



Standards of Accreditation for Residency Programs in Infectious Diseases (adult)

The *Standards of Accreditation for Residency Programs in Infectious Diseases (adult)* are a national set of standards maintained by the Royal College for the evaluation and accreditation of *Infectious Diseases (adult)* residency programs. The standards aim to ensure the quality of residency education provided across Canada, and ensure *Infectious Diseases (adult)* residency programs adequately prepare residents to meet the health care needs of their patient population(s), during and upon completion of training.

The standards include expectations specific to the discipline, as well as the expectations set out in the *General Standards of Accreditation for Residency Programs*, which are applicable to all residency programs. In instances where the indicators reflected in the *General Standards of Accreditation for Residency Programs* have been modified within this document to reflect a discipline-specific expectation, the indicator as reflected in this document takes precedence. The standards are intended to be read in conjunction with the national discipline-specific documents for *Infectious Diseases (adult)*.

Standards Organization Framework

Level	Description
Domain	Domains, defined by the Future of Medical Education in Canada-Postgraduate (FMEC-PG) Accreditation Implementation Committee, introduce common organizational terminology to facilitate alignment of accreditation standards across the medical education continuum.
Standard	The overarching outcome to be achieved through the fulfillment of the associated requirements.
Element	A category of the requirements associated with the overarching standard.
Requirement	A measurable component of a standard.
Mandatory and exemplary indicators	<p>A specific expectation used to evaluate compliance with a requirement (i.e. to demonstrate that the requirement is in place).</p> <p>Mandatory indicators must be met to achieve full compliance with a requirement.</p> <p>Exemplary indicators provide objectives beyond the mandatory expectations and may be used to introduce indicators that will become mandatory over time.</p> <p>Indicators may have one or more sources of evidence, not all of which will be collected through the onsite accreditation review (e.g. evidence may be collected via the institution/program profile in the CanAMS).</p>

Domain: Program Organization

Standard 1: There is an appropriate organizational structure, with leadership and administrative personnel to support the residency program, teachers, and residents effectively.

Element 1.1: The program director leads the residency program effectively.

Requirement 1.1.1: The program director is available to oversee and advance the residency program.

Indicator 1.1.1.1: The program director has adequate protected time to oversee and advance the residency program consistent with the postgraduate office guidelines and in consideration of the size and complexity of the program.

Indicator 1.1.1.2: The program director is accessible and responsive to the input, needs, and concerns of residents.

Indicator 1.1.1.3: The program director is accessible and responsive to the input, needs, and concerns of teachers and members of the residency program committee.

Requirement 1.1.2: The program director has appropriate support to oversee and advance the residency program.

Indicator 1.1.2.1: The faculty of medicine, postgraduate office, and academic lead of the discipline provide the program director with sufficient support, autonomy, and resources for the effective operation of the residency program.

Indicator 1.1.2.2: Administrative support is organized and adequate to support the program director, the residency program, and residents.

Requirement 1.1.3: The program director provides effective leadership for the residency program.

Indicator 1.1.3.1: The program director fosters an environment that empowers members of the residency program committee, residents, teachers, and others as required to identify needs and implement changes.

Indicator 1.1.3.2: The program director advocates for equitable, appropriate, and effective educational experiences.

Indicator 1.1.3.3: The program director communicates with residency program stakeholders effectively.

Indicator 1.1.3.4: The program director anticipates and manages conflict effectively.

Indicator 1.1.3.5: The program director respects the diversity and protects the rights and confidentiality of residents and teachers.

Indicator 1.1.3.6: The program director demonstrates active participation in professional development in medical education.

Indicator 1.1.3.7 [Exemplary]: *The program director demonstrates a commitment to and facilitates educational scholarship and innovation to advance the residency program.*

Indicator 1.1.3.8 [Royal College Requirement]: The program director or delegate attends at least one specialty committee meeting per year in person or remotely.

Element 1.2: There is an effective and functional residency program committee structure to support the program director in planning, organizing, evaluating, and advancing the residency program.

Requirement 1.2.1: The residency program committee structure is composed of appropriate key residency program stakeholders.

Indicator 1.2.1.1: Major academic and clinical components and relevant learning sites are represented on the residency program committee.

Indicator 1.2.1.2: There is an effective, fair and transparent process for residents to select their representatives on the residency program committee.

Indicator 1.2.1.3: There is an effective process for individuals involved in resident wellness and safety program/plans to provide input to the residency program committee.

Indicator 1.2.1.4 [Exemplary]: There is an effective process for individuals responsible for the quality of care and patient safety at learning sites to provide input to the residency program committee.

Requirement 1.2.2: The residency program committee has a clear mandate to manage and evaluate the key functions of the residency program.

Indicator 1.2.2.1: There are clearly written terms of reference that address the composition, mandate, roles, and responsibilities of each member; accountability structures; decision-making processes; lines of communication; and meeting procedures.

Indicator 1.2.2.2: The terms of reference for the residency program committee are reviewed on a regular basis, and are refined as appropriate.

Indicator 1.2.2.3: The mandate of the residency program committee includes planning and organizing the residency program, including selection of residents, educational design, policy and process development, safety, resident wellness, assessment of resident progress, and continuous improvement.

Indicator 1.2.2.4: Meeting frequency of the residency program committee is sufficient to fulfil its mandate.

Indicator 1.2.2.5: The residency program committee structure includes a competence committee (or equivalent) responsible for reviewing residents' readiness for increasing professional responsibility, promotion, and transition to practice.

Requirement 1.2.3: There is an effective and transparent decision-making process that includes input from residents and other residency program stakeholders.

Indicator 1.2.3.1: Members of the residency program committee are actively involved in a collaborative decision-making process, including regular attendance at and active participation in committee meetings.

Indicator 1.2.3.2: The residency program committee actively seeks feedback from residency program stakeholders, discusses issues, develops action plans and follows up on identified issues.

Indicator 1.2.3.3: There is a culture of respect for residents' opinions by the residency program committee.

