CURRICULUM FOR SPECIALIST TRAINING IN ORAL AND MAXILLOFACIAL SURGERY

Produced on behalf of the SAC in Oral and Maxillofacial Surgery
and the British Association of Oral and Maxillofacial Surgeons

RATIONALE

Scope of oral and maxillofacial surgery

Oral and maxillofacial surgery deals with the diagnosis, evaluation and treatment of conditions affecting the mouth, jaws, face, and head and neck region. Internationally agreed guidelines define the current scope of the specialty as:

- Treatment of dento-alveolar and oral pathology
- Preprosthetic surgery including implantology
- Diseases and disorders of the temporomandibular joint
- Cranio-maxillofacial trauma: hard and soft tissue
- Benign and malignant conditions of the salivary glands
- Benign and malignant conditions of the head and neck
- Congenital, developmental and acquired cranio-maxillofacial deformity
- Other non-surgical conditions affecting the face, mouth and jaws (oral mucosal disease, cervico-facial infections, oro-facial pain etc.)
- Aesthetic facial surgery

(It is accepted that a full range of surgical techniques is required for each of the above categories including, where relevant, reconstruction utilising distant donor sites and microsurgical techniques.)

Purpose of this document

The goal of any surgical training programme should be to produce trained surgeons with the knowledge, skills and attitudes required to be a consultant. In the case of oral and maxillofacial surgery this should furnish the trainee with the expertise necessary to assume responsibility for the care of both adults and children. This will involve diagnosis, investigation, operative and non-operative management, and will include effective communication with both patients and/or their carers. In addition, any programme should allow the trainee to develop generic skills that allow effective interaction with other professionals (clinical and non-clinical) involved in the delivery of healthcare to patients.

The purpose of this document is to outline the goals of the training pathway in oral and maxillofacial surgery. It is intended to inform trainees of the areas of knowledge and practice they are expected to become proficient in, and to guide them in developing their skills. In addition it is intended to inform trainers and thus encourage construction of a programme to meet the needs of individual trainees.

Information from this curriculum and the associated document on the assessment strategy will help inform the annual RITA process in order to provide a basis for counselling trainees.

Curriculum framework

The curriculum is laid out in three sections:

Section 1	Initial years (1&2):	Basic knowledge and skills
Section 2	Intermediate years (3&4):	Development of core competencies
Section 3	Final years (5&6):	Progression to CCT and beginning of sub-specialist training

The aim is to provide a competency based training programme that is consistently applied and objectively assessed. The above sections are not mutually exclusive since it is fully expected that at different stages trainees may be exposed to different training opportunities. Some of the areas of the later stages may have been started before completing objectives for earlier stages. This document should therefore be viewed as a guide, rather than a rigid directive, as to the minimum required at the end of each of these stages.

The curriculum is further divided into such areas as skill or knowledge categories. This is simply a mechanism for reference to the types of skills or knowledge required to achieve particular outcomes. During training it is anticipated that many of the training opportunities will help the trainee towards more than one of the learning outcomes.

Each of the categories is broken down into modules where appropriate, and reference is made to the expected learning outcomes for each module.

SPECIALIST TRAINING

Entry to specialist training

Specialist training is the recognised pathway to achieving a Certificate of Completion of Training (CCT) in Oral and Maxillofacial Surgery. Under current guidelines this certificate is mandatory for UK trainees who wish to apply for consultant positions in the UK.

The postgraduate deans working with the Specialist Advisory Committee in Oral and Maxillofacial Surgery have the responsibility of ensuring that the training programmes are of a suitable standard to allow trainees to achieve a CCT. This responsibility is discharged on behalf of the Specialist Training Authority, the body that ultimately recommends the award of CCT and inclusion on the Specialist Register held by the GMC.

Currently entry to specialist training follows a period of basic surgical training culminating in the attainment of the MRCS. Appointment to a Specialist Registrar post is by competitive interview and is based on meeting certain criteria as outlined in both the job description and person specification that will be specific to the post being applied for.

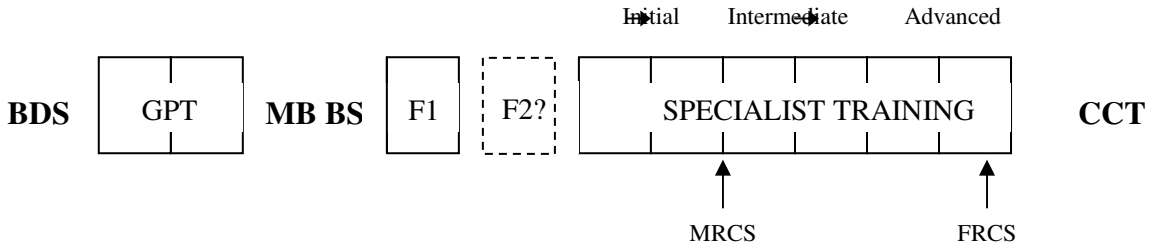
In future specialist training will start immediately after the post-graduation foundation years. The exact entry method has yet to be determined but some form of competitive appointment will still apply. The emphasis in the early years of specialist training will be to concentrate on the acquisition of generic surgical competencies and basic specialist competencies. This will normally include experience in other surgical specialties with the acquisition of relevant transferable knowledge and skills. This approach will allow trainees to move laterally, should they wish it, into another related specialty in the early years of training. They will be able to take with them ‘transferable credits’ that will be accepted as counting towards accreditation in their new specialty.

Pathway to specialist training

Trainees in oral and maxillofacial surgery require dental and medical qualifications. The route taken to the entry point for specialist training will differ slightly depending on which qualification is taken first. (In many ways the time taken for a second degree can actually be considered as part of specialist training for oral and maxillofacial surgeons.)

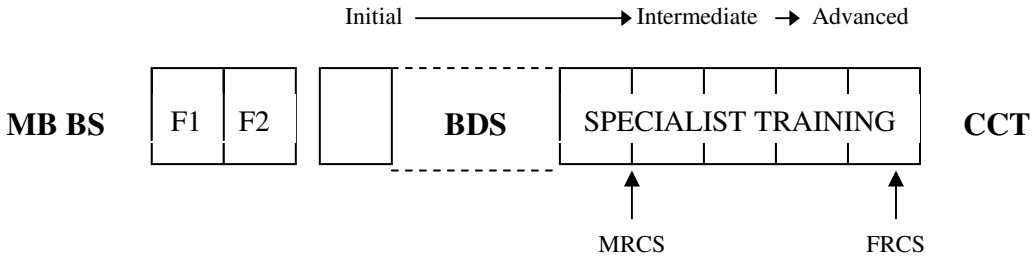
a) Starting from Dental Surgery

At present the majority of trainees start in dentistry, taking medicine as their second degree. It is envisaged that a number of generic professional competencies will be achieved during the two years of General Professional Training that will follow dental qualification. This will allow transfer of 'credits' that should considerably shorten or obviate the need for a second foundation year after medical graduation. This concept is further supported by the realisation that those dental surgeons who return to study medicine because they wish to train in oral and maxillofacial surgery have already made a definite career choice. Consequently there is no need for any career orientation, which is a major reason for most medical graduates to be exposed to a variety of specialties in the second foundation year. A possible plan for the training pathway would therefore be as follows:



b) Starting from Medicine

Trainees who qualify first in medicine will probably opt to study dentistry following exposure to oral and maxillofacial surgery in the second foundation year or, more probably, in the early years of training in other related specialties. They will have achieved the relevant generic competencies during the two foundation years and can therefore re-enter specialist training immediately following dental qualification.



Active support from the Universities and the Department of Health for a shortened medical or dental course would help to reduce the training period further. This should be possible if the principle of 'transferable credits' is accepted for undergraduate education, as it will be in post-graduate training.

Progress from the initial period into the intermediate stage of training (at approximately two years after the foundation years) will depend on a summative assessment (likely to be a specialty MRCS) that will combine examination in general principles of surgery with aspects of the chosen specialty.

The mandatory requirements for progress from the initial to the intermediate stage of specialist training in oral and maxillofacial surgery are:

- Medical and dental qualification
- GMC and GDC registration
- Satisfactory completion of the foundation year(s)
- Satisfactory progress through the early years of specialty training, including time spent in related disciplines, with the acquisition of defined competencies
- Success in the MRCS examination (specialty format yet to be agreed)

Summary

The specialist training programme in oral and maxillofacial surgery will aim to furnish trainees with the knowledge, skills and attitudes to acquire a CCT in the specialty. It is designed so that trainees will make progress through the stages from novice to competent practitioner, and ultimately to independent practitioner.

The training programme will provide opportunities for exposure to a wide range of oral and maxillofacial surgical problems. The aim is to acquire competency in the generality of the specialty by the end of year 6. This will include the opportunity to pursue an area of sub-specialisation in the latter period of training, which may be further developed after the award of a CCT.

(The award of a CCT will be dependent on a satisfactory RITA appraisal at the completion of training and success in the intercollegiate specialty FRCS examination. Trainees will normally be expected to acquire the MFDS (part C) or equivalent at some stage during training).

SECTION 1 - SPECIFIC GOALS FOR YEARS 1 & 2

Aim: To allow a trainee to acquire and develop the key fundamental skills that will form a basis for further progress in the specialty.

Structure of Years 1 & 2

The initial period of specialist training will combine experience in other surgical specialties with training in basic aspects of oral and maxillofacial surgery. Typically a total of 12 months may be spent outwith the specialty during this period. The aim should be to acquire competencies and basic surgical skills that will improve understanding of the care of the surgical patient.

Related surgical disciplines that can contribute to training at this stage include:

- General surgery
- Otolaryngology
- Plastic surgery
- Orthopaedic surgery
- Neurosurgery
- Accident and emergency medicine

A logbook and training portfolio should be kept. This will allow assessment of relevant competencies that can be accepted towards specialist training. Successful attendance at basic surgical skills and ATLS courses would be expected during this stage of training. Instructional and skills courses in basic aspects of the specialty will also be attended during the first two years. These include, for example, head and neck anatomy and maxillofacial plating courses.

