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| **General Surgery Residency Goals & Objectives**  |
| **Pediatric Surgery Service at Arkansas Childrens Hospital** |
| **Revised January, 2011** |
| **PGY – 1** |  |
| **A. Medical Knowledge** |  |
| 1. | FLUID & ELECTROLYTES. The resident should possess an in-depth, working knowledge of normal fluid, electrolyte and acid-base physiology and the causes, clinical manifestations and management of fluid and electrolyte and acid-base disturbances in children; |
| 2. | NUTRITION & METABOLISM. The resident should possess an in-depth, working knowledge of normal human nutrition in infants and children. The resident should know the effects of acute and chronic surgical diseases on normal metabolism in infants and children. The resident should also have an in-depth working knowledge of the types of enteral feedings and parenteral feedings including the sites of delivery, indications, contraindications, and potential benefits and complications of these types of nutritional therapy; |
| 3. | HERNIAS. The resident should possess a detailed knowledge of the anatomy and physiology of the abdominal wall as it relates to abdominal incisions, hernias and hernia repairs in infants and children. In particular, the resident should understand the unique aspects of infant and childhood hernias, the preoperative assessment of patients with a hernia, the indications for repair, and the operative approaches to inguinal and umbilical hernia in infants and children; |
| 4. |  STOMACH & DUODENUM. The resident should possess a detailed knowledge of the pathophysiology, clinical manifestations, and diagnostic and therapeutic approaches to infants and children with gastroesophageal reflux; |
| 5 | INTESTINE. The resident should possess a detailed knowledge of the pathophysiology, clinical manifestations, diagnostic and therapeutic approaches to common gastrointestinal conditions of infancy and childhood including pyloric stenosis, mesenteric volvulus, intestinal obstruction, acute appendicitis, and intussusception; |
| 6. | SURGICAL COMPLICATIONS. The resident should possess a detailed knowledge of the pathophysiology, clinical manifestations, diagnostic and therapeutic algorithms for surgical complications in infancy and childhood such as wound infections, respiratory insufficiency, wound dehiscence and postoperative bleeding; |
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| **B. Patient Care** |  |
| 1. | PRE-OPERATIVE CARE. The resident should perform and document a concise, accurate, and thorough history & physical examination, write appropriate admission orders, order & review appropriate diagnostic tests & formulate a basic treatment plan for surgical patients admitted to the hospital either emergently or electively; |
| 2. | PRE-OPERATIVE CARE. The resident should write physician orders that include appropriate maintenance fluid and electrolyte replacement, appropriate antibiotic selections, and appropriate nutritional support, including either enteral or parenteral nutrition, where indicated;  |
| 3. | PRE-OPERATIVE CARE. The resident should be able to assess a patient requiring a surgical procedure such as *assessment for co-morbid conditions, operative risk, and obtain appropriate preoperative imaging & consultations.* |
| 4. | PRE-OPERATIVE CARE. The resident should be able to efficiently utilize and interpret diagnostic laboratory testing. *Examples of appropriate tests include serum chemistries, liver function tests, arterial blood gas analysis, hematological profiles and coagulation tests.* |
| 5. | PRE-OPERATIVE CARE. The resident should be able to efficiently utilize and interpret diagnostic radiological tests. *Examples of the types of studies include chest and abdominal radiographs, computed tomography, ultrasonography, & gastrointestinal contrast studies.* |
| 6. | PRE-OPERATIVE CARE. The resident should be able to prepare a patient for operation including the writing of appropriate physicians orders (that includes appropriate prophylactic antibiotics), obtaining informed consent for basic operations / procedures including consent for blood transfusion, and completion and documentation of a preoperative checklist (that includes diagnosis, planned procedure, indications for operation, preoperative lab, the results of pertinent diagnostic studies, special considerations such as positioning, supplies, type & crossmatch for transfusion operative equipment); |
| 7. | OPERATIVE CARE. The resident should demonstrate an understanding of the principles of preparation in the operating room, including sterile technique, use of preoperative antibiotic prophylaxis, the surgical prep, positioning/draping and management of anesthetic-related emergencies. |
| 8. | OPERATIVE CARE. The resident should demonstrate the principles involved in operations such as the gentle handling of tissue, dissection of tissue planes, suture and ligature techniques and under appropriate supervision, perform basic surgical procedures such as the placement of central venous lines, *common abdominal operations (e.g., appendectomy, inguinal & umbilical herniorrhaphy), lymph node biopsy, gastrostomy, pyloromyotomy, circumcision & basic wound and drain care* |
| 9. | OPERATIVE CARE. The resident should participate in as many operations on the service as possible, including those in which he / she is not the primary resident surgeon; |
| 10. | POST-OPERATIVE CARE. Following the procedure, the resident should write a succinct, accurate brief operative note that records the surgeons name, the operation performed, the diagnosis, the operative findings, the estimated blood loss, the estimated I & O’s for the case, and other pertinent facts. The resident should also write post-operative physician orders promptly that includes at a minimum a diet, activity level, medications including antibiotics and nursing orders; |
