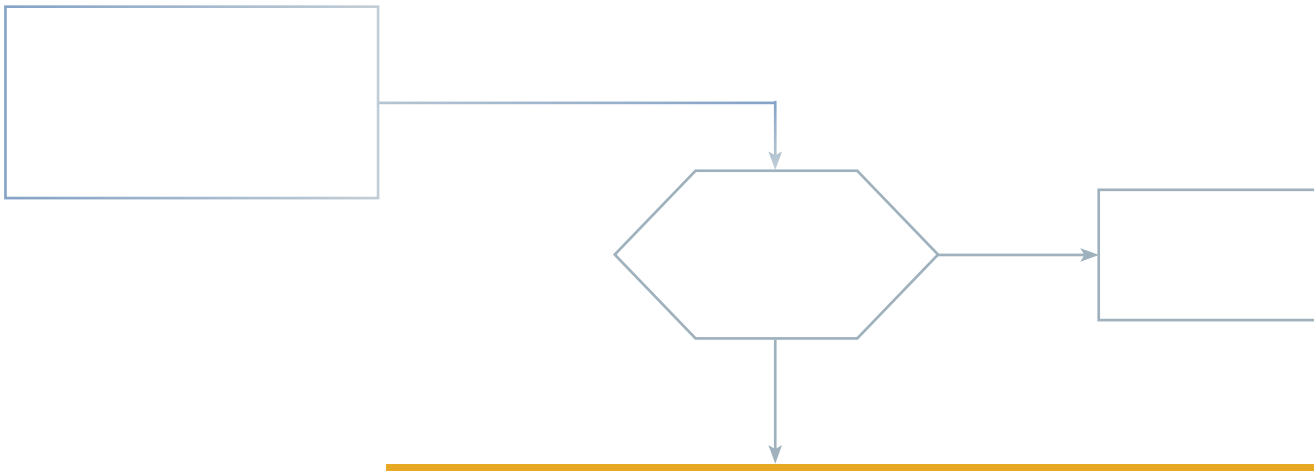
BLUEPRINT PROJECT

MEDICAL COUNCIL OF CANADA
LE CONSEIL MÉDICAL DU CANADA

Qualifying Examinations Blueprint and Content Specifications

September 2014 – Final Version



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THE MEDICAL COUNCIL OF CANADA strives to achieve the highest level of medical care for Canadians through excellence in evaluation of physicians. The Council assesses over 12,000 medical students and graduates every year through its examinations.

The Medical Council of Canada (MCC) Assessment Review Task Force undertook a strategic review of its assessment processes with a clear focus on their purposes and objectives, their structure and their alignment with MCC's major stakeholder requirements. The review addressed current trends in medical education, regulation and assessment. The review also took into account the role and purpose of MCC examinations in meeting the current and future needs of medical regulatory authorities (MRAs), the public and other stakeholders. Multi-stakeholder consultation and analysis activities were conducted between 2009 and 2011 with resulting recommendations and a final report approved by Council in 2011.

In addition to focusing on the reassessment and realignment of MCC's exams, a key recommendation focused on validating and updating the blueprints for the MCC Qualifying Examinations.

As part of its commitment to adhere to best practices in medical education and assessment, the MCC undertook the Blueprint Project to review and establish an evidence-based approach for identifying the competencies that physicians will be expected to demonstrate and be assessed on at two decision points: (1) entry into residency, and (2) entry into independent practice. The purpose is to ensure that physician critical core competencies, knowledge, skills and behaviours for safe and effective patient care in Canada are being appropriately assessed for the two decision points.

Preamble

Over the past 24 months, the MCC has undertaken work to validate and update the MCC Qualifying Examination blueprints. A blueprint reflects the overall knowledge, skills and behaviours required of a professional and guides the development of assessments. It is critical in ensuring that elements considered important for safe and effective patient care and health care in Canada are represented on examinations and other forms of assessment.

The MCC Blueprint, approved by Council in September 2014, is the result of an evidence-based and collaborative approach. Provided with wide-ranging research, a group of twelve subject matter experts (SMEs) representing various perspectives and organizations proposed a draft blueprint that was then reviewed by multiple stakeholders through extensive consultations. The MCC Blueprint is organized along two dimensions representing (1) a continuum of care and (2) activities that physicians perform on a daily basis. This Blueprint offers the MCC the opportunity to assess fundamental core competencies required of physicians practising in Canada at various points along their careers regardless of specialty.

Mapping to the CanMEDS Roles

In 2009, the MCC adopted the CanMEDS roles[1] to organize its Objectives. An exercise conducted by Council in September 2013 demonstrated that the CanMEDS roles can be directly mapped to the new Blueprint dimensions. The Blueprint thus offers an assessment framework that is highly complementary to both CanMEDS as defined by the Royal College of Physicians and Surgeons of Canada and CanMEDS-FM, developed by the College of Family Physicians of Canada.

