Clinical Immunology and Allergy Competencies

2025
VERSION 2.0

Effective for residents who enter training on or after July 1, 2025.

DEFINITION

Clinical Immunology and Allergy is the branch of medicine concerned with the investigation, diagnosis, and medical management of disorders involving the immune system, with an emphasis on allergic, autoimmune, and immunodeficiency disorders.

CLINICAL IMMUNOLOGY AND ALLERGY PRACTICE

Clinical immunologists/allergists focus on the evaluation and care of patients of all ages with allergic and immunologic disorders. Allergic disorders include anaphylaxis, asthma, contact and atopic dermatitis, urticaria, rhinitis, and eosinophilic and mast cell disorders. Patients may have allergies to aeroallergens, stinging insects, foods, medications (including biologics and vaccines), and latex. Immunologic disorders are typically complex with multi-system dysfunction, and include primary and secondary immunodeficiencies, and autoimmune diseases, as well as transplantation immunology. Clinical immunologists/allergists may concentrate their practice on one or both aspects of the discipline.

Clinical immunologists/allergists provide assessment, management, and longitudinal care. They perform and interpret assessments, including immediate and delayed hypersensitivity tests, patch tests, spirometry, and food and drug challenges. They interpret tests of immune function to diagnose and manage patients with immune disorders. Management may include immunization, antimicrobial therapy, other pharmacotherapy, immune globulin replacement therapy, immune suppression, immune modulation, hematopoietic stem cell transplantation and/or genetic modification, and desensitization.

The practice of Clinical Immunology and Allergy is predominantly based in the outpatient setting, with some activities done preferentially in the hospital setting. Clinical immunologists/allergists practice in rural and urban settings and may be located in a single provider outpatient clinic or work with a team of physicians and other health professionals.

Clinical immunologists/allergists collaborate with a variety of specialists and family physicians. They may work within an interprofessional team of nurses, respiratory therapists, certified

asthma educators, pharmacists, dietitians, social workers, and psychologists to provide care for their patients.

The discipline of Clinical Immunology and Allergy is rapidly evolving due to the increasing prevalence allergic disorders, advances in understanding the underlying pathogenesis, improved diagnostics, and emerging therapies.

ELIGIBILITY REQUIREMENTS TO BEGIN TRAINING (ADULT STREAM)

These eligibility requirements apply to those who began training in Internal Medicine prior to July 1, 2023:

Royal College certification in Internal Medicine

OR

Eligibility for the Royal College examination in Internal Medicine

OR

Registration in a Royal College-accredited residency program in Internal Medicine (see requirements for these qualifications)

A maximum of one year of training may be undertaken during concurrent training for certification in Internal Medicine

These eligibility requirements apply to those who began training in Internal Medicine on or after July 1, 2023:

Royal College certification in Internal Medicine

OR

Successful completion of the Core stage of training in a Royal College accredited residency program in Internal Medicine (see requirements for these qualifications)

Training in Clinical Immunology and Allergy may overlap with completion of requirements for certification in Internal Medicine (see requirements for the Overlap Training and Alternative Pathway to Internal Medicine Certification).

ELIGIBILITY REQUIREMENTS TO BEGIN TRAINING (PEDIATRIC STREAM)

Royal College certification in Pediatrics

OR

Successful completion of the Transition to Practice stage of training in a Royal College accredited residency program in Pediatrics[1]

ELIGIBILITY REQUIREMENTS FOR EXAMINATION[2]

All candidates must be Royal College certified in Internal Medicine or Pediatrics in order to be eligible for the Royal College examination in Clinical Immunology and Allergy.

CLINICAL IMMUNOLOGY AND ALLERGY COMPETENCIES

Medical Expert

Definition:

As *Medical Experts*, clinical immunologists/allergists integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centred care. Medical Expert is the central physician Role in the CanMEDS Framework and defines the physician's clinical scope of practice.

