

2010

**EDITORIAL REVISION – 2018
VERSION 1.2**

This document applies to those who begin training on or after July 1, 2010.

DEFINITION

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

GOALS

Upon completion of training, a resident is expected to be a competent specialist in Thoracic Surgery capable of assuming a consultant's role in the specialty. The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and research.

Only candidates certificated by the Royal College of Physicians and Surgeons of Canada in General Surgery or Cardiac Surgery may be eligible for certification in Thoracic Surgery.

Residents must demonstrate the requisite knowledge, skills, and behaviours for effective patient-centred care and service to a diverse population. In all aspects of specialist practice, the graduate must be able to address ethical issues and issues of gender, age, sexual orientation, age, culture, ethnicity, and beliefs in a professional manner.

THORACIC SURGERY COMPETENCIES

At the completion of training, the resident will have acquired the following competencies and will function effectively as a:

Medical Expert

Definition:

As Medical Experts, Thoracic Surgeons integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centred care. Medical Expert is the central physician Role in the CanMEDS framework.

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

1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centred medical care

- 1.1. Perform a consultation, including the presentation of well-documented assessments and recommendations in oral, written and/or electronic form in response to a request from another health care professional
- 1.2. Demonstrate use of all CanMEDS competencies relevant to Thoracic Surgery
- 1.3. Identify and appropriately respond to relevant ethical issues arising in patient care and medical decision making
- 1.4. Demonstrate the ability to prioritize professional duties when faced with multiple patients and problems
- 1.5. Demonstrate compassionate and patient-centred care
- 1.6. Recognize and respond to the ethical dimensions in medical decision-making
- 1.7. Demonstrate medical expertise in situations other than patient care

2. Establish and maintain clinical knowledge, skills and attitudes appropriate to Thoracic Surgery

- 2.1. Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to Thoracic Surgery, including the following:
 - 2.1.1. The principles and practice of surgery, as well as pulmonary function, biostatistics, bioethics, transplantation, chemotherapy and radiation oncology
 - 2.1.2. The anatomy, embryology and diseases of the chest wall, mediastinum, lung, trachea, pleura, esophagus, stomach and diaphragm
 - 2.1.3. Respiratory physiology
 - 2.1.4. Esophageal physiology and esophageal motility tests
 - 2.1.5. Diseases of the heart and great vessels
- 2.2. Describe the CanMEDS framework of competencies relevant to Thoracic Surgery
- 2.3. Apply lifelong learning skills of the Scholar Role to implement a personal program to keep up to date, and enhance areas of professional competence
- 2.4. Integrate the available best evidence and best practices to enhance the quality of care and patient safety in Thoracic Surgery

3. Perform a complete and appropriate assessment of a patient

- 3.1. Identify and effectively explore issues to be addressed in a patient encounter, including the patient's context and preferences

OBJECTIVES OF TRAINING IN THORACIC SURGERY (2010)

- 3.2. Elicit a history that is relevant, concise, and accurate to context and preferences for the purposes of diagnosis, management, health promotion, and disease prevention
- 3.3. Perform a focused physical examination that is relevant and accurate for the purposes of diagnosis, management, health promotion, and disease prevention
- 3.4. Select and interpret appropriate investigative methods in a resource-effective and ethical manner
 - 3.4.1. Esophageal function including esophageal motility tests
 - 3.4.2. Lung function including pulmonary function tests
 - 3.4.3. Interpretation of investigations relevant to Thoracic Surgery
 - 3.4.4. Diagnostic and interventional imaging
 - 3.4.5. Laboratory studies
 - 3.4.6. Microbiology
 - 3.4.7. Cardiac function
- 3.5. Demonstrate effective clinical problem solving and judgment to address patients' problems, including interpreting available data and integrating information to generate differential diagnoses and management plans
 - 3.5.1. Develop an appropriate plan of care and interpret laboratory and radiological investigations
 - 3.5.2. Manage with proficiency and expertise thoracic surgical emergencies including thoracic trauma
 - 3.5.3. Manage patients pre and post-operatively, including critical care management

4. Use preventive and therapeutic interventions effectively

- 4.1. Implement a management plan in collaboration with a patient and the patient's family¹
- 4.2. Demonstrate appropriate and timely application of preventive and therapeutic interventions relevant to Thoracic Surgery
 - 4.2.1. Recommend an appropriate therapeutic plan taking into account such matters as age, general health, risk/benefit ratio, and prognosis
- 4.3. Obtain appropriate informed consent for therapies
- 4.4. Ensure patients receive appropriate end-of-life care

¹ 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.

