



**PHILIPPINE ASSOCIATION OF THORACIC
AND CARDIOVASCULAR SURGEONS, INC.
(PATACSI)**

**PATACSI
THORACIC
SURGERY CORE
AND PATHWAY
CURRICULUM
ACCREDITATION
GUIDELINES**



PHILIPPINE ASSOCIATION OF THORACIC AND CARDIOVASCULAR SURGEONS, INC. (PATACSI)

PATACSI REQUIREMENTS and PROCEDURES in ACCREDITATION in THORACIC SURGERY 2017

I. INTRODUCTION:

The Philippine Association of Thoracic and Cardiovascular Surgeons Inc. (PATACSI) have developed national standards for evaluation and accreditation of the thoracic, cardiac and vascular surgery training program based on the new PATACSI Core Curriculum instructional design manual approved by the institutional stakeholders.

The Philippine Association of Thoracic and Cardiovascular Surgeons Inc. (PATACSI) through its Surgical Training Committee, has the prime responsibility of reviewing and revising the TCVS curriculum to keep it relevant and abreast with accepted international curriculum standards. And, in consonance with Article VIII Section 1.L (Committee on Surgical Training) of our constitution, PATACSI is duly tasked to evaluate and revise the existing TCVS curriculum if deemed necessary, through our regular curriculum workshops.

The structured and standardized core curriculum (1st and 2nd year) of the focused program will be based on an outcome-based curriculum, the contents of which were initially deliberated on and presented by designated THORACIC, CARDIAC and VASCULAR working groups.

Finality on the issue of implementing a Focused (Tracking) Program was voted upon during the August 08, 2015 workshop which will be carried out and adapted by each training institution depending on the institution's strengths and preferred specialty training (cardiac/thoracic/vascular).

During said workshop, an extensive review of the issues raised during past core curriculum workshops (2008-2014) and their pertinent output were presented, so that all participants may be clear with what has been achieved, what stills needs to be discussed and what still needs to be done to standardize the TCVS curriculum program, in accordance with a competency-based education as advocated by the Philippine government to keep up with the ASEAN Mutual Recognition Arrangement.

During said workshop moderated by Dr. Fernando Melendres, the issue of a 'Focused' curriculum program was lengthily discussed and eventually voted upon. In this focused program, the first two years of the TCVS training curriculum would require standardized knowledge, skills, operations, and attitudinal rigors of designated cardiac, thoracic, and vascular topics and diseases. The final year of training will revolve ONLY around the trainee's chosen field of specialty: cardiac or thoracic or vascular.



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The Philippine Association of Thoracic and Cardiovascular Surgeons Inc. (PATACSI) Board of Directors presented the final draft of the TCVS Core Curriculum during the PATACSI Annual Business Meeting dated 02 December 2016 held at Aloe AB, Marco Polo Hotel, Ortigas, and approved during that general assembly.

The Philippine Association of Thoracic and Cardiovascular Surgeons Inc. (PATACSI) Board of Directors distributed the final instructional design for Thoracic, Cardiac and Vascular Core Curriculum for guidance of the accredited training institution for proper implementation.

The Thoracic, Cardiac and Vascular Core Curriculum are implemented effective 01 January 2017 in all PATACSI Accredited Training Program on the first year TCVS Fellows of all training institutions.

II. MISSION and VISION of the PHILIPPINE ASSOCIATION of THORACIC and CARDIOVASCULAR SURGEONS INC.

MISSION

We are an organization of competent, ethical and socially responsive surgeons working to ensure quality of thoracic, cardiac and vascular surgery practice in the Philippines.

VISION

Our vision is to provide world class thoracic, cardiac and vascular surgical care responsive to the needs of the Filipino people.

Objectives of PATACSI

1. To ensure the highest standards of thoracic, cardiac and vascular surgery training programs.
2. To promote surgical research in thoracic, cardio and vascular surgery.
3. To provide relevant continuing surgical education in thoracic, cardiac and vascular surgery.
4. To maintain the highest standards of ethical surgical practice



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III. PROCEDURES for ACCREDITATION and EVALUATION

A thoracic, cardiac and vascular surgery training program that wishes to be accredited should inform the PATACSI by submitting a letter to the Board of Directors. The letter should be accompanied by an information sheet containing the following:

1. Name of hospital/s
2. Date of application
3. Name and signature of department/section head/program director
4. Name and signature of program training officer
5. Name and signature of hospital director
6. Case load/material listing with distinction between those done by trainees and consultant for the past three (3) years.
7. Name of trainees
8. Conferences for the past three (3) years
9. Research activities for the past three (3) years

The PATACSI Board of Directors shall direct the Accreditation Committee to evaluate the program based on the guidelines and requirements as stated in the following sections. Upon completion of the evaluation process, the Accreditation Committee shall make a final report (including its recommendations) to the PATACSI Board of Directors for a final decision. The program director will then be informed of this decision.

IV. REQUIREMENTS for THORACIC SURGERY TRAINING PROGRAMS

At the end of the Thoracic Pathway, the Graduate should have acquired clinical competence in the diagnosis and management of thoracic surgical disorders. His/Her abilities in 1st and 2nd year level of training have to acquire and develop the following:

1. PHYSICAL FACILITIES

- 1.1. In-patient and outpatient facilities. The training program in thoracic and cardiovascular surgery must have in-patient and outpatient clinic. The in-patient service must have at least twelve (12) regular beds exclusively for the admission and care of patients with thoracic, cardiac and vascular problems. The outpatient clinic must be held at least once weekly for a minimum of three (3) hours. There must also be an emergency room service to handle both trauma and non-trauma cases.



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- 1.2. Laboratory facilities in the training program must be able to provide service clinical and surgical pathology including frozen section biopsies and ABG determination.
- 1.3. The following diagnostic equipment and facilities must be available in the hospital.
- 1.3.1. Plain and contrast radiography
 - 1.3.2. Ultrasonography (including echocardiography)
 - 1.3.3. Pulmonary function test
 - 1.3.4. Endoscopic equipment
 - 1.3.4.1. Flexible and rigid bronchoscope
 - 1.3.4.2. Flexible and rigid esophagoscope
 - 1.3.4.3. Mediastinoscope
 - 1.3.4.4. VATS
 - 1.3.5. CT Scan
- 1.4. Easy access to the following must be available.
- 1.4.1. Nuclear medicine/scanning
 - 1.4.2. Cardiac catheterization laboratory
 - 1.4.3. Magnetic resonance imaging
- 1.5. Therapeutic Facilities
- 1.5.1. Each training program should have at least one major operating room equipped with the following:
 - 1.5.1.1. Anesthesia machine with ventilator
 - 1.5.1.2. Invasive monitoring equipment
 - 1.5.1.3. Pump oxygenator equipment
 - 1.5.1.4. Capnograph
 - 1.5.1.5. Oximeter
 - 1.5.1.6. C-arm
 - 1.5.1.7. IABP
 - 1.5.2. Each training program should have a Post Anesthesia Care Unit that is adequately equipped.
- 1.6. Morgue and facilities for postmortem examination must be available.
- 1.7. The thoracic and cardiovascular surgery unit must have the following facilities
- 1.7.1. Office
 - 1.7.2. Conference room
 - 1.7.3. Library with adequate reference materials in thoracic, cardiac and vascular surgery to include books and journals



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1.8. Major clinical units: Medicine, Surgery, Pediatrics, Intensive Care, Pathology, Radiology.

