Linking Modules to the Curriculum Map

Otago Medical School
University of Otago
MB ChB
Curriculum Map

UNIVERSITY
of
OTAGO

Te Whare Wānanga o Otāgo

2016 version

An interim document pending release of the online version of the revised curriculum map

Authorised by the OMS MB ChB Curriculum Committee (MCC)

University of Otago Medical School

Revision date: 2017
Table of Contents

Introduction........................................................................................................................................ 3
  Learning Philosophy......................................................................................................................... 3
Underlying Goals and Purpose.......................................................................................................... 4
Map Structure and Inter-relationships.............................................................................................. 5
Governance of the map...................................................................................................................... 6
The Core Elements ............................................................................................................................ 6
Core Presentations (CPs) .................................................................................................................. 7
  Definition: ....................................................................................................................................... 7
  Guiding questions for Presentations: ............................................................................................ 7
  Core presentation list: ................................................................................................................... 8
Core Professional Activities (CPAs) .................................................................................................. 11
  Definition: ...................................................................................................................................... 11
  Short definition: ........................................................................................................................... 11
  CPA List: .................................................................................................................................... 12
Core Conditions (CCs) ....................................................................................................................... 15
  Definition: ...................................................................................................................................... 15
  Guiding questions for core conditions: ....................................................................................... 15
  Core Conditions list: ................................................................................................................... 16
Other core lists: learning outcomes .................................................................................................. 21
  Core diagnostics: ......................................................................................................................... 21
  Essential drug list: ........................................................................................................................ 25
Appendices: ......................................................................................................................................... 26
  Appendix 1: Glossary: Key definitions ......................................................................................... 26
  Appendix 2: Levels of learning (LL) ............................................................................................ 28
  Appendix 3: Work in progress in relation to the curriculum map .............................................. 31
  Linking elements within the curriculum map ............................................................................... 31
  Learning Outcomes ...................................................................................................................... 33
  Appendix 4: Historical background to the Curriculum Map ...................................................... 34
Introduction
The University of Otago MB ChB programme curriculum map (the curriculum map) outlines the key elements of expected learning within the MBChB programme. It demonstrates how the elements are organised, structured and related to each other. It also shows the associations, via modules, with learning opportunities in the curriculum and to learning resources. While it contains the expected learning outcomes and opportunities, the map itself does not describe the programme structure, contain timetables or describe the entire curriculum.

The core of the curriculum is covered (can be accessed and learned by students) via three central ‘organising’ constructs which form a ‘common currency’ for the curriculum:

Core Presentations (CPs)
Core Conditions (CCs)
Core Professional Activities (CPAs)

The ‘core’ lists represent common ‘doorways’ or points of access for the students to learning and also are the primary point of linking to learning outcomes and to learning opportunities (modules) and learning resources.

The use of the term ‘core’ reflects that fact that the lists of presentations, conditions and professional activities have been deliberately chosen as representing the essential minimum requirements for an undergraduate curriculum. The lists (and associated learning) are not intended to be exhaustive or to in any way limit or bound student learning. These terms are fully defined in the glossary section but in essence core presentations represent the ways in which patients present to health services, core conditions the illnesses and injuries which patients develop and core professional activities the things which doctors do within their professional roles.

Learning Philosophy
All of the required learning outcomes within the curriculum can be achieved by attending to learning that is relevant to (linked to) the core presentations, core conditions and core professional activities. ¹

Learning through experience and linking theory to practice is at the heart of the programme. Theory and knowledge are is represented by the specific learning outcomes that are categorised or grouped according to the six domains. Practice is represented by the learning opportunities in modules where the core elements are covered and/or are likely to be encountered. The structure of the curriculum map (whereby learning outcomes are associated primarily with core elements rather than directly to modules) facilitates flexibility of learning and accommodates revisiting, reinforcement and serendipitous opportunistic learning. Students are supported and guided in

¹ Note: This document does not contain the individual learning outcomes but outlines the core elements and other important aspects of the curriculum map.
their learning by the linking of learning resources and learning outcomes to the common currency of the core professional activities, core presentations and core conditions and by associated guiding questions.

The deliberate allocation and progression of levels of learning by stage of training is also consistent with the commitment to the concept of spirals of learning.

Please see the Glossary in Appendix 1 for detailed definitions.

Learning outcomes are not only linked to these core elements of the curriculum but are also classified according to domain groupings – these being:

- Clinical Skills
- Diagnostics and Therapeutics
- Hauora Maori
- Population Health and Epidemiology
- Professional Practice
- Science, Scholarship and Research

These domains are also more comprehensively defined and described in the glossary section.

Underlying Goals and Purpose
The primary purpose of a curriculum map is to guide and assist student learning. It aims to enable students and staff to find out what learning is expected, where in the course such learning occurs, and how such learning links to other components of the course.

It will do this primarily by:

- Making visible to students, and staff, the learning opportunities and resources so that students can link theory with present and future practice
- Providing resources and frameworks to facilitate and maximise learning from both scheduled and serendipitous experience or practice
- Making visible also the progression (spiral) and coordination of learning that occurs throughout the overall programme

The map will also serve several other purposes including:

- Assisting teaching staff, especially module convenors, to see where their individual contribution fits within the overall programme
- Assisting teaching and administrative staff to identify and collaborate with each other where they share core elements
- Facilitating sharing and refinement of relevant resources
- Representing the curriculum in sufficient detail and format to enable understanding by external bodies including accreditation authorities
- Representing the curriculum in a way that will facilitate efficient review, modification and quality control
Map Structure and Inter-relationships

The important elements of the curriculum map and relationships between them are outlined in the diagram below. Essentially each learning outcome can be linked to any one or more core element (CP, CC or CPA) and each of the core elements also has links both to modules, which provide the main learning opportunities, and to learning resources, via the module link to Med Moodle.

Because each core element is linked to more than one module, staff and students can see where content is reinforced and/or built upon. It also helps staff and students identify learning resources from other modules. The work of identifying important and useful links between individual learning outcomes and core elements is underway but incomplete. Work is about to commence also on identifying meaningful links between the core elements and modules. A critical component of this process will be conversations with module convenors. Details of the principles and process involved in this work are included in Appendix 3.

The third indirect type of link between learning resources and relevant core elements (CPs, CCs and CPAs) occurs via the existing mechanisms in Med Moodle.

While the MB ChB curriculum map is freely and publicly accessible via the website the learning resources, by residing within the Med Moodle learning platform, are therefore password protected. This not only allows control of access to resources, including access in relation to stage of training, but will enable quality control processes in regard to the resources including for example control of editing rights.
Governance of the map
Content of the curriculum map is overseen and authorised by the Curriculum Map subcommittee (CMSC) of MCC. This oversight includes responsibility for ensuring the consistency and coherence of the map.

The majority of the domain groupings, into which all learning elements are classified, have oversight by the corresponding MCC sub-committee. Diagnostics and Therapeutics as yet has no oversight body other than the CMSC. It is anticipated that the majority of these learning outcomes will receive oversight via clusters of module convenors whose modules share common core elements.

The Core Elements
The following pages provide detail of the core elements in the curriculum map, the CPs, CPAs and CCs. These elements now form the heart of the MB ChB curriculum map.
Core Presentations (CPs)

Definition:
A Core Presentation = a symptom, complaint, problem or request a patient has identified or a clinically recognisable patient state which requires further diagnostic consideration including an initial assessment and management strategy.

All presentations within the Core Presentation list (133) are considered essential learning for medical students by the time of graduation. The list, and the order in which the presentations appear, is not intended to indicate or represent the relative importance or proportionality of systems or disciplines within the overall curriculum.

