



PATIENT AT HEART, SCIENCE IN HAND

MDCM PROGRAM
EDUCATIONAL OBJECTIVES

PREAMBLE

The program objectives are organized by general competencies and principles deemed essential for Canadian physicians as elucidated by the Royal College of Physicians and Surgeons of Canada (CanMEDS 2015), and the College of Family Physicians of Canada (CanMEDS FM). They are based on four fundamental premises to ensure career-long excellence in whole-person care:

1. Biological, behavioral and social sciences as well as scientific methodology are fundamental pillars of medical knowledge.
2. A physician fulfills two roles in service to the patient: that of a healer and a professional. This is referred to as “Physicianship”.
3. Identity formation is an important goal of medical education; the program guides students in developing a coherent professional identity, assists them in understanding healer and professional roles and obligations, and supports them in retaining core aspects of their personal identities and values.
4. The program has a strong clinical focus and emphasizes clinical skills acquisition. It is designed to increase the integration of clinical and foundational sciences and to promote active learner participation in the education process.

At completion of the program, McGill MDCM graduates are expected to be able to function responsibly, in a supervised clinical setting, at the level of an “undifferentiated” physician. It is understood that the process of professional identity formation, while having been initiated and crystallized during medical school, will continue to evolve during the transition to residency and beyond in medical practice.

Definitions of the physician roles presented below are adopted from the RCPSC and the Core Competencies from CanMEDS 2015 Framework.

Available at:

http://canmeds.royalcollege.ca/uploads/en/framework/CanMEDS%202015%20Framework_EN_Reduced.pdf

1. Medical Expert

Medical students are expected to develop incrementally an expertise that integrates all of the CanMEDS roles; they do so by applying their emergent medical knowledge, clinical skills, and core professional values in the provision of high-quality and safe patient-centred care.

Students will be able to:

1.1	Demonstrate knowledge in the disciplines from the biological, behavioural sciences and social sciences, as well as the humanities that are foundational to the practice of medicine.	1.1.1	Demonstrate knowledge of the normal structures and functions of the human body, including normal human behavior.
		1.1.2	Demonstrate knowledge of the etiology, pathology, pathophysiology, clinical presentations and scientifically based methods in the diagnosis and treatment of common maladies.
1.2	Gather a history and perform a physical examination	1.2.1	Demonstrate knowledge of the clinical manifestations of common maladies and the scope of human suffering.
		1.2.2	Obtain an accurate medical history that covers all essential aspects relevant to the patient, including issues related to age, gender, socio-economic status, beliefs and values.
		1.2.3	Perform both a complete and an organ-system-specific examination (including mental status) appropriate to the age of the patient and nature of the clinical problem(s).
		1.2.4	Screen for medication or substance abuse, recognizing when it is appropriate to do so.
		1.2.5	Define and discuss the fundamental concepts of 'physicianship' including: "person", "health", "disease", "illness", "suffering", "personal functioning", and "healing".
1.3	Create and prioritize a differential diagnosis	1.3.1	Demonstrate knowledge of the diagnosis of common and urgent problems as defined by the Medical Council of Canada (MCC) Clinical Presentations.
		1.3.2	Select and interpret specific symptoms, signs, and laboratory and imaging data in order to list meaningful and relevant differential diagnoses for all MCC Clinical Presentations, and to state the relative likelihood of the diagnostic possibilities in different patient populations.
		1.3.3	Demonstrate knowledge of the clinical, laboratory, imaging manifestations of common maladies.

1.4	Select and discuss treatment plans and prescriptions	1.4.1	Demonstrate knowledge of the treatment of common and urgent problems as defined by the Medical Council of Canada (MCC) Clinical Presentations.
		1.4.2	Demonstrate knowledge of commonly used drugs, including pharmacological effects, clinical indications, contra-indications, major side effects and common interactions with other drugs, chemicals or foods.
		1.4.3	Demonstrate knowledge of the basic principles of complementary and alternative medicine.
		1.4.4	When faced with addictions or medication and substance abuse, intervene, counsel, and report as needed.
		1.4.5	Make explicit the roles of uncertainty and empiricism in clinical decision making and patient management, in part by demonstrating an understanding of the roles of uncertainty and empiricism in clinical judgement.
		1.4.6	Describe any discomfort, harm, inconvenience or side effects associated with the proposed course of action (including medications), the expected course for the patient without the proposed investigation or therapy, and reasonable alternatives.
		1.4.7	Formulate a treatment plan, in collaboration with the health care team, and write the orders (with appropriate countersignature) directing the further care of the patient in a clear and timely manner.
		1.4.8	Evaluate the response to therapy and other management decisions and adjust treatment plans accordingly.
		1.4.9	Describe, observe or perform common technical procedures (see Procedural Skills Appendix).
		1.4.10	Aid patients to recall and understand information that is provided to them.
1.5	Recognize a patient requiring urgent or emergent care and initiate evaluation and management	1.5.1	Differentiate between life threatening, serious but non-emergency, and benign conditions, modifying history-taking and the physical exam according to the severity and urgency of the problem, and initiating management appropriate to each situation.
		1.5.2	Resuscitate patients following the standards of the BCLS (Basic Cardiac Life Support).
1.6	Report on a clinical encounter	1.6.1	Create organized, relevant and legible patient notes (using the McGill case report template for admission notes in particular).
		1.6.2	Perform succinct, focused oral presentations to summarize patient cases.

