

Surgical Procedures

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 1: General Surgery

1. Terms and definitions
2. Primary purposes of general surgery
3. Common diagnostic tests and procedures used prior to or during general surgery
4. Relevant anatomy groups for general surgery
5. Various surgical incisions for general surgery
6. Relevant anatomy for the thyroid and parathyroid
7. Thyroid and parathyroid pathology
8. Special considerations for thyroid and parathyroid surgery
9. Thyroid and parathyroid procedures
10. Relevant anatomy for the breast
11. Breast pathology
12. Special considerations for breast surgery
13. Breast procedures
14. Relevant anatomy for the biliary system and spleen
15. Pathology for the biliary system and spleen
16. Special considerations for the biliary system and spleen
17. Common procedures performed on the biliary system and spleen
18. Relevant anatomy for the gastrointestinal system
19. Gastrointestinal system pathology

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 1: General Surgery (continued)

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| 20. Special considerations for gastrointestinal system surgery | 34. Diagram setup used in thyroid and parathyroid procedures |
| 21. Gastrointestinal system procedures | 35. Diagram setup used in breast procedures |
| 22. Primary purposes for hernia surgery | 36. Diagram setup used in biliary system procedures |
| 23. Typical anatomy where hernias occur | 37. Diagram setup used in gastrointestinal procedures |
| 24. Basic herniation categories and locations | 38. Diagram setup used in hernia procedures |
| 25. Herniation pathology | 39. Determine appropriate actions and relevant supplies for general surgical procedures |
| 26. Special considerations for hernia surgery | 40. Perform surgical duties during thyroid surgery |
| 27. Typical herniorrhaphy or hernioplasty procedures | 41. Perform surgical duties during an excisional breast biopsy with frozen section |
| 28. Supplies used in general surgery | 42. Perform surgical duties during a sentinel lymph node biopsy |
| 29. Equipment used in general surgery | 43. Perform surgical duties during a modified radical mastectomy |
| 30. Special instruments used in general surgery | 44. Perform surgical duties during an inguinal herniorrhaphy |
| 31. Destination of patient after completion of general surgery | 45. Perform surgical duties during a laparoscopic herniorrhaphy repair trans-abdominal preperitoneal (TAPP) |
| 32. Possible complications and prognosis of patient after general surgery | 46. Perform surgical duties during a cholecystectomy with cholangiography |
| 33. Wound management and classification of general surgical procedures | 47. Perform surgical duties during a laparoscopic cholecystectomy |
| | 48. Perform surgical duties during a liver wedge resection |
| | 49. Perform surgical duties during a laparoscopic splenectomy |
| | 50. Perform surgical duties during a whipple procedure (pancreaticojejunostomy) |

Instructional/Task Analysis

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Module 1: General Surgery (continued)

51. Perform surgical duties during a Bilroth II
52. Perform surgical duties during a gastrostomy
53. Perform surgical duties during an esophageal hiatal herniorrhaphy
54. Perform surgical duties during a laparoscopic Nissen fundoplication
55. Perform surgical duties during an appendectomy
56. Perform surgical duties during a laparoscopic appendectomy
57. Perform surgical duties during a hemorrhoidectomy
58. Perform surgical duties during a loop colostomy
59. Perform surgical duties during a laparoscopic low anterior resection

Module 2: Obstetric and Gynecologic Surgery

1. Terms and definitions
2. Primary purposes of obstetric and gynecologic surgery
3. Anatomy relevant to the female reproductive system and its support structures
4. Relevant tissue layers
5. Pathology for obstetric or gynecologic surgical intervention
6. Common obstetric and gynecologic diagnostic approaches
7. Special considerations for obstetric or gynecologic procedures
8. Special equipment used in obstetric or gynecologic surgery
9. Supplies used in obstetric or gynecologic surgery

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 2: Obstetric and Gynecologic Surgery (continued)