Key and Enabling Competencies: Clinical immunologists/allergists are able to…

1. Practise medicine within their defined scope of practice and expertise

1.1. Demonstrate a commitment to high-quality care of their patients

1.2. Integrate the CanMEDS Intrinsic Roles into their practice of Clinical Immunology and Allergy

1.3. Apply knowledge of the clinical and biomedical sciences relevant to Clinical Immunology and Allergy

Basic science

1.3.1. Anatomy, physiology, and pathology of the immune system

1.3.1.1. Lymphoid system

1.3.1.2. Upper airway, nose, sinuses, and middle ear

[1] Some programs in Quebec may permit eligible trainees to begin subspecialty training before completion of the Pediatrics Transition to Practice stage. However, as with all jurisdictions, trainees in Quebec must achieve all generalist competencies of the Pediatrics specialty prior to certification in Pediatrics. To learn more about the entrance requirements for a specific Clinical Immunology and Allergy program, speak to the relevant postgraduate medical education office.

[2] These eligibility requirements do not apply to Subspecialty Examination Affiliate Program (SEAP) candidates. Please contact the Royal College for information about SEAP.

1.3.1.3. Lower airway

1.3.1.4. Skin

1.3.1.5. Gastrointestinal tract

1.3.2. Immune mechanisms

1.3.2.1. Antigens, including superantigens and determinants

1.3.2.2. Antigen presentation and histocompatibility

1.3.2.3. Immunoregulation and tolerance

1.3.2.4. Immunogenetics and molecular biology

1.3.2.5. Immunoglobulins (Ig)

1.3.2.5.1. Immediate type hypersensitivity (IgE-mediated) reactions

1.3.2.5.2. IgG, IgA, IgM, and Fc receptor-mediated reactions, including antibody-dependent cellular cytotoxicity, immune complex, and opsonization

1.3.2.6. T and B cell ligand-receptor interactions, signal transduction, cell activation and anergy

1.3.2.7. Cytokines and chemokines, and their receptors

1.3.2.8. Adhesion molecules

1.3.2.9. Complement, coagulation, fibrinolytic, and kallikrein–kinin immune systems

1.3.2.10. Delayed type hypersensitivity and cell-mediated immunity

1.3.2.11. Innate immunity

1.3.3. Cells involved in immune responses, including differentiation, origin, reception, interactions and secretion

1.3.3.1. Lymphocytes

1.3.3.1.1. T cells and receptors

1.3.3.1.2. B cells and receptors

1.3.3.1.3. Other lymphocytes, including natural killer (NK), natural killer T cells (NKT), and innate lymphocyte cells

1.3.3.2. Antigen-presenting cells, including monocytes, macrophages, and dendritic cells

1.3.3.3. Mast cells and basophils

1.3.3.4. Eosinophils

1.3.3.5. Neutrophils

1.3.3.6. Other cells, including endothelial, epithelial, and smooth muscle cells, and fibroblasts and platelets

1.3.4. Transplant immunology

1.3.5. Immunology of reproduction and pregnancy

1.3.6. Neonatal immunology

Principles of research

1.3.7. Experimental design

1.3.8. Data analysis and biostatistics

1.3.9. Epidemiology

1.3.10. Research ethics, human subject protection, and adverse event reporting

Clinical science

1.3.11. Allergens and antigens, including non-disease-specific properties, measurement and avoidance methods

1.3.11.1. Airborne

1.3.11.1.1. Pollens

1.3.11.1.2. Molds and fungi

1.3.11.1.3. Animal, insect and arthropod allergens

1.3.11.1.4. Irritants and/or pollutants

1.3.11.2. Food

1.3.11.3. Insect venom

1.3.11.4. Medications

1.3.11.5. Contact sensitizers

1.3.11.6. Occupational

1.3.12. Hypersensitivity and other immune-mediated disorders, including epidemiology, risk factors, pathogenesis, clinical presentation, diagnosis and differential diagnosis, and management

1.3.12.1. Adverse reactions to foods

1.3.12.2. Adverse reactions to stinging insects

1.3.12.3. Anaphylaxis, including idiopathic, exercise-induced, and latex-induced

1.3.12.4. Urticaria and angioedema

1.3.12.5. Eczema and atopic dermatitis

1.3.12.6. Contact hypersensitivity

1.3.12.7. Nasal and sinus disorders, including allergic rhinitis and allergic fungal sinusitis

1.3.12.8. Asthma

1.3.12.9. Hypersensitivity pneumonitis

1.3.12.10. Allergic bronchopulmonary aspergillosis

1.3.12.11. Chronic obstructive pulmonary disease (COPD)

1.3.12.12. Cystic fibrosis

1.3.12.13. Interstitial lung disease

1.3.12.14. Allergic and immunologic disorders of the eye

1.3.12.15. Occupational disorders with immunological mechanisms

1.3.13. Immunologic disorders, including epidemiology, risk factors, pathogenesis, clinical presentation, diagnosis and differential diagnosis, and management