2. Communicator

As communicators, medical students form relationships with patients and their families, with peers, with teachers and the staff of the medical school and affiliated health care facilities.

Students will be able to:

2.1	Promote an appropriate patient-doctor relationship	2.1.1	Demonstrate compassion, interest, respect, and understanding of the patient as an individual, while maintaining a professional therapeutic relationship.
		2.1.2	Demonstrate openness, non-judgmental behaviour, respect, and accommodation to optimize health outcomes for patients from diverse backgrounds, based upon current evidence.
		2.1.3	Respond to sociocultural and individual influences that affect the doctor-patient relationship and their impact on the delivery of medical recommendations and patient responses to illness.
		2.1.4	Be attentive to the role of the power differential in professional interactions with patients and other members of the health care team.
		2.1.5	Demonstrate culturally sensitive and culturally competent clinical care, including effective communication across cultural boundaries.
		2.1.6	Discuss information, including sensitive issues, at the appropriate level for all patients at all ages and conditions.
2.2	Manage the encounter	2.2.1	Listen and observe attentively.
		2.2.2	Communicate with patients and families using the McGill approach to communication skills (a modification of the Calgary-Cambridge Guide).
		2.2.3	Elicit patient concerns using non-directive (open-ended) and directive (closed-ended) questions, paraphrasing, explaining and summarizing when appropriate.
		2.2.4	Deal effectively with challenging communication situations (e.g. excessively talkative, reticent, crying, or hostile patients).
		2.2.5	Present and discuss “bad news” with patients and their families, in an empathetic manner.
2.3	Work with patients and their families to develop investigation and management plans	2.3.1	Determine the amount and type of information to be given by identifying the extent of the patient’s wish for information.
		2.3.2	Communicate the degree of certainty associated with specific items of scientific and clinical information to patients.
		2.3.3	Engage patients and their families in developing plans that reflect the patient’s perspectives, health care needs, values, and goals.
		2.3.4	Discuss limitations to the health care plan (such as advanced care directives and level of intervention).
2.4	Utilize appropriate strategies (e.g. face-to-face, telephone and electronic formats) for communications with patients, families, other healthcare professionals, peers, teachers and staff.		

3. Professional

Medical students are expected to incrementally acquire the identity of a physician. This identity formation is, in part, based on an authentic commitment to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, self-regulation, and maintenance of personal health.

Students will be able to:

3.1	Demonstrate the attributes of the professional and the healer during the medical school experience and in the context of patient care.	3.1.1	Recognize and acknowledge patients' suffering, in part by being present to the patient and by accompanying them on the illness trajectory.
		3.1.2	Demonstrate responsibility and punctuality in attending to clinical and academic duties.
		3.1.3	Maintain a professional appearance, including appropriate attire.
		3.1.4	Demonstrate a commitment to patient safety.
		3.1.5	Participate in peer assessment and other forms of self-regulation of the profession.
		3.1.6	Promote a safe learning environment and evaluate teachers, programs and peers in an appropriate and constructive manner.
		3.1.7	Be receptive and respond appropriately to feedback on personal performance.
		3.1.8	Discuss basic principles of medical jurisprudence and biomedical ethics.
		3.1.9	Recognize and manage conflicts of interest.
3.2	Manage themselves	3.2.1	Demonstrate a commitment to personal health and well-being in order to foster optimal patient care.
		3.2.2	Exhibit self-awareness and manage influences on personal well-being and professional performance.
3.3	Respect the laws governing practice and professional and ethical codes, including the 'Code de déontologie des médecins du Québec' and the Faculty of Medicine's Code of Conduct (including institutional electronic communication policies).	3.3.1	Respect confidentiality and respond appropriately in situations where exceptions or limitations to confidentiality are required (e.g. in mandatory disclosure obligations pursuant to youth protection and mental health acts).
		3.3.2	Under supervision, obtain informed consent from patients, including consent for minors or those deemed otherwise incompetent to give consent.