5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic

5.1. Demonstrate effective, appropriate and timely performance of diagnostic and therapeutic procedures relevant to Thoracic Surgery, using the most appropriate technique

5.1.1. Interventions

5.1.1.1. Bronchoscopy: flexible and rigid, diagnostic and therapeutic

5.1.1.2. Endobronchial ultrasound

5.1.1.3. Upper gastrointestinal endoscopy

5.1.1.4. Endoscopic ultrasound for esophageal and gastric disorders

5.1.1.5. Thoracoscopy

5.1.1.6. Mediastinoscopy

5.1.1.7. Treatment of malignant or benign lesions

5.1.1.8. Operative treatment of diseases of the mediastinum and pericardium

5.1.1.9. Chest wall resection and reconstruction

5.1.1.10. Pulmonary resection

5.1.1.11. Esophageal and gastric resection and reconstruction

5.1.1.12. Tracheal resection and reconstruction

5.1.1.13. Surgery of the diaphragm

5.1.2. Diagnostic and therapeutic procedures for the following clinical problems, including the comprehensive management of complications of thoracic procedures for:

5.1.2.1. Gastro-esophageal reflux disorders

5.1.2.2. Acute airway obstruction

5.1.2.3. Thoracic infection

5.1.2.4. Chest trauma

5.1.2.5. Airway hemorrhage

5.1.2.6. Esophageal motility disorders

5.1.2.7. Mediastinal sepsis

5.1.2.8. Thoracic malignant disease

5.1.2.9. Pleural disease

5.1.2.10. Diaphragmatic hernias

5.1.2.11. Benign lung disease

5.1.2.12. Thoracic outlet syndrome

5.1.2.13. Myasthenia gravis

5.1.2.14. Hyperhidrosis

5.1.3. Demonstrate knowledge of the management of patients with lung transplantation for pulmonary diseases

5.2. Obtain appropriate informed consent for procedures

5.3. Document and disseminate information related to procedures performed and their outcomes

5.4. Ensure adequate follow-up is arranged for procedures performed

6. Seek appropriate consultation from other health professionals, recognizing the limits of their own expertise

6.1. Demonstrate insight into their own limits of expertise

6.2. Demonstrate effective, appropriate, and timely consultation of another health professional as needed for optimal patient care

6.3. Arrange appropriate follow-up care services for a patient and their families

Communicator

Definition:

As *Communicators*, Thoracic Surgeons effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

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

1. Develop rapport, trust, and ethical therapeutic relationships with patients and families

1.1. Recognize that being a good communicator is a core clinical skill for physicians, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence, and improved clinical outcomes

1.2. Establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty, compassion, and empathy

1.2.1. Communicate indications, contraindications, risks and benefits of diagnostic and therapeutic procedures effectively

1.3. Respect patient privacy, confidentiality, and autonomy

1.4. Be aware of and responsive to nonverbal cues

1.5. Listen effectively

1.6. Facilitate a structured clinical encounter effectively

2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals

- 2.1. Gather information about a disease and about a patient's beliefs, concerns, expectations, and illness experience
- 2.2. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers, and other professionals, while respecting individual privacy and confidentiality
 - 2.2.1. When appropriate, include all members of the health care team in discussions of therapeutic plans

3. Convey relevant information and explanations accurately to patients and families, colleagues and other professionals

- 3.1. Deliver information to a patient and family, colleagues, and other professionals in a humane manner and in such a way that it is understandable and encourages discussion and participation in decision-making
 - 3.1.1. Demonstrate effective use of interpreters
 - 3.1.2. Appreciate how differences in culture and social identity and background affect patient/families responses to therapeutic suggestions and diagnosis

4. Develop a common understanding on issues, problems, and plans with patients, families, and other professionals to develop a shared plan of care

- 4.1. Identify and effectively explore problems to be addressed from a patient encounter, including the patient's context, responses, concerns, and preferences
- 4.2. Respect diversity and differences, including but not limited to the impact of gender, religion and cultural beliefs on decision-making
- 4.3. Encourage discussion, questions, and interaction in the encounter
- 4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop a plan of care
- 4.5. Address challenging communication issues effectively, including obtaining informed consent, delivering bad news, and addressing anger, confusion, and misunderstanding

5. Convey oral, written, and/or electronic information effectively about a medical encounter

- 5.1. Maintain clear, concise, accurate, and appropriate records of clinical encounters and plans
- 5.2. Present oral reports of clinical encounters and plans
- 5.3. Convey medical information appropriately to ensure safe transfer of care

6. Present medical information effectively to the public or media, including social media, about a medical issue

- 6.1. Demonstrate expertise in situations other than those involving direct patient care

Collaborator

Definition:

As *Collaborators*, Thoracic Surgeons effectively work within a health care team to achieve optimal patient care.