1.3.13.1. Hereditary and acquired angioedema

1.3.13.2. Primary immunodeficiencies

1.3.13.2.1. Complement

1.3.13.2.2. Phagocyte

1.3.13.2.3. T cell

1.3.13.2.4. B cell

1.3.13.2.5. Combined cellular and humoral

1.3.13.2.6. Innate immunity

1.3.13.2.7. Diseases of immune dysregulation

1.3.13.2.8. Autoinflammatory disorders

1.3.13.2.9. Phenocopies of primary immunodeficiencies

1.3.13.3. Secondary immunodeficiencies

1.3.13.4. B cell disorders

1.3.13.5. T cell disorders

1.3.13.6. Eosinophilic disorders

1.3.13.7. Mast cell disorders

1.3.13.8. Autoimmune and rheumatologic disorders

1.3.13.9. Immunohematologic malignancies and disorders

1.3.13.10. Cryopathic disorders

1.3.13.11. Granulomatous disorders

1.3.13.12. Transplant rejection

1.3.13.13. Graft versus host disease: acute and chronic

1.3.13.14. Reproductive, pregnancy, and neonatal immunologic disorders

1.3.14. Microbiology and infectious diseases

1.3.14.1. Mechanisms pathogens use to evade or subvert the immune system

1.3.14.2. Infections associated with specific immune deficits

1.3.15. Diagnostic modalities used in Clinical Immunology and Allergy, including indications, contraindications, principles of application and/or interpretation, and quality control methods

1.3.15.1. Skin testing, including epicutanous, intradermal, delayed type hypersensitivity, and patch

1.3.15.2. Nasal and conjunctival provocation

1.3.15.3. Blood gas measurement

1.3.15.4. Pulmonary function testing, including spirometry, bronchial provocation, body plethysmography, exhaled nitric oxide, and impulse oscillometry

1.3.15.5. Mucociliary function by means of nasal and lung tests, including secretion evaluation, lavage, and biopsy

1.3.15.6. Induced sputum analysis

1.3.15.7. Laboratory testing

1.3.15.7.1. Serum specific IgE measurement

1.3.15.7.2. Component-resolved food allergy testing

1.3.15.7.3. Ig measurement, including total and subclasses

1.3.15.7.4. Specific antibody response to vaccines and precipitins

1.3.15.7.5. Autoantibody measurements

1.3.15.7.6. Complement

1.3.15.7.7. Immune complexes

1.3.15.7.8. Serum and urine protein electrophoresis, and light chain assays

1.3.15.7.9. Flow cytometry analysis of leukocytes and leukocyte subsets and markers

1.3.15.7.10. Functional assays

1.3.15.7.11. Mediator measurement, including secreted and intracellular

1.3.15.7.12. Coagulation, fibrinolytic, and kallikrein–kinin immune system evaluation

1.3.15.7.13. Molecular biology techniques, including polymerase chain reaction (PCR) (including T cell receptor excision circles (TREC) assay), in situ hybridization, Ig/T cell receptor (TCR) gene rearrangement, and binding of ligands to nucleic acid or polypeptide sequences

