MEDICAL EXPERT

The CanMEDS 2015 Expert Working Groups

Since its origins in the 1990s, the CanMEDS Project has been a grand collaborative effort of hundreds if not thousands of educators, Royal College Fellows, family physicians, and other experts. Its development has involved countless hours devoted to literature reviews, stakeholder surveys, focus groups, interviews, consultations, consensus-building, debate, and educational design. As a result, CanMEDS has been heralded worldwide for its utility as a framework to anchor physician competence in the service of patients.

In early 2013, the Royal College, along with key partners, assembled a series of Expert Working Groups (EWGs) organized around the seven core CanMEDS domains. As of January 2014, more than 100 people were involved in updating one or more CanMEDS 2015 subdomains. Each EWG is composed of medical educators and practising physicians from a range of specialties and locations. All participants have contributed their expertise to develop a first draft of the revised framework. Their role is to:

- review the CanMEDS 2005 Framework to identify potential concepts requiring clarification or modification, as well as any gaps or redundancies in the existing CanMEDS competencies
- incorporate new themes such as patient safety and intraprofessionalism into the framework

The Medical Expert Role review: objectives, principles, and methods

The CanMEDS 2015 Medical Expert EWG members adopted the following principles as foundational to their work:

- The process is one of revision and renewal: improvement, not reinvention, is the goal.
- The primary target audience is the users of the framework: trainees, front-line teachers, program directors, and Clinician Educators who design programs.

- The constructs of the Medical Expert Role need to be grounded in theory and best practices, while their presentation should be practical and related to the daily practice of any physician.
- Generic competencies within the Medical Expert Role should be articulated for all specialties.
- Concepts that are relevant to multiple Roles should be articulated in the Role where they are the most prominent. Although redundancy and overlap
are accepted, and even expected, in practice, the framework itself should avoid repetition while ensuring the appropriate integration of Roles.

Our report was developed by means of the following activities and approaches:

- a review of recent literature (2005–2013)
- a review of the “Emerging Concepts” consultation document
- recruitment of working group members with wide geographical and discipline-specific (including family medicine) representation and with recognized contributions to, and scholarship in, different aspects of teaching and learning and across the continuum of learning (UME, PGME, and CPD)
- specific recruitment of participants (learners and faculty) as ePanel members, to achieve further breadth in consultation
- integration of recommendations from the eHealth and Patient Safety and Quality Improvement working groups
- review of formal stakeholder consultation (including the CanMEDS 2013 survey and the ICRE 2013 Town Hall)

What’s new in the draft 2015 Medical Expert Role

Modification of Role definition and description

Medical Expert and the Intrinsic Roles. The EWG spent considerable time and energy debating and modifying the definition and description of the Medical Expert Role. We felt that, since it defines the physician’s scope of practice, this Role should remain central. That is, other disciplines might have fairly similar Intrinsic Roles while replacing Medical Expert with domain-specific expertise to define a competent practitioner. That being said, the other CanMEDS Roles are just as important and essential to the practice of medicine and must be perceived by faculty and learners as such. The importance of integrating the Intrinsic Roles is highlighted in the definition and description, and within the competencies of, the Medical Expert Role.

Lifelong learning. The EWG wanted to support the concept that medical science is constantly evolving and growing. The notion of “possessing” a body of knowledge may inadvertently de-emphasize the critical importance of lifelong learning and of using clinical practice supports (which were not as prevalent when CanMEDS 2005 was written); this term was therefore replaced with the phrase “utilize an evolving body of knowledge.”

The context of practice. The EWG worked to provide an improved articulation of context and greater clarity with regard to the factors that should influence clinical practice, but without expanding the Role definition too much. Our thinking was based in part on evolving models of evidence-based medicine (work by Haynes, Devereaux, and Guyatt), the application of which take into account the patient’s clinical condition, circumstances, preferences, and actions, along with best practices, research evidence, and the availability of resources.

Modifications to key and enabling competencies

Key competency 1 was expanded to include the concepts of complexity, uncertainty, and ambiguity. We felt that these “new” concepts are quite important to the practice of medicine and are increasingly being recognized and explored by the medical education community. This content was also suggested for inclusion by the eHealth EWG.

The former enabling competency 1.7—“Demonstrate medical expertise in situations other than patient care, such as providing expert legal testimony or advising governments, as needed”—was not felt to be a competency of all graduating residents and was removed from the framework. It could be considered an “enhanced expertise milestone” that could be achieved by some physicians (and was written as such in the upcoming milestones release).

The former key competency 2—“Establish and maintain clinical knowledge, skills and attitudes appropriate to their practice”—was removed as a key
Comparison of 2005 and 2015 frameworks

Definition 2005
As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centered care. Medical Expert is the central physician Role in the CanMEDS framework.

Description 2005
Physicians possess a defined body of knowledge, clinical skills, procedural skills and professional attitudes, which are directed to effective patient-centered care. They apply these competencies to collect and interpret information, make appropriate clinical decisions, and carry out diagnostic and therapeutic interventions. They do so within the boundaries of their discipline, personal expertise, the healthcare setting and the patient’s preferences and context. Their care is characterized by up-to-date, ethical, and resource-efficient clinical practice as well as with effective communication in partnership with patients, other

Definition 2015
As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of high-quality and safe patient-centred care. Medical Expert is the central physician Role in the CanMEDS framework and defines the physician’s clinical scope of practice.

Description 2015
Physicians utilize an evolving body of knowledge, clinical skills, and professional attitudes to support high-quality and safe patient-centred care. They apply these as they collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions. They do so within the boundaries of their discipline, scope of practice, and expertise, taking into account the patient’s clinical condition, circumstances, preferences, and actions, along with best practices, research evidence, and the availability.
health care providers and the community. The Role of Medical Expert is central to the function of physicians and draws on the competencies included in the Roles of Communicator, Collaborator, Manager, Health Advocate, Scholar and Professional.

**Elements 2005**

- Integration and application of all CanMEDS Roles for patient care
- Core medical knowledge
- Patient problem identification
- Diagnostic reasoning
- Clinical judgment
- Clinical decision-making
- Application of appropriate therapies
- Procedural skill proficiency
- Humane care
- Application of ethical principles for patient care
- Functioning as a consultant
- Knowing limits of expertise
- Maintenance of competence
- Principles of patient safety and avoiding adverse events

**Key competencies 2005**

Physicians are able to…

1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centered medical care;
2. Establish and maintain clinical knowledge, skills and attitudes appropriate to their practice;
3. Perform a complete and appropriate assessment of a patient;
4. Use preventive and therapeutic interventions effectively;

**Key concepts 2015**

- Agreed-upon goals of care
- Application of core clinical and biomedical sciences
- Clinical decision-making
- Clinical reasoning
- Dealing with complexity, uncertainty, and ambiguity
- Duty to care
- Integration of CanMEDS Intrinsic Roles
- Knowing limits of expertise
- Prioritization of professional responsibilities
- Patient-centred clinical assessment and management
- Patient safety
- Providing consultation
- Procedural skill proficiency
- Quality improvement
- Timely follow-up
- Working within the health care team

**Key competencies 2015**

Physicians are able to …

1. Practise medicine within their defined clinical scope of practice and expertise
2. Perform a patient-centred clinical assessment and establish management plans
3. Plan and perform interventions for the purpose of assessment and/or management
4. Establish plans for timely follow-up and appropriate consultation
5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic;

6. Seek appropriate consultation from other health professionals, recognizing the limits of their expertise.

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1. **Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centered medical care**
   1.1. Effectively perform a consultation, including the presentation of well-documented assessments and recommendations in written and/or verbal form in response to a request from another health care professional
   1.2. Demonstrate effective use of all CanMEDS competencies relevant to their practice
   1.3. Identify and appropriately respond to relevant ethical issues arising in patient care
   1.4. Effectively and appropriately prioritize professional duties when faced with multiple patients and problems
   1.5. Demonstrate compassionate and patient-centered care
   1.6. Recognize and respond to the ethical dimensions in medical decision-making
   1.7. Demonstrate medical expertise in situations other than patient care, such as providing expert legal testimony or advising governments, as needed

2. **Establish and maintain clinical knowledge, skills and attitudes appropriate to their practice**
   2.1. Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to the physician’s specialty
   2.2. Describe the Royal College framework of competencies relevant to the physician’s specialty

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1. **Practise medicine within their defined clinical scope of practice and expertise**
   1.1. Demonstrate a commitment to high-quality care of their patients
   1.2. Integrate the CanMEDS Intrinsic Roles into the practice of medicine
   1.3. Apply knowledge of the clinical and biomedical sciences relevant to their specialty
   1.4. Perform an appropriately timed consultation, presenting well-documented assessments and recommendations in written and/or oral form
   1.5. Carry out professional duties in the face of multiple, competing demands
   1.6. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice

2. **Perform a patient-centred clinical assessment and establish management plans**
   2.1. Identify and prioritize issues to be addressed in a patient encounter
   2.2. Elicit a history, perform a physical exam, select investigations, and interpret the results for the purpose of diagnosis and management, disease prevention, and health promotion
2.3 Apply lifelong learning skills of the Scholar Role to implement a personal program to keep up-to-date, and enhance areas of professional competence

2.4 Contribute to the enhancement of quality care and patient safety in their practice, integrating the available best evidence and best practices

3. Perform a complete and appropriate assessment of a patient

3.1 Effectively identify and explore issues to be addressed in a patient encounter, including the patient’s context and preferences

3.2 For the purposes of prevention and health promotion, diagnosis and/or management, elicit a history that is relevant, concise and accurate to context and preferences

3.3 For the purposes of prevention and health promotion, diagnosis and/or management, perform a focused physical examination that is relevant and accurate

3.4 Select medically appropriate investigative methods in a resource-effective and ethical manner

3.5 Demonstrate effective clinical problem solving and judgment to address patient problems, including interpreting available data and integrating information to generate differential diagnoses and management plans

3. Plan and perform interventions for the purpose of assessment and/or management

3.1 Determine indicated interventions for the purpose of assessment and/or management

3.2 Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, the options discussed

3.3 Triage interventions, taking into account clinical urgency, the potential for deterioration, and available resources

3.4 Develop and implement a plan incorporating the degree of clinical uncertainty and the expertise of team members individually and as a whole

3.5 Perform the intervention in a skilful and safe manner, adapting to findings or changing clinical circumstances

3.6 Establish and implement a plan for both pre- and post-procedure care

4. Use preventive and therapeutic interventions effectively

4.1 Implement an effective management plan in collaboration with a patient and their family

4.2 Demonstrate effective, appropriate, and timely application of preventive and therapeutic interventions relevant to the physician’s practice

4.3 Ensure appropriate informed consent is obtained for therapies

4.4 Ensure patients receive appropriate end-of-life care

4. Establish plans for timely follow-up and appropriate consultation

4.1 Establish the roles of the patient and all team members for follow-up on investigations, response to treatment, and consultations, and ensure that the agreed follow-up occurs

4.2 Recognize when care should be transferred to another physician or health care provider

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5. **Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic**

5.1 Demonstrate effective, appropriate, and timely performance of diagnostic procedures relevant to their practice

5.2 Demonstrate effective, appropriate, and timely performance of therapeutic procedures relevant to their practice

5.3 Ensure appropriate informed consent is obtained for procedures

5.4 Appropriately document and disseminate information related to procedures performed and their outcomes

5.5 Ensure adequate follow-up is arranged for procedures performed

5. **Actively participate, as an individual and as a member of a team, in the continuous improvement of health care quality and patient safety**

5.1 Recognize and respond to adverse events and near misses

5.2 Seek opportunities to provide high-quality care

5.3 Contribute to a culture that promotes the continuous improvement of health care quality and patient safety

5.4 Describe how human and system factors influence decision-making and provision of patient care

5.5 Engage patients and their families in the continuous improvement of health care quality and patient safety

6. **Seek appropriate consultation from other health professionals, recognizing the limits of their expertise**

6.1 Demonstrate insight into their own limitations of expertise via self-assessment

6.2 Demonstrate effective, appropriate, and timely consultation of another health professional as needed for optimal patient care

6.3 Arrange appropriate follow-up care services for a patient and their family
The CanMEDS 2015 Expert Working Groups

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• review the CanMEDS 2005 Framework to identify potential concepts requiring clarification or modification, as well as any gaps or redundancies in the existing CanMEDS competencies
• incorporate new themes such as patient safety and intraprofessionalism into the framework
• develop the draft milestones within each existing CanMEDS Role (for release in April 2014)
• ensure that the framework is practical and useful for education across the continuum
• act on feedback from consultation and integrate relevant content into the revised CanMEDS Framework

This report is meant to complement the current working draft of the CanMEDS 2015 framework—the Series I draft—and to provide information and context for readers who may wish to delve into the rationale and work of the Communicator EWG. The report is organized into three sections. The first section summarizes our methods and principles. The second section provides context for the revisions represented in the Series I draft and highlights differences from the 2005 Framework. Finally, the third section presents the newly drafted Communicator Role for 2015 in a side-by-side comparison with the 2005 version.

The Communicator Role review: objectives, principles, and methods

The CanMEDS 2015 Communicator EWG members adopted the following principles as foundational to their work:

• The process is one of revision and renewal: improvement, not reinvention, is the goal.
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Communicator Role Expert Working Group
Chair: Alan Neville
Core members: Wayne Weston, Dawn Martin, Louise Samson, Perle Feldman, Gord Wallace, Olivier Jamoulle, José François, Marie-Thérèse Lussier, Sue Dojeiji
Advisory members: Judy Brown, Erin Keely, Suzanne Kurtz, Abbie Hain
are accepted, and even expected, in practice, the framework itself should avoid repetition while ensuring the appropriate integration of Roles.

Our report was developed by means of the following activities and approaches:

- a review of recent literature (2005–2013)
- a review of the “Emerging Concepts” consultation document
- recruitment of working-group members with wide geographical and discipline-specific (including family medicine) representation and with recognized contributions to, and scholarship in, different aspects of teaching and learning and across the continuum of learning (UME, PGME, and CPD)
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What’s new in the draft 2015 Communicator Role

Major content changes

Scope of the Role. The Communicator EWG faced a significant challenge in establishing and maintaining a clear focus on the scope and context of the CanMEDS Communicator Role. Communication is integral to all of the CanMEDS Roles, and thus the working group made the decision that the Communicator Role should concentrate exclusively on the interaction between physicians and their patients, including patients’ family members and others.* Thus, references to communicating with other professionals have been removed from the suggested revisions for the 2015 framework. In addition, we have recommended that competence in presenting information about a medical issue to the public or media be addressed in the Health Advocate Role. This will appear as a Milestone in Health Advocate in Key Competency 2 in the Series II release later this spring.

An emphasis on patient-centred care. Although the 2005 framework articulated a patient-sensitive approach to communication, shared decision-making, and respect for diversity in the list of elements, the Communicator EWG has decided to emphasize patient-centred and therapeutic communication more explicitly by adopting a definition of patient-centred care summarized for the EWG by one of the EWG members. We felt that patient-centred therapeutic communication is axiomatic to the physician–patient interaction, in which physicians form relationships with patients and their families, so as to facilitate the gathering and sharing of information essential for exemplary health care.

Transfer-of-care issues. The EWG received input from a number of other working groups. The Patient Safety and Quality Improvement Working Group advised consideration of informed consent, informed discharge and handover, delegation of supervision, and disclosure with respect to adverse events and risks. In keeping with our recommendation concerning the scope of the Communicator Role, we felt that handover between health care professionals should be tied to the Collaborator Role; this has been communicated to the Collaborator EWG. Issues of transfers of care, informed consent, and disclosure that we felt were relevant to communication between physicians and patients and their families have been included in this draft competency framework for the Communicator Role either as a competency or milestone.

