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RECALIBRATING FOR THE 21ST CENTURY: REPORT OF THE ASSESSMENT REVIEW TASK FORCE OF THE MEDICAL COUNCIL OF CANADA



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Setting the stage

Society has bestowed the privilege of self-regulation on the medical profession. In addition to continuing competence, the profession's critical values in this social contract are compassion, service, altruism and trustworthiness. In Canada, 13 medical regulatory authorities are responsible for ensuring that physicians in their jurisdictions have the appropriate education and credentials to practise medicine safely. The modern physician is expected to demonstrate competence, not only through appropriate day-to-day practice, but also through formal assessments of his or her knowledge, skills and behaviours.

The Medical Council of Canada (MCC), founded by the Canada Medical Act of 1912, has as its original purpose the development of an assessment of physician ability acceptable to all the medical regulatory authorities (MRAs) for the purpose of licensure. The MCC is unique in that its membership represents all MRAs in Canada, all universities with a faculty of medicine, the public and medical students and residents.

The MCC currently provides three examinations of medical competence. The Qualifying Examination Part I and Part II (MCCQE Part I and II) are the assessment components of the Licentiate of the Medical Council of Canada. Additionally, the MCC offers the Evaluating Examination (MCCEE), which is held at 500 sites in over 80 countries and provides an initial screening of international medical graduates interested in practising in Canada.

The MCC awards the Licentiate to a candidate who has graduated from a recognized medical school, carried out at least one year of postgraduate clinical training, and successfully completed the MCCQE Part I and II.

The MCC ensures that the competencies for entry into practice are well defined, including their constituent components, through a formal objectives-setting process. It also identifies the various assessment tools to measure these competencies, and provides psychometric quality assurance of validity and reliability for each of the assessment processes and examinations.

As society evolves, as medicine advances and as the health system becomes more complex, there is an ongoing need to look at the role of the physician in society and to ensure that the most competent medical care is available to Canadians. The MCC, from its very beginnings, has placed a top priority on linking its examinations to the needs of the day, so as to ensure that Canadians get competent practitioners to deliver their health care safely. The work and recommendations of the Assessment Review Task Force continue the MCC's century-long continuum of reassessment and realignment of its examinations.

Critical competencies for today's doctors

"Competence: The habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and the community being served."

Defining and assessing professional competency,
Epstein & Hundert, 2002

The CanMEDS project is an innovative Canadian project carried out in the late 20th century by the Royal College of Physicians and Surgeons of Canada (RCPSC). Influential in shaping current medical education in Canada, it has provided a framework to create new assessment objectives. The CanMEDS Physician Competency Framework is organized around seven roles, or critical competencies, for today's physicians, with medical expert being the central role. The others are *communicator, collaborator, health advocate, manager, scholar* and *professional*.

In today's world, these critical competencies go beyond traditional medical knowledge and skills to include other professional attributes required by a physician to function and manage in a complex health system. Communication skills must go beyond those required to effectively relate to patients and other health professionals; they have to be based upon a clear recognition of the impact that culture, family and community have on patients and their health.

Both national certifying colleges – the RCPSC and the College of Family Physicians of Canada (CFPC) – have adopted the CanMEDS framework to shape their accreditation, learning objectives, curricula and specialty competency assessments. Most of Canada's medical schools are also adopting it as the driver of their curriculum design, and the MCC has reorganized its objectives using the CanMEDS framework to describe the critical competencies expected of a graduating physician entering both supervised and independent practice.

The CanMEDS framework caused much reflection within the MCC and spurred efforts to align the MCC examinations with these new directions. For example, Council established a Professionalism Task Force in 2006 that brought together international expertise and enhanced the definition of professional competencies and their example behaviours. The Professionalism Task Force recommendations have been reviewed by the MCC's Central Examination Committee and interpreted by the Objectives Committee. As a result, new item development is now being incorporated into the work plans of the various test committees. The initial assessment results have received international recognition.

Health-care delivery

“Added complexities include the explosion of scientific discoveries and new knowledge; the mounting burden of chronic diseases; health disparities among sub-populations; and the ongoing challenges of serving people in rural and remote areas.”

The Future of Medical Education in Canada, 2010

The delivery of health care in the 21st century is changing rapidly, and society expects that modern health-care professionals, as well as the institutions that train them, will adapt quickly and responsively to meet patient and population needs. Three recent major studies of medical and health-care education in Canada, the US and internationally have identified the need for major changes in the way we educate our health professionals:

- **Health professionals for the new century: transforming education to strengthen health systems in an interdependent world**, Julio Frenk, Lincoln Chen et al., identified “... a mismatch of

competencies to patient and population needs... narrow technical focus without broader contextual understanding... [and] predominant hospital orientation at the expense of primary care..."

- ***Educating Physicians: A Call for Reform of Medical School and Residency***, Molly Cooke, David Irby and Bridget O'Brien noted that the "future demands new approaches to shaping the minds, hands and hearts of physicians".
- ***The Future of Medical Education in Canada: A Collective Vision for MD Education***, reflected the complexity of modern health care, and identified the need for medical schools and their curricula to be more rapidly responsive to changing societal needs.

These reports each acknowledged the new and burgeoning challenges to health care of individuals and populations, stemming from illness, environment, behaviour, rapid demographic changes, or the epidemiologic pressures of global life. Frenk, Chen et al. also identified the inequities in the health of populations, not only between countries but also within countries. In addition, they introduced the concept of transformative learning, which goes beyond knowledge and skill development and socialized professional values, to develop physicians skilled in searching for information, analyzing it and synthesizing it into their decision making.

