Guiding principles for national entry-level competency profiles used in the Canadian Medical Association conjoint accreditation process

Approved by the Committee on Conjoint Accreditation
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Part I: Introduction

- Purpose

These principles have been developed to assist health science professional organizations in the development and revision of their entry-level competency profiles. The principles are intended to be facilitative and not prescriptive. The ultimate authority for approval of any professional organization’s national competency profile is its governing body.

**Principle 1:** The national professional organization representing a health profession, including or in collaboration with provincial/territorial regulatory bodies for the profession, is responsible for developing and approving the national entry-level competency profile for the profession.

- Relationship of competency profiles to the conjoint accreditation process

The mission of the conjoint accreditation process is to ensure national standards for educational programs in designated health science professions, thereby contributing to the competency of graduates and the quality of patient care in Canada.

The *Requirements for accreditation* specify the performance criteria that educational programs must meet in order to become accredited. Requirement 1 states: “The program enables students to attain the competencies specified in the national entry-level competency profile for the profession.” The existence of a national entry-level competency profile for a health science profession is one of six criteria for initial and continued inclusion of that profession in the conjoint accreditation process.

In order for any profession’s national entry-level competency profile to be used in the conjoint accreditation process, the organization representing the profession at a national level must submit the approved profile to the Committee on Conjoint Accreditation for acceptance and use within the process.
Key definitions from the Requirements for accreditation

Clinical education
The planned learning experiences for students in an actual or simulated clinical environment (e.g., actual or simulated hospital, clinic, laboratory or ambulance) that is representative of the current practice setting of the designated health science profession. In some professions, the national competency profile specifies the competencies that must be performed in the actual practice setting of the profession, and which competencies may be performed in a simulated clinical environment.

National entry-level competency profile
A list of the competencies accepted by the certification and regulatory bodies for a given health science profession as the basis for entry to the profession in 70% or more of the provinces/territories in which the profession is practised including 50% or more of all practitioners from all provinces/territories. Ideally, a national entry-level competency profile for a given health science profession is the basis for entry to the profession in all provinces/territories in which the profession is practised.

Entry-level competency
A behaviour (or set of behaviours) that demonstrates or reflects an element or elements such as knowledge, skills or attitudes required by an individual to perform a given task at entry to a profession. There should be congruence between entry-level competencies and learning outcomes.

Learning outcome
A result of learning. A measured level of performance that demonstrates the degree to which a given competency (or set of competencies) has been attained by the learner.

Part II: Structure of a national entry-level competency profile

Principle 2: A national entry-level competency profile for a health profession is a valid description of the competencies required for safe and effective practice at entry to the profession.

A national entry-level competency profile should contain the following elements in some form.

1) Statement of overall purpose
The statement of purpose should make reference to the following information:
- The national competency profile is the description of the professional behaviours required of a practitioner as the minimum competence for entry to the profession.
- The national competency profile is used by educational programs as a framework for curriculum development; programs are expected to develop measurable didactic and clinical learning objectives to guide the learner’s progress toward attainment of the entry-level competencies. An educational program may exceed the national competency profile, and may include additional competencies based on its mission and goals, as well as
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- The CMA accreditation process uses the national entry-level competency profile to assess whether educational programs are preparing graduates with the required competencies for entry to the profession. Programs must cross-reference all competencies of the national profile to their didactic and clinical components; the cross-reference is validated by the survey team through review of program documentation.

- The national certification body uses the national competency profile as the basis for its professional certification process, usually through a national examination or other assessment process. In developing a national examination, the certification body uses the competency profile to develop an examination blueprint that specifies the weighting of various competencies in the testing process.

- In some professions, there are provincial/territorial regulatory bodies that regulate the practice of the profession, including the requirements for entry to practice in the province/territory. Some provincial/territorial regulatory bodies have chosen to contract with CMA for use of the conjoint accreditation process as their mechanism for ensuring that programs in the province/territory include the requirements for registration. In these cases, the regulatory body accepts the national competency profile as the basis for program accreditation, and identifies any provincial/territorial competencies that are required for entry to practice in addition to the competencies of the national competency profile. Educational programs must also cross-reference the provincial/territorial competencies to their didactic and clinical components.