Indicator 1.2.3.4: Actions and decisions are communicated in a timely manner to the residency program's residents, teachers, and administrative personnel, and to the academic lead of the discipline and others responsible for the delivery of the residency program, as appropriate.

Standard 2: All aspects of the residency program are collaboratively overseen by the program director and the residency program committee.

Element 2.1: Effective policies and processes to manage residency education are developed and maintained.

Requirement 2.1.1: The residency program committee has well-defined, transparent, and functional policies and processes to manage residency education.

Indicator 2.1.1.1: There is an effective mechanism to review and adopt applicable postgraduate office and learning site policies and processes.

Indicator 2.1.1.2: There is an effective, transparent mechanism to collaboratively develop and adopt required program- and discipline-specific policies and processes.

Indicator 2.1.1.3: There is an effective mechanism to disseminate the residency program's policies and processes to residents, teachers, and administrative personnel.

Indicator 2.1.1.4: All individuals with responsibility in the residency program follow the central policies and procedures regarding ensuring appropriate identification and management of conflicts of interest.

Element 2.2: The program director and residency program committee communicate and collaborate with residency program stakeholders.

Requirement 2.2.1: There are effective mechanisms to collaborate with the division/department, other programs, and the postgraduate office.

Indicator 2.2.1.1: There is effective communication between the residency program and the postgraduate office.

Indicator 2.2.1.2: There are effective mechanisms for the residency program to share information and collaborate with the division/department, as appropriate, particularly with respect to resources and capacity.

Indicator 2.2.1.3: There is collaboration with the faculty of medicine's undergraduate medical education program and with continuing professional development programs, including faculty development, as appropriate.

Indicator 2.2.1.4 [Exemplary]: *There is collaboration with other health professions to provide shared educational experiences for learners across the spectrum of health professions.*

Element 2.3: Resources and learning sites are organized to meet the requirements of the discipline.

Requirement 2.3.1: There is a well-defined and effective process to select the residency program's learning sites.

Indicator 2.3.1.1: There is an effective process to select, organize, and review the residency program's learning sites based on the required educational experiences, and in accordance with the central policy(ies) for learning site agreements.

Indicator 2.3.1.2: Where the faculty of medicine's learning sites are unable to provide all educational requirements, the residency program committee, in collaboration with the postgraduate office, recommends and helps establish inter-institution affiliation (IIA) agreement(s) to ensure residents acquire the necessary competencies.

Requirement 2.3.2: Each learning site has an effective organizational structure to facilitate education and communication.

Indicator 2.3.2.1: Each learning site has a site coordinator/supervisor responsible to the residency program committee.

Indicator 2.3.2.2: There is effective communication and collaboration between the residency program committee and the site coordinators/supervisors for each learning site to ensure program policies and procedures are followed.

Requirement 2.3.3: The residency program committee engages in operational and resource planning to support residency education.

Indicator 2.3.3.1: There is an effective process to identify, advocate for, and plan for resources needed by the residency program.

Domain: Education Program

Standard 3: Residents are prepared for independent practice.

Element 3.1: The residency program's educational design is based on outcomes-based competencies and/or objectives that prepare residents to meet the needs of the population(s) they will serve in independent practice.

Requirement 3.1.1: Educational competencies and/or objectives are in place that ensure residents progressively meet all required standards for the discipline and address societal needs.

Indicator 3.1.1.1 (modified): The educational objectives meet the subspecialty-specific requirements for adult Infectious Diseases, as outlined in the Objectives of Training and the Subspecialty Training Requirements in adult and pediatric Infectious Diseases.

Indicator 3.1.1.2: The competencies and/or objectives address each of the Roles in the CanMEDS/CanMEDS-FM Framework specific to the discipline.

Indicator 3.1.1.3: The competencies and/or objectives articulate different expectations for residents by stage and/or level of training.

Indicator 3.1.1.4: Community and societal needs are considered in the design of the residency program's competencies and/or objectives.

Element 3.2: The residency program provides educational experiences designed to facilitate residents' attainment of the outcomes-based competencies and/or objectives.

Requirement 3.2.1: Educational experiences are guided by competencies and/or objectives, and provide residents with opportunities for increasing professional responsibility at each stage or level of training.

Indicator 3.2.1.1: The educational experiences are defined specifically for and/or are mapped to the competencies and/or objectives.

Indicator 3.2.1.2 (modified): The educational experiences meet the subspecialty-specific requirements as outlined in the Objectives of Training and the Subspecialty Training Requirements in adult and pediatric Infectious Diseases.

Indicator 3.2.1.3 (modified): The educational experiences and supervision are appropriate for residents' stage or level of training, and support residents' achievement of increasing professional responsibility to the level of independent practice.

Indicator 3.2.1.4: The educational experiences include the opportunity for residents to assume responsibility for patients over a sufficiently long period to observe the history of disease and the benefits and complications of therapy.

Indicator 3.2.1.5: The educational experiences include opportunities for residents to assume the role of junior attending, under appropriate supervision.

Indicator 3.2.1.6: The educational experiences include opportunities for resident after-hours coverage for the infectious diseases service that is relevant to infectious diseases training, as permitted by provincial, hospital, and residency organizational agreements, or as approved by the program director.¹

¹ This should generally not be in-house.

Indicator 3.2.1.7: The educational experiences include organized and supervised opportunities in public health for the resident to acquire and utilize the principles and methods of epidemiology and public health as applied to infectious diseases in the community setting and, wherever possible, participate in the investigation of an epidemic.

Indicator 3.2.1.8: The educational experiences include opportunities for participation in community-based experiences and/or rotations supported by appropriate supervision and a sufficient volume and variety of patient encounters, particularly in the areas of sexually transmitted diseases, TB, travel medicine, public health, and HIV management; these educational experiences are encouraged by the residency program.

