

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

DEFINITION

Thoracic Surgery is the branch of surgery concerned with congenital and acquired diseases of the chest wall, mediastinum, lungs, trachea, pleura, esophagus, stomach, and diaphragm.

THORACIC SURGERY PRACTICE

Thoracic surgeons provide surgical care for patients with a broad range of congenital and acquired, either benign or malignant, conditions affecting the chest wall, mediastinum, lungs, trachea, pleura, esophagus, stomach, and diaphragm.

Thoracic surgeons provide consultation for urgent and non-urgent clinical presentations to determine the patient's suitability for a diagnostic or therapeutic procedure or for operative management. Thoracic surgeons perform diagnostic and therapeutic endoscopic procedures, including flexible and rigid bronchoscopy, esophagogastroduodenoscopy, thoracoscopy, mediastinoscopy, and endoscopic ultrasound. They perform operative procedures, using open and minimally invasive techniques, and provide all aspects of pre- and post-operative care.

Thoracic surgeons practice in academic tertiary and quaternary and large community hospitals, in which patients can receive the full range of diagnostic services, acute and intensive care, and access to the collaborative care of interprofessional teams needed to optimize clinical outcomes. Due to the regionalized delivery of thoracic care, thoracic surgeons are often called upon to provide advice and direction for care remotely.

Thoracic surgeons work with a wide variety of other medical and surgical specialties and with interprofessional teams of nurses, respiratory therapists, physical and occupational therapists, dietitians, and other health care professionals.

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ELIGIBILITY REQUIREMENTS TO BEGIN TRAINING

Royal College certification in General Surgery

OR

Royal College certification in Cardiac Surgery and demonstrated achievement of the competencies required to perform the following General Surgery Entrustable Professional Activities (EPAs):

- Recognizing and initiating management for patients with a surgical abdomen or acute abdomen
- Providing initial assessment and management of patients with multiple traumatic injuries and performing procedures for patients with traumatic injuries
- Performing the pre-procedural assessment and risk optimization for patients undergoing endoscopy and performing esophagogastroduodenoscopy
- Performing the skills of minimally invasive surgery (MIS)
- Performing procedures on
 - stomach and duodenum
 - small bowel
 - appendix and colon
 - spleen
 - lymph nodes
 - breast
 - abdominal wall and hernia
 - skin and soft tissue
 - head and neck

OR

Completion of training and eligibility for the Royal College examination in General Surgery

OR

Completion of training and eligibility for the Royal College examination in Cardiac Surgery and demonstrated achievement of the competencies required to achieve the above-named General Surgery EPAs

ELIGIBILITY REQUIREMENTS FOR EXAMINATION¹

All candidates must be Royal College certified in their primary specialty in order to be eligible for the Royal College examination in Thoracic Surgery.

THORACIC SURGERY COMPETENCIES

Medical Expert

Definition:

As *Medical Experts*, thoracic surgeons 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: Thoracic surgeons 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 Thoracic Surgery
- 1.3. Apply knowledge of the clinical and biomedical sciences relevant to Thoracic Surgery
 - 1.3.1. Embryology and anatomy of the chest wall, mediastinum, lung, trachea, pleura, esophagus, stomach, and diaphragm
 - 1.3.2. Physiology
 - 1.3.2.1. Respiratory
 - 1.3.2.2. Esophageal
 - 1.3.3. Epidemiology of thoracic diseases
 - 1.3.4. Roles of genetics, lifestyle practices, and occupational and environmental exposures in the genesis of thoracic diseases
 - 1.3.5. Principles of natural history, diagnosis, and medical and surgical management of diseases of the chest wall, mediastinum, lung, trachea, pleura, esophagus, stomach, and diaphragm
 - 1.3.6. Diagnostic modalities, including indications for, contraindications to, and interpretation of
 - 1.3.6.1. Pulmonary function testing
 - 1.3.6.2. Esophageal motility testing

¹ These eligibility requirements do not apply to Subspecialty Examination Affiliate Program (SEAP) candidates. Please contact the Royal College for information about SEAP.

- 1.3.7. Potential risks and complications of endoscopic procedures for the patient, operator, and assistant, and measures appropriate to minimize such hazards
 - 1.3.8. Indications for, contraindications to, risks, and benefits of thoracic surgery procedures
 - 1.3.9. Principles of the practice of
 - 1.3.9.1. Medical oncology and radiation oncology as they relate to patients with thoracic disease
 - 1.3.9.1.1. Indications for induction therapy, adjuvant therapy, definitive non-surgical management, and their efficacy and side effects as they relate to surgical management
 - 1.3.9.1.2. Sequence and timing of multimodal treatments and their impact on surgical management
 - 1.3.9.2. Management of thoracic trauma and emergencies
 - 1.3.9.3. Basic concepts of transplantation
 - 1.3.9.3.1. Indications and exclusions
 - 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 thoracic surgery 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. Select and interpret
 - 2.2.1.1. Diagnostic and interventional imaging
 - 2.2.1.2. Laboratory studies, including microbiology
 - 2.2.1.3. Cardiac function tests
 - 2.2.1.4. Esophageal function tests
 - 2.2.1.5. Pulmonary function tests
 - 2.2.2. Explore and consider the implications of pre-existing medical conditions
 - 2.2.3. Determine the indications for, benefits, and risks of thoracic surgery interventions for the clinical presentation

