Respiratory, Hemic, Lymphatic, Mediastinum and Diaphragm

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Objectives

- Understand basic anatomy and functions of the respiratory system, the hemic and lymphatic systems, and the mediastinum and diaphragm
- Define key terms
- Discuss common CPT® codes and modifiers
- Review diagnoses common to the respiratory system, the hemic and lymphatic systems, and the mediastinum and diaphragm
- Introduce HCPCS Level II codes and coding guidelines as they apply to these systems.

Respiratory System

- Nose
- Larynx
- Pharynx
- Trachea
- Bronchi
- Bronchioles
- Lungs
Respiratory System

- Alveoli
  - Located at the ends of the bronchioles
  - Function is gas exchange (CO$_2$ and O$_2$)
- Pleura

ICD-9-CM

- Respiratory System
  - Acute Respiratory Infections (460-466)
  - Other Disease of the Upper Respiratory System (470-478)
  - Pneumonia and Influenza (480-488)
  - COPD and Allied Conditions (490-496)
ICD-9-CM

• Laryngitis
• Croup
• Respiratory Syncytial Virus (RSV)
• Pneumonia
• Influenza
• COPD

ICD-9-CM

• Asthma
• Bronchitis
• Pneumoconiosis
• Empyema
• Pneumothorax
• Interstitial Lung Disease
ICD-9-CM

• Pulmonary Edema
• V codes
  – Personal history
  – Family history
  – Screenings

Rules/Guidelines

• Respiratory procedures
  – Progress downward from the head to the thorax
• Parenthetical statements
  – Directions on how to use specific codes
  – Apply to codes above parenthetical note; not below
• Most codes are unilateral
• Use modifier 50 if bilateral procedure performed
  – Unless code descriptor states bilateral
The Nose

• Incision
  – Drainage
    • Abscess or hematoma

The Nose

• Excision
  – Biopsy code
  – Nasal polyps
    • Polyp is a growth protruding from a mucous membrane in a body cavity
    • Simple or extensive
    • Use modifier 50 to bill bilateral
    • One or multiple polyps removed, report code one time
The Nose

• **Excision**
  – Lesion destruction
    • Approach used
    • Lasers
    • Cryotherapy
    • Electrocautery
  – Cyst removals
  – Turbinates/procedures
    • Soft, small bones in nose
    • Can inhibit proper breathing when enlarged/diseased
    • Billed per turbinate
      – Code up to six turbinate removals

• **Rhinectomy**
  – Total rhinectomy
    • Remove entire nose
      – Deep cancer of skin
      – Bad case of frost bite
The Nose

• Introduction
  – Therapeutic turbinate injection
  – Prosthesis for deviated nasal septum
    • Plug placed by physician

• Removal of foreign body
  – Office setting
  – Facility setting
    • General anesthesia

• Repair
  – Rhinoplasty
    • Cleft palate/lip repair
    • Parenthetical statement
      – Reconstruction, grafts
  – Septoplasty, Atresia. Fistulas, Dermatoplasty
The Nose

• Destruction
  – Turbinate mucosa
    • Do not use modifier 50

• Other procedures
  – Control of epitaxis (nose bleed)
    • Approach
    • Simple or complex
    • Use modifier 50 for bilateral on anterior approach
  – Fracturing of turbinates

Accessory Sinuses

• Incision
  – Open vs. closed (or endoscopic)
    • Cutting into the body area
  – Sinus lavage
  – Sinusotomies
    • Drainage
    • Polyp removal
    • Biopsy
Accessory Sinuses

• Endoscopy
  
  - All surgical endoscopies *always* include a diagnostic endoscopy
  
    - Diagnostic evaluation
      
        • Includes inspection of nasal cavity, meatus, spheno-ethmoid recess and turbinates

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Accessory Sinuses

• Endoscopy
  
  - Biopsies
  
  - Maxillary, ethmoidectomy, sphenoidotomy
  
  - Repair of CSF leak (ethmoid region)
  
  - With optic nerve decompression
  
  - Many parenthetical statements in CPT® for accessory sinus endoscopies

• Other procedures
  
  - Unlisted procedure codes always end in “99”
The Larynx

• Excision
  – Removal of part of larynx, pharynx, surrounding tissue
    • Due to tumor of benign or malignant nature
  – Approaches
    • laterovertical
    • anterovertical
    • anter-latero-vertical

The Larynx

• Excision
  – Always includes tracheostomy
    • Not coded separately
  – Neck dissections
    • Radical-Remove sternocleidomastoid muscle, submandibular salivary gland, internal jugular vein, lymph nodes of later neck, chin and mandible and also supraclavicular nodes
The Larynx

- Incision
  - Emergency endotracheal intubation
  - Change of tracheotomy tube

The Larynx

- Endoscopy
  - Use of operating microscope or telescope
    - Parenthetical statement instructs not to code the operating microscope
  - Direct visualization
    - View anatomical structures via bronchoscope inserted into laryngoscope
  - Indirect visualization
    - Structures viewed in a laryngoscopic mirrored reflection
The Larynx

- Endoscopy
  - Tumor excision
  - Vocal cord injector or stripping
  - Biopsies
  - Flexible fiberoptic and ridged scopes are used and have different codes

The Larynx

- Repair
  - Stenosis
  - Scarring
    - Result of burn
  - Laryngeal web
    - Web of tissue between vocal folds
- Destruction
  - Laryngeal nerve – unilateral and therapeutic
Trachea and Bronchi

• Incision
  – Tracheotomy, tracheal punctures, tracheostoma revision
  – Tracheobronchoscopy through established tracheostomy
  – EBUS