Indicator 3.2.1.9 [Exemplary]: *The educational experiences include at least one block selective in community infectious diseases, under the supervision of an Infectious Diseases specialist.*

Indicator 3.2.1.10: The educational experiences include a formal, structured, and supervised rotation in infection prevention and control where the resident will learn relevant principles of hospital epidemiology and become familiar with the methods and problems related to hospital infection prevention and control activities, attend meetings of the hospital Infection Prevention and Control Committee, and participate fully in all aspects of the hospital Infection Prevention and Control program.

Indicator 3.2.1.11: The educational experiences include a formal, structured, and supervised rotation in antimicrobial stewardship where the resident will learn and incorporate into practice the principles of judicious antimicrobial prescribing at the patient, facility, and community levels, attend meetings of the hospital antimicrobial stewardship committee, and participate fully in all aspects of the hospital antimicrobial stewardship program.

Indicator 3.2.1.12: The educational experiences include a regularly scheduled longitudinal resident clinic at least one-half day per week, or equivalent.

Indicator 3.2.1.13: The educational experiences include adequate experience in diagnostic microbiology in a medical microbiology laboratory, under the direct supervision of a specialist certified in Medical Microbiology¹, in the following areas:

- General microbiology
 - routine techniques, including use of different culture media, specimen collection and primary inoculation, and various staining techniques
 - bench experience and familiarity with special isolation and identification techniques related to urine, respiratory secretions, blood, tissue and body fluids, and enteric and anaerobic bacteriology
 - antibiotic susceptibility testing and assays for antibiotic levels

- TB, mycology and parasitology
 - specimen collection, transport and media for fungi and mycobacteria
 - staining and antibiotic sensitivity testing for mycobacteria
 - identification of common fungi, including candida, aspergillus, cryptococcus; fungal serology and antigen detection
 - stool examination for ova, trophozoites, and larvae; concentration techniques; string test; special stains and serology
- Virology, mycoplasma and chlamydia
 - viral detection methods for herpes viruses, respiratory viruses, and enteric viruses
 - viral serology, including Epstein Barr Virus (EBV), hepatitis, HIV, measles, and rubella
 - chlamydia and mycoplasma isolation and antigen detection systems
- Special techniques
 - quantitative bacteriology, rapid diagnostic techniques, ELISA, immunofluorescence, deoxyribonucleic acid (DNA) probes, and electron microscopy
- Infection control and nosocomial pathogens
 - role of microbiology laboratory in infection prevention and control and surveillance;
 - laboratory investigation of nosocomial outbreaks, including bio-typing, phage typing, and molecular methods.

¹ Or with qualifications acceptable to the program director.

Requirement 3.2.2: The residency program uses a comprehensive curriculum plan, which is specific to the discipline, and addresses all the CanMEDS/CanMEDS-FM Roles.

Indicator 3.2.2.1: There is a clear curriculum plan that describes the educational experiences for residents.

Indicator 3.2.2.2: The curriculum plan incorporates all required educational objectives or key and enabling competencies of the discipline.

Indicator 3.2.2.3: The curriculum plan addresses expert instruction and experiential learning opportunities for each of the CanMEDS/CanMEDS-FM Roles with a variety of suitable learning activities.

Indicator 3.2.2.4: The curriculum plan includes training in continuous improvement, with emphasis on improving systems of patient care, including patient safety, with opportunities for residents to apply their training in a project or clinical setting.

Indicator 3.2.2.5: The curriculum plan includes fatigue risk management, specifically, education addressing the risks posed by fatigue to the practice setting, and the individual and team-based strategies available to manage the risk.

Indicator 3.2.2.6: The curriculum plan includes organized scholarly activities, with dedicated protected time for the resident.¹ (Medical Expert).

¹ It is preferable that this time be allocated as part of the standard working day of the resident and not be scheduled prior to or following the standard working day.

Indicator 3.2.2.7 [Exemplary]: *The curriculum plan involves regularly scheduled tutorial activities, seminars, teaching rounds, and journal clubs (Medical Expert).*

Indicator 3.2.2.8: The curriculum plan includes active participation by residents in both the planning and production of conferences (Medical Expert).

Indicator 3.2.2.9: The curriculum plan includes teaching covering the clinical knowledge essential to the understanding and practice of Infectious Diseases (Medical Expert).

Indicator 3.2.2.10: The curriculum plan includes the scientific basis of Infectious Diseases (Medical Expert).

Indicator 3.2.2.11: The curriculum plan includes opportunities for residents to acquire communication skills related to:

- pre- and post-test counselling;

- contact tracing and public health notification of communicable diseases;
- educating patients and their partners and/or families about infections and preventive strategies; and
- educating physicians and other health professionals about infection prevention and control and use of antimicrobials (Communicator).

Indicator 3.2.2.12: The curriculum plan includes the opportunity for residents to acquire collaborative skills related to:

- working in patient care teams; and
- working with infection control professionals, microbiology technologists, and public health professionals (Collaborator).

Indicator 3.2.2.13: The curriculum plan includes the opportunity for residents to learn management skills related to:

- infection prevention and control activities and effective antimicrobial stewardship, including participation in relevant institutional committee meetings;
- patient safety activities, including morbidity and mortality reviews;
- cost-effective use of the microbiology laboratory; and
- outpatient antimicrobial therapy, including intravenous therapy (Leader).

Indicator 3.2.2.14: The curriculum plan includes the opportunity for residents to acquire Health Advocate skills related to:

- immunization;
- risk reduction (e.g., safe needle use, safer sex practices);
- post-exposure prophylaxis; and
- patient safety in the health care setting (e.g., infection prevention and control) (Health Advocate).

Indicator 3.2.2.15: The curriculum plan includes the opportunity for residences to acquire Scholar skills related to:

- completion of faculty supervised clinical or basic research for submission to a peer reviewed meeting or journal; and

- education of medical students, residents, and other health professionals (Scholar).

Requirement 3.2.3: The educational design allows residents to identify and address individual learning objectives.

Indicator 3.2.3.1: Individual residents' educational experiences are tailored to accommodate their learning needs and future career aspirations, while meeting the national standards and societal needs for their discipline.

