SCOPE OF PRACTISE FOR MAXILLOFACIAL PROSTHETICS AND TECHNOLOGY

MB Cutler FIMPT
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Introduction and Preamble

A caring, knowledgeable, competent and skilful individual capable of practise as a part of head & neck, oral health and medical teams, the Maxillofacial Prosthetist is able to accept professional responsibility for the effective and safe care of patients, appreciates the need for continuing professional development and can utilise advances in relevant knowledge and techniques.

Scope of practise for the Maxillofacial Prosthetist will be directed by Fitness to Practise and Ethical & Professional Code guidelines produced by the Institute of Maxillofacial Prosthetists & Technologists (IMPT) alongside Clinical Governance and National Occupational Standards (NOS) as defined by the NHS and Department of Health.

All Maxillofacial Prosthetists will have previously fulfilled those formal qualification objectives relating to registration as Dental Technicians with the General Dental Council (GDC). The Maxillofacial Prosthetist will, if required, design, manufacture dental devices in the laboratory and supply such devices to Dentists.
1 MAXilloFACIAL TRAUMA

1.1) The Maxillofacial Prosthetist will understand the principles of technical support provided for the treatment of maxillofacial trauma, splint applications and methods of splint fixation. The Maxillofacial Prosthetist will also have a detailed knowledge of cranio-facial, oral, orbital and dental anatomy.

1.2) Coincident with this the Maxillofacial Prosthetist will be familiar with applicable theory, including incidence and aetiology, classification and types of fracture of the maxillofacial skeleton, dental and periodontal injuries, technical management of soft tissue injuries, post-traumatic rehabilitation, and sports injuries and their prevention.

1.3) Integral with this knowledge is an awareness of the physiological processes of bone repair, the displacement of fractures of the facial skeleton, surgical techniques used to reduce and stabilise fracture injuries and an awareness of the rationale for selection of treatment modalities.

1.4) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made trauma splints supplied by a maxillofacial laboratory service, is required by the Maxillofacial Prosthetist.

With regard to maxillofacial trauma, the Maxillofacial Prosthetist will;

1.5) review a request for maxillofacial trauma splints ensuring all necessary information is available
1.6) prevent cross-infection and exercise aseptic handling of impressions
1.7) design and manufacture metallic and polymeric splints used for the management of maxillofacial trauma injury
1.8) plan and co-ordinate laboratory elements of each trauma case using the most appropriate methods and technologies available
1.9) design the most appropriate splint device in the best interests of patient care
1.10) select the optimal materials and components for each case and apply suitable processing technologies
1.11) identify technical problems that may occur during the application or use of a splint device provided by the maxillofacial laboratory service
1.12) document medical device data.

2 CRANIOFACIAL DEFORMITY

2.1) The Maxillofacial Prosthetist will identify and have an knowledge of the aetiology and classifications of cranio-facial deformity.

2.2) This knowledge will include the concepts and features of normal and ideal occlusion, the features and classification of malocclusion, analysis of cranial, cranio-facial and dental deformity, the use of radiographs and scans to identify cranio-facial landmarks and deformity, techniques for cranio-facial surgery, pre-surgical planning systems, computer analysis and pre-
surgical planning, 3D imaging, distraction osteogenesis, orthodontic planning regimes and bi-maxillary orthognathic model surgery planning systems.

2.3) The Maxillofacial Prosthetist will have detailed knowledge of splinting and fixation systems used for crano-orthoptic reshaping following surgery, orthognathic surgery and orthodontic appliances used, both pre- and post-operatively, as part of an orthognathic treatment plan.

2.4) The Maxillofacial Prosthetist will be familiar with surgical techniques, splinting and fixation systems used to correct dental, cranial or crano-facial deformity, and the concept of distraction osteogenesis.

2.5) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made splints supplied by a maxillofacial laboratory service, will be required by the Maxillofacial Prosthetist.