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eHealth competencies. Feedback from the eHealth EWG has been incorporated into the document (in competencies 3 and 4 particularly).

Increased emphasis on patient education. When we reviewed the content of key competencies 3 and 4 from the 2005 framework, we saw an opportunity to combine these into one key competency that emphasizes the sharing of information with patients and their families in a way that satisfies a patient-centred philosophy. Including in this revised key competency is an increased emphasis on patient education, a concept previously addressed in 2005 in the Scholar/Teacher Role. Cultural safety as an issue has now been included in key competency 3.

Disclosure of adverse outcomes. The Communicator EWG spent considerable time discussing the issue of disclosure of adverse outcomes. We received detailed recommendations on disclosure from the Patient Safety and Quality Improvement EWG. Consideration was given by the Communicator EWG to creating a new key competency, but after considerable debate we decided to create a new enabling competency within key competency 3 to address disclosure.

Comparison of 2005 and 2015 frameworks

Definition 2005
As Communicators, physicians effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

Description 2005
Physicians enable patient-centered therapeutic communication through shared decision-making and effective dynamic interactions with patients, families, caregivers, other professionals, and important other individuals. The competencies of this Role are essential for establishing rapport and trust, formulating a diagnosis, delivering information, striving for mutual understanding, and facilitating a shared plan of care. Poor communication can lead to undesired outcomes, and effective communication is critical for optimal patient outcomes. The application of these communication competencies and the nature of the doctor-patient relationship vary for different specialties and forms of medical practice.

Definition 2015
As Communicators, physicians form relationships with patients and their families* that facilitate the gathering and sharing of information essential for exemplary health care.

Description 2015
Physicians enable patient-centred therapeutic communication by exploring the patient’s symptoms, which may be suggestive of disease, and by actively listening to the patient’s experience of his or her illness. Physicians explore patients’ fears, their ideas about their illness, the impact of their illness on their lives, and their expectations of their health care and their health care providers. This knowledge will be integrated with an understanding of the patient’s context, including socio-economic status, medical history, family history, stage of life, living situation, work or school setting, and other relevant psychological and social issues. Central to a patient-centred approach is shared decision-making: finding common ground with patients in developing a plan to address their medical problems and health goals in a manner that reflects their needs, values, and preferences. This plan should be informed by evidence and guidelines.

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Because illness affects not only patients but also their families, physicians must be able to communicate effectively with everyone involved in the patient’s care.

**Elements 2005**
- Patient-centered approach to communication
- Rapport, trust and ethics in the doctor-patient relationship
- Therapeutic relationships with patients, families and caregivers
- Diverse doctor-patient relationships for different medical practices
- Shared decision-making
- Concordance
- Mutual understanding
- Empathy
- Capacity for compassion, trustworthiness, integrity
- Flexibility in application of skills
- Interactive process
- Relational competence in interactions
- Eliciting and synthesizing information for patient care
- Efficiency
- Accuracy
- Conveying effective oral and written information for patient care
- Effective listening
- Use of expert verbal and non-verbal communication
- Respect for diversity
- Attention to the psychosocial aspects of illness
- Breaking bad news
- Addressing end-of-life issues
- Disclosure of error or adverse events
- Informed consent
- Capacity assessment
- Appropriate documentation
- Public and media communication, where appropriate

**Key concepts 2015**
- Accuracy
- Active listening
- Addressing end-of-life issues
- Appropriate documentation
- Attention to the psychosocial aspects of illness
- Breaking bad news
- Capacity assessment
- Concordance of goals and expectations
- Disclosure of adverse events
- Diverse physician–patient relationships for different medical practices
- Effective oral and written information for patient care across different forms of media
- Efficiency
- Eliciting and synthesizing information for patient care
- Empathy
- Ethics in the physician–patient relationship
- Expert verbal and non-verbal communication
- Informed consent
- Mutual understanding
- Patient-centred approach to communication
- Privacy and confidentiality
- Rapport
- Relational competence in interactions
- Respect for diversity
- Shared decision-making
- Therapeutic relationships with patients and their families
- Transition in care
- Trust in the physician–patient relationship
Key competencies 2005

Physicians are able to…

1. Develop rapport, trust and ethical therapeutic relationships with patients and families;
2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues and other professionals;
3. Accurately convey relevant information and explanations to patients and families, colleagues and other professionals;
4. Develop a common understanding on issues, problems and plans with patients and families, colleagues and other professionals to develop a shared plan of care;
5. Convey effective oral and written information about a medical encounter.

Enabling competencies 2005

Physicians are able to…

1. Develop rapport, trust, and ethical therapeutic relationships with patients and families
   1.1. Recognize that being a good communicator is a core clinical skill for physicians, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence and improved clinical outcomes
   1.2. Establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy
   1.3. Respect patient confidentiality, privacy and autonomy
   1.4. Listen effectively
   1.5. Be aware and responsive to nonverbal cues
   1.6. Effectively facilitate a structured clinical encounter

Key competencies 2015

Physicians are able to…

1. Establish professional therapeutic relationships with patients and their families
2. Elicit and synthesize accurate and relevant information along with the perspectives of patients and their families
3. Engage patients and others in developing plans that reflect the patient’s health care needs and goals
4. Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy

Enabling competencies 2015

Physicians are able to…

1 Establish professional therapeutic relationships with patients and their families
   1.1 Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy and respect
   1.2 Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety
   1.3 Recognize when the values, biases, or perspectives of patients, physicians, or other health care providers may affect the quality of care, and modify the approach to the patient appropriately
   1.4 Respond appropriately to patients’ non-verbal communication and utilize appropriate non-verbal behaviours to enhance communication with patients
   1.5 Manage emotionally charged conversations and conflicts
   1.6 Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances
2. **Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals**

2.1. Gather information about a disease, but also about a patient’s beliefs, concerns, expectations and illness experience

2.2. Seek out and synthesize relevant information from other sources, such as a patient’s family, caregivers and other professionals

3. **Accurately convey relevant information and explanations to patients and families, colleagues and other professionals**

3.1. Deliver information to a patient and family, colleagues and other professionals in a humane manner and in such a way that it is understandable, encourages discussion and participation in decision-making

4. **Develop a common understanding on issues, problems and plans with patients, families, and other professionals to develop a shared plan of care**

4.1. Effectively identify and explore problems to be addressed from a patient encounter, including the patient’s context, responses, concerns, and preferences

4.2. Respect diversity and difference, including but not limited to the impact of gender, religion and cultural beliefs on decision-making

4.3. Encourage discussion, questions, and interaction in the encounter

4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop a plan of care

4.5. Effectively address challenging communication issues such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding

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2 Elicit and synthesize accurate and relevant information along with the perspectives of patients and their families

2.1. Use patient-centred interviewing skills to effectively identify and gather relevant biomedical information

2.2. Manage the flow of a physician–patient encounter

2.3. Inquire about and explore the patient’s beliefs, values, preferences, context, expectations, and health care goals

2.4. Seek out and synthesize relevant information from other sources, including the patient’s family, with the patient’s consent

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3 Engage patients and others in developing plans that reflect the patient’s health care needs and goals

3.1. Provide explanations that are clear, accurate, and adapted to the patient’s level of understanding and need

3.2. Share information that is timely, accurate, and transparent in regard to the patient’s health status, care, and outcome

3.3. Engage patients in a way that is respectful, non-judgmental, and ensures cultural safety

3.4. Assist patients and others to identify and make use of information and communication technologies to support their care and manage their health

3.5. Use counselling skills and decision aids to help patients make informed choices regarding their health care

3.6. Disclose adverse events to patients and/or their families accurately and appropriately
5. **Convey effective oral and written information about a medical encounter**

5.1. Maintain clear, accurate, and appropriate records (e.g., written or electronic) of clinical encounters and plans

5.2. Effectively present verbal reports of clinical encounters and plans

5.3. When appropriate, effectively present medical information to the public or media about a medical issue

4. **Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy**

4.1. Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with legal and regulatory requirements

4.2. Communicate effectively using an electronic health record or other digital technology

4.3. Share information with patients and appropriate others in a manner that respects patient privacy and confidentiality
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- a review of recent literature (2005–2013)
- a review of the “Emerging Concepts” consultation document
- recruitment of working-group members with wide geographical and discipline-specific (including family medicine) representation and with recognized contributions to, and scholarship in, different aspects of teaching and learning and across the continuum of learning (UME, PGME, and CPD)
- specific recruitment of participants (learners and faculty) as ePanel members, to achieve further breadth in consultation
- integration of recommendations from the eHealth and Patient Safety and Quality Improvement working groups
- review of formal stakeholder consultation (including the CanMEDS 2013 survey and the ICRE 2013 Town Hall)

What’s new in the draft 2015 Collaborator Role

Major content changes

Changes to key and enabling competencies. The EWG felt that all of the CanMEDS 2005 key and enabling competencies for the Role remained important and relevant and that nothing should be removed. However, many of the 2005 enabling competencies will be articulated as a milestone related to the revised 2015 Collaborator competencies.

An emphasis on active abilities. The EWG also felt that the CanMEDS 2015 competencies should describe active abilities required; thus, rather than the descriptors of knowledge acquisition used in some key and enabling competencies in CanMEDS 2005 (e.g., “describe” or “explain”), we favoured descriptors of ability such as “identify,” “analyze,” “engage” and “demonstrate.” Such descriptors are particularly important later in the development toward competence.

A growing understanding of collaborative care. The work of the Collaborator EWG recognizes the increased focus, immense explosion of information, and evolution of understanding and practice within the domain of collaborative care.

An expansion of the Role. The first of the two key competencies in the 2005 Framework addresses interprofessional teams, while the second relates to dealing with conflict. There was strong consensus among the EWG that the domains (competencies) of the Collaborator Role are broader than this, and that compressing all aspects of the Collaborator Role into just two key competencies is limiting. In light of the great deal of work that has been done over many years in relation to collaboration in practice, alignment with other available Canadian collaboration competency frameworks (i.e., the Canadian Interprofessional Health Collaborative) was felt by the EWG to be prudent and important. Additionally, the 2005 key competency of “participating in an interprofessional healthcare team” has been described in the recent literature as addressing these distinct domains: (1) roles, responsibility and diversity; (2) developing and maintaining professional relationships that facilitate collaborative work with others; and (3) team functioning or process—including both membership and leadership roles related to teamwork. These concepts continue to be reflected in the enabling competencies for key competency 1.

New content and concepts

An inter- and intraprofessional emphasis. Having the 2015 competencies explicitly specify not only interprofessional collaboration but also intraprofessional collaboration (i.e., collaboration among physicians) was felt to be an important addition. This has been incorporated into the Role description as well the competencies and the forthcoming milestones.
**Relationship-centred care.** Described in the literature since 1990, the model of care termed “relationship-centred care” defines the importance of developing and fostering four relationships in the care environment: (1) patient–practitioner; (2) practitioner–practitioner (inter- and intraprofessional relationships); (3) practitioner–patient community; and (4) practitioner–self. The patient–practitioner relationship is thus only one of four key relationships required for optimal patient-centred care. Because the other relationships described are particularly relevant to the Collaborator Role, we felt that this model of care would be an important addition to the 2015 Collaborator Role content.

**Including the patient’s perspective.** The importance of including the patient’s perspective in the decision-making process is reflected both in the literature and in current standards of practice. In keeping with this, but separate from Communicator competencies, the Collaborator EWG recommends that the Collaborator Role include competency in including the patient’s perspective in a shared decision-making process. The working group felt that including partnership with the patient in the context of shared decision-making for care would complement the partnership articulated as part of the Communicator Role. There were some strong feelings that the patient voice or role needs to be further enhanced in the Collaborator Role. However, concern was that this would dilute the focus on inter- and intraprofessional collaboration. Vincent Dumée, co-director of the Collaboration and Patient Partnership Direction of the Faculté de médecine de l’Université de Montréal has been recruited as a member of the Collaborator Role e-panel to provide input specifically from the patient perspective.

**Understanding one another’s roles.** The daily use of knowledge of one’s own roles and responsibilities and those of other health care professionals—knowledge that embraces the value of a diversity of perspectives—enhances patient outcomes and safety and warrants continued attention within the Collaborator Role.

**Redefining “teams.”** The concept of “a team” merits careful attention as we define Collaborator Role competencies. In 2005, the first key competency of the Role—“Participate effectively and appropriately in an interprofessional healthcare team”—seemed to emphasize formally constituted health care teams. Mental models of what constitutes a team are strong and can limit the applicability of the competencies of the Collaborator Role if a specific specialist or specialty does not consider their practice to include a formal health care team, whether geographically co-located or not. The EWG felt that it was important to reflect collaboration more broadly, beyond the context of formalized teams. Collaboration should occur in any interaction between two or more practitioners for the benefit of the patient’s care. Thus, except in a couple of specific instances, the word “team” has not been used in the 2015 Collaborator competencies, in favour of the terms “health care providers” or “interaction with other colleagues.” Additionally, the term “health care providers” rather than “professionals” has been used to be open to the possible inclusion of care providers who are not part of the regulated health professions but play a role in the care of many patients and are important collaborators in providing optimal care.

**Shared decision-making** with other health care providers has been added as an enabling competency. In doing so, the EWG recognizes that true collaboration means explicitly including the patient as a central member of the care team. This requires engagement with patients as partners throughout their health care experiences, effective communication and interaction with other health care providers, and attention to optimizing transitions in care. The inclusion of shared decision-making as a key competency aligns with the National Interprofessional Competency Framework as well as the Safety Competencies and allows the patient perspective to be included, albeit by overlapping with the Communicator Role in the CanMEDS Framework. Collaborative practitioners should hand over care, as opposed to performing “handoff”: the language of hand-over is more in keeping with a collaborative process and continued commitment. Transitions of care are relevant to both intra- and interprofessional care.

**Addressing conflict.** The EWG felt that the language surrounding conflict resolution in the 2005 Framework was excessively adversarial. Language in keeping with aligning goals, managing differences and tensions, working toward shared outcomes and a shared vision of care, and developing integrated care plans is preferred. Therefore, the competency related to resolving conflict in the 2015 Collaborator Role draws upon the concepts of the 2005 Framework in a way that is intended to encourage a broader conceptualization of managing
differences—that is, not necessarily a negative interaction or process but, rather, as one that can be beneficial to patient care and safety.

Content and concepts excluded from the 2015 Collaborator Role

Shared leadership was felt to be an important addition to the 2015 Framework, recognizing that the exercise of leadership needs to be balanced according to context, situation, the specific expertise needed, and practical concerns. The Collaborator EWG considered adding a competency to address shared leadership, which would have included the need for appropriate "followership" within teams. After a review of the other draft 2015 CanMEDS Roles, it was decided that, to avoid redundancy, this concept would be incorporated into the Leader (formerly Manager) Role.

Quality improvement. Although team-based training in quality improvement is integral to best practice and practice improvement and is accepted as an important methodology for collaborative care, the Collaborator EWG felt that this function was more in keeping with the Leader Role and the Scholar Role (particularly with regard to lifelong learning). Therefore, competency in this regard is not included in the Collaborator Role.

Supervision of others. The supervision of tasks delegated to others (within and beyond the medical profession) was felt by the EWG to be affiliated with Scholar/Teacher Role not with the Collaborator Role, where the focus is shared care and shared work.

Comparison of 2005 and 2015 frameworks

Definition 2005
As Collaborators, physicians effectively work within a healthcare team to achieve optimal patient care.