The level of learning is not uniform for all presentations but specified and described according to the particular presentation.

The detailed descriptors of levels of learning (see Appendix 2) and associated guiding questions also assist students to understand the depth and breadth of learning required in relation to presentations.

Guiding questions for Presentations:
The following are typical questions which students should work towards answering when learning about a particular presentation. The range of questions tackled will depend on both the stage of training and the expected level of learning for the specific presentation as indicated within the map.

1. What body structures and functions (biomedical and psychosocial) could be involved in this presentation?
2. What disruptions of structures and functions (biomedical and psychosocial) could be involved in this presentation?
3. What clinical features of the presentation (history and examination) and patient and population variables (such as age, sex, race, ethnicity, socio-economic background, co-morbidities, and population prevalence) are helpful in identifying a provisional and differential diagnosis? (aetiology, correlation of clinical features with underlying causes including ‘red flags’)
4. What conditions most commonly cause this presentation?
5. Are there potentially serious and life-threatening conditions which need to be considered and specifically diagnosed (ruled-in) or excluded (ruled-out)?
6. What guiding principles and specific diagnostic tests/investigations will help determine the diagnosis?
7. In what circumstances does management of the presentation need to proceed at the same time as investigation and diagnosis?
8. What are the management priorities while undertaking investigation and diagnosis?
9. Are there any clinical guidelines which outline the approach to this presentation? What are the benefits and limitations of these guidelines in general and for individual patients?
10. In what circumstances should help be sought from others such as more senior medical professionals and allied health professionals?
Core presentation list:
1. Anaemia/pallor
2. Lymphadenopathy
3. Bruising/purpura/petechiae
4. Splenomegaly
5. Immune deficiency/immunosuppression
6. Palpitations/abnormal heart rhythm
7. Abnormal blood pressure
8. Chest pain
9. Heart murmur/abnormal heart sounds in an adult
10. Heart murmur/abnormal heart sounds in an infant/child
11. Shock
12. Unilateral swelling in the calf or leg
13. Pain in calf, thigh, or buttocks on walking
14. Shortness of breath
15. Respiratory distress in a child
16. Obstructed airway
17. Coughing up blood
18. Cough
19. Upper respiratory symptoms (nasal blockage, nasal discharge, sore throat)
20. Sleeping problems
21. Abnormal development of secondary sex characteristics
22. Malnutrition/undernutrition
23. Dehydration
24. Polyuria/polydipsia
25. Neck swellings/lumps
26. Difficulty/pain swallowing
27. Abdominal/loin/groin pain
28. Abdominal pain in children
29. Disturbance of bowel habit
30. Gastro-intestinal bleeding
31. Jaundice
32. Infant jaundice
33. Nausea/vomiting
34. Abdominal mass/swelling in an adult
35. Abdominal mass/swelling in a child
36. Oliguria/anuria
37. Blood in the urine
38. Urinary retention
39. Urinary incontinence
40. Lower urinary tract symptoms
41. Genital ulceration/discharge/warts
42. Scrotal/groin pain or abnormality
43. Breast lump/other changes
44. Female pelvic pain/discomfort
45. Abnormal vaginal discharge
46. Disorder of menstruation/intermenstrual/post-menopausal vaginal bleeding
47. Menopausal symptoms
48. Unintentional weight loss
49. Obesity
50. Fatigue/lethargy/malaise
51. Generalised/peripheral oedema
52. Febrile illness in an adult
53. Febrile illness in an infant/child
54. Hypothermia/frostbite
55. Skin wound, including human or animal bite
56. Burn(s)
57. Ingestion of toxic substances (accidental or intentional)
58. Multiple trauma
59. Head injury
60. Eye injury
61. Spinal injury
62. Chest/abdominal/pelvic injury
63. Fracture/dislocation/soft tissue limb injury
64. Confusion/ altered mental state
65. Eating disturbance
66. Altered mood
67. Anger/aggression
68. Anxiety/agitation/stress
69. Psychosis/hallucinations/delusions
70. Self-harm/suicidal intent
72. Limb(s) pain/lump(s)
73. Limp/abnormal gait in a child
74. Single joint problem
75. Multiple joint problem
76. Sore joints in a child
77. Deformity of spine/chest/upper limb/lower limb
78. Muscle spasms/cramps
79. Falls
80. Loss of consciousness
81. Altered level of consciousness
82. Headache/facial pain
83. Memory loss/forgetfulness
84. Speech/language disturbances
85. Involuntary movements/gait disturbance
86. Dizziness/vertigo
87. Numbness/paraesthesiae
88. Weakness focal/generalised.
89. Red eye
90. Painful/dry/irritable eye
91. Pupil abnormality
92. Double vision
93. Sudden change of vision
94. Gradual change of vision
95. Visual problems in infancy and childhood
96. Bulging eye(s)
97. Nose bleed
98. Ear ache/discharge
99. Hoarseness/voice change
100. Hearing loss/tinnitus
101. Childhood disability/chronic condition
102. Normal pregnancy/labour/puerperium
103. Vaginal bleeding in pregnancy
104. Large or small for dates gestation
105. A medical complication in pregnancy
106. Complications of labour
107. Problems in the puerperium
108. Sick newborn/infant
109. Infant feeding problems
110. Failure to thrive
111. Developmental delay/dysmorphic features
112. Slow or accelerated growth in childhood
113. Localised skin change/lesion
114. Skin change in unwell patient
115. Rash
116. Urticaria (hives)/angioedema
117. Pigmented skin lesion/pigment patch
118. Pruritus/itchy skin
119. Skin ulcer(s)
120. Hair/nail complaints
121. Skin/subcutaneous lump(s)
122. Unplanned pregnancy
123. Suspected/actual physical, sexual, psychological or emotional abuse within the family group
124. Risk-taking behaviours such as alcohol and other drug use, and risky sexual activity
125. Request for help with behaviour/lifestyle change
126. Request for preventive health information
127. Patient and/or family requiring community support/respite care
128. Request for sexual health information/help with sexual dysfunction
129. Infertility
130. Request for contraception/sterilisation
131. Discussion about termination of pregnancy
132. Cardiorespiratory arrest
133. Advanced, progressive or terminal disease requiring a palliative approach
Core Professional Activities (CPAs)

**Definition:**
Core Professional Activities (CPAs) are discrete, identifiable activities required of medical professionals which are not specific to any particular patient presentation or condition. Core professional activities are based around some of the most common and important roles and tasks required of medical professionals and require integration of knowledge, skills and attitudes into a meaningful whole. Each CPA constitutes one of the many “things doctors do” in their professional roles. For the purposes of this curriculum map each activity is described in terms which reflect the standard or level of competence which can reasonably be expected of a new medical graduate.

The majority of CPAs represent recognisable meaningful activities undertaken or performed, and experienced, in the course of patient care. Others reflect the broader scope of the professional role and include activities in relation to the professional self, colleagues, the profession as a whole and the wider community and systems of care.

Some of these CPAs/activities when undertaken by qualified medical professionals will be clearly visible to students while others may be internalised and hidden from view. The activities which students are able to see/witness as observable behaviours provide a stimulus for students to make links between learning experiences/opportunities and underlying knowledge and theory. Where the activities are largely cognitive and reflective or occurring outside of the learning environments these CPAs will need to be explicitly shared and articulated to students making them therefore both visible and able to be learned.

**Short definition:**
Core professional activities are based around some of the most common and important roles and tasks required of medical professionals and require integration of knowledge, skills and attitudes into a meaningful whole. Each CPA constitutes one of the many “things doctors do” in their professional roles. For the purposes of this curriculum map each activity is described in terms which reflect the standard or level of competence which can reasonably be expected of a new medical graduate.