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

1. Participate effectively and appropriately in an interprofessional health care team

- 1.1. Describe the specialist's roles and responsibilities to other professionals
- 1.2. Describe the roles and responsibilities of other professionals within the health care team
 - 1.2.1. Describe the unique aspects of care provided by nursing, physiotherapy, respiratory therapy, dietician, occupational health, speech pathology, social worker and ethicist relevant to Thoracic Surgery practice
- 1.3. Recognize and respect the diverse roles, responsibilities, and competences of other professionals in relation to their own
 - 1.3.1. Seek the advice or assistance of other members of the health care team when their expertise can improve patient care
 - 1.3.2. Consult with other physicians for corroboration or complementary care
- 1.4. Work with others to assess, plan, provide, and integrate care for individuals and groups of patients
- 1.5. Work collaboratively in other activities and tasks; examples are research, educational work, program review, and/or administrative responsibilities
- 1.6. Participate in interprofessional team meetings to discuss problems in investigation and therapy
- 1.7. Enter into interdependent relationships with other professions for the provision of quality care
- 1.8. Describe the principles of team dynamics
- 1.9. Respect team ethics, including confidentiality, resource allocation, and professionalism
- 1.10. Demonstrate leadership in a health care team, as appropriate

2. Work with other health professionals effectively to prevent, negotiate, and resolve interprofessional conflict

- 2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team
- 2.2. Work with other professionals to prevent conflicts
- 2.3. Respect differences and the scopes of practice of other professions
- 2.4. Reflect on their own differences, misunderstanding, and limitations that may contribute to interprofessional tension
- 2.5. Reflect on interprofessional team function
- 2.6. Employ collaborative negotiation to resolve conflicts and address misunderstandings

Manager

Definition:

As *Managers*, Thoracic Surgeons are integral participants in health care organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the health care system.

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

1. Participate in activities that contribute to the effectiveness of their health care organizations and systems

- 1.1. Work collaboratively with others in their organizations
- 1.2. Participate in systematic quality process evaluation and improvement, including patient safety initiatives
- 1.3. Describe the structure and function of the health care system as it relates to Thoracic Surgery, including the roles of physicians
- 1.4. Describe principles of health care financing, including physician remuneration, budgeting, and organizational funding

2. Manage their practices and careers effectively

- 2.1. Set priorities and manage time to balance patient care, practice requirements, outside activities, and personal life
- 2.2. Manage a practice, including finances and human resources
- 2.3. Implement processes to ensure personal practice improvement
- 2.4. Employ information technology appropriately for patient care

3. Allocate finite health care resources appropriately

- 3.1. Demonstrate an understanding of the importance of just allocation of health care resources, balancing effectiveness, efficiency, and access with optimal patient care
 - 3.1.1. Seek to improve efficiencies in time and financial resources in the provision of care for patients with Thoracic Surgical diseases
- 3.2. Apply evidence and management processes for cost-appropriate care

4. Serve in administration and leadership roles

- 4.1. Participate effectively in committees and meetings
- 4.2. Lead or implement change in health care
- 4.3. Plan relevant elements of health care delivery, such as to work schedules

Health Advocate

Definition:

As *Health Advocates*, Thoracic Surgeons responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.

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

1. Respond to individual patient health needs and issues as part of patient care

- 1.1. Identify the health needs of an individual patient
- 1.2. Identify opportunities for advocacy, health promotion, and disease prevention with individuals to whom they provide care
 - 1.2.1. Participate in patient education
 - 1.2.2. Assist patients in the acquisition and interpretation of health care information, including the role of genetics and lifestyle practices in the genesis of thoracic disease
 - 1.2.3. Promote the prevention of thoracic disease by counselling patients about smoking cessation and by encouraging the avoidance of occupational and environmental exposure

2. Respond to the health needs of the communities that they serve

- 2.1. Describe the practice communities that they serve
 - 2.1.1. Describe the epidemiology of thoracic disease
 - 2.1.2. Describe the impact of environmental toxins in the genesis of particular patient complaints
 - 2.1.3. Identify the role of preventive medicine for thoracic diseases

2.1.4. Describe methods of patient education and preventive medicine intervention for thoracic diseases

2.2. Identify opportunities for advocacy, health promotion, and disease prevention in the communities that they serve, and respond appropriately

2.3. Demonstrate an appreciation of the possibility of competing interests between the communities served and other populations