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| 10. Special instrumentation for obstetric or gynecologic surgery | 18. Diagram setup used in obstetric procedures |
| 11. Relevant positions for obstetric or gynecologic surgery | 19. Diagram setup used in gynecologic procedures |
| 12. Common incisions used for obstetric or gynecologic surgery | 20. Determine needs for a cesarean section |
| 13. Common obstetric procedures | 21. Determine appropriate actions and relevant supplies for obstetric or gynecologic surgical procedures |
| 14. Common gynecologic procedures | 22. Perform surgical duties during a D&C with hysteroscopy |
| 15. Destination of patient after completion of obstetric and gynecologic surgery | 23. Perform surgical duties during a cervical biopsy (punch and LEEP) |
| 16. Possible complications and prognosis of patient after obstetric and gynecologic surgery | 24. Perform surgical duties during a cervical cerclage (Shirodkar's Procedure) |
| 17. Wound management and classification of obstetric and gynecologic surgical procedures | 25. Perform surgical duties during an endometrial ablation |
| | 26. Perform surgical duties during a myomectomy—abdominal approach |
| | 27. Perform surgical duties during a diagnostic laparoscopy for tubal ligation |
| | 28. Perform surgical duties during an operative laparoscopy for ectopic pregnancy |
| | 29. Perform surgical duties during a tuboplasty |
| | 30. Perform surgical duties during a cesarean section |
| | 31. Perform surgical duties during a total abdominal hysterectomy with BSO (bilateral salpingectomy and oophorectomy) |
| | 32. Perform surgical duties during a laparoscopically-assisted vaginal hysterectomy (LAVH) |
| | 33. Perform surgical duties during a robotic-assisted hysterectomy |
| | 34. Perform surgical duties during a total vaginal hysterectomy |

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Module 2: Obstetric and Gynecologic Surgery (continued)

35. Perform surgical duties during an anterior and posterior repair (colporrhaphy)
36. Perform surgical duties during a labioplasty
37. Perform surgical duties during an ablation of condylomata
38. Perform surgical duties during a marsupialization of Bartholin's Gland (cystectomy)
39. Perform surgical duties during a uterine radiation seeding (brachytherapy)
40. Perform surgical duties during a simple vulvectomy
41. Perform surgical duties during a total pelvic exenteration
42. Perform surgical duties during a Wertheim procedure (radical hysterectomy)

Module 3: Genitourinary Surgery

1. Terms and definitions
2. Purposes of genitourinary surgery
3. Relevant anatomical structures of the genitourinary system
4. Physiological functions of the genitourinary system
5. Relevant pathophysiology leading to genitourinary surgery
6. Structure-specific pathology
7. Diagnostic interventions used for treating conditions of the genitourinary system
8. Special considerations for genitourinary surgery
9. Specific elements unique to surgical intervention for genitourinary surgery
10. Basic equipment, instrumentation, and supplies for genitourinary surgery
11. Relevant genitourinary positions and incisions

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 3: Genitourinary Surgery (continued)

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| 12. Common adrenal, kidney, and ureter procedures | 19. Determine appropriate actions and relevant supplies for genitourinary procedures |
| 13. Common bladder procedures | 20. Catheterize a male patient |
| 14. Common urethral procedures | 21. Catheterize a female patient |
| 15. Common male procedures | 22. Perform surgical duties for a circumcision |
| 16. Destination of patient after completion of genitourinary surgery | 23. Perform surgical duties for an epispadias repair |
| 17. Possible complications and prognosis of patient after genitourinary surgery | 24. Perform surgical duties for a hypospadias repair |
| 18. Wound management and classification of genitourinary surgical procedures | 25. Perform surgical duties for a penile implant |
| | 26. Perform surgical duties for a penectomy |
| | 27. Perform surgical duties for a hydrocelectomy |
| | 28. Perform surgical duties for an orchiopepy |
| | 29. Perform surgical duties for an orchietomy |
| | 30. Perform surgical duties for a closed prostatectomy (TURP) |
| | 31. Perform surgical duties for a laparoscopic prostatectomy with robot (TURP) |
| | 32. Perform surgical duties for an open prostatectomy—suprapubic, retropubic, and perineal approaches |
| | 33. Perform surgical duties for prostate seeding |
| | 34. Perform surgical duties for a cystoscopy |
| | 35. Perform surgical duties for a transurethral resection of bladder tumor (TURBT) |
| | 36. Perform surgical duties for a cystectomy with creation of ileal conduit |
| | 37. Perform surgical duties for a suspension (TVT/Sling) |
| | 38. Perform surgical duties for a ureteropyelolithotomy |

