a critical phase of treatment. It must be done with skill and meticulous attention to detail. The critical factors that follow—pulp vitality, periodontal health, esthetics, proper occlusion, and the longevity of the restoration itself—will depend on it.

### **General Criteria and Standards (See Introduction)**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient-management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

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Parameter Guidelines: (11) Tooth preparation and modification parameter

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ICD-10-CM

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*Please refer to the Completely Dentate, Partial Edentulism, or Complete Edentulism Parameters for specific diagnostic and treatment codes and more extended lists of indications, therapeutic goals, factors affecting risk, standards of care, favorable outcomes, and risks and complications.*

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Indications	Therapeutic goals	Risk factors affecting quality of care
1. Loss of tooth structure/integrity (a) Caries (b) Attrition (c) Erosion (d) Abrasion (e) Abfraction (f) Fractures/microfractures/cracks (g) Endodontic therapy	1. Improved mastication 2. Improved speech 3. Improved esthetics 4. Improved swallowing 5. Restoration of facial height 6. TMJ and orofacial muscle support 7. Positive psychosocial response 8. Airway support 9. Improved comfort	1. Dyskinesia 2. Preexisting systemic conditions 3. Hyperactive gag reflex 4. Xerostomia 5. Increased salivation 6. Periodontal disease 7. Endodontic complications 8. Occlusal factors 9. Skeletal factors
2. Intra and interarch integrity (a) Mobility/stabilization (b) Diastema/interproximal contact closures (c) Tooth malposition (d) Loss of occlusal vertical dimension (e) Esthetics (f) Pathogenic occlusion (g) Fixed or removable partial denture and overdenture tooth abutments (h) Failed preexisting restorations (i) Correction of congenital abnormalities (j) Tooth morphology not acceptable for prosthodontic design (k) Patient concerns	10. Improved tooth form and function 11. Restore intra and interarch integrity and stability 12. Maintain or improve periodontal health 13. Improved prosthetic retention, stability, and support	10. Inadequate tooth structure 11. Parafunctional habits 12. Caries susceptibility 13. Psychosocial factors 14. Preexisting tooth position and alignment 15. Patient concerns

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Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Risks and complications
1. Preprosthetic preparation	1. Improved mastication	1. Refractory patient response
(a) Nonsurgical	2. Improved speech	2. Speech alterations
(b) Surgical	3. Improved esthetics	3. Unacceptable esthetics
(c) Endodontic	4. Improved swallowing	4. Unrealistic patient expectations
(d) Periodontal	5. Restoration of facial height	5. Materials failure/incompatibility
(e) Orthodontic	6. Restored TMJ and orofacial muscle support	6. Difficulty chewing and/or swallowing
(f) TMD	7. Positive psychosocial response	7. TMJ and/or orofacial muscle dysfunction
2. Treatment of etiologic factors	8. Improved airway support	8. Alterations in taste perception
3. Intra and extracoronary restorative procedures	9. Improved comfort	9. Allergic response
4. Post-treatment follow-up	10. Satisfactory patient adaptation	10. Endodontic complications
5. Patient education	11. Improved intra and interarch integrity and stability	11. Periodontal complications
	12. Improved tooth form and function	12. Increased caries susceptibility
	13. Improved periodontal health	13. Dentinal sensitivity
	14. Improved prosthetic support or retention	14. Tongue/cheek biting
		15. Pain

### **Selected References (Tooth Preparation and Modification Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information. These references are outlined in an American College of Prosthodontists publication, *Defining Digital Dentistry – A Survey of Recent Literature*, Version 3 published November 2017.

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## **(12) Esthetics Parameter**

### **Preface**

Esthetic dentistry encompasses those procedures designed to enhance and improve form and function in addition to the esthetically harmonious appearance of the maxillofacial region. Esthetic dentistry procedures are performed on both hard and soft tissues to either subjectively or objectively address patient concerns. Although prosthodontists feel that all treatment is to be rendered in an esthetic manner, there are times when treatment is performed solely to enhance and produce esthetic goals. As in all prosthodontic procedures, a thorough history and examination must be completed. Esthetic treatment is predicated upon patient selection, treatment, and patient expectations.

The prosthodontist is responsible for selecting the method and materials necessary to achieve the prosthetic goal. When additional health care providers are involved with the care, the prosthodontist as a leader and a collaborator clearly communicates the prosthetic plan to achieve the necessary osseous and soft tissue augmentations that meets the definitive comprehensive care plan. The determinant of the esthetic outcome depends upon the selected prosthetic support. With tooth-supported prostheses, the prosthodontist determines the appropriate prosthetic dimensions and required soft and hard tissue modifications necessary to achieve the esthetic goal. With implant-supported prostheses, the prosthodontist is responsible for implant placement and the associated hard and soft tissue dimensions to achieve the planned esthetic result. This includes immediate implant placement and/or immediate restoration protocols for partially or completely edentulous patients.

Perceptions of esthetic needs may be highly subjective. Therefore, this parameter suggests that form and appearance may be subjectively or objectively assessed in a qualitative or quantitative manner. The irreversibility of many esthetic procedures requires that the patient be fully aware of future additional and/or alternative treatments if their initial esthetic goals are not met. However, it remains the prosthodontist's responsibility and obligation not to exceed normal physiologic limits of the patient in pursuit of an elective goal. The proper selection of treatment occurs through a comprehensive dialogue between the prosthodontist and the patient in which both subjective and objective evaluations are used to determine appropriateness of treatment and thus enable the assumption of a reasonable risk/benefit ratio.

The elective nature of esthetic procedures requires that the patient be thoroughly educated about possible risks and adverse consequences along with the need for dedicated maintenance procedures. Many approaches are possible in the prosthodontic management of esthetic problems; thus, the prosthodontist should make appropriate referrals to other health care providers for both consultation and treatment when indicated. The purpose of this parameter is to help with the identification of factors affecting risks and standards of care, indications of favorable outcomes, and known risks and complications for the majority of prosthodontic esthetic procedures.

### **General Criteria and Standards**

*Informed Consent:* All elective irreversible esthetic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), the goals of treatment, the known benefits and risks of the procedure(s), the factors that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacement/revisions, and the favorable outcome.

*Documentation:* Parameters of care for the prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology © 2019 American Dental Association. All rights reserved.

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 Parameter Guidelines: (12) Esthetics parameter
 

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 ICD-10-CM
 

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*Please refer to the Completely Dentate, Partial Edentulism, or Complete Edentulism Parameter for specific diagnostic and treatment codes and more extended lists of indications, therapeutic goals, factors affecting risk, standards of care, favorable outcomes, and risks and complications.*

*Please refer to the Ridge and Site Preparation and Implant Placement Parameters for additional specific diagnostic and treatment codes.*

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Indications	Therapeutic goals	Risk factors affecting quality of care
1. Patient concerns	1. Complete edentulism (see Complete Edentulism Parameter)	1. Complete edentulism (see Complete Edentulism Parameter)
2. Unacceptable tooth morphology	2. Partial edentulism (see Partial Edentulism Parameter)	2. Partial edentulism (see Partial Edentulism Parameter)
(a) Tooth wear: attrition, abrasion, abfraction, and erosion	3. Goals associated with the tooth extraction (see Ridge Preparation Parameter)	3. Risks associated with the tooth extraction (see Ridge Preparation Parameter)
(b) Congenital/developmental abnormalities	4. Goals associated with implants (see Implant Placement and Restoration Parameter)	4. Risks associated with implants (see Implant Placement and Restoration Parameter)
(c) Tooth fracture/chipping	5. Address patient concerns	5. Unrealistic patient expectations
(d) Surface texture	6. Improve esthetics	6. Lack of clear communication
3. Unacceptable color	7. Improve tooth form	7. Tooth position and alignment
4. Unesthetic restorations	8. Improve gingival architecture	8. Inadequate tooth structure
5. Diastema/interproximal contacts/closures	9. Positive psychosocial response	9. Root shape/morphology
6. Tooth malposition	10. Improve psychosocial well-being	10. Unacceptable gingival architecture
7. Unacceptable crown height-width ratio	11. Maintain/improve masticatory function	11. Inadequate biologic width
8. Unacceptable gingival architecture	12. Maintain/improve phonetics/speech	12. Edentulous ridge resorption
9. Unacceptable edentulous ridge architecture		13. Periodontal disease
		14. Endodontic complications
		15. Occlusal factors
		16. Skeletal factors
		17. Existing systemic disease
		18. Lip and cheek anatomy
		19. Orofacial muscular complications
		20. Psychosocial factors
		21. Parafunctional habits
		22. Developmental growth in progress
		23. Allergy to biomaterials

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Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Patient education	1. Patient concerns addressed	1. See Complete Edentulism Parameter
2. Medical and dental history review	2. Improved esthetics	2. See Partial Edentulism Parameter
3. Medical consultation when indicated	3. Improved tooth form and position	3. Risks and complications associated with tooth extraction and ridge augmentation (see Ridge Preparation Parameter)
4. Informed consent	4. Improved gingival architecture	4. Risks and complications associated with implant placement and restoration
5. Use of imaging modalities as indicated	5. Positive psychosocial response	5. Unrealistic patient expectations
6. Preprosthetic preparation as indicated: nonsurgical, surgical, endodontic, periodontal, orthodontic, TMJ therapy, plastic surgical, and other referral	6. Satisfactory patient adaptation to current condition	6. Refractory patient response
7. Intra and extracoronal restorative procedures as indicated	7. Maintained/improved masticatory function	7. Phonetic/speech alterations
8. Fixed, removable, and implant prosthodontic procedures as indicated	8. Maintained/improved phonetics/speech	8. Unacceptable esthetics
9. Impression technique or digital scanning technique consistent with patient factors and materials/technology used	9. Healthy supporting structures	9. Materials failure/incompatibility (repair or remake)
10. Articulator selected based on patient/case factors, or virtual articulation	10. Verified patient compliance	10. Functional limitations
11. Occlusal scheme selected appropriate for case		11. TMJ and/or orofacial muscle dysfunction
12. Maintenance of restorations		12. Allergic reaction to biomaterials
13. Post-treatment follow-up care		13. Periodontal complications
		14. Endodontic complications
		15. Irreversible nature of procedures
		16. Unknown longevity of materials
		17. Lack of regular professional maintenance
		18. Increased incidence of retreatment
		19. Increased caries risk
		20. Dentinal sensitivity
		21. Alteration in sensory/motor nerve function
		22. Biomechanically induced complications to supporting structures
		23. Patient noncompliance with oral hygiene
		24. Patient noncompliance with professional maintenance recommendations

### **Selected References (Esthetics Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Literature references of this parameter cover all areas of dentistry and extend to techniques not solely associated with the specialty. Members are encouraged to be conversant with literature for each and every procedure performed. The following reading list covers those areas most often associated with prosthodontics. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, not that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

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### **(13) Biomaterials Selection and Application Parameter**

#### **Preface**

The prosthodontist is responsible for the selection of biomaterials suitable to meet the esthetic, functional, and biological needs of the patient. By specialty definition, prosthodontists diagnose, treatment plan, rehabilitate, and maintain oral function, comfort, appearance, and health of patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitutes.

From a biological perspective, materials support the development and maintenance of tissue contours and ongoing tissue health. The prosthodontist must have didactic and clinical knowledge with regard to biomaterials and techniques in order to meaningfully apply and communicate their intricacies and capabilities to the patient. From a biomechanical perspective, the prosthodontist must predict the load on teeth, implants, prosthetic materials, and supporting tissues to develop treatment plans and to provide care and subsequent supportive and maintenance plans to promote health and minimize complications. From an esthetic perspective, materials must be selected to visually mimic the missing tooth (or teeth) and supporting orofacial structures using qualities, including but not limited to contours, shade, texture, translucency, and biocompatibility.

From a long-term functional perspective, prosthetic material properties must be compatible with the environment to which they are exposed. Properties include but are not limited to wear resistance, corrosion resistance, dimensional stability, low thermal conductivity, biocompatibility, adequate flexural strength, and longevity. Additionally, if the design is multilayered, the materials should be compatible. The prosthodontist must have in-depth knowledge of biomaterial properties and their application, extending to all materials, which support the goal of prosthesis placement and provision of placement care, used in the clinic and laboratory.

### **General Criteria and Standards**

#### **Informed Consent**

All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

#### **Documentation**

Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

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## Parameter Guidelines: (13) Biomaterials selection and application

## ICD-10-CM

Please refer to the Completely Dentate, Partial Edentulism, or Complete Edentulism Parameters for specific diagnostic and treatment codes.

Please refer to the Ridge and Site Development Parameter for specific diagnostic and treatment codes.

Please refer to the appropriate Implant Placement and Restoration Parameter for specific diagnostic and treatment codes.

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Clinical condition(s) requiring prosthodontic care as defined by PDI (ACP Patient Classification System) and other clinical conditions	1. Address patient concerns	1. Unrealistic patient expectations
2. Planned adjunctive care supporting prosthetic rehabilitation and/or implant placement	2. Improve esthetics	2. Lack of clear communication
3. Professional referral [99201-99205 CPT-2019]	3. Positive psychosocial response	3. Existing systemic disease
4. Dental evaluation prior to medical treatment [99281-8 CPT-2019]	4. Improve tooth form	4. Periodontal disease
5. Dental evaluation relating to side effects of medical treatment [99281-8 CPT-2019]	5. Maintain function	5. Endodontic complications
6. Patient concerns [99201-99205, 99211-99215 CPT-2019]	6. Suitable biological response	6. Occlusal factors
	7. Prosthesis predictability	7. Tooth position and alignment
		8. Skeletal factors
		9. Inadequate tooth structure
		10. Soft/hard tissue architecture
		11. Lip and cheek anatomy
		12. Orofacial muscular complications
		13. Psychosocial factors
		14. Parafunctional habits

## Specialty performance assessment criteria

Standards of care	Favorable outcomes	Known risks and complications
1. Patient education	1. Patient concerns addressed	1. Unrealistic patient expectations
2. Informed consent	2. Improved esthetics	2. Refractory patient response
3. Preprosthetic preparation	3. Positive psychosocial response	3. Speech alterations
(a) Nonsurgical	4. Satisfactory patient adaptation	4. Unacceptable esthetics
(b) Surgical	5. Improved tooth form	5. Materials failure/incompatibility
(c) Endodontic	6. Maintained function	6. Functional limitations
(d) Periodontal		7. TMJ and/or orofacial muscle dysfunction
(e) Orthodontic		8. Allergic response
(f) TMD		9. Endodontic complications
(g) Plastic surgical		10. Periodontal complications
(h) Other referral		11. Irreversibility of procedures
4. Intra and extracoronal restorative procedures		12. Unknown longevity of materials
5. Fixed, removable, and implant prosthodontic procedures		13. Lack of regular professional maintenance
6. Post-treatment follow-up and supportive care		14. Increased incidence of retreatment
		15. Increased caries risk
		16. Tooth sensitivity
		17. Inflammation
		18. Infection
		19. Soft tissue hyperplasia

### **Selected References (Biomaterials Selection and Application Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Literature references of this parameter cover all areas of dentistry and extend to techniques not solely associated with the specialty. Members are encouraged to be conversant with literature for each and every procedure performed. The following reading list covers those areas most often associated with prosthodontics. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, not that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.



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## **(14) Temporomandibular Disorders Parameter**

### **Preface**

Treatment of TMD is both challenging and complex. TMD is classified as a craniofacial pain disorder involving the temporomandibular joint (TMJ), masticatory muscles, and other structures.

TMD patients and their symptoms vary a great deal. Most patients complain of pain and/or unusual sounds associated with the TMJs, often when chewing, yawning, or simply opening their mouths. Other signs may include limited opening, or deviation of

the mandible to one side or the other when opening to the maximum or during excursions. Joint noises may or may not accompany these altered patterns of opening.