1.3.15.7.14. Genetic testing

1.3.15.7.15. Human leukocyte antigen (HLA) typing

1.3.15.8. Challenges: oral, parenteral, and exposure; including foods, inhalants, and drugs

1.3.15.9. Medical imaging

1.3.16. Principles of therapeutic modalities used in Clinical Immunology and Allergy

1.3.16.1. Allergen avoidance

1.3.16.2. Vaccines, including indications, immune response, adjuvants, efficacy, and reactions

1.3.16.3. Mechanisms of action, indications for, adverse reactions to, and efficacy, pharmacokinetics, and monitoring of

1.3.16.3.1. Antihistamines

1.3.16.3.2. Anticholinergics and methylxanthines

1.3.16.3.3. Aspirin and other non-steroidal anti-inflammatory agents (NSAID)

1.3.16.3.4. Beta-agonists and antagonists

1.3.16.3.5. Glucocorticoids: oral, dermatologic, and ophthalmic

1.3.16.3.6. Leukotriene pathway modulators

1.3.16.3.7. Mast cell stabilizers

1.3.16.3.8. Immunotherapy

1.3.16.3.9. Immunomodulator and gene therapy

1.3.16.3.9.1. Deoxyribonucleic acid (DNA)

1.3.16.3.9.2. Cytosine-phosphate-guanine (CpG) oligodeoxynucleotides

1.3.16.3.9.3. Cytokines

1.3.16.3.9.4. Monoclonal antibodies and fusion proteins

1.3.16.3.10. Immune globulin therapy, including products, mechanism of action, indications, modalities of delivery, and adverse reactions

1.3.16.3.11. Plasmapheresis

1.3.16.3.12. Ultraviolet light treatment

1.3.16.3.13. Surgical intervention for the sinuses and middle ear

1.3.16.3.14. Hematopoetic stem cell transplantation

1.3.16.4. Complementary and alternative medicine, and their role and evidence base for allergic and immunologic disorders

1.3.17. Principles of quality improvement and quality control

1.3.17.1. Allergen extract standardization and stability

1.4. Perform appropriately timed clinical assessments with recommendations that are presented in an organized manner

1.5. Carry out professional duties in the face of multiple competing demands

1.6. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in Clinical Immunology and Allergy practice

2. Perform a patient-centred clinical assessment and establish a management plan

2.1. Prioritize issues to be addressed in a patient encounter

2.2. Elicit a history, perform a physical exam, select appropriate investigations, and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion

2.2.1. Elicit a history of

2.2.1.1. Potential allergic and non-allergic triggers

2.2.1.2. Environmental and workplace exposures

2.2.1.3. Family history of allergic and/or immunologic disease

2.2.1.4. Recurrent infections

2.2.2. Perform a physical exam relevant to the patient's presentation

2.2.3. Select and interpret the results of

2.2.3.1. Skin testing, including epicutanous, intradermal, delayed type hypersensitivity, and patch

2.2.3.2. Nasal and conjunctival provocation

2.2.3.3. Blood gas measurement

2.2.3.4. Pulmonary function testing, including spirometry, bronchial provocation, body plethysmography, exhaled nitric oxide, and impulse oscillometry

2.2.3.5. Mucociliary function by means of nasal and lung tests, including secretion evaluation, lavage, and biopsy

2.2.3.6. Induced sputum analysis

2.2.3.7. Ig measurement, including total, specific, and immune complexes

2.2.3.8. Serum specific IgE

2.2.3.9. Component-resolved food allergy testing

2.2.3.10. Leukocyte phenotyping, including flow cytometry, spectratyping, memory and activation markers

2.2.3.11. Cellular function, including proliferation, cytotoxicity, chemotaxis, phagocytosis, and killing

2.2.3.12. Mediator measurement, including secreted, intracellular, and signaling

2.2.3.13. Complement, coagulation, fibrinolytic, and kallikrein–kinin immune system evaluation

2.2.3.14. Medical imaging

2.2.3.15. Challenges: oral, parenteral, and exposure; including foods, inhalants, and drugs

2.3. Establish goals of care in collaboration with patients and their families,[3] which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation

2.4. Establish a patient-centred management plan for patients with:

Hypersensitivity and other immune-mediated disorders

2.4.1. Adverse reactions to foods

2.4.2. Adverse reactions to stinging insects

2.4.3. Anaphylaxis, including idiopathic, exercise-induced, and latex-induced

2.4.4. Urticaria and angioedema

2.4.5. Eczema and atopic dermatitis

2.4.6. Contact hypersensitivity

2.4.7. Nasal and sinus disorders, including allergic rhinitis and allergic fungal sinusitis

2.4.8. Asthma

2.4.9. Hypersensitivity pneumonitis

2.4.10. Allergic bronchopulmonary aspergillosis

2.4.11. Chronic obstructive pulmonary disease (COPD)

[3] Throughout this document, references to the patient's family are intended to include all those who are personally significant to the patient and are concerned with his or her care, including, according to the patient's circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.