Learning Outcomes

On completion of Year 2 the OMFS trainee will have acquired the following:

a) Experience in at least one, and preferably two, related surgical specialties
b) Generic skills to allow team working, and management of and communication with both colleagues and patients, as well as a high standard of professionalism
c) Clear understanding of the basic sciences as they relate to the pathology and practice of surgery, and oral and maxillofacial surgery in particular
d) Competence in basic operative skills
e) Competence in the basic perioperative care of the surgical patient
f) Competence in the diagnosis and clinical management of common oral and maxillofacial conditions
g) Competence in the operative management of a range of common oral and maxillofacial conditions as defined below.

1. GENERIC SKILLS

(Section to be updated and inserted?)

It is anticipated that many of these skills will have been acquired by a combination of experiential learning and taught courses during general professional training in dentistry and in the medical foundation years. Including these in the specialist curriculum allows trainees and trainers an opportunity to review at what level they currently operate in these areas and identify if further training and experience is required.

The six 'Key Competencies' listed below were developed by the CanMEDS 2000 Project and have been adopted across the Anglophone world to describe the generic skills required of a good surgeon.

In addition these skills are also highlighted in the GMC document *Good Medical Practice* and as such form a key part in the revalidation of consultants and of the accreditation of PRHO programmes. Familiarity with this process will be a valuable learning opportunity for the forthcoming generations of trained specialists.

The following categories are identified:

1.1 **Medical Expert**

1.2 **Communicator**

1.3 **Collaborator**

1.4 **Manager**

1.5 **Scholar**

1.6 Professional

2. BASIC SCIENCE KNOWLEDGE

This section outlines the basic knowledge needed to underpin the practice of oral and maxillofacial surgery. This is divided into separate subject headings purely as a convenience to identify those areas in which knowledge is expected. This should be used as an indicative guide rather than an exhaustive list.

It is anticipated that trainees will already have a basic knowledge of the identified areas from their undergraduate teaching. During the first two years of Specialist Training it will be necessary for trainees to build upon this knowledge with specific reference to oral and maxillofacial surgery practice.

It is recognised that detailed knowledge, especially around embryology, pathology and genetics, will most likely only be truly understood at later stages of training or during sub-specialist training. The aim in the initial stage of training is to ensure that the core knowledge is sound to allow more detailed specialist knowledge to be gained later. It is anticipated that many of these areas will be addressed by personal study and taught courses in the basic sciences.

The following domains of core knowledge will be covered:

2.1 **Anatomy** of the head and neck region with special reference to the facial bones, temporomandibular joint, oral cavity, salivary glands, and related structures and tissues (including embryological development).

2.2 **Physiology** of mastication, deglutition, salivation, and osteogenesis.

2.3 **Surgical Pathology** of common conditions and disorders of the head and neck.

2.4 **Clinical Pharmacology** relevant to the practice of surgery.

2.5 **Clinical Microbiology** with particular reference to infections of the head and neck.

2.1 ANATOMY

Indicative training years 1-2

Aim: To understand the basic anatomy that oral and maxillofacial surgeons will encounter during the management of surgical patients and the development of anatomical systems.

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Skull, brain and cranial cavity	Embryogenesis of skull Functional knowledge of brain and its coverings Knowledge of common anatomical variations of skull Applied surgical anatomy.	Application of this knowledge appropriately in the clinical setting.	Evaluation of knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Orbit and eye	Development of orbit and eye. Relations within maxillofacial skeleton Applied surgical anatomy	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Nose and paranasal sinuses	Development of nose and paranasal sinuses. Relations of these structures to the	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings

	maxillofacial skeleton Applied surgical anatomy			Use of critically analysed topics
Facial musculature/soft tissues	Development of facial musculature and its effect on development of the head and neck in general Applied surgical anatomy	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Temporomandibular joint and infratemporal fossa	Embryogenesis and development of the temporomandibular joint Functional anatomy of the TMJ Applied surgical anatomy of the TMJ and infratemporal fossa	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
External, middle and inner ear	Functional anatomy Applied surgical anatomy	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Oral cavity, teeth and supporting structures,	Embryogenesis and development of the oral	Application of this knowledge appropriately in	Evaluation of personal knowledge level and	Formal assessment of basic science

pharynx	cavity and pharynx Applied surgical anatomy	the clinical setting.	identification of learning needs.	Observed performance in clinical settings Use of critically analysed topics
Mandible and maxilla	Embryogenesis of maxilla and mandible Facial growth Disorders of development Applied surgical anatomy	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Larynx, trachea, neck and thoracic inlet	Developmental anatomy of the neck. Disorders of development Applied surgical anatomy	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics

2.2 PHYSIOLOGY

Indicative training years 1-2

Aim: To understand the normal physiological processes at different ages and to understand the effects of disease and trauma in these processes as they relate to oral and maxillofacial surgery.

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Oral mucosa and connective tissues of the mouth	Metabolism and functions of the oral mucoasa and connective tissues of the oral cavity	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Calcium/phosphorus metabolism and calcification	Mineral metabolism Chemistry of calcium and phosphates Composition of bone and teeth Metabolism of bone and teeth Mechanisms of calcification	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Bone growth and remodelling	Mechanisms of osteogenesis and ossification	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in

	Bone remodelling Mechanisms of bone growth Post-natal remodelling of the facial skeleton Effects of soft tissues on skull growth			clinical settings Use of critically analysed topics
Mechanisms of tooth eruption	Normal tooth eruption – theories Abnormal tooth eruption Factors affecting tooth eruption	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Salivary glands and saliva	Composition and functions of saliva Stimulus and mechanisms of salivation Importance of saliva in relation to oral disease	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Immunology and defence mechanisms of the mouth	Mechanical, chemical and hormonal factors protecting the oral cavity Immunological protective mechanisms	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed

				topics
Mastication and deglutition	Properties and functions of the muscles of mastication Co-ordination of the masticatory system Taste and olfaction Phases of deglutition Control of deglutition Dysphagia	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Effects of dietary deficiencies and hormonal imbalances	Physiological effects of dietary deficiency Physiological effects of hormonal imbalance Nutrition and malnutrition	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Age changes in the oral structures	Physiological effects of aging within the head and neck	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Physiological responses to	Physiology of stress	Application of this	Evaluation of personal	Formal assessment of

surgical treatment	The anxious patient Vasovagal reactions, hyperventilation and arrhythmias	knowledge appropriately in the clinical setting.	knowledge level and identification of learning needs.	basic science Observed performance in clinical settings Use of critically analysed topics
Wound healing	Wounding agents and sequelae The inflammatory response Healing of oral and other wounds Abnormal healing	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Oro-facial pain	Sensory innervation of the head and neck Transmission of trigeminal impulses within the central nervous system. Pain perception Referred pain Theories of pain Physiological effects of pain	Application of this knowledge appropriately in the clinical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics

2.3 SURGICAL PATHOLOGY (and GENETICS)

Indicative training years 1-2

Aim: To understand pathological processes as they present in the common oral and maxillofacial diseases/conditions/illnesses.

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Biopsy principles and techniques	Rationale and mechanisms for biopsy Preparation and preservation of pathological specimens Use of the pathology laboratory	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Inflammatory reactive and infectious diseases	The acute inflammatory response The chronic inflammatory response Principles of wound healing Abnormal wound healing Healing in specialized tissues	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report

Immune-based diseases	Pathological basis for the immune response Auto-immune disease	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Conditions of developmental disturbance	Disorders of metabolism Disorders of nutrition	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Hyperplasias, hamartomas, and neoplasms of soft tissues and bones	Disorders of growth and development Differential diagnosis Treatment modalities (if required)	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics

				Trainers' report
Benign epithelial tumours of the mucosa and skin	Pathology of disorders of growth Differential diagnoses Treatment modalities	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Potentially malignant and malignant epithelial tumours of the mucosa and skin	Mechanisms of tumour initiation and growth Malignant transformation Mechanisms of metastasis Tumour staging Treatment modalities	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Effects of radiation and osteoradionecrosis	The effects of ionizing radiation	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings

				Use of critically analysed topics Trainers' report
Benign soft tissue tumours of mesenchymal origin	Pathology of disorders of growth Differential diagnoses Treatment modalities	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Malignant soft tissue tumours of mesenchymal origin	Mechanisms of tumour initiation and growth Malignant transformation Mechanisms of metastasis Tumour staging Treatment modalities	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Non-neoplastic salivary gland diseases	Pathology of salivary gland disease Differential diagnosis	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in

	Treatment modalities			clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Salivary gland neoplasms	Mechanisms of tumour initiation and growth Malignant transformation Mechanisms of metastasis Tumour staging Treatment modalities	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Odontogenic and non-odontogenic cysts	Pathology of non-neoplastic conditions involving odontogenic tissues Differential diagnosis Treatment options	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Odontogenic tumours,	Pathology of neoplastic	Application of this	Evaluation of personal	Formal assessment of

hamartomas and neoplasms	conditions involving odontogenic tissues Differential diagnosis Treatment options	knowledge appropriately in the clinical setting	knowledge level and identification of learning needs.	basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Pigmented lesions of the skin and mucosa	Pathological basis of pigmentation Normal and abnormal pigmentation Diagnostic procedures Treatment options	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Fibro osseous diseases and systemic diseases affecting bone	Pathology of disorders of growth Differential diagnoses Treatment modalities	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report

Benign and malignant neoplasms of bone	Pathology of disorders of growth Calcium metabolism Differential diagnoses Mechanisms of tumour initiation and growth Mechanisms of metastasis Tumour staging Treatment modalities	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Neoplasms of the immune system	Pathology of the immune response Immunity to infection Hypersensitivity, tissue grafts and autoimmunity	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Trauma	Haemorrhage and shock Oedema Fever and hypothermia	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including

				involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Oncology	Mechanisms of tumour initiation and growth Role of environmental factors Role of genetic factors Tumour staging Treatment strategies Mechanisms of chemotherapy and radiotherapy	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report
Genetics	Genetics in normal development Role of genetics in pathological processes	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings including involvement in clinico-pathological meetings Use of critically analysed topics Trainers' report

2.4 CLINICAL PHARMACOLOGY

Indicative training years 1-2

Aim: To understand the uses and effects of therapeutic agents used in the treatment of conditions presenting to the oral and maxillofacial surgeon.