Patients experiencing pain often indicate that their major areas of discomfort are associated with the masticatory muscles and/or in the preauricular areas. Occasionally, the pain is referred to other areas of the head and neck. Ironically, some patients with signs of TMD may not even be aware of any problems and do not report any pain.

Typically, TMD patients present with muscle and joint symptoms other than the typical pain and joint noises, such as headache, neck pain, earaches, and tinnitus. Some patients will be aware of chronic habits, such as bruxism, clenching, and grinding either during the day or at night; however, many will not be aware of these habits. Instead, they will focus on the outcomes/consequences, such as discomfort or the destruction of tooth structure.

TMD may be acute or chronic. Acute TMD usually has a duration of 3 to 6 months and is often associated with a specific event, such as trauma. Treatment of these acute conditions, if any, tends to be supportive/palliative, designed to relieve muscle pain and inflammation with over-the-counter drugs, such as nonsteroidal anti-inflammatory drugs, warm, moist compresses, soft diet, etc. However, chronic TMD patients report symptoms for 12 months or more and may require more involved treatment with prescription medications, oral devices, and physical therapy.

Chronic TMD patients requiring prosthodontic treatment are a special concern, and the prosthodontist should manage the incongruities of the joint and muscles before initiating treatment. Otherwise, the existing dysfunction of the joints and the muscles may very well affect the prosthodontic outcome of treatment.

If the goals of dissolution of TMD symptoms cannot be resolved by traditional treatment with oral devices, pain and/or anti-inflammatory medications, and physical therapy, the patient may be a candidate for a surgical resolution and should be referred to the appropriate specialist.

### **General Criteria and Standards**

#### **Informed Consent**

All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

#### **Documentation**

Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

Parameter Guidelines: (14) Temporomandibular disorders

ICD-10-CM

- 306.8 Other specified psychophysiological malfunction: bruxism and tooth grinding*
- M26.2 524.2 Anomalies of dental arch relationship*
- M26.3 Unspecified anomalies of tooth position*
- M26.4 Malocclusion*
- M26.5 Dentofacial functional abnormalities*
- M26.6 Temporomandibular joint disorder*
- M26.79 Other specified dentoalveolar anomalies (occlusal plane anomalies)*
- M60.9 Myalgia and myostis, unspecified*
- S03.0 Dislocation of jaw*
- M24.40 Recurrent dislocation, unspecified joint*
- Codes Specifically Related to TMD
- G43009 Migraine*
- M542 Cervicalgia*
- H92.09 Otagia*
- S03.00XA Dislocation of disk (due to accident) closed*
- R51 Headache*
- M12.58 Traumatic Arthropathy, TMJ*
- M24.9 Articular Disk Displacement*
- M46.40 Retrodiskitis*
- M79.11 Myalgia of Mastication Muscles*
- M19.90 Degenerative Joint Disease*
- M26.631 Articular Disk Disorder/TMJ Joint*
- H93.A9 Pulsatile Tinnitus, Unspecified*
- F59 Bruxism*
- K03.9 Trauma to Teeth*
- K08.419 Tooth Loss due to Accident*
- M65.9 Synovitis and Tenosynovitis*
- Q89.8 Artesia of Condyles*
- M62.40 Muscle Spasm*
- R42 Dizziness/Vertigo*
- M79.7 Fibromyalgia*
- M26.631 Articular Disk Disorder/Right TMJ Joint*
- M26.632 Articular Disk Disorder/Left TMJ Joint*
- M26.633 Articular Disk Disorder/TMJ Joint, Bilateral*
- M26.639 Articular Disk Disorder/TMJ Joint, Unspecified Side*

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Orofacial pain	1. Reduction/management of pain	1. Recalcitrant/uncontrollable acute pain
2. TMJ pain	2. Improved function range of motion	2. Pain unresponsive to treatment
3. Myofacial pain	3. Provide intra and interarch stability and support	3. Ongoing, limited, or decreasing function
4. Diminished function	4. Provide TMJ and orofacial support	4. Instability of stomatognathic system
5. Limitation in range of motion	5. Address patient concerns	(a) TMJ
6. Inability to masticate	6. Patient education	(b) Neuromuscular system
7. Change in skeletal and/or dental relationships		(c) Dentition
8. Traumatic injuries		(d) Maxillomandibular relation
9. Stress, mental and physical		(e) Heightened occlusal awareness
10. Perceived hearing loss		5. Preexisting systemic conditions
11. Patient concerns		6. Patient noncompliance with prescribed treatment
		7. Chronic pain behavior
		8. Psychosocial considerations
		9. Esthetic considerations
		10. Periodontal considerations
		11. Parafunctional habits
		12. Previous treatment
		13. Swallowing habits
		14. Tongue position

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Comprehensive clinical prosthodontic assessment [D0150, D0160, D0470, D0999 CDT-2019]	1. Reduction/management of pain	1. Persistent or increased pain
2. Acute TMD [D0140, D7820, D7830, D7880, D7899, D7630, D9610 CDT 2019]	2. Improved function	2. Decreased stomatognathic function
3. Evaluation of previous treatment [D0170 CDT 2019]	3. Improved intra and interarch stability and support	3. Unanticipated motor or sensory nerve abnormality
4. Appropriate diagnostic imaging [D0321, D0322, D0330, D0340, D0350 CDT 2019]	4. Improved TMJ and orofacial muscle support	4. Prolonged period of disability
5. Appropriate consultations/referrals	5. Acceptable patient compliance	5. Psychological sequelae
6. Monitoring of adjunctive therapy [D0170 CDT 2019]		6. Recurrence of symptoms
7. Occlusal therapy, which may include: [(D2710-D2799, D7780, D8210, D8220, D9920, D9930, D9940, D9950-D9952, D9999 CDT 2019)]		7. Postural limitations
(a) Orthotic devices		8. Need for continued orthotic therapy
(b) Occlusal equilibration		9. Unfulfilled patient expectations
(c) Provisional restorations		
(d) Definitive restorations		
8. Maintenance [D0170 CDT 2019]		
9. Patient education		
10. Informed consent		
11. Pharmacological therapy [D9610, D9630 CDT 2019]		
12. Physical therapy [97014, 97032, 97001, 97002, 97110, 97014, 97504, 97010, 97039, 97112, 97520 CPT 2005]		
13. Post-treatment follow-up care		

### **Selected References (Temporomandibular Disorders Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

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## **(15) Upper Airway Sleep Disorders Parameter**

### **Preface**

The treatment of UASDs (severe snoring—upper airway resistance syndrome [UARS] and obstructive sleep apnea [OSA]) falls into categories depending on the severity of the disorder: oral devices, constant positive airway pressure (CPAP) or bilevel positive airway pressure (BPAP or BiPAP), and surgery. The prosthodontist is qualified to design and fabricate various types of oral devices and use them in the treatment and management of minor versions of these disorders or if the patient cannot tolerate the CPAP or BPAP. These devices mechanically reposition the anatomy to maintain airway patency by holding the tongue or mandible in a forward position or stabilizing the soft palate. Because these disorders can be serious health risks, they must be diagnosed, documented, and evaluated by a board-certified sleep specialist physician, and their progress must be monitored. This teamwork approach is mandatory. These disorders affect 50 to 100 million people, and secondarily affect their bed partners. The only treatment that a dental professional (outside of oral surgeons) can participate in is in the fabrication of an oral device. This parameter will only address the fabrication and monitoring of an oral appliance for a patient who exhibits UASD.

### **General Criteria and Standards**

#### **Informed Consent**

All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

#### **Documentation**

Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.



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Parameter Guidelines: (15) Upper airway sleep disorders

ICD-10-CM

G47.9 Sleep disturbances, unspecified

G47.33 Obstructive Sleep Apnea

G47.31 Central Sleep Apnea

G47.37 Complex Sleep Apnea

G47.39 Mixed Sleep Apnea

G47.30 Unspecified Sleep Apnea

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>Severe snoring (UARS) without hypoxia or apnea</li> <li>Class 1 UASDs</li> <li>Airway restriction during sleep</li> <li>Psychosocial factors</li> <li>Anatomical abnormalities (obesity, tumors, and polyps)</li> </ol>	<ol style="list-style-type: none"> <li>Improve sleep quality and quantity</li> <li>Maintain airway patency during sleep</li> <li>Positive psychosocial response</li> <li>Reduction/management of UARS and OSA</li> </ol>	<ol style="list-style-type: none"> <li>Restricted opening</li> <li>Instability of the stomatognathic system                             <ol style="list-style-type: none"> <li>Temporomandibular joint</li> <li>Neuromuscular</li> <li>Dentition</li> </ol> </li> <li>Periodontal disease</li> <li>Preexisting systemic diseases</li> <li>Patient noncompliance with prescribed treatment</li> <li>Parafunctional habits</li> <li>Psychosocial factors</li> <li>Inadequate supporting structures                             <ol style="list-style-type: none"> <li>Tooth form</li> <li>Number of teeth</li> <li>Residual ridge</li> </ol> </li> <li>Hyperactive gag reflex</li> <li>Skeletal factors</li> <li>Anatomical abnormalities (polyps, tumors, and hypertrophy)</li> </ol>

Standard of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
<ol style="list-style-type: none"> <li>Unspecified adjunctive procedure by report [D9999 CDT 2005]</li> <li>Coordination with sleep physician: physician prescription (must be prescribed by physician since this is a medical problem being treated appropriately by a dentist)</li> <li>Comprehensive clinical assessment</li> <li>Trial procedures                             <ol style="list-style-type: none"> <li>Trial devices</li> <li>Adjustment procedures</li> </ol> </li> <li>Tongue-retaining devices</li> <li>Mandibular advancement devices</li> <li>Soft palate lifting devices</li> <li>Oral orthotic device [CPT E1399]</li> <li>Patient education</li> <li>Post-treatment follow-up care</li> </ol>	<ol style="list-style-type: none"> <li>Improved sleep quality and quantity</li> <li>Reduction in daytime sleepiness</li> <li>Acceptable patient compliance</li> <li>Positive psychosocial response</li> <li>Improved airway support during sleep</li> </ol>	<ol style="list-style-type: none"> <li>Ineffectiveness of treatment</li> <li>TMD—joint or muscle dysfunction</li> <li>Tooth pain or mobility</li> <li>Increased salivation</li> <li>Noncompliance</li> <li>Material failure</li> <li>Allergic response</li> <li>Alterations in arch-to-arch relation</li> <li>Soft tissue irritability</li> </ol>

### **Selected References (Upper Airway Sleep Disorders Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

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## (16) Maxillofacial Prosthetics Parameter

### Preface

Maxillofacial prosthetics typically involves the prosthodontic treatment of acquired defects, congenital defects, and developmental defects. Many maxillofacial prosthetic procedures follow surgical resections requiring the replacement of anatomical structures with prostheses. Whereas maxillofacial prosthetic instruction is inherent in the training of educationally qualified prosthodontists, it is important to note that certain prosthodontists have taken additional formalized and accredited education and training in the field of maxillofacial prosthetics. Often, the special skills acquired by these prosthodontists are required to achieve optimum patient care. Treatment of these patients requires substantial adjunctive therapy using a multidisciplinary approach and interaction with the medical community. Advances of the technology in the diagnosis, risk assessment and prognosis, planning, care, and supportive care are incorporated within the maxillofacial prosthodontist's multidisciplinary responsibility. The reading lists do not encompass all of this complexity. Interested parties are encouraged to cross-reference literature cited in this document as well as other sources.

This parameter is divided into specific areas detailing the guidelines for each segment. The evaluation and treatment of intraoral defects (Parameters A to F) utilize the Comprehensive Clinical Assessment, the Completely Dentate, the Partial Edentulism, and the Complete Edentulism Parameters where appropriate. The majority of maxillofacial prosthetic patients will be classified Class IV using the PDI (Prosthodontic Diagnostic Index) Classification system. Treatment of these patients requires experience at or beyond the competence level in maxillofacial prosthetics.

These subparameters cover:

- A. Maxillary defect
  - (a) Acquired
  - (b) Congenital or developmental
- B. Mandibular defect
  - (a) Acquired
  - (b) Congenital or developmental
- C. Palatopharyngeal incompetence and insufficiency
- D. Soft palate defect
  - (a) Acquired
  - (b) Congenital or developmental
- E. Composite resection defect

- F. Traumatic injury
- G. Auricular defect
  - (a) Acquired
  - (b) Congenital or *developmental*
- H. Orbital defects—evisceration, enucleation, and exenteration
- I. Nasal defect—acquired
- J. Pre and postradiation therapy care
- K. Pre and postchemotherapy care
- L. Implant retained extraoral prosthesis

### **General Criteria and Standards**

#### Informed Consent

All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

#### Documentation

Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

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## Parameter Guidelines: (16) Maxillofacial prosthetics—16A: maxillary defect

	ICD-10
1. Acquired	ICD-10 Codes—Acquired
2. Congenital and developmental	<i>B42-B48 Mycoses</i>
The maxilla functions as a partition between the nasal and oral cavities. Surgical resection of tumors, the tumors themselves, or other treatment may cause communication between these two cavities. Various types of obturator prostheses can function to re-establish this partition. The educationally qualified prosthodontist is best trained to evaluate the patient for prosthetic restoration of the defect (potential or actual). Secondary surgical reconstruction procedures after primary tumor ablation can improve postsurgical anatomy and enhance prosthesis stability and success. A prosthesis can often restore the patient to normal function. Areas of consideration and reference include but are not limited to: Obturator Prosthesis, Interim [D5936 CDT-2019, 21079 CPT 2019] Obturator Prosthesis, Definitive [D5932 CDT-2019, 21080 CPT 2019] Obturator Prosthesis, Surgical [D5931 CDT-2019, 21076 CPT 2019] Maxillary Resection, Reconstruction	<i>C00.1-C00.9 Malignant neoplasm of lip</i> <i>C05.x Malignant neoplasm of hard palate</i> <i>C30.0, C30.1 Malignant neoplasm of nasal cavity, middle ear</i> <i>C31.0-C31.9 Malignant neoplasm of sinus</i> <i>C41.0 Malignant neoplasms, bone and articular cartilage</i> <i>C49.0 Malignant neoplasm, other connective and soft tissues</i> <i>D10 Benign neoplasm of mouth and pharynx</i> <i>Q85.00-Q85.02 Neurofibromatosis</i> <i>D43.3 Neoplasm of uncertain behavior of cranial nerves</i> <i>M31.2 Lethal midline granuloma</i> <i>M31.3 Wegeners granulomatosis</i> <i>M27.0-M27.9 Diseases of the jaw</i> <i>Q18 Other congenital malformations of face and neck</i> <i>R49.8 Other voice and resonance disorders</i> <i>R13.1 Dysphagia</i> <i>S02.4xx Fracture of maxilla</i>
ProsthesisMaxillofacial Stabilizing Prosthesis [21089 CPT 2019] Palatal Lift Prosthesis [D5955 CDT-2019, 21083 CPT 2019] Resection Prosthesis Speech Aid, Modification [21084 CPT 2019] Speech Aid, Pediatric [D5953 CDT-2019, 21084 CPT 2019] Speech Aid, Adult [D5952 CDT-2019, 21084 CPT 2019] \Surgical splint [D5988 CDT-2019, 21085 CPT 2019] Surgical stent [D5982 CDT-2019] Trismus Device [D5937 CDT-2019]	ICD-10 Codes—Congenital Developmental <i>G60.0 Hereditary motor and sensory neuropathy 356.0</i> <i>G60.9 Hereditary and idiopathic neuropathy, unspecified 356.9</i> <i>G61.xx Inflammatory neuropathies</i> <i>G70.00, G70.01 Myasthenia gravis</i> <i>G780.9 Myoneural disorders, unspecified</i> <i>G71.2 Congenital myopathies</i> <i>G71.0 Muscular dystrophy</i> <i>G71.1 Myotonic disorders</i> <i>Q18.xx Congenital malformation of face and neck</i> <i>Q35.xx Cleft palate</i> <i>Q36.xx Cleft lip</i> <i>Q37.xx Cleft palate and lip</i> <i>Q38.xx Other congenital malformation of tongue, mouth, and pharynx</i> <i>R49.8 Other voice and resonance disorders</i>