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Module 3: Genitourinary Surgery (continued)

39. Perform surgical duties for a ureteroscopy
40. Perform surgical duties for a nephrectomy
41. Perform surgical duties for a kidney transplant
42. Perform surgical duties for Wilm's tumor excision (adrenalectomy laparoscopic approach)

Module 4: Ear, Nose, and Throat Surgery

1. Terms and definitions
2. Primary purposes of otorhinolaryngeal surgery
3. Primary components of the otorhinolaryngeal anatomy
4. Anatomy relevant to the ear and its support structures
5. Anatomy relevant to the nose and its support structures
6. Anatomy relevant to the mouth and throat and its support structures
7. Pathology for otorhinolaryngeal surgical intervention
8. Possible diagnostic approaches to otorhinolaryngeal surgery
9. Special considerations during setup for otorhinolaryngeal procedures
10. Special equipment used in otorhinolaryngeal surgery
11. Special supplies used in otorhinolaryngeal surgery
12. Special instrumentation for otorhinolaryngeal surgery
13. Positioning, prepping, and draping for otorhinolaryngeal surgery
14. Incisions for otorhinolaryngeal surgery
15. Common otologic procedures

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 4: Ear, Nose, and Throat Surgery (continued)

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| 16. Common rhinologic procedures | 21. Diagram setup used in otologic procedures |
| 17. Common laryngeal procedures | 22. Diagram setup used in rhinologic procedures |
| 18. Destination of patient after completion of ear, nose, and throat surgery | 23. Diagram setup used in laryngeal procedures |
| 19. Possible complications and prognosis of patient after ear, nose, and throat surgery | 24. Determine appropriate actions and relevant supplies for ear, nose, and throat procedures |
| 20. Wound management and classification of ear, nose, and throat surgical procedures | 25. Perform surgical duties during microscope setup |
| | 26. Perform surgical duties during a myringotomy |
| | 27. Perform surgical duties during a tympanoplasty |
| | 28. Perform surgical duties during a stapedectomy |
| | 29. Perform surgical duties during a septoplasty or submucous resection (SMR) |
| | 30. Perform surgical duties during a Caldwell-Luc antrostomy and nasal antrostomy |
| | 31. Perform surgical duties during a tonsillectomy and adenoidectomy (T&A) |
| | 32. Perform surgical duties during a temporal mandibular joint (TMJ) arthroscopy |
| | 33. Perform surgical duties during a total laryngectomy |
| | 34. Perform surgical duties during a radical neck dissection |
| | 35. Perform surgical duties during a laryngoscopy |
| | 36. Perform surgical duties during a cochlear implant |
| | 37. Perform surgical duties during a mastoidectomy |

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 4: Ear, Nose, and Throat Surgery (continued)

38. Perform surgical duties during a choanal atresia
39. Perform surgical duties during an endoscopic sinus surgery (FESS)
40. Perform surgical duties during a nasal polypectomy
41. Perform surgical duties during a nasal turbinectomy
42. Perform surgical duties during a tracheotomy and tracheostomy
43. Perform surgical duties during a parotidectomy
44. Perform surgical duties during a uvulopalatopharyngoplasty

Module 5: Ophthalmic Surgery

1. Terms and definitions
2. Primary purposes of ophthalmic surgery
3. Extraocular anatomy for ophthalmic surgery
4. Intraocular anatomy for ophthalmic surgery
5. Physiological functions of the eye—vision
6. Pathophysiology leading to ophthalmic surgery
7. Common ophthalmic diagnostic procedures
8. Special considerations for ophthalmic surgery
9. Specialized ophthalmic equipment
10. Specialized ophthalmic supplies
11. Specialized instrumentation used in ophthalmic surgery
12. Ophthalmic drugs

