

Degree Level Expectations for Graduates Receiving the Doctor of Medicine, M.D.

Faculty of Medicine University of Toronto

1 Introduction

The University of Toronto, Undergraduate Medical Education Program leading to the MD Degree is fully accredited by the Liaison Committee on Medical Education (LCME) and the Committee on Accreditation of Canadian Medical Schools (CACMS). The last successful accreditation was in May 2004, with a term of eight years granted, until May 2012.

The Committee on the Accreditation of Canadian Medical Schools (CACMS), working with the Liaison Committee on Medical Education (LCME) in the United States, ensures that Canadian medical faculties' MD programs meet the quality expected when producing tomorrow's doctors. Medical schools demonstrating compliance are afforded accreditation, a necessary condition for a program's graduates to be licensed as physicians. CACMS came into formal existence in 1979 as a joint effort of the then-Association of Canadian Medical Schools (ACMC) and the Canadian Medical Association. Since 1965 the ACMC had worked with the LCME in the accreditation process for Canadian MD programs. The LCME is a similar joint effort between the Association of American Medical Colleges and the American Medical Association. Since mid-century it assumed responsibility for accrediting programs leading to the MD degree in the United States and Canada based on a long-standing collaboration extending to the beginning of the 20th century and the famous "Flexner Report." There was active Canadian participation in the LCME until CACMS was formed.

The accreditation standards address items in the following categories:

1. Institutional setting
2. Educational program for the MD degree
3. Medical students
4. Faculty
5. Educational resources

Each faculty undergoes a full on-site assessment visit at least every eight years by a team of trained surveyors consisting of senior leaders, educators and students. There is an LCME member on the survey team of each Canadian school, and the CACMS chair and secretary are frequent surveyors for American schools. This team prepares a formal survey report, which is given separate consideration by CACMS and the LCME. Each body makes its own determination of the school's state of compliance with the standards and determines the status of accreditation. CACMS and LCME invariably request a follow-up, ranging from a progress report to repeat limited visits or even probation, depending on the seriousness and duration of the areas of non-compliance. Adverse actions such as probation are subject to appeal.

By judging the compliance of medical education programs with nationally accepted standards of educational quality, these accrediting agencies serve the interest of the general public and the students enrolled in these programs. All accreditation standards can be found at www.lcme.org

2 Degree Learning Objectives and Requirements

2.1 Overall Learning Objectives

Recognizing

- 1) the continuum of medical education, and the compelling logic of linking medical student education to subsequent post-graduate training and continuing education,

and

2) the scientific and humanistic foundations of Medicine,

The University of Toronto, Faculty of Medicine has adopted the following goals for the undergraduate curriculum:

A. Graduates of the Undergraduate Medical Program will demonstrate the foundation of knowledge, skills and attitudes necessary to achieve the CanMEDS competencies and the Four Principles of Family Medicine.

B. In keeping with the Faculty of Medicine's vision of International Leadership in Health Research and Education, the Undergraduate Medical Curriculum will *encourage, support and promote* the development of future academic health leaders, who will contribute to our communities, and improve the health of individuals and populations through the discovery, application and communication of knowledge.

Based on this, curriculum objectives are organized into the following categories:

1. Medical Expert/Skilled Clinical Decision Maker
2. Communicator/Doctor-Patient Relationship
3. Collaborator
4. Manager
5. Health Advocate
6. Scholar
7. Professional

2.2 Requirements to Graduate

This section identifies the curriculum requirements, all of which must be successfully fulfilled by a student in order to graduate.

Each student will complete 148 weeks of instruction over the four-year Doctor of Medicine program.

In the first two years of the preclerkship, five block courses run in sequence over 67 weeks: *Structure and Function, Metabolism and Nutrition, Brain and Behaviour, Pathobiology of Disease* and *Foundations of Medical Practice*. These courses allow the student to learn the basic science that is the foundation of medicine in the context of clinical cases and medical conditions. The two longitudinal courses that extend through the entire two years of the preclerkship are *The Art and Science of Clinical Medicine (ASCM-1 & ASCM-2)*, and *Determinants of Community Health 1 & 2 (DOCH-1 & DOCH-2)*. In ASCM students learn the proper techniques of the medical history and physical examination, and a patient-centred and humane approach to the doctor/patient interaction. The *Determinants of Community Health 1 & 2 (DOCH 1&2)* teaches the fundamental principles of community health. DOCH 1 teaches the concepts of health and illness, determinants of health, the Canadian health care system, health promotion, and health protection. The course consists of one half day per week for the year and has both lectures and community – based field experiences. The *DOCH 2* course builds upon the knowledge and skills learned in DOCH 1 by having students work on a research project in the community. Through this project, students apply both research and community health concepts to address health problems and determinants of health affecting specific population groups.