Indicator 3.2.3.2: The residency program fosters a culture of reflective practice and lifelong learning among its residents.

Requirement 3.2.4: Residents' clinical responsibilities are assigned in a way that supports the progressive acquisition of competencies and/or objectives, as outlined in the CanMEDS/CanMEDS-FM Roles.

Indicator 3.2.4.1: Residents' clinical responsibilities are assigned based on level or stage of training and their individual level of competence.

Indicator 3.2.4.2: Residents' clinical responsibilities, including on-call duties, provide opportunities for progressive experiential learning, in accordance with all CanMEDS/CanMEDS-FM Roles.

Indicator 3.2.4.3: Residents are assigned to particular educational experiences in an equitable manner, such that all residents have opportunities to meet their educational needs and to achieve the expected competencies of the residency program.

Indicator 3.2.4.4: Residents' clinical responsibilities do not interfere with their ability to participate in mandatory academic activities.

Requirement 3.2.5: The educational environment supports and promotes resident learning in an atmosphere of scholarly inquiry.

Indicator 3.2.5.1: Residents have access to, and mentorship for, a variety of scholarly opportunities, including research as appropriate.

Indicator 3.2.5.2: Residents have protected time to participate in scholarly activities, including research as appropriate.

Indicator 3.2.5.3: Residents have protected time to participate in professional development to augment their learning and/or to present their scholarly work.

Element 3.3: Teachers facilitate residents' attainment of competencies and/or objectives.

Requirement 3.3.1: Resident learning needs, stage or level of training, and other relevant factors are used to guide all teaching, supporting resident attainment of competencies and/or objectives.

Indicator 3.3.1.1: Teachers use experience-specific competencies and/or objectives to guide educational interactions with residents.

Indicator 3.3.1.2: Teachers align their teaching appropriately with residents' stage or level of training, and individual learning needs and objectives.

Indicator 3.3.1.3: Teachers contribute to the promotion and maintenance of a positive learning environment.

Indicator 3.3.1.4: Residents' feedback to teachers facilitates the adjustment of teaching approaches and learner assignment, as appropriate, to maximize the educational experiences.

Element 3.4: There is an effective, organized system of resident assessment.

Requirement 3.4.1: The residency program has a planned, defined, and implemented system of assessment.

Indicator 3.4.1.1: The system of assessment is based on residents' attainment of experience-specific competencies and/or objectives.

Indicator 3.4.1.2: The system of assessment clearly identifies the methods by which residents are assessed for each educational experience.

Indicator 3.4.1.3: The system of assessment clearly identifies the level of performance expected of residents based on level or stage of training.

Indicator 3.4.1.4: The system of assessment includes identification and use of appropriate assessment tools tailored to the residency program's educational experiences, with an emphasis on direct observation where appropriate.

Indicator 3.4.1.5: The system of assessment meets the requirements within the specific standards for the discipline, including the achievement of competencies in all CanMEDS roles or CFPC evaluation objectives, as applicable.

Indicator 3.4.1.6: The system of assessment is based on multiple assessments of residents' competencies during the various educational experiences and over time, by multiple assessors, in multiple contexts.

Indicator 3.4.1.7: Teachers are aware of the expectations for resident performance based on level or stage of training and use these expectations in their assessments of residents.

Indicator 3.4.1.8: The system of assessment includes assessment of each resident's learning portfolio, including but not limited to patient logs, In-Training Evaluation Reports (ITERs), teaching assessments, and observed clinical encounters.

Indicator 3.4.1.9: The system of assessment includes a process for conducting an observed clinical encounter for each of the CanMEDS competencies for each resident at least once each year.

Indicator 3.4.1.10 [Exemplary]: *In addition to regular rotation-specific in-training evaluations, the system of assessment requires that each resident in adult Infectious Diseases has at least one written examination per year.*¹

¹ Preferably in a short answer question format.

Requirement 3.4.2: There is a mechanism in place to engage residents in regular discussions for review of their performance and progression.

Indicator 3.4.2.1: Residents receive regular, timely, meaningful, in-person feedback on their performance.

Indicator 3.4.2.2: The program director and/or an appropriate delegate meet(s) regularly with residents to discuss and review their performance and progress.

Indicator 3.4.2.3: There is appropriate documentation of residents' progress toward the attainment of competencies, which is available to the residents in a timely manner.

Indicator 3.4.2.4: Residents are aware of the processes for assessment and decisions around promotion and completion of training.

Indicator 3.4.2.5: The residency program fosters an environment where formative feedback is actively used by residents to guide their learning.

Indicator 3.4.2.6: Residents and teachers have shared responsibility for recording residents' learning and achievement of competencies and/or objectives for their discipline at each level or stage of training.

Requirement 3.4.3: There is a well-articulated process for decision-making regarding resident progression, including the decision on satisfactory completion of training.

Indicator 3.4.3.1: The competence committee (or equivalent) regularly reviews residents' readiness for increasing professional responsibility, promotion, and transition to practice, based on demonstrated achievement of expected competencies and/or objectives for each level or stage of training.

Indicator 3.4.3.2: The competence committee (or equivalent) makes a summative assessment regarding residents' readiness for certification and independent practice, as appropriate.

Indicator 3.4.3.3: The program director provides the respective College with the required summative documents for exam eligibility and for each resident who has successfully completed the residency program.

Indicator 3.4.3.4 [Exemplary]: *The competence committee (or equivalent) uses advanced assessment methodologies (e.g., learning analytics, narrative analysis) to inform recommendations/decisions, as appropriate, on resident progress.*

Requirement 3.4.4: The system of assessment allows for timely identification of and support for residents who are not attaining the required competencies or objectives as expected.

Indicator 3.4.4.1: Residents are informed in a timely manner of any concerns regarding their performance and/or progression.

Indicator 3.4.4.2: Residents who are not progressing as expected are provided with the required support and opportunity to improve their performance, as appropriate.