Description 2005
Physicians work in partnership with others who are appropriately involved in the care of individuals or specific groups of patients. This is increasingly important in a modern multiprofessional environment, where the goal of patient-centred care is widely shared. Modern healthcare teams not only include a group of professionals working closely together at one site, such as a ward team, but also extended teams with a variety of perspectives and skills, in multiple locations. It is therefore essential for physicians to be able to collaborate effectively with patients, families, and an interprofessional team of expert health professionals for the provision of optimal care, education and scholarship.

Definition 2015
As Collaborators, physicians work effectively with other health care providers to provide safe, high-quality patient care.

Description 2015
Providing high-quality, safe patient care requires working collaboratively with a variety of individuals with complementary skills, in multiple settings across the continuum of care. Collaboration is a relationship-centred process based on trust, respect, and shared decision-making. Collaboration with patients and their families, inter- and intraprofessional care providers, community partners, and health system stakeholders is essential. It involves sharing knowledge, perspectives, and responsibilities, and a willingness to learn together. This requires understanding the roles of others, pursuing common goals and outcomes, and managing differences. Such collaboration skills are broadly applicable to related activities beyond clinical care, such as administration, education, advocacy, and scholarship.

* Throughout the Series I draft of the CanMEDS 2015 Framework, the phrase “patient and their families” is intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.
Elements 2005

- Collaborative care, culture, and environment
- Shared decision making
- Sharing of knowledge and information
- Delegation
- Effective teams
- Respect for other physicians and members of the healthcare team
- Respect for diversity
- Team dynamics
- Leadership based on patient needs
- Constructive negotiation
- Conflict resolution, management, and prevention
- Organizational structures that facilitate collaboration
- Understanding roles and responsibilities
- Recognizing one’s own roles and limits
- Effective consultation with respect to collaborative dynamics
- Effective primary care – specialist collaboration
- Collaboration with community agencies
- Communities of practice
- Interprofessional health care
- Multiprofessional health care
- Learning together
- Gender issues

Key concepts 2015

- Collaborative care, culture, and environment
- Collaboration with community
- Communities of practice
- Conflict resolution, management, and prevention
- Constructive negotiation
- Effective consultation and referral
- Effective teams
- Handover
- Interprofessional health care
- Intraprofessional health care
- Managing differences
- Recognizing one’s own roles and limits
- Relationship-centred care
- Respect for other physicians and members of the healthcare team
- Respect for diversity
- Shared decision-making
- Sharing of knowledge and information
- Situational awareness
- Team dynamics
- Transitions of care
- Understanding roles and responsibilities

Key competencies 2005

Physicians are able to…

1. Participate effectively and appropriately in an interprofessional healthcare team;

2. Effectively work with other health professionals to prevent, negotiate, and resolve interprofessional conflict;

Key competencies 2015

Physicians are able to …

1. **Work effectively with other physicians and other health care professionals**

2. **Work with inter- and intraprofessional colleagues to prevent misunderstandings, manage differences, and resolve conflict**

3. **Effectively and safely hand over care to an appropriate health care professional**
Enabling competencies 2005

Physicians are able to...

1. Participate effectively and appropriately in an interprofessional healthcare team;
   1.1. Clearly describe their roles and responsibilities to other professionals
   1.2. Describe the roles and responsibilities of other professionals within the healthcare team
   1.3. Recognize and respect the diversity of roles, responsibilities and competences of other professionals in relation to their own
   1.4. Work with others to assess, plan, provide and integrate care for individual patients (or groups of patients)
   1.5. Where appropriate, work with others to assess, plan, provide and review other tasks, such as research problems, educational work, program review or administrative responsibilities
   1.6. Participate effectively in interprofessional team meetings
   1.7. Enter into interdependent relationships with other professions for the provision of quality care
   1.8. Describe the principles of team dynamics
   1.9. Respect team ethics, including confidentiality, resource allocation and professionalism
   1.10. Where appropriate, demonstrate leadership in a healthcare team

2. Effectively work with other health professionals to prevent, negotiate, and resolve interprofessional conflict

2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team
2.2. Work with other professionals to prevent conflicts
2.3. Employ collaborative negotiation to resolve conflicts
2.4. Respect differences, misunderstandings and limitations in other professionals
2.5. Recognize one’s own differences, misunderstandings and limitations that may contribute to inter- and intraprofessional tension
2.6. Reflect on interprofessional team function

Enabling competencies 2015

Physicians are able to ...

1 Work effectively with other physicians and other health care professionals

1.1 Establish and maintain healthy inter- and intraprofessional working relationships for collaborative care
1.2 Negotiate overlapping and shared responsibilities with inter- and intraprofessional health care providers for episodic or ongoing care of patients
1.3 Engage in effective and respectful shared decision-making with other care providers

2 Work with inter- and intraprofessional colleagues to prevent misunderstandings, manage differences, and resolve conflict

2.1 Demonstrate a respectful attitude toward other colleagues and members of an inter- and intraprofessional team
2.2 Work with others to prevent conflicts
2.3 Employ collaborative negotiation to resolve conflicts
2.4 Respect differences, misunderstandings, and limitations in others
2.5 Recognize one’s own differences, misunderstandings, and limitations that may contribute to inter- and intraprofessional tension
2.6 Reflect on inter- and intraprofessional team function

3 Effectively and safely hand over care to an appropriate health care professional

3.1 Demonstrate effective and safe handover during a patient transition to a different setting or stage of care
3.2 Demonstrate effective and safe handover during a transition of responsibility for care
The CanMEDS 2015
Manager Expert Working Group Report

Chairs
Deepak Dath | Ming-Ka Chan

CanMEDS 2015
ROYAL COLLEGE
OF PHYSICIANS AND SURGEONS OF CANADA
The CanMEDS 2015 Manager Expert Working Group Report

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The Manager Role review: objectives, principles, and methods

The CanMEDS 2015 Manager EWG members adopted the following principles as foundational to their work:

• The process is one of revision and renewal: improvement, not reinvention, is the goal.

• The primary target audience is the users of the framework: trainees, front-line teachers, program directors, and Clinician Educators who design programs.

• The constructs of the Manager Role need to be grounded in theory and best practices, while their presentation should be practical and related to the daily practice of any physician.

• Generic competencies within the Manager Role should be articulated for all specialties.

• Concepts that are relevant to multiple Roles should be articulated in the Role where they are the most
prominent. Although redundancy and overlap are accepted, and even expected, in practice, the framework itself should avoid repetition while ensuring the appropriate integration of Roles.

Our report was developed by means of the following activities and approaches:

• a review of recent literature (2005–2013)
• a review of the “Emerging Concepts” consultation document
• recruitment of working-group members with wide geographical and discipline-specific (including family medicine) representation and with recognized contributions to, and scholarship in, different aspects of teaching and learning and across the continuum of learning (UME, PGME, and CPD)
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What’s new in the draft 2015 Leader (formerly Manager) Role

Major content changes

From “Manager” to “Leader.” In this draft revision, the EWG proposes that the Manager Role be renamed the Leader Role to better reflect physicians’ scope of practice in this domain. The concept of leadership has been embedded in the definition, as well as within each of the four key competencies, of the Role. There is an increased emphasis on leadership concepts throughout the Role, and the development of leadership skills has been added as enabling competency 3.1.

This change was the product of extensive debate conducted through face-to-face discussion (e.g., at medical education events such as ICRE, CCME, and AMEE), teleconferencing, email, and Twitter. Suggestions regarding the title of the Role ranged from emphasizing the importance of leadership and giving this concept increased prominence while keeping the title “Manager,” to changing the title to “Manager-Leader” or “Leader.” Although diverse opinions were expressed, common ground was found with regard to the need for physicians’ personal responsibility, active engagement, and contribution (as ways of conceptualizing leadership).

Renewed emphases. This draft revision of the Role also reflects:

• a greater emphasis on patient safety and quality-improvement processes
• the broader inclusion of health informatics
• a greater emphasis on the development of skills to achieve a balance between practice and personal life

Clarified areas. The following aspects of the Role have been clarified:

• Resource allocation is conceived in this document as a function of good stewardship.
• The word “practice” refers to all of the professional activities of a physician.
• Health Informatics is viewed as a crucial content area for good leaders and managers and as vital to the delivery of health care.

New areas. Competencies in ensuring patient safety and quality improvement, including the incorporation of standards of patient safety such as adverse event reporting, have been added.

For further consideration. Going forward, the EWG suggests that the following concepts be given further consideration in the Leader Role:

• Chaos, complexity and complex adaptive systems of medicine
• Emotional intelligence
• Social media
• Decision-making
Comparison of 2005 and 2015 frameworks

**Definition 2005**
As Managers, physicians are integral participants in healthcare organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the health care system.

**Description 2005**
Physicians interact with their work environment as individuals, as members of teams or groups, and as participants in the health system locally, regionally or nationally. The balance in the emphasis among these three levels varies depending on the nature of the specialty, but all specialties have explicitly identified management responsibilities as a core requirement for the practice of medicine in their discipline. Physicians function as Managers in their everyday practice activities involving co-workers, resources and organizational tasks, such as care processes, and policies as well as balancing their personal lives. Thus, physicians require the ability to prioritize, effectively execute tasks collaboratively with colleagues, and make systematic choices when allocating scarce healthcare resources. The CanMEDS Manager Role describes the active engagement of all physicians as integral participants in decision-making in the operation of the healthcare system.

**Elements 2005**
- Physicians as active participants in the healthcare system
- Physician roles and responsibilities in the healthcare system
- Collaborative decision-making
- Quality assurance and improvement
- Organization, structure and financing of the healthcare system
- Managing change

**Definition 2015**
As Leaders, physicians develop, in collaboration with other health care leaders, a vision of a high-quality health care system and take responsibility for effecting change to move the system toward the achievement of that vision.

**Description 2015**
Society has explicitly identified management and leadership abilities as core requirements for the practice of medicine. Physicians and others exercise collaborative leadership within the complex health care systems that form their specific work environments. At a system level, physicians contribute to the development and delivery of continuously improving health care and engage others to work with them toward this vision. Physicians must balance their personal lives with their responsibilities as managers and leaders in their everyday clinical, administrative, research, and teaching activities. They function as individual care providers, as members of teams or groups, and as participants and leaders in the health care system locally, regionally, nationally, and globally. The CanMEDS Leader Role describes the active engagement of all physicians as managers and leaders in decision-making in the operation and ongoing evolution of the health care system.

**Key concepts 2015**
- Administration
- Career development
- Collaborative leadership and “followership”
- Consideration of justice, efficiency, and effectiveness in the allocation of health care resources for optimal patient care
- Effective meetings and committee participation
- Health human resources
- Information technology for health care
Key competencies 2005

Physicians are able to…

1. Participate in activities that contribute to the effectiveness of their healthcare organizations and systems;
2. Manage their practice and career effectively;
3. Allocate finite healthcare resources appropriately;
4. Serve in administration and leadership roles, as appropriate.

Key competencies 2015

Physicians are able to …

1. Contribute to the improvement of health care delivery in health care teams, organizations, and systems
2. Engage in the stewardship of health care resources
3. Demonstrate leadership in professional practice
4. Manage their practice and career
Enabling competencies 2005

Physicians are able to...

1. Participate in activities that contribute to the effectiveness of their healthcare organizations and systems
   1.1 Work collaboratively with others in their organizations
   1.2 Participate in systemic quality process evaluation and improvement, such as patient safety initiatives
   1.3 Describe the structure and function of the healthcare system as it relates to their specialty, including the roles of physicians
   1.4 Describe principles of healthcare financing, including physician remuneration, budgeting and organizational funding

2. Manage their practice and career effectively
   2.1 Set priorities and manage time to balance patient care, practice requirements, outside activities and personal life
   2.2 Manage a practice, including finances and human resources
   2.3 Implement processes to ensure personal practice improvement
   2.4 Employ information technology appropriately for patient care

3. Allocate finite health care resources appropriately
   3.1 Recognize the importance of just allocation of healthcare resources, balancing effectiveness, efficiency and access with optimal patient care
   3.2 Apply evidence and management processes for cost-appropriate care

Enabling competencies 2015

Physicians are able to ...

1 Contribute to the improvement of health care delivery in health care teams, organizations, and systems
   1.1 Demonstrate personal responsibility for improving patient care
   1.2 Contribute to quality improvement and patient safety using the best available knowledge and practices
   1.3 Engage others to work collaboratively to improve systems of patient care
   1.4 Use and adapt systems to learn from adverse events and near misses
   1.5 Use health informatics to improve the quality of patient care and optimize patient safety

2 Engage in the stewardship of health care resources
   2.1 Allocate health care resources for optimal patient care
   2.2 Apply evidence and management processes to achieve cost-appropriate care
   2.3 Contribute to strategies that improve the value of health care delivery

3 Demonstrate leadership in professional practice
   3.1 Develop their leadership skills
   3.2 Facilitate change in health care to enhance services or outcomes
   3.3 Design and organize elements of health care delivery
4. Serve in administration and leadership roles, as appropriate
4.1. Chair or participate effectively in committees and meetings
4.2. Lead or implement a change in health care
4.3. Plan relevant elements of health care delivery (e.g., work schedules)

4. Manage their practice and career
4.1. Set priorities and manage time to balance practice and personal life
4.2. Manage career planning, finances, and health human resources in a practice
4.3. Implement processes to ensure personal practice improvement
The CanMEDS 2015
Health Advocate Expert Working Group Report

Chair
Jonathan Sherbino
HEALTH ADVOCATE

The CanMEDS 2015 Expert Working Groups

Since its origins in the 1990s, the CanMEDS Project has been a grand collaborative effort of hundreds if not thousands of educators, Royal College Fellows, family physicians, and other experts. Its development has involved countless hours devoted to literature reviews, stakeholder surveys, focus groups, interviews, consultations, consensus-building, debate, and educational design. As a result, CanMEDS has been heralded worldwide for its utility as a framework to anchor physician competence in the service of patients.

In early 2013, the Royal College, along with key partners, assembled a series of Expert Working Groups (EWGs) organized around the seven core CanMEDS domains. As of January 2014, more than 100 people were involved in updating one or more CanMEDS 2015 subdomains. Each EWG is composed of medical educators and practising physicians from a range of specialties and locations. All participants have contributed their expertise to develop a first draft of the revised framework. Their role is to:

• review the CanMEDS 2005 Framework to identify potential concepts requiring clarification or modification, as well as any gaps or redundancies in the existing CanMEDS competencies
• incorporate new themes such as patient safety and intraprofessionalism into the framework

This report is meant to complement the current working draft of the CanMEDS 2015 Framework —the Series I draft— and to provide information and context for readers who may wish to delve into the rationale and work of the Health Advocate EWG. The report is organized into three sections. The first section summarizes our methods and principles. The second section provides context for the revisions represented in the Series I draft and highlights differences from the 2005 Framework. Finally, the third section presents the newly drafted Health Advocate Role for 2015 in a side-by-side comparison with the 2005 version.

The Health Advocate Role review: objectives, principles, and methods

The CanMEDS 2015 Health Advocate EWG members adopted the following principles as foundational to their work:

• The process is one of revision and renewal: improvement, not reinvention, is the goal.
• The primary target audience is the users of the framework: trainees, front-line teachers, program directors, and Clinician Educators who design programs.
• The constructs of the Health Advocate Role need to be grounded in theory and best practices, while their presentation should be practical and related to the daily practice of any physician.
• Generic competencies within the Health Advocate Role should be articulated for all specialties.
• Concepts that are relevant to multiple Roles should be articulated in the Role where they are the most prominent. Although redundancy and overlap

Health Advocate Expert Working Group

Chair: Jonathan Sherbino
Core members: Deirdre Bonnycastle, Brigitte Côté, Leslie Flynn, Andrea Hunter, Daniel Ince-Cushman, Jill Konkin, Ivy Oandasan, Glenn Regehr, Denyse Richardson, Jean Zigby
Advisory members: Marcia Clark, Sherissa Microys

• develop the draft milestones within each existing CanMEDS Role (for release in April 2014)
• ensure that the framework is practical and useful for education across the continuum
• act on feedback from consultation and integrate relevant content into the revised CanMEDS Framework

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are accepted, and even expected, in practice, the framework itself should avoid repetition while ensuring the appropriate integration of Roles.

