

Rotation: Inpatient Pediatrics at SIUH 3D - Senior Resident

Residents: Pediatric residents at the PL2 or PL3 level

Prerequisites: Satisfactory completion or waiver of the PL1 training year; maintenance of certification in PALS

Primary Goals for this Rotation

GOAL: Common Signs and Symptoms. Supervise junior residents in evaluation and management of common signs and symptoms associated with acute illness and hospitalization.

Coordinate the evaluation and management, with consultation as indicated, patients with signs and symptoms that commonly present to the Inpatient Unit (examples below).

1. General: acute life-threatening event (ALTE), constitutional symptoms, hypothermia, failure to thrive, fatigue, fever without a source, hypothermia, weight loss
2. Cardiorespiratory: apnea, chest pain, cough, cyanosis, dyspnea, heart murmur, hemoptysis, hypertension, hypotension, inadequate respiratory effort, shortness of breath, stridor, syncope, tachypnea, respiratory failure, wheezing
3. Dermatologic: burns, ecchymoses, edema, petechiae, purpura, rashes, urticaria
4. EENT: acute visual changes, conjunctival injection, edema, epistaxis, hoarseness, nasal discharge, stridor, trauma
5. Endocrine: heat/cold intolerance, polydipsia, polyuria
6. GI/Nutrition/Fluids: abdominal masses or distention, abdominal pain, ascites, dehydration, diarrhea, dysphagia, hematemesis, inadequate intake, jaundice, melena, rectal bleeding, regurgitation, vomiting
7. Genitourinary/Renal: change in urine color, dysuria, edema, hematuria, oliguria, scrotal mass or edema
8. GYN: abnormal vaginal bleeding, pelvic pain, vaginal discharge
9. Hematologic: abnormal bleeding, bruising, hepatosplenomegaly, lymphadenopathy, masses, pallor
10. Musculoskeletal: arthritis/arthralgia, bone and soft tissue trauma, limb pain, limp
11. Neurologic: ataxia, diplopia, headache, hypotonia, head trauma, lethargy, seizure, vertigo, weakness
12. Psychiatric/Psychosocial: child abuse or neglect, conversion symptoms

GOAL: Common Conditions. Supervise junior residents in recognizing and managing common childhood conditions presenting to the Inpatient Unit.

Coordinate the evaluation and management, with consultation as indicated, of patients with conditions that commonly present to the Inpatient Unit (examples below).

1. General: failure to thrive, fever of unknown origin
2. Allergy/Immunology: acute drug allergies/reactions, anaphylaxis, immunodeficiencies (e.g. HIV), recurrent pneumonia, serum sickness, angioedema
3. Cardiovascular: bacterial endocarditis, cardiomyopathy, congenital heart disease, congestive heart failure, Kawasaki disease, myocarditis, rheumatic fever
4. Endocrine: diabetes (including DKA), electrolyte disturbances secondary to underlying endocrine disease
5. GI/Nutrition: appendicitis, bleeding, cholangitis, complications of inflammatory bowel disease,

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<p>gastroenteritis, gastroesophageal reflux, hepatic dysfunction, bowel obstruction, pancreatitis, severe malnutrition</p> <ol style="list-style-type: none"> 6. GU/Renal: electrolyte and acid-base disturbances, glomerulonephritis, hemolytic-uremic syndrome, nephrotic syndrome, urinary tract infection/pyelonephritis 7. Gynecologic: genital trauma, pelvic inflammatory disease, sexual assault 8. Hematologic/Oncologic: abdominal and mediastinal mass, common malignancies, fever and neutropenia, thrombocytopenia, severe anemia, vaso-occlusive crises and other complications of sickle cell disease 9. Infectious Disease: cellulitis (including periorbital and orbital), cervical adenitis, dental abscess, encephalitis, HIV, infections in immunocompromised hosts, laryngotracheobronchitis, line infections, meningitis (bacterial and viral), osteomyelitis, pneumonia (viral and bacterial), sepsis/bacteremia, septic arthritis, tuberculosis 10. Pharmacology/Toxicology: common drug poisoning or overdose 11. Neurology: acute neurologic conditions (acute cerebellar ataxia, Guillain Barre syndrome, movement disorders), seizures, shunt infections 12. Respiratory: airway obstruction, asthma exacerbation, bacterial tracheitis, bronchiolitis, croup, epiglottitis, complicated pneumonia, chronic lung disease of infancy, complications of cystic fibrosis 13. Rheumatologic: Henoch Schonlein purpura (HSP), juvenile rheumatoid arthritis (JRA), systemic lupus erythematosus (SLE), Kawasaki's disease 14. Surgery: pre- and post-op consultation and evaluation of surgical patients (general, ENT, orthopedics, urology, neurosurgical, etc.), special needs of technology-dependent children (blocked tracheostomy, gastric tube dysfunction, VP shunt malfunctions). 15. Burns and trauma: provide general supportive pediatric care and coordination of care for patients with burns and other trauma being treated by surgical services.
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GOAL: Diagnostic and Screening Procedures. Utilize common diagnostic tests and imaging studies appropriately in the inpatient setting.