Given that CPAs attempt to describe activities which integrate knowledge and skills across domains and across the complex applied practice of medicine, the descriptors of CPAs are quite long. A short heading has been provided for each CPA but the full descriptor should be considered when linking to relevant student learning and resources.
### CPA List:

<table>
<thead>
<tr>
<th>CPA Number</th>
<th>Full description</th>
<th>Short title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Complete a doctor-patient consultation addressing the patient’s needs and perspectives, including cultural aspects, while also completing the medical tasks and duties.</td>
<td>Doctor-patient consultation</td>
</tr>
<tr>
<td>2</td>
<td>When the patient identifies as Māori, manage the consultation in a manner which includes Māori health models of engagement and assessment utilising te reo, tikanga and other relevant Hauora Māori competencies.</td>
<td>Maori consultation</td>
</tr>
<tr>
<td>3</td>
<td>Appropriately incorporate advice and guidance from a Māori health clinician, worker or provider.</td>
<td>Incorporate guidance from Maori health workers</td>
</tr>
<tr>
<td>4</td>
<td>When the patient identifies as Pacific, manage the consultation in a manner which includes Pacific health models of engagement and assessment.</td>
<td>Pacific consultation</td>
</tr>
<tr>
<td>5</td>
<td>Help patients and family/whānau navigate their illness-related journeys by considering the whole person including their psychosocial, cultural and spiritual needs, and by working with the health care team to ensure appropriate support is provided.</td>
<td>Help patients navigate their illness-related journey</td>
</tr>
<tr>
<td>6</td>
<td>Be flexible in order to adapt the assessment and management approach to take account of context, patient factors, population risks and prevalence rates.</td>
<td>Patient and population risk factors</td>
</tr>
<tr>
<td>7</td>
<td>Select, organise and/or perform appropriate core diagnostic tests and explain the tests/procedures and the results to patients.</td>
<td>Diagnostic tests</td>
</tr>
<tr>
<td>8</td>
<td>Recognise and initiate management of the acutely unwell and/or deteriorating patient.</td>
<td>Acutely unwell and deteriorating patients</td>
</tr>
<tr>
<td>9</td>
<td>Contribute to the shared management of patients with chronic conditions.</td>
<td>Management of chronic illness</td>
</tr>
<tr>
<td>10</td>
<td>Appropriately modify assessment and management strategies in circumstances where the patient has impaired competence and/or autonomy.</td>
<td>Impaired competence or autonomy</td>
</tr>
<tr>
<td>11</td>
<td>Appropriately modify assessment and management strategies in circumstances where the patient has impaired communication, language difficulties, and/or disability.</td>
<td>Communication difficulties</td>
</tr>
<tr>
<td>12</td>
<td>Recognise and appropriately manage a situation when the interaction with the patient is challenging or difficult.</td>
<td>Challenging/difficult interactions</td>
</tr>
<tr>
<td>13</td>
<td>Assess and manage patients around the time of an operation.</td>
<td>Assess and manage patients around the time of an operation</td>
</tr>
<tr>
<td>14</td>
<td>Complete an age-appropriate consultation of a paediatric patient; including adolescent, child, infant and new-born.</td>
<td>Paediatric consultation</td>
</tr>
<tr>
<td>15</td>
<td>Share information and decision-making with a patient, and when appropriate, their family/whānau or chosen others, in order to construct an acceptable management plan which incorporates the patient’s preferences and values.</td>
<td>Sharing of information and decision making</td>
</tr>
<tr>
<td>16</td>
<td>Communicate patient information to health professional colleagues in a way which demonstrates clinical reasoning through a provisional diagnosis, differential diagnosis and formulated management plan.</td>
<td>Communication with colleagues</td>
</tr>
<tr>
<td>17</td>
<td>Select, organise, and/or perform or prescribe, monitor and/or evaluate appropriate core therapeutic interventions.</td>
<td>Core therapeutic interventions</td>
</tr>
<tr>
<td>18</td>
<td>Contribute to the effective provision and receipt of handover of care of a patient.</td>
<td>Handover of care</td>
</tr>
<tr>
<td>19</td>
<td>Function competently as a member of a health care team including respectful and effective communication, and calling for help and/or closer supervision when appropriate.</td>
<td>Function competently as a member of a health care team</td>
</tr>
<tr>
<td>20</td>
<td>Respect and protect patient confidentiality within consultations and within teams and systems of health care, recognising and managing circumstances in which there are limits to confidentiality.</td>
<td>Patient confidentiality</td>
</tr>
<tr>
<td>21</td>
<td>Follow appropriate process and procedures for consent in health care, recognising and managing circumstances when consent is not obtained or possible.</td>
<td>Consent issues</td>
</tr>
<tr>
<td>22</td>
<td>Contribute to discussions with patients, and when appropriate their family/whānau or chosen others, in relation to poor prognosis, advance care planning, end-of-life care, and resuscitation status including DNACPR orders (do not attempt cardiopulmonary resuscitation)</td>
<td>Poor prognosis and end-of-life care</td>
</tr>
<tr>
<td>23</td>
<td>Contribute to health care team discussions involving the range of ethical dilemmas arising in clinical practice.</td>
<td>Discussion of ethical dilemmas</td>
</tr>
<tr>
<td>24</td>
<td>Recognise and manage situations where personal moral values differ from those of individual patients and/or the accepted moral codes of the medical profession.</td>
<td>Issues around moral values</td>
</tr>
<tr>
<td>25</td>
<td>Comply with legislation relevant to clinical practice in New Zealand.</td>
<td>Legislation relevant to clinical practice</td>
</tr>
<tr>
<td>26</td>
<td>Apply appropriate cultural competencies to interactions with patients, family/whānau and communities.</td>
<td>Cultural competencies</td>
</tr>
<tr>
<td>27</td>
<td>Undertake continuing professional development by recognising and managing personal limits, and seeking and responding appropriately to feedback.</td>
<td>Continuing professional development</td>
</tr>
<tr>
<td>28</td>
<td>Maintain appropriate professional boundaries, and seek and offer support in circumstances where there is recognisable risk of boundary violations.</td>
<td>Professional boundaries</td>
</tr>
<tr>
<td>29</td>
<td>Contribute to the professional development and/or supervision of students, peers and health professional colleagues.</td>
<td>Professional development of peers and colleagues</td>
</tr>
<tr>
<td>30</td>
<td>Recognise and manage risks to personal wellbeing that could impact on practice and/or professional development.</td>
<td>Personal well-being</td>
</tr>
<tr>
<td>31</td>
<td>Recognise and respond to situations where impairment of wellbeing and/or the competence of a peer or colleague could pose a risk to patients or the public.</td>
<td>Wellbeing and competence of colleagues</td>
</tr>
<tr>
<td>32</td>
<td>Formulate a practice-related question, gather, critically appraise and interpret relevant information and evidence, and apply these to the question.</td>
<td>Evidence based practice</td>
</tr>
<tr>
<td></td>
<td>Apply health promotion principles to develop and/or evaluate an initiative designed to improve the health of a population.</td>
<td>Health promotion principles</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>34</td>
<td>Recognise and decide when a health problem requires a choice between a population approach and an individual approach.</td>
<td>Population versus individual approaches</td>
</tr>
<tr>
<td>35</td>
<td>Contribute to quality assurance and quality improvement of health care delivered by individuals and systems.</td>
<td>Quality improvement</td>
</tr>
<tr>
<td>36</td>
<td>Recognise and manage systems and/or individual factors where there is a risk of error, harm or sub-optimal care and manage occasions when these have occurred.</td>
<td>Error and sub-optimal care</td>
</tr>
<tr>
<td>37</td>
<td>Identify major determinants of health, and advocate for and contribute to, interventions that reduce inequities and improve the health of populations.</td>
<td>Reduce inequities and improve population health</td>
</tr>
<tr>
<td>38</td>
<td>Engage patients in preventive and population strategies to improve individual and population health.</td>
<td>Preventive and population health strategies</td>
</tr>
<tr>
<td>39</td>
<td>Apply the science of normal structure and function (from genome to whole body) to optimize individual and population health.</td>
<td>Science of normal structure and function</td>
</tr>
<tr>
<td>40</td>
<td>Apply the science of abnormal structure and function (from genome to whole body) to prevent, diagnose and manage individual and population health problems.</td>
<td>Science of abnormal structure and function</td>
</tr>
<tr>
<td>41</td>
<td>Apply the science of environmental, microbiological, radiation and other external factors to prevent, diagnose and manage individual and population health problems.</td>
<td>Science of environmental, microbiological and other external factors</td>
</tr>
<tr>
<td>42</td>
<td>Apply the behavioural and social sciences to optimize health and manage conditions of individuals, family/whānau and communities.</td>
<td>Behavioural and social sciences</td>
</tr>
<tr>
<td>43</td>
<td>Understand common qualitative and quantitative study designs and interpret and apply study findings to practice</td>
<td>Research designs and interpretation</td>
</tr>
</tbody>
</table>
Core Conditions (CCs)