Our report was developed by means of the following activities and approaches:

- a review of recent literature (2005–2013)
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- integration of recommendations from the eHealth and Patient Safety and Quality Improvement working groups
- review of formal stakeholder consultation (including the CanMEDS 2013 survey and the ICRE 2013 Town Hall)

What’s new in the draft 2015 Health Advocate Role

Major content changes

The major changes to the Health Advocate Role for 2015 are as follows.

Expansion and refinement of the definition and description. On the basis of feedback received after the release of the 2005 Framework, along with data from Phase 1 of the national consultation, it was clear that this Role required greater clarity. In response, the EWG dedicated considerable attention to refining the definition and description of the Health Advocate Role, including distinguishing between communities and populations (an area of previous confusion) and defining health improvement more explicitly.

Adoption of a lens of partnership in advocacy. The 2005 Framework used language that positioned advocacy as a solo endeavour. The 2015 Framework recognizes that advocacy happens through partnerships. Physicians advocate “with” (and not “for”) patients. Advocacy organizations have shared, group leadership. This concept is reflected in the language of the document.

De-emphasis of population-level advocacy. Large-scale activism is not part of the practice of every specialist physician in Canada. However, a number of physicians participate and lead population-level advocacy initiatives. By de-emphasizing mandatory population-level advocacy, the document aligns with the common practice of specialists, while endorsing this important activity for a segment of physicians.

Changes to competencies

The key competencies have been significantly rephrased and, to the extent that they retain the 2005 content, have been reordered. In the current arrangement, the first key competency and three associated enabling competencies address advocacy with a specific patient, while the second key competency and three enabling competencies address advocacy with a community or population.

Changes to concepts

Health equity was added to the 2015 concepts. The EWG believes that this is a foundational principle of advocacy. Patient safety was removed as a concept. Although elements of patient safety are emphasized in the 2015 milestones, the EWG believes that, since this is not a primary focus of the Role, it is not necessary to include it in the concepts. Also, the interaction of the Health Advocate Role with other Roles has been removed. The EWG believes that this concept is inherent in the design of the CanMEDS Framework, and so its inclusion here would be redundant.
Questions for the Phase 2 Consultations

Enabling competency 2.3 requires every specialist physician to participate in a process that improves the health of the community or population that he or she serves. The EWG was divided about the vague requirement of this milestone. Specifically, should the milestone include modifiers that emphasize that participation needs to be substantial or longitudinal in nature? Or, should the language remain as written, providing program directors with some flexibility?

Comparison of 2005 and 2015 frameworks

Definition 2005

As Health Advocates, physicians responsibly use their expertise and influence to advance the health and the well-being of individual patients, communities and populations.

Description 2005

Physicians recognize their duty and ability to improve the overall health of their patients and the society they serve. Doctors identify advocacy activities as important for the individual patient, for populations of patients and for communities. Individual patients need physicians to assist them in navigating the healthcare system and accessing the appropriate health resources in a timely manner. Communities and societies need physicians' special expertise to identify and collaboratively address broad health issues and the determinants of health. At this level, health advocacy involves efforts to change specific practices or policies on behalf of those served. Framed in this multi-level way, health advocacy is an essential and fundamental component of health promotion. Health advocacy is appropriately expressed both by individual and collective actions of physicians in influencing public health and policy.

Definition 2015

As Health Advocates, physicians responsibly contribute their expertise and influence to improve health by working with the patients, communities, or populations they serve to determine and understand needs, develop partnerships, speak on behalf of others when needed, and support the mobilization of resources to effect change.

Description 2015

Physicians recognize their duty to participate in efforts to improve the health and well-being of their patients, their communities, and the broader populations they serve. For the purposes of the Role definition and description, a “community” is a group of people and/or patients connected to one’s practice, and a “population” is a group of people and/or patients with a shared issue or characteristic.

Physicians possess medical knowledge and abilities that provide unique perspectives on health. Physicians also have privileged access to patients’ accounts of their experience with illness and the health care system. Improving health is not limited to mitigating illness or trauma, but includes disease prevention (e.g., screening), health promotion (e.g., healthy habits and environments), and health protection (e.g., surveillance). Improving health also includes promoting health equity, whereby individuals and populations reach their full health potential without being disadvantaged by race, ethnicity, religion, gender, sexual orientation, age, social class, economic status, or level of education.

Physicians leverage their position to support patients in navigating the health care system and to advocate
with them to access appropriate resources in a timely manner. Physicians seek to improve the quality of both their clinical practice and associated organizations by addressing the health needs of the patients, communities, or populations they serve. Physicians promote healthy communities and populations by influencing the system (or by supporting others who are influencing the system), both within and outside of their work environments.

Advocacy requires action. Physicians contribute their knowledge of the determinants of health (e.g., psychological, biological, social, cultural, environmental, and economic determinants, and health care system factors) to positively influence the health of the patients, communities, or populations they serve. Physicians gather information and perceptions about issues, working with patients and their families* to develop an understanding of needs and potential mechanisms to address these needs. Physicians support patients, communities, or populations to call for change, or speak on behalf of those patients, communities, or populations when needed. Physicians increase awareness about important health issues at the patient, community, or population level. They support or lead the mobilization of resources (e.g., financial, material, or human resources) on small or large scales.

Advocacy requires partners. Physicians work within complex systems; thus, advocacy requires the development of partnerships with patients, their families and support networks, and community agencies and organizations to influence health determinants. Advocacy often requires engaging other health care providers, community agencies, administrators, and policy-makers.

* Throughout the Series I draft of the CanMEDS 2015 Framework, the phrase “patient and their families” is intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.
Elements 2005

- Advocacy for individual patients, populations and communities
- Health promotion and disease prevention
- Determinants of health, including psychological, biological, social, cultural and economic
- Fiduciary duty to care
- The medical profession’s role in society
- Responsible use of authority and influence
- Mobilizing resources as needed
- Adapting practice, management and education to the needs of the individual patient
- Patient safety
- Principles of health policy and its implications
- Interactions of advocacy with other CanMEDS Roles and competencies

Key concepts 2015

- Adapting practice to respond to the needs of patients, communities, or populations served
- Advocacy in partnership with patients, communities, and populations served
- Continuous quality improvement
- Determinants of health, including psychological, biological, social, cultural, environmental, educational, and economic determinants, as well as health care system factors
- Disease prevention
- Fiduciary duty
- Health equity
- Health promotion
- Health protection
- Mobilizing resources as needed
- Principles of health policy and its implications
- Potential for competing health interests of the individuals, communities, or populations served
- Responsible use of position and influence
- Social accountability of physicians

Key competencies 2005

Physicians are able to...

1. Respond to individual patient health needs and issues as part of patient care;
2. Respond to the health needs of the communities that they serve;
3. Identify the determinants of health of the populations that they serve;
4. Promote the health of individual patients, communities and populations.

Key competencies 2015

Physicians are able to...

1. Respond to individual patients’ complex health needs by advocating with them in the clinical or extra-clinical environment
2. Respond to the needs of a community or population they serve by advocating with them for system-level change
Enabling competencies 2005

Physicians are able to...

1. Respond to individual patient health needs and issues as part of patient care
   1.1 Identify the health needs of an individual patient
   1.2 Identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care

2. Respond to the health needs of the communities that they serve
   2.1 Describe the practice communities that they serve
   2.2 Identify opportunities for advocacy, health promotion and disease prevention in the communities that they serve, and respond appropriately
   2.3 Appreciate the possibility of competing interests between the communities served and other populations

3. Identify the determinants of health for the populations that they serve
   3.1 Identify the determinants of health of the populations, including barriers to access to care and resources
   3.2 Identify vulnerable or marginalized populations within those served and respond appropriately

4. Promote the health of individual patients, communities, and populations
   4.1 Describe an approach to implementing a change in a determinant of health of the populations they serve
   4.2 Describe how public policy impacts on the health of the populations served
   4.3 Identify points of influence in the healthcare system and its structure
   4.4 Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism

Enabling competencies 2015

Physicians are able to ...

1. Respond to individual patients’ complex health needs by advocating with them in the clinical or extra-clinical environment
   1.1 Work with patients to address determinants of health that affect them
   1.2 Work with patients and their families to increase their opportunities to adopt healthy behaviours
   1.3 Consider disease prevention, health promotion, or health surveillance when working with individual patients

2. Respond to the needs of a community or population they serve by advocating with them for system-level change
   2.1 Use a process of continuous quality improvement in their practice that incorporates disease prevention, health promotion, and health surveillance activities
   2.2 Work with a community or population to identify the determinants of health that affect them
   2.3 Participate in a process to improve health in the community or population they serve

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4.5 Appreciate the possibility of conflict inherent in their role as a health advocate for a patient or community with that of manager or gatekeeper

4.6 Describe the role of the medical profession in advocating collectively for health and patient safety
SCHOLAR

The CanMEDS 2015 Expert Working Groups

Since its origins in the 1990s, the CanMEDS Project has been a grand collaborative effort of hundreds if not thousands of educators, Royal College Fellows, family physicians, and other experts. Its development has involved countless hours devoted to literature reviews, stakeholder surveys, focus groups, interviews, consultations, consensus-building, debate, and educational design. As a result, CanMEDS has been heralded worldwide for its utility as a framework to anchor physician competence in the service of patients.

In early 2013, the Royal College, along with key partners, assembled a series of Expert Working Groups (EWGs) organized around the seven core CanMEDS domains. As of January 2014, more than 100 people were involved in updating one or more CanMEDS 2015 subdomains. Each EWG is composed of medical educators and practising physicians from a range of specialties and locations. All participants have contributed their expertise to develop a first draft of the revised framework. Their role is to:

• review the CanMEDS 2005 Framework to identify potential concepts requiring clarification or modification, as well as any gaps or redundancies in the existing CanMEDS competencies
• incorporate new themes such as patient safety and intraprofessionalism into the framework
• develop the draft milestones within each existing CanMEDS Role (for release in April 2014)
• ensure that the framework is practical and useful for education across the continuum
• act on feedback from consultation and integrate relevant content into the revised CanMEDS Framework

This report is meant to complement the current working draft of the CanMEDS 2015 Framework — the Series I draft — and to provide information and context for readers who may wish to delve into the rationale and work of the Scholar EWG. The report is organized into three sections. The first section summarizes our methods and principles. The second section provides context for the revisions represented in the Series I draft and highlights differences from the 2005 Framework. Finally, the third section presents the newly drafted Scholar Role for 2015 in a side-by-side comparison with the 2005 version.

The Scholar Role review: objectives, principles, and methods

The CanMEDS 2015 Scholar EWG members adopted the following principles as foundational to their work:

• The process is one of revision and renewal: improvement, not reinvention, is the goal.
• The primary target audience is the users of the framework: trainees, front-line teachers, program directors, and Clinician Educators who design programs.

• The constructs of the Scholar Role need to be grounded in theory and best practices, while their presentation should be practical and related to the daily practice of any physician.
• Generic competencies within the Scholar Role should be articulated for all specialties.
• Concepts that are relevant to multiple Roles should be articulated in the Role where they are the most prominent. Although redundancy and overlap
are accepted, and even expected, in practice, the framework itself should avoid repetition while ensuring the appropriate integration of Roles.

Our report was developed by means of the following activities and approaches:

- a review of recent literature (2005–2013)
- a review of the “Emerging Concepts” consultation document
- recruitment of working-group members with wide geographical and discipline-specific (including family medicine) representation and with recognized contributions to, and scholarship in, different aspects of teaching and learning and across the continuum of learning (UME, PGME, and CPD)
- specific recruitment of participants (learners and faculty) as ePanel members, to achieve further breadth in consultation
- integration of recommendations from the eHealth and Patient Safety and Quality Improvement working groups
- review of formal stakeholder consultation (including the CanMEDS 2013 survey and the ICRE 2013 Town Hall)

What’s new in the draft 2015 Scholar Role

Major content changes

As part of the CanMEDS 2015 review and update process, the Royal College decided to convene four separate expert working groups (EWGs) to review the different components of the 2005 CanMEDS Scholar Role: lifelong learning; structured clinical appraisal; teaching; and scholarship. The feeling was that these competencies were sufficiently distinct to provide a good rationale for subject-matter experts to focus on their areas of expertise during the review and development process. The resulting framework reintegrates these components once again under the Scholar Role. However, the following description of key revisions highlights each of the four sub-roles.

Lifelong learning

- In the proposed competencies for Scholar, we intended to capture the concept that lifelong learning is an endeavour that supports continuous improvement and enhancement of professional practice. The enabling competencies were reorganized into three enabling competencies—rather than nine, as in the 2005 Framework. These three enabling competencies reflect both planned and opportunistic learning as well as the need to integrate learning into daily work, to use data from a variety of sources to guide learning, and to learn as an active part of a community of practice.

- In the revised framework, professional work should be viewed as an ongoing learning laboratory with unending opportunities for quality improvement and professional growth—a personal learning environment.

- The importance of reflection in supporting lifelong learning is expressed in enabling competency 1.2.

- Lifelong learners need to reflect “capability”—the ability to adapt to change—in order to align their learning needs with new or emerging evidence to inform practice and support continuous improvement in professional performance.

- All physicians should have their own learning plan, formulated with intention and in a systematic, prospective way and grounded in their professional roles and responsibilities.

- All physicians must seek and leverage data and feedback about their performance from multiple sources to identify needs and inform their future learning. These data must be interpreted and assimilated into practice: in other words, one must analyze and reflect on the feedback data collected and use it to inform practice performance.
• Lifelong learning should not be conceptualized as solely an individual activity. Physicians work as part of a complex health system, and there is evidence to suggest that individually based quality improvement has little impact. The emergence of collaborative practice raises the need for physicians to be able to engage in collaborative learning—that is, to learn with, from, and for others.

• Further, the Lifelong Learning Working Group contributors felt that the development of a learning management system (infrastructure) should not be an individual undertaking but, rather, a centralized role of the Royal College. However, storing and accessing learning resources (using technology or not), devising organizing strategies and mechanisms, and tracking or documenting learning are all components of managing an individualized learning plan. The management system needs to allow personalization: the ability to add the resources and data sources used in practice.

Teacher

The following major content-related revisions are proposed in the draft 2015 CanMEDS Framework. Many of these changes are intended to better reflect the scope of practice of teachers and educators.

• an increased focus on teaching of medical as well as other health-profession trainees and practitioners

• a shift of competency in teaching patients and families to the Communicator Role

• expansion and clarification of assessment versus evaluation; in this context, “assessment” pertains to learners, while “evaluation” pertains to rotations, programs, and faculty

• refinement and rewording of the broader concept of “ethics” to convey more explicit, teaching-specific ethical concepts, including (1) a safe environment for learners and teachers; (2) the “hidden curriculum” and “power differentials”; and (3) maintaining patient safety in teaching

• expansion of teaching strategies beyond lectures and presentations to a broader variety of teaching strategies in clinical and non-clinical settings

• expansion of feedback to include seeking as well as providing feedback

• increased emphasis on the feedback process being based on observation as well as on other sources is also needed

• explicit mention of the “hidden curriculum”

Rationale

• We have shifted the teaching of patients and families to the Communicator Role to reduce redundancy and allow expansion within that role with respect to conducting discussions with individual patients and providing explanations of diseases and their management.

