



TRAINING STANDARDS IN IMPLANT DENTISTRY 2016¹

Foreword to TSID 2016

This revision of the 2012 document has been undertaken as its scheduled review was due, and, to align with the Faculty of General Dental Practice's (FGDP) policy of periodically reviewing all Standards.

The FGDP(UK) would like to thank the valuable input received from all external contributors in producing this revision, in particular, the Association of Dental Implantology (ADI), Professor Cemal Ucer of Edge Hill University and Dr Paul Stone of the Edinburgh Dental Institute.

This document aims to provide a summary of the training that a reasonable dental practitioner carrying out safe implant dentistry in the United Kingdom should undertake, before embarking upon patient care in this discipline. The working group considered whether a minimum number of completed implant cases undertaken during training should be stipulated. It was felt more appropriate that emphasis is given to undertaking an appropriate quality assured course, having an experienced mentor, maintaining a detailed record of the range of training received, having an experiential log, and complying with the principles of lifelong learning.

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¹ Document to be revisited in 2019

Introduction

Dental implants are used for the replacement of one or more missing teeth. Their insertion involves various surgical and restorative dental procedures; therefore, dentists placing implants must be competent in carrying out these procedures. The dentist must have undertaken suitable postgraduate training which has included mentored clinical implant placement and/or restoration.

Training in implant dentistry is available from a variety of providers including universities, royal colleges and hospitals. Courses are also run by individuals and commercial providers. This document describes the standards which should be met by such training courses in the United Kingdom.

These standards have been developed to ensure patient safety and protection. They should be used by dental teams and providers of training, to ensure consistency in the acquisition of knowledge and clinical skills for implant procedures, and to ensure good practice. They also serve as a reference point for the General Dental Council (GDC), in the consideration of patient complaints against dentists who have allegedly practised implant dentistry without the necessary competence.

The original standards for training dental teams who wish to practise implant dentistry were developed in December 2005 by a small working group convened by the GDC. The standards were revisited and updated in 2008, and again in 2011/2012 (see Annex for the list of contributors in 2012). Whilst the GDC initiated the development of these standards, this is not a GDC document. It is a shared publication from the group who developed it.

The standards development groups have always been independent of any commercial organisation; their remit being to develop, review and update the standards in light of developments in implant dentistry.

It is recognised that the practice of implant dentistry changes as new materials and techniques are developed. The training standards will be reviewed and updated as need be by the same or equivalent expert group in 2019.

The surgical procedure involves placing a small root analog of appropriate biocompatible material (the 'implant') into the patient's jawbone, and attaching a false tooth, teeth or denture to it. For some patients, the jawbone may need augmenting prior to or at the time of placement. It is essential that any patient considering having dental implant treatment receives a thorough assessment, treatment and maintenance plan, in order to give their informed consent before undergoing the procedure. The patient must receive sufficient information on the benefits, risks, costs, alternatives and likely prognosis.

The clinician should have an evidence-informed and patient-centered approach to the selection of techniques and materials and be satisfied that the manufacturer of materials is sufficiently stable and of adequate stature to be able to provide component parts for the foreseeable future. The clinician should also take responsibility for assessing the effects any implant features may have on the surrounding tissues.

Before undertaking implant treatment, the dentist should be familiar with The General Dental Council's Standards for the Dental Team. Principle 7, in particular, highlights the importance of the practitioner understanding their limitations and working within one's professional knowledge and skillset.

We draw the reader's attention to sub-standards 7.1, 7.2 and 7.3 which states that registrants must:

- 7.1 provide good quality care based on current evidence and authoritative guidance
- 7.2 work within their knowledge, skills, professional competence and abilities
- 7.3 update and develop their professional knowledge and skills throughout their working lives

THE STANDARDS

The scope of implant dentistry

Implant dentistry encompasses a variety of surgical and restorative dental techniques and procedures, but it can be broadly divided into two levels:

1. Replacement of missing dentition involving the straightforward placement and/or restoration of implants
2. Replacement of missing dentition involving the complex placement and/or restoration of implants

The Appendix provides guidance about 'Straightforward' and 'Complex' cases.