Definition:
A Core condition is an abnormal (pathological) disorder, disease, illness or injury which impacts on the health and well-being of the person. The Core Conditions list includes the conditions considered to be essential learning for medical students by the time of graduation. The level of learning is not uniform but specified and described according to the particular condition.

The detailed descriptors of levels of learning (see Appendix 2) and associated guiding questions also assist students to understand the depth and breadth of learning required in relation to conditions.

Guiding questions for core conditions:

The following are typical questions which students should work towards answering when learning about a particular condition. The range of questions tackled will depend on both the stage of training and the expected level of learning for the specific presentation as indicated within the map.

(1) What disruptions of structures and functions (biomedical and psychosocial) are involved in this condition?
(2) How does this condition typically present? (clinical features on history and examination and other ways e.g. abnormal test/investigation results) What are the important atypical presentations?
(3) What other conditions should be considered in a differential diagnosis before reaching a definitive diagnosis?
(4) What are the prevalence and incidence of this condition? What are the condition-specific, individual patient and population variables which influence these?
(5) What are the main impacts (physical, psychosocial, cultural and spiritual) of this condition for the individual patient, their family/whānau and friends, society and for health services?
(6) What is the natural progression and prognosis of the condition?
(7) What are the common associated conditions and co-morbidities?
(8) What principles guide therapeutic interventions in this condition?
(9) What are the management options for patients with this condition and how do these impact on prognosis and patient wellbeing?
(10) Are there any individual and population based preventive, screening and treatment strategies which can be used for this condition?
(11) What are the current challenges and controversies in relation to this condition?
Core Conditions list:

Croup
Diabetes - Type I
Electrical injury
Foreign body in the ear, nose or throat
Foreign body in the eye
Near drowning
Pelvic fracture
Thermal/chemical burn
Otitis Media
Tympanic membrane rupture
Distributive shock
Cardiogenic shock
Hypovolaemic shock
Zoonotic bacterial diseases
Urinary calculus disease
Cystitis / urethritis
Acute bronchitis
Heart failure
Adult respiratory distress syndrome
Airway stenosis and malacia
Aortic aneurysm
Arrhythmias
Asthma
Bladder cancer
Bronchiectasis
Systemic fungal infections
Central sleep apnoea syndrome
Testicular torsion
Vesicoureteral reflux
Chronic bronchitis
Chronic renal failure
Community-acquired pneumonia
COPD (chronic bronchitis and/or emphysema)
Diaphragmatic hernia, including hiatus hernia
Diving-related disease
Adverse drug reaction
Dust, smoke or toxic gas exposure
Infective Endocarditis
Erectile dysfunction
High-altitude disease
Disordered fluid, electrolyte, or acid base balance
Primary Hypertension
Orthostatic (postural) hypotension
Ischaemic heart disease
Tuberculous infection
Marfan’s syndrome
Nephrotic syndrome
Non-tuberculous mycobacterial diseases
Nosocomial pneumonia
Obstructive sleep apnoea syndrome
Acute coronary syndromes
Parapneumonic effusion and empyema
Pericarditis (acute, chronic, or constrictive)
Peripheral vascular disease
Phrenic nerve palsy
Pleural effusion
Pneumoconiosis and asbestos-related disease
Infection in the immunocompromised host
Pneumothorax
Pyelonephritis
Prepucial and penile / glans disorders
Primary ciliary dyskinesia
Pulmonary hypertension (primary and secondary)
Pulmonary embolism
Radiation-induced respiratory disease
Secondary Hypertension
Sarcoidosis
Testicular cancer
Urinary tract obstruction
Cardiac valvular disorders
Injury of urinary tract (kidney ureter, bladder, or urethra)
Glomerulonephritis (GN)
Urinary tract infection
Varicose veins
Ano-rectal fissure, fistula or abscess
Ischaemic bowel
Intestinal Obstruction
Occult blood loss
Short Bowel Syndrome
Oesophageal achalasia
Acute pancreatitis
Alcoholic Liver Disease
Alpha-1 Antitrypsin Deficiency
Appendicitis
Autoimmune Hepatitis
Barrett Oesophagus
Blind loop syndrome
Gastro duodenal cancer
Ovarian cancer
Acute renal failure
Oesophagus cancer
Pancreas cancer
Chronic Pancreatitis
Coeliac Disease
Crico-Pharyngeal Incoordination
Inflammatory Bowel Disease
Cystic Fibrosis (CF)
Diverticulosis / Diverticulitis
Drug induced liver disease
Duodenal Ulcer
Gallstone Disease, including acute cholecystitis
Gastric Ulcer
Gastritis / Duodenitis
Gastro-oesophageal Reflux Disease (GORD)
Gilbert’s Syndrome
Haemochromatosis
Haemorrhoids
Hepatolenticular degeneration (Wilson’s disease)
Hepato-Renal Syndrome
Irritable Bowel Syndrome
Lactose intolerance
Cancer - hepatocellular
Oesophageal stricture
Oesophageal tears/rupture
Pancreatic insufficiency
Gastrointestinal polyps
Portal hypertension
Primary biliary cirrhosis
Primary sclerosing cholangitis
Radiation colitis
Non-alcoholic Steatosis / Steatohepatitis
Viral Hepatitis (A, B, C, EBV, CMV)
Hyperparathyroidism and hypoparathyroidism
Hypopituitarism
Insulinoma
Long-term glucocorticoid therapy
Paget's disease of bone (osteitis deformans)
Diabetes - Type II
Amblyopia
Adrenal insufficiency (Addison’s disease)
Adrenal tumour
Hyperaldosteronism
Thyroid cancer
Congenital adrenal hyperplasia
Disorders of vitamin D nutrition and metabolism
Dyslipidaemia
Pituitary tumour
Hypercalcaemia and hypocalcaemia
Hyperprolactinaemia
Hyperthyroidism
Hypothyroidism
Obesity
SIADH (Syndrome of inappropriate antidiuretic hormone hypersecretion)
Solitary thyroid nodule
Malnutrition (including starvation and re-feeding syndrome)
Nutritional anaemias
Osteoporosis
Iodine deficiency
Acute and overuse muscular injuries
Polyarthritis
Infectious gastroenteritis
Hospital acquired infections
Viral respiratory infections
Osteomyelitis
Peritonitis
Septicaemia
Acute glaucoma
Scleritis / Episcleritis / keratitis / iritis
HIV / AIDS
Osteoarthritis
Infectious mononucleosis
Acute Leukaemia
G6PD deficiency and acquired disorders
Haemoglobinopathies and thalassaemia
Hereditary spherocytosis
Femur fracture
Acute Retinopathy of prematurity
Parkinson’s Disease
Progressive neurological diseases of adults
Prostate cancer
Spinal cord injury or compression
Affective disorders including major depression, dysthymic disorder, and bipolar affective disorder
Anxiety disorders
Behavioural and emotional disturbance in childhood, including ADHD
Anorexia nervosa / bulimia, and other eating disorders
Organic mental disorders (OMS)
Personality disorders
Schizophrenia and related delusional and psychotic disorders
Somatoform and dissociative disorders, including dissociative seizure and psychogenic hyperventilation
Substance misuse / abuse
Malpresentations in labour
Pre-term birth
Intrauterine growth restriction (IUGR)
Prolonged pregnancy
Amenorrhoea
Antepartum haemorrhage
Cancer - Endometrium
Chronic hypertension in pregnancy
Cord prolapse
Disorders of the vulva
Dysfunctional labour
Dysfunctional uterine bleeding
Dysmenorrhoea
Miscarriage
Eclampsia and pre-eclampsia
Ectopic pregnancy
Endometriosis
Hydatidiform mole and other trophoblastic disorders
Anaemia in pregnancy
Diabetes - gestational
HIV in pregnancy
Gestational hypertension
Syphilis and other STIs in pregnancy
Infection in the mother and foetus/neonate
Menopause
Menorrhagia
Pelvic inflammatory disease
Placental abruption and placenta previa
Conjunctival degenerations
Polycystic Ovarian Syndrome (PCOS)
Postnatal mental disorders
Postpartum Haemorrhage (PPH)
Premenstrual tension
Puerperial pyrexia
Recurrent miscarriage
Rhesus isoimmunisation
Sexually transmitted infections
Shoulder dystocia
Vaginal and uterine prolapse
Physiologic jaundice in infants
Child - Non-accidental injury / abuse
Chromosomol abnormalities
Inborn errors of metabolism
Child: congenital heart disease
Foetal alcohol syndrome
Infant hypoglycaemia / hypothermia
Alzheimer's disease
Bell’s palsy
Brain/meningeal tumours
Cerebral haemorrhage and infarction
Huntington's disease
Meningitis
Migraine
Congenital and acquired myopathies
Nerve root / Plexus lesion
Neuromuscular junction disorders
Peripheral nerve lesions
Posterior fossa lesions including cerebellar and brainstem vascular syndromes
Cancer – Spinal cord/cranial nerves
Spinal Stenosis (cord or cauda equina compressions)
Subarachnoid haemorrhage
Tardive dyskinesia
Systemic connective tissue disorders
Toxic-metabolic encephalopathy
Epileptic seizure / status epilepticus
Acoustic neuroma
Conditions of the inner ear
Fracture of the skull or facial skeleton (including orbital fractures)
Rhinitis
Sinusitis
Cancer of the nose, oropharynx and larynx
Pharyngitis, tonsillitis, quinsy, laryngitis
Vocal cord palsy
Pharyngeal pouch (Zenker's diverticulum)
Cancer – Eye and orbit including retinoblastoma
Sub-conjunctival haemorrhage
Chronic glaucoma
Retinal detachment and retinal vascular occlusions
Ptosis
Optic Neuritis
Horner's syndrome
Ectropion / entropion
Conjunctivitis
Anisocoria
Polymyalgia rheumatica
Corneal epithelial abrasions and burns
Orbital & peri-orbital infections
Cataract
Fungal infections of the skin, mucous membranes, hair or nails
Follicular skin disorders
Chloasma
Necrobiosis lipoidica
Pyoderma gangrenosum
Erythema multiforme
Exanthenatous viral skin infections
Granuloma annulare
Head, body and pubic lice
Venomous snake, spider or insect bite
Intertrigo
Contact dermatitis
Eczema
Pityriasis rosea
Psoriasis
Scabies
Dysplastic naevus syndrome
Benign epithelial tumours of the skin
Benign mesenchymal tumors of the skin
Keratoacanthoma
Lentigo maligna
Impetigo
Necrotizing fasciitis
Bullous skin diseases
Toxic epidermal necrolysis
Cellulitis
Hyposplenism
Rhabdomyolysis
Tendon laceration/rupture
Polycystic Kidney disease
Polycythaemia vera
Deep venous thrombosis
Neural tube defects
Protozoal diseases
Ovarian cyst
Benign prostatic hyperplasia
Hydrocele
Epididymitis
Varicocele
Ingual / femoral hernia
Vascular injury in a limb
Fractures of the wrist and hand
Fractures of the shoulder and upper arm
Vertebral fracture
Fractures of the lower leg and foot
Common dislocations of the upper limb
Dislocation patella
Prolapsed intervertebral disc
Ankylosing spondylitis
Chronic widespread pain syndrome (fibromyalgia)
Gout / other crystal arthropathies
Frozen shoulder
Meniscal cyst
Enthesopathies
Scoliosis
Foot deformities
Non venomous insect / spider bites (including bedbugs)
Tension headache
Infection / inflammation of the eyelid
Otitis externa
Impacted earwax
Hydramnios
Uterine fibroid
Mastitis
Foetal distress
Uterine rupture
Helminthic diseases
Congenital deformities of the hip (particularly hip dysplasia)
Benign mammary dysplasia
Tenosynovitis
Dupuytren's contracture
Osteochondropathies
Temporomandibular joint disorders
Rheumatic fever
Trigeminal neuralgia
Musculoskeletal cancer
Renal cancer
Breast — Fibroadenoma
Metastatic cancer
Chronic (postviral) fatigue syndrome
Malignant cachexia
Tetanus
Hydrocephalus
Lichen simplex
Infantile respiratory distress syndrome
Undescended testicle
Heat exhaustion / heatstroke
Mumps
Salivary gland disorders including parotitis and duct stones
Disorders of refraction
Macular degeneration
Presbyopia
Allergy
Alcohol intoxication
Cardiomyopathy
Congenital malformations of the digestive system
Faecal incontinence
Herpes simplex
Viral Warts
Zoonotic viral diseases
Otosclerosis
Genetic hearing loss
Acute meniscal tear in the knee
Intentional self-harm
Diabetes insipidus
Presbycusis (age related deafness)
Noise-induced hearing loss
Ligament injury
Hypersplenism
Raynaud’s Disease
Reactive arthropathy
Vasovagal / neurocardiogenic syncope
Benign cardiac murmur
Popliteal synovial cyst (including cyst rupture)
Meningococcal disease
Transient cerebral ischaemic attack
Poliomyelitis
Blocked nasolacrimal duct
Haemophilus influenzae disease
Pertussis
Pneumococcal disease
Diphtheria
Cholera
Juvenile osteochondrosis of the spine
Spondylosis / spondylolisthesis
Aseptic (avascular) necrosis of bone
Mesothelioma
Myelodysplastic syndromes
Monoclonal gammopathy of undetermined significance (MGUS)
Chickenpox
Bronchiolitis
Aortic dissection
PUJ obstruction
Cholangiocarcinoma
Septic arthritis
Influenza
Adverse reaction to IV fluid therapy
Elder abuse
Encephalitis
Visual pathway disorders
Giant cell arteritis
Multiple sclerosis
Chronic Leukaemia
Compartment syndrome
Essential thrombocytois
Pulmonary thromboembolism
Arterial thromboembolism
Orchitis
Prostatitis
Cluster headache
Hypertensive retinopathy
Diabetic retinopathy
Anaphylaxis
Angioedema
Drug intoxication
Drug abuse
Shingles
Other core lists: learning outcomes

In addition to the core elements of CPs, CPAs and CCs the curriculum map identifies some additional core lists of some of the learning outcomes. These currently include a core diagnostics list, the pre-existing essential drug list, and will in the future include also core therapeutics and core procedures. The refinement and generation of these lists is still work-in-progress.