• We have shifted the emphasis on the concept of “learning styles” to “learning needs” and matching teaching strategies to learning goals.

Structured critical appraisal

In 2005 the critical appraisal competency of the Scholar Role was defined as the ability to “critically evaluate information and its sources, and apply this appropriately to practice decisions.” In the 2005 framework, this competency was enabled through the following skills and activities:

• Describe the principles of critical appraisal

• Critically appraise retrieved evidence in order to address a clinical question

• Integrate critical appraisal conclusions into clinical care

Opportunities for clarity and improved focus

The Structured Clinical Appraisal EWG identified the following limitations to—and hence opportunities to revise and improve—the critical appraisal competency as presented in 2005.

• Critical appraisal, which we defined as the evaluation of research evidence using principles of clinical epidemiology and/or evidence-based medicine, is only one of the skills that health care providers in 2015 require to achieve useful mastery of the biomedical literature and information resources.
• Critical appraisal skills are most useful when they are preceded by the ability to recognize important uncertainty in health care scenarios, or gaps in health care systems, and to translate these concerns into information needs and/or answerable questions.

• Health care providers in 2015 should be knowledgeable about evidence hierarchies and biomedical search engines so that the best available evidence can be brought to bear on the questions they have derived from uncertainty. Specifically, providers should be skilled in searching knowledge resources and efficient at acquiring evidence to address their questions.

• It is important to recognize that the sheer magnitude of the biomedical literature makes it difficult, if not impossible, to apply critical appraisal to most of the uncertainty faced in day-to-day practical decision-making. To that end, health care providers must be familiar with pre-appraised resources. Largely non-existent before 2005, these resources summarize evidence from primary studies and systematic reviews for practical application. High-quality practice guidelines can also serve this purpose.

• Although using pre-appraised resources will address the uncertainty in most encounters, the ability to conduct an in-depth assessment of the risk of bias and to discern threats to generalizability are also important skills. The evaluation of research activity is an essential prerequisite to scholarly activities, including research, teaching, and topic mastery, and the skill set that this requires is complementary to that needed in daily decision-making and in addressing unanswered practical questions.

• Given the plethora of study designs and research methodologies now in use, the critical appraisal of evidence is becoming increasingly daunting. The most effective way to mitigate this problem is to adopt a structured approach informed by the many design-specific evaluative frameworks that can be found in the literature.

• Appropriately applying the information derived from critical appraisal to practical decisions can also be a daunting task. At the level of the patient encounter, shared decision-making can be facilitated by a mutual understanding of the risks and benefits associated with a specific course of action and an appreciation of the quality of available evidence and, hence, its limitations. At the organizational level, an appreciation of the principles of implementation science or knowledge translation is required.

• The use of evidence-based alerting services tailored to one’s discipline is essential to continuing learning; this key approach can alert practitioners to what they don’t know or what is new in their discipline.

**Summary of major changes**

**Critical appraisal and applying evidence in practice as separate competencies.** In general terms, we believe that the skills and competencies housed in the critical appraisal competency are actually multi-faceted and cross into other domains of the CanMEDS Framework, and thus merit integration in CanMEDS 2015. Most importantly, we believe a distinction needs to be made between the use of evidence summaries from reliable resources to inform medical decision-making and the important scholarly skill of conducting a structured analysis and critical appraisal of research literature. Thus, these two skill sets have been presented in the 2015 revision of the Scholar Role as separate key competencies.

**Evidence-informed decision-making.** We have added the more specific and descriptive term, “evidence-informed decision-making,” which we loosely define as “the ability to recognize a need for information, and to identify, locate, evaluate, and effectively apply evidence summaries to the issue or problem at hand.” The new key and enabling competencies relate to question formulation, with an emphasis on searching pre-appraised resources. The importance of searching pre-appraised resources is also emphasized within the lifelong learning domain of the Scholar Role.

**Structured critical appraisal.** We have replaced the term “critical appraisal” with “structured critical appraisal.” This change reflects the importance of using established criteria to define the risk of bias in biomedical research, whether quantitative or qualitative, and to identify limitations in external validity. Enabling competencies include the ability to define an appropriate evaluative framework and effectively understand its intent so as to apply it to an evaluation of a study.
Comparison of 2005 and 2015 frameworks

**Definition 2005**
As scholars, physicians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

**Description 2005**
Physicians engage in a lifelong pursuit of mastering their domain of expertise. As learners, they recognize the need to be continually learning and model this for others. Through their scholarly activities, they contribute to the creation, dissemination, application and translation of medical knowledge. As teachers, they facilitate the education of their students, patients, colleagues, and others.

**Definition 2015**
As Scholars, physicians demonstrate a lifelong commitment to excellence in practice through continuous learning, the teaching of others, the evaluation of evidence and other resources, and contributions to scholarship.

**Description 2015**
Physicians pursue excellence by continually evaluating the processes and outcomes of their daily work, sharing and comparing their work with that of others, and actively seeking feedback in the interest of quality and patient safety. Using multiple ways of learning, they strive to meet the needs of individual patients and of the health care system.

Physicians strive to master their domains of expertise and to share their knowledge. As lifelong learners, they implement a planned approach to learning in order to achieve improvement in each CanMEDS Role. They recognize the need to continually learn and to model the practice of lifelong learning for others. As teachers they facilitate, both individually and through teams, the education and learning of students and residents, colleagues, co-workers, the public, and others.
Physicians are able to identify pertinent evidence, evaluate it using specific criteria, and apply it in their scholarly activities and practice. Through their engagement in evidence-informed and shared decision-making, they recognize uncertainty in practice and formulate questions to address knowledge gaps. Using skills in navigating information resources, they identify evidence syntheses that are relevant to these questions and arrive at clinical decisions that are informed by evidence while taking patient values and preferences into account.

Through their scholarly activities, physicians also contribute to the application, dissemination, translation, and creation of knowledge and practices applicable to health.

### Elements 2005
- Lifelong learning
- Moral and professional obligation to maintain competence and be accountable
- Reflection on all aspects of practice
- Self-assessment
- Identifying gaps in knowledge
- Asking effective learning questions
- Accessing information for practice
- Critical appraisal of evidence
- Evidence-based medicine
- Translating knowledge (evidence) into practice
- Translating knowledge into professional competence
- Enhancing professional competence
- Using a variety of learning methodologies
- Principles of learning
- Role modeling
- Assessing learners
- Giving feedback
- Mentoring
- Teacher-student ethics, power issues, confidentiality, boundaries
- Learning together
- Communities of practice

### Key concepts 2015

#### Lifelong learning
- Collaborative learning
- Communities of practice
- Patient safety
- Performance assessment
- Personal learning plan
- Quality improvement
- Reflection on practice
- Self-improvement

#### Teacher
- Faculty, rotation, and program evaluation
- Formal and informal curricula
- Hidden curriculum
- Learner assessment
- Learning outcomes
- Mentoring
- Needs assessment
- Optimization of the learning environment
- Principles of assessment
- Role-modelling
- Seeking and providing feedback
- Supervision and graded responsibility
- Teaching and learning
Evidence-informed decision-making
- Evidence syntheses
- Information literacy
- Knowledge gaps
- Uncertainty in practice

Structured critical appraisal
- Effect size
- Evidence-based medicine
- External validity
- Generalizability
- Internal validity
- Knowledge translation
- Risk of bias

Research
- Clinical innovation
- Confidentiality
- Conflict of interest
- Informed consent
- Research
- Scholarly inquiry
- Scholarship

Key competencies 2015
Physicians are able to…

1. Engage in the continuous improvement and enhancement of their professional activities through ongoing learning
2. Facilitate the learning of students, residents, other health care professionals, the public, and others as appropriate.
3. Integrate best available evidence, contextualized to specific situations, and integrate it into real-time decision-making
4. Critically evaluate the integrity, reliability, and applicability of health-related research and literature
5. Contribute to the dissemination and/or creation of knowledge and practices applicable to health

Key competencies 2005
Physicians are able to…

1. Maintain and enhance professional activities through ongoing learning
2. Critically evaluate information and its sources, and apply this appropriately to practice decisions
3. Facilitate the learning of patients, families, students, residents, other health professionals, the public, and others as appropriate.
4. Contribute to the creation, dissemination, application, and translation of new medical knowledge and practices.

- Research / scientific inquiry
- Research ethics, disclosure, conflicts of interest, human subjects and industry relations
Enabling competencies 2005

Physicians are able to...

1. **Maintain and enhance professional activities through ongoing learning**
   1.1. Describe the principles of maintenance of competence
   1.2. Describe the principles and strategies for implementing a personal knowledge management system
   1.3. Recognize and reflect learning issues in practice
   1.4. Conduct a personal practice audit
   1.5. Pose an appropriate learning question
   1.6. Access and interpret relevant evidence
   1.7. Integrate new learning into practice
   1.8. Evaluate the impact of any change in practice
   1.9. Document the learning process

2. **Critically evaluate information and its sources, and apply this appropriately to practice decisions**
   2.1. Describe the principles of critical appraisal
   2.2. Critically appraise retrieved evidence in order to address a clinical question
   2.3. Integrate critical appraisal conclusions into clinical care

3. **Facilitate the learning of patients, families, students, residents, other health professionals, the public, and others as appropriate**
   3.1. Describe principles of learning relevant to medical education
   3.2. Collaboratively identify the learning needs and desired learning outcomes of others

Enabling competencies 2015

Physicians are able to ...

1. **Engage in the continuous improvement and enhancement of their professional activities through ongoing learning**
   1.1. Develop, monitor, and revise a personal learning plan to enhance professional practice
   1.2. Regularly analyze their performance, using various data and other sources to identify opportunities for learning and improvement
   1.3. Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice

2. **Facilitate the learning of students, residents, other health care professionals, the public, and other stakeholders**
   2.1. Recognize the power of role-modelling and the impact of the hidden curriculum on learners
   2.2. Promote a safe learning environment
   2.3. Ensure that patient safety is maintained when learners are involved
   2.4. Collaboratively identify the learning needs of others and prioritize learning outcomes
   2.5. Demonstrate effective teaching to facilitate learning
   2.6. Seek and provide meaningful feedback
   2.7. Use assessment tools and practices that are appropriate to a given learning context

3. **Integrate best available evidence, contextualized to specific situations, and integrate it into real-time decision-making**
   3.1. Recognize uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that can address them
3.3. Select effective teaching strategies and content to facilitate others’ learning
3.4. Demonstrate an effective lecture or presentation
3.5. Assess and reflect on a teaching encounter
3.6. Provide effective feedback
3.7. Describe the principles of ethics with respect to teaching

4. Contribute to the creation, dissemination, application and translation of new knowledge and practices
4.1. Describe the principles of research and scholarly inquiry
4.2. Describe the principles of research ethics
4.3. Pose a scholarly question
4.4. Conduct a systematic search for evidence
4.5. Select and apply appropriate methods to address the question
4.6. Appropriately disseminate the findings of a study

3.2. Demonstrate proficiency in identifying, selecting, and navigating pre-appraised resources
3.3. Integrate evidence into decision-making

4 Critically evaluate the integrity, reliability, and applicability of health-related research and literature
4.1. For a given professional scenario, formulate scholarly questions using a structure that encompasses the patient or population, intervention, comparison, and outcome (PICO)
4.2. Identify one or more studies or scholarly sources that shed light on a given professional question
4.3. Interpret study findings, including a discussion and critique of their relevance to professional practice
4.4. Determine the validity and risk of bias in a wide range of scholarly sources
4.5. Describe study results in both quantitative and qualitative terms
4.6. Evaluate the applicability (external validity or generalizability) of evidence from a wide range of biomedical research products
4.7. Translate and apply the findings of studies into professional practice, and discuss the barriers and facilitators to achieving this
4.8. Identify and use automatic information-delivery services that highlight new evidence appropriate to their scope of professional practice

5 Contribute to the dissemination and/or creation of knowledge and practices applicable to health
5.1. Describe the principles of research and scholarly inquiry and their role in contemporary health care
5.2. Discuss and interpret the ethical principles applicable to health-related research
5.3. Discuss the roles and responsibilities of researchers, both principal investigators and research collaborators, and how they differ
from clinical and other practice roles and responsibilities

5.4 Pose medically and scientifically relevant, appropriately constructed questions that are amenable to scholarly investigation

5.5 Discuss and critique the possible methods of addressing a given scholarly question

5.6 Summarize and communicate to professional and lay audiences, including patients and their families* the findings of applicable studies and reports

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Scholar Expert Working Group

Chairs: Denyse Richardson and Anna Oswald

Lifelong Learning Working Group

Chair: Denyse Richardson
Core members: Nathalie Caire Fon, Craig Campbell, Ian Goldstine, Jennifer Gordon, Jocelyn Lockyer, Karen Mann, John Parboosingh, Mithu Sen, Ivan Silver
Advisory members: Bob Bluman, Dave Davis, François Goulet, Brenna Lynn, Jamie Meuser, Brian Wong

Teacher Working Group

Chair: Anna Oswald and Ming-Ka Chan
Core members: Karen Mann, Wayne Weston, Elisa Ruano Cea, Connie LeBlanc, Farhan Bhanji, James Goertzen, Jennifer Walton, Marcia Clark, Brian Wong
Advisory members: Nick Busing, Sal Spadafora, Allyn Walsh, Chris Watling

Critical Appraisal Working Group

Chair: Eddy Lang
Core members: Roland Grad, Martin Dawes, Susan Powelson, Jim Henderson, Lorie Kloda, Brian Haynes
Advisory members: Lisa Calder, Julien Poitras, Kent Stobart

Research Working Group

Chair: Bart Harvey
Core members: Stacy Ackroyd-Stolarz, Tanya Horsley, Vivian R. Ramsden, David Streiner
PROFESSIONAL

The CanMEDS 2015 Expert Working Groups

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The Professional Role review: objectives, principles, and methods

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• The process is one of revision and renewal: improvement, not reinvention, is the goal.
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Our report was developed by means of the following activities and approaches:

• a review of recent literature (2005–2013)
• a review of the “Emerging Concepts” consultation document
• recruitment of working-group members with wide geographical and discipline-specific (including family medicine) representation, content expertise in the Role, and recognized contributions to, and scholarship in, different aspects of teaching and learning and across the continuum of learning (UME, PGME, and CPD)
• specific recruitment of participants (learners and faculty) as ePanel members, to achieve further breadth in consultation
• integration of recommendations from the eHealth and Patient Safety and Quality Improvement working groups
• review of formal stakeholder consultation (including the CanMEDS 2013 survey and the ICRE 2013 Town Hall)

What’s new in the draft 2015 Professional Role

Major content changes

The Professional Role Expert Working Group formed two subgroups to address issues specific to Professionalism and to Physician Health. The discussions of the two groups resulted in the following recommendations.

Reorganization of competencies. A renewed emphasis on the concept of commitment is reflected in the current draft: the first two 2005 key competencies and their enabling competencies have been reorganized into three key competencies that reflect the “commitment of the physician to the patient, to society, and to the profession.” The fourth and last key competency (formerly no. 3) concerns the “commitment of the physician to self.”

In addition, a number of enabling competencies have been merged in view of their similar content or have been separated for clarity.

New concepts. A number of relatively new or topical concepts that were absent from the 2005 Framework have been added to this proposed revision, as follows:

• The concept of professional identity has been added to the Role description.
• The concepts of practice reflection and standard-setting in peer assessment and review have been added to new enabling competency 3.3.
• The following concepts were added as enabling competencies: professional behaviours in the use of technology-enabled communication; a commitment to the promotion of the public good; the just allocation of resources; patient safety and quality improvement; responsiveness to societal needs and expectations; and collegiality.
• Although the concept of collegiality was implicit in the 2005 Framework, it has been given increased emphasis in the current revision in relation to Physician Health and to Professionalism per se.
• Several items have been added to the Key Concepts (see side-by-side comparison with 2005 Elements).