These reports saw the future of health care as integrated, with specific or formally defined scopes of care becoming more diffused among professions. Each report recognized the societal need for more primary health care and a new approach to generalism, in a system whose graduates are becoming more and more focused in their spectrum of care. There was also recognition that today's learners come from diverse educational and cultural backgrounds, develop at different rates, and achieve different abilities at different times.

The concept of competency is redefined in the broad context of patient and population care. Competency-based learning was the watchword in these reports. Frenk, Chen et al. identified the need to have a disciplined approach to specify the health problems to be addressed, to define the competencies required for the health system, to tailor the curriculum to achieve these competencies, and to adequately assess their achievement or shortfalls.

Canada's regulatory scene

"By virtue of the British North America Act of 1867 the governance of educational matters was handed over to the Provinces... in consequence we have since had a curious complexity of medical legislation, there being practically no uniformity amongst the provinces in regard to standard of study or qualification for practice."

Thomas Roddick, 1897

The 13 provinces and territories have constitutional responsibility for governing Canadian health-care delivery, education and professional regulation. Each has its own medical regulatory body, which defines the requirements for physicians entering practice in its jurisdiction. The licensing of physicians has adapted to meet the unique patient and health-care needs of each province or territory. A survey in 2009 identified that over 120 different forms of medical licensure exist in Canada, many of which are not accepted by

every jurisdiction. Indeed, full licensure can take very different routes in different jurisdictions. This affects the mobility of physicians across provincial/territorial boundaries and creates multiple, complex routes to licensure, especially for immigrant physicians who have not completed their education in Canada.

Two Federal/provincial/territorial initiatives have been introduced to reduce the complexity. In 2009, the chapter of the Agreement on Internal Trade governing labour mobility was modified and signed by all premiers and the Federal government. It acknowledges that if a professional is acceptable in one jurisdiction, her or his credentials must be acceptable to all other jurisdictions.

The modified agreement requires that “a certified worker in one province or territory who wishes to relocate to another province or territory to work shall, upon application, be certified for that occupation by the destination province or territory, unless an additional pre-defined allowable certification requirement or limitation is imposed, or unless a province or territory has noted the need for an exception as necessary to achieve public, consumer or environmental protection”.

Therefore, physicians holding a full licence will be able to move from jurisdiction to jurisdiction without the new jurisdiction revisiting the credentials, as long as they have a supporting certificate of professional conduct. Even those physicians with restrictions on their licence will be granted a licence in another province or territory as long as the receiving jurisdiction can accommodate those conditions or restrictions.

The other Federal/provincial/territorial initiative is the Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications. Signed by ministers from all levels of government, it establishes deadlines by which professional organizations must have in place a process to verify that the knowledge, skills, work experience and education obtained in another country is comparable to the standards established for Canadian professionals. The framework also requires descriptions of clear pathways to recognition that are fair, transparent, timely and consistent.

The Assessment Review Task Force

It is within this environment of change and complexity that the Medical Council of Canada, in the fall of 2009, established the Assessment Review Task Force (ARTF). Its goal was to undertake a reflective and strategic review of the MCC's assessment processes, with a clear focus on their purposes and objectives, their structure and their alignment with MCC's major stakeholder requirements.

Membership

Chair:

Dr. Oscar Casiro, Professor of Pediatrics and Regional Associate Dean, Vancouver Island, Faculty of Medicine University of British Columbia; Head, Division of Medical Sciences University of Victoria

Members:

Dr. Trevor Theman, Registrar, College of Physicians and Surgeons of Alberta

Ms. Nancy MacBeth, Public Member, MCC

Dr. Donald Studney, Associate Professor of Medicine, University of British Columbia and Chair, MCC's Evaluating Examination Composite Committee

Dr. Ramses Wassef, Professor of Surgery, University of Montreal and Chair, MCC's Central Examination Committee (CEC)

Dr. Claire Touchie, Associate Professor of Medicine, University of Ottawa and Vice-Chair, CEC

Staff:

Dr. Ian Bowmer, CEO, MCC

Mr. Robert Lee, Director, Evaluation Bureau, MCC

Ms. Krista Breithaupt, Director, Research and Development, MCC

Ms. Andrée Fortin-Bélanger, Executive Secretary to the Board, MCC

Terms of reference

1. Confirm current trends in medical education, regulation and assessment.
2. Review the role and purpose(s) of the MCC examinations – clarifying what the examinations are intended to measure.
 - *Identify any additional qualities that require assessment to ensure physicians demonstrate all appropriate competencies for licensure in Canada.*
 - *Identify the difference between physicians entering practice and those in practice for many years.*

3. Review and assess the current and future needs of the regulatory bodies and stakeholders who utilize the examinations.
 - *Identify modifications to the current assessment processes that may be required to meet these additional needs.*
 - *Identify critical stakeholders.*
 - *Identify the MRAs' needs.*
 - *Identify the needs of the other critical stakeholders.*
 - *Identify assessment methods that may be used in assessing physician competence.*
 - *Identify the critical components and their relative value in the continuum of learning.*
 - *Review the structure of the examination test committees to ensure appropriate composition and content management.*
4. Submit recommendations to the MCC Executive Board for approval. Any recommendations will take into consideration the following criteria: examinations and all assessments must be designed in such a way that their content, development, construction and delivery are achieved in a cost-effective manner.