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Altered and unintelligible speech</li> <li>2. Loss of/or difficulty with mastication</li> <li>3. Loss of/or difficulty with deglutition</li> <li>4. Oronasal or oroantral</li> <li>5. Airway management</li> <li>6. Loss of dental-alveolar and associated structures</li> <li>7. Loss of patient's self-esteem and quality of life</li> <li>8. Loss of moisture by excessive air leakage</li> <li>9. Management of nasal and oral secretions</li> </ol>	<ol style="list-style-type: none"> <li>1. Intelligible speech</li> <li>2. Improved mastication</li> <li>3. Improved deglutition</li> <li>4. Separation of oro-nasal-pharyngeal regions</li> <li>5. Improved health of oral and nasal structures</li> <li>6. Modify and/or substitute for dento-alveolar structures</li> <li>7. Improved patient's self-esteem and quality of life</li> <li>8. Improved postsurgical facial form</li> <li>9. Improved lip support</li> </ol>	<ol style="list-style-type: none"> <li>1. Presence of disease</li> <li>2. Size and location of defect and presence or lack of structure within the defect</li> <li>3. Inadequate remaining supporting structures—inadequate alveolus or tooth form/numbers, strategic position (or lack) of teeth, presence of exposed bone, exostoses, and conchae</li> <li>4. Radiation therapy-xerostomia, altered hard and soft tissues</li> <li>5. Chemotherapy</li> <li>6. Limitation of opening—scar contracture or trismus</li> <li>7. Compromised or missing opposing dentition</li> <li>8. Hyperactive gag reflex</li> <li>9. Psychosocial factors</li> <li>10. Caries susceptibility</li> <li>11. Occlusal factors, to include altered mandibular envelope of motion, and/or altered and restricted mandibular movement</li> <li>12. Preexisting systemic conditions</li> <li>13. Parafunctional habits</li> <li>14. Skeletal factors</li> <li>15. Neurological alterations to include changes in sensory input and neuromuscular function</li> <li>16. Periodontal/endodontic complications</li> <li>17. Saliva and salivary gland alterations</li> </ol>

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Comprehensive clinical assessment	1. Improved speech	1. Recurrence or progression of the disease
2. Preprosthetic preparation	2. Improved mastication	2. Difficulties with speech, mastication, and deglutition
(a) Appropriate review of medical history	3. Improved deglutition	3. Unstable/unretained prosthesis
(b) Appropriate consultation with physician/surgeon	4. Improved esthetics	4. Tissue changes requiring modification/refabrication of prosthesis
(c) Appropriate oral surgical evaluation	5. Improved self-image	5. Degradation of supporting dental or loss of anatomical structures
(d) Appropriate endodontic evaluation	6. Restoration of facial height and support	6. Fluid egress around obturator
(e) Appropriate periodontic evaluation	7. Airway support	7. Unrealistic expectations
(f) Appropriate dental specialty review	8. Improved control of saliva and mucus	8. Lack of patient compliance or understanding
(g) Implant evaluation	Support to TM joint and orofacial muscles	9. Ulcerations
3. Placement of obturator prostheses	9. Satisfactory patient adaptation	10. Alterations in taste perception
(a) Surgical obturator		11. Endodontic/periodontal complications
(b) Interim obturator		12. Material failure/incompatibility
(c) Definitive obturator		13. Continued negative self-image
4. Adjunctive dental care to support or retain prosthesis		14. Nasal regurgitation
5. Surgical revision or reconstruction with vascularized tissue		15. Compromise of facial support
(a) Surgical design and simulation with osseous flap and dental implants		16. Loss of integration of implants secondary to adjunctive radiation therapy
6. Preprosthetic preparation		17. Sudden onset of trismus
(a) Nonsurgical		18. Eustachian tube dysfunction
(b) Surgical		
(c) Endodontic		
(d) Periodontal		
(e) Orthodontic		
7. Direct or perform intracoronal and extracoronal restorative procedures		
8. Education in proper defect hygiene and prosthesis maintenance		
9. Post-treatment follow-up, annually in coordination with surveillance		

## Parameter Guidelines: (16) Maxillofacial prosthetics—16B: Mandibular defect

Comments	ICD-10
1. Acquired	<i>ICD-10 Codes—Acquired</i>
2. Congenital and developmental	<i>C00.1-C00.9 Malignant neoplasm of lip</i>
Resection or loss of a portion of the mandible can result in a variety of functional deficits that are dependent on the extent of the defect (surgery, radiation, and trauma), the concomitant therapy, and the timing of rehabilitative efforts. The educationally qualified prosthodontist is best trained to evaluate the defect and coordinate and manage the design and fabrication of prostheses to compensate for the resulting functional loss. Prostheses may be fabricated for either a maxillary, mandibular, or combination defect. Secondary surgical reconstruction procedures to include osseointegration reconstruction after tumor removal can improve postsurgical anatomy and thus enhance prosthesis stability and success. The prostheses can guide mandibular movement and assist in restoring the functions of mastication, deglutition, and speech, as well as restoring more normal facial form. Areas of consideration and reference include but are not limited to: Mandibular Reconstruction Prosthesis [21081 CPT 2019] Mandibular Resection Prosthesis (w/guide) [D5934 CDT-2019, 21081 CPT 2019] Mandibular Resection Prosthesis (w/o guide) [D5935 CDT-2019, 21081 CPT 2019] Maxillofacial Stabilizing Prosthesis [21089 CPT 2019] Palatal Augmentation Prosthesis [D5954 CDT-2019, 21082 CPT 2019] Surgical Splint	<i>C03.x Malignant neoplasm of upper gum</i> <i>C30.0, C30.1 Malignant neoplasm of nasal cavity, middle ear</i> <i>C31.0-C31.9 Malignant neoplasm of sinus</i> <i>C41.1 Malignant neoplasm of mandible</i> <i>C76.0 Malignant neoplasm of head, face, and neck</i> <i>D10.0 Benign neoplasm of lip</i> <i>D10.9 Benign neoplasm of pharynx, unspecified</i> <i>Q85.00-Q85.02 Neurofibromatosis</i> <i>D43.3 Neoplasm of uncertain behavior of cranial nerves</i> <i>M31.2 Lethal midline granuloma</i> <i>M31.3 Wegeners granulomatosis</i> <i>M27.0-M27.9 Diseases of the jaw</i> <i>Q18 Other congenital malformations of face and neck</i> <i>R49.8 Other voice and resonance disorders</i> <i>R13.1 Dysphagia</i> <i>S02.6xx Fracture of mandible</i>
	<i>ICD-10 Codes—Congenital Developmental</i>
	<i>K00.4 Disturbances in tooth formation</i>
	<i>K00.5 Hereditary disturbances in tooth structure, not elsewhere classified</i>
	<i>K00.6 Disturbances in tooth eruption</i>
	<i>Q74.0 Other congenital malformation of upper limb(s), including shoulder girdle</i>
	<i>Q75.xx Other congenital malformations of skull and face bones</i>

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Loss of all or part of mandible (lack of mandibular continuity)	1. Guide mandibular movement	1. Sequelae from surgery
2. Deviation of mandible due to lack of surgical reconstruction	2. Retrain use of remaining neuromuscular complex	2. Concomitant therapies (i.e., radiation and chemotherapy)
3. Neuromuscular or neural malfunction of primary or secondary cause	3. Improve deglutition	3. Deviation of the mandible or altered/restricted mandibular movements
4. Loss of function from 1, 2, or 3; that is, difficulty with deglutition and/or fluid control, speech, appearance, and mastication	4. Improve mastication	4. Presence/absence of physical therapy postsurgery
5. Poor self-esteem and quality of life	5. Improve speech	5. Extent of scarring
6. Psychosocial factors	6. Substitute for dento-alveolar anatomy	6. Loss of muscular function
7. Professional referral	7. Improve facial support/cosmetics	7. Loss of sensory function of tongue and lip
8. Occlusal instability	8. Improve lip support	8. Loss of surrounding tissues, tongue, lips, and buccal mucosa (loss of tongue and lip competency)
	9. Improve salivary control	9. Presence/absence of neck dissection
		10. Presence/absence of teeth
		11. Edentulism
		(a) Same arch
		(b) Opposing arch
		12. Periodontal disease
		13. Endodontic complications
		14. Psychosocial factors
		15. Poor residual bone quality
		16. Caries
		17. Benign or malignant neoplastic disease
		18. Need for adjuvant therapy with radiation



Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Comprehensive clinical assessment	1. Improved mandibular movement	1. Progression or recurrence of the disease
2. Preprosthetic preparation	2. Improved occlusion	2. Continued difficulty with mastication, speech, and deglutition
(a) Appropriate review of medical history	3. Improved mastication	3. Unstable prosthesis
(b) Appropriate consultation with physician/surgeon	4. Improved deglutition	4. Lack of patient compliance or understanding
(c) Appropriate surgical evaluation	5. Improved speech	5. Tissue changes requiring modifications or remaking of prosthesis
(d) Appropriate endodontic evaluation	6. Improved quality of life	6. Degradation of teeth and supporting tissues
(e) Appropriate periodontic evaluation	7. Improved facial support	7. Progression of the patient's disease
(f) Implant evaluation	8. Positive psychosocial response	8. Material failure/incompatibility
(g) Evaluation for simultaneous surgical revision or reconstruction	9. Satisfactory patient adaptation	9. Allergic response
(h) Vascularized graft evaluation	10. Airway support	10. Soft-tissue irritation
(i) Feasibility of concomitant prosthetic reconstruction	11. Improved control of fluids	11. Airway compromise
3. Surgical design and simulation		12. Tissue breakdown/bone exposure
4. Adjunctive care to support or retain prostheses		13. Loss of integration of implants
5. Prosthesis placement		14. Fracture/exposure of hardware
6. Maintenance/alteration of prostheses		15. Unrealistic patient expectations
7. Patient education		16. Prosthesis failure due to fracture or servicing needs
8. Post-treatment care		

## Parameter Guidelines: (16) Maxillofacial prosthetics—16C: Palatopharyngeal incompetence or insufficiency

## Comments

## ICD-10

Palatopharyngeal insufficiency refers to the condition that results when the soft palate is of insufficient length (as seen in congenital or acquired deformities) to achieve palatopharyngeal closure during the dynamic activities of speech, phonation, and deglutition. Palatopharyngeal incompetence refers to the condition that results when the soft palate is of sufficient length but has compromised neuromuscular control, thus making palatopharyngeal closure impossible. The treatment of these disorders falls into two categories. This includes surgery and oral/dental prosthetic devices. The educationally qualified prosthodontist is most trained to design and fabricate prostheses to treat and manage these disorders. These prostheses mechanically alter the anatomy of the palatopharyngeal mechanism, minimizing the loss of air and fluids resulting in improved speech and deglutition. These can be either a speech-aid prosthesis in the case of insufficiency, a palatal lift prosthesis for incompetence, or a combination of these two prostheses.

Areas of consideration and reference include but are not limited to:

Maxillofacial Stabilizing Prosthesis

Palatal Augmentation Prosthesis

Palatal Lift Prosthesis, Modification

Palatal Lift Prosthesis, Definitive

Palatal Lift Prosthesis, Interim

Speech Aid, Adult

Speech Aid, Modification

Speech Aid, Pediatric

*C06.x Malignant neoplasm of other and unspecified parts of mouth*  
*C10.x Malignant neoplasm of oropharynx*  
*C11.x Malignant neoplasm of nasopharynx*  
*Q85.00-Q85.02 Neurofibromatosis*  
*H47.9 Unspecified disorder of visual pathways*  
*I63.50 Cerebral infarction due to unspecified occlusion*  
*M27.0-M27.9 Diseases of the jaw*  
*Q18 Other congenital malformations of face and neck*  
*Q18.xx Congenital malformation of face and neck*  
*Q35.xx Cleft palate*  
*Q36.xx Cleft lip*  
*Q37.xx Cleft palate and lip*  
*Q38.xx Other congenital malformation of tongue, mouth, and pharynx*  
*R49.8 Other voice and resonance disorders*

## Indications

## Therapeutic goals

## Risk factors affecting quality of care

1. Unintelligible or socially unacceptable speech	1. Speech improvement	1. Neuromuscular disease
2. Loss of deglutition (regurgitation of food and/or fluid into nasal cavities and sinuses)	2. Improved deglutition	2. Long-term prognosis
3. Exposure of nasopharyngeal space (palatopharyngeal insufficiency)	3. Positive psychosocial response	3. Size and location of palatopharyngeal deformity
4. Poor patient self-esteem and quality of life	4. Improvement in patient self-esteem and quality of life	4. Inadequate supporting structure—poor arch form and/or inadequate tooth numbers or form to include strategic position of teeth in the dental arch
5. Psychosocial factors	5. Replace dento-alveolar anatomy	5. Edentulism (maxillary arch)
6. Professional referral	6. Improved occlusion	6. Discordant maxillo-mandibular relations and occlusion
	7. Improved mastication	7. Hyperactive gag reflex
	8. Stimulation of soft palatal tissues for improved motion	8. Periodontal disease
		9. Endodontic complications
		10. Parafunctional habits
		11. Psychosocial factors
		12. Latent radiation effects on soft tissue tolerance
		13. Partially mobile soft palate

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Comprehensive clinical assessment	1. Improved speech	1. No improvement in speech
2. Preprosthetic preparation	2. Improved mastication	2. No improvement in deglutition
(a) Appropriate review of medical history	3. Improved deglutition	3. Unstable prosthesis
(b) Appropriate consultation with attending physician/surgeon/therapist	4. Improved self-esteem and quality of life	4. Hyponasal speech
(c) Appropriate nonsurgical evaluation	5. Positive psychosocial response	5. Airway compromise
(d) Appropriate surgical evaluation	6. Satisfactory patient adaptation	6. Unrealistic patient expectations
(e) Appropriate endodontic evaluation		7. Lack of patient compliance or understanding
(f) Appropriate periodontal evaluation		8. Tissue changes requiring modifications or remaking of prosthesis
(g) Implant placement evaluation		9. Degradation of teeth and supporting structures
3. Adjunctive dental care to support or retain prosthesis		10. Progression of the patient's disease
4. Placement of prosthesis:		11. Material failure/incompatibility
(a) Palatopharyngeal speech aid		12. Allergic response
i. Diagnostic (pediatric and adult)		13. Soft-tissue irritation
ii. Definitive (pediatric and adult)		14. Gagging
(b) Palatal lift		15. Aspiration
(c) Palatal augmentation prosthesis		16. Obligatory mouth breathing
5. Surgical revision and/or reconstruction		17. Dental caries increase
6. Intracoronal and extracoronal restorative procedures		18. Progression of periodontal disease
7. Maintenance of prosthesis		
8. Patient education		
9. Post-treatment care		
10. Injection of tissue fillers into the pharyngeal tissues		
11. Soft palatotomy		