- 2.2.4. Synthesize patient information to determine suitability for surgical intervention and to plan peri-operative management
- 2.2.5. Identify patients for discussion at multidisciplinary case conferences
- 2.3. Establish goals of care in collaboration with patients and their families,² which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation
- 2.4. Establish a patient-centred management plan
 - 2.4.1. Recommend an appropriate therapeutic plan, taking into account age, general health, risk/benefit ratio, and prognosis for patients with acute and chronic, benign and malignant conditions of the chest wall, mediastinum, lung, trachea, pleura, esophagus, stomach, and diaphragm
 - 2.4.2. Manage thoracic surgical emergencies, including thoracic trauma
 - 2.4.3. Manage patients pre- and post-operatively, including critical care management

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. Diagnostic or therapeutic endoscopy
 - 3.1.2. Operative intervention
 - 3.1.3. Interventional radiology
 - 3.1.4. Systemic therapy
 - 3.1.5. Radiation therapy
 - 3.1.6. Pharmacologic therapy
- 3.2. Obtain and document informed consent, explaining the risks and benefits of, 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. Diagnostic and therapeutic interventions and procedures
 - 3.4.1.1. Bronchoscopy, flexible and rigid
 - 3.4.1.2. Endobronchial ultrasound

² 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 their care, including, according to the patient's circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.

- 3.4.1.3. Mediastinoscopy
- 3.4.1.4. Thoracoscopy
- 3.4.1.5. Upper gastrointestinal endoscopy, flexible and rigid
- 3.4.2. Surgical procedures, via open or minimally invasive techniques, of the following anatomical areas:
 - 3.4.2.1. Airway
 - 3.4.2.2. Chest wall
 - 3.4.2.3. Diaphragm
 - 3.4.2.4. Esophagus and stomach
 - 3.4.2.5. Lung
 - 3.4.2.6. Mediastinum
 - 3.4.2.7. Pleura

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. Determine the necessity and appropriate timing of referral to other health care providers

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

Communicator

Definition:

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

Key and Enabling Competencies: Thoracic surgeons are able to...

1. Establish professional therapeutic relationships with patients and their families

- 1.1. Communicate using a patient-centred approach that encourages patient 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, 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
 - 1.3.1. Recognize how differences in culture, social identity, and background affect patient and family responses to a diagnosis and therapeutic suggestions
- 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 to the patient's clinical condition and circumstances
 - 1.6.1. Use interpreters effectively

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

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
- 4.3. 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*, thoracic surgeons work effectively with other health care professionals to provide safe, high-quality, patient-centred care.

Key and Enabling Competencies: Thoracic surgeons 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. Describe the aspects of care provided by nurses, physiotherapists, respiratory therapists, dietitians, occupational therapists, speech pathologists, social workers, and ethicists relevant to thoracic surgery practice
 - 1.2.2. Seek the advice or assistance of other members of the health care team to improve patient care
- 1.3. Engage in respectful shared decision-making with physicians and other colleagues in the health care professions
 - 1.3.1. Convey the plan for the surgical approach to the operating team
 - 1.3.2. Contribute surgical expertise to multidisciplinary team discussions
 - 1.3.3. Consult with other specialists and colleagues regarding the patient's medical and surgical issues
 - 1.3.4. Consult with other health professionals regarding patients' social, rehabilitative, and nutritional concerns

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*, thoracic surgeons 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: Thoracic surgeons 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 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
- 2.2. Apply evidence and management processes to achieve cost-appropriate care
 - 2.2.1. Demonstrate efficient use of time and resources in the provision of patient 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*, thoracic surgeons 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: Thoracic surgeons 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 to address determinants of health that affect them and their access to needed health services or resources
 - 1.1.1. Facilitate timely access to diagnostic, therapeutic, and rehabilitative services and resources
- 1.2. Work with patients and their families to increase opportunities to adopt healthy behaviours
- 1.3. Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients
 - 1.3.1. Counsel and/or provide aids for
 - 1.3.1.1. Smoking cessation
 - 1.3.1.2. Avoidance of occupational and environmental exposures
 - 1.3.2. Identify opportunities for screening, including for lung cancer

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
- 2.2. 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

Scholar

Definition:

As *Scholars*, thoracic surgeons 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: Thoracic surgeons 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
- 2.3. 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
- 3.4. 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 considering 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*, thoracic surgeons 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: Thoracic surgeons 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
- 1.3. Recognize and respond to ethical issues encountered in practice
 - 1.3.1. Apply knowledge of the ethical and legal standards relating to patient confidentiality

- 1.3.2. Manage relationships with industry
- 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
 - 2.2. 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
 - 4.1.1. Demonstrate knowledge of occupational hazards for thoracic surgeons and implement measures to minimize physical and psychological risks
 - 4.2. Manage personal and professional demands for a sustainable practice throughout the physician life cycle
 - 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 Thoracic Surgery by December 2027.

APPROVED – Specialty Standards Review Committee – June 2024