Indicator 3.4.4.3: Any resident requiring formal remediation and/or additional educational experiences, is provided with:

- a documented plan detailing objectives of the formal remediation and their rationale;
- the educational experiences scheduled to allow the resident to achieve these objectives;
- the assessment methods to be employed;
- the potential outcomes and consequences;
- the methods by which a final decision will be made as to whether the resident has successfully completed a period of formal remediation; and
- the appeal process.

Domain: Resources

Standard 4: The delivery and administration of the residency program are supported by appropriate resources.

Element 4.1: The residency program has the clinical, physical, technological, and financial resources to provide all residents with the educational experiences needed to acquire all competencies and/or objectives.

Requirement 4.1.1: The patient population is adequate to ensure that residents experience the breadth of the discipline.

Indicator 4.1.1.1: The residency program provides access to the volume and diversity of patients appropriate to the discipline.

Indicator 4.1.1.2: The residency program provides access to diverse patient populations and environments, in alignment with the community and societal needs for the discipline.

Indicator 4.1.1.3: The volume and diversity of patients available to the residency program are sufficient to support residents' acquisition of knowledge, skills, and attitudes relating to population aspects of age, gender, culture, and ethnicity, appropriate to adult Infectious Diseases.

Requirement 4.1.2: Clinical and consultative services and facilities are organized and adequate to ensure that residents experience the breadth of the discipline.

Indicator 4.1.2.1: The residency program has access to the diversity of learning sites and scopes of practice specific to the discipline.

Indicator 4.1.2.2: The residency program has access to appropriate consultative services to meet the general and specific standards for the discipline.

Indicator 4.1.2.3: The residency program has access to appropriate diagnostic services and laboratory services to meet both residents' competency requirements and the delivery of quality care.

Indicator 4.1.2.4: Resident training takes place in functionally inter- and intra-professional learning environments that prepare residents for collaborative practice.

Indicator 4.1.2.5: The residency program's clinical service participates in the management of an adequate volume and variety of patients, and provides appropriate clinical supervision, for the resident to develop proficiency in the following areas of adult Infectious Diseases:

- acute community-acquired infections (including bacteremia, pneumonia, meningitis, osteomyelitis, complicated urinary tract infections, orbital infections);
- diseases of travel and immigration;
- infections associated with medical devices;
- infections in the immune compromised host, including patients with human immunodeficiency virus (HIV) infection, and solid organ and hematopoietic stem cell transplant patients;
- infections in critically ill patients (including intensive care unit, burns, trauma);
- infections during pregnancy;

- infective endocarditis;
- nosocomial, including postoperative, infections;
- sexually transmitted diseases;
- systemic mycoses; and
- tuberculosis and other mycobacterial infections.

Indicator 4.1.2.6: The residency program's clinical service has an adequate volume of patients to provide at least 300 supervised consultations per resident, per year of clinical training.

Indicator 4.1.2.7: The residency program has access to an accredited pediatric Infectious Diseases program, or equivalent acceptable to the Royal College¹, to provide sufficient experience in pediatric infectious diseases.

¹ Where an accredited pediatric Infectious Diseases residency program is not available at the same university, the only two acceptable alternatives for the pediatric component of the adult residency program are:

- Pediatric infectious diseases experience at the same university, supported by:
 - at least one full-time pediatric Infectious Disease specialist whose qualifications are acceptable to the program director to supervise the residents' clinical pediatric Infectious Disease training;
 - an adequate patient number to provide at least 200 pediatric consultations per year at the facility, providing experience with the main types of neonatal and pediatric infectious diseases;
 - clinical exposure to a broad base of neonatal and pediatric infectious diseases; and
 - supplementation of the clinical exposure with lectures, reading, and discussions to cover areas where clinical material is not available.
- Training in an accredited pediatric Infectious Diseases residency program at another Canadian university.

Indicator 4.1.2.8: The residency program has access to adult outpatient clinics in which the resident acts as an Infectious Diseases consultant for the investigation and treatment of a broad variety of infections not requiring hospitalization (including diseases of travel and immigration, tuberculosis (TB), and sexually transmitted diseases) as well as for post-discharge follow-up, in order for the resident to experience the outpatient management of common infectious diseases.

Indicator 4.1.2.9: The residency program has access to adult outpatient clinics in which the resident acts as the Infectious Diseases physician responsible for the ongoing management of patients with chronic infections (e.g. HIV, hepatitis B and C, outpatient intravenous [IV] therapy), in order for the resident to gain experience in the outpatient management of those chronic infections that are frequently managed primarily by an Infectious Diseases physician.

Indicator 4.1.2.10: The residency program has access to the following clinical resources:

- critical care;
- emergency department; transplantation;
- ophthalmology;
- surgery, including orthopedics, cardiac surgery, neurosurgery, and obstetrics and gynecology;
- internal medicine; and
- public health.

Indicator 4.1.2.11: The residency program has access to a medical microbiology laboratory and medical imaging.

Indicator 4.1.2.12 [Exemplary]: *The residency program has access to pathology and immunology services.*

Indicator 4.1.2.13: The university sponsors an accredited program in Internal Medicine.

Requirement 4.1.3: The residency program has the necessary financial, physical, and technical resources.

Indicator 4.1.3.1: There are adequate financial resources for the residency program to meet the general and specific standards for the discipline.

Indicator 4.1.3.2: There is adequate space for the residency program to meet educational requirements.

Indicator 4.1.3.3: There are adequate technical resources for the residency program to meet the specific requirements for the discipline.

Indicator 4.1.3.4: Residents have appropriate access to adequate facilities and services to conduct their work, including on-call rooms, workspaces, internet, and patient records.

Indicator 4.1.3.5: The program director, residency program committee, and administrative personnel have access to adequate space, information technology, and financial support to carry out their duties.

Indicator 4.1.3.6: The residency program has access to facilities for clinical or basic science research rotations, which meet the following requirements:

- the director of the research program is university-appointed;
- the research program and the role of the resident are clearly defined; and
- there is adequate space, equipment, assistance, and, where indicated, animal facilities.