| 11. | POST-OPERATIVE CARE. The resident should demonstrate an understanding of the basic principles of routine postoperative care of infants and children, including pain control, fluid and electrolyte management, wound management, nutritional support, and antibiotic treatment.. |
| 12. | POST-OPERATIVE CARE. The resident should recognize and manage common post-operative complications including fever, respiratory distress, wound infection, intra-abdominal abscess, and ileus,; |
| 13. | POST-OPERATIVE CARE. The resident should provide and document routine postoperative care including the performance and documentation of daily progress notes, discharge orders and discharge summary, outpatient prescriptions, and ensuring appropriate post-operative follow-up, including visits from a home-health care agency; |
| 14 | OUTPATIENT CARE. The resident must attend and participate in ambulatory surgery clinics held each week for their service. *Activities should include examination & evaluation of new patients, perioperative and postoperative care of established patients, and surgical consultations under the supervision of attending surgeons.* |
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| **C. Interpersonal and Communications Skills**  |  |
| 1. | The resident should communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds. This includes discussions regarding the patient’s disease processes (including complications), the expected courses, operative findings, and operative procedures with assistance from upper level residents and the attending surgeons;  |
| 2. | The resident should communicate effectively with other team members including attending physicians, senior residents, midlevel providers, nurses and students. The resident must accurately portray critical clinical information in a timely professional manner and work effectively as a member of the general surgery service;  |
| 3. | The resident should work effectively with physicians from other services, other health professionals such as nurses and therapists, and health related agencies to provide high-quality health care. The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents in a timely professional manner;  |
| 4. | The resident must effectively document the practice activities by maintaining clear, concise, accurate, and timely medical records including (but not limited to) admission history and physical examination notes, consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries; |
| 5. | The resident should counsel and educate patients and their families about the diseases that they or their family member are dealing with and the rationale for the recommended plan of care; |
| 6. | The resident will ensure that all student notes are accurate, reflect a proper plan, and are countersigned by a physician each day. |
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| **D. Practice-Based Learning and Improvement**  |  |
| 1. | The resident must identify strengths, deficiencies and limits in his / her fund of knowledge and clinical abilities through self-evaluation and set learning and improvement goals based on those deficiencies;  |
| 2. | The resident must identify and use appropriate learning activities to improve his / her knowledge in areas of knowledge and clinical deficiencies. In addition to individual study, it is expected that the resident will participate in all clinical (e.g., clinics and operating room) and didactic (e.g., conferences) activities specific to this service in order to improve his / her fund of knowledge and clinical abilities as they relate to the fundamentals of general surgical practice;  |
| 3. | The resident must incorporate formative evaluation feedback from his / her faculty and senior residents into his / her daily practice; |
| 4.  | The resident should be able to use information technology to locate high quality evidence from scientific studies related to their patient’s health problems. He / she should be able to analyze the literature for quality and relevance to their patient and be able to assimilate this information into clinical practice;  |
| 5. | The resident should be able to clearly and accurately educate their patients and families, medical students, residents, and other health professionals about the fundamentals of endocrine and malignant diseases and their medical and surgical management;; |
| 6. | The resident must attend all service-specific conferences such as the pediatric surgery M & M Conference, Pediatric Surgery Case Conference, Surgical Grand Rounds, & the Departmental Morbidity & Mortality conference; |
| 7. | The resident must utilize an evidence-based approach to patient care; |
| 8. | The resident is expected to have an understanding of the anatomy, physiology, and pathophysiology for each case in which they participate, and will keep track of their operative cases, with the goal of exposure to a diverse and thorough spectrum of gastrointestinal diseases during the rotation. |
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| **E. Systems-Based Practice** |  |
| 1. | The resident should be able to work effectively to provide high quality and seamless patient care throughout the health care delivery system including the outpatient clinic, emergency department, inpatient ward, operating room, post-anesthesia care unit, and intensive care unit;  |