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Adverse reactions to drugs	Incidence of adverse drug reactions Classification of adverse drug reactions Long-term and delayed effects causing adverse reactions Surveillance methods	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Recognition and understanding of critical incident reporting procedures	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Practical drug prescribing	Principles of prescribing Prescription writing Drug information	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Recognition and understanding of critical incident reporting procedures	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Drug interactions	Incidence of drug interactions	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning	Formal assessment of basic science

	Pharmaceutical interactions Pharmacokinetic interactions Pharmacodynamic interactions		needs Recognition and understanding of critical incident reporting procedures	Observed performance in clinical settings Use of critically analysed topics Trainers' report
Drug therapy in the young, the elderly, and in pregnancy	Differences in drug therapy (a) in the young (b) in the elderly (c) in pregnancy	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Recognition and understanding of critical incident reporting procedures	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Patient compliance	Factors affecting compliance Measuring compliance Improving compliance	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Recognition and understanding of critical incident reporting procedures	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Placebos	The placebo effect Mode of action of placebos Adverse effects of	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs	Formal assessment of basic science Observed performance in clinical settings

	placebos		Recognition and understanding of critical incident reporting procedures	Use of critically analysed topics Trainers' report
Drug development and clinical trials	The pharmaceutical industry and the regulatory authorities Definition of a clinical trial The conduct of a clinical trial Ethics of clinical trials	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Recognition and understanding of critical incident reporting procedures	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Drug therapy of systemic disease relevant to maxillofacial surgical practice	Knowledge of specific agents, their effects and mechanisms of action	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Recognition and understanding of critical incident reporting procedures	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Relief of pain and anaesthesia	Anatomical and neuropharmacological mechanisms underlying pain sensation Mechanism of action of analgesics	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics

	Practical use of analgesics Treatment of intractable pain (e.g. in terminal care) Local anaesthetics General anaesthetics		colleagues. Team skills	Trainers' report
Drug dependence and abuse	Factors predisposing to drug dependence Pharmacology of specific drugs of dependence Treatment of drug dependence	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Principles of cancer chemotherapy and immunosupression	Actions of chemotherapeutic agents Pre-treatment evaluation Combination chemotherapy Adverse effects of drugs used in cancer chemotherapy Practical use of cytotoxic agents	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report

2.5 CLINICAL MICROBIOLOGY

Indicative training years 1-2

Aim: To understand the microbiology of common infections/conditions which affect the head and neck.

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Classification and pathogenicity of micro-organisms	Classification of micro-organisms Pathogenesis Factors affecting the virulence and spread of micro=organisms	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Use of the microbiology laboratory	Collection of clinically-relevant specimens Transport of specimens Laboratory procedures for microbiological diagnosis	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Antimicrobial chemotherapy	Mode of action of antimicrobial agents Spectrum of activity	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs	Formal assessment of basic science Observed performance in

	Principles of clinical use Causes of treatment failure Antibiotic resistance Antibiotic prophylaxis		Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	clinical settings Use of critically analysed topics Trainers' report
Pyrexia of unknown origin(PUO)	Definition and causes of PUO Investigation of PUO	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Septicaemia	Clinical features and causative organisms Investigation Antimicrobial treatment	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Opportunistic and fungal infections	Opportunistic organisms and conditions	Application of this knowledge appropriately in	Evaluation of personal knowledge level and	Formal assessment of basic science

	Diagnosis Treatment Antifungal agents	the clinical setting	identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Observed performance in clinical settings Use of critically analysed topics Trainers' report
Specific infections of the head and neck	Odontogenic infections Infections of the paranasal sinuses Osteomyelits Tissue space infections Spreading infections Skin infections Necrotizing fasciitis	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Infective endocarditis	Incidence, clinical features and predisposing factors Pathogenesis and causative organisms Investigation Treatment/prophylaxis	Application of this knowledge appropriately in the clinical setting	Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report

Hospital acquired infection	Types of hospital-acquired infection Surgical wound infections Infection in intensive care units Infections of risk to hospital staff Isolation procedures	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs Demonstration of an appropriate caring attitude to patients, carers and colleagues. Team skills	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Principles of disinfection	General considerations Disinfection methods	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report
Sterilisation	General considerations Sterilisation methods	Application of this knowledge appropriately in the clinical setting	Evaluation of personal knowledge level and identification of learning needs	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics Trainers' report

3. MANAGEMENT OF COMMON ORAL AND MAXILLOFACIAL CONDITIONS

This section highlights the areas of the curriculum that it is reasonable to expect a trainee in the initial years of training to be able to deal with whether encountered as a result of being 'on-call' or working in an out-patient clinic setting. It is recognised that different trainees start with different levels of experience and will progress at different rates.

The following problems are commonly encountered and should be managed competently by the end of year 2 of training, up to and including operative intervention if appropriate (see Operative Skills section below).

- Diagnosis and management of dento-alveolar pathology
- Diagnosis and management of common oral mucosal disease
- Facial lacerations
- Fractures of the facial bones
- Diagnosis and management of temporomandibular joint pain and facial pain
- Diagnosis and investigation of salivary gland and neck swellings

The objective to be achieved for these conditions is:

- To be able to assess a patient presenting either acutely or in the out-patient clinic
- To be able to formulate a differential diagnosis and an investigation and management plan
- To be able to treat the patient appropriately up to and including operative intervention if appropriate
- To be able to communicate the above information at the required level to patients/carers/other team members

3.1 Management of common conditions – Dentoalveolar Pathology

Objectives: To be able to assess a patient presenting either acutely or in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Impacted wisdom tooth	Signs and symptoms Differential diagnosis Investigations and radiographic interpretation Methods of medical management including treatment of inflammation/infection Pharmacology and therapeutics of analgesia Understanding of NICE guidelines	Ability to formulate treatment plan Treat/drain infection and/or remove tooth Institute aftercare and review	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio
Dento-alveolar abscess/infection	Signs and symptoms Differential diagnosis Investigations and radiographic interpretation Methods of medical management	Ability to formulate treatment plan Treat/drain infection Institute aftercare and review	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio

3.2 Management of common conditions –Oral mucosal lesions

Objectives: To be able to assess an patient presenting with a mucosal lesion either acutely or in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Oral ulceration	Aetiological factors and differential diagnosis Investigations Possible relationship to systemic disease Relevant pharmacology and therapeutics Signs of malignant disease	Examination of the oral mucosa Biopsy/cytology techniques Ability to formulate treatment plan	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio
Leukoplakia	Aetiological factors and differential diagnosis Investigations Possible relationship to systemic disease Relevant pharmacology and therapeutics Signs of malignant disease	Examination of the oral mucosa Biopsy techniques Ability to formulate treatment plan	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio

3.3 Management of common conditions – Trauma

Objectives: To be able to assess an injured patient presenting either acutely or in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Facial laceration(s)	Aetiology of facial trauma Principles of wound management and soft tissue repair	General assessment of the traumatised patient Assessment and examination of patient with facial laceration(s) Ability to formulate a treatment plan and prioritise management Repair of facial lacerations under local anaesthesia	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio
Facial fracture(s)	Aetiology of facial trauma Priorities of management Assessment of airway and level of consciousness (Glasgow coma scale) Signs and symptoms of fractures of facial skeleton Eyes/ears assessment	General assessment of the traumatised patient Assessment and examination of patient with facial trauma Airway management and emergency treatment of facial trauma Ability to formulate a treatment plan and	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio

	Investigations and radiographic interpretation	prioritise management Pain control /prevention of infection		

3.4 Management of common conditions – Facial Pain

Objectives: To be able to assess a patient presenting with pain either acutely or in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Oro-facial pain	Signs and symptoms of common causes of oro-facial pain Differential diagnosis Investigations Methods of medical and surgical management Relevant pharmacology and therapeutics	Ability to examine Ability to formulate treatment plan	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio
Temporomandibular joint dysfunction	Signs and symptoms of TMJ dysfunction Differential diagnosis Investigations and radiographic interpretation Methods of medical and surgical management Relevant pharmacology and therapeutics	Ability to examine TMJ and muscles of mastication Ability to formulate and instigate treatment plan	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio

3.5 Management of common conditions – Salivary Gland / Neck Swellings

Objectives: To be able to assess a patient presenting with a neck swelling either acutely or in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Salivary gland swellings	Causes of intermittent/persistent swelling of major salivary gland Differential diagnosis Investigations Methods of medical and principles surgical management	Clinical examination of the neck and salivary glands FNAC technique Treatment of acute infected swelling	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio
Neck swellings	Causes of intermittent/persistent swelling of neck Differential diagnosis Investigations Methods of medical and principles surgical management	Clinical examination of the neck and salivary glands FNAC technique Treatment of acute infected swelling Drainage of neck abscess	Ability to communicate with patient and/or carer including consent Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Guided feedback Review of trainee portfolio

4. OPERATIVE SKILLS AND COMPETENCIES

This section lists the competencies expected by the end of the initial stage of training in oral and maxillofacial surgery (i.e. end of indicative year 2). The progress made will vary both with the trainee's innate abilities and also the workload and casemix of the trainers with whom they work. The trainee's level of competence should be assessed by direct observation of performance and guided feedback.

A trainee would be expected to be able to perform the procedures listed below without the direct scrubbed assistance or supervision of a trainer. The list is not exhaustive, although it covers most of the common procedures expected at this stage. (Reference should also be made to the list of operative procedures at the end of this document. Generally speaking competency in those classified C/D at level 1 would be expected.)

It should be noted that competence in some additional procedures can be obtained at this stage rather than in the later stages in training. Once more this may be due to a number of reasons, such as increased exposure to the procedures, past experience and innate surgical ability.