The Clinical Clerkship is 81 weeks long, and is divided into Phase I (45 weeks) and Phase II (36 weeks). The Clerkship begins with DOCH-3, and academy/hospital orientations.

Phase I Clerkship has been designed to re-enforce the pre-clerkship experience and provide basic knowledge, skills and attitudes in the major disciplines of Internal Medicine, Surgery, Psychiatry, Pediatrics, Family Medicine, Obstetrics and Gynecology, Ophthalmology and Otolaryngology. This year also provides an opportunity for career selection. Students are required to complete a 6- week elective block during Phase I Clerkship. To allow for flexibility, students may subdivide the 6 weeks into shorter

time periods with the requirement that no time period is less than 2 weeks and that the various time periods add up to 6 weeks in total.

Phase II Clerkship is less structured giving the students more choice with electives/selective opportunities to broaden their educational experience. All students have 12 weeks of elective time prior to interviews related to the CaRMS process. Students are required to complete two elective blocks during the Phase II Clerkship.

Following the successful completion of these 148 weeks, each medical student is eligible to apply through the provincial regulatory Colleges (e.g., College of Physicians and Surgeons of Ontario) for an educational license to pursue postgraduate training (residency).

Each student must also successfully pass the licensure exam of the Medical Council of Canada* in order to practice medicine independently.

(*The Medical Council of Canada was established in 1912 by authority of the Canada Medical Act. One of the original purposes of the MCC is to establish and promote a qualification in medicine, known as the Licentiate of the Medical Council of Canada (LMCC) which is recognized by the 13 medical regulatory authorities in Canada, and is one of the requirements for the issuance of a license to practice medicine in Canada)

3 Degree Level Expectations for the MD Program

3.1 Depth and Breath of Knowledge

(The Medical Expert/ Skilled Clinical Decision Maker)

The medical graduate will be able to:

1. Demonstrate a knowledge of the scientific¹ and humanistic foundations of medicine and be able to apply that knowledge to the practice of medicine.
2. Demonstrate a thorough knowledge of the etiology, pathogenesis, clinical features, complications, principles of prevention and management of common and life-threatening illnesses presenting throughout the age spectrum, including all of the core clinical presentations outlined by the Medical Council of Canada.
3. Demonstrate:
 - ✓ The ability to obtain and document both a complete and a focused medical history, as the situation requires.
 - ✓ The ability to perform and document both a complete and focused physical and mental status examination, as the situation requires.
 - ✓ The ability to interpret commonly-employed laboratory tests, including tests of blood and other body fluids, various imaging modalities, and other specific tests such as electrocardiography.
 - ✓ The ability to integrate the above history, physical and laboratory test findings into a meaningful diagnostic formulation.
 - ✓ Therapeutic and on-going management skills with respect to health and disease
4. Retrieve, analyze, and synthesize relevant and current data and literature, using information technologies and library resources, in order to help solve a clinical problem.
5. Propose clinical decisions utilizing methods which integrate

¹ Scientific foundations include among others, the contemporary content of those disciplines that have been traditionally titled anatomy, behavioral science, biochemistry, genetics, immunology, microbiology, pathology, pharmacology and therapeutics, physiology, and preventive medicine.

the best research evidence with clinical expertise and patient values.

3.2 Knowledge of Methodologies

(Scholar)

The medical graduate will be able to contribute to the following scholarly activities:

1. Research:

The medical graduate will be able to pose a research question, help develop a protocol, assist in carrying out the research, and disseminate the results. The medical graduate will demonstrate an understanding of ethics as it relates to medical research.

2. Education:

The medical graduate will

- a) demonstrate the ability to engage in life-long, self-directed learning and critical inquiry.
- b) compare and contrast the diverse learning approaches of peers, patients and others, in order to effectively interact and collaborate.
- c) assist in teaching others and facilitating learning where appropriate
- d) understand the importance of being mentors to those less experienced members of the health care teams

3. Creative Professional Activity

The medical graduate will be able to describe the importance of, and contribute to professional innovations, creative excellence, and exemplary professional practice. The graduate will also demonstrate leadership potential by participating in the development of professional practices, such as practice guidelines or health policy development, and participation in professional organizations.

