

*Canadian College of
Microbiologists*



*Collège Canadien des
Microbiologistes*

Accreditation Standards for Postgraduate Fellowship Programs in Clinical Microbiology

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Approved by: CCM Board of Directors

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1. Introduction

1.1. Purpose

The purpose of these standards is to define the minimum requirements of CCM-accredited educational programs for doctoral-level training in Clinical Microbiology in Canada. These standards are intended to assist medical, clinical, and public health microbiology programs in meeting and exceeding the minimum requirements in the design and conduct of educational programs. The standards described herein must be carried out to achieve and maintain program accreditation.

The terms “must”, “shall”, and “require” identify quality system elements that the CCM considers mandatory for an accredited training program

1.2. Description of the Profession

The Fellow of the Canadian College of Microbiologists (FCCM) certification recognizes the expertise in clinical microbiology of Microbiologists holding doctoral degrees who have pursued additional training in clinical microbiology. Clinical Microbiologists have appointments in hospital, public health or private diagnostic laboratories with a mandate to provide clinical direction and responsibility for the testing being performed.

The scope of activity of Clinical Microbiologists is defined in the FCCM Scope of Activity document, which is available on the CCM website at <https://www.ccm.ca/wp-content/uploads/2019/10/FCCM-Scope-of-Activity.2019.pdf>

2. Program Goals

The goals of a Clinical Microbiology training program are to prepare Trainees to be technically skilled, professionally competent, and competent to function as a clinical laboratory leader, consultant, and educator in clinical microbiology. Upon the completion of their education, trainees should be able to carry out the core functions of a practicing Clinical Microbiologist, which include the capacity to:

Direct and develop an accredited clinical laboratory service, both operationally and financially, that will support and improve the clinical diagnosis and epidemiological investigation of infectious diseases.

Generate, disseminate and interpret data from microbiological investigations as they apply to the diagnosis, management, and treatment of patients with infectious diseases and public health scenarios involving infectious diseases.

Educate clinical/medical professional and technical personnel.

Establish research programs that advance the field of infectious diseases for improved patient care and public health.

Act as microbiology consultants to support clinical and public health programs/initiatives at the local, national and international level.

3. Administrative Structure and Governance

3.1. Program Administration

A Clinical Microbiology Fellowship Training Program Committee is required to administer and monitor residency applications, admissions, educational objectives, training evaluations, professional conduct, and graduation or dismissal from the program. This committee must be comprised of but not limited to the Program Director and representatives of each of the training sites.

The Clinical Microbiology Fellowship Training Program Committee must meet at least twice per year to review trainee progress, address resident issues and concerns, and review the specific training program objectives annually. Meeting minutes must be recorded and archived.

Committee process and procedure for the administration of the above and supporting responsibilities must be developed, periodically reviewed, and publicly accessible.

3.2. Program Director

The program director must lead the Clinical Microbiology Fellowship Training Program Committee, fulfill its mandate, and be ultimately responsible for the organization, administration, periodic review, continued development and general effectiveness of the program.

The program director must be certified as a FCCM, a Diplomate of the American Board of Medical Microbiology (ABMM) or Medical Microbiologist according to the Royal College Medical Microbiology Speciality Committee. The program director must have a university appointment and must be active full time in microbiology work.

The FCCM Standing Committee Chair must be notified when a new program director is appointed.

There must be designated responsible individuals at all affiliated institutions providing instruction for the trainees. There must be an active liaison between the program director and these individuals.

The program director must meet with trainees every 6 months, at minimum, to review and document trainee progress and plan supplemental learning activities as needed.

The program director must maintain a permanent file of progress reports, evaluations, and other relevant documentation for each trainee, to be shared with the trainee, until the training has been completed.

The program director may not participate in FCCM examination development or administration.

3.3. Institutional Requirements

Postgraduate fellowship programs must be established in institutions with complete clinical microbiology or reference laboratories, which perform clinical and/or public health microbiology procedures. The volume of testing must be of sufficient quality and quantity to provide the opportunity for all trainees in the program to achieve the educational objectives and receive the necessary experience to successfully complete the FCCM examination process and function as described within the Scope of Activity document.

If the institution lacks one or more program elements/aspects, the program may still be accredited provided that collaborative arrangements have been made with affiliate institutions that can provide the elements/aspects that are unavailable at the primary institution.

When more than one institution is involved in the overall program delivery of bench experience, clinical experience, and didactic lectures, the accreditation will be awarded to the primary institution that assumes responsibility for trainee selection, admission and guidance, program curriculum design and overall delivery, program coordination and verification of program success.

3.4. Affiliate Institutions

Affiliated institutions may be involved to ensure that all program elements/aspects can be met. Each affiliated institution must have a designated responsible individual who is in charge of the program administration at that site. The program director is responsible for the overall assurance of program completion. As such, active communication must exist between the program director and the institution's responsible individual when the trainee is at that site.

The designated responsible individual at each affiliate institution must meet the requirements established for the program director.