4.1 Operative Skills – Dentoalveolar Surgery

Indicative training years: 1 - 2

Objective: Can perform complete task without direct supervision

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Surgical extraction of unerupted/impacted teeth and roots	Anatomy of mouth, jaws, teeth and supporting structures Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Indications including NICE guidelines Potential complications Pharmacology and therapeutics of postoperative analgesia	Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly Techniques of bone removal and tooth division Intra-oral suturing techniques	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Apical surgery / excision of jaw cyst	Anatomy of mouth, jaws, teeth and supporting structures Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Pathogenesis of chronic infection and cystic lesions	Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly Techniques of exposure, bone removal and enucleation of pathology	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking	Observation in practice Guided feedback Review of trainee portfolio

	Potential complications Pharmacology and therapeutics of postoperative analgesia	Intra-oral suturing techniques	Awareness of personal limitations	
Surgical exposure or transplantation of unerupted tooth	Anatomy of mouth, jaws, teeth and supporting structures Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Indications Potential complications Pharmacology and therapeutics of postoperative analgesia	Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly Techniques of exposure and bone removal Packing and/or bonding of tooth Techniques of tooth splintage Intra-oral suturing techniques	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Closure of oro-antral communication / removal of root from maxillary antrum	Anatomy of mouth, jaws, paranasal sinuses, teeth and supporting structures Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Physiology of sinus function	Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly Techniques of local flap closure Techniques of antral	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking	Observation in practice Guided feedback Review of trainee portfolio

	Pathology of inflammatory sinus disease Understanding of risk factors in aetiology Pharmacology and therapeutics of postoperative analgesia	exploration / lavage Antrostomy Intra-oral suturing techniques	Awareness of personal limitations	
Excision / biopsy of benign oral soft tissue / hard tissue lesion	Anatomy of mouth, jaws, teeth and supporting structures Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Differential diagnosis Potential complications Pharmacology and therapeutics of postoperative analgesia	Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly Techniques of incisional / excisional biopsy Control of haemorrhage Techniques of local flap closure Intra-oral suturing techniques	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Lingual / labial frenectomy	Anatomy of mouth, jaws, teeth and supporting structures Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Indications and techniques	Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly Intra-oral suturing techniques	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support	Observation in practice Guided feedback Review of trainee portfolio

	Potential complications Pharmacology and therapeutics of postoperative analgesia		staff/teamworking Awareness of personal limitations	

4.2 Operative Skills – Maxillofacial Trauma

Indicative training years: 1 - 2

Objective: Can perform complete task without direct supervision

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Repair of facial laceration(s)	Anatomy of facial skin and underlying structures Assessment of cranial nerve function Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Wound healing and wound care	Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly Management of contaminated wound Management of a laceration involving key structures or tissue loss Soft tissue handling and suturing techniques	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Treatment of dental trauma and dento-alveolar fractures	Anatomy of mouth, jaws, teeth and supporting structures Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Classification of dental trauma and dento-alveolar	Clinical examination of oral cavity, facial skeleton and cranial nerves Local anaesthetic and sedation techniques Carry out of steps of procedure safely and correctly	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking	Observation in practice Guided feedback Review of trainee portfolio

	fractures Assessment of head injury and cranial nerve function Aetiology Interpretation of radiographs Potential complications Pharmacology and therapeutics of postoperative analgesia	Techniques for removal of damaged teeth / retained roots Techniques of preservation of damaged teeth, reduction and fixation Intra-oral soft tissue handling and suturing techniques	Awareness of personal limitations	
Closed reduction of nasal fracture	Anatomy of facial skeleton Physiology of nasal cavity Assessment of head injury and cranial nerve function Interpretation of radiographs Potential complications	Clinical examination of facial skeleton and cranial nerves Carry out of steps of procedure safely and correctly Manipulation of nasal bones and septum Management of epistaxis Nasal packing and external splintage	Consent Communication with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Elevation and fixation of fractured zygoma	Anatomy of scalp, facial skeleton, orbit and contents Anatomy of eyelids	Clinical examination of facial skeleton and cranial nerves Basic ophthalmic and	Consent Communication with patient and/or carer	Observation in practice Guided feedback Review of trainee portfolio

	Classification of facial fractures Assessment of head injury and cranial nerve function Physiology of sight and occulomotor function Interpretation of radiographs Available techniques Potential complications	orthoptic assessment Carry out of steps of procedure safely and correctly Techniques of exposure of fracture site(s) and bone manipulation Plate handling skills Soft tissue handling and suturing techniques	Appropriate use of support staff/teamworking Awareness of personal limitations	
Reduction and fixation of fracture of mandible (excluding condyle)	Anatomy of facial skeleton, teeth and supporting structures Classification of facial fractures Assessment of head injury and cranial nerve function Dental occlusion Interpretation of radiographs Available techniques Potential complications	Clinical examination of teeth, oral cavity, facial skeleton and cranial nerves Carry out of steps of procedure safely and correctly Techniques for removal of damaged teeth / retained roots Techniques of exposure of fracture site(s) and bone manipulation Plate handling skills Techniques of intermaxillary fixation	Consent Communication with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

		Intra / extra-oral soft tissue handling and suturing techniques		

4.3 Operative Skills – Salivary Gland Surgery

Indicative training years: 1 - 2

Objective: Can perform complete task without direct supervision

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Excision of mucocoele of lip / labial gland biopsy	Anatomy of lip Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Potential complications	Local anaesthetic techniques Intra-oral soft tissue dissection and suturing techniques Control of haemorrhage	Consent Communication with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Removal of stone from submandibular duct	Anatomy of submandibular / sublingual gland lingual nerve and and oral cavity Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Investigations including radiographs Potential complications	Local anaesthetic techniques Exposure of submandibular duct and safe retrieval of stone Intra-oral soft tissue dissection and suturing techniques Control of haemorrhage	Consent Communication with patient and/or carer Management of patient anxiety Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Excision of neoplasm of minor salivary gland	Anatomy of oral cavity, palate and minor salivary	Local anaesthetic techniques	Consent	Observation in practice

	glands Anatomy of trigeminal nerve and infiltration / nerve block anaesthesia Differential diagnosis and pathology of salivary gland lesions Methods of local flap repair of palate Potential complications	Biopsy techniques Excision and local flap repair Intra-oral soft tissue dissection and suturing / packing techniques Control of haemorrhage	Communication with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Guided feedback Review of trainee portfolio

4.4 Operative Skills – Neck Surgery

Indicative training years: 1 - 2

Objective: Can perform complete task without direct supervision

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Fine needle aspiration of neck mass	Neck Anatomy Neck Pathology Awareness of appropriateness of procedure and alternatives Potential complications Individual steps of procedure	Carry out of steps of procedure safely and correctly Assemble equipment / precautions Localisation of mass and aspiration Prepare and confirm adequacy of specimen	Consent Communication with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Drainage of tissue space infection	Anatomy of fascial spaces of head and neck Microbiology of head and neck infection Anatomy and physiology of the upper aerodigestive airway Awareness of appropriateness of procedure and alternatives	Appropriate aseptic preparation Exposure and exploration of tissue space(s) Collection of samples Securing appropriate drains and dressings	Consent Communication with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Cervical node biopsy	Anatomy of lymphatic	Carry out of steps of	Consent	Observation in practice

	drainage and vital structures, including spinal accessory nerve and brachial plexus Differential diagnosis of enlarged neck nodes Relevant investigations Potential complications Individual steps of procedure	procedure safely and correctly Localisation of mass and dissection Wound closure	Communication with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Guided feedback Review of trainee portfolio
Surgical access to airway (Tracheostomy / cricothyroidotomy)	Anatomy of larynx, trachea and related structures Techniques of non-surgical airway management Physiology of respiration Upper airway pathology Techniques of surgical airway management Local anaesthesia and analgesia techniques Potential complications	Identify relevant instruments and support staff Appropriate aseptic preparation Exposure and access to airway Control of haemorrhage Placement and securing of tube in airway Tracheostomy care	Consent Communication with patient and/or carer Appropriate use of support staff/teamworking Communicates post-operative instructions to nursing staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.5 Operative Skills - Resection of Malignant Tumours

Indicative training years: 1 - 2

Objective: Can perform complete task without direct supervision

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Excision of Malignant Skin Tumour	Anatomy of head and neck skin and lines of relaxation Awareness of age changes Aetiology and pathology of common skin cancers Principles of wound healing Techniques of skin excision and closure	Use of local anaesthesia and analgesia Appropriate aseptic preparation Identification of lesion relevant vital structures and margin of normal tissue Excision of lesion Appropriate wound closure	Consent Awareness of appropriateness of procedure Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.6 Operative Skills - Reconstructive Surgery

Indicative training years: 1 - 2

Objective: Can perform complete task under direct supervision but may need occasional help

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Harvest of skin graft	Anatomy of skin Physiology of graft healing Techniques of skin graft harvesting Techniques of graft immobilisation Techniques of donor site dressing/repair	Identify relevant instruments Aseptic preparation Local anaesthesia and analgesia techniques Harvesting of graft of appropriate thickness Placement and immobilisation of graft Repair or dressing of donor site Postoperative management of donor and recipient site	Consent Awareness of appropriateness of procedure Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Harvest of bone graft (Intra-oral sites)	Anatomy of mouth and jaws Bone healing Intraoral donor sites, risks and complications	Local anaesthesia and analgesia technique Safe harvesting of graft of appropriate size/type Repair of donor site	Consent Awareness of limitations of procedure Communication skills with patient and/or carer	Observation in practice Guided feedback Review of trainee portfolio

	Techniques of bone graft harvesting		Awareness of personal limitations	
Local Skin Flaps	Anatomy of skin of the head and neck Techniques of local flap design and use	Local anaesthesia and analgesia techniques Aseptic preparation Raising, mobilising and insetting local flap Tissue handling and suturing techniques Management of complications of wound healing	Consent Communication skills with conscious patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.7 Operative Skills - Aesthetic Surgery

Indicative training years: 1-2

Objective: Can perform complete task under direct supervision but may need occasional help

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Scar Revision / Z-plasty	Anatomy of head and neck skin and lines of relaxation Pathophysiology of wound healing Psychology of body dysmorphobia and post-traumatic stress Techniques of scar revision and disguise Techniques of non surgical scar modification	Identification of patients who will and won't benefit from surgery Aseptic preparation Tissue handling and suturing techniques Management of complications of wound healing	Counselling of patients Consent Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

5. PERI-OPERATIVE CARE

Indicative training years: 1-2

Aim: To ensure the trainee has reached a level of competence in peri-operative care. The following should apply to each of the procedures in the common conditions and operative skills category

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Pre-operative care	Indications for surgery Required preparation for surgery to include necessary pre-operative investigations Outcomes and complications of surgery Knowledge of the admission process	Synthesis of history and examination into operative management plan Ability to explain procedure and outcomes to patient and parents at an appropriate level To be able to take informed consent To construct an appropriate theatre list	Takes time to explain procedures to patient Encourages questions Takes patient and carer views into account in decision making	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre
Intra-operative care	Anatomy to be encountered during procedure Steps involved in operative procedure Knowledge of alternative procedures in case of encountering difficulties	Necessary hand-eye dexterity to complete procedure Appropriate use of assistance Communication with other members of theatre team	Awareness of progress of procedure Willingness to work with assistants and other theatre personnel to achieve outcomes Self -awareness of when to seek advice/assistance	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre

Post-operative care	Potential complications of procedure Outcomes of procedure Likely post-operative progress from disease process and intervention Physiological and pathological changes in condition as a result of intervention	Assessment of patient and physiological parameters Appropriate intervention to deal with changing parameters Communication skills for dealing with team members, patients and carers Ability to prioritise interventions	Willingness to act as part of a team or lead team where necessary Self -awareness of when to seek advice/assistance	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre

SECTION 2 - SPECIFIC GOALS FOR YEARS 3 & 4

Aim: To allow a trainee to acquire and develop the specialist skills, knowledge and attitude that will allow further progress towards a CCT in the specialty.