With regard to craniofacial deformity, the Maxillofacial Prosthetist will;

2.6) prevent cross-infection and exercise aseptic handling of impressions

2.7) be competent at the application of bi-maxillary model surgery planning systems

2.8) design and manufacture laboratory manufactured devices used for the surgical management of craniofacial deformity

2.9) take intra-oral and extra-oral impressions, as required, in the clinic or operating theatre and prepare the defect site prior to impression taking

2.10) plan and co-ordinate the laboratory elements of each case using the most appropriate methods and technologies available

2.11) design the most appropriate device in the best interests of patient care

2.12) select the optimal materials and components for each case and apply suitable processing and planning technologies

2.13) identify technical problems that may occur during the application or use of a device provided by the maxillofacial laboratory service

2.14) document medical device data.

### 3 ORAL AND MAXILLOFACIAL DISEASE

3.1) Whilst it is not expected that the Maxillofacial Prosthetist will not diagnose disorders definitively, the ability to recognise departures from the normal and arrange appropriate referral is important.

3.2) The Maxillofacial Prosthetist will have the ability to recognise the presence of disease or developmental abnormalities and have an appreciation of the management of oral and maxillofacial disease, classification and types of disease, surgical management, radiotherapy and chemotherapy.

3.3) To support long term prosthetic rehabilitation the Maxillofacial Prosthetist will have a sound knowledge of the principles of surgical reconstruction, tissue transfer and the concept of
osseointegrated implant techniques. Integrated with this is an awareness of post treatment-surgical anatomy, physiology and associated complications.

3.4) The Maxillofacial Prosthetist will have knowledge of the immediate prosthetic and technical management of oral and maxillofacial disease, pre-operative surgical-splint design and manufacture, surgical obturation, radiotherapy appliances, the provision of immediate obturator prostheses and the use of rehabilitative devices.

3.5) To provide prosthetic rehabilitation for the maxillary compromised patient the Maxillofacial Prosthetist will assess the patient and defect(s) giving consideration to the comfort, function, application, fabrication, disease prognosis, aesthetics and general health of the patient. Integrated with such consideration will be the functions of mastication, deglutition, speech and aesthetics relating to obturators.

3.6) With regard to the post-surgical prosthetic management of the maxillary defect and oro-facial defect patient the Maxillofacial Prosthetist will have a detailed knowledge of patient and defect site assessment, intra- and extra-oral impression techniques (to include sectional impression technique), impression materials, obturator and intra-oral prosthesis design (to include sectional prosthetic devices), device maintenance and clinical review.

3.7) As part of the ongoing care plan the Maxillofacial Prosthetist will have an understanding of the concepts of surgical, immediate, intermediate and definitive obturator devices, associated prosthetic rehabilitation techniques and the concept of additional elective pre-prosthetic surgery. Coincident with this knowledge is the ability to identify, act upon and, if necessary, report or refer on complications that may arise during the acute phase or as apart of the ongoing rehabilitation. The Maxillofacial Prosthetist will understand design principles of appliances used in the obturation of maxillary defects and be capable of manufacturing a range of prostheses fit for clinical presentation.

3.8) The Maxillofacial Prosthetist will also be familiar with post-surgical treatments, anatomy, physiology, and complications associated with oral and maxillofacial cancer patients, to include radiotherapy and chemotherapy.

3.9) With regard to oral and maxillofacial disease the Maxillofacial Prosthetist will provide comprehensive prosthetic support to the patient. Coincident with this is the ability of the Maxillofacial Prosthetist to recognise departures from the normal and recognition of the need to arrange for appropriate referral. The Maxillofacial Prosthetist will have a knowledge of the principles of the disease processes, pathological changes requiring clinical intervention, clinical procedures and the team approach to patients with malignant or benign disease.

3.10) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made intra- and extra-oral prostheses and splint devices supplied by a maxillofacial laboratory service, is required by the Maxillofacial Prosthetist.