## Parameter Guidelines: (16) Maxillofacial prosthetics—16D: Soft palate defects

## Comments

## ICD-10

1. Acquired	<i>C00.1-C00.9 Malignant neoplasm of lip</i>
2. Congenital and developmental	<i>C05.x Malignant neoplasm of hard palate</i>
Treatment of diseases of the soft palate can create defects that are a challenge to restore. These tissues are dynamic in function and not easily replaced or duplicated. Pretreatment planning can be invaluable and is strongly encouraged. The educationally qualified prosthodontist is best trained to treat and manage these disorders. These prostheses attempt to restore the dynamic function of the palato-pharyngeal complex to control and direct the flow of air, fluid, and food in a normal physiological manner. Areas of consideration and reference include but are not limited to: Palatal Lift Prosthesis, Definitive [D5955 CDT-2019, 21083 CPT 2019] Palatal Lift Prosthesis, Interim [D5958 CDT-2019] Palatal Lift Prosthesis, Modification [D5959 CDT-2019] Speech Aid, Modification [D5960 CDT-2019, 21084 CPT 2019] Speech Aid, Adult [D5953 CDT-2019, 21084 CPT 2019] Speech Aid, Pediatric [D5953 CDT-2019, 21084 CPT 2019] Surgical Obturator [D5931 CDT-2019, 21076 CPT 2019] Definitive Obturator [D5932 CDT-2019, 21080 CPT 2019] Parameter Guidelines: Soft Palate Defect ICD-10 Codes See Palatopharyngeal Incompetence or Insufficiency.	<i>C30.0, C30.1 Malignant neoplasm of nasal cavity, middle ear</i> <i>C31.0-C31.9 Malignant neoplasm of sinus</i> <i>H47.9 Unspecified disorder of visual pathways</i> <i>I63.50 Cerebral infarction due to unspecified occlusion</i> <i>M27.0-M27.9 Diseases of the jaw</i> <i>Q18 Other congenital malformations of face and neck</i> <i>R49.8 Other voice and resonance disorders</i> <i>R13.1 Dysphagia</i> <i>Q35.xx Cleft palate</i> <i>Q36.xx Cleft lip</i> <i>Q37.xx Cleft palate and lip</i> <i>Q38.xx Other congenital malformation of tongue, mouth, and pharynx</i> <i>R49.8 Other voice and resonance disorders</i>

## Indications

## Therapeutic goals

## Risk factors affecting quality of care

1. Unintelligible speech (or loss of intelligibility)	1. Improved speech	1. Size and location of the defect
2. Difficulty with deglutition (nasal regurgitation)	2. Improved deglutition	2. Function of remaining velo-pharyngeal mechanism
3. Oro-nasal or oropharyngeal communication	3. Separation of oro-nasal or oro-pharyngeal communication	3. Presence or absence of dento-alveolar support
4. Loss of patient's self-esteem and quality of life	4. Improved self-esteem and quality of life	4. Opposing dentition
5. Professional referral	5. Professional referral	5. Periodontal disease
6. Nasal reflux	6. Cessation of nasal reflux	6. Endodontic complications
		7. Psychosocial factors
		8. Concomitant therapies
		9. Change in neuromuscular reflex

## Specialty performance assessment criteria

## Standards of care

## Favorable outcomes

## Known risks and complications

1. Preprosthetic preparation	1. Improved speech	1. No improvement in speech
(a) Review of medical history	2. Improved deglutition	2. No improvement in deglutition
(b) Evaluation with physician/surgeon/speech pathologist	3. Improved quality of life	3. Continued nasal reflux
(c) Oral surgery evaluation	4. Improved self-image	4. Patient unable/unwilling to wear prosthesis
(d) Endodontic evaluation	5. Improved psychosocial response	5. Lack of patient compliance or understanding
(e) Periodontal evaluation	6. Improved palato-pharyngeal competence	6. Tissue changes requiring remake or modification of prosthesis
(f) Implant evaluation, if appropriate	7. Satisfactory patient adaptation	7. Degradation of teeth and supporting tissues
2. Adjunctive care to retain support prosthesis, that is, implants and fixed prosthesis		8. Progression of patient's disease
3. Prosthesis fabrication and placement		9. Material failure/incompatibility
4. Maintenance/modification of prosthesis		10. Soft-tissue irritation
5. Patient education and post-treatment care		11. Airway compromise
(a) Dental		12. Aspiration
(b) Concomitant therapy, that is, speech		13. Progressive fibrosis of soft palate
6. Potential soft palatotomy to remove incompetent soft palatal tissue		14. Progressive immobility of soft palate
		15. Eustachian tube dysfunction necessitating PE tube placement

Parameter Guidelines: (16) Maxillofacial prosthetics—16E: Composite resection defect

Comments	ICD-10
<p>Composite defects by definition involve multiple facial structures, compromise multiple sensory systems, and frequently require multiple integrated prostheses that support, contact, and/or function together. Multiple defects have multiple sensory loss and loss of control of body fluids. The loss of tissues often leaves the patient with a severe facial deformity, which may result in:</p> <ul style="list-style-type: none"> <li>(a) Behavior maladjustment</li> <li>(b) Prejudice regarding employment</li> <li>(c) Difficulties in interpersonal relationships</li> <li>(d) Unintelligible speech</li> <li>(e) Frustration</li> <li>(f) Loss of self-esteem and</li> <li>(g) Sexual dysfunction</li> <li>(h) Loss of oral competency (speech and swallowing) could be included</li> </ul>	<p>Refer to subparameters 16A, 16B, 16C, 16E, 16G, and 16H</p>

The educationally qualified prosthodontist is best trained to evaluate the patient for restoration of the defect. Areas of consideration and reference include but are not limited to: Facial Augmentation Implants [21089; 21248; 21249 CPT 2019] (D6010; D6012; D6013; D6040; D6050 CDT 2019) Facial Moulage [D5912 CDT 2019] Facial Moulage, Sectional [D5911 CDT 2019] Facial Prosthesis (21088 CPT 2019) (D5919 CDT 2019) Facial Prosthesis, Replacement (21088 CPT 2019) (D5929 CDT 2019) Mandibular Resection/Reconstruction Prosthesis [21081 CPT 2019] (D5934; D5935 CDT 2019) Maxillofacial Stabilization Prosthesis [21089 CPT 2019] (D5988 CDT 2019) Nasal Prosthesis [21087 CPT 2019] (D5913 CDT 2019) Obturator Prosthesis, Definitive [21080 CPT 2019] (D5932 CDT 2019) Obturator Prosthesis, Interim [21079 CPT 2019] (D5936 CDT 2019) Obturator Prosthesis, Surgical [21076 CPT 2019] (D5931 CDT 2019) Maxillary Resection, Reconstruction Prosthesis (21081 CPT 2019) Orbital Prosthesis [21077 CPT 2019] (D5915 CDT 2019) Intraoral Prosthesis [21081 CPT 2019] (D5999 CDT 2019)

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Facial soft-tissue deformity resulting from skin, muscle, and connective tissue loss</li> <li>2. Facial hard-tissue deformity from loss of bone, teeth, and cartilage</li> <li>3. Loss of sensory organ (eye) resulting in blindness</li> <li>4. Loss of sensory organ (nose) resulting in loss of smell</li> <li>5. Oral tissue loss (hard and soft tissues), resulting in reduced oral competency, decreased mastication, disrupted speech, dysphasia, and facial reflux during eating and swallowing</li> <li>6. Exposure of nasal, sphenoid, and frontal sinuses</li> <li>7. Compromised speech resonance with increased nasality</li> <li>8. Communication of oral-nasal-facial cavities</li> <li>9. Loss of patient's self-esteem</li> <li>10. Professional referrals</li> </ol>	<ol style="list-style-type: none"> <li>1. Restoration of facial form</li> <li>2. Restoration of ocular form</li> <li>3. Restoration of oral competence with reduction of oral and facial reflux</li> <li>4. Substitution for dento-alveolar structures and facial structures</li> <li>5. Improvement of nasal-oral-facial cavity separation</li> <li>6. Improvement in self-esteem and quality of life</li> <li>7. Improvement in deglutition and mastication</li> <li>8. Restoration of speech, improved resonance, and reduced nasality</li> <li>9. Restoration of sinus partition to improve normal humidity</li> <li>10. Reduction of mucous crusting and control of normal discharge of bodily fluids</li> </ol>	<p>(Severity factors that increase risk and the potential for known complications)</p> <ol style="list-style-type: none"> <li>1. Status of existing disease: contiguous, local, or systemic</li> <li>2. Size and location of defect</li> <li>3. Number of sensory structures normally found within defect</li> <li>4. Inability to speak and communicate</li> <li>5. Complications from alterations in normal anatomical soft-tissue form and bony support</li> <li>6. Local wound changes, friable tissues, scar tissue, and hemorrhage</li> <li>7. Compromise from functional rehabilitation to form rehabilitation</li> <li>8. Maintenance of nasal and oral airway</li> <li>9. Incomplete surgical reconstruction</li> <li>10. Preexisting systemic conditions</li> <li>11. Psychosocial factors</li> <li>12. Scarring</li> <li>13. Muscle fibrosis and trismus</li> <li>14. Loss of function of remaining structure secondary to treatment</li> <li>15. Postirradiation and chemotherapeutic tissue changes and sequelae</li> <li>16. Motor skills of the patient/lack of motion</li> <li>17. Unrealistic expectations</li> </ol>

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Comprehensive clinical assessment	1. Improved facial/ocular aesthetics	1. Difficulty in maintaining prosthesis position (unstable)
2. Pretreatment evaluation	2. Maintenance of humidification in defect	2. Difficulty in prosthesis maintenance
(a) Appropriate review of medical history	3. Reduction in airborne pollutants to defects membranes and tissues	3. Tissue changes (color and anatomical) requiring modification
(b) Appropriate maxillofacial examination	4. Improved speech and deglutition	4. Difficulty in reducing reflux
(c) Appropriate dental examination	5. Reduction of nasal or oral regurgitation and salivary flow	5. Unrealistic patient expectations
(d) Appropriate implant evaluation	6. Airway support	6. Irritation or ulceration from prosthesis
(e) Consider consultations to include physician/surgeon	7. Improved patient self-esteem and quality of life	7. No improvement in speech and deglutition
(f) Diagnostic imaging (CT, CBCT, and MRI)	8. Acceptable patient adaptation and use of prosthesis	8. No improvement in control of fluids
(g) 3D models	9. Minimal tissue irritation	9. Continued poor self-esteem
3. Adjunctive pretreatment surgical revisions to defect site		10. Recurrence of disease
4. Adjunctive dental care to support or retain prosthesis if defect is contiguous with oral cavity		11. Lack of patient cooperation/motivation
(a) Implant		12. Loss of retention
(b) Surgical revisions		13. Adhesive allergy or ineffectiveness
(c) Dental care and maintenance		(a) Implants: Loss in integration
		(b) Implants: Fracture of framework or implant-retained device
		14. Loss of prosthesis/damage to prosthesis
5. Selection or fabrication of ocular element		
6. Placement of composite prosthesis		
7. Patient education and instruction in use		
8. Maintenance of prosthesis: composite and intraoral		
9. Pretreatment follow-up		
10. Accurate impression		
11. Prosthesis design		
12. Post-treatment follow-up and supportive care		

Parameter Guidelines: (16) Maxillofacial prosthetics—16F: Traumatic injury

Comments	ICD-10
<p>Traumatic injury often causes unique tissue problems. The educationally qualified prosthodontist is best trained to evaluate the defect and coordinate, manage, and design prostheses to deal with the resultant defect(s). The prosthesis can restore form and function and reestablish partitions between contiguous cavities. The treatment of these problems, especially the more complex ones, often involves multiple surgeries to attempt reconstruction, necessitating multiple prostheses used over time.</p> <p>Areas of consideration and reference include but are not limited to:                      Auricular Prosthesis [D5914 CDT 2019, 21086 CPT 2019]                      Commissure Splint [D5987 CDT 2019]                      Cranial Implants [62140 CPT 2019]                      Facial Augmentation Implants [62141 CPT 2019]                      Facial Moulage, Complete [D5912 CDT 2019]                      Facial Moulage, Sectional [D5911 CDT 2019]                      Facial Prosthesis [D5919 CDT 2019, 21088 CPT 2019]                      Facial Prosthesis, Replacement [D5929 CDT 2019, 21088 CPT 2019]                      Nasal Prosthesis [D5913 CDT 2019, 21087 CPT 2019]                      Nasal Septal Prosthesis [D5922 CDT 2019]                      Obturator Prosthesis, Definitive [D5932 CDT 2019, 21080 CPT 2019]                      Obturator Prosthesis, Interim [D5936 CDT 2019, 21079 CPT 2019]                      Ocular Prosthesis [D5916 CDT 2019]                      Ocular Prosthesis, Interim [D5932 CDT-2019]                      Surgical Splint [D5988 CDT 2019, 21085 CPT 2019]                      Surgical Stent [D5982 CDT 2019, 21085 CPT 2019]                      Trismus Device [D5937 CDT 2019]                      Dental Prostheses</p>	<p><i>S00.x Superficial injury of head</i>  <i>S01.x Open wound of head</i>  <i>S02.x Fracture of the skull and facial bones</i>  <i>S04.x Injury of cranial nerve</i>  <i>S05.x Injury of eyelid and orbit</i>  <i>S08.x Avulsion and traumatic amputation of part of head</i>  <i>S09.x Other and unspecified injuries of the head</i></p>

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Loss of soft or hard tissue in the head or neck area</li> <li>2. Assess location of fragments of teeth, bone, restorations, or foreign objects after trauma</li> <li>3. Professional/patient referral/request</li> <li>4. Poor patient self-esteem and quality of life</li> <li>5. Surgical techniques do not adequately restore missing tissues</li> </ol>	<ol style="list-style-type: none"> <li>1. Coordinate appropriate care with other health professionals</li> <li>2. Improve function and appearance (ideal)</li> <li>3. Improve partition between various head and neck spaces</li> <li>4. Control fluids</li> <li>5. Assist airflow</li> <li>6. Improve speech</li> <li>7. Improve deglutition</li> <li>8. Treat dento-alveolar structures</li> <li>9. Improve patient's self-esteem and quality of life</li> </ol>	<ol style="list-style-type: none"> <li>1. Increased scarring</li> <li>2. Loss of hard and soft tissues</li> <li>3. Decreased oral opening may restrict access</li> <li>4. Collapse or loss of arch integrity</li> <li>5. Loss of dento-alveolar structures</li> <li>6. Premorbid prosthetic experience</li> <li>7. Other disease processes or medications that may compromise results</li> <li>8. Altered neurological condition and/or response</li> <li>9. Treatment delayed because of other more urgent or life-threatening care</li> <li>10. Inability to properly maintain restoration because of additional injuries (i.e., quadriplegia)</li> <li>11. Psychosocial</li> <li>12. Patient's expectations</li> <li>13. Lack of patient motivation and/or compliance</li> </ol>

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Comprehensive clinical assessment	1. Improved speech	1. Difficulties with speech, mastication, and deglutition
2. Appropriate consultation and referral for alternative treatment modalities	2. Improved mastication	2. Unstable/unretained prosthesis
3. Prosthesis to include surgical stents, splints, intraoral and extraoral prostheses (if applicable)	3. Improved deglutition	3. Tissue changes requiring new prosthesis/modification
4. Adjunctive dental care to support or retain prosthesis	4. Improved esthetics	4. Additional surgical procedures requiring new prosthesis/modification
5. Prosthetic preparation	5. Improved self-image	5. Unrestored tissue deficit (especially neurologic)
(a) Review of medical history	6. Improved facial height and support	6. Degradation of support structures including dento-alveolar complex
(b) Maxillofacial examination	7. Airway support	7. Fluid incompetency
(c) Dental examination	8. Support to muscles and joints	8. Unrealistic expectations
(d) Implant	9. Patient adaptation	9. Ulceration of tissues
(e) Medical	10. Improved control of fluids	10. Alterations in sensory perception (taste and smell)
6. Educate in proper prosthesis maintenance		11. Delayed dento-alveolar complications
7. Post-treatment follow-up and supportive care		12. Material failure/incompatibility
		13. Continued psychosocial problems
		14. Lack of patient compliance or understanding