Core diagnostics:
This list (129) includes diagnostic tests considered to be essential for the assessment and management of core presentations and core conditions. Only two different levels of learning (LL) were considered necessary to describe the level of learning that should be reached by the end of the TI year. The full description of the LL is found in Appendix 2 but in essence level 2 equates to the student knowing how the test or investigation is used and level 4 to the student being able to safely and effectively use the test or investigation, and the test results and/or report, in common and important presentations and conditions.

Blood tests

1. Full blood count (FBC): Red blood cell count (RBC) and Haemoglobin (Hb), White blood cell count (WBC) and differential, Platelet count
2. Coagulation tests: INR, APTT, DIC screen, Coagulation screen
3. Blood film report
4. Creatinine, urea and electrolytes
5. Bilirubin and liver function tests
6. Amylase/lipase
7. Calcium
8. Phosphate
9. Magnesium
10. Thyroid function tests
11. Parathyroid hormone (PTH)
12. Vitamin D
13. Uric acid
14. Lipid profile
15. Blood glucose
16. Tests of glycaemic control
17. Myocardial injury markers
18. B-type natriuretic peptide (BNP)
19. D-dimer
20. Acute phase and inflammatory markers: Erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), fibrinogen
21. Iron studies
22. Vitamin B12 and folate
23. Thiamine
24. Coeliac disease antibodies
25. Autoantibodies and Rheumatoid factor 4
26. Prostate Specific Antigen (PSA) 4
27. Serum protein electrophoresis (SPE) 4
28. Arterial blood gases (ABG) 4
29. Blood tests for allergy/ anaphylaxis 2
30. Blood typing, Group and hold, crossmatch 4
31. Tissue typing 2
32. Synacthen test 4
33. Endocrine gland suppression/ stimulation tests 2
34. Hypothalamic and pituitary function tests 2
35. Therapeutic drug monitoring 4
36. Blood alcohol level 4
37. Toxicology drug screening and levels 4

Imaging tests

38. Plain X-ray of chest 4
39. Plain X-ray of abdomen 4
40. Plain X-ray of spine report 4
41. Plain X-ray of long bones for fracture 4
42. Plain X-ray of pelvis and hips 4
43. Mammography report 4
44. Ultrasound scanning of abdomen report 4
45. Ultrasound scanning of pelvis report 4
46. Ultrasound scanning of renal tract report 4
47. Ultrasound scanning of thyroid report 4
48. Pregnancy ultrasound report 4
49. Carotid Doppler report 4
50. Duplex ultrasound report 4
51. CT scan (± contrast) of head report 4
52. CT scan (± contrast) of abdomen report 4
53. CT scan (± contrast) of chest report 4
54. CT scan (± contrast) of spine report 4
55. CT urogram report 4
56. CT pulmonary angiogram report 4
57. CT coronary angiogram report 2
58. MRI scanning report 4
59. Angiography report 2
60. Intravenous pyelography (IVP) report 4
61. Cystography report 2
## Cardiac investigations

62. Electrocardiogram (ECG) 4
63. Exercise ECG report 4
64. Other cardiac stress testing report 2
65. Continuous (Holter) ECG monitoring report 2
66. Echocardiography report 4
67. Cardiac catheterisation report 4

## Urine tests

68. Urine dipstick analysis 4
69. Urine pregnancy test 4
70. Mid-stream urine (MSU) 4
71. Bladder puncture urine (BPU) 4
72. Urinary sediment examination and microscopy 4
73. 24 hour urine collection 2
74. Urine biochemistry 4

## Microbiological and biochemical tests

75. Microscopy, staining, culture and biochemical analysis (urine, urethral, high-vaginal, cervical, nasal, nasopharyngeal, throat, sputum, pleural, ascitic, blood, CSF, faecal, wound, swabs, joint aspirates, other aspirates) 4
76. Rapid streptococcal antigen testing 4
77. Serology 4
78. Virology 4
79. Tuberculin skin testing 4
80. Skin scrapings and nail clippings 4

## Cytology, histology and biopsy

81. Cytology/histology/biopsy report 4
82. Cervical smear report 4
83. Lymph node biopsy report 4
84. Bone marrow aspirate and biopsy report 2
85. Temporal artery biopsy report 4
86. Pleural aspirate and biopsy report 2
87. Skin biopsy report 4
88. Renal biopsy report 4
89. Trans-rectal ultrasound guided prostate biopsy report 4
90. Breast aspirate and biopsy report 4
Endoscopy

91. Upper GI Endoscopy report 4
92. Endoscopic retrograde cholangio-pancreatography (ERCP) report 4
93. Percutaneous trans-hepatic cholangio-pancreatography (PTHC or PTC) report 4
94. Lower GI Endoscopy report 4
95. Arthroscopy report 2
96. Bronchoscopy report 2
97. Colposcopy report 4
98. Cystoscopy report 2
99. Hysteroscopy report 2

Other tests

100. Faecal occult blood testing 4
101. Faecal calprotectin 2
102. Faecal elastase 2
103. Polymerase Chain Reaction (PCR) 2
104. GI contrast studies 4
105. Nerve conduction and Electromyogram (EMG) studies 2
106. Electroencephalogram (EEG) 2
107. CSF pressure recording (lumbar puncture) 4
108. GI contrast studies 4
109. Hydrogen breath test 4
110. Bone densitometry report 4
111. Ventilation perfusion (VQ) scan report 4
112. Bone scan report 4
113. Thyroid isotope scan report 2
114. Positron emission tomography (PET) scan report 2
115. Paediatric vision and hearing tests 2
116. Tear drainage test 2
117. Tonometry 4
118. Audiometry 2
119. Bronchial provocation testing 2
120. Spirometry 4
121. Sleep studies 2
122. Dermoscopy 4
123. Mole mapping 4
124. Allergy skin testing 4
125. Antenatal screening tests 4
126. Neonatal screening tests 4
127. Sweat test for cystic fibrosis 2
128. Genetic tests (karyotyping, FISH testing, single gene mutation testing) 2
129. Foetal and maternal monitoring in labour 2
**Essential drug list:**
The core therapeutics list, which will include core pharmacotherapeutics, is still being identified but for now the map incorporates the current essential drug list as previously agreed by the Faculty of Medicine.