With regard to oral and maxillofacial disease, the Maxillofacial Prosthetist will;

3.11) review and prioritise a referral request using all available information

3.12) communicate with patients, colleagues from other medical specialties, patient groups and relevant voluntary organisations

3.13) assess each patient to consider physical and psychological status and other non-clinical dynamics such as occupation or lifestyle
3.14) prevent cross-infection and use aseptic technique when handling materials, instruments, medical devices and components in the clinical and laboratory environments

3.15) examine a defect site and associated structures

3.16) define device function and required objectives of each medical device

3.17) prepare a suitable treatment plan, within the context of maxillofacial prosthetics and technology

3.18) take intra-oral and extra-oral impressions, as required, in the clinic or operating theatre and prepare the defect site prior to impression taking

3.19) plan and co-ordinate the laboratory elements of each case using the most appropriate methods and technologies available

3.20) design the most appropriate surgical splint, obturator prostheses or therapeutic appliance in the best interests of patient care, this may include a complimentary device for the opposing jaw

3.21) select the optimal materials and components for each case and applying suitable processing technologies

3.22) fit splints, prostheses or therapeutic appliances in the clinic or operating theatre as required

3.23) identify technical problems and clinical complications that may occur during the application or use of a medical device provided by the maxillofacial laboratory service

3.24) recognise departures from the norm when reviewing a patient and arranging for appropriate referral

3.25) enter relevant patient details into the medical record and documenting medical device data.

4 FACIAL PROSTHETICS

4.1) To support the ongoing technical management and rehabilitation of the facial prosthetic patient the Maxillofacial Prosthetist will have an understanding of the aetiology and causation of facial defects, their treatment, additional pre-prosthetic surgery and the effects of such defects with regard to the patient’s physiological and psychological health, patient support groups and camouflage.

4.2) The Maxillofacial Prosthetist will have detailed knowledge of relevant anatomy prosthesis design and dimension, anatomical accuracy, topography and surface effects, colour technology, material and colour stability, relevant polymeric and silicone chemistry, lamination, tissue adhesives and relevant skin preparations. Integrated and coincident with this knowledge will be the use of intra-oral and extra-oral impression materials; their safe application, rheology, accuracy and stability.

4.3) Large oro-facial defect patients present a unique challenge with regard to prosthetic rehabilitation. The Maxillofacial Prosthetist will carry out sectional intra-oral and facial impression techniques associated with the design and manufacture of sectional oro-facial prosthetic devices.
4.4) Osseointegrated implants have significantly advanced the application of facial prosthetic rehabilitation. The Maxillofacial Prosthetist will have a knowledge of surgical technique, implant positioning with regard to prosthetic outcome, implant components, impression techniques, substructure design, fixation components, prosthesis design, applications, maintenance, patient instruction, associated complications and clinical review.

4.5) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made facial prostheses and splint devices supplied by a maxillofacial laboratory service, is required by the Maxillofacial Prosthetist.

*With regard to facial prostheses, the Maxillofacial Prosthetist will;*

4.6) review and prioritise referral a request using all available information

4.7) communicate with patients, colleagues from other medical specialties, patient groups and relevant voluntary organisations

4.8) assess each patient to consider physical and psychological status and other non-clinical dynamics such as occupation or lifestyle

4.9) prevent cross-infection and use aseptic technique when handling materials, instruments, medical devices and components in the clinical and laboratory environments

4.10) examine a defect site and associated structures

4.11) define device function and required objectives of each medical device

4.12) prepare the most suitable treatment plan, within the context of maxillofacial prosthetics and technology

4.13) take intra-or additional extra-or extra-oral impressions in the clinic or operating theatre and prepare the defect site prior to impression taking

4.14) plan and co-ordinate the laboratory elements of each case using the most appropriate methods and technologies available

4.15) design the most appropriate facial prostheses in the best interests of patient care

4.16) select the optimal materials and components for each case and applying suitable processing technologies

4.17) fit prostheses in the clinic as required

4.18) identify technical problems and clinical complications that may occur during the application or use of a medical device provided by the maxillofacial laboratory service

4.19) recognise departures from the norm when reviewing a patient and arranging for appropriate referral

4.20) enter relevant patient details into the medical record and documenting medical device data.
5 OCULAR PROSTHETICS

5.1) The Maxillofacial Prosthetist will have a knowledge of the anatomy of the orbit and socket, pathology of diseases of the globe and ocular socket, ocular socket microbiology, associated surgical techniques and use of ocular implants.

5.2) The Maxillofacial Prosthetist’s knowledge will include aetiology and assessment of the ocular prosthetics patient, impression techniques, prosthesis design and types, pattern and analogue modification, ocular colouration, and material selection and handling.