2. LEARNING ACTIVITIES

2.1. Operative

- 2.1.1. A consultant must be in attendance in all first major operations of trainees. (as documented in the operations logbook and operative record).
- 2.1.2. At least 10% of all major operations of trainees must be done with a consultant in attendance (as documented in operations logbook and operative record).

2.2. Didactics/Conference

- 2.2.1. Pre and post op conference should be held once a week with at least two consultants in attendance.
- 2.2.2. Teaching rounds should be held once a week with a consultant in attendance.
- 2.2.3. Research hour should be held once a month with at least two consultants in attendance.
- 2.2.4. Journal clubs should be held once a month with a consultant in attendance.
- 2.2.5. Rotation in other hospital to augment/complement the training program.

3. FACULTY

- 3.1. Each training program should have at least three (3) Diplomates of the Philippine Board of Thoracic and Cardiovascular Surgery (PBTCVS) as trainees. The head of service and training officer should be Diplomates of the PBTCVS and Fellows of PATACSI.
- 3.2. The Training Officer, Department or Division Chief is advised to hold only one such position in one institution alone.

4. TRAINING QUALIFICATIONS

- 4.1. The minimum entry requirements for a trainee in thoracic surgery are as follows:
 - 4.1.1. The applicant must be a Filipino physician licensed to practice in the Philippines.
 - 4.1.2. He/She must have good physical and mental health and be of good moral character as attested to by two previous trainers.
 - 4.1.3. He/She must be Philippine Board of Surgery eligible, if not yet a diplomate.



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4.1.4. All foreign trainees will be evaluated by the training institution. He/She must comply with requirements 2 and present a certification of training from his training institution equivalent to that needed by Filipino trainees for Philippine Board of Surgery eligibility.

4.1.5. The applicant from a foreign country must be a physician licensed to practice in his country. He must also secure a permit from the Department of Health of the Philippines that they are allowed to train in TCVS here in the country.

4.1.6. He/She must have at least three (3) years certification in General Surgery in the Philippines particularly in a Philippine College of Surgeons (PCS) Accredited Training Program or abroad.

5. LEVELS and DURATION of TRAINING

5.1. A trainee must undergo training for a minimum of three (3) years in any of the accredited residency training programs.

5.1.1. Level I First Year

5.1.2. Level II Second Year

5.1.3. Level III Third Year

6. COMPETENCIES

6.1. COGNITIVE DOMAIN

6.1.1. Knowledge

6.1.2. Comprehension

6.1.3. Intellectual Skills

6.1.3.1. Data gathering

6.1.3.2. Analysis

6.1.3.3. Problem-solving

6.1.3.4. Decision-making

6.1.3.5. Critical Thinking

6.2. PSYCHOMOTOR DOMAIN

6.2.1. Technical Skills

6.2.2. Communication Skills

6.3. AFFECTIVE DOMAIN

6.3.1. Interpersonal Skills

7. INTENDED LEARNING OUTCOMES



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7.1. At the end of the FIRST (1st) YEAR, the Fellow should be able to:

7.1.1. COGNITIVE DOMAIN (PATACSI)

7.1.1.1. Understand the principles of diagnosis and management of common thoracic surgical disorders.

7.1.1.2. Demonstrate knowledge of the principle of Research, Methodology and Critical Appraisal of Literature

7.1.1.3. At the end of Level I & II, the trainee must complete and present a research paper. Level I at least case report or case series. Level II at least meta-analysis.

7.1.2. PSYCHOMOTOR DOMAIN

7.1.2.1. Evaluate patients with thoracic surgical disorders

7.1.2.1.1. Obtain an adequate history

7.1.2.1.2. Perform a thorough physical exam

7.1.2.1.3. Order pertinent laboratory and diagnostic exams

7.1.2.1.4. Formulate treatment plan

7.1.2.1.5. Refer appropriately

7.1.2.1.6. Provide continuing care

7.1.2.2. Must be able to understand the different approaches to the thoracic cavity.

7.1.2.3. Must be able to assess and stratify risks of patients undergoing thoracic surgery.

7.1.2.4. Perform minor diagnostic surgical procedures.

7.1.2.5. Perform minor thoracic surgical procedures.

7.1.3. AFFECTIVE DOMAIN

7.1.3.1. Demonstrate the proper attitudes and habits in the practice of surgery

7.2. At the end of the THIRD (3rd) YEAR, the Fellow should be able to:

7.2.1. COGNITIVE DOMAIN

7.2.1.1. Understand the principles of diagnosis and management of common thoracic surgical disorders.

7.2.1.2. Demonstrate knowledge of the principle of Research, Methodology and Critical Appraisal of Literature.

7.2.1.3. At the end of Level III, the trainee must complete and present a research paper at least a clinical trial.



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- 7.2.2.1. Perform or assist in the performance of surgical procedures.
- 7.2.2.2. Assist and Perform major and minor thoracic surgical procedures.

7.2.3. AFFECTIVE DOMAIN

- 7.2.3.1. Demonstrate the proper attitudes and habits in the practice of surgery

8. CURRICULUM CONTENT (Please see THORACIC CURRICULUM MANUAL)

8.1. 1st YEAR and 2nd Year (CORE)

8.1.1. GENERAL MANAGEMENT of a PATIENT UNDERGOING THORACIC SURGERY

- 8.1.1.1. Physiology, Pathology, Anatomy
 - 8.1.1.1.1. Tracheobronchial Tree and Lungs
 - 8.1.1.1.2. Thoracic Inlet, Neck, Mediastinum and Diaphragm
 - 8.1.1.1.3. Esophagus, Upper GI Tract and Colon
 - 8.1.1.1.4. Pleura and Chest Wall
- 8.1.1.2. Antimicrobials
- 8.1.1.3. Bronchodilators
- 8.1.1.4. Pulmonary visodilators
- 8.1.1.5. Inotropes
- 8.1.1.6. Antineoplastic
- 8.1.1.7. Anticoagulants
- 8.1.1.8. Antiplatelet
- 8.1.1.9. Management of intra-pleural sepsis
- 8.1.1.10. Management of thoracic infections
- 8.1.1.11. Signs and Symptoms of Thoracic Diseases
- 8.1.1.12. Principles of Management of Patient with Thoracic Diseases
- 8.1.1.13. Open versus Minimally Invasive approaches limited to Trauma
- 8.1.1.14. Open versus Minimally Invasive Approaches to Thorax and Abdomen
- 8.1.1.15. Risk assessment and satisfaction
- 8.1.1.16. Recognition of post-thoracic surgical complications
- 8.1.1.17. Post-operative management of pain control
- 8.1.1.18. Treatment of Cardiac Arrhythmias
- 8.1.1.19. Physiotherapy and Rehabilitations
- 8.1.1.20. Understanding Thoracic specific ventilator
- 8.1.1.21. Principles of ventilatory support
- 8.1.1.22. Esophagoscopy (5)