Structure of Years 3 & 4

The intermediate period of specialist training will provide increasing exposure to the core aspects of oral and maxillofacial surgery. The aim should be to acquire the competencies and specialist surgical skills that will form the basis for safe clinical practice in the generality of the specialty. The logbook should record development of operative skills and any deficiency in experience or competency during years 1-2 must be corrected during this period.

Instructional courses in various aspects of the specialty will probably be attended during this time. This will include a microsurgical skills course if not already attended. Attendances at regional study days, national and international conferences will be encouraged. Trainees should seek to develop their experience in audit, teaching, presentations and contributing to the specialty literature.

Learning Outcomes

On completion of Year 4 of specialist training the trainee will have acquired the following:

a) Increasing competence in the peri-operative care of the maxillofacial surgical patient
b) Competence in diagnosis and clinical management of most oral and maxillofacial conditions
c) Competence in the operative care of a greater range of oral and maxillofacial conditions (i.e. in addition to those listed for years 1-2).

1. GENERIC SKILLS

Anything further to add here?

2. BASIC SCIENCE KNOWLEDGE

Reference should be made to the section on Basic Science Knowledge for years 1-2. Any perceived deficiencies should be corrected. The aim should be to develop a more detailed knowledge in those areas that are relevant to day-to-day core clinical practice in oral and maxillofacial surgery. Increasing competence in surgical anatomy, physiology and pathology will be linked to increased clinical and operative skills competence.

Knowledge of the surgical anatomy relevant to flaps and grafts used in reconstructive surgery should be acquired during this stage of training.

2.1 ANATOMY

Indicative training years 3-4

Aim: To understand the surgical anatomy that oral and maxillofacial surgeons will encounter during the management of surgical patients and the development of anatomical systems.

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Blood supply to skin, fascia, muscle and bone	Knowledge of principles of blood supply to skin, fascia, muscle and bone Applied surgical anatomy	Application of this knowledge appropriately in relation to design of reconstructive flaps	Evaluation of knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics
Regional anatomy relevant to bone grafts and common pedicled / free flaps	Applied surgical anatomy of limbs, thoracic cage, back, abdominal wall, groin and pelvis	Application of this knowledge appropriately in the surgical setting.	Evaluation of personal knowledge level and identification of learning needs.	Formal assessment of basic science Observed performance in clinical settings Use of critically analysed topics

3. MANAGEMENT OF COMMON ORAL AND MAXILLOFACIAL CONDITIONS

This section gives examples of some other areas of the curriculum that it is reasonable to expect a trainee in the intermediate years of training to be able to deal with, whether encountered as a result of being 'on-call' or working in an out-patient clinic setting. These are in addition to the conditions listed earlier for the initial years of training

The following problems are commonly encountered and should be managed competently by the end of year 4 of training, up to and including operative intervention if appropriate (see Operative Skills section below).

All conditions listed for the years 1-2 plus:

- Diagnosis and management of patient with developmental deformity of the facial skeleton
- Diagnosis and management of patient presenting with oro-facial malignancy

The objective to be achieved for these conditions is:

- To be able to assess a patient presenting either acutely or in the out-patient clinic
- To be able to formulate a differential diagnosis and an investigation and management plan
- To be able to treat the patient appropriately up to and including operative intervention if appropriate
- To be able to communicate the above information at the required level to patients/carers/other team members

3.1 Management of common conditions – Facial Deformity

Objectives: To be able to assess a patient presenting either acutely or in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Developmental/acquired deformity of facial skeleton	Aetiological factors and differential diagnosis Specialised investigations Classification of malocclusion/deformity	History and examination of the patient with facial deformity Ability to formulate treatment plan Orthognathic surgery techniques Post-operative care and follow-up	Ability to communicate with patient and/or carer including consent Ability to teamwork Ability to liase with relevant professional staff and seek advice where needed	Observation in practice Performance in the combined clinics Guided feedback Review of trainee portfolio

3.2 Management of common conditions – Head and Neck Cancer

Objectives: To be able to assess a patient presenting either acutely or in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Cancer of the head and neck region	Aetiological factors and differential diagnosis Specialised investigations	History and examination of the patient with head and neck cancer FNAC/biopsy techniques Endoscopy techniques Ability to formulate treatment plan Carry out appropriate surgery according to competency Post-operative care and follow-up	Ability to communicate with patient and/or carer including consent Counselling/breaking bad news Ability to liase with relevant professional staff and seek advice where needed Ability to teamwork	Observation in practice Performance in the MDT meeting Guided feedback Review of trainee portfolio

4. OPERATIVE SKILLS

This section lists the competencies expected by the end of the intermediate stage of training in oral and maxillofacial surgery (i.e. end of indicative year 4). The progress made will vary both with the trainee's innate abilities and also the workload and casemix of the trainers with whom they work. The trainee's level of competence should be assessed by direct observation of performance and guided feedback.

In addition to procedures listed for years 1-2 a trainee would be expected to be able to perform the operations listed below without the direct scrubbed assistance or supervision of a trainer. The list is not exhaustive, although it covers most of the common procedures expected at this stage. (Reference should also be made to the list of operative procedures at the end of this document. Generally speaking competency in those classified C/D at level 2 would be expected.)

It should be noted that competence in some additional procedures can be obtained at this stage rather than in the final stages in training. Once more this may be due to a number of reasons, such as increased exposure to the procedures, past experience and innate surgical ability.

4.1 Operative Skills – Maxillofacial Trauma

Indicative training years: 3-4

Objective: Can perform complete task without direct supervision of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Repair of parotid / lacrimal duct injury	Anatomy and physiology of parotid / lacrimal glands Appropriate investigations Principles of stenting of duct	Examination of cranial nerves / recognition of case at risk Examination of eyelids and lacrimal apparatus Identify relevant instruments and support staff Identification of key structures Use of loupes / operating microscope Surgical repair under magnification	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Fracture of mandibular condyle - open reduction and fixation	Anatomy of facial skeleton, TM joint, parotid gland, facial nerve Classification of condylar fractures Assessment of head injury	Clinical examination of teeth, oral cavity, facial skeleton and cranial nerves Carry out of steps of procedure safely and correctly	Consent Communication skills with patient and/or carer Appropriate use of support staff	Observation in practice Guided feedback Review of trainee portfolio

	and cranial nerve function Dental occlusion Interpretation of radiographs Available techniques Potential complications	 Techniques for removal of damaged teeth / retained roots Techniques for exposure of fracture site and manipulation of condylar fragment Plate handling skills Techniques of intermaxillary fixation	Awareness of personal limitations	
Fracture of maxilla - open reduction and fixation	Anatomy of facial skeleton, TM joint, parotid gland, facial nerve Classification of facial fractures Assessment of head injury and cranial nerve function Dental occlusion Interpretation of radiographs/scans Available techniques Potential complications	Clinical examination of teeth, oral cavity, facial skeleton and cranial nerves Carry out of steps of procedure safely and correctly Techniques for removal of damaged teeth / retained roots Techniques for exposure of fracture sites and reduction of fragments Plate handling skills Techniques of intermaxillary fixation	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

Fracture of orbital floor – repair and graft	Anatomy of facial skeleton, orbit and contents Classification of facial fractures Assessment of head injury and cranial nerve function Interpretation of radiographs/scans Available techniques Potential complications	Clinical examination of eyes, facial skeleton and cranial nerves Carry out of steps of procedure safely and correctly Techniques for approach to orbital floor Safe exposure of fracture sites and reduction of fragments Bone grafting and plating skills	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.2 Operative Skills – Salivary Gland Surgery

Indicative training years: 3-4

Objective: Can perform complete task without direct supervision of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Sublingual gland excision	Anatomy and physiology of major salivary glands Anatomy of oral cavity and lingual nerve Indications and techniques Potential complications	Identification of relevant instruments and support staff Intra-oral dissection Identification and protection of submandibular duct / lingual nerve	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Submandibular gland excision	Anatomy and physiology of major salivary glands Anatomy of facial and lingual nerves Investigations Indications and techniques Potential complications	Identification of relevant instruments and support staff Aseptic preparation Skin incision and approach to gland Identification and protection of facial nerve Dissection of gland and ligation of duct Appropriate drainage and	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

		closure		
Parotidectomy	Anatomy and physiology of major salivary glands Anatomy of facial nerve Investigations / FNAC technique Indications for procedures and techniques Potential complications	FNAC technique Identification of relevant instruments and support staff Aseptic preparation Skin incisions and approaches to facial nerve Identification and protection of facial nerve Dissection of gland / tumour and ligation of duct Appropriate drainage and closure Neural repair and grafting	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.3 Operative Skills – Orthognathic Surgery