| 2. | The resident should be able to coordinate high quality patient care throughout the health care delivery system by working effectively with consultants, other health care providers such as respiratory therapists, physical therapists, and nurse, discharge planning nurses, and social workers; |
| 3. | The resident should incorporate considerations of cost awareness, risk benefit analysis, and evidence-based medicine into their clinical practice |
| 4. | The resident should be an advocate for high quality patient care and work to identify ways to optimize care delivery systems; |
| 5. | The resident should work effectively with risk managers, quality improvement professionals, and utilization review nurses to enhance patient safety, practice high quality and cost effective patient care; |
| 6. | The resident should be familiar with the principles of quality improvement processes including root cause analysis and should participate in identifying system errors and implementing potential systems solutions where possible; |
| 7. | The resident should work effectively with discharge planning, utilization review nurses, social workers, and home health care agencies to seamlessly and efficiently move the patient from an in hospital setting to a rehabilitation hospital, skilled nursing facility, or home with or without a home health care agency. |
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| **F. Professionalism**  |  |
| 1. | The resident must be honest at all times;  |
| 2. | The resident should place the needs of the patient above all the needs or desires of him/herself.  |
| 3. | The resident should maintain high ethical behavior in all professional activities.  |
| 4. | The resident should remain compliant with all required training designated by the institution.  |
| 5. | The resident must demonstrate a commitment to the continuity of patient care through carrying out professional responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.  |
| 6. | The resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations.  |
| 7. | The resident should be properly and professionally attired at all times while engaged in patient care.  |
| 8. | The resident should be properly and professionally groomed at all times when engaged in patient care.  |
| 9. | The resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.  |
| 10. | The resident should at all time treat patients, families, and all members of the health care team with respect, compassion, and integrity.  |
| 11. | The resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.  |
| 12. | The resident must attend the mandatory conferences. |
| 13. | The resident should serve as a role model and guide for the medical students on the service in terms of professionalism. |

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| **PGY – 4** |  |
| In general the goals and objectives for the PGY – 4 resident on the Pediatric Surgery Service include the list of goals and objectives listed above for the PGY – 1 residents as a foundation with the addition of the following: |  |
| **A. Medical Knowledge** |  |
| 1. | GASTROINTESTINAL TRACT. The resident should be able to classify the following congenital malformations of the gastrointestinal tract by type, embryologic origin, and the need for surgical intervention: esophageal atresia, pyloric stenosis, intestinal malrotation, duodenal atresia, and imperforate anus; |
| 2. | GASTROINTESTINAL TRACT. The resident should possess an in-depth working knowledge of the pathophysiology, clinical features, diagnoistic evaluation and therapeutic options for a child with short-gut syndrome; |
| 3. | PULMONARY. The resident should be able to classify the following congenital malformations of the lungs by type, embryologic origin, and the need for surgical intervention: diaphragmatic hernia, sequestration, cystic defects, lobar emphysema; |
| 4. | ABDOMINAL WALL. The resident should be able to classify the following congenital malformations of the abdominal wall by type, embryologic origin, and the need for surgical intervention: umbilical & inguinal hernias, omphalocele, gastroschisis; |
| 5. | HEAD & NECK. The resident should be able to classify the following congenital malformations of the head & neck by type, embryologic origin, and the need for surgical intervention: branchial cleft, thyroglossal duct cyst, cystic hygroma; |
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| **B. Patient Care**  |  |
| 1. | PRE-OPERATIVE CARE. The resident should be able to perform and document a concise, accurate, and thorough history & physical examination, write appropriate admission orders, order & review appropriate diagnostic tests & formulate and implement a treatment plan for pediatric surgical patients with complex medical and surgical diseases as well as those who are hemodynamically unstable; |
| 2. | PRE-OPERATIVE CARE. The resident should be able to resuscitate an acutely ill child, such as an individual who is septic, bleeding, or hypovolemic; |
| 3. | PRE-OPERATIVE CARE. With appropriate supervision and consultation, the resident should be able to preoperatively assess and manage serious co-morbid medical conditions, accurately assess operative risk, obtain proper preoperative imaging & consultations, and adjust medical and operative approaches based upon the patient’s risk assessment. |
| 4. | PRE-OPERATIVE CARE. The resident should be able to obtain informed consent for major abdominal operations such as cholecystectomy, laparotomy, and splenectomy; |
| 5. |  PRE-OPERATIVE CARE. The resident should be able to evaluate a medically complex or seriously ill patient for an acute surgical condition and render a concise and accurate consultation that details the relevant clinical findings and the diagnostic and therapeutic plan.  |
