Bond University Medical Program

Medicine

Student/Clinician Guide

YEAR 4

Medicine Rotation

The aim of the Medicine Rotation is for students to see patients whose clinical problems require medical (non-operative) management. You will experience first-hand the daily routine and practice of medicine by a physician and hospital team. It is expected that you will learn about the assessment and management of medical patients in the clinical setting whilst on the Medicine Rotation.

This rotation may pose a challenge because of the volume of work. The knowledge explosion and rapid advances in medicine mean that it is impossible to cover the medical curriculum in one single rotation. However, knowledge of the common medical presentations and conditions listed below will provide a firm foundation for continuing professional development.

During the rotation, students need to learn about a variety of medical illnesses encompassing a number of sub-specialities, which may include:

- Cardiology
- Endocrinology
- Gastroenterology
- Geriatrics
- Haematology

- Infectious Diseases
- Respiratory
- Neurology
- Rheumatology
- Nephrology

You will need to ensure you cover a range of medical conditions by seeing as many patients as possible.

	Medicine Rotation Specific Learning Outcomes	Link to year LO's See appendix 1
MH1	Recognise serious illness requiring urgent management/intervention;	Y4SS01 Y4CP03 Y4CP04
MH2	Know when a procedure is indicated as well as the associated risks, and competently perform a procedure on the Procedural Skills List;	Y4CP05
MH3	Demonstrate ability to apply this knowledge as it relates to pharmacological and clinical management of medical patients;	Y4CP06 Y4CP08
MH4	Plan investigations and provide a rationale for their appropriateness (support or refute a diagnosis, cost-effectiveness, influence on management);	Y4CP03 Y4CP07 Y4CP08
MH5	Interpret the results of commonly encountered diagnostic tests and imaging in patients with medical illness.	Y4CP07

ePortfolio learning module available

a. Symptom Based Approach

Pain ☐	Chest Pain ☐
	Abdominal Pain
	Headache ☐
	Back Pain ☐
	Joint Pain ☐
Fatigue/Weakness ☐	
Seizures ☐	
Dizziness ☐	
Dyspnoea ☐	
Pyrexia ☐	
Delirium/Mental State Function ☐	
Syncope ☐	

b. Disease Based Approach

The table below is to be used as a guide to complement learning from clinical situations and should not be viewed as a complete or exhaustive list.

Cardiovascular	Ischemic Heart Disease / Infarction ☐
	Cardiac Failure ☐
	Hypertension ☐
	Arrhythmias ☐
	Bacterial Endocarditis ☐
Respiratory Peak flow and nebuliser	Pneumonia ☐
	Asthma ☐
	Chronic Airflow Limitation (Emphysema) ☐
	Pulmonary Embolus ☐
	Pneumothorax ☐
	Obstructive Sleep Apnoea ☐

Digestive System	Hepatobiliary Diseases ☐ Inflammatory Bowel Disease☐ Peptic Ulcer Disease ☐ Coeliac Disease ☐
Oncology	Oncology Principles ☐ Breast Cancer ☐ Prostate Cancer ☐ Lung Neoplasm ☐ GE Neoplasm ☐ Hodgkin's Disease/Lymphoma ☐ Renal Neoplasm ☐
Nervous System	CVA ☐ Seizure Disorders ☐ Syncope ☐ Central and Peripheral Myalgia and Weakness ☐ Headache Disorders ☐ Neuropathies ☐
Musculoskeletal	Arthritides ☐ Osteoporosis ☐ Autoimmune /Connective Tissue Diseases ☐
Renal	Renal Failure (Acute/Chronic) ☐ Glomerulonephritis/Nephrotic Syndrome ☐
Endocrine	Diabetes Mellitus ☐ Thyroid Disease ☐ Adrenal Disease ☐
Haematological	Anaemia ☐ Coagulation Disorders ☐
	Common Infectious Diseases ☐ Allergies ☐