Indicative training years: 3-4

Objective: Can perform complete task without direct supervision of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Genioplasty	Developmental anatomy of facial skeleton and facial musculature Classification and assessment of facial deformity Psychology of facial deformity Norms of facial proportions Techniques of cephalometric analysis Potential complications	Identification of relevant instruments and support staff Approaches to the anterior mandible Identification and protection of mental nerves Safe use of power tools Plating and fixation skills Control of haemorrhage	Consent Recognition of multidisciplinary team working Liaison with team members Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Mandibular ramus osteotomy	Developmental anatomy of facial skeleton and facial musculature Development of occlusion Classification and assessment of facial deformity	Identification of relevant instruments and support staff Approaches to the mandibular ramus Identification and protection of key structures	Consent Recognition of multidisciplinary team working Liaison with team members Communication skills with	Observation in practice Guided feedback Review of trainee portfolio

	Physiology of mastication Psychology of facial deformity Norms of facial proportions Techniques of cephalometric analysis Potential complications	Safe use of power tools Plating and fixation skills Control of haemorrhage Intermaxillary fixation techniques	patient and/or carer Awareness of personal limitations	
Maxillary osteotomy (Le Fort I and variants)	Developmental anatomy of facial skeleton and facial musculature Development of occlusion Classification and assessment of facial deformity Physiology of mastication Psychology of facial deformity Norms of facial proportions Techniques of cephalometric analysis Potential complications	Identification of relevant instruments and support staff Approaches to the maxilla Safe use of power tools Plating and fixation skills Control of haemorrhage Intermaxillary fixation techniques	Consent Recognition of multidisciplinary team working Liaison with team members Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Zygomatic osteotomy	Developmental anatomy of facial skeleton / orbits	Identification of relevant instruments and support staff	Consent Recognition of	Observation in practice Guided feedback

	Classification and assessment of facial deformity Psychology of facial deformity Norms of facial proportions Techniques of cephalometric analysis Potential complications	Approaches to the zygoma Safe use of power tools Plating and fixation skills Control of haemorrhage	multidisciplinary team working Liaison with team members Communication skills with patient and/or carer Awareness of personal limitations	Review of trainee portfolio

4.4 Operative Skills – Temporomandibular Joint Surgery

Indicative training years: 3-4

Objective: Can perform complete task without direct supervision of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Arthrocentesis	Applied anatomy of temporomandibular joint Aetiology of facial pain Indications for procedure Alternative non-surgical therapy Potential complications	Identification of relevant instruments and support staff Needle access to joint space(s)	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Surgery for recurrent dislocation	Applied anatomy of temporomandibular joint Surgical techniques available Indications for procedure Alternative non-surgical therapy Potential complications	Identification of relevant instruments and support staff Approaches to the TMJ and zygomatic arch Appropriate wound closure	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.5 Operative Skills – Surgery for benign jaw tumours

Indicative training years: 3-4

Objective: Can perform complete task without direct supervision of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Resection of odontogenic tumour / fibro-osseous lesion	Anatomy of facial skeleton, jaws, teeth and supporting structures Classification and pathology of odontogenic tumours and fibro-osseous lesions Investigations Interpretation of radiographs/scans Indications and techniques, including conservation surgery Potential complications	Identification of relevant instruments and support staff Intra-oral and extra-oral approaches to the jaws Safe use of power tools Excision of lesion with margin where appropriate Bone grafting techniques Repair of defect	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.6 Operative Skills – Neck Surgery

Indicative training years: 3-4

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Ligation of carotid artery / control of major haemorrhage	Surgical and vascular anatomy of the neck Physiology of hypovolaemic shock Principles of fluid resuscitation Potential complications	Prioritisation Identify relevant instruments and support staff Patient positioning and aseptic preparation Exposure of relevant vessels Secure source of bleeding Control or repair of vessel Wound closure Demonstrable ability to deal complications	Consent Awareness of appropriateness of procedure Communication skills with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Excision of benign neck cyst / neoplasm	Surgical anatomy of the neck Differential diagnosis Investigations Potential complications	Identify relevant instruments and support staff Patient positioning and aseptic preparation Safe exposure of lesion	Consent Communication skills with patient and/or carer Appropriate use of support staff/teamworking	Observation in practice Guided feedback Review of trainee portfolio

		and dissection Drainage and appropriate wound closure	Awareness of personal limitations	
Neck Dissection(s)	Surgical anatomy of the neck Modes and patterns of metastatic spread to neck nodes Appropriate investigations Indications for different types of dissection Potential complications	Identify relevant instruments and support staff Patient positioning and aseptic preparation Carry out of steps of procedure safely and correctly Tissue dissection and control of haemorrhage Identification and protection of vital structures Drainage and appropriate wound closure	Consent Communication skills with patient and/or carer Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.7 Operative Skills – Resection of Malignant Tumours

Indicative training years: 3-4

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Excision of Oral / Oropharyngeal or Jaw Malignancy	Anatomy and physiology of mouth, jaws and face Pathology and modes of invasion / spread of common oro-facial malignancies Interpretation of radiographs / scans Common access techniques to oral and jaw cancers Common excisional techniques for orofacial cancer including conservation surgery Requirements for functional rehabilitation Potential complications Alternatives to surgical treatment	Identify relevant instruments and support staff Aseptic preparation Sharp and blunt dissection of soft tissues Osteotomy technique and plate handling skills Safe isolation of tumour Safe adequate excision of tumour in three dimensions Preservation of vital structures Control of haemorrhage Appropriate drain placement and wound closure	Consent Communication skills with patient and/or carer Counselling / breaking bad news Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

Orbital Exenteration	Anatomy and physiology of face, orbit and skull Understanding of mode of orbital spread of cancer Common excisional techniques for orbital cancer including conservation surgery Access techniques to orbitofacial lesions Individual steps to orbital exenteration Requirements for rehabilitation Alternatives to surgical treatment	Identify relevant instruments and support staff Aseptic preparation Sharp and blunt dissection of soft tissues Osteotomy techniques and plate handling skills Safe isolation and exenteration of orbital contents Skin grafting skills Methods of temporary obturation and/or reconstruction	Consent Communication skills with patient and/or carer Counselling / breaking bad news Appropriate use of support staff/teamworking Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.8 Operative Skills – Reconstructive Surgery

Indicative training years: 3-4

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Harvest of bone graft (Extra-oral sites)	Anatomy and physiology of limbs, pelvis and skull Understanding of bone healing Advantages and disadvantages of various sites Use of alternative procedures Potential complications	Identification of relevant instruments and support staff Aseptic preparation Skin incisions and approaches to bone graft sites Use of bone instruments / harvesting of bone Insetting and fixation of bone graft Management of donor site and closure	Consent Awareness of limitations of procedure Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.9 Operative Skills – Neural Surgery

Indicative training years: 3-4

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Harvest of Nerve Grafts	Anatomy of commonly harvested nerves Potential complications	Identify relevant instruments and support staff Aseptic preparation Skin incision(s) Exposure, isolation and harvesting of nerve(s) Appropriate wound closure	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Cryotherapy / section of trigeminal nerve branch(es)	Anatomy of trigeminal nerve Aetiology of facial pain Understanding of principles of therapy Indications for procedure Potential complications	Exposure of nerve Cryotherapy treatment protocols Wound closure and management of complications	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

5. PERI-OPERATIVE CARE

Indicative training years: 3 - 4

Aim: To ensure the trainee has reached a level of competence in peri-operative care. The following should apply to each of the procedures in the common conditions and operative skills category

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Pre-operative care	Indications for surgery Required preparation for surgery to include necessary pre-operative investigations Outcomes and complications of surgery Knowledge of the admission process	Synthesis of history and examination into operative management plan Ability to explain procedure and outcomes to patient and parents at an appropriate level To be able to take informed consent To construct an appropriate theatre list	Takes time to explain procedures to patient Encourages questions Takes patient and carer views into account in decision making	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre
Intra-operative care	Anatomy to be encountered during procedure Steps involved in operative procedure Knowledge of alternative procedures in case of encountering difficulties	Necessary hand-eye dexterity to complete procedure Appropriate use of assistance Communication with other members of theatre team	Awareness of progress of procedure Willingness to work with assistants and other theatre personnel to achieve outcomes Self -awareness of when to seek advice/assistance	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre

Post-operative care	Potential complications of procedure Outcomes of procedure Likely post-operative progress from disease process and intervention Physiological and pathological changes in condition as a result of intervention	Assessment of patient and physiological parameters Appropriate intervention to deal with changing parameters Communication skills for dealing with team members, patients and carers Ability to prioritise interventions	Willingness to act as part of a team or lead team where necessary Self -awareness of when to seek advice/assistance	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre

SECTION 3 - SPECIFIC GOALS FOR YEARS 5&6

Aim: To allow a trainee to acquire and develop the specialist skills, knowledge and attitude that will allow final progress towards and achievement of a CCT in the specialty, with the beginning of sub-specialist training as appropriate.

Structure of Years 5 & 6

The final period of specialist training will complete exposure to the core aspects of oral and maxillofacial surgery and increase exposure to sub-specialty areas of choice. By the end of year 6 a trainee should have acquired the competencies and specialist surgical skills that will form the basis for safe clinical practice in the generality of the specialty. The logbook should record further development of operative skills and any deficiency in experience or competency during years 1-4 must be corrected during this period. Most trainees will identify areas of sub-specialty interest during this final period of core training and individual logbooks will probably reflect a bias towards these chosen aspects of clinical practice.

Typical areas of sub-specialist areas of interest relevant to oral and maxillofacial surgery are:

- Craniofacial trauma and secondary reconstruction
- Craniofacial surgery for congenital and acquired deformity
- Osseodistraction of the facial skeleton
- Cleft lip and palate
- Head and neck oncology
- Advanced reconstruction of the mouth, face and jaws (including free tissue transfer)
- Osseointegrated implant techniques and surgery for rehabilitation of the head and neck cancer patient
- Aesthetic maxillofacial surgery
- Temporomandibular joint surgery and reconstruction

Attendance at relevant courses and regional study days, national and international conferences will be expected. Trainees should continue to develop their experience in audit, research, teaching, presentations and contributing to the specialty literature.

Learning Outcomes

On completion of Year 6 of specialist training a trainee will have acquired the following:

a. Competence in the peri-operative care of the maxillofacial surgical patient including management of most complications
b. Competence in diagnosis and clinical management of all core oral and maxillofacial conditions
c. Competence in the operative care of all core oral and maxillofacial conditions
d. Experience in and exposure to at least one area of sub-specialist practice in order to form the basis for subsequent post CCT training and/or mentoring

1. GENERIC SKILLS

Anything further to add here?