2) Description of the health science profession

The description of the health science profession should provide a context for the entry-level competencies. This description could include categories such as:

- The practitioner – an outline of the expectations for an entry-level practitioner and their interaction with the patient.
- The practice setting(s) – the types of medical or health care services where the profession practices.
- The practice model – the profession’s scope of practice and the practitioner’s role within the health care team.

3) Methodology

A description of the methodology used to develop the competency profile, and if applicable, the occupational analysis conducted as a precursor to the development of the competency profile.

A statement describing the extent of change to the competency profile from previous versions, i.e., whether the profile has new competencies or new competency categories, or whether the revisions are simply changes to terminology or format. An indication of how major changes in the profile are identified, e.g., shading or highlighting.

4) Competency areas

The competencies within a competency profile should be grouped into competency areas (or
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domains). Each profession should determine the competency areas and terminology that best describe its practice model.

The following competency areas should be included, either as separate competency areas, or as part of another competency area:

- Professional responsibilities including jurisprudence
- Ethics for health professionals
- Communication, interaction and collaboration
- Critical thinking and problem solving
- Safe practice
- Patient assessment/management
- Clinical applications

The following competency areas could be included, either as separate competency areas, or as part of another competency area:

- Quality management
- Resource management
- Research/applied investigation

Alternative terminology and additional competency areas could be included, depending on the profession’s practice model.

5) Description of competencies

A competency is a statement of behaviour (or set of behaviours) that a practitioner is able to perform independently, effectively and safely at entry to practice (see Key definitions). The competency statement includes an action verb and possibly another descriptor (e.g., performance environment, competency level) that specifies the performance required of a practitioner to be deemed competent at entry to practice. A competency should be measurable, so that its attainment is verifiable.

A competency profile usually includes two levels of competency statements: broad competency statements that describe overall or complex behaviours, and specific measurable competency statements that describe component performance elements of each broad competency. In some cases, a third level of competency statement may be needed to clarify the scope of a particular competency. Some professions choose to provide this level of clarification through an appendix to the competency profile.

A competency profile provides educational programs with a framework from which to develop competency-based learning objectives. Some professions may choose to provide educational programs with a separate, more detailed curriculum guide, which describes the specific knowledge, skills and attitudes required for attainment of each competency included in the competency profile. The competency profile differs from a curriculum guide in the level of detail provided.

Some professions also provide educational programs with an examination blueprint, which describes the weighting (%) of competencies by area for development of the professional examination. It should be noted that not all competencies included in a competency profile
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need to be tested on a professional examination; attainment of some competencies may be verified by an educational program’s internal evaluation processes. The accreditation process requires a program to provide verifiable data on student learning outcomes, and this data includes both national certification results and internal summative evaluation data.

6) Competency attainment

The competency profile should be consistent with the following definition of competency attainment (Requirements for accreditation, 2009).

An educational program in a health science profession provides students with an educational experience that ensures a logical progression toward competency attainment. This progression includes the following:

Theoretical learning and clinical simulation
Theoretical learning and clinical simulation activities are integral components of the educational process, and facilitate the acquisition of foundational knowledge and specific skills. As well, the opportunity to manage simulated patient cases can assist in the development of clinical readiness for direct patient contact. Clinical simulation is also useful for competency attainment in low-frequency and/or high-risk clinical procedures.

Direct patient contact in the practice setting of the profession
A health science education program also enables students to attain and demonstrate clinical competencies through direct patient contact in the actual practice setting of the profession. Students have the opportunity to integrate knowledge, skills, attitudes and judgement in real clinical situations that require problem-solving, communication and critical thinking to address patient needs and conditions. A program makes every effort to optimize a student’s experience with real patients; however, it is recognized that it may not be feasible for the student to perform all entry-level competencies in actual clinical situations.

The outcome of a well-integrated learning experience is a practitioner who has attained the competencies required for safe and effective practice at entry to the profession.
Part III: Development and validation of a national competency profile

Principle 3: A health profession reviews and updates its national entry-level competency profile regularly to ensure the relevance of the profile to current and evolving clinical practice.

- Development process

A national competency profile for a health science profession must be a valid reflection of the current competency requirements for entry-level practice in that profession across Canada (see Key definitions).

