



PATIENT AT HEART, SCIENCE IN HAND

MDCM PROGRAM
EDUCATIONAL OBJECTIVES

SCHOOL OF MEDICINE – FACULTY OF MEDICINE AND HEALTH SCIENCES
MCGILL UNIVERSITY

MDCM PROGRAM OBJECTIVES

Approved By: MDCM Program Committee

Approved On: December 12, 2015

Updated On: June 19, 2023

Next Planned Update: Winter 2026

Purpose: Overall Learning Objectives for the MDCM Program

Note: Please note that the MDCM Program Objectives have been revised to reflect current terminology and competencies. All related documents will be updated shortly. Please see the transition key for more information.

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.



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, social sciences, and 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 of common maladies.
		1.1.3	Develop and apply the fundamental concepts of 'physicianship', by expressing humility, openness and curiosity in the face of disease, illness and suffering.
1.2	Gather a history and perform a physical examination	1.2.1	In partnership with a patient, elicit a detailed and accurate medical history appropriate to the context and situation, including identifying interpersonal, social and environmental factors that impact health.
		1.2.2	Inquire about, identify and assess medication use, habits, and potential substance abuse disorders, including screening for alcohol use, during a medical history interview.
		1.2.3	In partnership with a patient, 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).
1.3	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 and signs in order to list meaningful and relevant differential diagnoses for all MCC Clinical Presentations.
		1.3.3	Select and interpret results of common diagnostic and screening tests, including recognizing normal from abnormal results, when working through a prioritized differential diagnosis
		1.3.3	Formulate a prioritized differential diagnosis by synthesizing relevant information and taking into consideration the relative likelihood of the diagnostic possibilities in different patient populations.
1.4	Select and discuss treatments, prescriptions and management plans.	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	Recognizes the need for the flexible use of knowledge in clinical decision-making and patient management, acknowledging complexity, uncertainty, ambiguity, and empiricism embedded in daily medical practice.
		1.4.3	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.
		1.4.4	Demonstrate knowledge of basic non-pharmacologic therapies and approaches for common clinical presentations.



		1.4.5	Formulate a treatment plan, in collaboration with the health care team and the patient, and write the orders (with appropriate countersignature) directing further care or follow-up with the patient in a clear and timely manner.
		1.4.6	Explain the possible benefits and harms of procedures or therapy options for a given patient. 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	Share effective health promotion, lifestyle changes, and disease prevention strategies, including the underlying rationale, with patients, their families and/or other members of the health care team.
		1.4.8	Evaluate patient's response to medications, therapy, treatment and other management decisions, and adjust management plans accordingly, while at all times ensuring patient safety.
		1.4.9	Describe, observe or perform common technical procedures safely (see Procedural Skills Appendix).
		1.4.10	Demonstrate compassionate care of patients, including exploring, in partnership with patients, how beliefs, knowledge, values, preferences and previous life experiences (including adverse life events) impact individual clinical encounters and decision-making processes.
1.5	Recognize a patient requiring urgent or emergent care	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.
		1.6.3	Document clinical encounters using non-biased, non-stigmatizing language in an accurate, complete, timely, and accessible manner.

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	Communicate using an open, anti-racist, anti-oppressive, non-judgmental, culturally safe, and trauma-informed approach that encourages patient safety, trust, and a sense of belonging.
		2.1.3	Explore, reflect upon and respond to personal biases, sociocultural, and individual influences that impact the doctor-patient relationship, 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	Discuss information, including sensitive issues, at an appropriate understandable level with all patients, at all ages and conditions, and aid patients to recall and understand all information provided to them.
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 honest, sensitive, and empathetic manner.
		2.2.6	Utilize appropriate strategies (e.g. face-to-face, telephone, electronic, or virtual formats) for communications with patients, families, other healthcare professionals, peers, teachers and staff.
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 provided by identifying the extent of the patient’s wish for information.
		2.3.2	Communicate the degree of certainty of scientific and clinical information to patients, as well as explain the significance of clinical findings and test results to patients, their families and team members.
		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).

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	Be receptive and respond appropriately to feedback on personal performance to support continuous practice improvement.
		3.1.5	Recognize and manage professional conflicts of interest.
		3.1.6	Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and cultural safety.
		3.1.7	Be aware of, respect and adhere to the policies and procedures of the McGill School of Medicine and its affiliate hospitals and institutions.
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, including identifying and reflecting upon: the limits of individual expertise, potential personal biases, personal reactions to professional situations, and seeking advice or help in challenging situations.
3.3	Respect the laws governing practice, professional and ethical codes, including the 'Code de déontologie des médecins du Québec' and the Faculty of Medicine and Health Science's Code of Conduct.	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, maladies a déclaration obligatoire (MADO)).
		3.3.2	Under supervision, obtain informed consent from patients, including consent for minors or those deemed otherwise incompetent to give informed consent.
		3.3.3	Discuss basic principles of medical jurisprudence and biomedical ethics.
		3.3.4	Ensure that any exchange and/or use of patient data is secure, ethical and lawful.
		3.3.5	When faced with potential illegal activity (e.g., human trafficking), or any form of abuse (e.g., elder, partner, or child abuse), ensure patient safety, intervene, counsel, and report as required by law.