4. Collaborator

As collaborators, medical students are expected to work effectively with teachers, clinical supervisors, peers, and other health care professionals to provide safe, high-quality, patient-centred care and to contribute to a safe and supportive learning environment.

Students will be able to:

4.1	Work within an interprofessional team to care for individual patients and to promote the health of defined populations.	4.1.1	Recognize and respect the distinct roles, responsibilities and competencies of other health care professionals in relation to their own.
		4.1.2	Participate in shared decision-making and collaborate in meeting these shared goals.
		4.1.3	Recognize the need for referral of patients to specialized care and interprofessional consultation and participate in integrating this input into patient care.
4.2	Work with others to promote understanding, manage differences, and resolve conflicts.		
4.3	List the principles of patient safety and strategies to avoid adverse events.		
4.4	Demonstrate safe hand over of the care of a patient to another health care professional.		

5. Manager

As members of teams and potential leaders of the future, medical students engage with others to contribute to a vision of a high-quality health care system. They assume personal responsibility, under appropriate supervision and within team environments, for the delivery of excellent patient care.

Students will be able to:

5.1	Participate in the delivery of excellent patient care in their clinical environment	5.1.1	Demonstrate knowledge of the principles of effective leadership and apply these principles to support a collaborative and interprofessional practice model.
		5.1.2	Demonstrate effective workplace and personal organizational skills.
		5.1.3	Demonstrate knowledge of the principles of quality control and improvement, including reporting incidents, close calls, adverse events, and side effects of drugs.
		5.1.4	Incorporate financial considerations in clinical decision-making.
5.2	Understand systems issues related to the delivery of excellent healthcare	5.2.1	Demonstrate knowledge of how aggregated clinical information is used for health care service planning for populations.
		5.2.2	Demonstrate knowledge of how information technology can be used to manage the cost of health care and to develop, implement, and monitor compliance with clinical guidelines and other forms of patient care protocols.
		5.2.3	Participate in the assessment of prevailing local practices, comparing them to best practices as a means of identifying opportunities for improvement in teams, organizations, and systems.

		5.2.4	Recognize the importance of fair allocation of healthcare resources, balancing effectiveness, efficiency and access with optimal patient care, including at the population level.
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6. Health Advocate

As health advocates, medical students are expected to contribute their knowledge and influence to improve health of communities and/or patient populations. This entails determining and understanding needs, speaking on behalf of others when required, and supporting the mobilization of resources to effect change.

Students will be able to:

6.1	Describe the underlying tenets and key issues of the Canadian health system and relevant laws and legislation.		
6.2	Advocate for the health of individuals	6.2.1	Identify health care resources and collaborate with individual patients to advocate for timely access to these resources.
		6.2.2	Identify determinants of health and risk factors for illness relevant to the individual including demography, culture, socioeconomic status, race, ethnicity, gender, sexual orientation, and circumstances of living.
		6.2.3	Describe and apply strategies for health promotion and disease prevention for individual patients.
		6.2.4	Incorporate preventive measures such as lifestyle changes into management strategies for individuals.
6.3	Advocate for the health of communities, including vulnerable populations	6.3.1	Identify determinants of health and risk factors for illness relevant to the community including demography, culture, socioeconomic status, race, ethnicity, gender, sexual orientation, and circumstances of living.
		6.3.2	Describe issues related to health care for vulnerable and marginalized communities, such as disabled people and aboriginal populations, and apply strategies to the provision of care in these circumstances.
		6.3.3	Describe and apply strategies for health promotion and disease prevention for a community .
6.4	Advocate for the health of a population	6.4.1	Identify determinants of health and risk factors for illness relevant to the patient population , including demography, culture, socioeconomic status, race, ethnicity, gender, sexual orientation, and circumstances of living.
		6.4.2	Describe, assess, measure and record the health status at the population level.
		6.4.3	Identify local and global sociocultural, economic, political (including public policy), and environmental factors that affect health and the delivery of health care.
		6.4.4	Describe and apply strategies for health promotion and disease prevention at the population level .

7. Scholar

As scholars, medical students are expected to demonstrate a lifelong commitment to excellence through learning continuously, evaluating evidence, and contributing to the synthesis, translation, application, sharing, and/or creation of knowledge.