Procedural Skills List for Medicine Rotation

Procedure	Students must be able to take/demonstrate
Measurement Urinalysis ECG Venepuncture Injection IV cannula Priming an IV line IV drug administration IV fluid and electrolyte therapy	Perform dipstick urinalysis testing □ Perform and interpret an ECG □ Perform and interpret basic spirometry □ Perform venepuncture □ Perform injections – IV, IM, SC □ Insertion of an IV cannula □ Set up an IV □ Describe the safe administration of an IV drug □ Explain fluid and electrolyte balance, how to calculate and the correction of imbalance □
Diagnostic IV cannula Blood sugar Blood culture Wound swab	Estimate the blood sugar using a glucometer □ Take blood for culture □ Take a swab from a wound □
Respiratory Nebuliser/inhaler Oxygen therapy	Instruct a patient on using a nebuliser/inhaler □ Demonstrate the use of oxygen by mask and nasal prongs □
Cardiopulmonary 12 lead ECG Peak flow measurement Arterial blood gas sampling Pleural effusion/pneumothorax Aspiration ACLS	Perform and interpret normal and common conditions on a 12 lead ECG □ Perform and interpret a peak flow measurement □ Perform and interpret a spirometry reading □ Observe and describe indications for taking an arterial blood gas sampling □ Observe and describe the indications and principles for inserting a chest drain □

Procedure	Students must be able to take/demonstrate
Gastrointestinal Nasogastric Tube Faecal occult blood analysis Abdominal paracentesis	Insertion of a nasogastric tube ☐ Perform a faecal occult blood analysis ☐ Observe and describe the indications and principles for abdominal paracentesis ☐
Neurological Lumbar puncture	Observe and describe the indications and principles for performing a lumbar puncture ☐

Timetable and Contacts

Students are expected to be present on a daily basis during their rotation. If students are unable to attend for any reason, they are required to advise the clinician, hospital co-ordinator (where available) and the Placements Team at Bond University: Med-placements@bond.edu.au

Clinical Supervision and Assessment

Students have a variety of workplace-based assessments (WBA) to successfully complete as a requirement for progression in the Medical Program. Assessments are completed in Osler ePortfolio, a cloud-based mobile assessment technology. For assistance with Osler contact: osler@bond.edu.au

1. **The In-Training Assessment (ITA)** is a workplace-based assessment tool utilised in clinical rotations, where the clinical supervisor provides comments about student overall performance on that rotation. The ITA is a summary evaluation of whether students have met the requirements of that rotation for:
- Clinical knowledge
- Procedural skills
- Clinical History taking and physical examination skills
- Communication
    - Communication with children and families
    - Appropriate clinical handover using ISBAR
- Personal and professional behaviour
- Attendance

The ITA can only be completed by the supervising Consultant or their delegate after seeking opinion from the team about the student performance. A formative, check point' ITA is due in Week 3. The purpose of this 'check point' is to ensure students know they are progressing successfully. The final summative ITA is due in Week 7, ideally after consultation and discussion with the student.

2. **Mini-CEX:** <u>Students are encouraged to participate in active learning by interacting with patients and engaging in discussions with clinician supervisors. These clinical activities are known as a Mini-CEX.</u> During the clinical placement, students will be supervised by both their consultant supervisor plus a range of clinicians such as those in specialist training pathways in the medical team.

    1. **2 x Mini-CEX evaluated by Consultant or delegate Registrar**
- 1 x Mini-CEX History
- 1 x Mini-CEX Physical examination

    2. **2 x Mini-CEX evaluated by Other Doctors, Allied health, Nursing, Technicians**
- For example: Procedural skills, X-ray interpretation, Clinical Documentation of an episode of patient care such as a ward round, ED review, OPD review, calculating percentile growth charts, interpreting lab results, ECG interpretation...

3. **Patient Logs:** Students are asked to log 3 patients per week / 20 per rotation to evidence the breadth of their engagement with patients on rotation. <u>Supervisors may utilise student logs to:</u>
- Evaluate student participation and engagement on placements to support completion of ITAs
- Incorporate patient logs in learning activities
- Identify opportunities for evaluation of a Mini-CEX

4. **Clerked Case:** Students will submit and present one (1) formal **Clerked Case** per placement. Students will take a history, examine a patient, then complete and submit a written Clerked Case which they will also present in W7 to their supervisor. Evaluation of the Clerked case incorporates three components: the written submission, ability to reference current literature to the patient case and student oral presentations.