Replacement of dentition involving the straightforward placement and/or restoration of implants

Before undertaking implant treatment, a dentist must develop competence in the procedures involved in clinical assessment, treatment planning, and the placement and restoration of implants. The skills and knowledge necessary for competence should be developed through a training course in implant dentistry, with a suitably trained and experienced clinician acting as a mentor. Such a training course must constitute verifiable CPD, with concise aims and objectives, anticipated learning outcomes and quality controls. There must be documentary evidence available of the course and its successful completion, and a record detailing the clinical experience obtained in the course. Treatment offered and undertaken must be evidence-informed and patient-centered. The dentist must use contemporary decision-making processes to critically appraise new products and techniques before using them, and must ensure that they normally follow accepted practice. Dentists would need to be able to provide justification to support their use of any unconventional treatment protocols.

Subject to which part of implant treatment a dentist takes responsibility for the dentist should have the necessary skills to:

1. Clinically assess a patient's suitability for implant therapy and undertake a risk-benefit analysis, including the identification of any dental or medical conditions the patient has that could make them unsuitable for implant treatment or could complicate surgery.

2. Be able to determine if the complexity of the case falls within his/her clinical experience and know when to make an appropriate referral.
3. Communicate well with the patient, to ensure s/he:
 - is fully informed about other treatment options, and their relative indications and contra-indications;
 - is fully informed of the material risks in the recommended treatment plan and the advantages and disadvantages of using implant anchorage in restoring the appearance and function of their dentition;
 - gives consent at every stage of implant placement and restoration that is informed and valid.
4. Undertake appropriate imaging (in line with Ionising Radiation Medical Exposure Regulations - IRMER).
5. Use aseptic surgical techniques.
6. Raise mucoperiosteal flaps and suture.
7. Use autogenous bone harvested from the oral cavity or bone substitutes, for minor alveolar bone augmentation in the placement of implants.
8. Use appropriate pharmaceutical agents.
9. Undertake (where necessary) conventional restorative procedures.
10. Undertake straightforward implant-supported restorative procedures.
11. Diagnose and deal with complications occurring during or after treatment.
12. Monitor and maintain implants and restorations over time.
13. Carry out adequate record-keeping, documenting and auditing of all clinical activity.

The dentist must first have a good level of general dental knowledge (MJDF or equivalent), augmented by an in-depth underpinning knowledge of the above skills and processes, specifically:

1. Surgical anatomy of the maxilla, the mandible and the surrounding tissues.
2. Pathological processes that occur in the maxilla, the mandible and the surrounding tissues.
3. Physical or medical conditions that could make a patient unsuitable for implant treatment or could complicate surgery.

4. The implant and other treatment options available and their relative indications and contraindications for certain patient groups.
5. The various advantages and disadvantages of using implant anchorage in restoring the appearance and function of the dentition, including the technical, functional and cosmetic limitations.
6. The principles and process of obtaining valid patient consent prior to implant treatment.
7. Implant design, geometry and characteristics.
8. The sourcing of suitable materials.
9. The effective control of infection and principles of aseptic technique.
10. Appropriate pharmaceutical agents that might be needed.
11. The healing processes that normally occurs following surgery.

Replacement of dentition involving the complex placement and / or restoration of implants

A dentist must be experienced in the placement and/or restoration of straightforward implants, as described above, before progressing onto the treatment of complex cases. Some clinicians may possess all of the surgical and restorative skills needed to treat a complex case single-handedly, but this is the exception; therefore, it is likely that the planning and treatment of such cases will require a team approach. Different aspects of care may be undertaken by appropriately trained and experienced members of the multidisciplinary team.

The prosthodontic team should be competent in managing the occlusal scheme, including changes to the vertical dimension and position of teeth and how these changes interact with the existing dentition (if present) and the jaw relationships. The placement of implants with complex bone augmentation demands a high level of surgical experience and a significant ability to care for such patients. Dentists undertaking such treatment should have been trained and assessed by a suitably competent and experienced mentor within an appropriate structured programme: one that has enabled the dentist to achieve a standard in these specific techniques equivalent to trainees sitting a specialist examination in oral surgery. As with training for straightforward cases, appropriate documentation of training courses undertaken and experience received during training should be available. The

trainee implant dentist must have developed competence in dealing with any immediate and long-term complications from the treatment provided.

