

Curriculum for Education and Training in Orthopaedic Surgery in New Zealand Overview

The overarching goal of the curriculum for education and training in Orthopaedic Surgery, 2019, is to guide trainees in learning and refining Foundation Competencies, in addition to those related to medical and surgical expertise, to improve the patient care they provide. The framework identifies and describes the abilities required of trainees to effectively meet the health care needs of patients.



This curriculum is divided into three sections.

Quality Patient Care

Section 3 – Applied Medical and Surgical Expertise in Orthopaedics Applied Sciences, Assessment, Management, Surgical Skills

Trauma
and Injury

Shoulder,
Elbow,
Hand &
Wrist

Hip, Knee,
Foot &
Ankle,
Spine

Paediatrics

Systemic
Medical
Conditions

Section 2 – Medical and Surgical Expertise

Medical Expertise

Technical Expertise

Judgement and Clinical Decision
Making

Section 1 – Foundation Competencies

Communication

Professionalism & Ethics

Health Advocacy

Collaboration & Teamwork

Management & Leadership

Scholarship & Teaching

Cultural Competence and Culture
Competence

SECTION 1 – FOUNDATION COMPETENCIES	
<i>Competencies that, together with medical and surgical expertise, are the foundation for quality patient care.</i>	
1.1 Communication and Cultural Awareness	<ul style="list-style-type: none"> Establishing relationships with patients and their whanau Eliciting relevant information Sharing information with patients and their whanau Sharing information with colleagues and others Appropriately adjusts with patients and relatives to accommodate cultural and linguistic differences
1.2 Collaboration and Teamwork	<ul style="list-style-type: none"> Working with others Handover Conflict management
1.3 Professionalism and Ethics	<ul style="list-style-type: none"> Professional and ethical behaviour Commitment to Orthopaedic Surgery as a Profession Health and sustainable practice
1.4 Management and Leadership	<ul style="list-style-type: none"> Leadership Organisational practice (including practice management) Cost and allocation of healthcare
1.5 Health Advocacy	<ul style="list-style-type: none"> Advocacy for individual patients Advocacy for the community Cultural awareness and sensitivity
1.6 Scholarship and Teaching	<ul style="list-style-type: none"> Ongoing learning (CPD and integration of evidence) Teaching Critical evaluation of literature Research, development and dissemination of new knowledge

** Please note, throughout the curriculum, phrases such as ‘patients and their whanau are intended to include all those that are personally significant to the patient and are concerned with his or her care.*

Based on the CanMEDs approach, Section 1 competencies together with medical and surgical expertise are the foundations of quality patient care. They are applied across all stages of training and have been brought together at the beginning of the curriculum document to emphasise their importance.

Competencies on conflict management and handover, practice management and critical evaluation of literature have been included. In keeping with current medical education best practice, professional and ethical behavior, and health and sustainable practice are distinct subsections of Professionalism. Although cultural awareness and sensitivity spans a number of Foundation Competencies, it has been included within Advocacy.

Each section of the curriculum builds upon the previous one. The achievement of specific competencies with regard to orthopaedic surgery detailed in later sections, is underpinned by the development of Foundation Competencies.

SECTION 2 – MEDICAL AND SURGICAL EXPERTISE	
<i>Medical and surgical expertise competencies underpin competencies within Section 3.</i>	
2.1 Orthopaedic Principles and Basic Sciences (OPBS)	Musculoskeletal Pathology Biomechanics and motion Materials and engineering Infection, immunology and inflammation Neurovascular Pharmacology Radiology and investigations
2.2 Medical Expertise (ME)	Applied Science Assessment Management
2.3 Technical Expertise (TE)	Pre-operative Intra operative Post-operative
2.4 Judgement and Clinical Decision Making	Non-operative Operative practice

The medical and surgical expertise competencies define the fundamental specialty knowledge and skills of orthopaedic surgeons across all areas of practice. The collation of these ‘generic’ orthopaedic surgery competencies prevents repetition throughout the curriculum, and when applied to a specific context within Section 3, reflects a spiral learning approach.

SECTION 3 – APPLIED MEDICAL AND SURGICAL EXPERTISE IN ORTHOPAEDICS	
<i>Medical and surgical expertise competencies applied to each topic area.</i>	
Topics:	<u>ME - Applied Sciences</u>
3.1 Trauma and Injury	Anatomy, including surgical approaches
3.2 Shoulder	Biomechanics
3.3 Elbow	Pathology
3.4 Hand and Wrist	<u>ME - Assessment</u>
3.5 Hip	History taking
3.6 Knee	Physical Examination
3.7 Foot and Ankle	Investigations
3.8 Spine	<u>ME - Management</u>
3.9 Tumour and Tumour-like Conditions	Non operative Management Management Plans
3.10 Paediatric	<u>SE - Surgical Skills</u>
3.11 Systemic Medical Conditions	Level One - Perform independently Level Two - Have observed, assisted with or performed with supervision Level Three – Discuss how procedure would be performed

Each topic area is divided into four sub-sections; Applied Science; Assessment; Management; and Surgical Skills.

Surgical skills are categorised into three levels. On their first day of independent practice, all trainees graduating from the NZOA education and training program will be able to competently perform all procedures listed in level one. They will have been provided with the opportunity to observe, assist with or perform under supervision those procedures listed in level two. In addition, they will be able to discuss how procedures in level three would be performed. In summary the levels indicate – ‘must perform’, ‘should have performed’, ‘would be beneficial to have had some educational exposure’.

It is expected that many trainees may also be able to independently perform procedures that are listed in level two and three. The goal is to train to excellence and assess for competence. Regional training centres will encourage trainees to achieve beyond the minimum required, as described in this curriculum.