2.4.12. Cystic fibrosis
2.4.13. Interstitial lung disease
2.4.14. Allergic and immunologic disorders of the eye
2.4.15. Occupational disorders with immunological mechanisms

Immunologic disorders
2.4.16. Hereditary and acquired angioedema
2.4.17. Primary immunodeficiencies
2.4.17.1. Complement
2.4.17.2. Phagocyte
2.4.17.3. T cell
2.4.17.4. B cell
2.4.17.5. Combined cellular and humoral
2.4.17.6. Innate immunity
2.4.17.7. Diseases of immune dysregulation
2.4.17.8. Autoinflammatory disorders
2.4.17.9. Phenocopies of primary immunodeficiencies

2.4.18. Secondary immunodeficiencies
2.4.19. B cell disorders
2.4.20. T cell disorders
2.4.21. Eosinophilic disorders
2.4.22. Mast cell disorders
2.4.23. Autoimmune and rheumatologic disorders
2.4.24. Immunohematologic malignancies and disorders
2.4.25. Cryopathic disorders
2.4.26. Granulomatous disorders
2.4.27. Transplant rejection
2.4.28. Graft versus host disease: acute and chronic
2.4.29. Reproductive, pregnancy, and neonatal immunologic disorders

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

3.1. Determine the most appropriate procedures or therapies
3.1.1. Skin testing

3.1.2. Allergen avoidance

3.1.3. Action plan for asthma

3.1.4. Action plan for anaphylaxis

3.1.5. Education regarding the appropriate use of allergic disease specific devices

3.1.5.1. Inhaler

3.1.5.2. Nasal spray

3.1.5.3. Epinephrine auto-injector

3.1.6. Allergen immunotherapy

3.1.6.1. Oral immunotherapy

3.1.6.2. Subcutaneous immunotherapy

3.1.6.3. Sublingual immunotherapy

3.1.7. Cellular immune reconstitution and bone marrow transplantation

3.1.8. Cytokine and cytokine receptor-mediated therapy

3.1.9. Immunoglobulin replacement therapy

3.1.10. Immunomodulatory therapy, including anti-IgE

3.1.11. Monoclonal antibodies and fusion proteins

3.1.12. Nucleic acid-based therapies, including DNA vaccines, CpG, gene insertion, and antisense nucleotides

3.1.13. Probiotics

3.2. Obtain and document informed consent, explaining risks and benefits, any contraindications, and the rationale for a proposed procedure or therapy

3.3. Prioritize procedures or therapies, taking into account clinical urgency and available resources

3.4. Perform procedures in a skilful and safe manner, adapting to unanticipated findings or changing clinical circumstances

3.4.1. Epicutaneous and intradermal allergy tests

3.4.2. Patch tests

3.4.3. Spirometry

3.4.4. Inhalant challenge

3.4.5. Food challenge and desensitization

3.4.6. Medication challenge and desensitization

3.4.7. Allergen immunotherapy

3.4.8. Venom immunotherapy

4. Establish plans for ongoing care and, when appropriate, timely consultation

4.1. Implement a patient-centred care plan that supports ongoing care, follow-up on investigations, response to treatment, and further consultation

4.1.1. Provide follow-up on results of investigations and response to treatment

4.1.2. Recognize and manage complications of allergic/immunologic disorders, interventions, and treatment

4.1.3. Identify indications for consultation with other health care professionals, including referral for hematopoietic and stem cell transplantation

5. Actively contribute, as an individual and as a member of a team providing care, to the continuous improvement of health care quality and patient safety

5.1. Recognize and respond to harm from health care delivery, including patient safety incidents

5.2. Adopt strategies that promote patient safety and address human and system factors

5.2.1. Develop anaphylaxis and asthma action plans to be used in school and workplace settings

Communicator

Definition:

As *Communicators*, clinical immunologists/allergists form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.