Training standards for all members of the dental implant team

The training standards above are applicable to all members of the dental team; however, it is recognised that there are individuals who are already experienced in implant dentistry. They will have gained their training in a variety of different ways.

All those assisting in implant and oral surgical procedures must have up to date and adequate knowledge of surgical asepsis.

All members of the dental team are reminded of their responsibility to continue to update their skills and knowledge in the field of implant dentistry.

It is recommended that all members of the dental team keep a detailed portfolio of their training, the courses they have attended, all mentoring they have received, and implants they have placed and/or restored, together with the outcomes.

The portfolio should demonstrate training and experience consistent with the complexity of treatment provided. Such portfolios could be used in any dispute in regards to a dentist's competence in implant dentistry, including those brought before the GDC. All dentists need to be appropriately indemnified against medico-legal disputes involving implants.

Appendix

Guidance for 'Straightforward' and 'Complex' Cases

Few treatment episodes will fall exactly into either category; however, the definitions here should help to identify the degree of complexity and potential risks involved in individual cases. Dental practitioners can better match cases to their level of experience and skills, as well as determine their professional development and training requirements.

Perception of Case

Straightforward: You can easily visualise the end result and the treatment stages are predictable. There are no aesthetic risk factors.

Complex: The end result cannot be easily visualised without extensive diagnostic and planning techniques. Treatment will include multiple stages to achieve the desired outcome and may involve multidisciplinary planning. Complications are more likely to occur than with straightforward cases. The aesthetic requirements or limitations of the case are high, as are the expectations of the patient.

Age and Medical History

Straightforward: The patient is fit to undergo routine oral surgical and restorative treatment procedures. There are no medical risk factors.

Complex: Due to age or physical/medical compromise, the patient will require special care and management. Consideration will need to be given to the duration of the required procedures, and the complexity of any remedial action required, should complications occur.

Tooth Position

Straightforward: The teeth to be replaced conform to the existing arch form, and the adjacent and opposing teeth easily determine the optimal prosthetic tooth position. There are no aesthetic risk factors.

Complex: There are no adjacent teeth, or those present are in an unsuitable position. There is a need to carry out extensive diagnostic procedures to determine the optimal tooth/implant position for aesthetics and function.

Implant Surgery

Straightforward: The implant surgical procedure is without anatomically related risks and can be carried out without the need for significant hard tissue grafting (this includes onlay bone grafting and sinus grafting).

Complex: The implant surgery is a more difficult procedure, which has anatomically related risks and might require significant hard tissue grafting (this includes onlay bone grafting and sinus grafting). Surgery will involve significant alteration to anatomical structures with potential risk of damage to vital structures.

Soft Tissue

Straightforward: Minor augmentation or alteration of the position of the peri-implant mucosa is all that is required. Such intervention would not require significant grafting of hard/soft tissue. Soft tissues biotype (quality and quantity) is satisfactory.

Complex: There is a need to significantly augment or alter the position of the peri-implant mucosa, requiring significant amounts of hard/soft tissue to be grafted.

Occlusion

Straightforward: The teeth can be replaced conforming to the existing occlusal scheme and at the same vertical dimension.

Complex: There is a need to substantially change the existing occlusal scheme or the occlusal vertical dimension.

Periodontal Status

Straightforward: The patient has healthy periodontal status or requires only straightforward mechanical periodontal intervention to eliminate minor pocketing or bleeding and improvement in plaque control.

Complex: The patient has active periodontitis with advanced horizontal/vertical bone loss and tooth mobility. There are lifestyle issues or co-morbidities such as smoking, diabetes or bruxism.

Placement Timing

Straightforward: Delayed after hard and soft tissue healing.

Complex: Immediate placement.

Loading Protocols

Straightforward: Implants are loaded after a conventional period of 8 to 12 weeks.

Complex: Implants are loaded/temporarised immediately or soon after their placement (early loading).

Maintenance

Straightforward: Dental hygienist or clinician provides oral hygiene advice and manages implant mucositis or periimplantitis with non-surgical periodontal therapy.

Complex: Surgical management of periimplantitis or implants that require removal by surgical approach.

ANNEX

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