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- 8.1.1.24. Flexible (10)
- 8.1.1.25. Rigid (2)
- 8.1.1.26. Diagnostic Thoracoscopy (10)
- 8.1.1.27. Tracheostomy (10)
- 8.1.1.28. Thoracentesis (10)
- 8.1.1.29. Thoracostomy (10)
- 8.1.1.30. TTNA (10)

- 8.1.1.31. Post-operative Care
 - 8.1.1.31.1. Wound Care
 - 8.1.1.31.2. Care of tubes
 - 8.1.1.31.3. Thoracic Drains
 - 8.1.1.31.4. Catheters

8.1.2. NEOPLASM of the LUNGS

- 8.1.2.1. Benign and malignant tumor of trachea, bronchus and lungs.
- 8.1.2.2. Epidemiology, genetic signatures, presentation and diagnosis.
- 8.1.2.3. Multi-modality management of thoracic malignancy.
- 8.1.2.4. Surgery (Open/VATS)
 - 8.1.2.4.1. Wedge resection
 - 8.1.2.4.2. Lobectomy
 - 8.1.2.4.3. Segmentectomy
 - 8.1.2.4.4. Bilobectomy
 - 8.1.2.4.5. Sleeve Lobectomy
 - 8.1.2.4.6. Resection with Chest Wall including resection techniques
 - 8.1.2.4.7. Pneumonectomy
 - 8.1.2.4.8. Carinal Pneumonectomy
 - 8.1.2.4.9. Pancoast Tumor Surgery
 - 8.1.2.4.10. Extended Resection (SVC, Spine etc.)
- 8.1.2.5. Repeat resection including completion pneumonectomy
- 8.1.2.6. Clagett procedure and Eloesser Flap
- 8.1.2.7. Soft tissue flaps for stump coverage

8.1.3. BENIGN LUNG CONDITIONS

8.1.3.1. BRONCHIECTASIS

- 8.1.3.1.1. Medical Therapy
- 8.1.3.1.2. Role of surgery
- 8.1.3.1.3. Criteria for surgical resection



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- 8.1.3.1.4. Diagnostic Studies
- 8.1.3.1.5. Familiarity with medical therapy
- 8.1.3.1.6. Clinical evaluation and assessment for responsible surgery

8.1.3.2. BACTERIAL INFECTIONS

- 8.1.3.2.1. Community acquired pneumonia
- 8.1.3.2.2. Nosocomial pneumonia
- 8.1.3.2.3. Aspiration pneumonia
- 8.1.3.2.4. Lung abscess
- 8.1.3.2.5. Pneumonia in the immunocompromised host
- 8.1.3.2.6. Antibiotic therapy
- 8.1.3.2.7. Clinical assessment
- 8.1.3.2.8. Techniques for culture specimen collection
- 8.1.3.2.9. Interpretation of imaging
- 8.1.3.2.10. Advance ventilator management prone position
- 8.1.3.2.11. Familiarity with medical therapy
- 8.1.3.2.12. Management of lung abscess
- 8.1.3.2.13. Medical management
- 8.1.3.2.14. Surgical management

8.1.3.3. TUBERCULOSIS and ATYPICAL MICROBACTERIA

- 8.1.3.3.1. Epidemiology and screening
- 8.1.3.3.2. Clinical presentation
- 8.1.3.3.3. Medical Treatment
- 8.1.3.3.4. Indications for surgery, including complications and outcomes
- 8.1.3.3.5. Familiarity with medical therapy
- 8.1.3.3.6. Management of complimentary TB
- 8.1.3.3.7. Timing and preparation of patients who are candidates for surgery

8.1.3.4. MYCOTIC INFECTIONS

- 8.1.3.4.1. Epidemiology of various fungal diseases
- 8.1.3.4.2. Diagnosis – cultures / serology



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- 8.1.3.4.4. Manifestations of:
 - 8.1.3.4.4.1. Histoplasmosis
 - 8.1.3.4.4.2. Aspergillus
 - 8.1.3.4.4.3. Coccidioidomycosis
 - 8.1.3.4.4.4. Blastomycosis
 - 8.1.3.4.4.5. Pulmonary Cryptococcus
 - 8.1.3.4.4.6. Myucormycosis
 - 8.1.3.4.4.7. Familiarity with medical therapy
 - 8.1.3.4.4.8. Role of surgery

8.1.3.5. PARASITIC DISEASES

- 8.1.3.5.1. Hybrid Diseases
- 8.1.3.5.2. Epidemiology
- 8.1.3.5.3. Complications
- 8.1.3.5.4. Laboratory testing
- 8.1.3.5.5. Imaging
- 8.1.3.5.6. Diagnostic techniques
- 8.1.3.5.7. Familiarity with medical therapy
- 8.1.3.5.8. Surgical treatment

8.1.3.6. INTESTINAL LUNG DISEASE

- 8.1.3.6.1. Categorization
- 8.1.3.6.2. Presentation, laboratory and physiological testing and imaging
- 8.1.3.6.3. Diagnostic options
- 8.1.3.6.4. Role of lung biopsy
- 8.1.3.6.5. Assessment of surgical risk, probability of effecting treatment change
- 8.1.3.6.6. Open and VATS lung biopsy

8.1.3.7. EMPHYSEMA and BULLAE

- 8.1.3.7.1. Etiology, pathology and Physiology of COPD
- 8.1.3.7.2. Smoking cessation measures and outcomes
- 8.1.3.7.3. Imaging (V-Q scan, pulmonary function, DLCO, etc.,)
- 8.1.3.7.4. Surgical techniques and results used in the treatment of non-bullous emphysema and bullae
- 8.1.3.7.5. Interpretation of imaging and pulmonary function



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- 8.1.3.7.7. Postoperative management
8.1.3.7.8. Familiarity with pulmonary rehabilitation

8.1.4. DISORDERS of the PLEURA

- 8.1.4.1. Anatomy and Physiology of the Pleura
- 8.1.4.2. Inflammatory, ineffective and malignant diseases of parietal and visceral pleura
- 8.1.4.3. Pneumothorax (spontaneous, secondary, catamenial)
- 8.1.4.4. Complex pleural effusion / empyema
- 8.1.4.5. Mesothelioma

8.1.5. DISORDERS of the CHEST WALL

- 8.1.5.1. Anatomy and Physiology of the Chestwall
- 8.1.5.2. Chest Wall Tumors
- 8.1.5.3. Congenital lesions (e.g. pectus deformities)
- 8.1.5.4. Thoracic outlet syndrome
- 8.1.5.5. Inflammatory / Infectious diseases
- 8.1.5.6. FNAB
 - 8.1.5.6.1. Incisional biopsy
 - 8.1.5.6.2. Excisional biopsy
 - 8.1.5.6.3. Core biopsy
- 8.1.5.7. Chest wall resection for benign and malignant diseases
- 8.1.5.8. Selection and insertion of prosthetic materials for reconstruction
- 8.1.5.9. Surgery for complications of chest wall resection, and repeat surgery
- 8.1.5.10. Supraclavicular and trans-axillary first rib approach to thoracic outlet syndrome
- 8.1.5.11. Chest wall deformity repair