• Endoscopy
  – Many bronchoscopy codes
    • Use common portion of main or parent code (up to the semicolon) as the first part of each indented code descriptor under the parent code
    • Bulls eye icon – code includes moderate sedation and is not reported separately when performed
  – Bronchoscopy codes
    • Bronchial lung biopsies
    • Foreign body removals
    • Stent or catheter placements
    • Flexible or rigid scopes
    • Many parenthetical statements
Trachea and Bronchi

• Introduction
  – Injection for bronchography
  – Aspiration
  – Indwelling tube/stent placement for oxygen therapy

• Excision and Repair
  – Carinal reconstruction
    • Needed after removal of cancer at this site
  – Tracheal tumor excision
    • Thoracic and intrathoracic
  – Stenosis and anastomosis excision
  – Injury suturing
  – Tracheostomy scar revision
Lungs and Pleura

• Incision codes
  – Thoracostomy
    • Drainage
    • Rib resection
  – Thoracotomy
    • Exploration
    • Biopsy
    • Hemorrhage control
    • Cardiac massage

Lungs and Pleura

• Incision
  – Pneumonostomy
  – Pleural scarification
    • Treatment for repeat pneumothorax
  – Decortication
    • Removal of a constricting layer of tissue from surface of lung(s)
    • Allow for full lung expansion
Lungs and Pleura

• Excision
  – Biopsies
    • Percutaneous
    • Needle
    • Open
    • Parenthetical statement directions
      – Additional codes for imaging guidance
      – Fine needle aspirate
      – Pathology evaluation of biopsies

Lungs and Pleura

• Removal
  – Pneumocentesis
  – Thoracentesis
Lungs and Pleura

• Removal
  – Total pneumonectomy
    • Removal of entire lung
  – Lobectomy
    • Removal of a lobe or lobes of lung
  – Resections

Lungs and Pleura

• Introduction and Removal
  – Thoracostomy (chest tube)
    • Treatment for pneumothorax and persistent pleural effusion
    • Left in patient for several days
      – Stitched to skin
    • Use larger tube than used in thoracentesis
Lungs and Pleura

• Endoscopy
  – Diagnostic vs. surgical
    • Billing both together is “unbundling”
      – Results in claim denial

Lungs and Pleura

• Lung Transplantation
  – Three steps
    • Harvesting
    • Backbench
    • Insertion
  – Live donors
    • Rare
    • Only one lobe donated
  – Cadaver donors
    • Most commonly used
Lungs and Pleura

• Surgical collapse therapy/thoracoplasty
  – Resection
  – Thoracoplasty
• Other procedures
  – Lung lavage
  – Tumor ablation
  – Unlisted - 32999

Pulmonary (94002-94799)

• Ventilator Management
• Other Procedures
  – Spirometry
  – Pulmonary capacity studies
  – Respiratory flow studies
  – Pulmonary stress testing
  – Inhalation treatment
  – Oxygen uptake
  – Pulse oximetry
Mediastinum and Diaphragm

- Mediastinum-thoracic cavity between the lungs that contains the heart, aorta, esophagus, trachea, thymus gland

- Diaphragm-muscle that divides the thoracic cavity from the abdominal cavity

ICD-9-CM

- Mediastinum and Diaphragm
  - Diaphragm Herniation
  - Diaphragmatic Paralysis
  - Thymic hyperplasia
Mediastinum

• Mediastinotomy
  – Cervical approach
  – Thoracic approach

• Excision
  – Cyst
  – Tumor

Mediastinum

• Endoscopy
  – Used for lung cancer staging
Hemic and Lymphatic Systems

• Lymphatic System
  – Network of channels
    • Carries clear fluid
    • Includes lymphoid tissue
  – Structures dedicated to circulation and production of lymphocytes
    • Spleen
    • Thymus
    • Bone marrow

Hemic and Lymphatic Systems

• Lymphatic System (cont)
  – Three interrelated functions
    • Removal for interstitial fluid from tissues
    • Absorbs and transports fatty acids to circulatory system
    • Transport antigen presenting cells to lymph nodes
Hemic and Lymphatic Systems

- Spleen
  - Located left side of stomach
  - Reservoir for blood cells
  - Produces lymphocytes involved in fighting infection

ICD-9-CM

- Hemic and Lymphatic Systems
  - Lymphoma
  - Lymphadenitis
  - Hypersplenism
  - Splenic Rupture
  - Leukemia
Hemic and Lymphatic Systems

• Splenectomy
  • Code selection based on type
    – Total
    – Partial
    – Total with extensive disease

• Repair
  – Splenorrhaphy
    • Repair of Spleen
    • Reported when a ruptured spleen is repaired
      – With or without partial splenectomy
Hemic and Lymphatic Systems

• Bone Marrow or Stem Cell Services
  – Bone marrow or blood cell transplant
    • Treatment for patients with blood diseases
      – Obtained by
        » Aspiration
        » Bone marrow biopsy
        » Bone marrow harvesting
    • Allogeneic bone marrow
      – From close relative
    • Autologous
      – From the patient

• Lymph Nodes & Lymphatic Channels
  – Network of nodes that carry lymph throughout the body
  – Clear fluid containing infection fighting WBCs
  – Drainage of lymph node abscess
    • Simple
    • Extensive
Hemic and Lymphatic Systems

• Lymph Nodes & Lymphatic Channels (cont)
  – Biopsy or Excision
    • Code selection based on method and location
      – Open or needle
      – Cervical, inguinal, axillary
      – Superficial or deep
  – Lymphadenectomy
    • Limited – removes only lymph nodes
    • Radical – removal of lymph nodes, glands and surrounding tissue

Hemic and Lymphatic Systems

• Lymph Nodes & Lymphatic Channels (cont)
  – Injection Procedures
  – Lymphangiography
    • To view lymphatic circulation
      – Use modifier 50 for bilateral procedure
    • Identify sentinel node