Element 4.2: The residency program has the appropriate human resources to provide all residents with the required educational experiences.

Requirement 4.2.1: Teachers appropriately implement the residency curriculum, supervise and assess trainees, contribute to the program, and role model effective practice.

Indicator 4.2.1.1 (modified): The number, credentials, and competencies of the teachers are adequate to provide the required clinical teaching, academic teaching, assessment, and feedback to residents, including teaching in the basic and clinical sciences related to Infectious Diseases in both adults and children; this requires a minimum of four physicians with an academic appointment who specialize in adult Infectious Diseases.

Indicator 4.2.1.2: The number, credentials, competencies, and scope of practice of the teachers are sufficient to supervise residents in all clinical environments, including when residents are on-call and when providing care to patients, as part of the residency program, outside of a learning site.

Indicator 4.2.1.3: There are sufficient competent individual supervisors to support a variety of resident scholarly activities, including research as appropriate.

Indicator 4.2.1.4: There is a designated individual who facilitates the involvement of residents in scholarly activities, including research as appropriate, and who reports to the residency program committee.

Indicator 4.2.1.5: The program director has Royal College certification in Infectious Diseases, or equivalent qualifications acceptable to the Royal College.

Domain: Learners, Teachers, and Administrative Personnel

Standard 5: Safety and wellness is promoted throughout the learning environment.

Element 5.1: The safety and wellness of patients and residents are actively promoted.

Requirement 5.1.1: Residents are appropriately supervised.

Indicator 5.1.1.1: Residents and teachers follow central policies and any program-specific policies regarding the supervision of residents, including ensuring the physical presence of the appropriate supervisor, when mandated, during acts or procedures performed by the resident, and ensuring supervision is appropriate for the level or stage of training.

Indicator 5.1.1.2: Teachers are available for consultation for decisions related to patient care in a timely manner.

Indicator 5.1.1.3: Teachers follow the policies and processes for disclosure of resident involvement in patient care, and for patient consent for such participation.

Requirement 5.1.2: Residency education occurs in a safe learning environment.

Indicator 5.1.2.1: Safety is actively promoted throughout the learning environment for all those involved in the residency program.

Indicator 5.1.2.2: Effective resident safety policies and processes are in place, which may include policies and processes defined centrally or specific to the program, and which reflect general and/or discipline-specific physical, psychological, and professional resident safety concerns, as appropriate. The policies and processes include, but are not limited to:

- After-hours consultation
- Complaints and allegations of malpractice
- Fatigue risk management
- Hazardous materials
- Infectious agents
- Ionizing radiation
- Patient encounters (including house calls)
- Patient transfers (e.g., Medevac)
- Safe disclosure of patient safety incidents
- Travel
- Violence, including sexual and gender-based violence.

Indicator 5.1.2.3: Policies regarding resident safety effectively address both situations and perceptions of lack of resident safety, and provide multiple avenues of access for effective reporting and management.

Indicator 5.1.2.4: Concerns with the safety of the learning environment are appropriately identified and remediated.

Indicator 5.1.2.5: Residents are supported and encouraged to exercise discretion and judgment regarding their personal safety, including fatigue.

Indicator 5.1.2.6: Residents and teachers are aware of the process to follow if they perceive safety issues.

Requirement 5.1.3: Residency education occurs in a positive learning environment that promotes resident wellness.

Indicator 5.1.3.1: There is a positive and respectful learning environment for all involved in the residency program.

Indicator 5.1.3.2: Residents are aware of and are able to access appropriate, confidential wellness support to address physical, psychological, and professional resident wellness concerns.

Indicator 5.1.3.3: The central policies and processes regarding resident absences and educational accommodation are applied effectively.

Indicator 5.1.3.4: The processes regarding identification, reporting, and follow-up of resident mistreatment are applied effectively.

Indicator 5.1.3.5: Residents are supported and encouraged to exercise discretion and judgment regarding their personal wellness.

Standard 6: Residents are treated fairly and supported adequately throughout their progression through the residency program.

Element 6.1: The progression of residents through the residency program is supported, fair, and transparent.

Requirement 6.1.1: There are effective, clearly defined, transparent, formal processes for the selection and progression of residents.

Indicator 6.1.1.1: Processes for resident selection, promotion, remediation, dismissal, and appeals are applied effectively, transparent, and aligned with applicable central policies.

Indicator 6.1.1.2: The residency program encourages and recognizes resident leadership.

Requirement 6.1.2: Support services are available to facilitate resident achievement of success.

Indicator 6.1.2.1: The residency program provides formal, timely career planning and counseling to residents throughout their progress through the residency program.

Standard 7: Teachers deliver and support all aspects of the residency program effectively.

Element 7.1: Teachers are assessed, recognized, and supported in their development as positive role models for residents in the residency program.

Requirement 7.1.1: Teachers are regularly assessed and supported in their development.

Indicator 7.1.1.1: There is an effective process for the assessment of teachers involved in the residency program, aligned with applicable central processes, that balances timely feedback with preserving resident confidentiality.

Indicator 7.1.1.2: The system of teacher assessment ensures recognition of excellence in teaching, and is used to address performance concerns.

Indicator 7.1.1.3: Resident input is a component of the system of teacher assessment.

Indicator 7.1.1.4: Faculty development for teaching that is relevant and accessible to the program is offered on a regular basis.

Indicator 7.1.1.5: There is an effective process to identify, document, and address unprofessional behaviour by teachers.

Indicator 7.1.1.6: The residency program identifies and addresses priorities for faculty development within residency training.

Requirement 7.1.2: Teachers in the residency program are effective role models for residents.

Indicator 7.1.2.1: Teachers exercise the dual responsibility of providing high quality and ethical patient care, and excellent supervision and teaching.

Indicator 7.1.2.2: Teachers contribute to academic activities of the residency program and institution, which may include, but are not limited to: lectures, workshops, examination preparation, and internal reviews.