Laying the groundwork: preparation and process

Invited papers

- *Assessment Methodologies (discussion paper of the MCC Assessment Review Task Force addressing common assessment methods used in medical education).* David Blackmore
- *Gap analysis; comparing the recommendations from the report of the Future of Medical Education - Undergraduate to the Objectives of the Medical Council of Canada.* Robert S. Lee
- *Medical Licensure Testing – White Paper for the Executive Board of the Medical Council of Canada.* Krista Breithaupt

Invited speakers

2009:

- *Insights from the Future of Medical Education in Canada Project: Challenges and Opportunities for the Assessment Processes of the Medical Council of Canada,* Dr. Jay Rosenfield, Vice-Dean, Undergraduate Medical Education, University of Toronto
- *Assessment for the Future,* Dr. John Norcini, President and CEO, Foundation for Advancement of International Medical Education and Research (FAIMER)
- *The Role of Medical Simulation in the 21st Century Training and Assessment of Health Professionals,* Dr. Amitai Ziv, Deputy Director, Sheba Medical Centre, Israel

2010:

- *Continuous Improvement: The Next Generation of USMLE,* Dr. Donald E. Melnick, President, National Board of Medical Examiners

- *Comparison of High and Low Fidelity Simulation: A Little Bit Less for a Lot Less*, Dr. Geoff Norman, Assistant Dean, Programme for Educational Research and Development, McMaster University
- *Why is measuring the soft so hard: Reflections on the evaluation of the “other” competencies*, Dr. Glenn Regehr, Associate Director, Research, Centre for Health Education Scholarship, University of British Columbia

Medical Regulatory Authority Survey

Qualitative analysis of the Objective Structured Clinical Examination (OSCE), *Does the Canadian national licensure OSCE fulfill its intended purpose? Perspectives of Stakeholders*, prepared by Dr. Claire Touchie as part of requirements for a Masters in Medical Education, University of Chicago

Focus group meetings at the MCC Annual General Meetings 2009 and 2010

Regional consultations with faculties of medicine between 2010 and 2011, including the University of Alberta, Memorial University of Newfoundland and Labrador, University of Manitoba, University of Toronto, Université de Montréal, Dalhousie University, Northern Ontario School of Medicine and the University of British Columbia

Presentation of the ARTF process at an international educators meeting – (Association of Medical Education of Europe) in 2011.

Consultations, feedback and deliberations

The Assessment Review Task Force (ARTF) spent much time consulting with the MCC's key stakeholders: the medical regulatory authorities and representatives of Canada's faculties of medicine. The core focus of the consultations was MCC examinations.

The MCC examinations defined

MCC Evaluating Examination (MCCEE) is a screening examination that assesses the basic medical knowledge and problem solving of a candidate at a level comparable to a minimally competent medical student completing his or her medical education in Canada and about to enter supervised practice. It provides the candidate with an estimate of the probability of his or her chances of succeeding in the Canadian system. It is not designed to test uniquely Canadian content. Access is international, with the MCCEE delivered through a service provider at 500 sites in over 80 countries. It is a prerequisite for international medical graduates (IMGs) to challenge the MCCQE Part I, and it is the minimal requirement for an IMG's entry into postgraduate medical education in Canada.

MCC Qualifying Examination Part I (MCCQE Part I) is a summative examination that assesses the critical medical knowledge and clinical decision-making ability of a candidate at a level expected of a medical student who is completing his or her medical degree in Canada. The examination is based on the MCC Objectives, which are organized under the CanMEDS roles. Candidates graduating and completing the MCCQE Part I normally enter supervised practice. Aside from formal accreditation processes of the undergraduate and postgraduate education programs, the MCCQE Part I is the only national standard for medical schools across Canada and, therefore, is administered at the end of medical school.

MCC Qualifying Examination Part II (MCCQE Part II) assesses the candidate's core abilities to apply medical knowledge, demonstrate clinical skills, develop investigational and therapeutic clinical plans, as well as demonstrate professional behaviours and attitudes at a level expected of a physician in independent practice in Canada. Candidates must have successfully completed the MCCQE Part I and be completing their postgraduate medical education (currently there is a requirement for one year of postgraduate education).

The MCCQE Part I and II form two components of the Licentiate of the MCC (LMCC), which, in turn, is one of the prerequisites for licensure and entry into independent practice in Canada.

Initial findings

An initial finding of the ARTF, through its consultations and deliberations, was the critical need to clearly reiterate the current purposes of the examinations and ensure there are clear definitions for any future purpose, or purposes, of all MCC assessments. There must be clear communication about **what** has to be measured through the examinations, principally in relation to core competencies, and **when** these competencies are

best assessed, that is to say on entry into supervised practice or on entry into independent practice?

ARTF also received repeated input from all stakeholders about the need for assessments that go beyond exit-from-training or entry-into-practice, to include assessments that occur throughout the physician's practice life.

Feedback from the medical regulatory authorities (MRAs)

The primary role of the MRAs is to assure the public and the profession that physicians are practising medicine safely. The MRAs made clear that they recognize the MCCQE Part I and II as necessary, valid and reliable instruments for assessing the core knowledge, clinical skills and decision-making ability of graduates of medical schools in the Canadian context as they enter medical practice.

Through the Federation of Medical Regulatory Authorities of Canada (FMRAC) committees, the MRAs are working together to standardize licensure requirements. The Canadian Standard for full licensure has been defined and accepted. FMRAC's Registration Working Group has drafted a limited number of categories for restricted or provisional medical registration that will vastly reduce the current number of categories in existence across the country. Applicants who have not completed the requirements for the Canadian Standard will be required to have their credentials and their abilities assessed to ensure that their abilities are comparable to those physicians who fulfill the Canadian Standard requirements.