1 : Demonstrate an understanding of the common diagnostic tests and imaging studies used in the inpatient setting, by being able to:
1 : Know the indications for and limitations of each study.
2 : Know or be able to locate age-appropriate normal ranges (lab studies).
3 : Apply knowledge of diagnostic test properties, including the use of sensitivity, specificity, positive predictive value, negative predictive value, false-positive and negative results, likelihood ratios, and receiver operating characteristic curves, to assess the utility of tests in various settings.
4 : Recognize cost and utilization issues in managing coordination of care.
5 : Interpret test results in the context of the specific patient and explain interpretation to juniors.
6 : Know therapeutic options for correction of abnormalities and discuss with juniors and attendings.
2 : Use common laboratory studies when indicated for patients in the inpatient setting.
<ol style="list-style-type: none"> 1. CBC with differential, platelet count, RBC indices 2. Blood chemistries: electrolytes, glucose, calcium, magnesium, phosphate 3. Renal function tests 4. Tests of hepatic function (PT, albumin) and damage (liver enzymes, bilirubin) 5. Serologic tests for infection (e.g., hepatitis, HIV) 6. C-reactive protein, erythrocyte sedimentation rate 7. Therapeutic drug concentrations 8. Coagulation studies 9. Arterial, capillary, and venous blood gases 10. Detection of bacterial, viral, and fungal pathogens 11. Urinalysis

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12. Cerebrospinal fluid analysis
13. Gram stain
14. Stool studies
15. Other fluid studies (e.g. pleural fluid, joint fluid)
16. Electrocardiogram

3 : Use common imaging or radiographic studies when indicated for patients on the inpatient unit.

1. Plain radiographs of the chest, extremities, abdomen, skull, sinuses
2. Other imaging techniques such as CT, MRI, angiography, ultrasound, nuclear scans, contrast studies (interpretation not expected)
3. Echocardiogram

GOAL: Monitoring and Therapeutic Modalities. Understand how to use physiologic monitoring and special technology in the general inpatient setting, including issues specific to care of the chronically ill child.

1 : Apply monitoring techniques and special treatments commonly used in the inpatient setting appropriately:

1. Know indications, contraindications and complications.
2. Assure proper use of technique for children of varying ages.
3. Determine which patients need continuous monitoring or special monitoring (e.g., neurological checks, strict I/Os, special precautions).
4. Interpret and respond appropriately to results of monitoring based on method used, age and clinical situation.

2 : Use appropriate monitoring techniques in the inpatient setting and interpret within the context of the specific patient's age, size, condition.

1. Monitoring of temperature, blood pressure, heart rate, respirations
2. Cardiac monitoring
3. Pulse oximetry

3 : Assure appropriate application of the treatments and techniques used in the inpatient setting.

1. Standard (previously universal) precautions
2. Nasogastric tube placement
3. Enteral nutrition
4. Administration of nebulized medication
5. Injury, wound care
6. Oxygen delivery systems
7. I.V. fluids
8. I.V. pharmacotherapy (antibiotics, antiepileptics, etc.)
9. Phlebotomy
10. Transfusion therapy

4 : Describe key issues in the inpatient and home management of the technology-dependent child with the following care needs:

1. Tracheostomy

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2. Chronic mechanical ventilation
3. Chronic parenteral nutrition
4. Gastrostomy tube for feedings
5. Permanent central venous catheter

5 : Recognize normal and abnormal findings at tracheostomy, gastrostomy, or central venous catheter sites, and demonstrate appropriate intervention or referral for problems encountered.