2. BASIC SCIENCE KNOWLEDGE

Reference should be made to the sections on Basic Science Knowledge for years 1-4. The aim should be to be confident in those areas that are relevant to day-to-day core clinical practice in oral and maxillofacial surgery. The relevant basic science knowledge required for development of sub-specialist practice should also be acquired during this stage of training unless competency has already been achieved.

Increasing competence in surgical anatomy, physiology and pathology will be linked to increased clinical and operative skills competence.

3. MANAGEMENT OF COMMON ORAL AND MAXILLOFACIAL CONDITIONS

This section gives examples of some other areas of the curriculum that it is reasonable to expect a trainee in the final years of training to be able to deal with, whether encountered as a result of being 'on-call' or working in an out-patient clinic setting. These are in addition to the conditions listed earlier for the initial years of training

The following problems are encountered and should be managed competently by the end of year 6 of training, up to and including operative intervention if appropriate (see Operative Skills section below).

All conditions listed for the years 1-4 plus:

- Diagnosis and management of patient requiring extra-oral and intra-oral osseointegrated implant rehabilitation
- Diagnosis and assessment of patient requiring rhinoplasty

The objective to be achieved for these conditions is:

- To be able to assess a patient presenting either acutely or in the out-patient clinic
- To be able to formulate a differential diagnosis and an investigation and management plan
- To be able to treat the patient appropriately up to and including operative intervention if appropriate
- To be able to communicate the above information at the required level to patients/carers/other team members

3.1 Management of common conditions – Patient requiring osseointegrated implants

Objectives: To be able to assess a patient requiring implants presenting in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Congenital or acquired loss of ear, orbital contents or nose	Aetiological factors and differential diagnosis Specialised investigations Understanding of principles of osseointegration and facial prostheses	History and examination of the patient with loss of facial tissues Ability to formulate treatment plan Osseointegration surgery techniques Post-operative care and follow-up	Ability to communicate with patient and/or carer including consent Ability to teamwork Ability to liase with relevant professional staff, especially maxillofacial technologists, and seek advice where needed	Observation in practice Performance in the combined clinics Guided feedback Review of trainee portfolio
Congenital or acquired loss of teeth and/or alveolar supporting tissues for dental prostheses	Aetiological factors affecting dental loss and alveolar resorption Specialised investigations and classification of alveolar resorption Understanding of principles of osseointegration and implant borne/retained dental prostheses	History and examination of the patient with dental loss and/or alveolar resorption Ability to formulate treatment plan Osseointegration surgery techniques Post-operative care and follow-up	Ability to communicate with patient and/or carer including consent Ability to teamwork Ability to liase with relevant professional staff, especially restorative dentists and maxillofacial technologists	Observation in practice Performance in the combined clinics Guided feedback Review of trainee portfolio

3.2 Management of common conditions – Patient requiring rhinoplasty

Objectives: To be able to assess a patient requiring a rhinoplasty presenting in the out-patient clinic
To be able to formulate a differential diagnosis and an investigation and management plan
To be able to treat the patient appropriately up to and including operative intervention if appropriate
To be able to communicate the above information at the required level to patients/carers/other team members

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Nasal deformity	Aetiological factors Understanding of nasal anatomy and function Understanding of facial aesthetics and age changes in facial tissues Examination of nasal aesthetics and function Specialised investigations Understanding of psychological factors in facial deformity	History and examination of the patient with nasal deformity Ability to formulate treatment plan Rhinoplasty and septo-rhinoplasty techniques Post-operative care and follow-up	Ability to communicate with patient and/or carer including consent Ability to teamwork	Observation in practice Performance in the out-patient clinic Guided feedback Review of trainee portfolio

4. OPERATIVE SKILLS

This section lists additional operative competencies expected by the end of core training in oral and maxillofacial surgery (i.e. end of indicative year 6). The progress made will vary both with the trainee's innate abilities and also the workload and casemix of the trainers with whom they work. The trainee's level of competence should be assessed by direct observation of performance and guided feedback.

Generally speaking a trainee would be expected to be able to perform the procedures listed below without the direct scrubbed assistance or supervision of a trainer (but see important notes below). The list is not exhaustive, although it completes most of the common procedures expected by the end of specialist training. (Reference should also be made to the list of operative procedures at the end of this document. Generally speaking competency in those classified C/D at level 3 would be expected.)

Important notes:

1. Some of the procedures listed below relate to areas of sub-specialty interest. If a trainee declares an intention to pursue a sub-specialty interest on completion of core training the operative logbook can be interpreted in the light of this. This has two implications:
    a. It is not essential that trainees reach level C/D in every operation listed below, although an adequate level of theoretical knowledge is expected for all procedures with level B operative competence as a minimum in most.
    b. An increased level of operative exposure and competence in one or other sub-specialist area will obviously inform the selection process for recognised post-CCT interface training programmes available to oral and maxillofacial surgeons (currently cleft surgery and head and neck surgical oncology).

2. Cleft lip and palate surgery is only undertaken in designated centres by recognised cleft surgeons. Training in this area in the U.K. will be restricted to surgeons selected according to the needs of the service.

4.1 Operative Skills – Maxillofacial Trauma

Indicative training years: 5-6

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Fractures of naso-orbito-ethmoid complex	Anatomy of craniofacial skeleton, nasal bones, orbit and contents Classification of facial fractures Assessment of head injury and cranial nerve function Interpretation of radiographs/scans Available techniques Potential complications	Clinical examination of eyes, facial skeleton and cranial nerves Carry out of steps of procedure safely and correctly Techniques for approach to naso-ethmoid complex Safe exposure of fracture sites and reduction of fragments Bone grafting and plating skills	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Fracture of frontal bones and craniofacial fractures	Anatomy of craniofacial skeleton, frontal bones, nasal bones, orbit and contents Anatomy and physiology of frontal sinus drainage Classification of frontal bone and facial fractures	Clinical examination of eyes, craniofacial skeleton and cranial nerves Carry out of steps of procedure safely and correctly Techniques for approach to frontal bone fractures	Consent Communication skills with patient and/or carer Team working with neurosurgeons Appropriate use of support staff	Observation in practice Guided feedback Review of trainee portfolio

	Assessment of head injury and cranial nerve function Interpretation of radiographs/scans Available techniques Potential complications	Safe exposure of fracture sites and reduction of fragments Management of frontal sinus involvement Bone grafting and plating skills	Awareness of personal limitations	

4.2 Operative Skills – Orthognathic Surgery

Indicative training years: 5-6

Objective: Can perform complete task without direct supervision of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Osseodistraction techniques	Developmental anatomy of facial skeleton and facial musculature Classification and assessment of facial deformity Psychology of facial deformity Norms of facial proportions Techniques of cephalometric analysis Theory of osseodistraction Indications for intra-oral and extra-oral osseodistraction Potential complications	Identification of relevant equipment and support staff Techniques for placement of intra-oral and extra-oral distractors Safe use of power tools Pinning. plating and fixation skills Post-operative management and supervision during active distraction.	Consent Recognition of multidisciplinary team working Liaison with team members Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.3 Operative Skills – Temporomandibular Joint Surgery

Indicative training years: 5-6

Objective: Can perform complete task without direct supervision of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Intra-capsular TMJ and condylar head pathology	Applied anatomy of temporomandibular joint Causes of TMJ/capsular/meniscal pathology Procedures available Indications for open surgery Potential complications	Identification of relevant instruments and support staff Approaches to the TMJ and mandibular condyle	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Reconstruction of temporomandibular joint	Applied anatomy of temporomandibular joint and surrounding structures Aetiology of TMJ ankylosis Aetiology of failure of development of TMJ Procedures available Indications for joint replacement or reconstruction	Identification of relevant instruments and support staff Approaches to the TMJ and mandibular ramus Harvest of costochondral graft Bone plating skills (*Optional:* Selection and fitting of alloplastic joint	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

	Knowledge of alloplastic joint replacements Potential complications	replacement)		

4.4 Operative Skills – Reconstructive Surgery

Indicative training years: 5-6

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Mandibular reconstruction (non-vascularised bone graft)	Anatomy of mandible, neck and oral cavity Understanding of bone healing and vascularisation Advantages and disadvantages of various donor sites Techniques of block and cancellous chip grafts Use of alternative procedures (alloplasts) Potential complications	Identification of relevant instruments and support staff Harvesting of bone grafts Insetting and fixation of bone graft Plating skills Management of donor site and closure Management of complications	Consent Awareness of limitations of procedure Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

Pedicled flaps	Anatomy of donor sites and principles of blood supply to skin, fascia and muscle Indications for different types of flap Limitation of techniques Potential complications	Identification of relevant instruments and support staff Raising of pedicled cutaneous, muscle and myocutaneous flaps Insetting of flap Management of donor site and closure Management of complications	Consent Awareness of limitations of procedure Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

Free tissue transfer	Anatomy of donor sites and principles of blood supply to skin, fascia and muscle Anatomy of neck vessels Indications for different types of flap Principles of microvascular anastomosis Limitation of techniques Potential complications	Identification of relevant instruments and support staff Raising of soft tissue and composite flaps Insetting of flap Use of operating microscope and loupes Preparation of donor and recipient vessels Arterial and venous microvasacular anastomosis Management of donor site and closure Management of complications	Consent Awareness of limitations of procedure Communication skills with patient and/or carer Awareness of personal limitations	Observation in practice Successful flap survival Guided feedback Review of trainee portfolio

4.5 Operative Skills – Osseointegrated implant surgery

Indicative training years: 5-6

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Insertion of extra-oral implants and abutment connection	Indications for procedure Understanding of principles of osseointegration Understanding of effects of radiotherapy on bone healing	Identify relevant instruments and support staff Aseptic preparation Approach to implant site(s) Correct handling and placement of implants Appropriate wound closure	Consent Communication skills with patient and/or carer Team working with maxillofacial technologist Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio
Insertion of intra-oral implants and abutment connection	Indications for procedure Understanding of principles of osseointegration Investigations and planning of implant placement Understanding of effects of radiotherapy on bone healing	Identify relevant instruments and support staff Surgical approach to implant site(s) Correct handling and placement of implants Appropriate wound closure	Consent Communication skills with patient and/or carer Team working with restorative dentist and/or maxillofacial technologist Appropriate use of support staff Awareness of personal limitations	Observation in practice Performance in the combined clinic Guided feedback Review of trainee portfolio

