INTRODUCTION

A university wishing to have an accredited program in Medical Genetics must also sponsor accredited programs in Internal Medicine and Pediatrics.

The purpose of this document is to provide program directors and surveyors with an interpretation of the general standards of accreditation as they relate to the accreditation of programs in Medical Genetics. This document should be read in conjunction with the General Standards of Accreditation, the Objectives of Training, and the Specialty Training Requirements in Medical Genetics.

STANDARD B1: ADMINISTRATIVE STRUCTURE

There must be an appropriate administrative structure for each residency program.

Please refer to Standard B1 in the General Standards of Accreditation for the interpretation of this standard. The program director must have a university appointment. The program director must have Royal College certification in Medical Genetics or equivalent.

STANDARD B2: GOALS AND OBJECTIVES

There must be a clearly worded statement outlining the goals of the residency program and the educational objectives of the residents.

The general goals and objectives for Medical Genetics are outlined in the Objectives of Training and the Specialty Training Requirements in Medical Genetics. Based upon these general objectives, each program must develop rotation specific objectives, suitable for that particular program, as noted in Standard B2 of the General Standards of Accreditation.

STANDARD B3: STRUCTURE AND ORGANIZATION OF THE PROGRAM

There must be an organized program of rotations and other educational experiences, both mandatory and elective, designed to provide each resident with the opportunity to fulfill the educational requirements and achieve competence in the specialty or subspecialty.
The structure and organization of each accredited program in Medical Genetics must be consistent with the specialty training requirements as outlined in the Objectives of Training and the Specialty Training Requirements in Medical Genetics.

Residents must be provided with increasing individual professional responsibility, under appropriate supervision, according to their level of training, ability, and experience in the management of Medical Genetics patients.

During the 18-block period of clinical Medical Genetics rotation, the program must ensure continuing longitudinal exposure to a variety of patients with genetic and metabolic diseases.

Exposure to community and/or population-based learning experiences such as outreach clinics, telehealth patient encounters, or population screening programs may be done concurrently with other activities during their residency.

**STANDARD B4: RESOURCES**

There must be sufficient resources including teaching faculty, the number and variety of patients, physical and technical resources, as well as the supporting facilities and services necessary to provide the opportunity for all residents in the program to achieve the educational objectives and receive full training as defined by the Royal College specialty training requirements.

In those cases where a university has sufficient resources to provide most of the training in Medical Genetics but lacks one or more essential elements, the program may still be accredited provided that formal arrangements are made to send residents to another accredited residency program for periods of appropriate prescribed training.

Learning environments must include experiences that facilitate the acquisition of knowledge, skills, and attitudes relating to aspects of age, gender, culture, and ethnicity appropriate to Medical Genetics.

1. **Teaching Faculty**

There must be a sufficient number of qualified teaching staff, including genetic counsellors and medical geneticists, to supervise residents and provide teaching in the basic and clinical sciences related to the specialty. The teaching staff should have a nucleus of full time teachers.

2. **Laboratory Faculty**

The individuals responsible for the laboratory instruction and supervision of residents must hold qualifications consistent with or equivalent to the national standards for professional laboratory personnel of the Canadian College of Medical Geneticists. The directors of the laboratories must have university appointments.
3. Number and Variety of Patients

There must be definite mechanisms to ensure that training provided in Medical Genetics, Internal Medicine, and Pediatrics meets the specific needs and program requirements for residents in Medical Genetics. There must be an active teaching service(s) providing fetal assessment and management of pregnancies at risk due to maternal or fetal indications.

4. Clinical Services Specific to Medical Genetics

a. Patient Care

In order to provide a learning experience in following the natural history and longitudinal management of certain genetic disorders, residents must have the opportunity to follow a sufficient number and variety of patients, both inpatient and outpatient, throughout their evaluation, treatment, and care. Essential elements of training include adequate exposure to prenatal, metabolic, cancer, adult and pediatric general genetics as well as dysmorphology. The program must provide residents with the opportunity to obtain experience in the provision of in- and outpatient consultation services in Medical Genetics to primary care physicians and other specialists.

b. Laboratory

Essential elements of training include adequate exposure to diagnostic laboratory experience in:
- Cytogenetics
- Molecular genetics
- Biochemical genetics

STANDARD B5: CLINICAL, ACADEMIC AND SCHOLARLY CONTENT OF THE PROGRAM

The clinical, academic, and scholarly content of the program must be appropriate for university postgraduate education and adequately prepare residents to fulfil all of the CanMEDS Roles of the specialist. The quality of scholarship in the program will, in part, be demonstrated by a spirit of enquiry during clinical discussions at the bedside, in clinics, or in the community, and in seminars, rounds, and conferences. Scholarship implies an in-depth understanding of basic mechanisms of normal and abnormal states and the application of current knowledge to practice.

Please refer to Standard B5 in the General Standards of Accreditation, the Objectives of Training, the Specialty Training Requirements in Medical Genetics and the CanMEDS framework for the interpretation of this standard. Each program must develop a curriculum for each of the CanMEDS Roles, which reflects the uniqueness of the program and its particular environment. Specific additional requirements are listed below.
1. **Medical Expert**

In addition to the *General Standards of Accreditation*, the following requirements apply:

- The residency program **must** provide course work or an equivalent formal educational program in molecular genetics, cytogenetics, genomics, human genetics, and genetic epidemiology/population genetics at the advanced level.

2. **Communicator**

In addition to the *General Standards of Accreditation*, the following requirements apply:

- Resources **must** be available to provide the equivalent of a four-week practicum focusing on general (non-genetic) counselling and communication skills.

3. **Collaborator**

The *General Standards of Accreditation* apply to this section.

4. **Manager**

The *General Standards of Accreditation* apply to this section.

5. **Health Advocate**

The *General Standards of Accreditation* apply to this section.

6. **Scholar**

In addition to the *General Standards of Accreditation*, the following requirements apply:

- The program **must** provide residents with an opportunity to complete a research project and disseminate the results.

7. **Professional**

The *General Standards of Accreditation* apply to this section.

**STANDARD B6: ASSESSMENT OF RESIDENT PERFORMANCE**

There must be mechanisms in place to ensure the systematic collection and interpretation of assessment data on each resident enrolled in the program.

Please refer to Standard B6 in the *General Standards of Accreditation* for the interpretation of this standard.
There **must** be regular assessment of the resident's knowledge, skills and attitudes, using measures appropriate to the attribute being assessed. The performance of the resident **must** be measured against the goals of the program. It is particularly important that counselling, diagnostic and management skills, research, and the ability to interpret laboratory data be appropriately assessed, by direct observation and with feedback to the resident.

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