Key and Enabling Competencies: Clinical immunologists/allergists are able to…

1. Establish professional therapeutic relationships with patients and their families

1.1. Communicate using a patient-centred approach that encourages patient and family trust and autonomy and is characterized by empathy, respect, and compassion

1.2. Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety

1.3. Recognize when the perspectives, values, or biases of patients, families, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly

1.4. Respond to a patient's non-verbal behaviours to enhance communication

1.5. Manage disagreements and emotionally charged conversations

1.6. Adapt to the unique needs and preferences of each patient and their family and to his or her clinical condition and circumstances

2. Elicit and synthesize accurate and relevant information, incorporating the perspectives of patients and their families

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

2.2. Provide a clear structure for and manage the flow of an entire patient encounter

2.3. Seek and synthesize relevant information from other sources, including the patient's family, with the patient's consent

3. Share health care information and plans with patients and their families

3.1. Share information and explanations that are clear, accurate, and timely, while assessing for patient and family understanding

3.1.1. Use effective language, communication, and teaching strategies with patients and their families

3.1.2. Provide information about diagnosis, management, and prognosis clearly and compassionately

3.1.3. Provide genetic counselling where appropriate

3.2. Disclose harmful patient safety incidents to patients and their families accurately and appropriately

4. Engage patients and their families in developing plans that reflect the patient's health care needs and goals

4.1. Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe

4.2. Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health

4.2.1. Assist patients and their families to identify patient education resources

4.2.2. Facilitate self-care and chronic disease management

4.3. Use communication skills and strategies that help patients and their families make informed decisions regarding their health

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

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

5.2. Communicate effectively using a written health record, electronic medical record, or other digital technology

5.3. Share information with patients and others in a manner that enhances understanding and that respects patient privacy and confidentiality

Collaborator

Definition:

As *Collaborators*, clinical immunologists/allergists work effectively with other health care professionals to provide safe, high-quality, patient-centred care.

Key and Enabling Competencies: Clinical immunologists/allergists are able to…

1. Work effectively with physicians and other colleagues in the health care professions

1.1. Establish and maintain positive relationships with physicians and other colleagues in the health care professions to support relationship-centred collaborative care

1.2. Negotiate overlapping and shared responsibilities with physicians and other colleagues in the health care professions in episodic and ongoing care

1.2.1. Work effectively with other specialists and other members of the health care team, including nurses, respiratory therapists, certified asthma educators, pharmacists, dietitians, social workers, and psychologists

1.3. Engage in respectful shared decision-making with physicians and other colleagues in the health care professions

2. Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts

2.1. Show respect toward collaborators

2.2. Implement strategies to promote understanding, manage differences, and resolve conflict in a manner that supports a collaborative culture

3. Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care

3.1. Determine when care should be transferred to another physician or health care professional

3.2. Demonstrate safe handover of care, using both oral and written communication, during a patient transition to a different health care professional, setting, or stage of care

Leader

Definition:

As *Leaders*, clinical immunologists/allergists engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.

Key and Enabling Competencies: Clinical immunologists/allergists are able to…

1. **Contribute to the improvement of health care delivery in teams, organizations, and systems**
    - 1.1. Apply the science of quality improvement to contribute to improving systems of patient care
    - 1.2. Contribute to a culture that promotes patient safety
    - 1.3. Analyze patient safety incidents to enhance systems of care
    - 1.4. Use health informatics to improve the quality of patient care and optimize patient safety

2. **Engage in the stewardship of health care resources**
    - 2.1. Allocate health care resources for optimal patient care
        - 2.1.1. Allocate limited or high-cost resources considering utility, efficacy, and fairness
    - 2.2. Apply evidence and management processes to achieve cost-appropriate care

3. **Demonstrate leadership in health care systems**
    - 3.1. Demonstrate leadership skills to enhance health care
    - 3.2. Facilitate change in health care to enhance services and outcomes

4. **Manage career planning, finances, and health human resources in personal practice(s)**
    - 4.1. Set priorities and manage time to integrate practice and personal life
    - 4.2. Manage personal professional practice(s) and career
    - 4.3. Implement processes to ensure personal practice improvement

Health Advocate

Definition:

As *Health Advocates*, clinical immunologists/allergists contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.