8.1.6. DISORDERS of the DIAPHRAGM

- 8.1.6.1. Anatomy and Physiology
- 8.1.6.2. Pathology of the diaphragm
- 8.1.6.3. Clinical, physiological and imaging techniques
- 8.1.6.4. Physiologic consequences of diaphragmatic herniation or paresis
- 8.1.6.5. Resection, repair and reconstruction of diaphragm
- 8.1.6.6. Diaphragmatic plication



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8.1.7. DISORDERS of the MEDIASTINUM

- 8.1.7.1. Anatomy and Physiology of the Mediastinum
- 8.1.7.2. Congenital, benign, infectious and malignant (primary and secondary conditions of the mediastinum)
- 8.1.7.3. Systematic conditions associated with the mediastinum
- 8.1.7.4. Clinical laboratory and imaging techniques used in the diagnosis and assessment of patients with mediastinal diseases.
- 8.1.7.5. Myasthenia gravis: medical, surgical and peri-operative management.
- 8.1.7.6. Staging of thymoma
- 8.1.7.7. Oncologic treatment of malignant disease of the mediastinum including multi-disciplinary care (Thymoma, germ cell cancers)
- 8.1.7.8. Surgical techniques for the treatment of myasthenia gravis, mediastinal cyst and tumors, complications and results.
- 8.1.7.9. Biopsy of mediastinal masses
- 8.1.7.10. Thymectomy for myasthenia gravis (open and VATS)
- 8.1.7.11. Resection of mediastinal tumors, including resection of adjacent structures

8.1.8. CARDIOTHORACIC TRAUMA

- 8.1.8.1. Blunt, penetrating and deceleration injuries to the chest
- 8.1.8.2. Indications and use of appropriate investigations
- 8.1.8.3. Indications for thoracotomy in trauma
- 8.1.8.4. Post-ACLS definitive care of blunt, penetrating and deceleration injuries of the chest
- 8.1.8.5. Recognition and management of immediately life threatening situations
- 8.1.8.6. Obstructed airway, tension pneumothorax, massive hemothorax, open
- 8.1.8.7. Lung contusion, bronchial rupture, blunt cardiac injury, intrathoracic bleeding
- 8.1.8.8. Esophageal injury, simple pneumothorax and major vascular injury
- 8.1.8.9. Various approaches to expose thoracic trauma
- 8.1.8.10. Part of Cardiac repair of cardiac injuries



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- 8.1.8.12. Repair of bronchial injuries
- 8.1.8.13. Repair of aortic transection
- 8.1.8.14. Repair of other great vessel injuries
- 8.1.8.15. Repair of lung injuries, chest injuries, diaphragmatic injuries

8.1.9. BENIGN ESOPHAGEAL DISORDERS

- 8.1.9.1. Esophageal and gastric anatomy
- 8.1.9.2. Anatomy of small and large intestine as related to reconstruction
- 8.1.9.3. Pathology
- 8.1.9.4. Diagnostic Procedures and their interpretation
- 8.1.9.5. Esophageal function tests
- 8.1.9.6. Drugs used in the treatment of GE reflux and dysmotility disorders
- 8.1.9.7. Treatment options of achalasia
- 8.1.9.8. Non-operative and operative options for treatment
- 8.1.9.9. Management of the post-op patients
- 8.1.9.10. Management of post-op complications
- 8.1.9.11. Open and lap fundoplication (Belsey, Nissen, Dor, Toupet)
- 8.1.9.12. Open and lap esophagomyotomy
- 8.1.9.13. Reoperations
- 8.1.9.14. Surgical treatment of the esophageal perforations (Stent, Repair, Diversion)
- 8.1.9.15. Open or MIS / Esophagomyotomy for diverticula

8.1.10. ESOPHAGEAL NEOPLASMS

- 8.1.10.1. Esophageal and gastric anatomy
- 8.1.10.2. Anatomy of small and large intestine as related to reconstruction
- 8.1.10.3. Screening methods and preventive measure
- 8.1.10.4. Interpretation of staging tests
- 8.1.10.5. Staging of esophageal cancer
- 8.1.10.6. Risk assessment of patients undergoing esophageal resection
- 8.1.10.7. Treatment options for high grade dysplasia / very early esophageal cancer
- 8.1.10.8. Treatment options for Stage I, II, III esophageal cancer
- 8.1.10.9. Induction therapy
- 8.1.10.10. Management of post-esophagectomy patients
- 8.1.10.11. Identification / management of post-resection



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- 8.1.10.13. Long term follow-up and management recurrence
- 8.1.10.14. Mobilization of the esophagus, stomach and colon
- 8.1.10.15. Esophageal resection (different approaches)
- 8.1.10.16. Various Esophageal reconstruction approaches including interposition techniques
- 8.1.10.17. Management of intra and post-operative complications

8.1.11. DISORDERS of the AIRWAY

- 8.1.11.1. Anatomy of the larynx, trachea and bronchus
- 8.1.11.2. Diagnosis/assessment of airway obstruction
- 8.1.11.3. Interpretation of laboratory and imaging techniques
- 8.1.11.4. Bronchoscopy (FOB, rigid)
- 8.1.11.5. Patient selection with assessment of function and risk
- 8.1.11.6. Bronchoplastic procedures: applications and limitations
- 8.1.11.7. Post-op care of patients after airway surgery
- 8.1.11.8. Sleeve resection of the trachea for simple benign conditions
- 8.1.11.9. Sleeve resection of the main bronchi including lobectomy
- 8.1.11.10. Techniques for the relief of major airway obstruction, including stenting, “core out” PDT, dilation, cryotherapy, etc.
- 8.1.11.11. Airway resection for tumors and complex benign conditions and techniques for airway reconstruction, anastomosis and laryngeal release
- 8.1.11.12. Repeat resections for recurrence and complications of prior resection
- 8.1.11.13. Management of fistulas in the aerodigestive tract by surgical and endoscopic techniques

8.2. 3rd YEAR (PATHWAY)

8.2.1. GENERAL MANAGEMENT of a PATIENT UNDERGOING THORACIC SURGERY

- 8.2.1.1. Physiology, Pathology, Anatomy
 - 8.2.1.1.1. Tracheobronchial Tree and Lungs
 - 8.2.1.1.2. Thoracic Inlet, Neck, Mediastinum and Diaphragm
 - 8.2.1.1.3. Esophagus, Upper GI Tract and Colon
 - 8.2.1.1.4. Pleura and Chest Wall
- 8.2.1.2. Antimicrobials
- 8.2.1.3. Bronchodilators
- 8.2.1.4. Pulmonary vasodilators
- 8.2.1.5. Inotropes



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- 8.2.1.7. Anticoagulants
- 8.2.1.8. Antiplatelet
- 8.2.1.9. Management of intra-pleural sepsis
- 8.2.1.10. Management of thoracic infections
- 8.2.1.11. Signs and Symptoms of Thoracic Diseases
- 8.2.1.12. Principles of Management of Patient with Thoracic Diseases
- 8.2.1.13. Open versus Minimally Invasive approaches limited to Trauma
- 8.2.1.14. Open versus Minimally Invasive Approaches to Thorax and Abdomen
- 8.2.1.15. Risk assessment and satisfaction
- 8.2.1.16. Recognition of post-thoracic surgical complications
- 8.2.1.17. Post-operative management of pain control
- 8.2.1.18. Treatment of Cardiac Arrhythmias
- 8.2.1.19. Physiotherapy and Rehabilitations
- 8.2.1.20. Understanding Thoracic specific ventilator
- 8.2.1.21. Principles of ventilatory support