6 : Demonstrate the skills for assessing and managing pain.

1. Use age-appropriate pain scales in assessment.
2. Describe indications for use and side effects of common narcotic and non-narcotic analgesics.
3. Administer medications to control pain in appropriate dose, frequency and route.
4. Describe indications for and use of behavioral techniques and supportive care, and other non-pharmacologic methods of pain control.

GOAL: Pediatric Competencies in Brief: Demonstrate high standards of professional competence while supervising a team caring for patients on the Inpatient Service.

Competency 1: Patient Care.

Senior pediatric residents on the in-patient rotation should be able to do the following during the day and during night call, with little supervision as needed:

a) Provide family-centered patient care by the team that is development- and age-appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.

b) Use a logical and appropriate clinical approach to the care of hospitalized patients, applying principles of evidence-based decision-making and problem-solving, demonstrating:

1. Careful data collection and synthesis
2. Appropriate orders for vital signs, I & Os, medications, nutrition, activity
3. Well thought-out daily care plans
4. Good clinical judgment and decision-making
5. Execution of careful discharge plans (orders, patient education, followup)

c) Provide sensitive support to patients with acute and chronic illnesses and to their families, and coordinate arrangement for ongoing support and preventive services at discharge.

d) Be aware of the condition and status of all patients on a service and handle multiple problems simultaneously.

Competency 2. Medical Knowledge.

Senior pediatric residents should:

a) Know the scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by a pediatrician; be able to acquire, critically interpret and apply this knowledge in patient care; effectively share this knowledge with junior residents.

b) Demonstrate a commitment to acquiring the base of knowledge needed to care for children in the inpatient setting.

c) Be able to access medical information efficiently, evaluate it critically, and apply it to inpatient care appropriately.

Competency 3: Interpersonal Skills and Communication.

With little supervision as needed, senior residents should:

a) Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

b) Provide effective patient education, including reassurance, for condition commonly seen on the inpatient service.

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c) Participate and communicate effectively as leader of an interdisciplinary team, both as the primary provider and the consulting pediatrician (e.g., patient presentations, sign-out rounds, communication with consultants and primary care community physicians).

d) Develop effective strategies for teaching students, colleagues, other professionals and laypersons.

e) Maintain and assure other team members maintain accurate, legible, timely and legally appropriate medical records.

Competency 4: Practice-based Learning and Improvement.

With minimal supervision as needed, senior residents should

a) Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate and improve one's patient care practice.

b) Use scientific methods and evidence to investigate, evaluate and improve one's patient care practice in the inpatient setting as well as those of other members of the care team and other services.

c) Identify personal learning needs, systematically organize relevant information resources for future reference, and plan for continuing acquisition of knowledge and skills.

Competency 5: Professionalism.

Residents must:

a) Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

b) Demonstrate personal accountability and assure accountability of team members to the well being of patients (e.g., following-up on lab results, writing high quality notes, and seeking answers to patient care questions).

c) Demonstrate a commitment to professional behavior in interactions with staff and professional colleagues.

d) Display leadership and initiative.

e) Adhere to ethical and legal principles and sensitivity to diversity while providing care in the inpatient setting.

Competency 6: Systems -Based Practice.

Residents should:

a) Practice and assure team members practice high-quality health care and advocate for patients within the context of the health care system.

b) Identify key aspects of health care systems and cost control in the inpatient setting and coordinate team member's patient care taking these factors into account.

c) When coordinating care by the team in the inpatient setting, consider cost and resource allocation without compromising quality of care.

d) Take steps to avoid medical errors; work with the health care team to recognize and address systems errors. Participate in quality assurance/performance improvement activities appropriate to the inpatient setting.

Procedures

GOAL: Technical and therapeutic procedures. Describe and competently perform the following procedures, including how they work and when they should be used.

Anesthesia/analgesia: pain management

Arterial puncture

Bladder: catheterization

Central line: use/care

Chest physiotherapy

Intravenous line placement

Lumbar puncture

Medication delivery: IM/SC/ID, inhaled, IV, rectal

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PPD: placement
Pulmonary function tests: peak flow meter
Pulse oximeter: placement
Rectal swab
Sterile technique
Suctioning: nares, oral pharynx, tracheostomy
Venipuncture
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