Defining the MCC Blueprint

Gathering and Analyzing Data

A series of reports highlighting various facets of physician practice and assessment provided evidence that informed the MCC Blueprint:

- **Report of the National Survey of the Physicians, Pharmacists, Nurses, and Public in Canada: 2013 –** *Explored the relative importance of physician knowledge, skills and behaviours expected at the two decisions points – entry into residency (formerly known as supervised practice) and entry into independent (unsupervised) practice. The National Survey was designed around the CanMEDS roles[1] as per the MCC's Objectives.*

- **Report of Incidence and Prevalence of Diseases and Other Health Related Issues in Canada –**
  Highlighted prevalent conditions that should be assessed in medical licensing examinations to ensure that doctors are adequately prepared to treat the major health concerns facing today's Canadian population as well as other areas of importance such as population health, care of the elderly, aboriginal health and patient safety.

- **Report on the Supervision of New PGY-1 Residents: A Case Report of Supervisors' Expectations vs. Residents' Perceptions project –**
  Defined entrustable professional activities to offer perspectives on the levels of supervision early in the first year of postgraduate education. This report helped frame expectations at the decision point: entry into residency (supervised practice).

- **Report to the Medical Council of Canada on Current Issues in Health Professional and Health Professional Trainee Assessment –**
  Offered insight and perspectives into ways in which the MCC might consider adapting its current assessment practices and developing additional tools to align with modern and future conceptions of medical education and medical practice.

These reports, as summarized in Appendix A, provided perspectives on the importance of competencies, frequencies of clinical presentations, possible entrustable professional activities, and perspectives on current and future visions of assessment.

Defining the Blueprint and Specifications for Assessments

To define the Blueprint and content specifications, the MCC invited 12 SMEs (Appendix B) to provide judgments concerning the content that should be assessed at the two decision points. The SMEs represented:

- *MCC Council – including MRA and University membership*
- *Certification bodies – RCPSC and CFPC*

- *Medical Education – UGME and PGME deans*
- *MCC committees – Central Examination Committee, Objectives committee and test committees*

A three-day workshop was held in mid-May 2013 to seek consensus and a recommendation for a blueprint and content specifications for MCC Qualifying Examinations. The resulting Blueprint will serve as a framework to assess fundamental core competencies required of physicians at various points along their careers regardless of specialty.

Stakeholder Consultations

From June to December 2013, the MCC held consultations with important stakeholder groups including:

- *MCC's Council (at the Annual Meeting)*
- *Undergraduate and postgraduate deans of the Canadian medical schools*
- *College of Family Physicians of Canada*
- *Collège des médecins du Québec*
- *Royal College of Physicians and Surgeons of Canada*
- *Association of Faculties of Medicine of Canada*
- *Canadian Association of Internes and Residents*
- *Fédération des médecins résidents du Québec*
- *Canadian Federation of Medical Students*
- *Fédération médicale étudiante du Québec*
- *Federation of Medical Regulatory Authorities of Canada*
- *Canadian Resident Matching Service*

In addition, the MCC received feedback from other professional associations via email communications and special meetings.

While the overall Blueprint and specifications were well received, suggestions were offered in an effort to clarify and improve the definitions and ensure that certain concepts were made more explicit.

Recommended Blueprint and Content Specifications - Themes and Outcomes

A two-dimensional common assessment blueprint was proposed along with content specifications for candidates at two decision points – entry into residency and entry into independent practice.

		DIMENSIONS OF CARE			
		Health Promotion and Illness Prevention	Acute	Chronic	Psychosocial Aspects
PHYSICIAN ACTIVITIES	Assessment/ Diagnosis				
	Management				
	Communication				
	Professional Behaviours				

Dimensions of Care[2]

Reflects the focus of care for the patient, family, community and/or population

- **Health Promotion and Illness Prevention**

  The process of enabling people to increase control over their health and its determinants, and thereby improve their health. Illness prevention covers measures not only to prevent the occurrence of illness, such as risk factor reduction, but also to arrest its progress and reduce its consequences once established[3]*. This includes, but is not limited to screening, periodic health exam, health maintenance, patient education and advocacy, and community and population health.*

- **Acute**

  Brief episode of illness within the time span defined by initial presentation through to transition of care. This dimension includes but is not limited to urgent, emergent, and life-threatening

conditions, new conditions, and exacerbation of underlying conditions.

- **Chronic**
  Illness of long duration that includes but is not limited to illnesses with slow progression.

- **Psychosocial Aspects**
  Presentations rooted in the social and psychological determinants of health and how these can impact on wellbeing or illness. The determinants include but are not limited to life challenges, income, culture, and the impact of the patient's social and physical environment.

