The Interventional Radiologist as “Clinician”: What Does It Mean? CanMEDS for the Interventional Radiologist

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There is a large movement within the field of interventional radiology (IR) and various related organizations (including the Society of Interventional Radiology and the Canadian Interventional Radiology Association) for interventional radiologists to become more clinical. This is seen as the necessary next step for the specialty as it continues to evolve and grow. Here, we take a novel approach to the implications of becoming a full-fledged clinician. We do this in the context of the Canadian Medical Education Directions for Specialists (CanMEDS) framework, developed in the early 1990s with the support of the Royal College of Physicians and Surgeons of Canada (RCPSC) in response to changing dynamics within health care and medical education. The CanMEDS framework defines the 7 domains of competency or roles of the specialist physician: professional, manager, advocate, collaborator, scholar, communicator, and medical expert. We suggest that these roles can be adapted to define the basis of the clinician interventional radiologist, and we believe they may be employed to teach current and future IR trainees how to fill what is hoped to be their future role. We provide a brief history of the CanMEDS project, define the 7 domains of competencies, and summarize how they apply to the clinician interventional radiologist.

The Next Generation of Interventional Radiologists: Clinicians

The future role of the interventional radiologist is currently in question. The growing sentiment, echoed by representative organizations such as the Society of Interventional Radiology (SIR), the American College of Radiology (ACR), and the Canadian Interventional Radiology Society (CIRA), is that the field and its membership must become fully “clinical”; that is, interventional radiologists must consider themselves as having primary responsibility for their patients in the context of patients having been referred to them for their expertise.¹,² For example, while collaboration remains a top goal, objections from the referring physician should not automatically abrogate an agreed-upon plan between the patient and the interventional radiologist.³ This also means that the interventional radiologist has clinics and clinic time, admitting privileges for patients, and if necessary, patient rounds. The many benefits of becoming a full-fledged clinician include a broadened referral base, enhanced patient–physician interaction, increased rapport with medical colleagues, and better follow-up care.⁴

Each year, the RCPSC meets to discuss various aspects of the practice of medicine in Canada, as well as current research topics. Arguably, the main focus of the meeting is the work that has been and is being done on the roles developed in the CanMEDS, which are intended to define today’s physician. The CanMEDS roles

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are applicable to any specialty of medicine, including the surgical subspecialties, medicine subspecialties, family medicine, pathology, diagnostic radiology, the traditional less clinical model of the interventional radiologist, and so forth. The roles are explained and discussed in numerous workshops and other forums. For example, in the 2004 meeting, Dr Jason Frank presented a workshop entitled “Cutting-Edge Competencies: Implementing CanMEDS in Your Program.” The workshop was intended to teach residency training program directors and academic department chairmen the 7 roles that society expects in its physician and how to implement these roles in their respective programs.

The CanMEDS roles can also be adapted to define the roles that the future interventional radiologist must fill. Here, we explain how these 7 CanMEDS roles came about, what they mean, and how they can be interpreted to define the future clinician interventional radiologist. We acknowledge that current diagnostic radiologists and traditional interventional radiologists also fill these roles; we are attempting to interpret the roles in the context of what many believe the next generation of interventional radiologists must become.

The Next Generation of Physicians: CanMEDS

The CanMEDS project began in the early 1990s as a growing realization within medicine that changes were necessary in the way young physicians were prepared for the evolving work environment. The RCPSC took the lead, and its Health and Public Policy Committee (HPPC) created a task force that would become the CanMEDS framework. The goal of CanMEDS was to identify the core competencies for specialist physicians, according to the needs of society; to identify the most relevant medical training; and consequently, to provide the highest quality of care. The project had 4 phases, described below.


Phase I involved identifying the core competencies applicable to all specialists; these were defined as important observable knowledge, attitudes, and skills. Each of the core competencies has numerous defined subcompetencies and objectives. Phase I was a massive undertaking that involved hundreds of physicians (of all specialties) and many subcommittees. The resulting competencies were validated by a large survey of specialists. The framework developed and adopted by the Royal College in 1996 listed the 7 CanMEDS competencies of the modern specialist physician as follows: professional, manager, advocate, collaborator, scholar, communicator, and medical expert (Figure 1).


Phase II involved a series of small pilot studies within faculties of medicine across Canada to develop methods by which the 7 core competencies can be effectively taught to trainees at both the undergraduate and postgraduate levels.

Phase III involved incorporating the 7 core competencies into the postgraduate medical education of all specialties. During the 5-year period, each of the 59 specialties and subspecialties reworked the CanMEDS standards specifically for their specialty. With the aid of the Royal College, the competencies were incorporated into the accreditation process and certification and examination standards for each specialty.