- 8.2.1.22. Esophagoscopy (5)
- 8.2.1.23. Bronchoscopy (10)
- 8.2.1.24. Diagnostic Thoracoscopy (10)
- 8.2.1.25. Tracheostomy (10)
- 8.2.1.26. Thoracentesis (10)
- 8.2.1.27. Thoracostomy (10)
- 8.2.1.28. TTNA (10)
- 8.2.1.29. Post-operative Care
 - 8.2.1.29.1. Wound Care
 - 8.2.1.29.2. Care of tubes
 - 8.2.1.29.3. Thoracic Drains
 - 8.2.1.29.4. Catheters

8.2.2. NEOPLASM of the LUNGS

- 8.2.2.1. Benign and malignant tumor of trachea, bronchus and lungs.
- 8.2.2.2. Epidemiology, genetic signatures, presentation and diagnosis.
- 8.2.2.3. Multi-modality management of thoracic malignancy.
- 8.2.2.4. Non-resectional techniques (SBRT, RFA etc.)
- 8.2.2.5. Assessment of performance status and risk
- 8.2.2.6. Survival and recurrence patterns
- 8.2.2.7. Post-operative complications (BP Fistula, space problems, empyema, prolonged air leak, etc.)
- 8.2.2.8. Surgical palliative techniques (stents, RFA, etc.)



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- 8.2.2.10. Diagnosis and management of AV Malformations, granulomas
- 8.2.2.11. Diagnosis and management of pulmonary metastases
- 8.2.2.12. Diagnosis and management of AV malformations granulomas hamartomas
- 8.2.2.13. Surgery (Open/VATS)
 - 8.2.2.13.1. Wedge resection
 - 8.2.2.13.2. Lobectomy
 - 8.2.2.13.3. Segmentectomy
 - 8.2.2.13.4. Bilobectomy
 - 8.2.2.13.5. Sleeve Lobectomy
 - 8.2.2.13.6. Resection with Chest Wall including resection techniques
 - 8.2.2.13.7. Pneumonectomy
 - 8.2.2.13.8. Carinal Pneumonectomy
 - 8.2.2.13.9. Pancoast Tumor Surgery
 - 8.2.2.13.10. Extended Resection (SVC, Spine etc.)
- 8.2.2.14. Repeat resection including completion pneumonectomy
- 8.2.2.15. Clagett procedure and Eloesser Flap
- 8.2.2.16. Soft tissue flaps for stump coverage

8.2.3. BENIGN LUNG CONDITIONS

8.2.3.1. BRONCHIECTASIS

- 8.2.3.1.1. Medical Therapy
- 8.2.3.1.2. Role of surgery
- 8.2.3.1.3. Criteria for surgical resection
- 8.2.3.1.4. Diagnosis studies
- 8.2.3.1.5. Familiarity with medical therapy
- 8.2.3.1.6. Clinical evaluation and assessment for responsible surgery
- 8.2.3.1.7. Assist in Lung resection
- 8.2.3.1.8. Assist in Anatomic / Non-anatomic (Open/VATS)

8.2.3.2. BACTERIAL INFECTIONS

- 8.2.3.2.1. Community acquired pneumonia
- 8.2.3.2.2. Nosocomial pneumonia
- 8.2.3.2.3. Aspiration pneumonia
- 8.2.3.2.4. Lung abscess
- 8.2.3.2.5. Pneumonia in the immunocompromised host



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- 8.2.3.2.7. Clinical assessment
- 8.2.3.2.8. Techniques for culture specimen collection
- 8.2.3.2.9. Interpretation of imaging
- 8.2.3.2.10. Advance ventilator management prone position
- 8.2.3.2.11. Familiarity with medical therapy
- 8.2.3.2.12. Management of lung abscess
- 8.2.3.2.13. Medical management
- 8.2.3.2.14. Surgical management

8.2.3.3. TUBERCULOSIS and ATYPICAL MICROBACTERIA

- 8.2.3.3.1. Epidemiology and screening
- 8.2.3.3.2. Clinical presentation
- 8.2.3.3.3. Medical Treatment
- 8.2.3.3.4. Indications for surgery, including complications and outcomes
- 8.2.3.3.5. Familiarity with medical therapy
- 8.2.3.3.6. Management of complimentary TB
- 8.2.3.3.7. Timing and preparation of patients who are candidates for surgery
- 8.2.3.3.8. Assist in resection techniques (Open/VATS)
- 8.2.3.3.9. Assist in Bronchial stump coverage

8.2.3.4. MYCOTIC INFECTIONS

- 8.2.3.4.1. Epidemiology of various fungal diseases
- 8.2.3.4.2. Diagnosis – cultures / serology
- 8.2.3.4.3. Imaging
- 8.2.3.4.4. Manifestations of:
 - 8.2.3.4.4.1. Histoplasmosis
 - 8.2.3.4.4.2. Aspergillus
 - 8.2.3.4.4.3. Coccidioidomycosis
 - 8.2.3.4.4.4. Blastomycosis
 - 8.2.3.4.4.5. Pulmonary Cryptococcus
 - 8.2.3.4.4.6. Myucormycosis
 - 8.2.3.4.4.7. Familiarity with medical therapy
 - 8.2.3.4.4.8. Role of surgery

8.2.3.5. PARASITIC DISEASES

- 8.2.3.5.1. Hybrid Diseases



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- 8.2.3.5.3. Complications
- 8.2.3.5.4. Laboratory testing
- 8.2.3.5.5. Imaging
- 8.2.3.5.6. Diagnostic techniques
- 8.2.3.5.7. Familiarity with medical therapy
- 8.2.3.5.8. Surgical treatment

8.2.3.6. **INTESTINAL LUNG DISEASE**

- 8.2.3.6.1. Categorization
- 8.2.3.6.2. Presentation, laboratory and physiological testing and imaging
- 8.2.3.6.3. Diagnostic options
- 8.2.3.6.4. Role of lung biopsy
- 8.2.3.6.5. Assessment of surgical risk, probability of effecting treatment change
- 8.2.3.6.6. Open and VATS lung biopsy
- 8.2.3.6.7. Assist in Open and VATS lung biopsy

8.2.3.7. **EMPHYSEMA and BULLAE**

- 8.2.3.7.1. Etiology, pathology and Physiology of COPD
- 8.2.3.7.2. Smoking cessation measures and outcomes
- 8.2.3.7.3. Imaging (V-Q scan, pulmonary function, DLCO, etc.,)
- 8.2.3.7.4. Surgical techniques and results used in the treatment of non-bullous emphysema and bullae
- 8.2.3.7.5. Interpretation of imaging and pulmonary function
- 8.2.3.7.6. Patients selection with assessment of function and risk
- 8.2.3.7.7. Postoperative management
- 8.2.3.7.8. Familiarity with pulmonary rehabilitation
- 8.2.3.7.9. Assists in procedures to deal with secondary pneumothorax and bullae by open and VATS
- 8.2.3.7.10. Assist in lung volume reduction surgery, unilaterally and bilaterally using open and VATS