Physician Activities

Reflects the scope of practice and behaviours of a physician practising in Canada

- **Assessment/Diagnosis**
  Exploration of illness and disease using clinical judgment to gather, interpret and synthesize relevant information that includes but is not limited to history taking, physical examination and investigation.

- **Management**
  Process that includes but is not limited to generating, planning, organizing safe and effective care in collaboration with patients, families, communities, populations, and other professionals (e.g., finding common ground, agreeing on problems and goals of care, time and resource management, roles to arrive at mutual decisions for treatment, working in teams).

- **Communication**
  Interactions with patients, families, caregivers, other professionals, communities and populations. Elements include but are not limited to relationship development, intraprofessional and interprofessional collaborative care, education, verbal communication (e.g. using the patient-centered interview and active listening), non-verbal and written communication, obtaining informed consent, and disclosure of patient safety incidents.

- **Professional Behaviours**
  Attitudes, knowledge, and skills relating to clinical and/or medical administrative competence, communication, ethics, as well as societal and legal duties. The wise application of these behaviours demonstrates a commitment to excellence, respect, integrity, empathy, accountability and altruism within the Canadian health-care system. Professional behaviours also include but are not limited to self-awareness, reflection, life-long learning, leadership, scholarly habits and physician health for sustainable practice.

These domains were thought to reflect practice that can be assessed not only at both MCC Blueprint decision points but could also be applied to any physician in any practice. This Blueprint reflects the knowledge, skills and behaviours that all physicians practising in Canada regardless of specialty, should demonstrate when taking care of patients, families, communities and the population at large. The dimensions are not mutually independent such that assessments can be designed for a particular dimension or for multiple dimensions. Note that principles of patient safety underscore each of the dimensions.

Content Specifications

Specifications are guidelines on how to sample each domain. As is the case with our Blueprint, the proposed content specifications cover the two decision points – entry into residency and entry into independent practice – and the fundamental core competencies required of physicians regardless of specialty. Although all domains should be assessed at each decision point, differences do exist to emphasize certain areas. The content specifications propose that significant weight should be placed on both the dimensions of Communications and Professional Behaviours at both decision points. As well, the specifications place slightly more emphasis on the Acute dimension of care and the Assessment/Diagnosis activity for assessing physicians at the first decision point, i.e., readiness at entry into residency (Appendix C); whereas the emphasis is more on the Chronic dimension of care and the Management activity for the second decision point, i.e., readiness at entry into practice (Appendix D).

Transitioning to the new Blueprint

Stakeholders will be kept informed of new developments well ahead of any implementation. Information regarding the transition of our existing examinations (MCCQE Part I and Part II) and the review of other assessment opportunities will be regularly updated on the MCC website.

References

1. Frank, JR., Jabbour, M., et al. Eds. (2005). Report of the CanMEDS Phase IV Working Groups. Ottawa: The Royal College of Physicians and Surgeons of Canada

2. Modified from Wenghofer, E.F., Williams, A.P., Klass, D.J., Faulkner, D. Physician-Patient Encounters: The Structure of Performance in Family and General Office Practice. J Cont Educ Health Prof 2006; 26:285-293.

3. World Health Organization, www.who.int/chp/en accessed 14/05/2013

APPENDIX A

Report Highlights

Report of the National Survey of the Physicians, Pharmacists, Nurses, and Public in Canada: 2013

This report provides an overview of the survey that the MCC conducted as part of the practice analysis of physicians who are either a) starting residency training (supervised practice) or b) newly licensed (entering unsupervised practice). The survey content was based on previously developed MCC objectives. Physician judgments of importance were collected based on expected physician abilities at the two decision points. Pharmacists, nurses, and informed public members were asked to provide judgments of importance on appropriate competencies. The physician survey revealed that both medical expert and non-medical expert roles are important, and that those competencies deemed important at the first decision point continue to grow in importance as a physician transitions into independent practice.

Full report available here.

Report of Incidence and Prevalence of Diseases and Other Health Related Issues in Canada

The primary purpose of this study is to review and summarize the frequency of most common and important diagnoses as seen in the Canadian context by reviewing existing data. Available data included inpatient admissions, emergency department visits and outpatient care visits. The data are organized by age groups and by certain conditions, such as women's health, psychiatric conditions and chronic medical conditions. The inclusion of these prevalent conditions in the specifications for medical licensing examinations would help to ensure that doctors are adequately prepared to treat today's Canadian population's major health concerns.

As a secondary purpose, this report includes a review of certain areas of importance for the practice of medicine that may not be well represented by patient presentations and diagnoses or the MCC competencies. Examples include areas such as population health, care of the elderly, patient safety issues and aboriginal health.

Full report available here.

Report Highlights (cont.)