3. Identify the determinants of health for the populations that they serve

3.1. Identify the determinants of health of the population, including barriers to access to care and resources

3.2. Identify vulnerable or marginalized populations within those served and respond appropriately

4. Promote the health of individual patients, communities, and populations

4.1. Describe an approach to implementing a change in a determinant of health of a population they serve

4.2. Describe how public policy impacts on the health of the populations served

4.3. Identify points of influence in the health care system and its structure

4.4. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity, and idealism

4.5. Demonstrate an appreciation of the possibility of conflict inherent in their role as a health advocate for a patient or community with that of manager or gatekeeper

4.6. Describe the role of the medical profession in advocating collectively for health and patient safety

Scholar

Definition:

As *Scholars*, Thoracic Surgeons demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

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

1. Maintain and enhance professional activities through ongoing learning

1.1. Describe the principles of maintenance of competence

1.2. Describe the principles and strategies for implementing a personal knowledge management system

1.3. Recognize and reflect on learning issues in practice

- 1.4. Conduct personal practice audits
- 1.5. Pose an appropriate learning question
- 1.6. Access and interpret the relevant evidence
- 1.7. Integrate new learning into practice
- 1.8. Evaluate the impact of any change in practice
- 1.9. Document the learning process
- 1.10. Discuss the importance of continuing medical education (CME) for Thoracic Surgeons

2. Critically evaluate medical information and its sources, and apply this appropriately to practice decisions

- 2.1. Describe the principles of critical appraisal
 - 2.1.1. Discuss the application of statistical methods to critical appraisal
 - 2.1.2. Describe how to access reliable medical information
- 2.2. Critically appraise retrieved evidence in order to address a clinical question
 - 2.2.1. Critically appraise thoracic surgical literature as it relates to patient diagnoses, investigations and treatment
- 2.3. Integrate critical appraisal conclusions into clinical care

3. Facilitate the learning of patients, families, students, residents, other health professionals, the public and others

- 3.1. Describe principles of learning relevant to medical education
- 3.2. Identify collaboratively the learning needs and desired learning outcomes of others
- 3.3. Select effective teaching strategies and content to facilitate others' learning
- 3.4. Deliver effective lectures or presentations
 - 3.4.1. Teach other health care professionals about Thoracic Surgery topics
- 3.5. Assess and reflect on teaching encounters
- 3.6. Provide effective feedback
- 3.7. Describe the principles of ethics with respect to teaching

4. Contribute to the development, dissemination, and translation of new knowledge and practices

- 4.1. Describe the principles of research and scholarly inquiry
 - 4.1.1. Apply outcome-based methodology to interpretation of clinical information
 - 4.1.2. Describe the important role of clinical and basic research in thoracic practice
- 4.2. Describe the principles of research ethics
- 4.3. Pose a scholarly question
- 4.4. Conduct a systematic search for evidence
- 4.5. Select and apply appropriate methods to address the question
- 4.6. Disseminate the findings of a study

Professional

Definition:

As *Professionals*, Thoracic Surgeons are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

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

1. Demonstrate a commitment to their patients, profession, and society through ethical practice

- 1.1. Exhibit appropriate professional behaviours in practice, including honesty, integrity, commitment, compassion, respect, and altruism
- 1.2. Demonstrate a commitment to delivering the highest quality care and maintenance of competence
- 1.3. Recognize and appropriately respond to ethical issues encountered in practice
- 1.4. Identify, declare, and manage perceived, potential, and actual conflicts of interest
- 1.5. Recognize the principles and limits of patient privacy and confidentiality as defined by the law and professional practice standards
- 1.6. Maintain appropriate boundaries with patients
- 1.7. Describe the ethical and legal standards relating to patient confidentiality

2. Demonstrate a commitment to their patients, profession, and society through participation in profession-led regulation

- 2.1. Demonstrate knowledge and understanding of professional, legal, and ethical codes of practice

OBJECTIVES OF TRAINING IN THORACIC SURGERY (2010)

- 2.2. Fulfil the regulatory and legal obligations required of current practice
- 2.3. Demonstrate accountability to professional regulatory bodies
- 2.4. Recognize and respond appropriately to others' unprofessional behaviours in practice
- 2.5. Participate in peer review

3. Demonstrate a commitment to physician health and sustainable practice

- 3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
- 3.2. Strive to heighten personal and professional awareness and insight
 - 3.2.1. Demonstrate personal and professional attitudes consistent with a consulting surgeon role
- 3.3. Recognize other professionals in need and respond appropriately

REVISED – Specialty Standards Review Committee – June 2010

EDITORIAL REVISION – Office of Specialty Education – June 2013

EDITORIAL REVISION – Office of Specialty Education – November 2018