5.3) Indwelling ocular prostheses require regular clinical review for cleaning, modification and assessment. The Maxillofacial Prosthetist will be able to recognise conditions and diseases associated with such devices.

5.4) With regard to the patient’s psychology and psychological health, the Maxillofacial Prosthetist will be familiar with the effects of monocular vision and the effects of altered body image.

5.5) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made intra-orbital prostheses and splint devices supplied by a maxillofacial laboratory service, is required by the Maxillofacial Prosthetist.

*With regard to ocular prostheses, the Maxillofacial Prosthetist will;*

5.6) review and prioritise a referral request using all available information

5.7) communicating with patients, colleagues from other medical specialties, patient groups and relevant voluntary organisations

5.8) assess each patient to consider physical and psychological status and other non-clinical dynamics such as occupation or lifestyle

5.9) prevent cross-infection and use aseptic technique when handling materials, instruments, medical devices and components in the clinical and laboratory environments

5.10) examine the defect site and associated structures

5.11) prepare the most suitable treatment plan, within the context of maxillofacial prosthetics and technology

5.12) take ocular socket and ocular-facial impressions in the clinic or operating theatre and prepare the defect site prior to impression taking

5.13) plan and co-ordinate the laboratory elements of each case using the most appropriate methods and technologies available

5.14) design the most appropriate splint, prosthesis or ocular implant in the best interests of patient care, and this may include analogue modification

5.15) select the optimal materials and components for each case and applying suitable processing technologies

5.16) fit ocular prostheses and splints, and activate splint devices, as required

5.17) identify technical problems, clinical complications that may occur, or diseases associated with the use of an ocular prosthesis
5.18) recognise departures from the norm when reviewing a patient and arranging for appropriate referral

5.19) enter relevant patient details into the medical record and documenting medical device data.

6 SOMATO PROSTHETICS

6.1) Alongside and integrated with relevant head and neck anatomy the Maxillofacial Prosthetist will have a knowledge of the musculature of the limbs, muscle structure and function, and the composition of connective tissue. Such knowledge will also cover the architecture of bone, cartilage, synovial tissues, nervous tissue, and structures and diseases of the breast. This will also include aetiology and assessment of the body prosthesis patient, concepts of body image, pain management and phantom pain.

6.2) The Maxillofacial Prosthetist will have a detailed knowledge of the concept of digit, hand, toe, breast, nipple-areolar and leg prostheses; their design, manufacture and application. This will include patient management, impression techniques, design, function, dynamic function, aesthetics, device fixation and the use of osseointegrated implant systems.

6.3) The Maxillofacial Prosthetist will also have a detailed knowledge of anatomical accuracy, dynamic function, topography and surface effects, colour technology, material and colour stability, relevant polymeric and silicone chemistry, lamination techniques, tissue adhesives and relevant skin preparations.

6.4) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made body, limb, hand and digit prostheses supplied by a maxillofacial laboratory service, is required by the Maxillofacial Prosthetist.

With regard to somato prostheses, the Maxillofacial Prosthetist will;

6.5) review and prioritise a referral request using all available information

6.6) communicate with patients, colleagues from other medical specialties, patient groups and relevant voluntary organisations

6.7) assess each patient to consider physical and psychological status and other non-clinical dynamics such as occupation or lifestyle

6.8) prevent cross-infection and use aseptic technique when handling materials, instruments, medical devices and components in the clinical and laboratory environments

6.9) examine a defect site and associated structures

6.10) define device function and required objectives of each medical device

6.11) prepare the most suitable treatment plan, within the context of maxillofacial prosthetics and technology

6.12) take extra-oral impressions in the clinic or operating theatre and prepare the defect site prior to impression taking
6.13) plan and co-ordinate the laboratory elements of each case using the most appropriate methods and technologies available

6.14) design the most appropriate prostheses in the best interests of patient care

6.15) select the optimal materials and components for each case and applying suitable processing technologies

6.16) fit prostheses in the clinic as required

6.17) identify technical problems and clinical complications that may occur during the application or use of a prosthesis provided by the maxillofacial laboratory service

6.18) recognise departures from the norm when reviewing a patient and arranging for appropriate referral

6.19) enter relevant patient details into the medical record and documenting medical device data.