Parameter Guidelines: (16) Maxillofacial prosthetics—16G: Auricular defects

Comments	ICD-10
<p>1. Acquired</p> <p>2. Congenital and developmental</p> <p>Auricular defects include acquired defects due to cancer or trauma and/or congenital defects. These defects may be partial or total, which are retained with various types of grafted tissue, adhesive, or implants. An auricular prosthesis is a removable prosthesis that artificially restores the natural ear. Its purpose is to restore normal appearance and acts to gather sound waves similar to the human ear, thus aiding in directional hearing. Also, it provides support for eyeglasses, when worn, and esthetic and psychological rehabilitation. The educationally qualified prosthodontist is best trained to evaluate and treat the patient for restoration of the defect. Areas of consideration and reference include but are not limited to: Auricular Prosthesis Facial Augmentation Implants Facial Moulage Facial Moulage, Sectional Facial Prosthesis Facial Prosthesis, Replacement Implant Retention</p>	<p><i>C32.1 Malignant neoplasm of supraglottis</i></p> <p><i>C49.0 Malignant neoplasm of connective and soft tissue of head, face, and neck</i></p> <p><i>C43.30-C43.39 Malignant melanoma of nose, other unspecified parts of face</i></p> <p><i>C44.201 Unspecified malignant neoplasm of skin of unspecified ear and external auricular canal</i></p> <p><i>D14.0 Benign neoplasm of middle ear, nasal cavity, and accessory sinuses</i></p> <p><i>D23.2 Other benign neoplasm of skin of unspecified ear and external auricular canal</i></p> <p><i>Q85.00-Q85.02 Neurofibromatosis</i></p> <p><i>Q16 Congenital malformation of ear causing impairment of hearing</i></p> <p><i>Q17 Other congenital malformations of ear</i></p> <p><i>Q17.0 Accessory auricle</i></p> <p><i>Q17.9, Congenital malformation of ear, unspecified</i></p>

Indications	Therapeutic goals	Risk factors affecting quality of care
<p>1. Restoration of facial form</p> <p>2. Psychosocial implications</p> <p>3. Patient request for treatment</p> <p>4. Professional referral</p> <p>5. Efficacy of treatment compared with surgical alternatives</p> <p>6. Unsatisfactory surgical result</p> <p>7. Improve directional hearing</p>	<p>1. Restore facial form</p> <p>2. Potential to restore directional hearing</p> <p>3. Restore esthetics</p> <p>4. Improved patient self-esteem and quality of life</p> <p>5. Allow patient to wear jewelry</p> <p>6. Support use of eyeglasses</p> <p>7. Improve less-than-ideal surgical results</p> <p>8. Allows repeatable placement without direct vision</p>	<p>1. Size and location of defect</p> <p>2. Presence and location of remaining auricular appendages</p> <p>3. Postradiation sequelae</p> <p>4. Psychosocial factors</p> <p>5. Patient's age and medical condition</p> <p>6. Unrealistic patient expectation</p> <p>7. Lack of patient compliance</p> <p>8. Environmental factors causing prosthesis instability</p> <p>9. Tissue irritation from reaction to materials</p> <p>10. Patient motor skills in proper prosthesis placement</p> <p>11. Inadequate retention/compromised retention</p>

Specialty performance assessment criteria

Standards of care	Favorable outcomes	Known risks and complications
<p>1. Size and location of defect</p> <p>2. Presence and location of remaining auricular appendages</p> <p>3. Postradiation sequelae</p> <p>4. Psychosocial factors</p> <p>5. Patient's age</p> <p>6. Unrealistic patient expectation</p> <p>7. Lack of patient compliance</p> <p>8. Environmental factors causing prosthesis instability</p> <p>9. Tissue irritation from reaction to materials</p> <p>10. Patient motor skills in proper prosthesis placement</p> <p>11. Inadequate retention/compromised retention</p> <p>12. Implant placement planning</p>	<p>1. Improved psychosocial attitude and self-esteem</p> <p>2. Improved facial symmetry</p> <p>3. Improved esthetics</p> <p>4. Improved directional hearing</p> <p>5. Allow use of jewelry</p> <p>6. Improved wearing of eyeglasses</p>	<p>1. Unrealistic patient expectations</p> <p>2. Loss of prosthesis/damage to prosthesis</p> <p>3. Change in color and appearance of prosthesis with time</p> <p>4. Tissue irritation from materials and/or allergic response</p> <p>5. Lack of patient compliance</p> <p>6. Tissue changes requiring modification or refabrication of prosthesis</p> <p>7. Changing seasons resulting in changing skin color</p> <p>8. Ulcerations and bruises</p> <p>9. Recurrence of disease</p> <p>10. Loss of retention</p> <p>11. Loss of implants</p> <p>12. Mastoiditis</p>

## Parameter Guidelines: (16) Maxillofacial prosthetics—16H: Orbital defect—evisceration, enucleation, and exenteration

Comments	ICD-10	
<p>Orbital evisceration, enucleation, exenteration, and/or degeneration establishes that at least one globe has been removed or involved. The surgical parameters determining evisceration versus exenteration, for the most part, impact very little on the ocular/orbital prosthesis. Orbital exenteration due to tumors, however, may also involve partial or total removal of soft tissues and the bony zygoma, maxilla, and frontal bones and may communicate with nasal and/or oral cavities. The loss of tissues that are involved with tumors frequently leaves the patient with severe facial deformity that may result in:</p> <ol style="list-style-type: none"> <li>1. Behavior maladjustment</li> <li>2. Prejudice regarding employment</li> <li>3. Difficulties in interpersonal relationships</li> <li>4. Altered voice quality</li> <li>5. Loss of self-esteem</li> <li>6. Sexual dysfunction</li> </ol> <p>An orbital prosthesis artificially restores the eye, eyelids, and adjacent hard and soft tissues lost as a result of trauma or surgery. It serves to restore normal appearance and allow the patient to socially interact with others on a day-to-day basis. It seals the defect from the external environment and maintains the normal humidity and moisture of the adjacent cavities, that is, the maxillary sinus, oral, and nasal cavities. The educationally qualified prosthodontist is most trained to design and fabricate prostheses to treat and manage these disorders. Areas of consideration and reference include but are not limited to: Facial Augmentation Implants [D5925 CDT-2019] Facial Moulage [D5912 CDT-2019] Facial Moulage, Sectional [D5911 CDT-2019] Facial Prosthesis [D5919 CDT-2019, 21088 CPT 2019] Facial Prosthesis, Replacement [D5929 CDT-2019] Ocular Prosthesis, Interim [D5923 CDT-2019] Ocular Prosthesis [D5916 CDT-2019] Orbital Prosthesis [D5915 CDT-2019, 21077 CPT 2019] Implant</p>	<p><i>C31.x Benign neoplasm of eye</i>  <i>C41.0 Malignant neoplasm of bones of skull and face</i>  <i>C44.2x Other and unspecified malignant neoplasm of skin of ear and external auricular canal</i>  <i>C44.1x-C44.4 Unspecified malignant neoplasm, skin, and face</i>  <i>C44.101 Unspecified malignant neoplasm of skin of unspecified eyelid, including canthus</i>  <i>C44.9 Other unspecified malignant neoplasm of skin</i>  <i>C49.0 Malignant neoplasm of connective and soft tissue of head face and neck</i>  <i>C69.xx Malignant neoplasm of eye and adnexa</i>  <i>D23.10 Other benign neoplasm of skin and unspecified eyelid, including canthus</i>  <i>M31.2 Lethal midline granuloma</i>  <i>M31.30 Wegeners granulomatosis</i>  <i>Q11.x Anophthalmos, microphthalmos, and macropthalmos</i>  <i>Q11.2 Microphthalmos</i>  <i>Q85.00-Q85.02 Neurofibromatosis</i></p>	
Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Loss of sensory organ (eye) resulting in blindness</li> <li>2. Facial soft tissue deformity, resulting from skin, muscle, and connective tissue loss</li> <li>3. Facial hard tissue deformity, resulting from loss of bone and cartilage</li> <li>4. Exposure of nasal, frontal, and sphenoid sinuses</li> <li>5. Degenerated orbit (sclera shell)</li> <li>6. Loss of self-esteem</li> <li>7. Professional referrals</li> </ol>	<ol style="list-style-type: none"> <li>1. Mobility coordination with contralateral side (ocular)</li> <li>2. Color stable and correct (ocular/orbital)</li> <li>3. Size conformity with contralateral side (ocular/orbital)</li> <li>4. Improve facial, ocular, and orbital form</li> <li>5. Improve voice quality</li> <li>6. Restore sinus partition to improve normal humidity reduction</li> <li>7. Separate oro-nasal pharyngeal areas</li> <li>8. Reduction of mucous crusting by recreating a humid environment</li> <li>9. Support of eyeglasses</li> <li>10. Mutual retention of obturator for improved stability in confluent defects</li> </ol>	<ol style="list-style-type: none"> <li>1. Ptosis</li> <li>2. Implant selection and placement</li> <li>3. Patient cooperation/compliance</li> <li>4. Dryness</li> <li>5. Muscle contracture and scar formation</li> <li>6. Amount of soft tissue loss</li> <li>7. Amount of bone loss</li> <li>8. Migrated implant</li> <li>9. Distorted lid borders</li> <li>10. Shallow lid borders</li> <li>11. Contracted socket</li> <li>12. Sequelae of adjunctive treatment</li> <li>13. Sequelae of wound healing, contracture, and scar formation</li> <li>14. Size, location, and contour of defect</li> <li>15. Variation in skin coloration</li> <li>16. Postradiation sequelae</li> <li>17. Psychosocial factor</li> <li>18. Patient's age and medical condition</li> <li>19. Unrealistic patient expectations</li> <li>20. Tissue reaction to materials</li> <li>21. Motor skills to place prosthesis</li> <li>22. Lack of patient motivation and/or compliance</li> <li>23. Exposure to environmental factors</li> </ol>

Standards of care	Specialty Performance Assessment Criteria	
	Favorable outcomes	Known risks and complications
1. Review medical history	1. Improved postsurgical facial form/cosmetics	1. Poor retention and difficulty in maintaining the position of prosthesis
2. Surgical consultation/alternation to reduce risk factors or supplement retention, including implant utilization. If irradiated, consultation with radiation oncologist.	2. Improved airflow	2. Unachievable esthetic expectations
3. Prosthetic preparation	3. Improved quality of life	3. Unrealistic patient expectations
(a) Facial moulage	4. Acceptable patient adaptation and use of prosthesis	4. Tissue irritations
(b) Photographs	5. Adequate retention with minimal tissue irradiation	5. Tissue changes, requiring prosthesis modification
4. Patient education	6. Positive psychosocial adaptation	6. Recurrence of disease
5. Conformer, trial conformer, and pressure conformer (when appropriate)	7. Improved quality of speech	7. Lack of patient compliance
6. Implant retention to include multipart elastic retention (if appropriate)		8. Change in color and appearance of prostheses with time
7. Maintenance of prosthesis, post-treatment follow-up, and supportive care		9. Loss of retention
		(a) Adhesive allergy or ineffectiveness
		(b) Implants: Loss of integration
		(c) Implant fractures of framework or implant retentive device
		10. Loss of prosthesis/damage to prosthesis
		11. Changing season resulting in changing skin color

## Parameter Guidelines: (16) Maxillofacial prosthetics—16I: Nasal defect

Comments	ICD-10	
<p>1. Acquired</p> <p>A nasal prosthesis provides more than just an esthetic replacement device. A stable nasal prosthesis improves the patient's self-esteem and ability to interact with society; it directs airflow and helps to maintain humidity and protect nasal mucous membranes. The educationally qualified prosthodontist has the scientific knowledge to work closely with surgical colleagues to achieve optimum care. Secondary surgical reconstructive procedures, skin grafting, and the use of osseointegration reconstruction after tumor removal can enhance prosthesis stability and success.</p> <p>Areas of consideration and reference include but are not limited to:            Facial Augmentation Implants Prosthesis [D5925 CDT-2019]            Facial Moulage [D5912 CDT-2019]            Facial Moulage, Sectional [D5911 CDT-2019]            Facial Prosthesis [D5919 CDT-2019, 21088 CPT 2019]            Facial Prosthesis, Replacement [D5929 CDT-2019]            Nasal Prosthesis [D5913 CDT-2019, 21087 CPT 2019]</p>	<p><i>C00.1-C00.9 Malignant neoplasm of lip</i>  <i>C30.0 Malignant neoplasm of nasal cavity</i>  <i>C41.0 Malignant neoplasm of bones of skull and face</i>  <i>C43.30-C43.39 Malignant melanoma</i>  <i>C44.3x Unspecified malignant neoplasm of nose, unspecified part of face</i>  <i>D23.3 Benign neoplasm of skin of other unspecified parts of the face</i>  <i>M31.2 Lethal midline granuloma</i>  <i>M31.30 Wegeners granulomatosis</i>  <i>Q18.x Specified congenital malformations of face and neck</i>  <i>Q18.9 Other unspecified congenital malformation of face and neck</i>  <i>Q85.00-Q85.02 Neurofibromatosis</i></p>	
Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>Restoration of facial form</li> <li>Psychosocial implication               <ol style="list-style-type: none"> <li>Self-esteem</li> <li>Unwillingness to be seen in society</li> </ol> </li> <li>Patient request for treatment</li> <li>Efficacy of treatment compared with surgical alternatives</li> <li>Unsatisfactory surgical result</li> <li>Professional referrals</li> </ol>	<ol style="list-style-type: none"> <li>Improve facial form</li> <li>Potential to protect nasal mucous membranes</li> <li>Improved esthetics</li> <li>Improved patient self-esteem and quality of life</li> <li>Improved air flow</li> <li>Improved speech</li> <li>Provide support for spectacles when needed</li> </ol>	<ol style="list-style-type: none"> <li>Size and location of defect</li> <li>Quality of tissues</li> <li>Preradiation sequelae</li> <li>Psychosocial factors</li> <li>Patient's age</li> <li>Patient's expectation and motivation</li> <li>Patient's compliance</li> <li>Tissue irritation from reaction to materials</li> <li>Adjunctive treatment sequelae</li> <li>Ability to have implant-retained prosthesis with remaining quality bone</li> </ol>
Specialty performance assessment criteria		
Standards of care	Favorable outcomes	Known risks and complications
<ol style="list-style-type: none"> <li>Pretreatment evaluation               <ol style="list-style-type: none"> <li>Review medical history</li> <li>Maxillofacial examination</li> <li>Dental examination</li> </ol> </li> <li>Consider adjunctive pretreatment surgical revision of site to include the consideration for implants</li> <li>Consider appropriate consultation and referrals for alternative treatment modalities (skin graft implants)</li> <li>Appropriate material selection and coloration</li> <li>Accurate impression, prosthesis design, and alternative retention modalities</li> <li>Maintenance of prosthesis</li> <li>Patient education</li> <li>Post-treatment follow-up and supportive care</li> </ol>	<ol style="list-style-type: none"> <li>Improved psychosocial attitude and self-esteem</li> <li>Improved facial symmetry</li> <li>Improved esthetics</li> <li>Improved air flow</li> <li>Protect nasal mucous membranes</li> <li>Improved speech</li> </ol>	<ol style="list-style-type: none"> <li>Unrealistic patient expectations</li> <li>Loss and/or damage to prosthesis</li> <li>Change in color and appearance of prosthesis with time</li> <li>Tissue irritation from materials and allergic response, inflammation, or ulceration</li> <li>Lack of patient compliance</li> <li>Tissue changes requiring modification or refabrication of prosthesis</li> <li>Recurrence of disease</li> <li>Loss of retention</li> <li>Adhesive allergy               <ol style="list-style-type: none"> <li>Implants: Loss of integration</li> <li>Implants: Fracture of framework or implant-retained device</li> </ol> </li> <li>Loss of prosthesis/damage to prosthesis</li> <li>Changing seasons resulting in changing skin color</li> <li>Utilization of make up with or without prosthesis color adaptation</li> <li>Inability to swim without prosthesis</li> </ol>

Parameter Guidelines: (16) Maxillofacial prosthetics—16J: Pre and postradiation therapy care