Bone augmentation procedures for implant surgery	Anatomy and age changes of maxilla and mandible Indications for bone augmentation Techniques available Surgical anatomy of intra-oral and extra-oral bone graft donor sites Investigations	Identify relevant instruments and support staff Harvest of cancellous and block grafts Preparation of recipient site and insertion / fixation of graft. Plating skills Appropriate wound closure Management of complications	Consent Communication skills with patient and/or carer Team working with restorative dentist and/or maxillofacial technologist Appropriate use of support staff Awareness of personal limitations	Observation in practice Performance in the combined clinic Guided feedback Review of trainee portfolio

4.6 Operative Skills – Aesthetic surgery

Indicative training years: 5-6

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Rhinoplasty	Anatomy of nasal bones, cartilages and soft tissues Physiology of nasal function Facial aesthetics Techniques of closed and open rhinoplasty Principles and technique of of septoplasty Indications and limitations of procedures Potential complications	Identify relevant instruments and support staff Approach to and osteotomy of nasal bones Exposure and handling of nasal cartilages / septum Bone and cartilage grafting techniques Wound closure and nasal packing / splinting	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

4.7 Operative Skills – Neural Surgery

Indicative training years: 5-6

Objective: Can perform complete task without direct assistance of scrubbed trainer

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Nerve repair / graft	Anatomy of commonly harvested nerves Principles of neural repair process Principles of nerve suture Indications and limitations of nerve grafting Potential complications	Identify relevant instruments and support staff Aseptic preparation Exposure, isolation and harvesting of nerve graft Exploration and preparation of damaged nerve Use of operating microscope and loupes Microneural repair techniques Appropriate wound closure Assessment of returning motor and / or sensory function	Consent Communication skills with patient and/or carer Appropriate use of support staff Awareness of personal limitations	Observation in practice Guided feedback Review of trainee portfolio

5. PERI-OPERATIVE CARE

Indicative training years: 5-6

Aim: To ensure the trainee has reached a level of competence in peri-operative care. The following should apply to each of the procedures in the common conditions and operative skills category

Subject / Topic	Knowledge	Clinical Skills	Relevant Professional Skills	Assessment
Pre-operative care	Indications for surgery Required preparation for surgery to include necessary pre-operative investigations Outcomes and complications of surgery Knowledge of the admission process	Synthesis of history and examination into operative management plan Ability to explain procedure and outcomes to patient and parents at an appropriate level To be able to take informed consent To construct an appropriate theatre list	Takes time to explain procedures to patient Encourages questions Takes patient and carer views into account in decision making	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre
Intra-operative care	Anatomy to be encountered during procedure Steps involved in operative procedure Knowledge of alternative procedures in case of encountering difficulties	Necessary hand-eye dexterity to complete procedure Appropriate use of assistance Communication with other members of theatre team	Awareness of progress of procedure Willingness to work with assistants and other theatre personnel to achieve outcomes Self -awareness of when to seek advice/assistance	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre

Post-operative care	Potential complications of procedure Outcomes of procedure Likely post-operative progress from disease process and intervention Physiological and pathological changes in condition as a result of intervention	Assessment of patient and physiological parameters Appropriate intervention to deal with changing parameters Communication skills for dealing with team members, patients and carers Ability to prioritise interventions	Willingness to act as part of a team or lead team where necessary Self -awareness of when to seek advice/assistance	Observation in practice Information contained in trainer report Formative and summative assessment of performance in OP clinic and theatre

APPENDIX

Oral & Maxillofacial Surgery
Summary of Levels of Operative Competency

1. The following 'long list' of procedures is intended to indicate something of the variety and scope of work carried out in the practice of oral and maxillofacial surgery. It is not intended to be complete or comprehensive. It should be read in conjunction with the sections on Operative Skills and Competencies in the main document.

2. Three levels of competence are identified. The aim that underpins these levels is the practical application of acquired surgical skills allied to an appropriate knowledge base. The list is not prescriptive but is intended as a benchmark for trainees of their progress in training, and as a guide for trainers on the expected level of operative competence at each stage.

3. It is not essential that all procedures should be individually assessed although this remains the ideal. The concept of transferable skills applies.

4. The indicated stages are the minimum required at each level of training, although it is anticipated that many trainees will gain the required level of competence in some procedures earlier. It is also recognised that most trainees will show a bias towards an area of sub-specialist interest in their final stages of training. This should be kept in mind when interpreting competence at level 3 (end of training) where C/D need normally apply only to these declared areas of specialist interest.

5. There is no mention of minimum numbers in this list because these are not the key to the assessment of competence.

OPERATIVE COMPETENCIES IN ORAL AND MAXILLOFACIAL SURGERY

Key:
A = Not able to perform procedure (but ideally should have seen or assisted)
B = Competent to perform procedure under direct supervision
C = Competent to perform procedure without direct supervision
D = Competent to perform and deal with complications and difficulties which may arise

OPERATION / PROCEDURE	**LEVEL 1 (End yr. 2)**	**LEVEL 2 (End yr. 4)**	**LEVEL 3 (End yr. 6)**
Dento-alveolar surgery			
Surgical extraction of retained/buried roots/teeth	D		
Surgical exposure of unerupted tooth	D		
Transplantation of tooth	D		
Apicectomy/retrograde root sealing	D		
Enucleation of jaw cyst	D		
Closure of oro-antral fistula	D		
Removal of tooth/root from maxillary antrum	D		
Excision of benign oral/gingival soft tissue lesion	D		
Lingual/labial frenectomy	D		
Excision of exostosis/benign lesion of bone	D		
Maxillofacial trauma			
Repair of facial lacerations	D		
Treatment of dento-alveolar fractures	D		
Reduction of fractured nasal bones	D		
Repair of lacrimal/parotid duct injury	B	C	D
Repair of facial nerve injury	A	B	D
Open reduction and fixation of symphysis/body/angle of fractured mandible	C	D	
Open reduction and internal fixation of condylar neck of mandible	B	C	D
Elevation of fractured zygoma	C	D	
Open reduction and fixation of fractured zygoma	C	D	
Orbital floor/wall exploration and repair/graft	B	C	D
Reduction and fixation fractured maxilla	B	D	D

(Le Fort I)			
Reduction and fixation fractured maxilla (Le Fort II/III)	B	C	D
Open reduction and fixation of naso-orbito-ethmoid complex fracture	A	B	D
Reduction and fixation of frontal bone fracture	A	B	D
Salivary gland surgery			
Labial gland biopsy	D		
FNAC of salivary gland	D		
Excision of mucocoele of lip	D		
Removal of stone from submandibular duct	C	D	
Excision of neoplasm of minor salivary gland	C	D	
Sublingual gland excision	B	D	
Submandibular gland excision	B	D	
Partial/superficial parotidectomy	A	D	
Total conservative parotidectomy	A	D	
Radical parotidectomy	A	D	
Orthognathic surgery			
Genioplasty	B	D	
Mandibular ramus osteotomy	B	D	
Le Fort I maxillary osteotomy	B	D	
Le Fort II/III maxillary osteotomy	A	B	D
Zygomatic/orbital osteotomy	B	C	D
Mandibular osteodistraction procedures	A	B	D
Maxillary osteodistraction procedures	A	B	D
Cleft lip and palate surgery			
Repair of cleft lip			A
Repair of cleft palate			A
Surgery for cleft palate fistula			A
Cleft lip revision surgery		A	B
Pharyngoplasty		A	B
Alveolar bone graft		A	B
Temporomandibular joint surgery			
Arthrocentesis	A	D	

Arthroscopy	A	B	D
Open operation on capsule/disc/condylar head	A	B	D
Surgery for recurrent TMJ dislocation	B	C	D
Costo-chondral graft	A	B	C
Alloplastic temporomandibular joint replacement	A	B	B
Surgery for benign disease of maxilla/mandible			
Excision of benign odontogenic tumours	B	C	D
Excision of fibro-osseous jaw tumours/dysplasia	B	C	D
Neck surgery			
Drainage of tissue space infection	D		
Tracheostomy/cricothroidotomy	C	D	
Exploration/ligation of external carotid artery	B	D	
FNAC neck mass	D		
Cervical node biopsy	C	D	
Excision of lymphoepithelial (branchial) cyst	B	C	D
Excision of thyroglossal cyst/fistula	B	C	D
Selective neck dissection	B	C	D
Comprehensive neck dissection	B	C	D
Resection of malignant tumours			
Excision of malignant skin tumour	D		
Excision of tongue/oro-pharyngeal tumour	B	C	D
Resection of mandible/maxilla	B	C	D
Orbital exenteration	B	C	D
Reconstructive surgery			
Harvest of skin graft	D		
Harvest of intra-oral bone graft	D		
Local skin flaps	D		
Harvest of non-vascularised extra-oral bone graft	C	D	
Mandibular reconstruction with non-vascularised bone graft	A	B	D
Pedicled muscle/fascial/myocutaneous flap	A	B	D

Vascularised free tissue transfer	A	B	D
Osseointegrated implant surgery			
Insertion of extra-oral implants/abutments	A	B	D
Insertion of intra-oral implants/abutments	A	B	D
Sinus lift/onlay graft	A	B	D
Aesthetic surgery			
Scar revision/Z-plasty etc.	C	D	
Cervico-facial liposuction	A	B	D
Rhinoplasty	A	B	D
Zygomatic/chin/nasal onlays	A	B	D
Pinnaplasty	A	B	D
Blepharoplasty	A	B	D
Browlift	A	B	D
Facelift		A	B
Neural surgery			
Harvest of peripheral nerve (e.g.sural)	A	C	D
Lingual nerve exploration/repair	A	B	D
Facial nerve repair/graft	A	B	D
Trigeminal nerve cryotherapy/neurectomy/chemolysis (peripheral)	A	D	