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 5: Ophthalmic Surgery (continued)

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| 13. Common ophthalmic incisions | 20. Diagram setup for extraocular procedures |
| 14. Common extraocular ophthalmic procedures | 21. Diagram setup for intraocular procedures |
| 15. Common intraocular ophthalmic procedures | 22. Determine appropriate actions and relevant supplies for ophthalmic surgical procedures |
| 16. Common procedures used to remove the eye | 23. Drape a freestanding operative ophthalmic microscope |
| 17. Destination and postoperative care of patient after ophthalmic surgery | 24. Perform surgical duties during an extracapsular cataract excision with phacoemulsification (PEK) |
| 18. Possible complications and prognosis of patient after ophthalmic surgery | 25. Perform surgical duties during a dacryocystorhinostomy |
| 19. Wound management and classification of ophthalmic surgical procedures | 26. Perform surgical duties during correction of strabismus (recession and resection) |
| | 27. Perform surgical duties during a keratoplasty (corneal transplant) |
| | 28. Perform surgical duties during an iridectomy and trabeculectomy |
| | 29. Perform surgical duties during a scleral buckle repair |
| | 30. Perform surgical duties during a vitrectomy |
| | 31. Perform surgical duties during an enucleation |
| | 32. Perform surgical duties during a chalazion excision |
| | 33. Perform surgical duties during a laceration repair |
| | 34. Perform surgical duties during an entropion/ectropion repair |

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 6: Oral and Maxillofacial Surgery

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| 1. Terms and definitions | 14. Diagram setup for oral and maxillofacial surgical procedures |
| 2. Primary purposes of oral and maxillofacial surgery | 15. Determine appropriate actions and relevant supplies for oral and maxillofacial surgical procedures |
| 3. Anatomical structures of the oral cavity | 16. Perform surgical duties during an open reduction with internal fixation (ORIF) of a maxillary or mandibular fracture |
| 4. Major bones and structures of the face and orbit | 17. Perform surgical duties during application of arch bars for a maxillary or mandibular fracture |
| 5. Physiological functions of oral and maxillofacial structures | 18. Perform surgical duties during a cleft lip repair |
| 6. Oral and maxillofacial pathophysiology which may require surgical intervention | 19. Perform surgical duties during a cleft palate repair |
| 7. Oral and maxillofacial diagnostic examinations | 20. Perform surgical duties during an odontectomy (tooth extraction) |
| 8. Special considerations for oral and maxillofacial surgery | 21. Perform surgical duties during a maxillary (Le Fort I) fracture repair |
| 9. Specialized equipment and instrumentation used in oral and maxillofacial surgery | 22. Perform surgical duties during a maxillary (Le Fort II) fracture repair |
| 10. Oral and maxillofacial surgical procedures | 23. Perform surgical duties during a maxillary (Le Fort III) fracture repair |
| 11. Destination and postoperative care of patient after completion of oral and maxillofacial surgery | 24. Perform surgical duties during an orbital floor fracture repair |
| 12. Possible complications and prognosis of patient after oral and maxillofacial surgery | |
| 13. Wound management and classification of oral and maxillofacial surgical procedures | |