**Essential Drug List – 2014**

<table>
<thead>
<tr>
<th>DRUG CLASS</th>
<th>Drugs in class – must know the pharmacology profile of those in bold in detail, and major effects and key points of others</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACEi</td>
<td>cilazapril, enalapril, quinapril</td>
</tr>
<tr>
<td>Alpha-blocker</td>
<td>doxazosin, terazosin</td>
</tr>
<tr>
<td>Anaesthetics</td>
<td>propofol, lignocaine (local anaesthetic)</td>
</tr>
<tr>
<td>Antianginal</td>
<td>glyceryl trinitrate, isosorbide, perhexiline</td>
</tr>
<tr>
<td>Antianxiety/hypnotic</td>
<td>diazepam, zopiclone, lorazepam</td>
</tr>
<tr>
<td>Antibacterial</td>
<td>penicillin, gentamicin, erythromycin, ciprofloxacin, ceftriaxone</td>
</tr>
<tr>
<td>Anticoagulant/antithrombotic</td>
<td>enoxaparin, warfarin, dabigatran, alteplase</td>
</tr>
<tr>
<td>Antidepressant</td>
<td>citalopram, fluoxetine, nortriptyline, moclobemide, lithium</td>
</tr>
<tr>
<td>Antidiabetic</td>
<td>insulin, gliclazide, metformin, sitagliptin, pioglitazone</td>
</tr>
<tr>
<td>Antidotes</td>
<td>naloxone, flumazenil</td>
</tr>
<tr>
<td>Antiemetics</td>
<td>metoclopramide, ondansetron, cyclazine</td>
</tr>
<tr>
<td>Antiepileptic</td>
<td>phenytoin, carbamazepine, valproate, lamotrigine</td>
</tr>
<tr>
<td>Antifungal</td>
<td>itraconazole, terbinafine</td>
</tr>
<tr>
<td>Antihypertensive</td>
<td>Clonidine, alpha-methyldopa</td>
</tr>
<tr>
<td>Antiparkinsonian</td>
<td>l-dopa/carbidopa, selegiline, ropinirole</td>
</tr>
<tr>
<td>Antiplatelet</td>
<td>aspirin, clopidogrel</td>
</tr>
<tr>
<td>Antipsychotic</td>
<td>haloperidol, clozapine, quetiapine, risperidone</td>
</tr>
<tr>
<td>Antiviral</td>
<td>Aciclovir, ritonavir, oseltamivir</td>
</tr>
<tr>
<td>Beta-blocker</td>
<td>metoprolol, propranolol, atenolol, carvedilol</td>
</tr>
<tr>
<td>Bisphosphonate</td>
<td>alendronate, zoledronate</td>
</tr>
<tr>
<td>Bronchodilator</td>
<td>salbutamol, ipratropium, salmeterol</td>
</tr>
<tr>
<td>Calcium channel blocker</td>
<td>amlodipine, diltiazem, verapamil</td>
</tr>
<tr>
<td>Contraceptive</td>
<td>levonorgestrel/ethinylestradiol</td>
</tr>
<tr>
<td>Corticosteroid</td>
<td>prednisone, fludrocortisone, fluticasone</td>
</tr>
<tr>
<td>Diuretic</td>
<td>bendroflumethiazide, furosemide, spironolactone</td>
</tr>
<tr>
<td>Gastric acid suppressant</td>
<td>omeprazole, ranitidine</td>
</tr>
<tr>
<td>Heart rate control</td>
<td>digoxin, amiodarone</td>
</tr>
<tr>
<td>Hypouricaemic</td>
<td>allopurinol, probenecid</td>
</tr>
<tr>
<td>Immunosuppressant</td>
<td>azathioprine, methotrexate, cyclophosphamide, infliximab</td>
</tr>
<tr>
<td>Lipid lowering</td>
<td>atorvastatin, bezafibrate</td>
</tr>
<tr>
<td>Major analgesic</td>
<td>morphine, methadone, fentanyl</td>
</tr>
<tr>
<td>NSAID</td>
<td>diclofenac, naproxen, ibuprofen</td>
</tr>
<tr>
<td>Simple analgesic</td>
<td>paracetamol, codeine</td>
</tr>
<tr>
<td>Substance misuse</td>
<td>ethanol, cannabinoids, nicotine, methamphetamine</td>
</tr>
<tr>
<td>Sympathomimetic</td>
<td>adrenaline, dopamine</td>
</tr>
</tbody>
</table>
Appendices:

Appendix 1: Glossary: Key definitions

**Learning outcome: (LO)**

= an **element of learning** plus a **level of learning** in relation to that specific element.

The specification of a level of learning with an element of learning demonstrates the progressive nature of the learning through the stages of training (from ELM to end of year 3, ALM to end of year 5, and at graduation at end of year 6). The level of learning for each learning outcome shows the minimum expected level for each stage of training, including at graduation.

**Level of learning (LL):**
The **levels of learning** are described using a variation of Millers pyramid [Knows About (KA), Knows How (KH), Shows How (SH), Does (D) and the descriptors for each of the levels have been specified according to the type of element to which they apply.

(See Appendix 2)

**Domain:**
For the purposes of the curriculum map all learning outcomes have been classified as fitting within one of 6 overarching domains where a domain encompasses a sphere(s) or field(s) of knowledge. Some of the domains combine sets of learning outcomes into relatively distinct sub-domains. In addition Clinical Skills also has a set of definitions specific to that domain which can be found in the CS Overview Map.


**Clinical Skills** – includes communication skills, history taking, examination, clinical reasoning, documentation, procedural skills and teamwork skills

**Diagnostics and Therapeutics** – includes investigations and their interpretations (including laboratory studies, imaging, and all other diagnostic modalities), medical therapeutics including clinical pharmacology, surgery, other interventional therapies, and disease management strategies, palliative medicine and end-of-life care

**Hauora Maori**

**Population Health and Epidemiology** – includes communicable disease control, epidemiology, equity and access, health promotion, health economics, health systems, international health, MOH Functions Health protection / environmental health, occupational health, and screening and prevention

**Professional Practice** - includes ethics, medicolegal practice, professional development, quality and safety, the medical humanities, interprofessional education/learning, and culture self and diversity

**Science, Scholarship and Research** - includes anatomy, biochemistry and metabolism, behavioural and social science, genetics (molecular and clinical), immunology, microbiology, pathology, physiology, evidence-based decision making and professional guidelines, research and information literacy
As above, the majority of the domain groupings, into which all learning elements are classified, have oversight by the corresponding MCC sub-committee. Diagnostics and Therapeutics as yet has no oversight body other than the CMSC.

Module:
A module is an organisational unit formed to oversee, coordinate (including timetabling) and deliver teaching/learning opportunities and assessment. Some are horizontal (blocks of time within a single year of the programme which used to be called attachments/runs e.g. surgery), some are vertical (time and content which crosses years and which used to be called threads e.g. ethics), and there are a small number which are virtual (these modules have oversight of learning in relation to the specified area in the curriculum but do not have scheduled time or direct responsibility for delivery).

It is anticipated that in the future elements of learning currently overseen by virtual modules may receive oversight via clusters of module convenors whose modules share common core elements.
## Appendix 2: Levels of learning (LL)