4. Collaborator

As collaborators, medical students are expected to work effectively with patients, 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 scope of practice 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.
		4.1.4	Promote shared understanding by acknowledging differences, clarifying misunderstandings, and managing interpersonal conflicts.
4.2	Demonstrate a commitment to patient safety and a culture of continuous improvement	4.2.1	List the principles of patient safety and strategies to avoid adverse events.
		4.2.2	Demonstrate safe hand over of the care of a patient to another health care professional.
		4.2.3	Participate in peer assessment and other forms of self-regulation of the profession, with awareness and mitigation of personal biases.
		4.2.4	Promote a safe learning environment and evaluate teachers, programs and peers in an appropriate and constructive manner.
		4.2.5	Practice cultural humility, which involves building self-awareness and embracing the expertise of others (especially those with lived experiences) and building trust-based relationships.

5. Leader

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, accidents, adverse events, and side effects of drugs.
		5.1.4	Incorporate considerations about judicious use of resources in clinical decision making.
		5.1.5	Use anti-racism and other inclusive best practices to improve the quality of patient care, overall experience, and optimize patient safety.
5.2	Understand systems	5.2.1	Demonstrate knowledge of how aggregated clinical information is used for health care service planning for populations.



issues related to the delivery of excellent healthcare	5.2.2	Demonstrate knowledge of how information technology can inform judicious use of healthcare resources and apply a critical stance in monitoring or implementing 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.

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	Advocate for the health of individuals	6.1.1	Identify health care resources and collaborate with individual patients to advocate for timely access to these resources.
		6.1.2	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.
		6.1.3	Describe and apply strategies for health promotion, lifestyle changes, and disease prevention for individual patients, including addressing determinants of health, structural factors, or racism that may affect them and their access to needed health services or resources.
6.2	Advocate for the health of communities and populations , including vulnerable populations	6.2.1	Identify determinants of health and risk factors for illness relevant to the community or population including demography, culture, socioeconomic status, race, ethnicity, gender, sexual orientation, and circumstances of living.
		6.2.2	Describe issues related to health care for vulnerable and marginalized communities, such as disabled people and indigenous populations, and apply strategies to the provision of care in these circumstances.
		6.2.3	Describe and apply strategies for health promotion and disease prevention for a community and at the population level
		6.2.4	Describe the health status at the population level.
		6.2.5	Identify local and global sociocultural, economic, political (including public policy), and environmental factors that affect health and the delivery of health care.



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	Demonstrate critical reflection and inquiry into adaptive practice, self-directed and life-long learning.	7.1.1	Develop, implement and monitor personal learning plans in order to recognize both gains and gaps in knowledge and performance during clinical and other professional encounters, and respond appropriately to any gaps by seeking and incorporating feedback from knowledgeable others.
		7.1.2	Participate in regular introspection and guided reflection to support life-long learning, critical thinking, and professional identity formation and appreciate the intersection between the three.
7.2	Explain scientific and clinical research principles and incorporate evidence-based approaches into professional practice.	7.2.1	Pose questions amenable to scholarly inquiry, including those that demonstrate an understanding of connections between the biological, biomedical, behavioral sciences, social sciences and clinical practice, and select or propose appropriate methods to address them.
		7.2.2	Demonstrate knowledge of statistics, epidemiology, and the "logic of inference" (including estimation, confidence intervals, hypothesis testing, and non-parametric methods).
		7.2.3	Demonstrate knowledge of the principles of research ethics, including the Helsinki Codes on human experimentation and clinical trials, and the need for fully informed and ongoing voluntary consent of human subjects.
		7.2.4	Demonstrate knowledge of the principles and methods underlying evidence-based medicine, including a critical look at clinical practice guidelines.
		7.2.5	Appreciate the relationship between the creation, translation and dissemination of research knowledge for advancing evidence-informed health care practices.
7.3	Demonstrate skillful use of information resources and technologies to support scholarship and clinical decision-making.	7.3.1	Engage in the flexible use of appropriate informatics technologies for continuously improving personal practice and contributing to collective improvements to practice.
		7.3.2	Appraise and evaluate the integrity, reliability and applicability of health-related research literature and results as well as other scientific communication platforms that may inform health care practices.

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APPENDIX 1: REQUIRED PROCEDURAL SKILLS

Procedural Skill	Level*				* Description of proficiency & student level of responsibility
	1	2	3	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. Body Mass Index (BMI) – calculation and interpretation	x	x	x	X	
C1. Chest tube insertion	x	x			
C2. Colonoscopy	x				
D1. Dressing change	x	x	x		
E1. Ear syringing	x	x	x		
E2. Perform Electrocardiogram	x	x	x	x	
E3. Electroconvulsive therapy	x				
E4. Endometrial biopsy	x				
E5. Endotracheal intubation	x	x	x		
G1. Gastroscopy	x				
G2. Glucometer & blood glucose level	x	x	x		
I1. Injections: Intramuscular (IM), Subcutaneous (SC), Intradermal (ID)	x	x	x		
I2. Intravenous access	x	x	x		
I3. IUD insertion	x				LEVEL 3 – does – executes the skills required of a clinical encounter or procedure, OR, performs an entire maneuver or procedure while under direct observation in a clinical (i.e., real patient) setting
J1. Joint aspiration / joint injection	x	x			
L1. Lumbar puncture	x	x			
N1. Needle decompression of tension pneumothorax	x	x			
N2. Nasogastric (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		
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			Reference: Evidence-Based Clinical Skills Document from AFMC National Clinical Skills Working Group
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		