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 7: Plastic Surgery

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| 1. Terms and definitions | 25. Diagram setup used in plastic surgery |
| 2. Primary purposes of plastic surgery | 26. Determine needs for given plastic surgery cases |
| 3. Integumentary system and skin anatomy | 27. Perform surgical duties during an abdominoplasty |
| 4. Classifications of indications for plastic surgery | 28. Perform surgical duties during breast augmentation (breast implants) |
| 5. Skin pathologies | 29. Perform surgical duties during a mastopexy (breast lift) |
| 6. Diagnostic methods used prior to plastic surgery | 30. Perform surgical duties during a reconstructive mammoplasty with muscle flaps and nipple reconstruction |
| 7. Special considerations for plastic surgery | 31. Perform surgical duties during excision of a facial skin lesion |
| 8. Special supplies used in plastic surgery | 32. Perform surgical duties during liposuction |
| 9. Special equipment used in plastic surgery | 33. Perform surgical duties during an otoplasty |
| 10. Special instruments used in plastic surgery | 34. Perform surgical duties during a rhinoplasty |
| 11. Positions, skin prep, and draping for plastic surgery | 35. Perform surgical duties during a rhytidectomy |
| 12. Incisions for plastic surgery | 36. Perform surgical duties during a blepharoplasty (upper and lower lids) |
| 13. Non-invasive, endoscopic plastic surgery procedures | 37. Perform surgical duties during a brow lift (direct and endoscopic) |
| 14. Treatment or removal of tissue, lesions or scars | 38. Perform surgical duties during a chin implant (mentoplasty) |
| 15. Skin graft donor options | 39. Perform surgical duties during malar implants |
| 16. Skin graft harvesting techniques | 40. Perform surgical duties during a split-thickness skin graft (STSG) |
| 17. Tissue flap techniques | 41. Perform surgical duties during burn debridement and escharotomy with STSG and WZ- or YZ-plasty for contracture release. |
| 18. Head and neck procedures | 42. Perform surgical duties during correction of radial dysplasia (centralization of wrist onto ulna) |
| 19. Breast plastic surgery procedures | |
| 20. Thoracic and abdominal plastic surgery procedures | |
| 21. Plastic surgical procedures for the extremities | |
| 22. Destination and postoperative care of patient after completion of plastic surgery | |
| 23. Possible complications of patient after plastic surgery | |
| 24. Wound management and classification of plastic surgical procedures | |

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 7: Plastic Surgery (continued)

43. Perform surgical duties during release of polydactyly
44. Perform surgical duties during release of syndactyly
45. Perform surgical duties during traumatic injury repair

Module 8: Orthopedic Surgery

1. Terms and definitions
2. Primary purposes of orthopedic surgery
3. Anatomical structures for orthopedic surgery
4. Bone composition types
5. Joints and surrounding tissue relevant to orthopedic surgery
6. Pathology that leads to orthopedic surgery
7. Bone fracture pathology and bone healing processes
8. Fracture management methods
9. Fracture management stabilization devices
10. Diagnostics performed prior to or during orthopedic surgery
11. Special considerations for orthopedic surgeries
12. Basic orthopedic supplies utilized in orthopedic surgery
13. Basic orthopedic equipment utilized in orthopedic surgery
14. Basic orthopedic instrumentation utilized in orthopedic surgery
15. Positions, skin prep, and draping for orthopedic surgery
16. Incisions for orthopedic surgery
17. Axial skeletal procedures
18. Joint reconstruction procedures

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 8: Orthopedic Surgery (continued)

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| 19. Upper extremity orthopedic procedures | 27. Identify appendicular skeletal anatomy |
| 20. Lower extremity orthopedic procedures | 28. Diagram setup used in upper extremity procedures |
| 21. Tendon and ligament repairs and reconstruction | 29. Diagram setup used in lower extremity procedures |
| 22. Limb reattachment procedures | 30. Determine appropriate actions and relevant supplies for orthopedic surgical procedures |
| 23. Amputation procedures | 31. Assist with application of a plaster cast |
| 24. Destination of patient after completion of an orthopedic surgical procedure | 32. Apply a tourniquet |
| 25. Complications and prognosis of patient after orthopedic surgical procedure | 33. Prepare power equipment |
| 26. Wound management and classification of orthopedic surgical procedures | 34. Perform surgical duties during an open acromioplasty |
| | 35. Perform surgical duties during an arthroscopic acromioplasty |
| | 36. Perform surgical duties during an arthroscopic shoulder surgery |
| | 37. Perform surgical duties during an open Bankart procedure |
| | 38. Perform surgical duties during an arthroscopic Bankart procedure |
| | 39. Perform surgical duties during a total shoulder arthroplasty |
| | 40. Perform surgical duties during an ORIF radius |
| | 41. Perform surgical duties during application of external fixator to the radius |
| | 42. Perform surgical duties during excision of Dupuytren's contracture |
| | 43. Perform surgical duties during a total hip arthroplasty |
| | 44. Perform surgical duties during an ORIF compression hip fracture procedure |
| | 45. Perform surgical duties during a femoral shaft rodding procedure |
| | 46. Perform surgical duties during an arthroscopic knee surgery |