International medical graduates (IMGs) are physicians who have graduated from a medical school outside Canada. Because US allopathic medical schools share the same accreditation process with Canadian medical schools (Council for Accreditation of Canadian Medical Schools and the Liaison Committee on Medical Education (LCME)), graduates and students from these medical schools are not required to complete the MCCQE prior to taking the MCCQE Part I or prior to entry into postgraduate education in Canada. IMGs may also have spent a number of years in practice in their country of origin. Therefore, it is not surprising that they constitute a more heterogeneous population of physicians than graduates of Canadian training programs.

The IMG who is already in practice in his or her own country and wishes to enter Canada poses various assessment challenges. Important areas that need assessment include the candidate's ability to work in the Canadian system and culture, to form effective inter-professional working relationships and to order tests or prescribe medications.

Assessment before entering practice

- The MRAs see a continuing need for the assessment of domestic graduates and those graduating from schools accredited by the LCME. All MRAs recognize a continued need for uniform measurement of performance in Canadian medical schools, and that the results of the measurement of individuals should be provided to the MRAs.
- The MRAs consider the current MCC examinations to have clear objectives and a high degree of validity and reliability. The examinations influence the medical school curriculum and, as such, help to direct the learning of competencies that the MRAs consider essential.
- The use of the results of the national examination process in the accreditation of faculties of medicine is seen as important and a point in which the MRAs, through their membership on the

MCC, influence the development of physicians.

- There is recognition of the evidence that performance on the MCCQE Part I and II has predictive ability for physicians who might have difficulty in practice.
- The clinical decision-making (CDM) component of the MCCQE Part I is seen as important because it measures abilities that have value in the practice of medicine. Many MRAs suggested the need to enhance the assessment of the physician's ability to integrate medical information and to increase the emphasis on clinical decision-making in the examination process.
- The MRAs do not uniformly consider success at the MCCQE Part I and II as the only criteria for entry into independent practice.
- It was noted that some licentiates do not have the skills required to practise competently in rural and/or remote areas and the perception is that the MCCQE Part I and II have not been designed to measure these competencies.
- Even though the MCCEE has been used as a minimum requirement for restricted licensure in some jurisdictions, the MRAs acknowledged that it is a screening test and not an assessment that ensures ability to enter practice in Canada. That is to say a candidate who fails the examination probably does not have the minimally necessary medical knowledge, but there are many candidates who pass the MCCEE who do not have the minimal necessary clinical knowledge to enter practice.

The MRAs indicated that they would prefer more specific ability assessments for those IMGs who have been in clinical practice for a number of years. They questioned whether the current examinations could be enhanced to more effectively assess the performance of this group of applicants or whether other generic examinations need to be developed for those IMGs who wish to enter directly into practice. The expected performance at the level of a recent Canadian graduate on the MCCQE Part I and II may or may not be the appropriate standard for assessing an experienced practising physician who wishes to enter practice in Canada, especially for one who is primarily in sub-specialty medicine. There was consensus that credential review alone was insufficient to register an IMG for practice in Canada. If an IMG is not entering a known postgraduate education program, it is considered essential that core knowledge and skill competencies be assessed, and that a period of in-practice assessment is also necessary prior to registering the physician for independent practice.

Assessment after entering practice

One question raised was whether there is a role for the MCC, in collaboration with the specialty colleges (CFPC and RCPSC), to develop specific tools that could assess physicians as they move through their professional careers. The lack of a standardized national program of continuing assessment is pointed out by the MRAs.

Current methods of measuring the impact of a physician's practice on patient outcomes, however, are in their infancy, and there is an overall lack of capacity to do meaningful assessments of physicians during practice. Regulators stated that the MCC should assist in developing and implementing specific tools, and in defining the national standards required to assess physicians in practice. Suggestions included other assessment processes such as nationally guided reflective exercises linked to specific scopes within a practice, a national physician review process similar to those developed in Quebec and Alberta, or standards for mini Clinical Examinations, Multi-Source Feedback, etc.

If an assessment of physicians in practice is to be linked to their current practice, there has to be a standardized methodology to define the scope of practice. While the certification examinations of the Royal College and

the College of Family Physicians define specialty-specific competencies, once a physician enters practice there is no standard definition of the individual physician's practice competencies. The MRAs expect practitioners to limit their scope of practice to their continuing competency. If MRAs require assessment in practice, perhaps defining individual scopes of practice will be insufficient and, therefore, assessments in-practice should be focused on more generic core competencies. Furthermore, the MCC could develop standards for an audit process to characterize the gap between what a physician does and "best practice guidelines" in that area. Tools would need to measure specific competencies as well as the ability to change and measure improvements in practice.

A meaningful LMCC

MRAs not only require practice-specific assessments, but also want evidence of adequate and appropriate postgraduate education and further assessments of specialty competencies.

The MCCQE Part I and II are only one part of the licensing process. To be meaningful, the LMCC should reflect the Canadian Standard, including the level of training and the competencies required for entry into practice. The LMCC was meant to be a qualification that identified a physician's readiness for independent practice, to be awarded when a person is ready for licensure (for independent practice) in Canada.