The methodology used to develop a profession’s competency profile should enable achievement of a national consensus within the profession on the required entry-level competencies, to a level consistent with the definition of a National Entry-level Competency Profile on page 2 of this document. Therefore, the development process should include consultation within the profession across all jurisdictions in Canada.

A profession should also have some mechanism to review and update its national competency profile regularly, ideally once every 5 years from the date of publication of a new profile, to ensure its relevance to current practice and its credibility among stakeholders.

It is advisable that a health science profession engage in some form of predictive exercise (“visioning”) to identify emerging practice trends in health care and their implications for the practice patterns of given health professions. This predictive exercise usually involves consultation with related medical and health professional groups and review of relevant research. The exercise could be part of the regular review of the competency profile or a separate activity; however, the exercise should inform the revision of the competency profile. Health professions should attempt to identify “future competencies” that will be required of entry-level practitioners in the future, e.g., within 5-10 years, to assist educational programs in their broad curriculum planning and to inform authorities responsible for health human resource planning.

A strategy used by many health professions is formation of a nationally representative “expert group” of practitioners and educators to function as a steering committee in the competency development/revision and validation processes. The expert group reviews current and future practice in the profession and, based on these practice patterns, develops a preliminary version of a new/revised profile of competencies required of entry-level practitioners. The expert group may also convene one or more focus groups with a wider range of health professions to explore future and emerging trends within health care that may have an impact on future practice of the profession.
Validation process

Principle 4: The development and revision of a national entry-level competency profile for a health profession includes a validation process whereby stakeholders at various levels in professional practice, regulatory, clinical and educational sectors are consulted on the competencies required for entry to the profession currently and in the foreseeable future.

Once a draft competency profile for a profession is developed, it is subjected to a national validation process by a broad group of stakeholders from settings that are representative of the profession’s practice patterns and the profession’s entry-level educational process. The validation process generally takes the form of a national survey, often web-based.

The validation process should involve the following stakeholders:

- Practitioners in the profession
- Managers/directors of clinical departments where the profession practises
- Senior health care administrators of institutions that employ members of the profession
- Educators (both senior administrators and faculty)
- Regulators (if applicable)
- Medical practitioners who work closely with members of the profession and sometimes
- Other relevant health professions or stakeholders

Most professions conduct the validation in stages based on the stakeholder groups consulted and survey data to be collected from each stakeholder group. Different strategies and survey questions are employed for different stakeholder groups.

For example, the survey of practitioners asks them to rate each proposed competency for:

- the frequency with which the practitioner currently performs this competency in daily work;
- the importance of this competency for safe and effective practice;
- and sometimes
- the importance of this competency for safe and effective practice in the future, e.g., within the next 5 years.

Validation surveys usually include one or more open-ended questions to elicit information about additional competencies that should be included in the profile and/or emerging trends in the profession. The survey of senior educational administrators may include questions about the implications of implementing the proposed new competencies into the educational programs.

If a profession’s competency profile specifies the performance environment for student performance of the competencies, the validation surveys sent to educators and preceptors should include some questions on the implications of these performance environments.

A validation survey also asks stakeholders to provide demographic information useful in the analysis and interpretation of results, e.g., employment role/title, province/territory of employment,
type of work setting (such as clinic, academic health centre, community hospital, community health service), years of experience, etc.

- **Analysis of validation survey data**

  The results of the validation survey are compiled and analyzed, together with response rates and demographic data.

  The survey data may reveal that the profession’s practice patterns vary across the country. Some competencies may be performed in certain provinces/territories, while not performed in others. The profession uses the survey data and pre-determined selection criteria to decide which competencies are to be included in the national profile.

  Ultimately, the competency profile for any health science profession must be a valid reflection of the practice requirements of an entry-level practitioner in Canada (see Key definitions).

  The frequency and importance data from validation surveys are also important for the profession in developing a blueprint for the national certification examination, and deciding on the weighting for each competency area.