Instructional/Task Analysis

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Application: What the Student Should Be Able to Do

Module 8: Orthopedic Surgery (continued)

47. Perform surgical duties during an ACL repair
48. Perform surgical duties during an AKA
49. Perform surgical duties during a BKA
50. Perform surgical duties during a total knee arthroplasty
51. Perform surgical duties during an Achilles tendon repair
52. Perform surgical duties during a triple arthrodesis
53. Perform surgical duties during a bunionectomy

Module 9: Neurosurgery

1. Terms and definitions
2. Primary purposes of neurosurgery
3. Skeletal, central, and peripheral nervous system components
4. Cranial anatomy
5. Ventricular system within the brain
6. Normal cerebrospinal fluid (CSF) and its route of distribution
7. Arterial and venous circulation in the brain and spine
8. Spinal anatomy
9. Neurosurgical pathology
10. Neurodiagnostic approaches
11. Special considerations for neurosurgical procedures
12. Basic sequence of events for neurosurgical procedures
13. Special equipment used in neurosurgery
14. Special supplies used in neurosurgery
15. Special instrumentation for neurosurgery
16. Neurosurgical positions
17. Neurosurgical incisions

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 9: Neurosurgery (continued)

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| 18. Cranial procedures | 24. Diagram setup used in cranial procedures |
| 19. Spinal procedures | 25. Diagram setup used in spinal procedures |
| 20. Peripheral nervous system procedures | 26. Determine needs for parietal craniotomy for subdural hematoma |
| 21. Destination of patient after completion of neurological surgery | 27. Determine needs for posterior thoracic laminectomy and fusion |
| 22. Possible complications and prognosis of patient after neurological surgery | 28. Determine appropriate actions and relevant supplies for neurosurgical procedures |
| 23. Wound management and classification of neurological surgical procedures | 29. Perform surgical duties during ulnar nerve release and/or carpal tunnel release |
| | 30. Perform surgical duties during insertion of a V-P shunt |
| | 31. Perform surgical duties during a lumbar laminectomy for discectomy |
| | 32. Perform surgical duties during a cervical laminectomy for fracture injury |
| | 33. Perform surgical duties during a craniotomy or a craniostomy repair |
| | 34. Perform surgical duties during a rhizotomy |
| | 35. Perform surgical duties during stereotactic procedures |
| | 36. Perform surgical duties during a transsphenoidal hypophysectomy |
| | 37. Perform surgical duties during a ventriculoscopy |

Module 10: Thoracic Surgery

1. Terms and definitions
2. Primary purposes of thoracic surgery
3. Anatomical structures of the respiratory system and its support structures
4. Tissue layers
5. Pathology terminology for thoracic surgical intervention
6. Thoracic diagnostic approaches

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 10: Thoracic Surgery (continued)

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| 7. Special considerations for thoracic procedures | 18. Diagram setup used in closed thoracic procedures |
| 8. Specific elements unique to surgical intervention for thoracic surgery | 19. Diagram setup used in open thoracic procedures |
| 9. Special equipment used in thoracic surgery | 20. Determine needs for a video-assisted thoracic surgery (VATS) |
| 10. Special supplies used in thoracic surgery | 21. Determine appropriate actions and relevant supplies for thoracic procedures |
| 11. Special instrumentation for thoracic surgery | 22. Perform surgical duties during insertion of a chest tube (closed thoracostomy) |
| 12. Positions for thoracic surgery | 23. Connect chest tube to disposable chest drainage system |
| 13. Incisions for thoracic surgery | 24. Perform surgical duties during a bronchoscopy |
| 14. Thoracic procedures | 25. Perform surgical duties during a scalene/supraclavicular node biopsy |
| 15. Destination of patient after completion of thoracic surgical procedure | 26. Perform surgical duties during a mediastinoscopy |
| 16. Possible complications and prognosis of patient after thoracic surgical procedures | 27. Perform surgical duties during a thoracoscopy or video-assisted thoracic surgery (VATS) |
| 17. Wound management and classification of thoracic surgical procedures | 28. Perform surgical duties during a thoracotomy |
| | 29. Perform surgical duties during a thoracoplasty |
| | 30. Perform surgical duties during a lung volume reduction surgery |
| | 31. Perform surgical duties during a bilateral lung transplant |

