

## Dental Implantology and Undergraduate Curricula

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Implantology has revolutionized the field of dentistry by offering a durable and natural-looking solution for tooth replacement. Dental implants provide numerous benefits, including improved chewing ability, enhanced speech, preservation of jawbone structure, and a boost in self-confidence and overall quality of life for individuals with missing teeth. Dental implants have a high success rate and can last for many years with proper care.

Dental implants have become an integral part of modern-day dental practices. While specialized training and expertise are required for complex implant cases, general dentists can handle many aspects of dental implant treatment, from initial evaluation to restoration and maintenance. Their role is vital in delivering comprehensive dental care and ensuring the success and longevity of dental implant procedures. Here's an overview of the implant-related responsibilities of a general dentist.

- **Patient Evaluation and Treatment Planning:** General dentists are often the first point of contact for patients seeking dental implants. They evaluate the patient's oral health, review their medical history, and assess their suitability for implant treatment. This includes examining the condition of the jawbone, gums, and adjacent teeth, as well as considering factors like overall health and any existing dental issues.
- **Implant Placement:** While surgical placement of dental implants is often performed by dental specialists, some general dentists have received additional training and possess the skills to perform straightforward implant surgeries themselves. General dentists who offer implant placement may place implants in selected cases, depending on their expertise, comfort level, and the complexity of the procedure.
- **Restoration:** Once the implant has integrated with the jawbone during the healing period, a general dentist takes over the restoration phase. They design and fabricate the crown, bridge, or denture that will be attached to the implant, ensuring a proper fit, aesthetics, and functionality. This may

involve taking impressions, selecting the appropriate materials, and collaborating with dental laboratories to create the final restoration.

- **Prosthetic Maintenance and Follow-up:** General dentists are responsible for the long-term maintenance of dental implants and the surrounding oral tissues. This includes regular check-ups, professional cleanings, and assessments of the implant's stability and the health of the surrounding gums. They also educate patients on proper oral hygiene practices and provide guidance on protecting and caring for the implant to maximize its longevity.
- **Ongoing Monitoring and Treatment:** General dentists monitor the overall oral health of patients with dental implants, ensuring that the implants and surrounding structures remain healthy over time. In case of any issues or complications, such as implant failure, peri-implantitis (inflammation around the implant), or restoration damage, general dentists can diagnose the problem and provide appropriate treatment or coordinate with specialists if necessary.
- **Referral and Collaboration:** In complex cases or situations requiring specialized expertise, a general dentist may refer patients to a dental implant specialist, such as an oral surgeon or periodontist. General dentists often collaborate closely with these specialists throughout the treatment process, sharing information and coordinating care for the patient's overall dental health.

Traditionally, implantology has been taught at the postgraduate level in most dental schools. However, in recent years, owing to a growing recognition of the importance of implantology, some dental schools have started incorporating implantology into their undergraduate dental curricula. It may probably be under the influence of a study published in European Journal of Dental Education which emphasizes that freshly graduating dentists must be well acquainted of theoretical and clinical aspects of dental implantology during their undergraduate education to better serve the patients requiring oral rehabilitation [1].

Following are just a few examples of world-renowned universities, and there are other dental schools worldwide that offer implant dentistry courses at the predoctoral level.

- **University of Birmingham, UK:** The University of Birmingham's dental school offers a predoctoral implantology program. Students have the opportunity to learn about implant dentistry, treatment planning, and the surgical and prosthetic aspects of implant placement.
- **University of Sydney, Australia:** The University of Sydney's dental school provides predoctoral students with an introduction to implant dentistry. Their curriculum includes theoretical and clinical training in implant surgery and restoration.
- **University of Toronto, Canada:** The University of Toronto's dental school incorporates implant dentistry into its undergraduate curriculum. They offer courses and hands-on training in implant surgery, prosthodontics, and implant-supported restorations.
- **University of Southern California USA:** Herman Ostrow School of Dentistry provides predoctoral students with a strong foundation in implant dentistry. Their curriculum includes lectures, preclinical exercises, and clinical experiences in implant placement, restoration, and prosthetics.
- **New York University, USA:** NYU College of Dentistry is known for its comprehensive implantology program, which includes didactic, preclinical, and clinical training in implant dentistry. They offer an extensive curriculum in implantology, covering topics such as treatment planning, surgical placement, and restoration of dental implants.

Incorporation of dental implants into undergraduate curricula was on the rise according to a report of deans of various Canadian and USA dental schools published way back in 2004 [2] but it has not yet been incorporated as a core component of the undergraduate curriculum in Pakistan despite increasing interest shown by the young students and stringent demand by the patients. Findings of a survey reveals that the existing approved BDS curriculum by PMDC has not outlined any requirements for minimum competency regarding dental implants and suggests that the basics knowledge pertaining to dental implants should be incorporated in the BDS curriculum [3].

Dental Educationalists and hierarchy of dental schools should ponder seriously on this issue for inclusion of this subject in the BDS curriculum. Incorporating implantology into the undergraduate curriculum will allow dental students to develop a foundation in this field and gain early exposure to implant-related procedures. However, it is important to note that the level of training provided at the undergraduate level may not be as comprehensive as that offered in postgraduate implantology programs. After graduation, dentists interested in pursuing implantology as a specialization may choose to pursue advanced education and training through

postgraduate programs, fellowships, or continuing education courses.

### Bibliography

1. Lang NP and De Bruyn H. "The rationale for the introduction of implant into the dental curriculum". *European Journal of Dental Education* 13.1 (2009): 18-23.
2. Fazal Ghani and Faisal Moeen. "Incorporating Implant Dentistry into Undergraduate Dental Curriculum: Need, Problems and A Simplified Implementation Strategy". *Journal of the Pakistan Dental Association* 4 (2011): 193-198.
3. Khan FR and Lone MM. "Oral Implantology Education in the Dental Colleges of Pakistan". *Journal of the Pakistan Dental Association* 25.4 (2016): 137-142.