The FCCM Standing Committee Chair need not be notified when the responsible individuals at each affiliate institution are appointed as long as the new individuals continue to meet the established criteria.

3.5. Institution Certification

The teaching institutions must be accredited, certified or licensed as required by local existing laws or accepted practice by recognized North American agencies.

4. Curriculum

4.1. Program Length

The standard program length is two years; however, programs may be longer based on individual program directors' assessments of the local training environment.

4.2. Areas of Training

The postdoctoral training program must provide the necessary education, training and practice in all of the speciality areas of medical and public health laboratory microbiology detailed in the FCCM Syllabus. The FCCM Syllabus is available at <http://www.ccm.ca/wp-content/uploads/2014/10/FCCM-Syllabus.pdf> .

There must be an organized schedule of rotations at each of the involved institutions, covering all areas required to fulfill the educational requirements of the program. Instruction should be provided through bench training and experience, didactic courses, hospital rounds, laboratory rounds, clinical conferences, workshops, self-instructional materials and management training. Trainees must be given the opportunity to act as a consultant to healthcare providers and laboratory colleagues, with appropriate supervision.

It is imperative that the activities assigned to the trainees be appropriately educational and not simply service work. Research activities should be secondary to clinical training opportunities.

4.3. Evaluation of Instruction

The program must have a means to systematically evaluate the trainee at designated intervals throughout the program. Performance and competence must be documented in relation to the program's stated objectives. These objectives must be provided to the trainee prior to the commencement of the program. A formal review of the trainee's progress should be completed annually and should involve written, oral and practical evaluations. Performance must be documented and reviewed with the trainee.

4.4. Program and Performance Records

The responsibilities of each institution and the designated responsible individual at each site must be clearly documented in the program materials.

Records must be kept of trainee activities at primary and affiliate institutions. The records should include the trainee's attendance, participation, achievement and formal evaluations. These records should be compiled by the program director. The program director is responsible for maintaining all records as described in 5.2 and 5.4.

5. Resources

5.1. General Resources

Teaching faculty, technical/clinical staff, financial and physical resources, as detailed below, must be sufficient to support all of the trainees admitted to the microbiology programs offered by the institution (CCM microbiology postdoctoral fellowship programs and Royal College of Physician and Surgeons of Canada residency programs).

5.2. Teaching Faculty

There must be a sufficient number of qualified teaching staff to supervise the trainees and provide education covering the breadth of medical and public health laboratory microbiology detailed in the FCCM Syllabus and FCCM Scope of Activity documents. Teaching staff must be qualified through academic preparation, experience or employment appointment to teach the assigned subjects.

5.3. Technical Staff

All involved institutions must have sufficient experienced medical laboratory technologists to ensure trainees receive complete, practical exposure in all areas described in the program objectives. Ideally, laboratories will have dedicated teaching technologists to assist in the structure of the trainee's rotations and provide additional educational support and activities (eg. provision of unknown specimens for work-up).

5.4. Financial Resources

The institution must ensure there are sufficient financial resources to continue operation of the laboratory and educational components of the program for the entire length of any accepted trainee's program.

Adequate stipend support should be provided for the trainees.

5.5. Physical Resources

Adequate laboratories, classrooms and office space must be available.

6. Trainees

6.1. Program Description

Selected trainees must be provided with a clear description of the program, its contents, objectives and evaluation processes prior to the commencement of the program. Such information should be provided to candidates interested in the program upon request.

The trainees must also be provided with information on the program stipend, travel support and scheduled time off.

6.2. Program Admission

The candidate successfully admitted to a clinical microbiology postdoctoral training program must have earned a PhD with graduate education in microbiology or a related field, deemed appropriate by the program director.

Candidate selection should be performed by a committee consisting of a minimum of three Microbiologists, including the program director. The committee should be relatively small and should ideally include a representative from each affiliate institution. The basis of the decision for selecting a trainee must be documented in writing and retained for seven years.

6.3. Guidance of Trainees

Program directors must be readily available to assist trainees in meeting the program's objectives.

6.4. Records of Trainees

The program director is responsible for maintaining detailed records from each institution involved in a trainee's program for seven years. The results of the annual formal evaluations

must be maintained for seven years. A summary report of each trainee must be maintained indefinitely.

6.5. Remediation, Withdrawal or Termination

In the event that disciplinary action is required throughout a program, written documentation of the precipitating actions/events, the disciplinary action and any follow-up actions or requirements must be documented in the trainee's records.

Policies and procedures for the remediation, withdrawal or termination of a trainee in the postdoctoral fellowship program must be fair and made available to the trainee prior to the commencement of the program. These documents must delineate the events or situations that may result in the need for remediation or ultimate termination, the individuals who will be involved in this decision process, the specific timeframes for the process, the process for notification of the trainee, and an appeal process for the trainee. Programs may refer to and adhere to the procedures and policies for remediation, withdrawal and termination that are established by the University's Postgraduate Medical Education Office in lieu of creating procedures and policies specific to their CCM-accredited educational programs for doctoral-level training in Clinical Microbiology.