Instructional/Task Analysis

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Application: What the Student Should Be Able to Do

Module 11: Cardiac Surgery

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| 1. Terms and definitions | 16. Diagram setup used in closed cardiac procedures |
| 2. Primary purposes of cardiac surgery | 17. Diagram setup used in open cardiac procedures |
| 3. Anatomy relevant to the heart and its support structures | 18. Determine needs for vessel harvesting |
| 4. Normal circulation and conduction | 19. Determine appropriate actions and relevant supplies for cardiac surgical procedures |
| 5. Pathology for cardiac surgical intervention | 20. Perform surgical duties during insertion of a transvenous pacemaker |
| 6. Cardiac diagnostic approaches | 21. Perform surgical duties during a percutaneous transluminal coronary angioplasty (PTCA) |
| 7. Special considerations for cardiac procedures | 22. Perform surgical duties during an intra-aortic balloon pump insertion (IABP) |
| 8. Special equipment used in cardiac surgery | 23. Perform surgical duties during a pericardectomy (pericardial window) |
| 9. Special supplies used in cardiac surgery | 24. Perform surgical duties during a thymectomy |
| 10. Special instrumentation for cardiac surgery | 25. Perform surgical duties during coronary bypass grafts without cardiopulmonary bypass (OpCAB) |
| 11. Positions and incisions for cardiac surgery | 26. Perform surgical duties during coronary bypass grafts with cardiopulmonary bypass |
| 12. Cardiac procedures | 27. Perform surgical duties during a port-access minimally invasive heart surgery |
| 13. Destination of patient after completion of cardiac surgery | 28. Perform surgical duties during a mitral valve repair or replacement (open or port-access) |
| 14. Possible complications and prognosis of patient after cardiac surgery | 29. Perform surgical duties during a ventricular aneurysm |
| 15. Wound management and classification of cardiac surgical procedures | 30. Perform surgical duties during an ascending aortic aneurysm |
| | 31. Perform surgical duties during a heart transplant |
| | 32. Perform surgical duties during coarctation of the aorta |

Instructional/Task Analysis

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Module 11: Cardiac Surgery (continued)

33. Perform surgical duties during a tetralogy of Fallot repair
34. Perform surgical duties during an atrial/ventricular septal defect repair
35. Perform surgical duties during closure of patent ductus arteriosus

Module 12: Peripheral Vascular Surgery

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| <ol style="list-style-type: none">1. Terms and definitions2. Primary purposes of peripheral vascular surgery3. Anatomical structures of the peripheral vascular system4. Physiological functions of the peripheral vascular system5. Pathophysiological conditions requiring peripheral vascular surgical intervention6. Peripheral vascular diagnostic approaches7. Special considerations for peripheral vascular surgery8. Special equipment used in peripheral vascular surgery9. Special supplies used in peripheral vascular surgery10. Special instrumentation for peripheral vascular surgery11. Positions and incisions for peripheral vascular surgery12. Peripheral vascular procedures13. Differences in vascular grafts14. Destination of the patient after completion of peripheral vascular surgery15. Possible complications and prognosis of the patient after peripheral vascular surgery16. Wound management and classification of peripheral vascular surgical procedures | <ol style="list-style-type: none">17. Diagram setup used in closed peripheral vascular procedures18. Diagram setup used in open peripheral vascular procedures19. Determine appropriate actions and relevant supplies for peripheral vascular surgical procedures20. Perform surgical duties during an angiography21. Perform surgical duties during insertion of a venous access device22. Perform surgical duties during percutaneous angioplasty procedures with endostent insertion23. Perform surgical duties during abdominal aortic aneurysm with graft insertion24. Perform surgical duties during insertion of a vena cava device25. Perform surgical duties during an embolectomy26. Perform surgical duties during carotid endarterectomy27. Perform surgical duties during aorto-femoral and femoropopliteal bypass grafts28. Perform surgical duties during an abdominal aortic aneurysm repair29. Perform surgical duties during placement of an arteriovenous fistula and shunt30. Perform surgical duties during ligation and vein stripping |
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Module 13: Pediatric Surgery