Phase IV: Faculty Development (2002–Present)

Following Phase III, the Royal College found that the CanMEDS framework had been broadly incorporated across Canada in undergraduate, postgraduate, and continuing medical education. Phase IV is therefore an ongoing process, in which various program directors and faculty who are incorporating the CanMEDS framework into their program or their own personal education are supported with teaching, learning, and assessment methods.

The 7 CanMEDS Roles

The 7 core CanMEDS competencies can be thought of as themes. Each of the 7 roles is broken down into further competencies that have been turned into educational objectives by the Royal College for specialty training programs. We will provide only a brief definition of each of the 7 roles, but extensive additional information is available from the Royal College.6 As we define each role, we invite readers to consider how each role would apply to their own practices as clinician interventional radiologists and to identify what (if anything) is currently missing.

Professional

The physician as professional must be able to 1) provide high-quality care with honesty, compassion, and integrity; 2) act and interact in a way that is appropriate and professional; and 3) provide care that is ethical and responsible and that respects medical, legal, and professional obligations. The clinician interventional radiologist must treat patients with the utmost respect and be fully committed to their care. Because one of the potential challenges in setting up a clinical practice is the additional time requirement,4 interventional radiologists must also ensure that they make personal time for themselves, their family, and their friends. As a professional, the clinician interventional radiologist ensures that regulatory and other obligations are fulfilled and maintains an appropriate standard, both for procedures performed and for running a clinical practice. For the field of IR, guidelines have been produced by the SIR for general clinical practice3 and for specific procedures.5

Manager

The physician as manager 1) uses time and available resources effectively with regard to his or her own needs and those of patients and others; 2) makes appropriate and effective use of health care and education resources, cognizant of their finite nature; 3) works effectively and efficiently without a health care organization; and 4) effectively employs information technology to optimize patient care and self-education. The clinician interventional radiologist who has inpatient (or outpatient) wards would therefore have to decide, for example, which consultations are necessary for patients, which additional procedures are necessary, and so forth. As clinicians, interventional radiologists are responsible for the care of their patients and must therefore order tests, procedures, and consultations as necessary, even if the patient’s problem is not strictly within the realm of IR. This role also implies that the interventional radiologist has the ability to set up and maintain a clinical practice, including its administrative aspects.

Health Advocate

The physician as health advocate 1) has the ability to recognize, assess, and respond to the relevant determinants of health affecting each patient; 2) contributes to overall societal health; and 3) helps patients navigate and gain access to health care resources. This role includes the interventional radiologist as a positive influence on public health. For example, a clinician interventional radiologist might recognize the need for a screening program, on the basis of the incidence of a particular patient complaint or disease within his or her patient population, and subsequently proceed to set such a program up within the practice. An excellent example of this is the Legs for Life® screening program started by the SIR in the US in 1997. Legs for Life is a highly successful national screening program for peripheral artery disease, abdominal aortic aneurysms, carotid disease and stroke, and venous disease.

The role of health advocate also includes affecting public health policy. A regulatory body for IR, such as SIR or CIRA, might lobby the government on a particular issue relevant to patient care within the specialty, such as increased access to IR procedures, health care coverage for newly developed procedures, and funding for screening programs. Both the SIR and CIRA currently have such lobby groups.

Collaborator

The physician as collaborator 1) effectively communicates and consults with health care colleagues for the best care of the physician’s patients and 2) contributes to interdisciplinary health care activities such as research, teaching, and committee work. Developing a clinical IR practice implies that, when they need help, interventional radiologists seek consultations with other specialties regarding their patients. For example, the treating interventional radiologist may require a vascular surgery consult on a patient who received an abdominal aortic aneurysm stent-graft or, similarly, a nephrology consultation on a patient who developed contrast-induced nephropathy. This would surely provide opportunity for learning, patient–physician
trust, and camaraderie among medical colleagues. Although consultation raises turf issues, collaboration is key to a successful and effective practice.

Scholar

The physician as scholar 1) develops, implements, and documents an approach to continuing medical education; 2) is able to critically appraise medical information; 3) enables and aids the education of patients, students, residents, and other health care professionals; and 4) contributes to knowledge within the field as well as its advancement. By creating a clinical IR practice with patient follow-up, interventional radiologists are able to document, learn from, and teach the clinical aspects of patient care relevant to their expertise and the effects of any procedure they subsequently perform. Such an approach also leads to quality improvement. If interventional radiologists take a “hired-gun” approach, simply performing the procedure asked of them by referring physicians, much opportunity for learning is lost, as interventional radiologists might be unaware of subsequent complications or unsuccessful procedures. The interventional radiologist as scholar embraces learning techniques such as lifelong learning, continuous quality improvement (CQI) projects, teaching, and critical appraisals.