Indicator 7.1.2.3: Teachers are supported and recognized for their contributions outside the residency program, which may include, but are not limited to: peer reviews, medical licensing authorities, exam boards, specialty committees, accreditation committees, specialty societies, and government medical advisory boards.

Indicator 7.1.2.4: Teachers contribute to scholarship on an ongoing basis.

Standard 8: Administrative personnel are valued and supported in the delivery of the residency program.

Element 8.1: There is support for the continuing professional development of residency program administrative personnel.

Requirement 8.1.1: There is an effective process for the professional development of the residency program administrative personnel.

Indicator 8.1.1.1: There is a role description that outlines the knowledge, skills, and expectations for residency program administrative personnel, that is applied effectively.

Indicator 8.1.1.2: Residency program administrative personnel receive professional development, provided centrally and/or through the residency program, based on their individual learning needs.

Indicator 8.1.1.3: Residency program administrative personnel receive formal and/or informal feedback on their performance in a fair and transparent manner, consistent with any applicable university, health organization, or union contracts.

Domain: Continuous Improvement

Standard 9: There is continuous improvement of the educational experiences, to improve the residency program and ensure residents are prepared for independent practice.

Element 9.1: The residency program committee systematically reviews and improves the quality of the residency program.

Requirement 9.1.1: There is a systematic process to regularly review and improve the residency program.

Indicator 9.1.1.1: There is an evaluation of each of the residency program's educational experiences, including the review of related competencies and/or objectives.

Indicator 9.1.1.2: There is an evaluation of the learning environment, including evaluation of any influence, positive or negative, resulting from the presence of the hidden curriculum.

Indicator 9.1.1.3: Residents' achievements of competencies and/or objectives are reviewed.

Indicator 9.1.1.4: The resources available to the residency program are reviewed.

Indicator 9.1.1.5: Residents' assessment data are reviewed.

Indicator 9.1.1.6: The feedback provided to teachers in the residency program is reviewed.

Indicator 9.1.1.7: The residency program's leadership at the various learning sites is assessed.

Indicator 9.1.1.8: The residency program's policies and processes for residency education are reviewed.

Requirement 9.1.2: A range of data and information is reviewed to inform the evaluation and improvement of all aspects of the residency program.

Indicator 9.1.2.1: Information from multiple sources, including feedback from residents, teachers, administrative personnel, and others as appropriate, is regularly reviewed.

Indicator 9.1.2.2: Information identified by the postgraduate office's internal review process and any data centrally collected by the postgraduate office are accessed.

Indicator 9.1.2.3: Mechanisms for feedback take place in an open collegial atmosphere.

Indicator 9.1.2.4 [Exemplary]: *A resident e-portfolio (or an equivalent tool) is used to support the review of the residency program and its continuous improvement.*

Indicator 9.1.2.5 [Exemplary]: *Education and practice innovations in the discipline in Canada and abroad are reviewed.*

Indicator 9.1.2.6 [Exemplary]: *Patient feedback to improve the residency program is regularly collected/accessed.*

Indicator 9.1.2.7 [Exemplary]: *Feedback from recent graduates is regularly collected/accessed to improve the residency program.*

Requirement 9.1.3: Based on the data and information reviewed, strengths are identified, and action is taken to address areas identified for improvement.

Indicator 9.1.3.1: Areas for improvement are used to develop and implement relevant and timely action plans.

Indicator 9.1.3.2: The program director and residency program committee share the identified strengths and areas for improvement (including associated action plans) with residents, teachers, administrative personnel, and others as appropriate, in a timely manner.

Indicator 9.1.3.3: There is a clear and well-documented process to evaluate the effectiveness of actions taken and to take further action as required.

Glossary of Terms

Term	Description
academic lead of the discipline	The individual responsible for a clinical department/division (e.g. department chair, division lead)
administrative personnel	Postgraduate and program administrative personnel, as defined below.
assessment	A process of gathering and analyzing information on competencies from multiple and diverse sources to measure a physician's competence or performance and compare it with defined criteria (Royal College of Physicians and Surgeons of Canada, 2012).
attestation	Verification of satisfactory completion of all necessary training, assessment, and credentialing requirements of an area of medical expertise. Attestation does not confer certification in a discipline (Royal College of Physicians and Surgeons of Canada, 2012).
central	This term applies to policies, processes, guidelines, and/or services developed by the faculty of medicine, postgraduate office, and/or postgraduate education committee, and applied to more than one residency program.
certification	Formal recognition of satisfactory completion of all necessary training, assessment, and credentialing requirements of a discipline, indicating competence to practise independently (Royal College of Physicians and Surgeons of Canada, 2012).
CFPC	College of Family Physicians of Canada.
CMQ	Collège des médecins du Québec
competence	The array of abilities across multiple domains of competence or aspects of physician performance in a certain context. Statements about competence require descriptive qualifiers to define the relevant abilities, context, and stage of training or practice. Competence is multi-dimensional and dynamic; it changes with time, experience, and settings (Frank, et al., 2010).

competency (competencies)	An observable ability of a health professional related to a specific activity that integrates knowledge, skills, values, and attitudes. As competencies are observable, they can be measured and assessed to ensure their acquisition. Competencies can be assembled like building blocks to facilitate progressive development (Frank, et al., 2010).
competent	Possessing the required abilities in all domains of competence in a certain context at a defined stage of medical education or practice (Frank, et al., 2010).
continuing professional development	An ongoing process of engaging in learning and development beyond initial training, which includes tracking and documenting the acquisition of skills, knowledge, and experiences.
continuous improvement	The systematic approach to making changes involving cycles of change (i.e. Plan, Do, Study, Act) that lead to improved quality and outcomes. It is used as an internal tool for monitoring and decision-making (e.g., What are the strengths and weaknesses of the residency program? How can we improve our system of assessment?).
dean	The senior faculty officer appointed to be responsible for the overall oversight of a faculty of medicine.
discipline	Specialty and/or subspecialty recognized by one of the certification colleges (Association of American Medical Colleges, 2012).
division/department	An organizational unit around which clinical and academic services are arranged.
domain(s) of competence	Broad distinguishable areas of competence that together constitute a general descriptive framework for a profession (Association of American Medical Colleges, 2012).
educational accommodation	Recognizing that people have different needs and taking reasonable efforts to ensure equal access to residency education.
equitable	Used in the context of having and/or allocating resources, and refers to fair and impartial distribution of resources (Oxford University Press, n.d.).