An emphasis on physician health. Focused discussion led to a consensus that competencies related to physician health should remain within the Professional Role. The Role definition and description have been updated and revised accordingly and, as noted above, the concept that a commitment to physician health meets an obligation to one’s self and supports the delivery of optimal patient care has been articulated in key competency 4. In addition,
the following revisions were made to the enabling competencies:

- Enabling competencies in physician health were rearranged and edited to indicate three sequential concepts: (1) personal awareness and insight, including the ability to be mindful, to reflect, and to self-regulate; (2) recognition of the conflicting demands that physicians face throughout the life cycle and the ability to develop strategies to ensure sustainable practice; (3) promotion of a professional culture conducive to physician health and well-being.

- Enabling competency 4.1 has been added to capture themes of self-awareness, the regulation of one's emotions, mindfulness, fatigue management and mitigation, identity formation, trainee safety, and boundaries.

- Enabling competency 4.2 has been added to capture themes of resilience, compassion fatigue, burnout, transitions, and the impact of adverse events.

- Enabling competency 4.3 has been added to capture themes of collegiality, community, role-modelling, mentoring, and responsibility to the profession.

Potential linkages with other Roles. No concepts or competencies from the 2005 Professional Role have been moved to another Role. However, because many of the enabling competencies concern the commitment to do something that is actually dealt with in another Role, we see some potential overlap with:

- time-management competencies in the Leader (formerly Manager) Role
- resource-allocation competencies in the Leader Role
- competencies in the responsible use of communication technology and social media in the Communicator Role
- promotion of the public good in the Health Advocate Role
- commitment to safe hand-overs, coordination of care, and teamwork in the Collaborator and Leader roles

Comparison of 2005 and 2015 frameworks

Definition 2005

As Professionals, physicians are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

Description 2005*

Physicians have a unique societal role as professionals who are dedicated to the health and caring of others. Their work requires the mastery of a complex body of knowledge and skills, as well as the art of medicine. As such, the Professional Role is guided by codes of ethics and a commitment to clinical competence, the embracing of appropriate attitudes and behaviors, integrity, altruism, personal well-being, and to the

Definition 2015

As Professionals, physicians are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, commitment to the profession, profession-led regulation, and maintenance of personal health.

Description 2015*

Physicians have an essential societal role as professionals who are dedicated to the health and care of others. Their work requires the mastery of the art of medicine and of a complex body of knowledge and skills. The Professional Role is grounded in a professional identity and is guided by codes of ethics and a commitment to clinical competence, ongoing professional development, integrity, honesty, altruism,

promotion of the public good within their domain. These commitments form the basis of a social contract between a physician and society. Society, in return, grants physicians the privilege of profession-led regulation with the understanding that they are accountable to those served.

Elements 2005

- Altruism
- Integrity and honesty
- Compassion and caring
- Morality and codes of behaviour
- Responsibility to society
- Responsibility to the profession, including obligations of peer review
- Responsibility to self, including personal care in order to serve others
- Commitment to excellence in clinical practice and mastery of the discipline
- Commitment to the promotion of the public good in health care
- Accountability to professional regulatory authorities
- Commitment to professional standards
- Bioethical principles and theories
- Medico-legal frameworks governing practice
- Self-awareness
- Sustainable practice and physician health
- Self-assessment
- Disclosure of error and adverse events

Key concepts 2015

Commitment to patients

- Altruism
- Bioethical principles and theories
- Commitment to excellence in clinical practice and mastery of the discipline
- Compassion and caring
- Confidentiality and its limits
- Integrity and honesty
- Moral and ethical behaviour
- Professional boundaries
- Respect for diversity

Commitment to society

- Commitment to the promotion of the public good in health care
- Social accountability
- Social contract in health care

Commitment to the profession

- Accountability to professional regulatory authorities
- Codes of ethics
- Commitment to patient safety and quality improvement
- Commitment to professional standards
- Conflicts of interest (personal, financial, administrative, etc.)
- Medico-legal frameworks governing practice

Commitment to self

- Applied capacity for self-regulation, including the assessment and monitoring of one’s thoughts, behaviours, emotions, and attention for optimal performance and well-being
Key competencies 2005

Physicians are able to...

1. Demonstrate a commitment to their patients, profession, and society through ethical practice;
2. Demonstrate a commitment to their patients, profession, and society through participation in profession-led regulation;
3. Demonstrate a commitment to physician health and sustainable practice.

Key competencies 2015

Physicians are able to...

1. Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards
2. Demonstrate a commitment to society by recognizing and responding to the social contract in health care
3. Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation
4. Demonstrate a commitment to physician health and well-being to foster optimal patient care

Enabling competencies 2005

Physicians are able to...

1. Demonstrate a commitment to their patients, profession, and society through ethical practice
   1.1. Exhibit appropriate professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism
   1.2. Demonstrate a commitment to delivering the highest quality care and maintenance of competence
   1.3. Recognize and appropriately respond to ethical issues encountered in practice

Enabling competencies 2015

Physicians are able to ...

1. Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards
   1.1. Exhibit appropriate professional behaviours and relationships in all aspects of practice, reflecting honesty, integrity, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
   1.2. Demonstrate a commitment to excellence in all aspects of practice and to active participation in collaborative care
   1.3. Recognize and respond to ethical issues encountered in practice
1.4. Appropriately manage conflicts of interest
1.5. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law
1.6. Maintain appropriate relations with patients.

2. Demonstrate a commitment to their patients, profession and society through participation in profession-led regulation
2.1. Appreciate the professional, legal and ethical codes of practice
2.2. Fulfill the regulatory and legal obligations required of current practice
2.3. Demonstrate accountability to professional regulatory bodies
2.4. Recognize and respond to others’ unprofessional behaviours in practice
2.5. Participate in peer review

3. Demonstrate a commitment to physician health and sustainable practice
3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
3.2. Strive to heighten personal and professional awareness and insight
3.3. Recognize other professionals in need and respond appropriately

1.4 Recognize and manage conflicts of interest
1.5 Exhibit professional behaviours in the use of technology-enabled communication

2 Demonstrate a commitment to society by recognizing and responding to the social contract in health care
2.1 Demonstrate a commitment to the promotion of the public good in health care, including stewardship of resources
2.2 Demonstrate a commitment to maintaining and enhancing competence
2.3 Demonstrate a commitment to quality improvement and patient safety
2.4 Demonstrate accountability to patients, society, and the profession by recognizing and responding to societal expectations of the profession

3 Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation
3.1 Fulfill the professional and ethical codes, standards of practice, and laws governing practice
3.2 Recognize and respond to unprofessional and unethical behaviours in others
3.3 Commit to participation in peer assessment and standard-setting
3.4 Maintain and promote a culture of collegiality, respect, and professional relationships

4 Demonstrate a commitment to physician health and well-being to foster optimal patient care
4.1 Exhibit self-awareness and effectively manage the influences on personal well-being and professional performance
4.2 Manage personal and professional demands for a sustainable practice through the physician life cycle
4.3 Promote a culture that recognizes, supports, and responds effectively to colleagues in need
The CanMEDS 2015 Expert Working Groups

Since its origins in the 1990s, the CanMEDS Project has been a grand collaborative effort of hundreds if not thousands of educators, Royal College Fellows, family physicians, and other experts. Its development has involved countless hours devoted to literature reviews, stakeholder surveys, focus groups, interviews, consultations, consensus-building, debate, and educational design. As a result, CanMEDS has been heralded worldwide for its utility as a framework to anchor physician competence in the service of patients.

In early 2013, the Royal College, along with key partners, assembled a series of Expert Working Groups (EWGs) organized around the seven core CanMEDS domains. In addition, two EWGs were organized to consider cross-cutting concepts, including Patient Safety and Quality Improvement and eHealth. As of January 2014, more than 100 people were involved in updating one or more CanMEDS 2015 subdomains. Each EWG is composed of medical educators and practising physicians from a range of specialties and locations. All participants have contributed their expertise to develop a first draft of the revised framework. Their role is to:

- review the CanMEDS 2005 Framework to identify potential concepts requiring clarification or modification, as well as any gaps or redundancies in the existing CanMEDS competencies
- incorporate new themes such as patient safety and intraprofessionalism into the framework
- ensure that the framework is practical and useful for education across the continuum

This report is meant to complement the current working draft of the CanMEDS 2015 Framework—the Series I draft—and to provide information and context for readers who may wish to delve into the rationale and work of the eHealth EWG. The report is organized into two sections. The first section summarizes our methods and principles. The second section contains notes and suggested entry-to-practice eHealth competencies for each of the seven CanMEDS Roles.

The eHealth review: objectives, principles, and methods

The CanMEDS 2015 eHealth EWG members adopted the following principles as foundational to their work:

- The process is one of revision and renewal: improvement, not reinvention, is the goal.
- The primary target audience is the users of the framework: trainees, front-line teachers, program directors, and Clinician Educators who design programs.
- The constructs of CanMEDS Framework need to be grounded in theory and best practices, while their presentation should be practical and related to the daily practice of any physician.
- Generic competencies related to eHealth should be articulated for all specialties.
- Concepts that are relevant to multiple Roles should be articulated in the Role where they are the most prominent. Although redundancy and overlap are accepted, and even expected, in practice, the framework itself should avoid repetition while ensuring the appropriate integration of Roles.

Our report was developed by means of the following activities and approaches:

- a review of recent literature (2005–2013)
CanMEDS 2015—eHealth EWG report

- a review of the “Emerging Concepts” consultation document
- recruitment of working group members with expertise and interest in eHealth. All members were recruited from an existing AFMC working group on eHealth
- specific recruitment of participants (learners and faculty) as ePanel members, to achieve further breadth in consultation
- review of formal stakeholder consultation (including the CanMEDS 2013 survey and the ICRE 2013 Town Hall)

Recommended competencies for CanMEDS Roles

The eHealth EWG was commissioned to look at each of the CanMEDS Roles through the lens of eHealth to provide advice and guidance to each of the EWGs. Our report was circulated to the EWGs and ePanels for input and consideration in September 2013 and again in November and December 2013.

eHealth is defined as the appropriate use of information and communication technologies for health service delivery, education, and research. This document outlines recommended competencies for each of the CanMEDS Roles. The graduating resident will be able to fulfill the competencies of all the CanMEDS Roles in eHealth upon completion of specialty training.

Competencies in each CanMEDS Role are listed in order of importance. A note prefacing each section explains our thinking and highlights potential areas of overlap between Roles for the EWGs to consider.

Medical Expert

In the Medical Expert Role we focus on the use of information technologies to enhance medical expertise, while recognizing that data and telehealth tools are adjuncts to support decision-making and that medical expertise is vital to patient management. There can be overlap here with the Scholar Role.

1. Adopt a variety of information and communication technologies to deliver patient-centred care and provide expert consultation to diverse populations in a variety of settings.

Communicator

In the Communicator Role we focus on the documentation, use, and exchange of data and communication with patients and their families. Here, the emphasis is on communication for clarity and enhancement of the physician–patient relationship.

1. Document patient outcomes and safety considerations in an accurate, complete, timely, and retrievable manner, in compliance with legal, privacy, and regulatory requirements and in the interest of effective and efficient clinical decision-making.

2. Recognize how the capture, organization, tabulation and display of health information affect the care of patients, facilitate or impede information exchange, and influence the efficiency of the health care system.

*Throughout the Series I draft of the CanMEDS 2015 Framework, the phrase “patient and their families” is intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.*
3. Present health information to, and share expertise with, patients and their families, using context- and content-appropriate language and media resources.

4. Assist patient and their families to identify and make use of information and communication technologies to support their care and manage their health (for example telecommunications, smart phone applications).

5. Direct patients to current, credible, and relevant consumer health information resources that are appropriate to their level of health information literacy.

**Collaborator**

For the Collaborator Role, we highlight the importance of communicating and sharing electronic information with other health professionals and participating with other stakeholders in the development, advancement, and utilization of electronic information and management tools, processes, and resources to promote patient well-being, further patient care, and improve patient outcomes. This includes the promotion of interprofessional and stakeholder collaboration to improve our current eHealth environment, and recognition of the value of committed interprofessional and interdisciplinary collaboration towards shaping our health information systems.

1. Participate with other health system stakeholders in the development, advancement, utilization, and evaluation of electronic information and management systems, processes, and resources to facilitate best practice and the provision of safe, high-quality, and productive care:
   - Employ recognized pan-Canadian health information technology standards, classification schemes, and terminology for recording and communicating clinical data and facilitating information exchange (e.g., the Canada Health Infoway Standards Collaborative).
   - Identify barriers to information-sharing among health professionals when using information technologies and systems in local, regional, provincial/territorial, and national contexts, and identify solutions to these barriers where possible.
   - Support continuous improvement in the design, selection, implementation, and evaluation of electronic information tools and management systems.

2. Share electronic information with other health care professionals collaboratively for the purpose of integrating and optimizing care and improving outcomes for individuals and populations.

3. Complete the electronic handover of professional responsibility and accountability to another health care professional in a manner that ensures quality, continuity, and patient safety.

**Manager (now Leader)**

For the Manager (Leader) Role, we articulate how clinicians have responsibility from the clinical service delivery point of view to understand the proper use of electronic health records, the pros and cons of integrating electronic health care resources into their practice, and their responsibility for factual, accurate output.

1. Support information technologies that protect the privacy of patients and the confidentiality of their personal health information while at the same time achieving system efficiency, transformation of care processes, improved outcomes, and/or reduction in health care costs.

2. Contrast the benefits and limitations of health information systems and apply this knowledge to patient management, patient safety, practice management, and continuous quality improvement in one’s own practice and in all clinical and professional environments where one works.

3. Acknowledge that human–computer interface issues, organizational culture, technological restrictions, and device and infrastructure malfunction may generate errors or distortion of data that negatively affect patient safety. Advocate
for and implement harm reduction strategies in the workplace.

4. Understand the terms “health system use” in the Canadian context and “interoperability” with respect to their application to electronic health data and relevance to medical practice.

5. Customize the output from digital health records for purpose-driven use to improve patient care.

6. Comprehend the influence of data inter-relationships on data output, quality and usage.

7. Describe the impact of health record interoperability and data exchange on collaborative patient-centred care.

**Health Advocate**

For the Health Advocate Role, we articulate the need for physicians to advocate for humanism in the virtual health care workplace, while maintaining awareness of the tension between the needs of the patient and of the health care system more generally. It addresses the need to balance the use of health information for global initiatives while respecting the privacy of individual patient information. It speaks to the meaningful use of electronic resources to inform population health strategies. The role of individual physicians who contribute to public health and population health data is placed in this Role, but we do recognize that, for public health specialists, this pertains to their Expert and Scholar Roles.

1. Employ health informatics to enhance quality of care and service delivery in the context of acute and chronic disease management in community settings.

2. Advocate for balance between an individual’s right to privacy and the needs of the health care system when using aggregated health information in decision-making.

3. Appreciate that analysis of pooled health and demographic data informs health policy decision-making at local, regional, provincial/territorial, national, and international levels.

4. Describe how health and population information can be used for disease surveillance, adverse event tracking, population health monitoring, and risk management.

5. Speak out against harmful medical misinformation portrayed in social media.

**Scholar**

For the Scholar Role, we highlight the role of the individual physician in upholding and continuously improving information and communication technology best practices to enhance patient care, committing to lifelong learning and teaching, and striving toward continuous quality improvement and excellence in their own practices. There could be some overlap with the Medical Expert and Professional Roles.