A "new" LMCC would mean a national qualification for entry into practice. It would define the requirements for the physician to be registered and could be time-limited. This LMCC would represent all components (and equivalencies to these could be defined by the MRAs) of the Canadian Standard for registration:

- A recognized MD degree
- MCCQE Part I and II
- Formal postgraduate education
- Certification from the College of Family Physicians or the Royal College of Physicians and Surgeons

Essential competencies of the physician in independent practice in addition to the medical expert role

- Communication skills – these were seen as the most important and encompass other competencies
- Professionalism
- Ability to collaborate among all health professionals and to demonstrate his or her role in inter-professional collaborative practice (teamwork)
- Medical record keeping
- Ability to arrange diagnostic testing
- Ability to deal with uncertainty, to know one's limitations, and to refer when appropriate
- Knowing how to arrange or provide consultation
- Knowledge of patient safety principles (and their overlap with collaboration and inter-professional relationships (system issues))
- Ability to deal with adverse events and the ability to communicate this to a patient and/or family members (disclosure of harm)
- Ability to demonstrate effective functioning within the health-care system and describe how it works

- Ability to self-assess, use self-reflection, and alter performance based upon this reflection

Focus for the MCC

- Concentrate on developing standardized, valid and reliable tools that can assess a wide range of core competencies
- Assess all the CanMEDS roles (collaborator, manager, advocate, professional, scholar, communicator), with the medical expert competencies being the knowledge and skills common to all physicians
- Consider developing common assessment processes that can be delivered to all physicians entering practice in Canada
- Develop common assessment processes for physicians practising in Canada
- Collaborate with the College of Family Physicians and the Royal College to develop assessments that allow them to focus on specialty areas (while the MCC assesses more generic competencies)

Feedback from the universities

Timing of the MCC assessments

The faculties of medicine consider timing of the MCC examination to be an important issue. A number of schools have explored the possibility of using the MCCQE Part I as an exit examination prior to graduation. Three schools in Quebec already use it for this purpose but for others that might consider adopting this approach, the timing of the current examination is too late for their graduation date.

The examination was recognized for its audit function and as an effective assessment of knowledge and possibly clinical decision-making at the end of medical school. All schools use the results to assess various aspects of their learning curricula.

Medical schools in Canada have matured both their curricula and their mechanisms of assessment. Some suggested that clinical skills are formally assessed at all Canadian faculties of medicine either at the end of the core clerkship or towards the end of fourth year. Some noted the MCCQE Part II OSCE is a good audit of their clinical programs. Some noted it focused residents into being more general physicians during their early postgraduate training, while others felt this might be a detrimental aspect of the timing of this examination. Some schools suggested it be moved to the end of all residency training, not just for family medicine as is being planned through the harmonization project. If so, it was suggested the assessment focus on generic core competencies.

Faculty at many of the consultations discussed the concept of a competency-based curriculum in postgraduate education and, in this context, raised the issue that candidates be allowed to challenge the assessments when they felt they were ready.

The MCCQE Part I

Aside from accreditation, the MCCQE Part I exam is the only national standard for medical schools across Canada and, therefore, should continue to be administered at the end of medical school. Some key

questions and discussion points raised during the consultations were:

- *Could the MCC have a role in assessment while students are still in medical school? Should there be intermittent summative assessments by the MCC? Or accreditation by the MCC of summative assessments? Such a national process could overcome the potential conflict of interest that universities face when trying remedial activities for the poorly performing student.*
- *Does the MCCQE Part I have a potential use as an exit examination from medical school? Three Quebec schools currently use the MCCQE Part I as a medical school exit examination. As the MCC has the ability to provide rewrite or supplemental examinations, providing this examination as a terminal examination is a viable option.*
- *Is the MCC adequately sampling across the CanMEDS roles? The MCC should develop the ability to assess all CanMEDS roles. The present focus is perceived to be on the medical expert with some assessment of the communicator, professional and manager roles. The blueprint should be revised to reflect all the roles, which will also require both research and development activity. Consideration may need to be given to going beyond point-in-time testing.*
- *Should the MCC continue with assessments that are built predominantly from the traditional discipline areas of the medical expert, or should it define the specific core competencies that cross discipline domains and involve all CanMEDS roles? The resultant examination would measure competencies that are not discipline specific. The assessments would be geared to competency in generic areas, rather than discipline domains and would allow core competencies to be tested in varying contexts.*
- *Can clinical decision-making be developed and refined further? What is the cost benefit of this kind of examination fidelity?*
- *Can the MCC improve the assessments of heterogeneous IMG groups to ensure their generic core knowledge is comparable to that of Canadians entering practice?*
- *Could a new or partial MCCQE Part I be developed that not only assesses essential knowledge and clinical decision-making of Canadian graduates, but also assesses generic competencies required of IMGs who wish to practise in Canada? This examination could then be offered offshore.*

The MCCQE Part II

The MCCQE Part II exam is resource intensive, long and difficult to deliver. While all Canadian medical schools test these clinical competencies, they do so at varying times in the curriculum and prior to any postgraduate enhanced experience. The current MCC OSCE is not only an assessment of the critical clinical abilities considered essential for entry into independent practice, but also an audit and an outcome measure of the educational programs in Canada.

The main suggestion from the faculties of medicine was that consideration be given to testing processes that measure critical clinical competencies but use fewer resources. One suggestion was an accreditation process to standardize Canadian medical school clinical assessment that would also require clear standard-setting for on site OSCEs. Mechanisms to compare the outcomes in a standardized fashion would also be required. Some new possibilities, gaps and questions were raised:

- *Are there other potential assessment modalities such as sequential examinations with a short screening assessment followed by a more extensive examination for those who do not meet the initial standard?*

- *Is there a role for standardized patients as examiners now that medical schools have sophisticated standardized patient populations?*
- *Again there was encouragement for the RCPSC, CFPC and MCC to collaborate to develop assessments so that the national specialty colleges focus on specialty clinical areas and the MCC assess more generic competencies.*
- *Can there be further research to determine the minimal stations necessary to define inadequate performance?*
- *Are we adequately sampling across the CanMEDS roles?*
- *Have we adequately established the critical generic core CanMEDS roles? And what are those critical competencies?* For example, areas to be covered could include record keeping, inter-professional and intra-professional skills (e.g. consultation writing), cultural sensitivities, judgment, self-assessment, patient safety considerations, health system understanding, knowing one's limitations in knowledge and skills, critical appraisal skills, and the ability to perform effective literature searches and their application to patient care.