8.2.4. **DISORDERS of the PLEURA**

- 8.2.4.1. Anatomy and Physiology of the Pleura



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8.2.4.1. Anatomic and laboratory and imaging techniques of parietal and visceral pleura

- 8.2.4.3. Pneumothorax (spontaneous, secondary, catamenial)
- 8.2.4.4. Complex pleural effusion / empyema
- 8.2.4.5. Mesothelioma
- 8.2.4.6. Hemothorax
- 8.2.4.7. Chylothorax
- 8.2.4.8. Fibrous tumor of the pleura
- 8.2.4.9. Chest drain insertion, management, removal and treatment of complication
- 8.2.4.10. Open and VATS procedures for the uncomplicated pleural problems, (pneumothorax, effusion, hemothorax, etc.) including drainage, biopsy, lytic therapy and pleurectomy
- 8.2.4.11. Open and VATS procedures for empyema including techniques for decortication
- 8.2.4.12. Advance techniques of pleural space obliteration
- 8.2.4.13. Surgical options for malignant mesothelioma
- 8.2.4.14. Resection of the other pleural tumors
- 8.2.4.15. Pleurodesis techniques

8.2.5. DISORDERS of the CHEST WALL

- 8.2.5.1. Anatomy and Physiology of the Chestwall
- 8.2.5.2. Chest Wall Tumors
- 8.2.5.3. Congenital lesions (e.g. pectus deformities)
- 8.2.5.4. Thoracic outlet syndrome
- 8.2.5.5. Inflammatory / Infectious diseases
- 8.2.5.6. Clinical, laboratory and imaging techniques
- 8.2.5.7. Techniques used in diagnosis
- 8.2.5.8. Resect the sternum and chest wall, physiological and cosmetic sequelae
- 8.2.5.9. Techniques of the chest wall reconstruction (prosthetic and muscle flaps)
- 8.2.5.10. Interpretation of laboratory, physiological and imaging technique
- 8.2.5.11. Patients selection for operation
- 8.2.5.12. Diagnose and manage patients with thoracic outlet syndrome
- 8.2.5.13. FNAB
 - 8.2.5.13.1. Incisional biopsy



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- 8.2.5.13.3. Core biopsy
- 8.2.5.14. Chest wall resection for benign and malignant diseases
- 8.2.5.15. Selection and insertion of prosthetic materials for reconstruction
- 8.2.5.16. Surgery for complications of chest wall resections and repeat surgery
- 8.2.5.17. Supraclavicular and trans-axillary first rib approach to thoracic outlet syndrome
- 8.2.5.18. Chest wall deformity repair

8.2.6. DISORDERS of the DIAPHRAGM

- 8.2.6.1. Anatomy and Physiology
- 8.2.6.2. Pathology of the diaphragm
- 8.2.6.3. Clinical, physiological and imaging techniques
- 8.2.6.4. Physiologic consequences of diaphragmatic herniation or paresis
- 8.2.6.5. Surgical technique used to biopsy and resect diaphragmatic tumors
- 8.2.6.6. Reconstructive material
- 8.2.6.7. Resection, repair and reconstruction of diaphragm
- 8.2.6.8. Diaphragmatic plication
- 8.2.6.9. Familiarity with diaphragmatic pacing

8.2.7. DISORDERS of the MEDIASTINUM

- 8.2.7.1. Anatomy and Physiology of the Mediastinum
- 8.2.7.2. Congenital, benign, infectious and malignant (primary and secondary conditions of the mediastinum)
- 8.2.7.3. Systematic conditions associated with the mediastinum
- 8.2.7.4. Clinical laboratory and imaging techniques used in the diagnosis and assessment of patients with mediastinal diseases.
- 8.2.7.5. Myasthenia gravis: medical, surgical and peri-operative management.
- 8.2.7.6. Staging of thymoma
- 8.2.7.7. Oncologic treatment of malignant disease of the mediastinum including multi-disciplinary care (Thymoma, germ cell cancers)
- 8.2.7.8. Surgical techniques for the treatment of myasthenia gravis, mediastinal cyst and tumors, complications and results.
- 8.2.7.9. Biopsy of mediastinal masses (Mediastinoscopy/Mediastinotomy)



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- 8.2.7.11. Resection of mediastinal tumors, including resection of adjacent structures

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8.2.8. CARDIOTHORACIC TRAUMA

- 8.2.8.1. Blunt, penetrating and deceleration injuries to the chest
- 8.2.8.2. Indications and use of appropriate investigations
- 8.2.8.3. Indications for thoracotomy in trauma
- 8.2.8.4. Post-ACLS definitive care of blunt, penetrating and deceleration injuries of the chest
- 8.2.8.5. Recognition and management of immediately life threatening situations
- 8.2.8.6. Obstructed airway, tension pneumothorax, massive hemothorax, open
- 8.2.8.7. Recognition and assessment of potentially life threatening situations
- 8.2.8.8. Lung contusion, bronchial rupture, blunt cardiac injury, intrathoracic bleeding
- 8.2.8.9. Esophageal injury, simple pneumothorax and major vascular injury
- 8.2.8.10. Various approaches to expose thoracic trauma
- 8.2.8.11. Part of Cardiac repair of cardiac injuries
- 8.2.8.12. Repair of esophageal injuries
- 8.2.8.13. Repair of bronchial injuries
- 8.2.8.14. Repair of aortic transection
- 8.2.8.15. Repair of other great vessel injuries
- 8.2.8.16. Repair of lung injuries, chest injuries, diaphragmatic injuries

8.2.9. BENIGN ESOPHAGEAL DISORDERS

- 8.2.9.1. Esophageal and gastric anatomy
- 8.2.9.2. Anatomy of small and large intestine as related to reconstruction
- 8.2.9.3. Pathology
 - 8.2.9.3.1. Motility disorders (esophageal sphincter dysfunction, achalasia, esophageal spasm)
 - 8.2.9.3.2. Diverticula and types of hiatal hernias - sliding paraesophageal
 - 8.2.9.3.3. Trauma (blunt, penetrating, iatrogenic perforations, radiation, induced, caustic, ingestion, drug induced)



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- 8.2.9.3.5. Strictures (reflux induced, caustic, anastomotic)
- 8.2.9.3.6. Tracheoesophageal fistula
- 8.2.9.3.7. Barrett's esophagus
- 8.2.9.4. Diagnostic Procedures and their interpretation
 - 8.2.9.4.1. Imaging, Radiography
 - 8.2.9.4.2. Gastric empty, GE reflux
- 8.2.9.5. Esophageal function tests
- 8.2.9.6. Drugs used in the treatment of GE reflux and dysmotility disorders
- 8.2.9.7. Treatment options of achalasia
- 8.2.9.8. Non-operative and operative options for treatment
- 8.2.9.9. Management of the post-op patients
- 8.2.9.10. Management of post-op complications
- 8.2.9.11. Open and lap fundoplication (Belsey, Nissen, Dor, Toupet)
- 8.2.9.12. Open and lap esophagomyotomy
- 8.2.9.13. Reoperations
- 8.2.9.14. Surgical treatment of the esophageal perforations (Stent, Repair, Diversion)
- 8.2.9.15. Open or MIS / Esophagomyotomy for diverticula
- 8.2.9.16. Re-operations
- 8.2.9.17. Surgical treatment of the esophageal perforations (Stent, Repair, Diversion)
- 8.2.9.18. Open or MIS / Esophagomyotomy for diverticula