7 DEEP BURIED IMPLANTS

7.1) With regard to cranio-maxillofacial and body applications the Maxillofacial Prosthetist will have a comprehensive knowledge of the design, materials selection, manufacture and application of custom-made deep buried implant prostheses.

7.2) Such devices include cranial, oral & maxillofacial, chest, limb and ocular implants manufactured using metallic or polymeric materials. The Maxillofacial Prosthetist will have a knowledge of the aetiology of cranial and body defects, indications for deep buried implants and the surgical procedures used to place them within the body.

7.3) The Maxillofacial Prosthetist will have a detailed knowledge of materials science and properties for implant grade materials, tissue response and bio-compatibility, design, manufacture, supply and fitting of deep buried implants.

7.4) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made deep buried implants supplied by a maxillofacial laboratory service, is required by the Maxillofacial Prosthetist.

With regard to deep buried implants, the Maxillofacial Prosthetist will;

7.5) review and prioritise a referral request using all available information

7.6) communicate with patients and colleagues from other medical specialties

7.7) prevent cross-infection and use aseptic technique when handling materials, instruments, pathological specimens, medical devices and components in the clinical and laboratory environments

7.8) examine a defect site and associated structures if required

7.9) take impressions in the clinic or operating theatre and prepare the defect site prior to impression taking
7.10) plan and co-ordinate the laboratory elements of each case using the most appropriate methods and technologies available

7.11) be competent at designing the most appropriate implant in the best interests of patient care

7.12) select the optimal materials and components for each case and applying suitable processing technologies

7.13) if required – assisting with the fitting of an implant device in the operating theatre

7.14) identify technical problems and clinical complications that may occur during the application or use of a medical device provided by the maxillofacial laboratory service

7.15) enter relevant patient details into the medical record and documenting medical device data.

8 SPLINT THERAPIES

8.1) Soft tissue trauma, thermal injuries, skin disease or congenital abnormality of the skin may require the application of laboratory-made intra-oral and extra-oral splint devices.

8.2) The Maxillofacial Prosthetist will have a knowledge of the anatomy and pathology of the skin in relation to thermal injury, wound healing, tissue grafting techniques and relevant skin conditions such as epidermolysis bullosa and Chondrodermitis.

8.3) A detailed knowledge of thermoplastic polymers, gels and thermoforming technologies will be required by the Maxillofacial Prosthetist.

8.4) Also required by the Maxillofacial Prosthetist is a detailed knowledge of the concepts of postburn appliance therapy, scar review and scar indexing, pathology of hypertrophic scar tissue and keloid and the clinical management of the postburn/soft tissue injury patient.

8.5) A detailed knowledge of current legislation, concerning the manufacture and supply of custom made deep buried implants supplied by a maxillofacial laboratory service, is required by the Maxillofacial Prosthetist.

*With regard to splint therapies, the Maxillofacial Prosthetist will;*

8.6) review and prioritise a referral request using all available information

8.7) communicate with patients, colleagues from other medical specialties, patient groups and relevant voluntary organisations

8.8) assess each patient to consider physical and psychological status and other non-clinical dynamics such as occupation or lifestyle

8.9) prevent cross-infection and use aseptic technique when handling materials, instruments, medical devices and components in the clinical and laboratory environments

8.10) examine a defect site and associated structures

8.11) define device function and required objectives of each medical device
8.12) prepare the most suitable treatment plan, within the context of maxillofacial prosthetics and technology

8.13) take intra-oral and extra-oral impressions in the clinic or operating theatre and prepare the defect site prior to impression taking

8.14) plan and co-ordinate the laboratory elements of each case using the most appropriate methods and technologies available

8.15) design the most appropriate splint appliance or other medical device in the best interests of patient care

8.16) select the optimal materials and components for each case and applying suitable processing technologies

8.17) fit and activate splints in the clinic or operating theatre as required

8.18) identify technical problems and clinical complications that may occur during the application or use of a splint device provided by the maxillofacial laboratory service

8.19) recognise departures from the norm when reviewing a patient and arranging for appropriate referral

8.20) enter relevant patient details into the medical record and documenting medical device data.