Themes and context for the ARTF recommendations

The insight gleaned from the consultations enabled the ARTF to identify the following themes from which to distill key issues and upon which to base its recommendations:

- **Achievement of competencies versus time in training**
All recent reviews of the medical education process have suggested less reliance on time-based periods of learning and a move to demonstrating progress by measuring specific competencies. There is general consensus that MCC assessments should concentrate on the general or core competencies expected of every physician, while the specialty colleges would concentrate on assessing specialty-specific competencies. While the medical knowledge competencies are well defined and accepted across Canada, both the MRAs and the faculties of medicine expressed that most of the other CanMEDS roles required more specific definition of the competency and the level at which a specific competency should be expected during the learning and practice continuum.
- **Flexibility versus fixed assessment times**
Faculty teachers and supervisors recognized the different rates at which students learn. They also recognized the redundancy that exists in the system with the MCC and the two specialty colleges developing assessment material in addition to the individual faculty of medicine. Many suggested developing common assessments including a national item bank for those schools administering progress testing. There was also support for a national examination available at a time before graduation that could be used in the graduation decision and for other forms of assessment throughout the postgraduate learning program that complement the educational program's ultimate goal of preparing the postgraduate trainee for independent practice.
- **Continuity (assessment along the physician's career)**
It became clear throughout the work of the ARTF that there is an increasing expectation of the public and the profession's regulators that physicians should have formal competency assessments at regular periods during their practice life. These assessments not only need to be specialty-specific

and assess newly gained knowledge and skills as physicians meet the new and different health needs of their population, but also assess the continuing core competencies expected of every physician as summarized in the CanMEDS roles.

- **Core competencies versus discipline-specific competencies**

There is general consensus that the current MCC examinations should concentrate on the assessment of those core competencies, including knowledge, skills, attitudes and behaviours, required of every physician entering independent practice.

- **Generalism**

The ARTF heard from every group that Canada required a medical-care system that supports and develops generalist physicians. The development of inter-professional collaborative care teams has been recognized as one approach to maintaining generalist care for the population. There is, therefore, the need to assess the ability of health professionals to work together in collaborative environments, and that inter-professional collaboration is one of the core competencies for a physician.

- **Data security and financial considerations**

In all discussions with the MRAs and universities, it was recognized that the security and sustainability of the assessment process have to be maintained. New assessment approaches may be necessary to ensure the competencies expected by the MRAs and the public are adequately assessed.

The issues identified by the ARTF and the recommendations arising are, to a degree, linked and interdependent, and the recommendations must be considered in this context. For example, the recommendation to explore options that would allow more flexibility in the scheduling of MCC examinations must be considered in light of the recommendation that the requirements for the LMCC (a designation that a physician is ready for independent practice) include all components of the Canadian Standard for registration as defined by the Federation of Medical Regulatory Authorities of Canada.

Issues and recommendations

Issue:

The LMCC in the continuum of qualification

The MCC examinations are one component of the process leading to a full licence to practise – the other requirements being adequate postgraduate education and certification by one of the two national colleges.

The LMCC must be a meaningful credential and reflect the level of training required for entry into practice. It will have more value if it is awarded when a person is ready for licensure. A “new designation” of the LMCC would mean a national qualification for entry into independent practice as the most responsible physician.

Recommendation 1

The requirements for the LMCC include all current components of the Canadian registration standard for full licence:

- *A recognized MD degree*
- *MCCQE Part I and II*
- *Formal postgraduate education acceptable to the medical regulators*
- *Certification from CFPC, CMQ or RCPSC*

Considerations

This reflects the original mission of the MCC that the LMCC be a qualification acceptable to all regulatory authorities for licensure for independent practice in medicine. Members of the ARTF are aware that common requirements for provisional licensure are being developed. These will include assessments of general medical knowledge (at a minimum success on the MCCEE or perhaps the MCCQE Part I or a future basic knowledge assessment) and the assessment of clinical skills and competencies in the discipline (while these competencies may be examined partially by pre-practice assessments such as an OSCE, they will always also include either an in-practice assessment or a period of discipline-specific residency training). Provisional licences will include restrictions, as identified by the individual MRA, and will apply to physicians who do not complete the requirements for full registration – for example, Canadian medical graduates and international medical graduates without CFPC and RCPSC certification.

Therefore, the Implementation Committee must explore, consider and report to Council on alternate routes to the Licentiate acceptable to the MRAs (see recommendation 6 - Implementation of the recommendations).

Issue:

Examination content

The *Objectives of the Medical Council of Canada Qualifying Examination* is a summary of the possible materials that could be included on the MCC examinations. The MCC examination material is developed using a sampling of these objectives, representative of the knowledge, skills and attitudes in which the examinee is expected to demonstrate competence.