8.2.10. ESOPHAGEAL NEOPLASMS

- 8.2.10.1. Esophageal and gastric anatomy
- 8.2.10.2. Anatomy of small and large intestine as related to reconstruction
- 8.2.10.3. Screening methods and preventive measure
- 8.2.10.4. Interpretation of staging tests
- 8.2.10.5. Staging of esophageal cancer
- 8.2.10.6. Risk assessment of patients undergoing esophageal resection
- 8.2.10.7. Treatment options for high grade dysplasia / very early esophageal cancer
- 8.2.10.8. Treatment options for Stage I, II, III esophageal cancer
- 8.2.10.9. Induction therapy
- 8.2.10.10. Management of post-esophagectomy patients
- 8.2.10.11. Identification / management of post-resection
- 8.2.10.12. Palliative procedures



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- 8.2.10.16. Various Esophageal reconstruction approaches including interposition techniques
- 8.2.10.14. Mobilization of the esophagus, stomach and colon
- 8.2.10.15. Esophageal resection (different approaches)
- 8.2.10.16. Various Esophageal reconstruction approaches including interposition techniques
- 8.2.10.17. Management of intra and post-operative complications

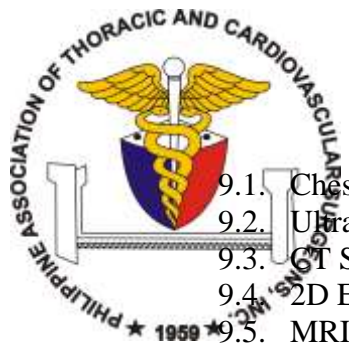
8.2.11. DISORDERS of the AIRWAY

- 8.2.11.1. Anatomy of the larynx, trachea and bronchus
- 8.2.11.2. Diagnosis/assessment of airway obstruction
- 8.2.11.3. Interpretation of laboratory and imaging techniques
- 8.2.11.4. Bronchoscopy (FOB, rigid)
- 8.2.11.5. Patient selection with assessment of function and risk
- 8.2.11.6. Bronchoplastic procedures: applications and limitations
- 8.2.11.7. Post-op care of patients after airway surgery
- 8.2.11.8. Sleeve resection of the trachea for simple benign conditions
- 8.2.11.9. Sleeve resection of the main bronchi including lobectomy
- 8.2.11.10. Techniques for the relief of major airway obstruction, including stenting, “core out” PDT, dilation, cryotherapy, etc.
- 8.2.11.11. Airway resection for tumors and complex benign conditions and techniques for airway reconstruction, anastomosis and laryngeal release
- 8.2.11.12. Repeat resections for recurrence and complications of prior resection
- 8.2.11.13. Management of fistulas in the aerodigestive tract by surgical and endoscopic techniques

8.2.12. CONGENITAL LUNG and THORACIC DISEASES

- 8.2.12.1. Pulmonary sequestration
- 8.2.12.2. Congenital lobar emphysema
- 8.2.12.3. Bronchogenic cysts
- 8.2.12.4. Cystic adenomatoid malformation
- 8.2.12.5. Congenital Lung disease (cystic adenomatoid, malformation, congenital lobar emphysema, sequestration)
- 8.2.12.6. Foregut duplication cysts diaphragmatic hernia and eventration
- 8.2.12.7. Esophageal atresia / fistula
- 8.2.12.8. Diagnosis, Assessment and treatment of common congenital pulmonary and esophageal disease
- 8.2.12.9. Congenital thoracic disease imaging interpretation

9. PRINCIPLES OF:



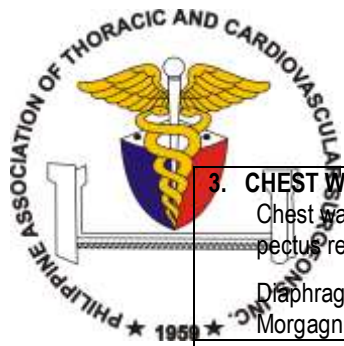
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- 9.1. Chest x-rays
- 9.2. Ultrasound
- 9.3. CT Scan
- 9.4. 2D Echo
- 9.5. MRI
- 9.6. ABG
- 9.7. VQ Scanning
- 9.8. PET/CT
- 9.9. PFT
- 9.10. EBUS
- 9.11. EUS

10. CLINICAL MATERIALS

10.1. Index cases were identified for THORACIC SURGERY PATHWAY. For the duration for his/her training, a trainee must have independently performed (skin to skin) the following procedures:

PROCEDURE	CORE	TRACKING
1. LUNG Open Anatomic Resections (<i>Segmentectomy, lobectomy, pneumonectomy</i>) Major VATS / Robotic Anatomic Resections (at least 5 VATS and 5 Open) Non-anatomic lung resections	0	25
2. PLEURA Decortication Pleurectomy, or other tumor resection, Symphatectomy, Pleurodesis	0	10 10



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3. CHEST WALL and DIAPHRAGM Chest wall resection (at least 2 with chest wall reconstruction), pectus repair		5
Diaphragmatic Surgeries (diaphragm resection or plication, repair of Morgagni, Bochdalek, or traumatic hernia)	0	5
4. MEDIASTINUM Tumor / cyst / mass resection via open, VATS, or robotic technique	0	10
Mediastinoscopy / Mediastinotomy		10
5. TRACHEOBRONCHIAL – AIRWAY SURGERY Tracheal-bronchial resection (at least 1 with reconstruction) Laryngotracheal resection/reconstruction, airway anastomosis, tracheal stenting	0	3
6. ESOPHAGUS Esophagectomy (Open or minimally invasive) (at least 1 with reconstruction) Benign Esophagus, Repair of perforation, drain perforation, diverticulectomy, myotomy, hiatal hernia repair	0	5
7. PEDIATHORACIC SURGERY		5
8. CARDIOTHORACIC TRAUMA	5	5
9. FNAB / TTNA/ Core Biopsy	10	
10. CTT	25	
11. THORACENTESIS (with or w/o ultrasound guidance)	10	
12. ESOPHAGOSCOPY	5	
13. BRONCHOSCOPY Flexible	10	
Rigid		2
14. DIAGNOSTIC THORACOSCOPY	10	
15. TRACHEOSTOMY	10	
TOTAL	85	95

11. MONITORING

11.1. The actual implementation of teaching and training activities shall be monitored.

11.1.1. LEARNING ACTIVITIES

11.1.1.1. **Lectures** – Attendance will be verified from the institution's logbook.

11.1.1.2. **Teaching Rounds** – A logbook should be utilized indicating the attendance of the consultants and trainees and cases presented. During the trainee's interview, counter-checking can be done.

11.1.1.3. **Operative Experience** – The trainee's personal logbook (indicating the name of the patient, case number, diagnosis,



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Appointments performed, date of operation, name of surgeons and assistants and result) will be reviewed. Operative records from the patient's chart will likewise be reviewed.

