



Subspecialty Recognition of Maxillofacial Prosthetics

The National Commission on Recognition of Dental Specialties and Certifying Boards (NCRDSCB) recognizes Prosthodontics as the specialty within dentistry that pertains to esthetic and functional rehabilitation of missing teeth and associated structures.¹ The NCRDSCB is comprised of representatives from all the recognized advanced dental education programs, an equivalent number of general dentists, and one public member. The American Dental Association (ADA) Board of Trustees, as the national sponsoring organization of general dentistry, appoints the general dentists and the public member. Similarly, the sponsoring organization of each specialty appoints a corresponding representative. Currently, there are no subspecialties recognized in dentistry; however, the NCRDSCB is considering support to define a path for such recognition. Maxillofacial prosthetics, which requires additional subspecialized training within the extensive and complex field of prosthodontics, would greatly benefit as an officially recognized subspecialty when the process is developed.

The discipline of maxillofacial prosthetics falls under the scope of prosthodontics but includes additional clinical skills, knowledge, and experience in the rehabilitation of patients who have acquired and congenital deformities of the head and neck due to cancer, surgery, trauma, or developmental defects. Fortunately, maxillofacial prosthodontists are key providers in the rehabilitative pathway of these patients at major cancer centers, trauma centers, hospitals, and in the military. In contrast to prosthodontists and all other disciplines in dentistry, maxillofacial prosthodontists treat a unique population of patients with missing or defective craniofacial anatomy through a variety of medically necessary prostheses and restorative procedures to improve quality of life and normal orofacial function. The scope of prosthetic services provided by maxillofacial prosthodontists commonly includes rehabilitation of maxillary, mandibular, palatal, palatovelopharyngeal, tongue, cleft lip and palate, and facial defects. Common prostheses include obturator prostheses, resection prostheses, palatal lift prostheses, craniofacial implants, speech aids, surgical stents, radiation devices, trismus devices, auricular, nasal and orbital prostheses, or a combination thereof.

Head and neck cancers account for 3-4% of all cancers in the United States, and it is estimated that approximately 65,000 people will develop head and neck cancer in 2020.² Over the past three decades, there has been an increased burden of human papilloma virus (HPV) related cancers that affect a much younger population and likely account for 70% of the oropharyngeal cancers.^{3,4} Consequently, there is a growing number of younger survivors who live with long-term morbidities as a result of cancer treatment with surgery, adaptive radiation, and chemotherapy.



In addition to rehabilitation of craniofacial defects, maxillofacial prosthodontists play a key role in managing acute and chronic oral morbidities such as oral mucositis, xerostomia, trismus, dysphagia, dysgeusia, compromised speech, radiation-induced caries, chronic pain, burning mouth syndrome, neurotoxicity, and osteoradionecrosis.^{5,6} Furthermore, as novel drug therapies are introduced for managing other cancers, such as immunotherapy, multi-drug targeted therapies, anti-resorptive and anti-angiogenic drugs, maxillofacial prosthodontists are instrumental in evaluating and managing the oral toxicities as well as rehabilitating patients with catastrophic morbidities such as medication-related osteonecrosis of the jaw.

Most of the patients with maxillofacial rehabilitation needs struggle daily with essential life functions such as swallowing, articulation, mastication, as well as self-esteem and body image.⁷ Nearly 90% of malignant head and neck cancers result in varying degrees of facial disfigurement or compromised oral function.⁸ Although all cancers are life threatening, head and neck cancers also threatens one's identity, causing profound psychological trauma.⁹⁻¹¹ Patients with head and neck cancer report a heightened sense of shame and self-consciousness resulting in psychologically destructive stigma, depression, reduced social functioning, and one of the highest suicide rates amongst cancers.^{10, 12-17} Maxillofacial prosthetic rehabilitation plays a sentinel role in restoring a state of psychosocial and functional normalcy in these patients.

To manage such unique needs, maxillofacial prosthodontists are trained extensively in craniofacial reconstruction and rehabilitation, operating room protocols, and coordination with multidisciplinary care teams to include multispecialty oncologists, surgeons, speech pathologists, radiologists, anaplastologists, social workers, and other dentists. While residents in a 3-year Commission on Dental Accreditation (CODA) accredited prosthodontics training program receive preliminary exposure to maxillofacial prosthetics, it is important to note that maxillofacial prosthodontists take an additional year of CODA accredited fellowship-based training in the field of maxillofacial prosthetics. CODA conducts site visits specifically for accreditation of these fellowship programs based on the additional standards for maxillofacial prosthetics delineated in the CODA prosthodontic standards.¹⁸ The goals of maxillofacial prosthetics training are to provide in-depth knowledge and competency in clinical skills pertaining to differential diagnosis, etiology, risk assessment, multidisciplinary treatment, supportive care, prognosis, treatment sequela, and treatment planning; subsequently, the implementation of pre-prosthetic, prosthetic, and post-prosthetic management of cranial and orofacial defects. Advancements in digital technologies, laboratory procedures, and biomaterials used in maxillofacial prosthetics are also included within the maxillofacial prosthodontist's area of expertise. The unique skills acquired by formal education and clinical experience are distinct and essential to achieve optimum patient care for this niche of patients with more complex maxillofacial rehabilitation needs.