evaluation	A process of employing a set of procedures and tools to provide useful information about medical education programs and their components to decision-makers (RIME Handbook). This term is often used interchangeably with assessment when applied to individual physicians, but is not the preferred term (Royal College of Physicians and Surgeons of Canada, 2012).
experiential learning	Experiential learning is an engaged learning process whereby students (i.e. residents) “learn by doing” and by reflecting on the experience (University of Michigan, 2016).
faculty development	That broad range of activities institutions use to renew or assist teachers in their roles (Centra, 1978).
faculty of medicine	A faculty of medicine, school of medicine, or college of medicine under the direction of a Canadian university/universities.
fatigue risk management	A set of ongoing fatigue prevention practices, beliefs, and procedures integrated throughout all levels of an organization to monitor, assess, and minimize the effects of fatigue and associated risks for the health and safety of healthcare personnel and the patient population they serve (Fatigue Risk Management Task Force, 2018).
hidden curriculum	A set of influences that function at the level of organizational structure and culture, affecting the nature of learning, professional interactions, and clinical practice (Association of Faculties of Medicine of Canada, 2010).
independent practice	Practice in which physicians are licensed to be accountable for their own medical practice that is within their scope of practice and that normally takes place without supervision.
institution	Encompasses the University, faculty of medicine, and postgraduate office.
inter-institutional agreement (IIA)	A formal agreement used in circumstances where a faculty of medicine requires residents to complete a portion of their training under another recognized faculty of medicine, in alignment with policies and procedures for IIAs as set by the Royal College, CFPC, and/or CMQ.

internal review	An internal evaluation conducted to identify strengths of, and areas for improvement for, the residency program and/or institution.
inter-professional	Individuals from two or more professions (e.g., medicine and nursing) working collaboratively with shared objectives, decision-making, responsibility, and power, to develop care plans and make decisions about patient care (CanMEDS).
intra-professional	Two or more individuals from within the same profession (e.g. medicine) working together interdependently to develop care plans and make decisions about patient care (CanMEDS).
learning environment	The diverse physical locations, contexts, and cultures in which residents learn (Great School Partnership, 2012).
learning site	A hospital, clinic, or other facility that contributes to residents' educational experiences.
mistreatment	Unprofessional behaviour involving intimidation, harassment, and/or abuse.
objective(s)	An outcomes-based statement that describes what the resident will be able to do upon completion of the learning experience, stage of training, or residency program.
physical safety	Includes protection against biological risks, such as immunization, radiation protection, respiratory protection, exposure to body fluids; it also includes protection against risks associated with physical spaces, with care provided during home visits, travel and meetings with violent patients (University of Montreal, n.d.).
postgraduate administrative personnel	Individuals who support the postgraduate dean in coordination and administration related to the oversight of residency programs, including the postgraduate manager (or equivalent).
postgraduate dean	A senior faculty officer appointed to be responsible for the overall conduct and supervision of postgraduate medical education within the faculty of medicine.
postgraduate education committee	The committee (and any subcommittees as applicable) overseen by the postgraduate dean, that facilitates the governance and oversight of all residency programs within a faculty of medicine.

postgraduate manager	Senior administrative personnel responsible for supporting the postgraduate dean and providing overall administrative oversight of the postgraduate office.
postgraduate office	A postgraduate medical education office under the direction of the faculty of medicine, with responsibilities for residency programs.
professional safety	Includes protection from allegations of malpractice, insurance against medical malpractice suits, disclosure assistance, academic and professional record confidentiality, as well as reporting procedures where confidentiality is assured and there are no reprisals (University of Montreal, n.d.).
program administrative personnel	Individuals who support the program director by performing administrative duties related to planning, directing, and coordinating the residency program.
program director	The individual responsible and accountable for the overall conduct and organization of the residency program. The individual is accountable to the postgraduate dean and academic lead of the discipline.
protected time	A designated period of time granted to an individual for the purposes of performing a task and/or participating in an activity.
psychological safety	Includes prevention, protection and access to resources to counter the risks of psychological distress, alcohol or drug dependence, intimidation and harassment (University of Montreal, n.d.).
residency program	An accredited residency education program in one of Canada's nationally recognized disciplines, associated with a recognized faculty of medicine, overseen by a program director and residency program committee.
residency program committee	The committee (and subcommittees, as applicable), overseen by the program director, that supports the program director in the administration and coordination of the residency program.
residency program stakeholder	A person or organization with an interest in and/or who is impacted by the residency program.

resident	An individual registered in an accredited residency program following eligible undergraduate training leading to certification or attestation in a recognized discipline (Royal College of Physicians and Surgeons of Canada, 2012).
resource	Includes educational, clinical, physical, technical, and financial materials and people (e.g. teachers and administrative personnel) required for delivery of a residency program.
Royal College	Royal College of Physicians and Surgeons of Canada.
site coordinator	The coordinator/supervisor with responsibility for residents at a learning site.
social accountability	The direction of education, research and service activities towards addressing the priority health concerns of the community, region, and/or nation. Priority health concerns are to be identified jointly by governments, health care organizations, health professionals, and the public (Boelen & Heck, 1995).
teacher	An individual responsible for teaching residents. Teacher is often used interchangeably with terms such as supervisor or preceptor.
teaching	Includes formal and informal teaching of residents, including the hidden curriculum.
wellness	A state of health, namely, a state of physical, mental, and social well-being, that goes beyond the absence of disease or infirmity (World Health Organization, n.d.).

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