Currently the emphasis of the MCC examinations and their blueprint is on the medical expert role, with some assessment of the communicator, professional and manager roles. Medical regulatory authorities and other stakeholders articulated a need to broaden and deepen the competencies assessed by the MCC examinations to include the critical core competencies within the CanMEDS framework considered essential prior to entry into supervised and independent practice. Specifically, in addition to the medical knowledge, there is a need to further delineate the expected competencies for communicator, collaborator, advocate, manager, scholar and professional.

Stakeholders identified specific competencies requiring emphasis and detailed delineation including:

- The candidate's ability to:
 - Gather and integrate information,
 - Develop a differential diagnosis and a treatment plan,
 - Address the clinical problem effectively through critical appraisal and self-reflection,
 - Demonstrate inter-professional collaboration,
 - Demonstrate and discuss patient safety principles, and
 - Demonstrate knowledge of the health-system structure and functioning.

Recommendation 2

The content of the MCC assessment processes shall be expanded by:

- *Defining the knowledge and behaviours in the CanMEDS roles that demonstrate competence of the physician about to enter independent practice.*
- *Reviewing the adequacy of content and skill coverage on the blueprints for all MCC examinations.*
- *Revising the examination blueprints and reporting systems to demonstrate that the appropriate assessment of all core competencies aligns with the purpose of each examination.*
- *Determining whether any core competencies cannot be tested by current MCC examinations, and exploring the development of new tools to assess these specific competencies.*

Considerations:

Members of the ARTF are aware of the regular process used to update the MCC Objectives and that one cycle is being completed in 2011. Plans and budgets are in place to review the content and skills in all MCC assessments to validate and update the blueprints over the next five years. This comprehensive study is expected to identify gaps in the coverage of the CanMEDS roles and possibly other knowledge or skill components, based on the intended purposes of each examination. As part of this effort, the development and piloting of some new item types and tasks will be budgeted and scheduled. This process will be the

basis for evaluating the psychometric, logistic and cost-effectiveness of any new tools or tasks considered for use in the MCC's operational programs. Operational implementation of new specifications, including item bank recoding and the development of assembly rules will be planned and resourced in such a way as to minimize impact on the quality of the existing testing programs. The national specialty colleges and the faculties of medicine will be engaged in this process including when developing processes for the assessment of competencies that cannot be fully tested by point-in-time examinations.

Issue:

Flexible scheduling of the examinations and their components

The current scheduling of the MCC examinations is relatively inflexible. Administration of the MCCQE Part I occurs close to the date of graduation at Canadian medical schools and for some, the timing does not allow the use of this examination as one of the requirements for graduation. Eligibility to take the MCCQE Part II requires prior completion of one year of postgraduate education, a rule implemented by the MRAs at a time when a one-year rotating internship was the minimal postgraduate training required to qualify for a licence to practise. Most candidates challenge the MCCQE Part II during their second year of residency training, and this is an issue of concern for some in very specialized programs. Others, however, recognize that the core competencies, assessed in the MCCQE Part II, reinforce general abilities in all trainees.

Enhanced flexibility of assessment times would allow a shift of focus from time-in-training to the more recent educational concept that allows progress based on the achievement of specific competencies. Flexibility would enable new assessment possibilities. For example, if the MCCQE Part I were administered earlier, it could be used by more medical schools as a prerequisite for graduation; the National Assessment Collaboration OSCE could become an audit of clinical skills at the end of medical school; and a more context-sensitive MCCQE Part II focused on core competencies (that is the basis of the assessment being harmonized with the clinical component of the CFPC certification examination) could be harmonized with the RCPSC examinations at the end of core training. Finally, if the MCCQE Part I were offered more frequently, the access of IMGs to the system would be facilitated. However, any scheduling must accommodate appropriate prerequisites and ensure the security of the assessment processes.

Recommendation 3

The timing for taking the MCCQE Part I and II, and the frequency with which they are offered, be revisited by exploring:

- *Options allowing more flexibility in scheduling all of the MCC examinations.*
- *Options permitting the components of the MCCQE Part I (knowledge and clinical decision-making) to be offered at the appropriate times in the learning/assessment continuum.*
- *The development of an integrated national assessment strategy for physicians in training in collaboration with the CFPC and RCPSC.*

Considerations:

Much of the MCC's software infrastructure is proprietary and, while adaptable, it is dedicated to the current

schedules and structures used for the MCC examinations. Members of the ARTF have discussed the need for adequate lead time and operational transition planning should changes be anticipated in the workflows and methods used for the assembly of tests, appointment scheduling, delivery and score reporting.

In some programs, extensive piloting would be required to ensure new delivery methods or formats could be executed in a reliable and secure manner. Members of the ARTF recognize the importance of collaboration with the MRAs, the three certifying colleges and the medical schools to evaluate the intended benefit of alternative scheduling. There will be a need to ensure clear and early notification to all stakeholders of any planned change in delivery times or locations.

Issue:

International medical graduates

International medical graduates (IMGs) are a heterogeneous group of candidates. Some are recent graduates, while others have been in practice in their country of origin for many years. Their medical schools vary from the stable, well-established school with modern and classical curricula accredited by national bodies to newly developed private schools with basic and clinical education taking place in different countries. Therefore, the assessment of the IMG wishing to enter medical practice in Canada requires special consideration.

In Canada, nearly half of the IMGs enter practice after assessment by a MRA. While there are some standard required assessments, each jurisdiction has established its own final process. Even with the variety of assessments across the country, many IMGs are found to need remedial education prior to entry into independent practice and, therefore, many seek entry into Canadian residency positions. The assessment of clinical abilities will differ if the purpose of the assessment is to ensure readiness to enter Canadian postgraduate training compared to entry into practice directly after completion of postgraduate training in their country of origin, or entry into practice in Canada after having practised in their country of origin.