1. Use information technologies to enhance knowledge, skill and judgment in the provision of evidence-informed patient care.

   – Articulate an information need and gather relevant data from a variety of sources, including the literature, electronic health records and databases, and discussions with colleagues.

   – Critically assess the reliability, quality and comprehensiveness of data used to inform health care decisions.

   – Appraise, consolidate, apply, and evaluate information acquired to care for and manage patients, bearing in mind their unique biological, personal, and cultural circumstances.

   – Participate in scholarly activity related to information and communication technology through the creation, maintenance, exchange and consumption of health data, information, and knowledge.

2. Organize, maintain, appraise, and continuously improve scholar resource and health information management skills both for oneself and for others.
using information technologies throughout one’s professional career.

Professional

For the Professional Role, we define professional boundaries, obligations, and responsibilities as they translate into eHealth practices, including the ability to respect patient privacy and professional boundaries with the understanding that electronic information and communication widens the potential boundaries that can be breached and threatens the physician–patient relationship.

1. Act to ensure that technology preserves and strengthens the physician–patient relationship, is of benefit to patients individually and collectively, and is used in a way that maintains public trust in the profession.

2. Demonstrate that professional judgment prevails over technologies designed to support clinical assessment, interventions, and evaluation.

3. Uphold professional obligations, comply with legislation, and maintain appropriate personal boundaries when engaging in the use of social media platforms and digital technologies to record, convey, and respond to information.

4. Adhere to organizational, professional, regulatory, and legal tenets pertaining to privacy, confidentiality and security of data in health information systems.

5. Report system deficiencies, misuse, or errors.

* It would be important for training institutions and individuals to be aware of their own provincial health information protection legislation and their provincial regulatory college statements relating to eHealth, Social Media, and telehealth (e.g., CPSA, CPSO, CPSBC, etc), as well as the CMA and CMPA’s position papers.

Glossary

Information and communication technologies: examples include electronic health records, electronic medical records, telehealth, emails, online web conferencing applications, picture archiving clinical systems, pharmacy information systems, point of care tools, mobile technologies, and applications.

Clinical decision support tools: alerts, reminders, clinical practice guidelines, algorithms/critical pathways.

Health Informatics: a discipline that aims to promote health and improve the delivery of efficient patient-centred health care through the application of information systems to collect, manage, transform and share health information.
CanMEDS 2015—Patient Safety and Quality Improvement EWG report

The CanMEDS 2015 Expert Working Groups

Since its origins in the 1990s, the CanMEDS Project has been a grand collaborative effort of hundreds if not thousands of educators, Royal College Fellows, family physicians, and other experts. Its development has involved countless hours devoted to literature reviews, stakeholder surveys, focus groups, interviews, consultations, consensus-building, debate, and educational design. As a result, CanMEDS has been heralded worldwide for its utility as a framework to anchor physician competence in the service of patients.

In early 2013, the Royal College, along with key partners, assembled a series of Expert Working Groups (EWGs) organized around the seven core CanMEDS domains. In addition, two EWGs were organized to examine cross-cutting concepts in Patient Safety and Quality Improvement (PS/QI) and in eHealth. As of January 2014, more than 100 people were involved in updating one or more CanMEDS 2015 subdomains. Each EWG is composed of medical educators and practising physicians from a range of specialties and locations. All participants have contributed their expertise to develop a first draft of the revised framework. Their role is to:

- review the CanMEDS 2005 Framework to identify potential concepts requiring clarification or modification, as well as any gaps or redundancies in the existing CanMEDS competencies
- incorporate new themes such as patient safety and intraprofessionalism into the framework
- ensure that the framework is practical and useful for education across the continuum

This report is meant to complement the current working draft of the CanMEDS 2015 Framework—the Series I draft—and to provide information and context for readers who may wish to delve into the rationale and work of the PS/QI EWG. The report is organized into two sections. The first section summarizes our methods and principles. The second section contains notes and suggested entry-to-practice competencies for each of the seven CanMEDS Roles.

The PS/QI review: objectives, principles, and methods

The CanMEDS 2015 PS/QI EWG members adopted the following principles as foundational to their work:

- The process is one of revision and renewal: improvement, not reinvention, is the goal.
- The primary target audience is the users of the framework: trainees, front-line teachers, program directors, and Clinician Educators who design programs.
- The constructs of CanMEDS Framework need to be grounded in theory and best practices, while their presentation should be practical and related to the daily practice of any physician.
- Generic competencies related to PS/QI should be articulated for all specialties.
- Concepts that are relevant to multiple Roles should be articulated in the Role where they are the most

Patient Safety and Quality Improvement Expert Working Group

Chair: Brian M. Wong

Core members: Stacy Ackroyd-Stolarz, Meri Bukowskyj, Lisa Calder, Amir Ginzburg, Sherissa Microys, Antonia Stang, Gord Wallace

Advisory members: Ward Flemons, Abbie Hain, Karen Hall Barber, Amy Nakajima, Kaveh Shojania, Roger Wong, Philip Ellison
prominent. Although redundancy and overlap are accepted, and even expected, in practice, the framework itself should avoid repetition while ensuring the appropriate integration of Roles.

Our report was developed by means of the following activities and approaches:

- a review of recent literature (2005–2013)
- a review of the “Emerging Concepts” consultation document
- recruitment of working-group members that represent an interdisciplinary group of PS/QI leaders and educators from across Canada, from a broad spectrum of practice backgrounds and geographic regions. Many participated in the design and delivery of the Advancing Safety for Patients in Residency Education (ASPIRE) train-the-trainer faculty development program.
- specific recruitment of participants (learners and faculty) as ePanel members, to achieve further breadth in consultation
- review of formal stakeholder consultation (including the CanMEDS 2013 survey and the ICRE 2013 Town Hall)

The core members of the PS/QI EWG are each representatives on one of the CanMEDS Roles 2015 EWGs, and act as advisors on their assigned EWG. After convening our initial teleconference to set the stage, we tasked each of the core members with considering the original CanMEDS 2005 Physician Competency Framework and answering the following questions:

- Which of the existing competencies already reflect core patient safety or quality improvement competencies and require little or no modification?
- Which of the existing competencies speak to a core patient safety or quality improvement competency, but require significant modification in its wording to place greater emphasis on patient safety and/or quality improvement?
- What core patient safety or quality improvement competencies are not currently included?

This report summarizes the Patient Safety and Quality Improvement Expert Working Group (PS/QI EWG) recommendations for the integration of core patient safety and quality improvement concepts into the seven CanMEDS Roles. Our intention was to provide CanMEDS EWG chairs with both a high-level overview to provide context for our recommendations, as well as specific suggestions that pertain to their respective CanMEDS Roles. This report represents our recommendations as of December 2013.

Key guiding documents

- ACGME Outcome Project, Competency descriptions. Accreditation Council for Graduate Medical Education. Available at: www.acgme.org/outcome/comp/GeneralCompetenciesStandards21307.pdf.
- National Steering Committee on Resident Duty Hours. Fatigue, risk and excellence: towards a pan-Canadian consensus on resident duty hours. Ottawa: Royal College of Physicians and Surgeons of Canada; 2013.
Recommended competencies for the CanMEDS Roles

**PS/QI: background and key definitions**

For the purposes of establishing the physician competencies that relate to patient safety and quality improvement, we must first clearly define what is meant by these terms and how they were applied to guide the PS/QI EWG’s work.

In 2001 the US Institute of Medicine published *Crossing the Quality Chasm*,¹ which identified the six attributes of quality in health care: safe, timely, effective, efficient, equitable, and patient-centred.

Patient safety—“freedom from harm related to health care”—has received sufficient attention, such that it is often considered separately, as a concept interrelated with quality. Thus, health care quality and patient safety are desired states or the outcomes that we strive to achieve.

However, patient safety and quality improvement can also be viewed as processes. For example, the Canadian Patient Safety Institute (CPSI) defines patient safety as “the pursuit of the reduction and mitigation of unsafe acts within the health care system.”² Batalden and Davidoff define quality improvement (i.e., the process by which we achieve optimal quality) as “the systematic approach to making changes involving rapid cycles of change that lead to better patient outcomes and stronger system performance.”³ In other words, both patient safety and quality improvement are about identifying opportunities for improvement, prioritizing these opportunities, and developing plans to introduce interventions that will improve the current state.

Importantly, we distinguish *quality improvement* from *quality assurance*: the latter is a process that determines a “pass/fail” assessment of compliance against a minimum standard (e.g., hospital accreditation) rather than measuring where you are and figuring out ways to make things better. The 2005 CanMEDS Framework refers to quality improvement and quality assurance interchangeably; we recommend that the term “assurance” be abandoned in the 2015 Framework and that only the term “quality improvement” be used instead.

For the purpose of making recommendations for updates to the CanMEDS Framework, the PS/QI EWG focused on identifying the key processes and practices that underlie the continuous improvement of health care quality and patient safety, and on defining the necessary physician competencies (i.e., knowledge, skills, and attitudes) that allow physicians to contribute to these processes and practices and incorporate continuous improvement principles into their day-to-day work.

**PS/QI as a core competency**

“Everyone in healthcare has two jobs when they come to work every day: to do their work and to improve it.”
Batalden and Davidoff (2007)³

Active engagement in the continuous improvement of quality and safety is core to what it is to be a physician.⁴ This statement is grounded in the belief that physicians require both medical and “health-systems-improvement” knowledge to provide high-quality, safe, and patient-centred care. Thus, quality and patient safety should feature prominently within the Medical Expert Role.

In the 2005 iteration of the CanMEDS Framework,⁵ enabling competency 2.4 already highlights the importance of this knowledge of patient safety and quality: “Contribute to the enhancement of quality care and patient safety in their practice, integrating the available best evidence and best practices.”

However, we recommend that the Medical Expert Role be expanded to include a key competency, with associated enabling competencies, dedicated solely to expertise in PS/QI (see Box 1 and Table 1). This would better reflect current thinking about the importance of physician engagement in the continuous improvement of health care quality and patient safety as a core activity.
It is important to distinguish the competencies listed under the Medical Expert role from those listed under the Manager Role. Although these competencies are related, we recommend that the PS/QI concepts within the Medical Expert Role focus on improving health care quality and patient safety at the level of the individual patient, whereas those concepts that focus on continuous improvement at the level of the system should reside within the Manager Role.

Box 1
Situating Patient Safety and Quality Improvement in the Medical Expert Role

Proposed key competency within the Medical Expert Role:
➢ Provide high-quality, safe care to patients as an individual and as a member of a team

Proposed enabling competencies:
➢ Recognize and respond to adverse events and near misses
➢ Seek opportunities to provide high-quality care
➢ Contribute to a culture that promotes the continuous improvement of health care quality and patient safety
➢ Describe how human and system factors influence decision-making and provision of patient care
➢ Engage patients and their families in the continuous improvement of health care quality and patient safety

PS/QI competencies within the Medical Expert Role

1. Recognizing and responding to adverse events and near misses. This enabling competency provides specificity to the knowledge and skills that physicians need when adverse events occur. Specific competencies to emphasize in the 2015 Framework include foundational knowledge of key patient safety terms and definitions (e.g., recognizing adverse events as harms related to health care and distinguishing them from the natural progression of disease) and managing adverse events and patient safety hazards as they arise in day-to-day patient care (e.g., recognizing unsafe situations, meeting patients’ and families’ emotional needs, and mitigating harms that result from adverse events). The Manager Role will focus on competencies related to responding to adverse events, near misses, and patient safety hazards, particularly at a system level (e.g., incident reporting).

2. Seeking opportunities to provide high-quality care. This enabling competency provides specificity to the knowledge and skills that physicians need in order to seek out opportunities to provide high-quality care in their day-to-day clinical practices. Specific competencies include being able to describe the domains of health care quality and apply them to identify gaps in care delivery; integrate quality improvement principles into daily clinical practice; and recognize and seek opportunities to improve quality on the basis of self-reflection and measured performance. The Manager Role will focus more on the application of quality improvement methodologies at the system level.

3. Contributing to a culture that promotes patient safety and quality improvement. An institutional culture conducive to safety and quality has been reported to be associated with improved patient safety. This pertains to the attitudinal competencies that physicians must demonstrate in order to promote a culture that supports PS/QI practices. Examples of such attitudes include adopting a fair and non-punitive approach to addressing patient safety problems and adverse events, promoting behaviours in others that contribute to improved health care quality and patient safety, and identifying patient safety and quality improvement as key professional values and essential components of daily practice.

4. Awareness of human and system factors. Physicians’ performance, including their diagnostic decision-making, is heavily influenced by human factors (e.g., fatigue, stress, cognitive biases) and environmental factors (e.g., work interruptions, equipment, technology). To optimize their performance, physicians need to recognize these factors and employ strategies to mitigate their negative effects. Specific emphasis should be placed on clinical decision-making, including diagnostic reasoning. Although the 2005 Framework speaks to
this (particularly enabling competency 3.5), delay in diagnosis and diagnostic error are emerging topics in the patient safety literature, and the role of clinical decision-making, and in particular diagnostic reasoning, has garnered significant attention. Specific language should refer to the importance of recognizing the influence of cognitive and affective biases and, where appropriate, mitigating their negative impact on the diagnostic reasoning process.

5. Engaging patients and their families in the continuous improvement of health care quality and patient safety. It is important to highlight the appropriate inclusion of patients and their families’ as partners in PS/QI processes, as this often leads to more successful recommendations and improvements. The concept of the “patient voice” and its role in contributing to daily PS/QI practices is not sufficiently prominent in the 2005 CanMEDS Framework and should be emphasized in the 2015 revision.

6. Ensuring safety in diagnostic and therapeutic procedures. The 2005 Framework includes language that speaks to performing diagnostic (enabling competency 5.1) and therapeutic (enabling competency 5.2) procedures effectively, appropriately, and in a timely manner. However, it is critical that these procedures be performed safely as well, since procedural complications are an important cause of preventable adverse events. Also, it would be important to consider how advances in procedural safety (e.g., simulation training, checklists, point-of-care ultrasound guidance, teamwork training, and fatigue management) might factor into the development of the accompanying milestones.

PS/QI competencies within the Intrinsic CanMEDS Roles: supporting the core

Establishing expertise in patient safety and quality improvement will require that physicians develop competencies situated in the six remaining Intrinsic CanMEDS Roles. These would ideally “feed into the core expertise” and, together with that core expertise, enable physicians to meaningfully improve health care quality and patient safety.

Mapping the key patient PS/QI domains to the Intrinsic Roles is not without its challenges. There is considerable overlap for a number of these domains. For example, disclosure of adverse events could be viewed as a competency within the Professional Role (as it was in the 2005 CanMEDS Framework), but there are also clear links to the Communicator and Health Advocate Roles.

To minimize redundancy, this report situates each of the key PS/QI domains primarily within one of the Intrinsic CanMEDS Roles (e.g., we recommend that disclosure of medical error be situated within the Communicator Role). To the best extent possible, we have aligned this categorization with the work of the CanMEDS EWGs. To acknowledge the overlap and provide specific examples for where they occur, we provide a matrix that maps PS/QI domains to the various CanMEDS Roles (see Table 2).

Communicator Role

1. Patient-centred communication. The 2005 CanMEDS Framework already highlights a number of elements related to patient-centred communication in key competency 4 within the Communicator Role. Specific competencies related to shared-decision making, informed consent, informed discharge (including educating the patient to recognize the symptoms and signs that should alert them to seek further medical care), establishing and respecting cultural sensitivity/safety, and health literacy should be emphasized in the 2015 Framework within the Communicator Role.

