

## Need for Innovations in Maxillofacial Prosthodontics in Pakistan

Sir,

Congenital or acquired debilitating diseases of the maxillofacial region and the consequent surgical treatment have a huge impact on the physical and psychological well-being of the affected individuals. Cancerous conditions of the lip and oral cavity have augmented the acquired disease burden, placing it in the top 10 categories of malignancies affecting the local population.<sup>1</sup> Surgery or radiotherapy of such lesions may lead to severe debilitation, poor aesthetics, compromised mastication, altered taste sensation, feeble oral/nasal/auricular functions, and psychological depression. Rehabilitation of such patients requires planning with a multidisciplinary approach, through surgical reconstruction or prosthetic restoration.

Maxillofacial Prosthodontics (MFP) can play a crucial role in the integration and provision of pertinent services to the affected individuals. Unfortunately, maxillofacial prosthodontists are not satisfied with the existing training programmes, infrastructure, and professional visibility at the designated forums for pre-, intra-, and post-surgical involvement as care-givers to cancer patients.<sup>2,3</sup> This indicates a dire need for 1-2 years of specialised training with the curriculum of relevant developmental, surgical, prosthodontics, implant dentistry, and advanced digital technological (ADT) domains with an innovative approach to accommodate the varied patterns of each debilitation.

Adequate knowledge of conventional techniques for MFP is mandatory to build ethical practice. Furthermore, literature indicates the utter need for innovation in conventional techniques, especially pertaining to nasal,<sup>4</sup> auricular, and facial prostheses. Although enhanced accuracy can be achieved through the acquisition of ADTs,<sup>3</sup> availability of adequate facilities for anatomic data acquisition, followed by expertise in prosthesis designing on software and manufacturing are still required. ADTs appear promising in prompt planning, inclusion of digital anatomic libraries and reconstruction. However, a skilled dental technician must be familiar with digital workflow as well as possess adequate artistic talent for the final customisation of prosthesis.

Despite the development of ADTs, individual software may lack minute details due to their generalised applications and require superimposition of images to attain the optimum results. In addition, existing studies that compare the conventional techniques with ADTs comprise of limited sample size, lack of description of possible shortfalls, absence of recommended protocols, and dearth of description for desirable outcomes among the two approaches.<sup>5</sup>

Thus, there is an equivalent need to innovate the conventional as well as digital techniques for MFP's broader, convenient and mutual utilisation and improvement of quality of care to the affected individuals. The onus to accommodate the progressive change lies upon the governing health sector to facilitate appropriate international and local training of maxillofacial prosthodontists. It should also implement SOPs for mandatory pre-surgical prosthodontic consultation of any maxillofacial surgical procedure. In addition, introduction of independent, didactic postgraduate or integrated programmes can improve the services delivered to the end-users. Likewise, financial support in manufacturing and commercialisation of maxillofacial health technology innovations can be instrumental in elevating the standard of care. Industrial support for the local production and marketing of such innovations may reduce the burden of total treatment on general population and shall boost the national health industry.

### COMPETING INTEREST:

The authors declared no competing interests.

### AUTHORS' CONTRIBUTION:

HZR, MNS: Substantial contributions to the conception or design of the work acquisition, analysis, or interpretation of data for the work, drafting the work, revising it critically for important intellectual content, and final approval of the version to be published.

All authors agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Received: March 26, 2023; Revised: May 22, 2023;  
Accepted: May 26, 2023  
DOI: <https://doi.org/10.29271/jcpsp.2023.11.1335>