<table>
<thead>
<tr>
<th>Curriculum Map Levels of Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knows About LL1</strong></td>
</tr>
<tr>
<td><strong>Presentations</strong></td>
</tr>
<tr>
<td><strong>Presentations (short descriptors)</strong></td>
</tr>
<tr>
<td><strong>Conditions</strong></td>
</tr>
<tr>
<td><strong>Conditions (short descriptors)</strong></td>
</tr>
<tr>
<td>Curriculum Map Levels of Learning</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Diagnostic tests/Investigations (and their interpretations) and Therapeutic/management interventions</strong></td>
</tr>
<tr>
<td><strong>Knows About LL1</strong></td>
</tr>
<tr>
<td>Knows how the diagnostic test/investigation or therapeutic intervention contributes to diagnosis and management and some of the principles underlying its use and circumstances in which it is used</td>
</tr>
<tr>
<td><strong>Knows How LL2</strong></td>
</tr>
<tr>
<td>Knows and can explain how the test/investigation or therapeutic intervention is used</td>
</tr>
<tr>
<td><strong>Shows How LL3</strong></td>
</tr>
<tr>
<td>Demonstrates performance of the skill at least once in the clinical environment or in a simulated setting but the experience and opportunities are insufficient to amount to the achievement of competence at the skill</td>
</tr>
<tr>
<td><strong>Does LL4</strong></td>
</tr>
<tr>
<td>Can independently perform the skill safely and effectively in the clinical setting. Competence, especially in procedural skills, does not necessarily equate to successfully completing the skill on each occasion, but requires that the student recognizes his/her limitations and the specific circumstances where assistance is required</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>D&amp;T (short descriptors)</strong></td>
</tr>
<tr>
<td>Knows about the skill, including underlying theory behind the practice. For procedural skills it involves knowledge of indications, contraindications, potential complications and alternate strategies or approaches if the skill is unsuccessful or unable to be performed</td>
</tr>
<tr>
<td>Knows how the test/investigation or therapeutic intervention is used</td>
</tr>
<tr>
<td>Safely and effectively uses the test/investigation or therapeutic intervention</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Clinical skills</strong></td>
</tr>
<tr>
<td>Knows about the skill, including underlying theory behind the practice. For procedural skills it involves knowledge of indications, contraindications, potential complications and alternate strategies or approaches if the skill is unsuccessful or unable to be performed</td>
</tr>
<tr>
<td>Knows and can explain the actual practice of the skill. For procedural skills it includes the procedure itself and also the post-procedure care of the patient and/or specimens obtained. The student has observed the procedure on at least one occasion</td>
</tr>
<tr>
<td>Shows how to use and perform the skill</td>
</tr>
<tr>
<td>Demonstrates performance of the skill at least once in the clinical environment or in a simulated setting but the experience and opportunities are insufficient to amount to the achievement of competence at the skill</td>
</tr>
<tr>
<td>Can independently perform the skill safely and effectively in the clinical setting. Competence, especially in procedural skills, does not necessarily equate to successfully completing the skill on each occasion, but requires that the student recognizes his/her limitations and the specific circumstances where assistance is required</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Clinical Skills (short descriptors)</strong></td>
</tr>
<tr>
<td>Knows about the skill</td>
</tr>
<tr>
<td>Knows and can explain how the skills is used and performed</td>
</tr>
<tr>
<td>Shows how to use and perform the skill</td>
</tr>
<tr>
<td>Safely and effectively uses and performs the skill</td>
</tr>
<tr>
<td>Sciences, Scholarship and Research</td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Hauora Maori Population Health and Epidemiology Professional Practice</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sciences, Scholarship and Research</th>
<th>Knows relevant learning</th>
<th>Knows how to use and apply relevant learning</th>
<th>Shows how to use and apply relevant learning</th>
<th>Safely and effectively uses and applies relevant learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauora Maori Population Health and Epidemiology Professional Practice (short Descriptors)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3: Work in progress in relation to the curriculum map

Linking elements within the curriculum map

While the linking of learning outcomes to CPAs has largely been completed, the work to identify links with the other core elements is ongoing and will be guided by the following principles:

Type 1 links: Learning Outcomes (LO) to Core Elements:

- Each LO can be linked to any one or more of the core elements (CPs, CCs, CPAs)
- The appropriate links will be identified and made using the guiding principles that LOs should be linked to CPs, CCs and CPAs when:
  - The presentation, condition or professional activity is a ‘good time’ or ‘good opportunity’ to learn that LO
  - The presentation, condition or professional activity is illustrative of the underlying LO (likely to be LOs in relation to underlying science or principles)
  - The LO is particularly relevant to the presentation, condition or professional activity
  - The LO adds ‘clarity’ or ‘detail’ in understanding of the presentation, condition or professional activity
- Links are not intended to be ‘complete’ or ‘exhaustive’ but to ensure the best match from an educational perspective and to ensure that all LOs are met if students attend to all of the Core Element lists

Type 2 links: Core Elements to Modules (learning opportunities)

Work to identify where core elements of the curriculum are learned and/or assessed is also planned. This will assist coordination and collaboration and will be guided by the following principles:

- Core elements should only be linked to modules when the core element is a focus of the module. The aim is limit links to those which are meaningful and useful. The intent is not to construct ‘complete’ or ‘exhaustive’ lists which include all or any core element that might be covered.
- Linkage of core elements to modules should assist collaboration between modules that share the same core elements.

To identify meaningful and useful links module convenors will be asked to consider the core elements from three perspectives: learning, resources and assessment and to choose 1 option from each category as it applies to their module.

Learning:

- This core element (CP/CPA/CC) or a component of it, has an explicit learning outcome and opportunities for ALL students to learn in your module (examples of learning opportunities include timetabled activities, patient contact, prescribed independent learning activities)
- There are opportunities for most, but not all, students to learn this core element (CP/CPA/CC), or a component of it, in this module
- No specific expectations in this module or opportunistic learning for only a few students
Resource
- A written, electronic or staff expert learning resource relating to this core element (CP/CPA/CC), or a component of it, is identified or provided in this module
- No such learning resource is identified or provided in this module

Assessment
- Assessment of this core element (CP/CPA/CC), or a component of it, is explicit in this module and contributes to progress decisions for all students (summative for all)
- Assessable (students are aware that it could be assessed for progress decisions, but it may not be)
- Not assessed

For two CPAs (39 and 40) (see p14) which focus on the science relating to structure and function additional detail, as below, should enable more detailed identification and mapping of learning/assessment to modules and of modules which share elements. Module convenors can also identify which body systems or structures, and which processes or functions from the lists below are focused on in their module.

Body systems or structures:
- Cardiovascular
- Respiratory
- Gastrointestinal, hepatic and nutrition
- Skin
- Male and female reproductive, including breast
- Nephrology and urology
- Musculoskeletal
- Nervous and sensory systems
- Brain and behaviour
- Endocrine
- Haematology, immunology and lymphoid system
- Other

Processes or functions:
- Cell biology
- Molecular biology / gene expression
- Cell replication, differentiation, tissue injury, repair and death
- Neoplasia
- Infection, immunity and inflammation
- Homeostasis
- Neurological function
- Muscle function
- Inter- and intra-cellular communication (endocrine, neurocrine, paracrine, autocrine)
- Nutrition, absorption, excretion, distribution, metabolism, energy
- Vascular/circulatory disturbances
- Gaseous exchange/respiration
- Psychological processes (emotion, cognition, behaviour)
- Inheritance
- Other
Once data gathering and analysis are complete a synthesis will be presented back to module convenors. This should provide substantial assistance to convenors in identifying modules that share common elements and enabling collaboration between those modules. It will also contribute to a mechanism whereby module convenors contribute to oversight and governance of the curriculum map.

**Learning Outcomes**

More work is to be done on refining the wording of the learning outcomes, identifying duplications, and further refining and reconciling after comparison with learning outcomes currently used by module convenors.

Some links do already appear in the current web-based version of the map however they cannot currently be considered wholly accurate or reliable.
Appendix 4: Historical background to the Curriculum Map

The curriculum map project has developed and evolved over time. Currently the bulk of the work is being done by the Faculty Curriculum Map group. This group arose from two previous working groups – the Outcomes Database Moderating group and the Core Topics working group. The project itself has its origins in the previous Outcomes Database and a desire to transform this database into a working curriculum map. Core topics which were promoted in the original Master Plan for the curriculum have now been absorbed into the curriculum map. The Curriculum Map group is a subcommittee of FCC with defined TOR and membership.

The origin of the outcomes and domain groupings
The starting point for the learning outcomes within the current curriculum map was the pre-existing Outcomes Database. These outcomes were checked for duplications, and then re-categorised from the previous structure of a mix of practice domains and programme domains into the current six overarching domains.
Linking Modules to the Curriculum Map

Otago Medical School
University of Otago