Today, there are a total of seven CODA accredited maxillofacial prosthetics (civilian and military) training programs in the United States.¹⁸ While a large percentage of treatment for patients with maxillofacial prosthetic needs are performed at these training centers, access to care can be a challenge due to travel and financial restraints. The resultant economic impact to the individual and society can be profound. While head and neck cancers are one of the most expensive tumors to treat, the lack of adequate rehabilitation and reimbursement is reflected by much higher indirect costs. More than half of the patients with head and neck cancer without adequate prosthetic rehabilitation indicate a status of being disabled, and only 48% return to work.¹⁹⁻²² Unemployment, disability insurance, lower wages, and loss of productivity of patients and caregivers are a few examples of indirect costs. Furthermore, patients are commonly unable to afford the expenditures of their maxillofacial prosthetic rehabilitation with ongoing, often financially burdensome, multidisciplinary treatment due to other out-of-pocket expenses such as travel expenses to geographically distant major cancer treatment centers. Thus, lack of adequate prosthetic rehabilitation opportunities has inevitable negative societal and economic consequences.

Access to care for many patients who require maxillofacial prosthetics outside of well-established medical treatment facilities can be challenging due to the lack of colloquial and formal recognition of the subspecialized niche of maxillofacial prosthetics. Just as specialty recognition is essential for outlining practices, the recognition of subspecialties is equally as important to specify the providers' focused knowledge, experience, and scope of practice. Similar to a surgeon with additional training in oncologic surgery who is recognized within the medical field as a subspecialist, a recognized maxillofacial prosthetics subspecialty is of great benefit for patients who are at the core of multidisciplinary rehabilitation team efforts. Subspecialty status will be ultimately beneficial to patients for understanding their provider's precise involvement in the multidisciplinary care team, and more importantly appropriate recognition by the third party or government (Centers for Medicare and Medicaid Services) reimbursements. Under the current dental specialties recognition model, maxillofacial prosthetics has an ad-hoc position within prosthodontics rather than an officially established subspecialty status.

The current dental specialty recognition does not adequately consider the evolving nature of the medical profession. Many patients requiring maxillofacial prosthetic services are treated in a medical necessity pathway with life-essential orofacial prostheses and require financial reimbursement through medical pathways for the complex skillsets and custom prostheses provided by a maxillofacial prosthodontist. Routinely, compensation for maxillofacial prosthetics is billed through International Classification of Diseases version 10 and Current Procedural Terminology (CPT) Medical Codes. Procedures with listed CPT codes are generally preauthorized and reimbursable, however, maxillofacial prosthodontists must frequently perform procedures that are not listed or use unlisted maxillofacial codes that may not be reimbursed as a result. Therefore, reimbursement remains a challenge for



hospitals, non-hospital-based treatment facilities, and private maxillofacial prosthetics practices, which is ultimately detrimental to all stakeholders that provide or receive care.

To address reimbursement issues at the national level, the American College of Prosthodontists (ACP) is sponsoring initiatives via congressional and state-driven advocacy. These efforts are led by members of the sponsoring sister organization, the American Academy of Maxillofacial Prosthetics (AAMP), which is the association of prosthodontists that the ACP recognizes to represent the care for patients with acquired, congenital, and developmental defects of the head and neck. To foster the relationship between these organizations, an AAMP Past President has a position as the Maxillofacial Director on the ACP Board of Directors to provide guidance on key subjects and initiatives.

It is the position of the American College of Prosthodontists that the affirmation of maxillofacial prosthetics as a subspecialty within prosthodontics will emphasize the growing importance of specialized dental medicine within the medical community. Consequently, this acknowledgement will enhance referral networks within the dental and medical communities and promote awareness through advertisement of medical facilities that employ maxillofacial prosthodontists. It further strengthens the public and professional perception of the medically integrated practice of dentistry and uniqueness of the specialty of prosthodontics. The subspecialty recognition of maxillofacial prosthetics will truly bridge medicine and dentistry in achieving common goals in maxillofacial rehabilitation as distinguished by successful patient outcomes.

Among the twelve specialties that are currently recognized, prosthodontics is uniquely positioned to allow subspecialization of maxillofacial prosthetics. The official recognition by the National Commission on Recognition of Dental Specialties and Certifying Boards of this subspecialty is crucial to advance the cause of maxillofacial prosthetics, to reduce the direct and indirect economic burden of patients with maxillofacial prosthetic needs, and ultimately to improve access to care for treating a deserving and challenging patient population.

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