Comments	ICD-10
<p>High-dose modern radiation therapy has increased the chance of cure of head and neck malignancy both when used alone and when in conjunction with surgery and/or chemotherapy. This treatment causes significant short-term and long-term sequelae. Pretreatment evaluation to include preventive measures and long-term treatment planning are essential. The therapeutic use of radiation therapy continues to evolve. The use of different particle application, combination therapies using chemotherapeutic agents to sensitize tumor cells and Intensity-Modulated Rationation Therapy and proton beam therapy application, continues to challenge the clinician to improve therapeutic and preventative treatments, including continuing educational activities. The use of therapeutic agents, such as topical fluoride application, is highly valuable. The educationally qualified prosthodontist is best trained to design and fabricate prostheses and to treat and manage these disorders.</p> <p>Areas of consideration and reference include but are not limited to:                      Fluoride Carrier [D5986 CDT 2019, 21089 CPT 2019]                      Radiation Carrier [D5983 CDT 2019]                      Radiation Shield Positioner [D5984 CDT 2019]                      Radiation Source Prosthesis                      Trismus Device                      Management and maintenance of hard and soft tissue complications</p>	<p>Diagnosis codes are directly related to the disease process being treated by the radiation</p>

Indications	Therapeutic goals	Risk factors affecting quality of care
<ol style="list-style-type: none"> <li>1. Head and neck cancer, which may be treated with radiation</li> <li>2. Postoperative sites where radiation is indicated</li> <li>3. Postradiation patient:                             <ol style="list-style-type: none"> <li>(a) Treatment of hard tissues</li> <li>(b) Treatment of soft tissues</li> <li>(c) Need for prosthetic care</li> </ol> </li> <li>4. Professional referrals</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce soft tissue reactions</li> <li>2. Reduce radiation exposure to noninvolved tissues</li> <li>3. Reduce or prevent xerostomia, ageusia, and anosmia</li> <li>4. Reduce long-term complications of soft and hard tissues</li> <li>5. Prevent radiation decay</li> <li>6. Reduce radiation-induced periodontal disease</li> <li>7. Reduce incidence of osteoradionecrosis</li> <li>8. Long-term treatment planning, pre and postradiation therapy</li> <li>9. Maintain normal range of mandibular movement</li> <li>10. Maintain adequate dietary intake</li> </ol>	<ol style="list-style-type: none"> <li>1. Perivascular fibrosis</li> <li>2. Salivary changes                             <ol style="list-style-type: none"> <li>(a) Viscosity</li> <li>(b) pH</li> <li>(c) Volume</li> </ol> </li> <li>3. Radiation exposure                             <ol style="list-style-type: none"> <li>(a) Grays</li> <li>(b) Field volume</li> <li>(c) Particle type</li> <li>(d) Energy source</li> </ol> </li> <li>4. Age and physical condition</li> <li>5. Weight loss during radiation</li> <li>6. Smoking and/or use of alcohol</li> <li>7. Patient compliance</li> <li>8. Individual tissue reaction</li> <li>9. Speech due to tongue decrease in function</li> <li>10. Speech due to velopharyngeal muscle atrophy</li> <li>11. Indirect food regurgitation/leakage into nasal cavity due to velopharyngeal atrophy</li> <li>12. Tongue fasciculations</li> </ol>

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Comprehensive clinical assessment (Parameter 1)	1. Complete oral evaluation before initiation of radiation treatment if possible	1. Xerostomia
2. Pretreatment dental care to avoid or reduce complications and/or side effects of radiation therapy	2. Education of patient regarding dental hygiene and oral care	2. Ageusia
3. Primary factors:	3. Modification of dental treatment planning after radiation to include long-term treatment planning	3. Dysgeusia
(a) Incidence of radiation caries		4. Hypogeusia
(b) Incidence of radiation-induced periodontal disease		5. Anosmia
(c) Incidence of osteoradionecrosis		6. Dental caries
4. Patient support in dealing with xerostomia, ageusia, and anosmia		7. Dietary restrictions
5. Management and maintenance of hard and soft tissue complications		8. Trismus
6. Educate with physical therapeutic regimen to maintain range of motion		9. Osteoradionecrosis
7. Support dietary recommendations for care		10. Alopecia
		11. Speech impairment
		12. Nasal leakage/regurgitation secondary to latent effects radiotherapy
		13. Tongue fasciculations
		14. Increased abrasion to dentition

## Parameter Guidelines: (16) Maxillofacial prosthetics—16K: Pre and postchemotherapy

Comments	ICD-10
<p>Nonsurgical treatment of disease processes, although not usually removing tissue en masse, has both short-term and long-term sequelae of treatment. Side effects can be significant and debilitating, requiring intervention, treatment, and education of the patient to prevent complications. The educationally qualified prosthodontist or other dentists trained in oncology are best qualified to evaluate these patients and provide appropriate care. Systemic chemotherapy produces an increase in serious risk of infection and hemorrhage, as well as other morbidities, such as mucositis, oral ulceration, and impaired healing. Patients receiving systemic chemotherapy should have arrangements made by their medical oncologist for an oral/dental evaluation before chemotherapy to eliminate potential dental sources of infection; disease-based exception and medical treatment decisions may supersede this. Continued dental observation is also necessary to prevent delays or interruption of medical treatment due to acute dental or oral disease. Areas of consideration and reference include but are not limited to:</p> <ol style="list-style-type: none"> <li>1. Fluoride Carrier</li> <li>2. Maintenance and management of hard and soft tissue complications</li> </ol>	<p><i>ICD-10 Codes</i> Diagnosis codes are directly related to the disease process being treated by the radiation.</p>

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Primary or metastatic cancer to be treated with systemic chemotherapy for palliative, prolongation of life, or curative intent	<ol style="list-style-type: none"> <li>1. Reduce potential for oral, dental infection</li> <li>2. Reduce soft tissue reaction to chemotherapy</li> <li>3. Maintain nutrition</li> <li>4. Reduce xerostomia, ageusia, and anosmia</li> <li>5. Avoid invasive dental procedures during chemotherapy</li> <li>6. Prechemotherapy oral dental treatment as indicated</li> <li>7. Prevent delays or interruptions in chemotherapy due to dental infection</li> <li>8. Palliative care during and after chemotherapy</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduced hemopoietic functions</li> <li>2. Mucositis</li> <li>3. Candidiasis and other fungal infectious agents</li> <li>4. Weight loss</li> <li>5. Viral and bacterial-induced mucosal infection</li> <li>6. Poor oral hygiene</li> <li>7. Xerostomia</li> <li>8. Oral symptoms of peripheral neuropathy</li> <li>9. Alterations in growth and development</li> <li>10. Other medical conditions</li> </ol>
Specialty performance assessment criteria		
Standards of care	Favorable outcomes	Known risks and complications
<ol style="list-style-type: none"> <li>1. Complete oral examination prior to chemotherapy</li> <li>2. Complete oral prophylaxis and oral hygiene instructions</li> <li>3. Evaluation of existing prosthesis and adjustments</li> <li>4. Address all active dental disease prior to chemotherapy, if possible</li> <li>5. Reduce infection risks</li> <li>6. Palliative care of mucositis</li> <li>7. Maintain adequate nutrition-body weight stability</li> <li>8. Continually monitor oral hygiene status</li> <li>9. Provide necessary noninvasive dental care</li> <li>10. Appropriate follow-up and treatment planning</li> <li>11. Management and maintenance of hard and soft tissue complications</li> <li>12. Minimize xerostomia, ageusia, and anosmia</li> <li>13. Propose alternative oral hygiene aides if necessary</li> </ol>	<ol style="list-style-type: none"> <li>1. Successful completion of chemotherapy regime without any significant complications</li> <li>2. Use of dental prosthesis to maintain masticatory function</li> <li>3. Maintained nutrition and body weight</li> <li>4. Successful management of dental disease</li> <li>5. Proactive maintenance to reduce future dental disease</li> </ol>	<p><i>NOTE: Before any dental treatment, the patient's medical condition must be assessed with the patient's physician.</i></p> <ol style="list-style-type: none"> <li>1. Risk of developing an infection</li> <li>2. Risk of excessive bleeding</li> <li>3. Delayed healing</li> <li>4. Patient's inability to maintain oral hygiene</li> </ol>

## Parameter Guidelines: (16) Maxillofacial prosthetics—16L: Implant retained extraoral prostheses

## Comments

## ICD-10

Cranial-based osseointegrated implants are capable of providing retention for a variety of extraoral prostheses needed for reconstruction of facial deformities. Eliminating the need for adhesives improves the convenience and longevity of the prosthetic device while eliminating much of the insecurity associated with patient apprehension and self-consciousness. Surgical and maxillofacial prosthetic pretreatment planning is critical to the successful application of these techniques. Thus, the educationally qualified prosthodontist is the most appropriately trained practitioner to create these prostheses.

*ICD-10 Codes*

Refer to subparameters 16F, 16G, and 16H.

Areas of consideration and reference include but are not limited to:

Facial Prosthesis [D5919 CDT-2019, 21088 CPT 2019]

Cranial-Based Osseointegrated Implants

Facial Moulage [D5912 CDT-2019]

Facial Moulage, Sectioned [D5911 CDT-2019]

Facial Prosthesis [D5919 CDT-2019, 21088 CPT 2019]

Facial Prosthesis Replacement [D5929 CDT-2019]

## Indications

## Therapeutic goals

## Risk factors affecting quality of care

1. Restoration of facial form	1. Restored facial form	(Severity factors that increase risk and the potential for known complications) 1. Size and location of the defect 2. Possible surgical tissue contours 3. Possible radiation sequelae 4. Psychosocial factors 5. Patient's age 6. Patient's expectations and motivation 7. Patient's compliance 8. Tissue reaction to penetrating materials 9. Soft-tissue depth and movement at penetration side 10. Bone availability, quality, and depth at receptor sites 11. Previous radiation therapy and bone residual vascularity 12. Superstructure design and ease of maintenance 13. Dexterity, visual acuity, and motor skills in placement of prosthesis 14. Soft-tissue reaction at penetration site over time
2. Psychosocial implication	2. Protect exposed mucous membranes	
3. Patient request for treatment	3. Restored esthetics	
4. Efficiency of treatment compared with surgical referral	4. Improved patient self-esteem	
5. Patient referral	5. Improved patient confidence in retention of prosthesis	
6. Unsatisfactory existing adhesive-retained prosthesis	6. Improved quality of life	
7. Physically impaired prosthesis placement skills	7. Improved compromised surgical result	
8. Unsatisfactory existing soft tissue retention case		
9. Skin irritation when using adhesive		



Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Review medical history (includes radiation ports, type, amount, etc.)	1. Improved psychosocial attitude, self-esteem, and confidence	1. Unrealistic patient expectations
2. Surgical removal of impending tissue remnants	2. Improved facial symmetry	2. Loss of prosthesis use
3. Appropriate consultation and referrals for alternative treatment modalities	3. Improved esthetics	3. Change in color and appearance of prosthesis
4. Evaluate prosthesis compatibility with existing tissues	4. Improved organ function (i.e., airflow, directional hearing, etc.)	4. Loss of prosthesis marginal integrity with use
5. Accurate impression, superstructure design with correct prosthesis construction, retention modalities, and coloration	5. Protection of exposed mucous membranes	5. Tissue irritation at implant penetration site
6. Post-treatment maintenance of prosthesis, follow-up, and supportive care	6. Improved use of prosthesis	6. Tissue changes requiring modification or refabrication of prosthesis
7. Education of patient		7. Loss of mechanical retention
8. Knowledge of osseointegration theory, principles, and techniques		8. Loss of superstructure integrity
9. Referral of adjunctive care as indicated (HBO)		9. Loss of implant(s)
		10. Lack of patient compliance

### **Selected References (Maxillofacial Prosthetic Parameter)**

This list of selected references is intended only to acknowledge some of the source of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

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## (17) Local Anesthesia Parameter

### Preface

Criteria and standards in this section refer specifically and exclusively to methods used by prosthodontists to control the pain and anxiety of patients treated in outpatient facilities (e.g., dental schools, hospital outpatient treatment facilities, prosthodontists' offices, and other facilities where prosthodontics is accomplished).

Anxiety, fear, and pain are of concern because each is inherent in the patient's reaction to the type of prosthodontic procedure being performed. All three must be controlled satisfactorily during therapy to permit safe and effective completion of the procedures. These anesthesia criteria have been developed to maximize safety and minimize risk in the population of patients being treated. The practitioner's selection of a particular technique for controlling pain and anxiety during a specific procedure has to be individually determined for each patient, considering the risks and benefits in each case.

In addition to anxiety, fear, and pain control, local anesthesia can be used for diagnostic and therapeutic purposes. Differential diagnoses of craniofacial pain symptoms can be used in cases where clarity is needed for multisymptom origin of chronic and acute pain. Auxiliary use of local anesthetics can be instrumental in deciphering the origin of neuropathic, musculoskeletal, and odontogenic pain. The specific diagnostic quality of gathering information is vital to rendering the appropriate treatment for patients presenting with pain of unclear/unknown origin.

Additionally, local anesthetics can be used for the treatment of myospasm of the orofacial complex. It is apparent that the use of physiotherapy can be supplemented by the use of plain local anesthetics delivered into the body of the muscle. This has been shown to result in protracted short-term analgesia and anesthesia assisting with management of orofacial pain and dysfunction of the mandibular locomotor system.

Techniques seldom used or applicable to very few patients are not included in this document. This category included hypnosis, acupuncture, transcutaneous electrical nerve stimulation, and specific medications and techniques for controlling acute or chronic pain. Behavior modification techniques (biofeedback) and psychiatric management have also been excluded (central anesthesia modality).

In the future, new indications or new anesthetic agents and techniques may lead to changes in equipment. As new pieces of equipment and the techniques for using them are evaluated and accepted for use, their inclusion in this document will be considered.

When administering anesthetic and/or sedative procedures to a patient, the prosthodontist is encouraged to be familiar with the rules and regulations of his/her individual state dental board and to follow the guidelines advocated by the American Dental Association.

### General Criteria and Standards

*Informed Consent:* The administration of anesthesia must be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the anesthetic procedure, the goals of treatment, the known benefits and risks of the anesthetic procedure, the factors that may affect the known risks and complications, the anesthetic management options, and the favorable outcomes.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention. As ancillary support, documentation of total dose relative to weight-based maximum dose and toxicity dose is important for safety management in patient care. Subsequent documentation of temporary or permanent neuro-praxic injury is also of primary importance for determining the risk further in safety management.

### Coding and Nomenclature

Diagnostic and procedural codes have been included in the ACP Parameters of Care only for general guidance. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve only as practice guidelines. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT), the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The indicated CPT codes should be matched to a specific correlative ICD-10 to be favorably considered by reviewers for third-party reimbursement. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology © 2019 American Medical Association. All rights reserved.



Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology © 2019 American Dental Association. All rights reserved.