* Throughout the Series I draft of the CanMEDS 2015 Framework, the phrase “patient and their families” is intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.
2. Disclosure of adverse events to patients and families. In the 2005 Framework, both the Communicator and Professional Roles list adverse event disclosure to patients and families as one of the key elements, but neither includes specific language in either the key or the enabling competencies. Given the importance of increased transparency in health care delivery and the development of disclosure frameworks to guide the communication that should take place when adverse events occur, we recommend that the communication elements related to adverse event disclosure (e.g., discussing the facts, prevention of future events, apology) receive greater emphasis in the 2015 Framework within the Communicator Role.

3. Effective clinical documentation. Although the 2005 CanMEDS Framework includes a key competency related to conveying effective written information about a medical encounter, expectations and obligations regarding maintaining the confidentiality and privacy of patients’ personal health information have increased since then. Thus, the 2015 Framework could emphasize specific patient safety elements related to clinical documentation, such as preparing comprehensive and timely discharge summaries, legibility, maintaining privacy and confidentiality, providing better clarity of responsibilities for ongoing care in the written consultative process, and proficiency in the use of electronic medical records.

Collaborator Role

1. Teamwork. Teamwork is already significantly represented in the 2005 Framework, and there have been noteworthy advances in recent years in our understanding of how the functioning of teams influences patient safety as well as significant work in the development of teamwork training programs that have the potential to decrease adverse events. Although some elements from the 2005 Framework reflect these developments (see enabling competency 1.8), we recommend updating the language to integrate the following concepts into the 2015 Framework: leadership, mutual support (e.g., graded assertiveness), situational awareness and monitoring (e.g., cross-monitoring, shared mental model), and communication across teams (e.g., call-outs, check-backs).

2. Working in teams to continuously improve health care quality and patient safety. Beyond developing competencies in teamwork skills as applied to the clinical setting, physicians need to work with other health care professionals when they engage in PS/QI activities. Therefore, physicians need to engage others in contributing to health care system improvement at the level of both the larger system and of local practice, and to work collaboratively to continuously improve health care quality and patient safety.

3. Handover between providers on a health care team. In view of the reduction in resident duty hours and the resulting increase in shiftwork seen over the past decade, physicians need to develop competence in the handover process, which includes the transfer of necessary clinical information and of responsibility for patient care. Although this is a specific element of communication across teams, it is such an important emerging concept that we feel it warrants specific attention. Physicians should be able to utilize structured communication skills and employ strategies (e.g., effectively use written handover; verify roles and responsibilities; develop a shared understanding of the patient’s condition, care plan, and anticipated problems and possible solutions) to reliably hand over patient care to colleagues.

4. Care transitions. Patients receive care in multiple care settings and under multiple providers, and the increasingly fragmented nature of our health care system potentially threatens the quality and safety of care provided to patients at points of transition (e.g., transfer from the emergency department to the hospital ward, discharge from the acute care setting to the ambulatory care setting). Physicians need to develop competencies in working effectively and collaboratively with other providers and with patients to maintain patient safety at these high-risk transition points. This concept did not exist in the 2005 CanMEDS...
5. Consultations and referrals. Consultations and referrals are among the most common methods of collaboration between physicians. Poor collaboration between physicians related to the consultation and referral process can result in delayed diagnoses, unnecessary testing, provider frustration, and patient dissatisfaction, and can ultimately contribute to adverse events. Physicians need to establish effective and safe practices related to consultations and referrals. The 2005 Framework includes language related to consultations and referrals in the Medical Expert Role, but we recommend strengthening the elements related to carrying out this process safely and integrating some of the important patient safety concepts into the Collaborator role.

Scholar—Lifelong Learning

1. Integrating continuous quality improvement with continuous professional development and lifelong learning. There is an emerging recognition that improvements in health outcomes for patients rely on both better professional development and better system performance. Physicians need to align their lifelong learning practices with continuous quality and patient safety improvement practices (including the ongoing development of skills in quality improvement) in order to optimize outcomes for patients.

2. Using quality outcomes to guide development of personal learning plans. In developing their personal learning plans, physicians should ideally use quality outcomes for their “gap analyses” and “needs assessments.” One tangible skill listed as enabling competency 1.4 within the 2005 Scholar Role—“conduct a personal practice audit”—speaks to this, but greater specificity that will integrate the six aims of quality (i.e., safety, timeliness, effectiveness, efficiency, equity, and patient-centredness) should be considered for the 2015 framework.

Scholar—Critical Appraisal

1. Critical appraisal of patient safety and quality improvement literature. Many general medical journals now publish research in PS/QI, and there are now journals dedicated specifically to publishing reports on patient safety and quality improvement initiatives. A recent *JAMA* “Users’ Guide to the Medical Literature” supports the critical appraisal of quality improvement literature. The 2005 Framework includes clear language related to critical appraisal in general, and the 2015 version should make specific reference to the need for physicians to expand their critical appraisal skills to include the published PS/QI literature.

2. Knowledge translation. Although knowledge translation was already an established field in 2005, better knowledge translation practices have emerged recently to address the lack of uptake in health care of evidence-based practices published in the form of primary research and clinical practice guidelines. The 2005 Framework includes within the Scholar role enabling competency 2.3—“integrate critical appraisal conclusions into clinical care”—which should be expanded in the 2015 Framework to clearly indicate the need for physicians to be able to translate clinical evidence into practice. This competency, which speaks primarily to the “effectiveness” aim of quality, should be adapted to the local context using established knowledge translation frameworks (e.g., the knowledge-to-action cycle).

Scholar—Research

1. Recognizing quality improvement and patient safety as legitimate forms of scholarly activity. In addition to conducting research on PS/QI topics, a strong case can be made for considering PS/QI work within what Boyer defines as the scholarship of application (which involves the rigour and application of disciplinary expertise with results that can be shared and/or evaluated by peers). There is also a growing attention to the ethical aspects of quality improvement projects, and an increasing number of journals devoted to publishing PS/QI initiatives (including the development of...
the Standards for Quality Improvement Reporting Excellence (SQUIRE) publication guidelines\(^43\) to ensure methodological rigour. As a result, it will be important to be able to describe the scientific basis for quality improvement in health care and to discuss the contribution of innovative approaches to quality improvement and the generation of new knowledge.

**Scholar—Teacher**

1. **Ensuring that patient safety is maintained throughout the learning experience, particularly in the context of clinical teaching.** Specific concepts that should be integrated into the 2015 Framework include safe clinical supervision practices (including how to appropriately delegate and supervise, instructing trainees to recognize their limits, and seeking greater supervision when appropriate), progressive independence, clinical autonomy, and role-modelling safe and respectful practices.

**Professional—Physician Health**

1. **Fatigue management.** A considerable body of research has linked fatigue and sleep deprivation to poor physician performance of cognitive and technical skills and to potential adverse outcomes for patients.\(^44\) Especially in light of the recent National Steering Committee pan-Canadian duty hour recommendations, physicians need to develop fatigue management strategies to ensure safe patient care.\(^45\) A competency in fatigue management should be added to the 2015 Framework.

2. **Coping with adverse events and outcomes.** This important topic is frequently overlooked, despite the fact that physicians involved in adverse events often themselves suffer negative emotional and health consequences. A growing body of literature has highlighted the need for health care providers involved in adverse events to recognize the potential impact of these events on their own well-being,\(^46\) to develop resilience, and to apply effective and constructive coping strategies to combat potentially long-standing negative effects (including increased risk of depression and substance abuse). These concepts do not exist in the 2005 CanMEDS framework and should be added to the 2015 Framework.

**Professional—Professionalism**

1. **A commitment to continuously improve health care quality and patient safety.** Physicians need to champion and demonstrate commitment to active participation in initiatives aimed at improving health care quality and patient safety.\(^47\) This commitment includes being receptive to and supportive of PS/QI initiatives, participating actively in systems-oriented quality improvement activities, and encouraging the sharing of lessons learned both within and among health care institutions. They must also role-model appropriate positive behaviours to address the hidden curriculum related to quality and patient safety. Enabling competency 1.2 in the 2005 Professional Role speaks generically to this need, but requires updating with specific language in the 2015 Framework.

2. **Professional accountability to uphold patient safety.** In the 2005 Framework, enabling competency 3.3 states that physicians should “recognize other professionals in need and respond appropriately.” Also relevant, but not unique to patient safety, is the need for physicians to report unprofessional conduct by colleagues to the appropriate authority. Physicians may also have reporting obligations related to colleagues whose mental or physical health, conduct, or behaviour poses a risk to patients or the public, or raises reasonable concerns about their ability to practise. Explicit language should be included in the 2015 Framework, particularly given the link between unprofessional behaviours and poor patient outcomes described in the literature.\(^48,49\)
Health Advocate

1. **Promoting health equity.** This value relates to one of the six core aims of quality, which is to promote equity in health care. Some of the language within the Health Advocate Role in the 2005 Framework, particularly key competency 3—“identify barriers to access to care and resources” and “identify vulnerable and marginalized populations”—speaks implicitly about the need to promote health equity. The 2015 Framework should include stronger language that specifically highlights the physician’s responsibility to advocate for equitable access to health care resources to serve all populations.

2. **Advocating for continuous improvement of health care quality and patient safety.** Many PS/QI efforts stall if they lack physician support and engagement. Thus, physician advocacy for systems-level changes to continuous improvement of health care quality and patient safety is critical. Enabling competency 4.6 within the 2005 version of the Health Advocate Role includes language that supports this notion: “Describe the role of the medical profession in advocating collectively for health and patient safety.” This language should be updated and modernized to more clearly state the importance of physician advocacy for patient safety and quality improvement.

Manager

1. **Quality improvement methodologies.** The 2005 Framework includes, as enabling competency 1.2, the physician’s ability to “participate in systemic quality process evaluation and improvement, such as patient safety initiatives.” This requires updating and should be expanded to include specific language about learning to use one or more of the quality improvement methodologies. Several approaches exist, such as the Model for Improvement (i.e., Plan-Do-Study-Act (PDSA) cycles) or “lean methodologies.” Training and proficiency in these foundational methodologies is critical for active engagement in continuous quality improvement, and so the 2015 Framework should be updated with specific language to reflect this need.

2. **Analyze and change the system in response to adverse events, near misses, and patient safety hazards.** The 2005 Framework lists patient safety as a broad concept within the Manager and Health Advocate Roles, but does not specify how physicians should respond when adverse events occur. Specific emphases in the 2015 Framework within the Manager Role should include taking part in adverse event reporting as well as participating in the analysis of systems to understand and change underlying processes that potentially lead to adverse events and near misses.

3. **The role of clinical informatics and health technology.** Increasingly, clinical informatics and new technologies are being used as tools to improve health care quality and patient safety (e.g., computerized provider order entry systems, electronic medical records). Physicians need to recognize the potential advantages, limitations, and unintended consequences associated with the use of clinical informatics on patient safety and quality improvement. There is also a desire to manipulate electronic health records to extract useful performance data to support improvement efforts. Physicians must be able to identify individuals with clinical informatics expertise and engage them in their efforts to measure their system performance to support quality improvement efforts.

4. **Resource stewardship.** Increasing attention has been paid in recent years paid to costs, efficiency, appropriateness of care, and value. Most recently, the Choosing Wisely campaign in the United States (soon to come to Canada) highlighted the need for physicians to take an evidence-based approach and avoid unnecessary overuse of finite health care resources to ensure the sustainability of our health care system. The Manager Role’s key competency 3 speaks to this need in the 2005 Framework, and we recommend again emphasizing its importance in the 2015 revision. In particular, physicians need to be able to articulate the concept of value in health care, employ strategies to overcome personal and organization factors influencing resource overuse, and improve care delivery processes to support high-value care.
5. Engaging others in the process of continuous improvement of health care quality and patient safety, including though working in teams.
Beyond developing competencies in teamwork skills as applied to the clinical setting, physicians need to work with other health care professionals when they engage in quality improvement and patient safety activities.

References


### Table 1
**Core Patient Safety and Quality Improvement competencies**

<table>
<thead>
<tr>
<th>Patient Safety/Quality Improvement competency</th>
<th>Scholar</th>
<th>Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribute to a culture that promotes the continuous improvement of health care quality and patient safety</td>
<td>1</td>
<td>2 2</td>
</tr>
<tr>
<td>Recognize and respond to patient safety hazards, near misses and adverse events</td>
<td>1</td>
<td>2 2</td>
</tr>
<tr>
<td>Seek opportunities to provide high-quality care</td>
<td>1</td>
<td>2 2</td>
</tr>
<tr>
<td>Describe how human and system factors influence decision-making and provision of patient care</td>
<td>1</td>
<td>2 2</td>
</tr>
<tr>
<td>Engage patients and families in continuous improvement of health care quality and patient safety</td>
<td>1 2</td>
<td></td>
</tr>
<tr>
<td>Technical procedural skill (both diagnostic and therapeutic) safety</td>
<td>1</td>
<td>2 2</td>
</tr>
</tbody>
</table>

Note that the number 1 refers to the Role where we recommend that the patient safety/quality improvement competency primarily resides, and that 2 refers to the other roles that contribute to that patient safety/quality improvement competency. For example, disclosing adverse events should reside primarily in the Communicator Role, but overlaps with the Professional and Health Advocate Roles.
<table>
<thead>
<tr>
<th>Patient Safety / Quality Improvement competency</th>
<th>CanMEDS Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient-centred communication</td>
<td>Scholar 1</td>
</tr>
<tr>
<td>Disclosure of adverse events to patients and families</td>
<td>Professional 2</td>
</tr>
<tr>
<td>Effective clinical documentation</td>
<td>Scholar 1, Professional 2</td>
</tr>
<tr>
<td>Teamwork (mutual support, communication, leadership, situation monitoring)</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Working in teams to continuously improve quality and patient safety</td>
<td>Scholar 1, Professional 2</td>
</tr>
<tr>
<td>Handover (between within-team providers)</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Care transitions (patients moving across the system)</td>
<td>Scholar 2, Professional 1, Manager 2</td>
</tr>
<tr>
<td>Consultations and referrals</td>
<td>Scholar 2</td>
</tr>
<tr>
<td>Integrating continuous quality improvement with continuous professional development / lifelong learning (including seeking ongoing opportunities to develop knowledge and skills in quality improvement and patient safety)</td>
<td>Scholar 1</td>
</tr>
<tr>
<td>Use of quality outcomes to guide development of personal learning plans</td>
<td>Scholar 1</td>
</tr>
<tr>
<td>Critical appraisal of patient safety and quality improvement literature</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Knowledge translation</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Recognizing quality improvement and patient safety as legitimate forms of scholarly activity</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Ensuring that patient safety is maintained throughout the learning experience (including safe clinical supervision)</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Fatigue management</td>
<td>Scholar 1</td>
</tr>
<tr>
<td>Coping with adverse events and outcomes</td>
<td>Scholar 1</td>
</tr>
<tr>
<td>Demonstrate a commitment to continuously improve health care quality and patient safety (including role modeling behaviours to address the hidden curriculum related to quality and patient safety)</td>
<td>Scholar 2, Professional 2, Manager 1</td>
</tr>
<tr>
<td>Demonstrate professional accountability to uphold patient safety</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Promoting health equity</td>
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</tr>
<tr>
<td>Advocating for continuous improvement of health care quality and patient safety</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>Quality improvement methodologies</td>
<td>Scholar 2</td>
</tr>
<tr>
<td>Respond to adverse events and patient safety hazards (informing, reporting, support to providers and patients, system analysis)</td>
<td>Scholar 2, Professional 1</td>
</tr>
<tr>
<td>The role of clinical informatics and health technology</td>
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<td>Resource stewardship</td>
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