- **Implementation of a new/revised competency profile**

  **Principle 5: The implementation time for a new/revised national entry-level competency profile for a health profession reflects sufficient adaptation time for educational programs.**

  It should be recognized for most health science professions that the graduation of the first entry-level practitioners under a new/revised competency profile will occur several years from the time the new/revised profile has been produced. The implementation time for a new/revised profile will depend on the magnitude of the competency changes and the length of most educational programs for the profession. The usual implementation time for new/revised competency profiles for the health science professions is 3-5 years.

  Professions should take this implementation time into consideration when determining the date of the first certification examination under the new profile.
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- **Advance notice of a new/revised competency profile**

  **Principle 6:** The national professional organization representing a health profession, including or in collaboration with provincial/territorial regulatory bodies for the profession, provides provincial/territorial governments and relevant senior educational administrators with advance notice of the development of a new/revised national entry-level competency profile, and following the stakeholder validation, provides notice of the implementation date of the validated profile, including the rationale for competency changes and outcomes of the validation process.

  It is advisable that the national organization representing the health profession, including or in collaboration with provincial/territorial regulatory bodies, provide provincial/territorial government departments of advanced education and health, as well as senior administrators of college and university programs for the health profession, with advance notice that the profession will be undertaking the development of a new/revised national entry-level competency profile.

  Following the stakeholder validation process for the new/revised competency profile, the profession should provide the provincial/territorial governmental authorities and relevant educational administrators with advance notice of the implementation date for the validated new/revised competency profile. The notice should include the rationale for any competency changes to the profile as well as a description of the stakeholder validation process undertaken and its outcomes.

**Conclusion**

These guiding principles are intended to assist health science professions in the development and revision of their entry-level competency profiles. A health science profession should apply these principles in a way that best reflects the nature of its practice. Ultimately, each profession is responsible for ensuring the integrity of its competency profile.

These guiding principles will evolve as new methodologies emerge for revising and validating competency profiles. Health science professions are encouraged to share new strategies with CMA Conjoint Accreditation Services for the benefit of other professions and the accreditation process.
APPENDIX 1

Summary of guiding principles for development and revision of competency profiles

**Principle 1:** The national professional organization representing a health profession, including or in collaboration with provincial/territorial regulatory bodies for the profession, is responsible for developing and approving the national entry-level competency profile for the profession.

**Principle 2:** A national entry-level competency profile for a health profession is a valid description of the competencies required for safe and effective practice at entry to the profession.

**Principle 3:** A health profession reviews and updates its national entry-level competency profile regularly to ensure the relevance of the profile to current and evolving clinical practice.

**Principle 4:** The development and revision of a national entry-level competency profile for a health profession includes a validation process whereby stakeholders at various levels in professional practice, regulatory, clinical and educational sectors are consulted on the competencies required for entry to the profession currently and in the foreseeable future.

**Principle 5:** The implementation time for a new/revised national entry-level competency profile for a health profession reflects sufficient adaptation time for educational programs.

**Principle 6:** The national professional organization representing a health profession, including or in collaboration with provincial/territorial regulatory bodies for the profession, provides provincial/territorial governments and relevant senior educational administrators with advance notice of the development of a new/revised national entry-level competency profile, and following the stakeholder validation, provides notice of the implementation date of the validated profile, including the rationale for competency changes and outcomes of the validation process.
APPENDIX 2

Links to competency profiles for select designated health science professions

Canadian Association of Medical Radiation Technologists (www.camrt.ca)
- Magnetic resonance imaging
- Nuclear medicine technology
- Radiation therapy
- Radiological technology

Canadian Association of Physician Assistants (www.caopa.net)
- Physician assistant

Canadian Society for Medical Laboratory Science (www.csmls.org)
- Clinical genetics
- Cytotechnology
- Medical laboratory assistant
- Medical laboratory technology

Canadian Society of Cardiology Technologists (www.csct.ca)
- Cardiology technology

Canadian Society of Clinical Perfusion (www.cscp.ca)
- Cardiovascular perfusion

Canadian Society of Diagnostic Medical Sonographers / Canadian Association of Registered Diagnostic Ultrasound Professionals (www.cardup.org)
- Diagnostic ultrasound technology (cardiac sonographer, general sonographer, vascular sonographer)

Paramedic Association of Canada (www.paramedic.ca)
- Paramedicine (primary care paramedic, advanced care paramedic, critical care paramedic)