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 Parameter Guidelines: (17) Local anesthesia parameter
 

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 ICD-10-CM
 

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*All codes related to achieving patient comfort using local anesthetic as indicated for assessment, diagnosis, planning, care, and supportive care are described in throughout the ACP Parameters of Care for Prosthodontics as aligned with the Completely Dentate Parameter, Partial Edentulism Parameter, and Complete Edentulism Parameter.*

Indications	Therapeutic goals	Risk factors affecting quality of therapy
1. Need to provide a prosthodontic procedure, which may create sensations, especially pain, that could interfere with treatment	1. Profound anesthesia in the operative area 2. Return of normal sensation within a prescribed period of time	1. Presence of coexisting major systemic disease 2. Adequacy of preoperative clinical preparation <ul style="list-style-type: none"> <li>(a) Clinical preparation of patient (i.e., history and physical evaluation; laboratory and other diagnostic studies complete)</li> <li>(b) Status of informed consent (e.g., completed, lacking)</li> </ul> 3. Presence of infection 4. History of drug allergy 5. History of allergy or sensitivity to local anesthetic agents or additive agents 6. Psychological aversion to injections 7. Presence of uncontrolled systemic conditions that may interfere with the normal healing process and subsequent tissue homeostasis (e.g., diabetes mellitus, bleeding dyscrasia, steroid therapy, immunosuppression, and malnutrition) 8. Presence of behavioral, psychological, or psychiatric disorders, including habits (e.g., alcohol, tobacco, or drug abuse) that may affect anesthetic management 9. Existing drug or alcohol intoxication 10. Degrees of patient cooperation and/or compliance 11. Method of administration (block, infiltration, intraligamentary, and intraosseous) 12. Vascularity 13. Dose 14. Selected local anesthetic agent

Standards of Care [D9200-D9299 CDT-2019]	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
<ol style="list-style-type: none"> <li>1. Completion of a medical history questionnaire, signed and dated by the patient or a responsible party</li> <li>2. Review of medical history form by the prosthodontist with all significant responses evaluated and noted on the form (dialogue history)</li> <li>3. Pretreatment physical evaluation and vital signs recorded in the chart</li> <li>4. Completion of medical consultation or additional laboratory testing, if indicated, before initiation of treatment (except in extreme emergency)</li> <li>5. Informed consent</li> <li>6. Continual observation and supervision of patient through the treatment</li> <li>7. Explanation of postoperative instructions to the patient and/or responsible adult at the time of discharge</li> <li>8. Determination that vital signs are stable before discharge</li> <li>9. Determination that patient is appropriately responsive before discharge</li> <li>10. Clinician and staff prepared in provision of cardiac life support potentially associated with the use of local anesthetics</li> <li>11. Availability of appropriate and applicable medical equipment and medication in the event of a local anesthetic and care-related emergency</li> </ol>	<ol style="list-style-type: none"> <li>1. Favorable outcomes by definition, the application or administration of local anesthetic agents is a totally reversible procedure. Except for the physiological and/or psychological trauma resulting from the procedure and except in rare cases of idiosyncratic reaction or allergy to the drugs involved, the patient should have returned to his or her preanesthetic physiological and/or psychological state within 12 hours after cessation of the administration of medication(s)</li> <li>2. Patient-reported favorable experience</li> </ol>	<ol style="list-style-type: none"> <li>1. Events related to local anesthesia care <ol style="list-style-type: none"> <li>(a) Cardiac arrest</li> <li>(b) Clinically apparent acute myocardial infarction</li> <li>(c) Clinically apparent symptoms of acute cerebrovascular accident</li> <li>(d) Respiratory arrest</li> <li>(e) Fulminating pulmonary edema</li> <li>(f) Vomiting and aspiration of gastric contents followed by radiographic findings of aspiration pneumonitis</li> <li>(g) Foreign body displaced into the airway or bronchi</li> <li>(h) Development of peripheral or central neurologic deficit</li> <li>(i) Infection</li> <li>(j) Dental injuries</li> <li>(k) Ocular injuries</li> <li>(l) Organ damage (i.e., kidney and liver)</li> </ol> </li> <li>2. Other physiologic events related to the local anesthesia experience (e.g., anxiety, syncope, seizure, asthma, hypertensive episode, angina, etc.)</li> <li>3. Unplanned hospital admission shortly after outpatient procedure performed under local anesthesia</li> <li>4. Unplanned admission to an intensive care unit shortly after the administration of local anesthesia</li> <li>5. Imaging or clinical evidence of a broken needle</li> <li>6. Persistent trismus</li> <li>7. Hematoma</li> <li>8. Evidence of intra-arterial or intravenous injection of the local anesthetic agents</li> </ol>

## Parameter Guidelines: (17) Local anesthesia parameter

## ICD-10-CM

All codes related to achieving patient comfort using local anesthetic as indicated for assessment, diagnosis, planning, care, and supportive care are described throughout the Parameters of Care for the Specialty of Prosthodontics as aligned with the Completely Dentate Parameter, Partial Edentulism Parameter, and Complete Edentulism Parameter.

*Temporomandibular Disorders, Masseteric Myospasm, Temporal Tendinitis, Mandibular hypomobility*

Indications	Therapeutic goals	Risk factors affecting quality of therapy
1. Need to obtain diagnostic information for determining source of acute or chronic pain	1. Provide localization of a specific dermatome of the head and neck that sources chronic or acute pain by intramuscular or trigger point injection with plain local anesthetic solution 2. Affirmation of source of pain by confirmation with patient guidance of sensation	1. Presence of coexisting major systemic disease 2. Adequacy of preoperative clinical preparation (a) Clinical preparation of patient (i.e., history and physical evaluation; laboratory and other diagnostic studies complete) (b) Status of informed consent (e.g., completed, lacking) 3. Presence of infection 4. Presence of central or peripheral neuropathic syndromes: reflex sympathetic dystrophy, demyelination syndromes, Horner's syndrome, or neuropraxic injury 5. History of drug allergy 6. History of allergy or sensitivity to local anesthetic agents or additive agents 7. Psychological aversion to injections 8. Presence of uncontrolled systemic conditions that may interfere with the normal healing process and subsequent tissue homeostasis (e.g., diabetes mellitus, bleeding dyscrasia, steroid therapy, immunosuppression, and malnutrition) 9. Presence of behavioral, psychological, or psychiatric disorders, including habits (e.g., alcohol, tobacco, or drug abuse) that may affect anesthetic management 10. Existing drug or alcohol intoxication 11. Degrees of patient cooperation and/or compliance 12. Method of administration (block, infiltration, intramuscular, ganglionic block, or regional block) 13. Vascularity 14. Dose 15. Selected local anesthetic agent 16. Presence of vasoconstrictor

Standards of care [D9200-D9299 CDT-2019]	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
<ol style="list-style-type: none"> <li>1. Completion of a medical history questionnaire, signed and dated by the patient or a responsible party</li> <li>2. Review of medical history form by the prosthodontist with all significant responses evaluated and noted on the form (dialogue history)</li> <li>3. Pretreatment physical evaluation and vital signs (including blood pressure) recorded in the chart</li> <li>4. Completion of medical consultation or additional laboratory testing, if indicated, before initiation of treatment (except in extreme emergency)</li> <li>5. Informed consent</li> <li>6. Continual observation and supervision of patient through the treatment</li> <li>7. Explanation of postoperative instructions to the patient and/or responsible adult at the time of discharge</li> <li>8. Determination that vital signs are stable before discharge</li> <li>9. Determination that patient is appropriately responsive before discharge</li> <li>10. Clinician and staff prepared in provision of cardiac life support potentially associated with the use of local anesthetics</li> <li>11. Availability of appropriate and applicable medical equipment and medication in the event of a local anesthetic and care-related emergency</li> </ol>	<ol style="list-style-type: none"> <li>1. Favorable outcomes by definition, the application or administration of local anesthetic agents is a totally reversible procedure. Except for the physiological and/or psychological trauma resulting from the procedure and except in rare cases of idiosyncratic reaction or allergy to the drugs involved, the patient should have returned to his or her preanesthetic physiological and/or psychological state within 12 hours after cessation of the administration of medication(s)</li> <li>2. Patient-reported favorable experience</li> <li>3. Patient obtains relief from diagnostic block</li> <li>4. Clinician affirms source of chronic or acute pain</li> <li>5. Patient is able to perform physiotherapy by having muscle anesthetized and obtains greater range of motion for increased function</li> </ol>	<ol style="list-style-type: none"> <li>1. Events related to local anesthesia care <ol style="list-style-type: none"> <li>(a) Cardiac arrest</li> <li>(b) Clinically apparent acute myocardial infarction</li> <li>(c) Clinically apparent symptoms of acute cerebrovascular accident</li> <li>(d) Respiratory arrest</li> <li>(e) Fulminating pulmonary edema</li> <li>(f) Vomiting and aspiration of gastric contents followed by radiographic findings of aspiration pneumonitis</li> <li>(g) Foreign body displaced into the airway or bronchi</li> <li>(h) Development of peripheral or central neurologic deficit <ol style="list-style-type: none"> <li>(i) Infection</li> <li>(j) Dental injuries</li> <li>(k) Ocular injuries</li> <li>(l) Organ damage (i.e., kidney and liver)</li> </ol> </li> </ol> </li> <li>2. Other physiologic events related to the local anesthesia experience (e.g., anxiety, syncope, seizure, asthma, hypertensive episode, angina, etc.)</li> <li>3. Unplanned hospital admission shortly after outpatient procedure performed under local anesthesia</li> <li>4. Unplanned admission to an intensive care unit shortly after the administration of local anesthesia</li> <li>5. Imaging or clinical evidence of a broken needle</li> <li>6. Persistent trismus</li> <li>7. Hematoma</li> <li>8. Evidence of intra-arterial or intravenous injection of the local anesthetic agents</li> </ol>

### **Selected References (Local Anesthesia Parameter)**

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## **(18) Adjunctive Therapies Parameter**

### **Preface**

The integrated therapy of many prosthodontic treatment plans includes components of all aspects of dentistry. Although the referral of a patient to appropriate specialists for treatment outside of prosthodontics is the norm, there are situations and considerations

in which the patient's best interest is protected by the prosthodontist performing limited procedures adjunctive to prosthodontic therapies outside the normal scope of the specialty. These procedures should be of a limited nature and be deemed appropriate when referral would not be in the patient's best interest. These treatments should be preceded by a discussion with the patient concerning the risk/benefit ratio and a subsequent informed consent. The prosthodontist should have demonstrated competence in any procedure performed and be aware that the standard of care for the procedure is determined by that group of dentists who most appropriately perform that procedure.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient and the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient-management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

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## Parameter Guidelines: (18) Adjunctive therapies parameter

## ICD-10-CM

*K00 Disorders of tooth development and eruption*  
*K02 Dental caries*  
*K03 Other diseases of hard tissues of teeth*  
*K04 Diseases of pulp and periapical tissues*  
*K05 Gingivitis and periodontitis*  
*K06 Other disorders of gingival and edentulous alveolar ridge*  
*K08 Other diseases and conditions of the teeth and supporting structures*  
*K11 Diseases of the salivary glands*  
*K12 Stomatitis and other oral lesions*  
*K13 Other diseases of lip and oral mucosa*  
*K14 Diseases of the tongue*  
*M26 Dentofacial anomalies, including malocclusion*  
*M27 Diseases of the jaws*  
*S01.8 Tooth (broken) uncomplicated or complicated*

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Limited clinical conditions outside of prosthodontics directly associated with a current treatment plan 2. Patient request/anxiety 3. Patient care/comfort 4. Professional referral 5. Cost containment	1. Eliminate or manage the diagnosed clinical condition 2. Minimize operative procedures to patient 3. Reduce anesthetic exposure 4. Reduce patient discomfort/pain 5. Eliminate or prevent an emergency condition 6. Facilitate prosthodontic care plan completion 7. Optimize esthetic and functional outcomes	1. Severity of condition treated 2. Preexisting systemic disease 3. Patient noncompliance with pre and/or postoperative instructions 4. Known risks to the provided therapy

## Specialty performance assessment criteria

Standards of care	Favorable outcomes	Known risks and complications
1. Informed consent procedure 2. Endodontic procedures 3. Periodontal procedures 4. Orthodontic procedures 5. Oral and maxillofacial surgical procedures 6. Demonstrated clinician competence in the procedure performed 7. Referral to an appropriate specialist for treatment of complications/failure to achieve therapeutic goals 8. Patient education	1. Elimination of emergency condition 2. Successful elimination or management of clinical condition 3. Minimal anesthetic exposure 4. Minimize operative exposure 5. Minimize pain/recovery periods 6. Minimize patient anxiety	1. Exacerbation of condition 2. Failure to manage or eliminate clinical condition 3. Risks and complications associated with indicated adjunctive care 4. Need for further advanced care referral

**Selected References (Adjunctive Therapies Parameter)**

Literature references for the Adjunctive Therapies Parameter cover all areas of dentistry and would be too extensive to list. Members are encouraged to be conversant with the literature regarding indication, risks, reported success, and potential complications for every procedure.

**(19) Terminal Dentition Parameter****Preface**

Terminal dentition describes a condition in which there are insufficient teeth to maintain function, and the arch, as a whole, will transition to the edentulous state. The example etiologies might be periodontal disease, caries, trauma, insufficient tooth structure to maintain function, prosthodontic discomfort, and/or patient desires. Transition to total edentulism should only be considered when

the patient is fully informed of all variables (e.g., prognosis of teeth, chance of success measured against longevity of treatment) and consequences that affect the value of treatment. Treatment options designed to extend the time with the remaining teeth in an effort to postpone the transition to the edentulous state should be discussed with the patient. These options include but are not limited to dental implant-retained or -supported restorations. Patient desires and expectations must be considered in conjunction with the professional knowledge and judgment of the prosthodontist.

The decision to remove one or more teeth has a multifactorial rationale ranging from patient preferences, cost, prosthetic need, tissue preservation, reduction of infection/disease, medical necessity, and inadequate restorative prognosis. Since the removal of a tooth/teeth is an irreversible, permanent act, the decision process must include a rigorous review of the myriad results of such treatment in both the short and long term. Patient expectations must be balanced with the realities of tooth removal, including the ongoing costs of long-term prosthodontic rehabilitation and maintenance, as well as reduction in overall function depending on the prosthodontic treatment anticipated. Proper imaging records are critical in establishing an accurate prognosis based on the presenting anatomic factors and patient expectations since all information will be lost after extraction unless previously recorded. Advanced imaging and fabrication technologies are useful in improving the patient experience.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

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## Parameter Guidelines: (19) Terminal dentition parameter

## ICD-10-CM

*K08.4, Partial loss of teeth (Partial edentulism)*

*K08.401 Partial loss of teeth, unspecified cause, class I (Partial Edentulism Class I)*

*K08.402 Partial loss of teeth, unspecified cause, class II (Partial Edentulism Class II)*

*K08.403 Partial loss of teeth, unspecified cause, class III (Partial Edentulism Class III)*

*K08.404 Partial loss of teeth, unspecified cause, class IV (Partial Edentulism Class IV)*

*K08.409 Partial loss of teeth, unspecified cause, unspecified class*

*Completely dentate—All Prosthodontic Diagnostic Index Classifications*

The specific determinants of classifications for the Prosthodontic Diagnostic Index for Completely Dentate and Partial Edentulism can be found in the ICD-10-CM; some disease categories and specific examples are listed below:

*G47.63 Sleep disorders, sleep-related bruxism*

*Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding*

*K00 Disorders of tooth development and eruption*

*K02 Dental caries*

*K03 Other diseases of hard tissues of teeth*

*K04 Diseases of pulp and periapical tissues*

*K05 Gingivitis and periodontitis*

*K06 Other disorders of gingival and edentulous alveolar ridge*

*K08 Other diseases and conditions of the teeth and supporting structures*

*K12 Stomatitis and other oral lesions*

*M26 Dentofacial anomalies, including malocclusion*

*M27 Diseases of the jaws*

*S01.8 Tooth (broken) uncomplicated or complicated*

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Inadequate mastication	1. Improved mastication	1. Dyskinesia
2. Pain/discomfort	2. Reduction of pain/discomfort	2. Preexisting systemic conditions
3. Inadequate esthetics	3. Esthetics	3. Medications
4. Inadequate support of TMJ and orofacial muscles	4. Occlusal rehabilitation	4. Hyperactive gag reflex
5. Psychosocial factors	5. Improved support of TMJ and orofacial muscles	5. Xerostomia
6. Unsatisfactory existing prostheses	6. Positive psychosocial response	6. Increased salivation
7. Lack of intra and interarch integrity and stability	7. Restore intra and interarch integrity and stability by replacement of teeth and associated structures	7. Periodontal disease
8. Questionable prognosis	8. Improved tooth form and function	8. Endodontic complications
(a) Loss of tooth structure/integrity	9. Improved treatment prognosis	9. Occlusal factors
(b) Periodontally compromised	10. Improved prosthetic support or retention	10. Skeletal factors
(c) Endodontically compromised	11. Transitional restoration	11. Inadequate tooth structure
9. Significance of tooth position	12. Arrest oral disease progression	12. Parafunctional habits
10. Systemic factors	13. Improved phonetics	13. Caries history and caries risk level
11. Oral health history factors that may adversely influence the success of prosthodontic care		14. Psychosocial factors
12. Inadequate phonetics		15. Preexisting tooth position and alignment
		16. Inadequate hard and/or soft tissue
		17. Unrealistic patient expectations
		18. Tongue thrust



Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Preprosthetic preparation (a) Appropriate nonsurgical evaluation (b) Appropriate surgical evaluation (c) Appropriate endodontic evaluation (d) Appropriate periodontal evaluation (e) Appropriate orthodontic evaluation	1. Improved mastication 2. Improved speech 3. Improved esthetics 4. Improved swallowing 5. Restored TMJ and orofacial muscle support associated with neuromuscular function	1. Refractory patient response 2. Speech alterations 3. Unacceptable esthetics 4. Unrealistic patient expectations 5. Materials failure/incompatibility 6. Biomechanically induced implant complications
2. Transitional FPD prostheses [D6253, D6793 CDT 2019]	6. Positive psychosocial response 7. Improved comfort	7. Difficulty in chewing and/or swallowing 8. TMJ and/or orofacial muscle dysfunction
3. Transitional RPD prostheses [D5211, D5212, D5820, D5821 CDT 2019]	8. Satisfactory patient adaptation 9. Improved intra and interarch integrity and stability	9. Alterations in taste perception 10. Allergic response
4. Transitional complete denture [D5130, D5140, D5810, D5811 CDT 2019]	10. Improved nutrition 11. Improved oral health-related quality of life	11. Degradation of supporting structures 12. Tongue thrust
5. Transitional implants and associated prostheses [D6000-D6199 CDT 2019]		
6. Implant-supported or -retained prostheses [D6000-D6199 CDT 2019]		
7. Maintenance of existing prostheses [D5410-D5899 CDT 2019]		
8. Pretreatment follow-up [D5410-D5899 CDT 2019]		
9. Patient education		
10. Informed consent		

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## **(20) Recall, Maintenance, and Supportive Care Parameter**

### **Preface**

Patients need recall, maintenance, and supportive care whether they are completely dentate or have some degree of edentulism. The American College of Prosthodontists has established the first clinical practice guidelines (CPGs) for patients with tooth- or implant-borne restorations. This was developed by a panel of experts appointed by the ACP, American Dental Association (ADA), Academy of General Dentistry (AGD), and American Dental Hygienists Association (ADHA), who reviewed and discussed two systematic reviews on the subject. The CPGs include patient recall, professional maintenance, and patient home maintenance, which was further divided based on removable or fixed prosthesis design. Reference to these CPGs provides the necessary background information that substantiates this prosthodontic parameter. The goal is prevention of disease, establishment of health, and minimization of prosthetic biological and mechanical complications before, during, and after prosthodontic care.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factor(s) that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient, the need for future replacements and revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include documentation of objective findings, diagnosis, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

The diagnostic and procedural codes listed throughout this section may not be all-inclusive and should serve as practice guidelines only. ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) diagnostic codes may change yearly and must be reviewed and updated annually to ensure accuracy. Specific diagnoses must be obtained from a current, recognized ICD-10-CM code source and substantiated by documentation in the dental record. Procedural codes listed throughout this section serve as a guide, which may be applicable to the treatment performed or management modality chosen. These may not be the most recent, applicable, or acceptable codes. Some dental/medical insurance providers have billing conventions unique to their organizations. It is the provider's responsibility to be aware of these unique situations.

Current Procedural Terminology (CPT) codes, the recognized codes for dental/medical billing, are revised yearly and must be reviewed and updated annually to ensure accuracy. The recent codes are accepted by dental/medical insurance providers and should be obtained from the current year's version of the American Medical Association (AMA) CPT Manual. Current Procedural Terminology ©2019 American Medical Association. All rights reserved.

Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years (previously every 5 years) and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

## Parameter Guidelines: (20) Recall, maintenance, and supportive care parameter

## ICD-10-CM

*Refer to Completely Dentate, Partial Edentulism, and Complete Edentulism for associated diagnostic codes*

*Refer to the clinical practice guidelines for recall and maintenance of patients with tooth- and implant-borne prostheses (Bidra et al, 2016)*

*Refer to ongoing risk assessment parameters for patients with diseases that affect prosthodontic care*

*Refer to associated national and international organization guidelines (e.g., Academy of Osseointegration, European Association for Osseointegration, American Academy of Periodontology, International Team for Implantology, etc.)*

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Indications associated with Comprehensive Assessment and Limited Assessment Parameters	1. Establish oral and systemic health status	1. Severity of the addressed condition
2. Indications associated with Completely Dentate Patient, Partially Edentulous Patient, or Completely Edentulous Patient Parameters	2. Promote systemic and oral health	2. Preexisting systemic disease
3. Clinical conditions outside of prosthodontics directly associated with a previous or current treatment plan	3. Reduce systemic and oral disease risk	3. Patient noncompliance with postoperative instructions
4. Patient care/comfort	4. Establish an individualized patient recall program based on patient risk	4. Known risks to provided therapy
5. Professional referral	5. Accurate diagnosis	
6. Cost containment	6. Develop an accurate prognosis for treatment of diagnosed condition(s)	
	7. Identify the factors that would influence new diagnosis, treatment planning, and treatment completion, including risk assessment	
	8. Develop alternative treatment plans	
	9. Patient education—inform patient of findings, diagnosis, and care options, including risks and benefits of recommended care	
	10. Maintain healthy dental structures	
	11. Maintain healthy supporting structures	
	12. Eliminate or manage the diagnosed clinical condition	
	13. Minimize operative procedures to patient	
	14. Minimize surgical procedures	
	15. Reduce anesthetic exposure	
	16. Reduce patient discomfort/pain	
	17. Eliminate or prevent an emergency condition	
	18. Recognize and diagnose biologic conditions or complications associated with previous care	
	19. Recognize and diagnose biomechanical conditions or complications associated with previous care	
	20. Address patient concerns	

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Informed consent procedure	1. Established, individualized patient recall program based on patient risk	1. See risks and complications associated with the Completely Dentate Patient, Partially Edentulous, or Complete Edentulism Parameters
2. Demonstrated competence in the procedure performed	2. See outcomes associated with the Completely Dentate Patient, Partially Edentulous Patient, and Completely Edentulous Patient Parameters	2. Progression of disease/condition
3. Referral to an appropriate specialist for treatment of complication/failure to achieve therapeutic goals	3. Successful management of diagnosed clinical condition	3. Unsuccessful management of disease/condition
4. Patient education	4. Minimize the progression of disease/condition	4. Progression of disease condition
	5. Minimize the incidence of emergent conditions and need for prosthodontic and adjunctive care	5. Emergent conditions requiring prosthodontic and/or adjunctive care
	6. Minimize pain/recovery periods	6. Need for referral
	7. Minimize patient anxiety	7. Patient noncompliance

### **Selected References (Recall, Maintenance, and Supportive Care Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

In general, relevant references pertain to clinical factors associated with diagnosis, planning, treatment, and supportive care. Ongoing clinical assessments must lead to recognition of indications, risks, benefits, and completion of care as described in numerous prosthodontic parameters. References from these parameters may be used to supplement this bibliography.

Afshari FS, Campbell SD, Curtis DA, et al: Patient-specific, risk-based prevention, maintenance, and supportive care: a need for action and innovation in education. *J Prosthodont* 2019;28:775-783

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## **(21) Leading Care and Collaborative Practice Parameter**

### **Preface**

Patient assessment and diagnosis leads to the recognition of care need and care complexity for completely dentate, partially edentulous, and completely edentulous patients. Through comprehensive assessment and data gathering, a diagnosis, assessment of risk and prognosis, and development of a patient-centered treatment plan can occur.

The patient's clinical conditions and desires may be met through interdisciplinary communication, collaboration, and care. The prosthodontist leads and collaborates with other health care professionals as determined by the prosthetic plan, which identifies the necessary natural tooth or implant-supporting structures, as well as the indicated adjunctive procedures. Care recommendations and procedures determined by the prosthetic goal may be provided by clinicians other than the prosthodontists. During this collaborative interaction and care, the prosthodontist is responsible for determining the relevance and advisability of these recommendations and procedures toward the patient's comprehensive care completion.

Four core competencies are recognized for interspecialty collaborative practice:

1. Work with individuals of other professions to maintain a climate of mutual respect and shared values (values/ethics for interprofessional practice)
2. Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations (roles/responsibilities)
3. Communicate with patients, families, communities, and professionals in health care and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease (interprofessional communication)
4. Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable (teams and teamwork)

Prosthodontists lead care that includes collaboration in a positive environment to safely and effectively meet patient needs and desires related to esthetics and function.

### **General Criteria and Standards**

*Informed Consent:* All prosthodontic procedures should be preceded by the patient's consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), goals of treatment, the known benefits and risks of the procedure(s), the factors that may affect the known risks and complications, the treatment options, the need for active maintenance by the patient and the need for future replacement/revisions, and the favorable outcome.

*Documentation:* Parameters of care for prosthodontic procedures include the documentation of objective findings, diagnosis, reasonable care options, and patient management intervention.

### **Coding and Nomenclature**

Diagnostic and procedural codes have been included in the Parameters of Care for the Specialty of Prosthodontics for general guidance only. Codes include those completed by the prosthodontists as well as other collaborating health care providers. The codes listed may not be all-inclusive or represent the most current or specific choices. The inclusion of codes is not meant to supplant the use of current coding books or to relieve practitioners of their obligation to remain current in diagnostic and procedural coding. The ACP Committee on Parameters of Care and Committee on Nomenclature do not endorse the use of this document as a coding manual.

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Current Dental Terminology (CDT) codes, the recognized codes for dental/medical billing, are revised every 3 years and should be reviewed and updated whenever the most recent version of the American Dental Association (ADA) CDT Manual is published. Current Dental Terminology ©2019 American Dental Association. All rights reserved.

## Parameter Guidelines: (21) Leading care and collaborative practice parameter

## ICD-10-CM

*K08.1 Complete loss of teeth (Partial Edentulism)**K08.101 Complete loss of teeth, unspecified cause, class I (Complete Edentulism Class I)**K08.102 Complete loss of teeth, unspecified cause, class II (Complete Edentulism Class II)**K08.103 Complete loss of teeth, unspecified cause, class III (Complete Edentulism Class III)**K08.104 Complete loss of teeth, unspecified cause, class IV (Complete Edentulism Class IV)**K08.109 Complete loss of teeth, unspecified cause, unspecified class**K08.4 Partial loss of teeth (Partial Edentulism)**K08.401 Partial loss of teeth, unspecified cause, class I (Partial Edentulism Class I)**K08.402 Partial loss of teeth, unspecified cause, class II (Partial Edentulism Class II)**K08.403 Partial loss of teeth, unspecified cause, class III (Partial Edentulism Class III)**K08.404 Partial loss of teeth, unspecified cause, class IV (Partial Edentulism Class IV)**K08.409 Partial loss of teeth, unspecified cause, unspecified class**Completely dentate—All Prosthodontic Diagnostic Index Classifications*

The specific determinants of the PDI for Completely Dentate and Partial Edentulism can be found in the ICD-10-CM; some disease categories and specific examples are listed below:

*G47.63 Sleep disorders, sleep-related bruxism**Z65.9 Problems related to unspecified psychosocial circumstances: bruxism and tooth grinding**K00 Disorders of tooth development and eruption**K02 Dental caries**K03 Other diseases of hard tissues of teeth**K04 Diseases of pulp and periapical tissues**K05 Gingivitis and periodontitis**K06 Other disorders of gingival and edentulous alveolar ridge**K08 Other diseases and conditions of the teeth and supporting structures**K11 Diseases of the salivary glands**K12 Stomatitis and other oral lesions**K13 Other diseases of lip and oral mucosa**K14 Diseases of the tongue**M26 Dentofacial anomalies, including malocclusion**M27 Diseases of the jaws**S01.8 Tooth (broken) uncomplicated or complicated*

Indications	Therapeutic goals	Risk factors affecting quality of care
1. Clinical conditions associated with a current treatment plan	1. Care goals associated with completely dentate patients	1. Condition to be addressed
2. Patient request/anxiety	2. Care goals associated with partially edentulous patients	2. Preexisting systemic disease
3. Patient care/comfort	3. Care goals associated with completely edentulous patients	3. Known risks associated with the provided therapy
4. Professional referral	4. Eliminate or manage the diagnosed clinical condition	4. Patient noncompliance with pre and/or postoperative instructions
	5. Minimize operative procedures to patient	
	6. Reduce anesthetic exposure	
	7. Reduce patient discomfort/pain	
	8. Eliminate or prevent an emergency condition	
	9. Facilitate prosthodontic care plan completion	
	10. Optimize esthetic and functional outcomes	

Standards of care	Specialty performance assessment criteria	
	Favorable outcomes	Known risks and complications
1. Recognize values/ethics of leadership and team work in collaborative practice	1. Favorable outcomes for completely dentate patients	1. Risks and complications associated with the completely dentate patient
2. Identify patient-centered roles and responsibilities for effective patient care	2. Favorable outcomes for partially edentulous patients	2. Risks and complications associated with the partially edentulous patient
3. Effective collaborative communication	3. Favorable outcomes for completely edentulous patients	3. Risks and complications associated with the completely edentulous patient
4. Clinical leadership and teamwork among health professionals for patient-centered care	4. Positive patient attitudes/perceptions	4. Negative patient attitude
5. Informed consent for prosthodontic procedures	5. Positive clinician attitudes/perceptions	5. Negative clinician attitude
6. Informed consent for procedures adjunctive to prosthodontic care	6. Effective collaborative behavior	6. Compromised patient/population/public health
7. Endodontic procedures	7. Improved performance in practice	7. Compromised implementation of patient-centered care
8. Periodontal procedures	8. Effective performance as a team leader	8. Exacerbation of condition
9. Orthodontic procedures	9. Effective performance as a team member	9. Failure to manage or eliminate clinical condition
10. Oral and maxillofacial surgical procedures	10. Improved health and system outcomes	10. Risks and complications associated with indicated adjunctive care
11. Demonstrated clinician competence in the procedure performed	11. Improved individual patient health	11. Need for further advanced care referral
12. Referral to an appropriate specialist for treatment of complications/failure to achieve therapeutic goals	12. Improved population/public health	
13. Patient education	13. Improved implementation of patient-centered care	
	14. Efficient provision of care	
	15. Cost-effectiveness	

### **Selected References (Leading Care and Collaborative Practice Parameter)**

This list of selected references is intended only to acknowledge some of the sources of information drawn upon in the preparation of this document. Citation of the reference material is not meant to imply endorsement of any statement contained in the reference material, or that the list is an exhaustive compilation of information on the topic. Readers should consult other sources to obtain a complete bibliography.

In general, relevant references pertain to clinical factors associated with diagnosis, planning, treatment, and supportive care. Communication and collaboration with other health care professionals is recognized and emphasized to best meet patient care needs. Clinical references cover all areas of dentistry, are extensive, and related to prosthetically driven goals for care. Clinical assessments must lead to recognition of indications, risks, benefits, and completion of care as described in numerous prosthodontic parameters. References from these parameters may be used to supplement this bibliography.

Afshari FS, Campbell SD, Curtis DA, et al: Patient-specific, risk-based prevention, maintenance, and supportive care: a need for action and innovation in education. *J Prosthodont* 2019;28:775-783

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