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| 1. Terms and definitions | 19. Maintain normal physiologic and psychological function in the pediatric patient |
| 2. Primary purposes of pediatric surgery | 20. Determine appropriate actions during interviewing, preparatory and surgical approach for a pediatric inguinal hernia repair |
| 3. Major classifications of indications for surgery on the pediatric patient | 21. Perform surgical duties during pediatric inguinal herniorrhaphy |
| 4. Basic developmental differences between pediatric and adult patients | 22. Perform surgical duties during pediatric pyloromyotomy |
| 5. Psychosocial concerns associated with caring for the pediatric patient, particularly in preoperative preparation | 23. Perform surgical duties during repair of tracheoesophageal fistula (TEF) |
| 6. Special intraoperative considerations for the pediatric patient | 24. Perform surgical duties during congenital diaphragmatic hernia repair (CDH) |
| 7. Basic pediatric supplies and equipment | 25. Perform surgical duties during treatment of biliary atresia |
| 8. Basic pediatric instrumentation | 26. Perform surgical duties during omphalocele or gastroschisis repair |
| 9. General and gastrointestinal pediatric procedures | 27. Perform surgical duties during colorectal resection for Hirschsprung's disease |
| 10. Urological pediatric procedures | |
| 11. Orthopedic pediatric procedures | |
| 12. Plastic and reconstructive pediatric procedures | |
| 13. ENT pediatric procedures | |
| 14. Neurosurgical pediatric procedures | |
| 15. Thoracic and cardiovascular pediatric procedures | |
| 16. Destination and postoperative care of patient after completion of pediatric surgery | |
| 17. Possible complications and prognosis of patient after pediatric surgery | |
| 18. Wound management and classification of pediatric surgical procedures | |

Instructional/Task Analysis

Related Information: What the Student Should Know

Application: What the Student Should Be Able to Do

Module 14: Emergency Surgery

1. Terms and definitions
2. Primary purposes for critical care of the trauma patient
3. Mechanisms of injury (MOI)
4. Trauma scoring systems
5. "The Golden Hour"
6. Three phases of traumatic death
7. Sequence of events for pre-hospital EMS triage and transport
8. Important information relayed to the OR before or during transport to the hospital or trauma center
9. Sequence of events for in-house triage and transport
10. Essential expertise levels required in the surgical trauma room
11. Basic trauma emergency cart contents
12. Basic table setups commonly used in Category I trauma cases
13. Steps for the required priority actions for a Category I trauma case call in from ED
14. Essential professional trauma room qualities and characteristics
15. Distinctive elements or focus points that sustain momentum and create solid operative strategy
16. Common face and neck trauma injuries
17. Common head trauma injuries
18. Common spinal trauma injuries
19. Common thoracic trauma injuries
20. Common abdominal trauma injuries
21. Common genitourinary trauma injuries
22. Common orthopedic trauma injuries
23. Common trauma injuries in the pediatric, pregnant, and elderly population
24. Organ procurement and transplant after fatal injury
25. Steps for organ transplant donation procedures
26. Practice critical thinking skills under stress
27. Determine appropriate actions during organ procurement and transplant (OP/T)
28. Perform surgical trauma duties involving the chest
29. Perform surgical trauma duties involving the abdomen
30. Perform surgical duties during traumatic injury repair