Communicator

The physician as communicator is able 1) to establish and maintain a therapeutic relationship with patients involving trust, empathy, understanding, and confidentiality; 2) to elicit relevant information from patients, their families, friends, community, and other members of the health care team; and 3) to effectively discuss patient care with patients, their personal supporters, and other relevant members of the health care team. An important aspect of this role, therefore, is developing and maintaining the therapeutic patient–physician relationship, which may include ongoing care. The interventional radiologist has much greater opportunity to develop this within a clinical practice. This relationship will be much easier to develop if the patient feels that the interventional radiologist is taking care of all the patient’s problems (either alone or in collaboration with colleagues) as well as follow-up. The clinician interventional radiologist must therefore also effectively communicate and consult with other members of the health care team involved with the care of patients.

Medical Expert

The physician as medical expert, or clinical decision maker, 1) has the abilities necessary to diagnose and manage a spectrum of patient care issues within the realm of the physician’s specialty, 2) can access and employ information relevant to his or her practice, 3) is able to utilize medical expertise in situations that do not involve direct patient care, 4) recognizes the limits of that expertise, and 5) performs effective consultations with other members of the health care team. The medical expert role is the central role of the specialist and draws on each of the other 6 core competencies. Clinician interventional radiologists must make much greater use of their clinical abilities when they are the physicians primarily responsible for their patients. If a patient on their ward has a patient care problem, interventional radiologists must decide on the treatment plan and appropriate consultation and subsequently, must act. In the past, this was often not the responsibility of interventional radiologists, as they were responsible solely for performing the procedure asked of them by the referring physician. This role encompasses “effective patient care,” which implies the total care of the patient. As mentioned above, this role therefore assumes that the interventional radiologist effectively fulfills each of the other 6 roles in the care of the patient.

These 7 roles, or core competencies, form what the CanMEDS project determined was the basis of the specialist physician and, we believe, the basis of the clinician. Since the introduction of the CanMEDS framework, there has been a significant amount of work on its implementation in residency training programs. One of the original aims of the CanMEDS project was to ensure that the defined core competencies were applicable to all specialties, from the surgical specialties to psychiatry, and to date, the experience has been positive. We believe these 7 roles can be applied to interventional radiologists and used as guides in their transition to clinicians.

Conclusion

The field of IR is rapidly evolving. Interventional radiologists currently in practice will have the most difficulty in adjusting. The specialty they entered on training was likely very different from the specialty they will retire from. Indeed, some of those currently in practice might not have entered the field had it been from the specialty they will retire from. Indeed, some of those currently in practice might not have entered the field had it been one with significant clinical responsibilities.

If the field of IR is to embrace this paradigm shift, it must be taught not only to those currently in practice but also to those at the trainee level (residents and fellows). This is one of the motivations behind the creation of 2 new IR training pathways in the US: the 6-year Diagnostic and Interventional Radiology Enhanced Clinical Training and Certification (DIRECT) pathway and the 6-year clinical pathway for vascular and interventional radiology, both of which provide much more clinical experience during the training stage.

The definition of what it means to be a clinician is not always so clear. Because the various regulatory and representative radiology bodies are relatively inexperienced with the concept of the clinician interventional radiologist, we suggest turning to those with experience for guidance. The 7 CanMEDS core competencies of the modern clinician are based on a massive undertaking by the RCPSC, the organization charged with protecting the public. Throughout the project, there was extensive input from both physicians and the public. Since the original project, the CanMEDS roles have been adopted by many other
countries, regulatory bodies, and organizations, and there has consequently been a vast amount of subsequent work to further develop the area. The 7 roles are also being incorporated into all the Canadian specialty residency training programs recognized by the RCPSC. We believe these 7 roles would provide excellent guidance for the field of IR as it continues to evolve and could be incorporated into IR education, whether at the level of the practising interventional radiologist (as continuing medical education) or at the level of the IR trainee (as postgraduate training).

We have only scratched the surface of the 7 core competencies. The CanMEDS roles are intended to be a framework, to be adapted to each specialty of medicine. While we used the framework to develop the clinical aspect of the interventional radiologist, it could just as easily be used to evolve a “hired gun.” We chose the former, because we believe the interventional radiologist’s future role is that of a clinician.

We encourage those interested in the CanMEDS roles to contact the RCPSC for further information and access to the extensive amount of material that has been developed since the project began.

Note

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References