Key and Enabling Competencies: Clinical immunologists/allergists are able to…

1. Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment

1.1. Work with patients and families to address determinants of health that affect them and their access to needed health services or resources

1.1.1. Identify the psychosocial aspects of allergic and immunologic disorders that affect patients and their adherence to therapy

1.1.2. Provide support for patients within their school, home, and work environments to achieve optimal management of their allergic and immunologic disorders

1.1.3. Assist patients in obtaining appropriate benefits, resources, and medications

1.2. Work with patients and their families to increase opportunities to adopt healthy behaviours

1.2.1. Work with patients and families to increase their understanding of their condition and health care needs

1.2.2. Work with patients and families to increase opportunities for autonomy with regards to their care

1.2.3. Encourage adherence to preventive measures and therapy

1.3. Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients and their families

2. Respond to the needs of the communities or populations they serve by advocating with them for system-level change in a socially accountable manner

2.1. Work with a community or population to identify the determinants of health that affect them

2.1.1. Identify sources of exposures that affect populations presenting with allergic and/or occupational disorders and apply current evidence for treatment and prevention

2.1.2. Identify the impact of economic costs of allergic and immunologic disorders and their treatment on patients

2.1.3. Identify how government policies and funding affect patients with allergic and immunologic disorders

2.2. Improve clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities

2.3. Contribute to a process to improve health in the community or population they serve

2.3.1. Participate in relevant specialty societies, community-based advocacy groups, other public education bodies, or private organizations

2.3.2. Share accurate information with other health care professionals and the public at large about issues in allergy and immunology

Scholar

Definition:

As *Scholars*, clinical immunologists/allergists demonstrate a lifelong commitment to excellence in practice through continuous learning, and by teaching others, evaluating evidence, and contributing to scholarship.

Key and Enabling Competencies: Clinical immunologists/allergists are able to…

1. Engage in the continuous enhancement of their professional activities through ongoing learning

1.1. Develop, implement, monitor, and revise a personal learning plan to enhance professional practice

1.2. Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources

1.3. Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice

2. Teach students, residents, the public, and other health care professionals

2.1. Recognize the influence of role-modelling and the impact of the formal, informal, and hidden curriculum on learners

2.2. Promote a safe and respectful learning environment

2.2.1. Promote and support an environment that is equitable, diverse, and inclusive

2.3. Ensure patient safety is maintained when learners are involved

2.4. Plan and deliver learning activities

2.5. Provide feedback to enhance learning and performance

2.6. Assess and evaluate learners, teachers, and programs in an educationally appropriate manner

3. Integrate best available evidence into practice

3.1. Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that can address them

3.2. Identify, select, and navigate pre-appraised resources

3.3. Critically evaluate the integrity, reliability, and applicability of health-related research and literature

3.3.1. Evaluate emerging and/or controversial therapies and investigations

3.3.2. Recognize the challenges involved in the study of rare diseases, small populations, and complex outcome measures

3.4. Integrate evidence into decision-making in their practice

4. Contribute to the creation and dissemination of knowledge and practices applicable to health

4.1. Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care

4.2. Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and vulnerable populations

4.3. Contribute to the work of a research program

4.4. Pose questions amenable to scholarly investigation and select appropriate methods to address them

4.5. Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry

Professional

Definition:

As *Professionals*, clinical immunologists/allergists are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.

Key and Enabling Competencies: Clinical immunologists/allergists are able to…

1. **Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards**
    - 1.1. Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
    - 1.2. Demonstrate a commitment to excellence in all aspects of practice
        - 1.2.1. Adhere to the standards of appropriate use of allergy testing and investigation
    - 1.3. Recognize and respond to ethical issues encountered in practice
    - 1.4. Recognize and manage conflicts of interest
    - 1.5. Exhibit professional behaviours in the use of technology-enabled communication
2. **Demonstrate a commitment to society by recognizing and responding to societal expectations in health care**
    - 2.1. Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians
        - 2.1.1. Assist patients in navigating complementary and alternative therapies
    - 2.2. Demonstrate a commitment to patient safety and quality improvement
3. **Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation**
    - 3.1. Fulfil and adhere to professional and ethical codes, standards of practice, and laws governing practice
    - 3.2. Recognize and respond to unprofessional and unethical behaviours in physicians and other colleagues in the health care professions
    - 3.3. Participate in peer assessment and standard setting

4. Demonstrate a commitment to physician health and well-being to foster optimal patient care

4.1. Exhibit self-awareness and manage influences on personal well-being and professional performance

4.2. Manage personal and professional demands for a sustainable practice throughout the physician life cycle

4.2.1. Develop a plan for physician wellness and work-life integration

4.3. Promote a culture that recognizes, supports, and responds effectively to colleagues in need

This document is to be reviewed by the Specialty Committee in Clinical Immunology and Allergy by December 2027.

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