Report on the Supervision of New PGY-1 Residents: A Case Report of Supervisors' Expectations vs. Residents' Perceptions project

Postgraduate year-1 residents (PGY-1s) begin supervised practice in a setting where senior residents and attending staff are available to guide and review their work. There is an expectation that PGY-1s are supervised but that they will gradually take on more responsibilities and function independently as they become more experienced.

The purpose of this study was to determine whether there is a discrepancy between the level of supervision expected by clinical supervisors (CSs) and what PGY-1s actually report doing.

Of the ten Entrustable professional activities (EPAs) identified (e.g., patient handover, obtaining informed consent), three showed significant differences in the level of supervision reported between the CSs and PGY-1s. These included: (1) the management of intravenous fluids, (2) obtaining informed consent, and (3) obtaining advanced directives. Three more EPAs (recognition and initiation of management of critically ill patients, handover of patient care, and coordination of patient discharge) were significantly different when performed at nighttime.

PGY-1s reported performing EPAs with less supervision than expected by CSs, especially during nighttime. Using EPAs to develop curriculum and assessment tools prior to residency may help better align CSs' expectations with PGY-1 activities.

Published article is available in:

Medical Education, September 2014

Report to the Medical Council of Canada on Current Issues in Health Professional and Health Professional Trainee Assessment

The fundamental purpose of this report is to offer insight into ways in which the MCC might consider adapting its current assessment practices and develop additional tools to align with modern and future conceptions of medical education and medical practice, with an ultimate goal of assuring better health care for all Canadians.

Full report available here.

APPENDIX B

Subject Matter Expert group

Dr. Stephen Aaron, *Medical Council of Canada Objectives committee*

Dr. Cathy Cervin, *College of Family Physicians of Canada*

Dr. Anne Fournier, *Royal College of Physicians and Surgeons of Canada*

Dr. Lisa Graves, *Undergraduate Medical Education*

Dr. Joan Glenn, *Medical Council of Canada university representative*

Dr. Andrew Harris, *Medical Council of Canada test committee*

Dr. Johanne Lacelle, *Medical Council of Canada test committee*

Dr. Bill McCauley, *Federation of Medical Regulatory Authorities of Canada*

Dr. Florin Padeanu, *Medical Council of Canada test committee*

Dr. Barbara Power, *Medical Council of Canada test committee*

Dr. Kamal Rungta, *Postgraduate Medical Education*

Dr. Lynn Russell, *Medical Council of Canada Objectives committee*

APPENDIX C

Decision 1 – Entry into Residency

Specification 1 – Grid

		DIMENSIONS OF CARE				
		Health Promotion and Illness Prevention	Acute	Chronic	Psychosocial Aspects	Row %
PHYSICIAN ACTIVITIES	Assessment/ Diagnosis					30±5
	Management					20±5
	Communication					30±5
	Professional Behaviours					20±5
	Column %	**20±5**	**30±5**	**30±5**	**20±5**	**100**

Specification 1 – Constraints

CONSTRAINT CATEGORY	DESCRIPTION	CONDITION
Complexity	Multiple morbidities	at least 10%
Age	Neonate, infant/child, adolescent, adult, adult women of childbearing age, and the frail elderly	sample across the age categories including adult woman of childbearing age and the frail elderly
Gender	Male, female	balance evenly (minimum of 40% each)
Special populations	Included but not limited to immigrant, LGBT, ability to access care, disabled, First Nation, Inuit, and Métis populations; end of life patients, refugees, inner city poor, the addicted and the homeless	representative sampling
Setting	Included but not limited to rural or remote settings, long term care institutions and home visits	representative sampling

APPENDIX D

Decision 2 – Entry into Independent Practice

Specification 2 – Grid

		DIMENSIONS OF CARE				
		Health Promotion and Illness Prevention	Acute	Chronic	Psychosocial Aspects	Row %
PHYSICIAN ACTIVITIES	Assessment/ Diagnosis					**25±5**
	Management					**35±5**
	Communication					**20±5**
	Professional Behaviours					**20±5**
	Column %	**20±5**	**25±5**	**35±5**	**20±5**	**100**

Specification 2 – Constraints

CONSTRAINT CATEGORY	DESCRIPTION	CONDITION
Complexity	Multiple morbidities	at least 20%
Age	Neonate, infant/child, adolescent, adult, adult women of childbearing age, and the frail elderly	sample across the age categories including adult woman of childbearing age and the frail elderly
Gender	Male, female	balance evenly (minimum of 40% each)
Special populations	Included but not limited to immigrant, LGBT, ability to access care, disabled, First Nation, Inuit, and Métis populations; end of life patients, refugees, inner city poor, the addicted and the homeless	representative sampling
Setting	Included but not limited to rural or remote settings, long term care institutions and home visits	representative sampling

The Blueprint Project Team

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