Students will be able to:

7.1	Recognize knowledge and performance gaps in clinical and other professional encounters and respond appropriately by developing, implementing and monitoring personal learning plans.
7.2	Pose questions amenable to scholarly inquiry, including those that demonstrate an understanding of connections between the biological, behavioural sciences, social sciences and clinical practice, and select or propose appropriate methods to address them.
7.3	Demonstrate skillful use of information resources and tools to support life-long learning, scholarship, and clinical decision-making.
7.4	Demonstrate knowledge of basic biostatistics, epidemiology, and the "logic of inference" (including estimation, confidence intervals, hypothesis testing and non-parametric methods).
7.5	Demonstrate knowledge of the principles of research ethics, including the Declaration of Helsinki on human experimentation and clinical trials, and the need for fully informed and voluntary consent of human subjects.
7.6	Demonstrate knowledge of the principles and methods underlying evidence-based medicine, including clinical practice guidelines.

References

The Canadian Medical Education Directives for Specialists (CanMEDS) Physician Competency Framework from the Royal College of Physicians and Surgeons of Canada (2015)

CanMEDS-Family Medicine: A Framework of Competencies in Family Medicine (2009)

["Objectives for the Qualifying Examination", Third Edition](#) from the Medical Council of Canada

Report I: Learning Objectives for Medical Student Education, Guidelines for Medical Schools, AAMC Medical School Objectives Project, by the Association of American Medical Colleges, January 1998



APPENDIX 1: REQUIRED PROCEDURAL SKILLS

Procedural Skill	Level*				* Description of proficiency & student level of responsibility
	1	2	3b	4	
A1. Abdominal paracentesis	x	x			LEVEL 1 – knows-how - observes and/or demonstrates knowledge of a clinical encounter, a maneuver or procedure (e.g. discusses process, expected outcomes, indications, contraindications, risks, complications)
A2. Abscess incision and drainage	x	x			
A3. Arterial blood gas	x	x			
A4. Aseptic technique	x	x	x	x	
B1. Bag-mask ventilation, oral and nasal airway	x	x	x		
B2. Bone marrow aspiration	x				
B3. Bronchoscopy	x				
C1. Chest tube insertion	x	x			
C2. Colonoscopy	x				
D1. Dressing change	x	x	x	x	
E1. Ear syringing	x	x	x	x	
E2. Electrocardiogram	x	x	x	x	
E3. Electroconvulsive therapy	x				
E4. Endometrial biopsy	x				
E5. Endotracheal intubation	x	x	x		
G1. Gastroscopy	x				
G2. Glucometer	x	x	x	x	
I1. IM/SC/ID injection	x	x	x	x	
I2. Intravenous access	x	x	x		
I3. IUD insertion	x				LEVEL 3a - does - assists the resident/staff in aspects of a clinical encounter or performs segments of a maneuver or procedure while under direct observation in a clinical (i.e. real patient) setting
J1. Joint aspiration	x	x			
L1. Lumbar puncture	x	x			
N1. Needle decompression of tension pneumothorax	x	x			
N2. NG tube	x	x	x		
O1. Ophthalmological exam - fluorescein	x	x	x		
O2. Ophthalmological exam - slit lamp	x	x			
O3. Ophthalmological exam - tonometry	x	x			
O4. Oximeter use to measure oxygen saturation	x	x	x	x	
P1. PAP smear	x	x	x		
P2. Pericardiocentesis	x				LEVEL 3b - does - executes the skills required of a clinical encounter or performs an entire maneuver or procedure while under direct observation in a clinical (i.e real patient) setting
P3. Perineal repair	x				
P4. Plantar wart removal	x				
P5. Primary casting for fracture	x	x			
S1. Skin biopsy	x				
S2. Spirometry-peak flowmeter and portable spirometer	x	x	x		
S3. Splint application	x	x	x		
S4. Spontaneous vaginal delivery	x	x	x		
T1. Temperature taking	x	x	x	x	
T2. Thoracentesis	x				
T3. Throat/nasopharyngeal swab	x	x	x	x	LEVEL 4 -does independently - executes the skills required of a clinical encounter or performs an entire maneuver or procedure without direct observation in a clinical (i.e. real patient) setting and reviews with a supervisor
U1. U/S guided central line insertion	x	x			
U2. Ultrasound	x	x	x		
U3. Universal precautions	x	x	x	x	
U4. Urinalysis dipstick	x	x	x	x	
U5. Urinary catheterization	x	x	x		
U6. Urine spot test for pregnancy	x	x	x	x	
V1. Venipuncture	x	x	x		
W1. Wound closure - suturing superficial skin wound/incision, aseptic technique	x	x	x		

Reference: Evidence-Based Clinical Skills Document from AFMC National Clinical Skills Working Group