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- 11.1.1.4. **Pre-op and Post-op Conferences** – The outpatient clinic logbooks, conference logbooks (indicating attendance, cases presented, consensus) will be reviewed.
- 11.1.1.5. **Rotation** – Certificate of completion from the host institution will be issued to the rotator. The training officer will give a feedback evaluation.

11.1.2. STANDARDS OF SUPERVISION

- 11.1.2.1. All first major operations of a trainee should be assisted by a consultant (documented by OR logbook, operative record).
- 11.1.2.2. At least 10% of all major operations of trainees should be done with consultant in attendance (documented in OR logbook, operative record).
- 11.1.2.3. Regular pre- and post-op conferences should be held once a week with at least two consultants in attendance.
- 11.1.2.4. Teaching rounds should be held at least once a week with a consultant in attendance.
- 11.1.2.5. Research hour should be held once a month with at least two consultants in attendance.
- 11.1.2.6. Journal clubs should be held once a month with a consultant in attendance.

12. LOGBOOK

- 12.1. Large part of the evaluation of training programs will require documentation of clinical material, procedures and activities. Thus, it is necessary that the institution keeps the following records and makes them available for review by the committee at the specified time.
 - 12.1.1. Trainee's logbook (Philippine College of surgeons trainees logbook to be utilized)
 - 12.1.2. Weekly census
 - 12.1.3. Case reports
 - 12.1.4. Outpatient department logbook conference logbook



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13. EVALUATION of the GRADUATE

The Product of the program should be competent to practice in both the urban and rural settings. He/She should also be qualified to be accepted in regional and foreign programs.

Aside from the thoracic and cardiac and vascular surgery skills, which the product must possess, he should also be morally and ethically upright. Safety in practice by having directed proficiency (performing procedure where one has mastery of) professionalism is also required. It is also ideal if the thoracic and cardiovascular surgeon takes his role as proponent of education and research seriously.

13.1. EVALUATION OF TRAINEE

13.1.1. AS A ROTATOR

The rotating trainee will be evaluated by the host hospital at the end of his rotation using a rating scale based on overall clinical competence, technical skills, attitude and basic theoretical knowledge.

13.1.2. EACH YEAR LEVEL

The trainee will be evaluated by the program training committee at the end of each year level using a rating scale based on overall competence, technical skills attitude and basic theoretical knowledge. His operative experience will be evaluated based on his personal operative logbook. His research output will be measured at the end each year. The result of in-service training examination would be taken into consideration.

13.1.3. AT THE END OF TRAINING

The trainee will be evaluated (as in number 2) by the program training committee, which would recommend either graduation from the program or extension of training. In addition to internal evaluation, all thoracic and cardiovascular surgery trainees will subject to external evaluation by the PATACSI based on standardized criteria to be set by the residency training committee.



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After satisfactory completion of the training requirements, the trainee shall be certified (to this effect) by the Program director/chairman and will be allowed to take the specialty certifying examinations to be given by the PBTCVS. This will be attested to by at least two (2) previous trainers who are Fellows of the PATACSI.

13.1.4. EVALUATION OF PATIENT-RELATED OUTCOMES

The Accreditation Committee of PATACSI will inspect the trainee's logbook. This must contain outcome measures such as morbidity and mortality. In addition, the department/record of morbidity and mortality census will also be used to compare with accepted norms of morbidity rare and morality rate.

13.1.5. OTHER OUTCOMES

The trainee will be evaluated in terms of research output, including anticipation in research for and publication in peer-reviewed journals. The trainee's active participation in PATACSI training program activities will be monitored. He will be required to attend at least three (3) such activities per year.

13.1.6. EXAMINATION STANDARDS

At least 50% of the graduates of a particular training program should pass the certifying examinations given by the PBCTVS within the five-year period preceding the accreditation visit.

14. THE ACCREDITATION COMMITTEE

14.1. COMPOSITION OF ACCREDITATION COMMITTEE

The general requirements for membership of the Accreditation Committee are as follows:

- 14.1.1. He must be a fellow in good standing.
- 14.1.2. He must preferably be a member of the academe.
- 14.1.3. **He must not be a current** department chairman, division or section chief, training officer of any of the training institutions.



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- 14.1.4. Three (3) members, one (1) from each of the designated hospitals of the Committee, will be appointed by the PATACSI Board of Directors. These members shall not be concurrent members of PBTCVS.
- 14.1.5. Two (2) members who are concurrent board examiners will be appointed by the PBCTVS.

14.2. FUNCTIONS OF THE ACCREDITATION COMMITTEE

The Accreditation Committee of the PATACSI is tasked to accredit training programs in thoracic, cardiac and vascular surgery in the Philippines. It evaluates training and programs and recommendations action on accreditation to the PATACSI Board of Directors.

14.3. FREQUENCY OF ACCREDITATION

- 14.3.1. Accreditation should be done on a regular basis with or without basis
- 14.3.2. The institution will be given notice at least one month prior to accreditation visit.
- 14.3.3. The institution may request for deferment for one month for defect is not remediable.
- 14.3.4. The institution shall notify the Accreditation Committee if the defect is not remediable.

14.4. COMPOSITION OF EXTERNAL ASSESSORS

Each training program will be visited by at least three (3) members of the Accreditation Committee. Initial evaluation of data should be done by a majority of the members of the Committee. The deliberation and final decision-making/recommendation shall be done by the committee en banc.

14.5. ON-SITE EVALUATION

- 14.5.1. Preparation for Evaluation
 - 14.5.1.1. All necessary information/data should be identified prior to accreditation visit.



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14.5.1.3. Checklist will be utilized.

14.5.1.4. On-site visitors will be selected.

14.5.1.5. A member will be assigned to make the necessary pre-visit communication and management.

14.5.2. Conduct of On-Site Visit

14.5.2.1. A minimum of four (4) hours will be spent per training institution.

14.5.2.2. Initial team meeting will be held upon discretion of the Committee.

14.5.2.3. Initial briefing will be done to discuss function of each member of the team.

14.5.2.4. Structured interviews will be used to ensure efficiency of interview.

14.6. STATUS OF PROGRAM

A final report shall be finished within one month after accreditation visit and submitted to the PATACSI Board of Directors stating any of the following recommendations

14.6.1. Full accreditation for three (3) years for programs that satisfactorily fulfill the requirements.

14.6.2. Probationary status for eighteen (18) months for programs with minor deficiencies. The program will be re-evaluated after the 18-month period.

14.6.3. Termination for non-compliance after having been evaluated twice as probationary status. The institution may reapply for accreditation after a one-year period.

14.7. EFFECTIVITY OF ACCREDITATION STATUS



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The Accreditation Committee will send its annual report that includes the recommendations to the PATACSI Board of Directors for approval. Once approved, the evaluation report will be sent to the training program Chairman and copy furnished to Training Officers. The decision will take effect upon the date of approval by the Board.

14.8. APPEALS

The training institution is entitled to make a written appeal to a decision within thirty (30) days after receipt of the accreditation status.

14.9. REVISION OF GUIDELINES

A revision of the training guidelines can only be done after four (4) years of implementation of the current guidelines and an evaluation of the different training programs at least once.