This activity is designed for students to:
1. Practice the skill of concise and relevant documentation
2. Develop their ability to articulate clinically relevant patient information in both Oral and Written formats
3. Guide their deeper clinical understanding of core conditions, including management options
4. Develop their clinical reasoning – their ability to formulate a diagnosis from the History and Physical examination, supported by specific tests
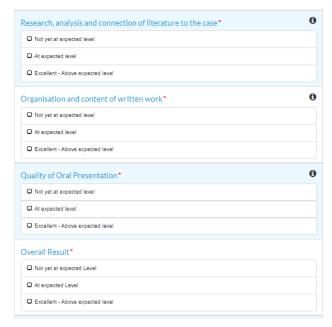
Process of Clerked Case Completion:

1. We ask the student to spend time with a patient sufficient to take a full history and examination and extract the relevant findings.
2. ~ W5: Students then concisely document their findings and write a problem list and care plan, including a GP letter, with reference to the literature in support of their clinical decision-making:
   a. This document is submitted to Osler and an assessment is assigned to you.
3. 1000 word maximum with 250-word abstract
4. ~ W6/7 the student presents the patient case to you orally and answers your questions, enabling you to evaluate their clinical reasoning.
5. Students will need guidance on when to present their clerked case orally to you, their supervisor.
6. You are encouraged to ask questions at any time in the presentation about the case and how students arrived at their diagnosis/management plan, for example:
7. Explain their rationale for each step in the clinical reasoning process
8. Explain the mechanism of action or pathophysiology of the condition
9. Ask them to identify red flags or co-morbidities
10. You may determine the format required for the presentation and communicate this to students:
    a. You may wish students to present a power point presentation
    b. You may wish to do the oral in front of peers for group learning
    c. It can be done in front of the patient at the bedside
11. Once the student has presented, please complete the assessment in Osler ePortfolio
12. W7: The Osler ePortfolio assessment is due on Friday Wk7, the last day of the rotation

The evaluation of the Clerked Case will be based on performance in the following 3 domains:

1. Research, analysis, and connection of Literature to the case

2. Organisation and content of written work

3. Quality of Oral presentation

The assessment overall results is one of the following:

☐ Not yet at expected level (Fail)
☐ At expected level (Pass)
☐ Excellent - Above expected level

Research, analysis and connection of literature to the case *
☐ Not yet at expected level
☐ At expected level
☐ Excellent - Above expected level

Organisation and content of written work *
☐ Not yet at expected level
☐ At expected level
☐ Excellent - Above expected level

Quality of Oral Presentation *
☐ Not yet at expected level
☐ At expected level
☐ Excellent - Above expected level

Overall Result *
☐ Not yet at expected Level
☐ At expected Level
☐ Excellent - Above expected level

5. Procedural Skills:

Bond Medical Students are required to complete the following procedural Skills on patients by the completion of their Phase 2 placements to graduate. Nine skills are to be completed on patients under guided supervision whilst 5 procedures are Theory only modules to support skills development.

#	Required Procedural Skill Activities
1	In-dwelling Catheter
2	IV Cannulation
3	Suturing
4	IM injection
5	SC injection
6	ECG
7	Venepuncture (venous blood sample)
8	Blood Culture Sampling
9	Sterile wash hand, gown, and glove
10	Examination of ICU patient – Theory Module only
11	Blood Gas Analysis – Theory Module only
12	Chest X-ray Interpretation – Theory Module only
13	Pulse Oximetry – Theory Module only
14	PPE – Theory Module only

Procedural Skills Assessments are completed by the observing clinician using Osler e-Portfolio.

Clinicians evaluate student procedural skills performance on an Entrustability Rating Scale:
Trust Level 1.   Requires physician assistance / direct instruction
Trust Level 2.   Requires significant supervisor input
Trust Level 3.   Performs independently but requires direct supervision
Trust Level 4.   Safe to perform independently (supervision immediately available)

Appendix 1 MEDI71-YR4: Core Clinical Practice

MEDI71-YR4 Core Clinical Practice A, B and C

1. Science and Scholarship: The medical graduate as scientist and scholar
2. Clinical Practice: The medical graduate as practitioner
3. Health and Society: The medical graduate as a health advocate
4. Professionalism and Leadership: The medical graduate as a professional and leader

The Australian Medical Council's Graduate Outcome Statements are organised into four domains. Within this subject, the framework mapped to the learning outcomes are: Science and Scholarship Domain (learning outcomes 1-3), Clinical Practice Domain (learning outcomes 4-11), Health and Society Domain (learning outcomes 12-15) and Professionalism and Leadership Domain (learning outcomes 16-22).