The MCCEE is a screening test designed to determine a minimum competence to succeed at the licensing process in Canada and not an assessment that ensures ability to enter practice in Canada. A candidate who fails the MCCEE does not have the minimal necessary medical knowledge; conversely, candidates who pass the MCCEE may not have the minimal necessary clinical abilities to enter practice.

In contrast, the MCCQE Part I and II are recognized as valid and reliable instruments for assessing core knowledge, clinical skills and decision-making ability of graduates of medical schools in the Canadian context as they enter medical practice. However, success at the MCCQE Part I and II is not uniformly considered by stakeholders as synonymous with readiness for entry into independent practice, particularly to practise competently in rural and/or remote areas.

The MRAs indicated that they need assessments that are valid, reliable and appropriate to assess those IMG physicians who have been in practice, and that any process should include a period of in-practice assessment in the expected discipline of practice. Therefore, the level of performance expected of a recent Canadian graduate on the MCCQE Part I and II might not be the appropriate standard for assessment of an experienced practising physician who wishes to enter practice in Canada, especially for those who are primarily in sub-specialty medicine. However, competencies such as working effectively in the Canadian system, cultural competence, inter-professional working relationships, ordering tests and prescribing medications are essential and need assessment.

Recommendation 4

Evaluate and enhance the assessment processes for the IMGs by:

- *Engaging governments, MRAs and other stakeholders with the goal of aligning the use of the MCCEE with its intended purpose.*
- *Developing and standardizing other tools necessary to screen and assess IMGs coming to Canada for the purpose of entry into postgraduate training.*
- *Defining the assessments and the role of the MCC in assessing IMGs for readiness for entry into practice in Canada and working with the MRAs to create the framework necessary for the assessment for practice readiness.*

Considerations

These recommendations are intended as encouragement and support for the MCC to maintain and bring forward the work accomplished to date by the National Assessment Collaboration's Transitional Central Coordinating Committee (NAC³). It seems reasonable that the NAC³ should build upon its work with the NAC OSCE, and put in place a system that supports the use of practice-readiness tools (Mini-CEX, multi-source feedback) within a Pan-Canadian framework. Part of this program should include clear and accessible communications about the appropriate use of each assessment, including the MCCEE, NAC OSCE, and MCCQE Part I and II, as components of a system to evaluate practice readiness for IMGs.

Issue:

Revalidation of competency

In 1994, Canada's MRAs embarked upon developing a model for revalidation of the physician's licence. The need to assess a physician's competence to practise in order to maintain licensure is even more relevant today, due to emerging trends such as an increase in the self-reported retirement age, the aging physician population, and the narrowing scopes of practice of family physicians and other specialists. The MCC's mission is to develop, validate and implement tools and strategies to evaluate physicians' competence. One of its strategic directions is to promote an integrated strategy for the assessment of physicians throughout their careers.

Recommendation 5

The MCC initiate a stakeholder group to develop a collaborative framework and an integrated national strategy for competency assessment and/or performance appraisal of physicians throughout their medical careers, by working with the:

- *Federation of Medical Regulatory Authorities of Canada*
- *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*
- *Association of Canadian Academic Healthcare Organizations*

Issue:

Implementation of the recommendations

The ARTF terms of reference do not include implementation of its recommendations. Thus, the ARTF ends its mandate upon submitting its recommendations to the MCC Executive Board. Effective and timely implementation of the ARTF recommendations will require both alignment with the MCC's research and development activities and adequate resources.

Recommendation 6

The Council implements the ARTF recommendations by tasking the Executive Board to:

- *Appoint an Implementation Committee with representation from the MRAs, medical schools and the certifying colleges.*
- *Oversee the Implementation Committee whose responsibilities include to:*
 - a) *Consult with stakeholders throughout the implementation process*
 - b) *Consider the implications of the recommendations*
 - c) *Prioritize the recommendations*
 - d) *Develop an action plan*
 - e) *Develop a budget and identify the human resource needs*
 - f) *Develop a communication strategy*
- *Enable the Research and Development Committee to:*
 - a) *Oversee the R&D activities needed to assist in implementing the recommendations*
 - b) *Align MCC's long-term research program with the changes that result from the ARTF recommendations*
- *Provide regular reports to Council and prepare policy changes required to implement the recommendations for Council approval*

Considerations

A defined process must be in place to ensure that innovations that derive from the MCC's research program are approved and governed by representatives of Council, including the Executive Board and the appropriate standing committees. Stakeholder engagement, consultation, collaboration and a communication strategy will be essential to implementation.

The issues identified by the ARTF and the recommendations arising are, to a degree, linked and interdependent. For example, the recommendation to explore options that would allow more flexibility in the scheduling of the MCC examinations must be considered in light of the recommendation that the requirements for the LMCC (a designation that a physician is ready for independent practice) include all components of the Canadian Standard for registration as defined by the Federation of Medical Regulatory Authorities of Canada.

Changes impacting MCC's operational examination programs must be presented for approval to the

responsible committees and Council. These include the Central Examination Committee (CEC), the Finance Committee, and the MCC Executive Board. These proposals should be in the form of completed research under the jurisdiction of the Research and Development Committee, with input from expert advisory committees. The resulting recommendations for implementation to the CEC and Executive Board, and ultimately Council, should include an analysis of alternatives, costs and benefits of the proposed change and align the proposed outcome with the strategic plan and mission of the MCC.



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of the Medical Council of Canada

October 2011