| 6. | PRE-OPERATIVE CARE. The resident should be able to evaluate a medically complex or seriously ill patient for an acute surgical condition and render a concise and accurate consultation that details the relevant clinical findings and the diagnostic and therapeutic plan.  |
| 7. | PRE-OPERATIVE CARE. The resident should be able to evaluate and manage an acutely injured child, including those who have sustained either blunt or penetrating traumatic injury, including, but not limited to, closed head injury and injury to the spleen, liver, pancreas, and small intestine. The senior resident should be able to manage the airway of an acutely injured pediatric patient, including an infant; |
| 6. | OPERATIVE CARE. The resident should demonstrate expert understanding and possession of the general principles involved in the performance of operations, such as gentle handling of tissue, dissection of tissue planes, suture and ligature techniques. In addition, under appropriate supervision, the senior resident should be able to perform surgical procedures of moderate complexity in infants and children, such as the Nissen fundoplication, small bowel resection, operative repair of hepatic, biliary or pancreatic injury, splenectomy, closure of a colostomy, laparoscopic or open cholecystectomy, laparoscopic or open appendectomy, and Ladd’s procedure *for malrotation;* |
| 7. | OPERATIVE CARE. As the senior surgical resident on the pediatric surgery service, it is expected that the PGY – 4 resident will participate in the operative management of all of the patients on this service, including those in which he / she is not the primary resident surgeon; |
| 8. | POST-OPERATIVE CARE. Following the procedure, the resident should write a succinct, accurate brief operative note and dictate an operative note that accurately and concisely details the procedure performed. The resident should also write post-operative physician orders promptly that includes at a minimum a diet, activity level, medications including antibiotics and venous thromboembolism prophylaxis, and nursing orders;. |
| 8. | POST-OPERATIVE CARE. The resident should be able to provide postoperative care for patients undergoing those operations indicated earlier, including pain control, fluid and electrolyte management, wound management, nutritional support, and antibiotic treatment, and management of their comorbid medical conditions; |
| 9. | POST-OPERATIVE CARE. The resident should recognize and appropriately manage common post-operative complications including fever, hemorrhage, oliguria, respiratory distress, wound dehiscence, wound infection, intra-abdominal abscess, and ileus;; |
| 10. | POST-OPERATIVE CARE. The resident must attend and participate in the surgery clinic for their service. *Activities will include examination and evaluation of new patients, perioperative and postoperative care of established patients, and surgical consultations under the supervision of attending surgeons.* |
| 11. | POST-OPERATIVE CARE. The resident should be able to perform simple and moderately complex pediatric surgical procedures in an office setting under the supervision of the attending surgeon; |
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| **C. Interpersonal and Communications Skills**  |  |
| The PGY – 4 resident is a senior surgical resident who is expected to be a leader on the surgical team. In addition, to the interpersonal and communication skills defined for a PGY – 1 resident, it is expected that the PGY – 4surgical resident should exhibit greater competence, across a variety of clinically relevant situations, with these important skills than would the PGY – 1.  |  |
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| **D. Practice-Based Learning and Improvement**  |  |
| In addition, to the practice-based learning and improvement skills defined for a PGY – 1 resident, it is expected that the PGY – 4 surgical resident should exhibit greater insight (through self-evaluation and formative feedback) into their clinical strengths, deficiencies and limits. The PGY – 4 resident’s ability to locate, identify and assimilate high quality clinical and scientific information should be relatively mature. As such it is expected that the PGY – 4 resident will be an effective teacher for his / her patients and families, medical students, residents, and other health professionals. Lastly, it is expected that the PGY – 4 resident will have a relatively sophisticated knowledge of hospital based quality improvement initiatives;  |  |
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| **E. Systems-Based Practice** |  |
| In addition to the systems-based practice skills defined for a PGY – 1 resident, it is expected that the PGY – 4 should possess a sophisticated understanding of the health care delivery system within the medical center and the community. The PGY – 4 resident should be an expert in coordinating high-quality, seamless patient care throughout the health care systems. He / she should understand and employ the concept of risk : benefit ratio and evidence-based medicine in their clinical practice. Lastly, the PGY – 4 resident should be an ardent champion for their patients and the institution and should help identify ways to improve the quality of care that is provided at each of our health care institutions; |  |
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| **F. Professionalism**  |  |
| In addition to the professionalism skills expected of a PGY – 1 resident, the PGY – 4 resident is expected to be a role model for professional and ethical behavior within the hospital.  |  |