YLO	Year 4 LO	**Description** *On successful completion of this subject the learner will be able to:*	PLO 2021	AMC DOMAIN
01	Y4SS 01	Apply current medical and scientific knowledge to individual patients, populations and health systems.	01	1.1, 1.2, 1.2, 1.3, 1.4
02	Y4SS 02	Integrate evidence based and environmentally sustainable health care practice in patient care and research methodology.	02	1.5, 1.6, 2.7
03	Y4SS 03	Commence MD Project and collect evidence in MD portfolio	03	1.1, 1.5, 1.6, 3.3 4.9
04	Y4CP 01	Demonstrate cognitive, technical and interpretive skills in undertaking an accurate, detailed system-focussed history from a range of patients within a variety of clinical settings.	04	2.2
05	Y4CP 02	Perform an accurate and complete physical examination on any body system including a mental state examination.	05	2.3
06	Y4CP 03	Use knowledge of common conditions, the patient history and physical examination findings, and clinical data, to undertake clinical reasoning and formulate probable and differential diagnoses.	06	2.2, 2.3, 2.4, 2.7, 2.8, 2.10
07	Y4CP 04	Recognise deteriorating and critically unwell patients who require immediate care and act appropriately	07	2.12
08	Y4CP 05	Safely perform a range of common procedures relevant to the rotation.	08	2.6, 2.11, 2.14
09	Y4CP 06	Safely apply the principles of "quality use of medicines" in an environmentally sustainable way relevant to the rotation	09	2.6, 2.7
10	Y4CP 07	In consultation with their supervisors, select and justify common investigations, based on the pathological basis of disease, utility, safety,	10	2.5, 3.7

		cost-effectiveness, sustainability and resource stewardship and interpret their results		
11	Y4CP 08	Formulate an initial management plan in consultation with patients, family and carers across a variety of clinical settings with consideration of psychosocial and cultural aspects that may influence management.	11	2.1, 2.7, 2.9, 2.13, 2.14, 2.15 3.2, 3.4
12	Y4HS 01	Using evidence from behavioural science and population health research to integrate prevention, early detection, health maintenance and chronic disease management into clinical practice.	12	1.6, 2.10, 3.5
13	Y4HS 02	Discuss and critically reflect on population, global and planetary health issues applicable to the relevant clinical and community setting	13	3.1, 3.2, 3.4, 3.5, 3.8, 3.9
14	Y4HS 03	Discuss the complex interactions between the healthcare environment, doctor and patient, and the role of the individual to ensure a safe working context.	14	2.1, 2.8, 3.6, 3.7, 4.5
15	Y4HS 04	Communicate effectively in all roles including health advocacy, education, assessment, and appraisal.	15	2.1, 3.3, 4.9
16	Y4PL 01	Demonstrate knowledge and a critical understanding of medico-legal and ethical issues (including ecological justice) that impact on patient healthcare	16	3.6, 4.1, 4.2, 4.4, 4.6, 4.10
17	Y4PL 02	Demonstrate an ability to manage a case load across a range of patients and from a variety of clinical settings.	17	2.2, 2.3, 2.4, 4.1, 4.2, 4.9
18	Y4PL 03	Comply with organisational policies regarding timely and accurate documentation.	18	2.15, 4.1, 4.2, 4.10
19	Y4PL 04	Demonstrate and ability to work as an effective team member, respecting the variety of roles within the clinical setting and the professional responsibilities relevant to one's own position and/or role within the team.	19	3.1, 4.1, 4.2, 4.6, 4.8
20	Y4PL 05	Uphold the standards and values of the medical profession and perform clinical activities in accordance with 'Good Medical Practice for Doctors in Australia' to support the health and well-being of individuals, communities and populations now and for future generations.	20	4.1, 4.2, 4.3, 4.5, 4.10
21	Y4PL 06	Self-evaluate one's professional practice and seek appropriate assistance according to level of training and experience	21	4.1, 4.2, 4.5, 4.7, 4.9
22	Y4PL 07	Proactively engage in life-long learning behaviours.	22	4.9