(Collaborator)

The medical graduate will be able to:

1. Describe the roles and expertise of all members of an interdisciplinary team that are required to optimally achieve a goal related to patient care, a research problem, an educational task, or an administrative responsibility.
2. Develop a care plan for a patient he/she has assessed, including investigation, treatment and continuing care, in collaboration with the members of the interdisciplinary team.
3. Participate in interdisciplinary team discussions, demonstrating the ability to accept, consider and respect the opinions of other team members, while contributing an appropriate level of expertise to patient care.

3.3 Application of Knowledge

(Health Advocate/Community Resources)

The medical graduate will be able to:

1. Describe the determinants of health and principles of disease prevention and behavior change appropriate for specific patient populations within a community and internationally, and apply these to patient care responsibilities and broader patient care initiatives.
2. Define and describe a population, its demography, cultural and socioeconomic constitution, circumstances of living, and health status; and understand how to gather health information about this population in order to better serve its needs.

3. Respect diversity, be willing to work through systems, collaborate with other members of the health care team, and accept appropriate responsibility for the health of populations.
4. Participate in community activities directed at improving health, utilizing the best evidence, effective teamwork and communication skills.
5. Describe the importance of the individual physician/patient relationship, and develop it appropriately, as a means to identify and implement individual health and disease management strategies on an individual basis.
6. Be prepared to challenge clinical orthodoxy, or identify threats to population health and advocate for their amelioration.

3.4 Communication Skills

(Communicator/Doctor-Patient Relationship)

The medical graduate will be able to:

1. Communicate effectively with patients, their families and the community through verbal, written and other non-verbal means of communication, respecting the differences in beliefs and backgrounds among patients and students.
2. Establish professional relationships with patients, their families (when appropriate) and community that are characterized by understanding, trust, respect, empathy and confidentiality.
3. Deliver information to the patient and family (as appropriate) in a humane manner, and in such a way that it is easily understood, encourages discussion and promotes the patient's participation in decision-making.
4. Gather information, negotiate a common agenda, and develop and interpret a treatment plan, while considering the influence of factors such as the patient's age, gender, ethnicity, cultural and spiritual values, socioeconomic background, medical conditions, and communication challenges.
5. Demonstrate the importance of cooperation and communication among health professionals so as to maximize the benefits to patient care and outcomes, and minimize the risk of errors.

3.5 Awareness of Limits of Knowledge

(Professional)

The medical graduate will be able to:

1. Recognize and accept the need for self-care and personal development as necessary to fulfilling one's professional obligations and leadership role.
2. Demonstrate altruism, honesty and integrity and respect in all interactions with patients, families, colleagues, and others with whom physicians must interact in their professional lives.
3. Demonstrate compassionate treatment of patients and respect for their privacy and dignity and beliefs.
4. Be reliable and responsible in fulfilling obligations.
5. Recognize and accept the limitations in his/her knowledge and clinical skills, and demonstrate a commitment to continuously improve his/her knowledge, ability and skills and leadership, always striving for excellence.

6. Describe and abide by the University/Faculty codes of professional conduct, and the relevant professional regulatory requirements concerning medical practice.
7. Describe the threats to medical professionalism posed by the conflicts of interest which can occur in the practice of medicine.
8. Demonstrate a sound grasp of the theories and principles governing ethical decision-making, the major ethical dilemmas in medicine, and an approach to resolving these.
9. Demonstrates an understanding of the principles and practice of law as they apply to the practice of medicine.
10. Develop the capacity to recognize common medical errors, report them to the required bodies, and discuss them appropriately with patients.

3.6 (Autonomy and Professional Capacity)

(Manager)

The medical graduate will be able to

1. Participate effectively in health care organizations, ranging from individual clinical practices to Academic Health Sciences Centres, exerting a positive influence on clinical practice and policy-making in one's professional community.
2. Describe the governance, structure, financing, and operation of the health care system and its facilities and how this influences patient care, research and educational activities at a local, provincial, regional, and national level.
3. Apply a broad base of information to the care of patients in ambulatory care, hospitals and other health care settings.
4. Describe the rationale for wise stewardship of available resources, appreciating the overall framework for resource allocation, and the absolute and relative levels of resources in various components of the health care system.
5. Help to build better teams.
6. Describe how population-based approaches to health care services can improve medical practice.
7. Participate in planning, budgeting, evaluation and outcome of a patient care program.
8. Participate in innovative approaches to clinical care.