

## Resident Curriculum for Inpatient Pediatrics

### GENERAL DESCRIPTION OF ACTIVITIES

#### PGY 1 Resident

Categorical pediatric interns will spend 4 to 5 months on the general pediatric in-patient service during their intern year.

Medicine/Pediatric interns will spend 2 to 3 months on the general pediatric in-patient service during their intern year.

The interns will become immersed in the daily care of children with common and interesting conditions that require inpatient care. They will be supervised at all times by a supervising resident (PGY 2 or 3) and the attending physician. The intern will follow an average of 6 to 10 inpatients. Call is per a night float system.

#### Supervising Resident

Categorical pediatric residents and medicine/pediatric residents function as the supervising resident for a minimum of 4 and maximum of 6 months during the remainder of their residency (years 2, 3 and 4). This will be based on the resident's preference and the approval of the Chief Resident and Program Director. The senior resident is responsible for all aspects of patient care on the service. He/she is expected to supervise 1 to 4 interns and 3 to 5 medical students, helping them to make patient care decisions and teaching them. He/she is also expected to be in close communication with the Attending physician. On average, the day senior residents will be responsible for 15 to 20 patients, and will transfer responsibilities to the night float senior after 5pm.

## Competency Based Goals and Objectives

### Patient Care

**GOALS:** Residents are expected to evaluate and manage, on an inpatient basis, common signs, symptoms and conditions in a timely, effective and compassionate manner. They should provide family-centered patient care that is developmentally and age-appropriate and effective for treatment of health problems and promotion of health. They should be the preferred provider for their patients.

#### **OBJECTIVES FOR RESIDENTS AT ALL LEVELS:**

- Carefully collect and synthesize data
- Write appropriate medical orders
- Devise well thought-out daily care plans

- Develop clinical judgment and decision-making
- Devise careful discharge plans
- Arrange for ongoing support and preventive services at discharge

### **OBJECTIVES FOR PGY 1 RESIDENTS:**

#### Admissions and daily work-

- Respond to pages within 5 minutes
- Respond to codes immediately when carrying the admit or team pager
- Perform admission History and Physicals and record findings in the EMR
- Staff new admissions with senior resident and call the attending with the proposed assessment and plan.
- Complete a daily progress note for each patient in the EMR
- Complete off service notes when leaving the service

#### Rounds-

- Pre-round, including reviewing medical records, examining patients, and speaking with nursing staff, patients, and their families
- Be the preferred provider for your patients
- Present patients on rounds including a proposed treatment plan
- Order appropriate laboratory and radiographic studies
- Appropriately follow up laboratory and radiologic examinations.
- Arrange for timely discharge from the hospital and contact patient's primary care provider to establish follow-up care and update them on the hospital course

### **OBJECTIVES FOR SUPERVISING RESIDENTS:**

#### Admissions and daily work-

- Respond to pages within 5 minutes
- Respond to codes immediately when carrying the admit or team pager
- Staff new admissions with your medical students and then facilitate calling the attending with your collective assessment and plan.
- Supervise interns in all aspects of their work
- Supervise medical students in all aspects of their work including co-signing notes and orders
- Examine all patients daily
- Complete discharge summaries within 48hr of discharge in the EMR
- Supervise procedures as needed
- Complete General Pediatrics Consults from surgical services within 24 hours, including staffing with an Attending Hospitalist and documentation in the EMR

#### Rounds-

- Ensure that patients are accurately presented on rounds and have a proposed treatment plan

- Determine the order of patients to be seen on walk rounds and direct the team throughout rounds
- Arrange for timely discharge from the hospital and facilitate contact of the patient's primary care provider to establish follow-up care and update them on the hospital course
- Supervise procedures as needed

### **OBJECTIVES FOR NIGHT CALL RESIDENTS:**

Admissions and daily work-

- Respond to pages within 5 minutes
- Respond to codes immediately when carrying the admit or team pager
- Staff new admissions with your medical students and intern through the night and then facilitate calling the attending with your collective assessment and plan; calls to attending should occur around 10pm to staff the night admissions, and whenever deemed necessary through the rest of the night
- Supervise interns in all aspects of their work
- Supervise medical students in all aspects of their work including co-signing notes and orders
- Evaluate patients through the night and adjust plan of care as necessary
- Supervise procedures as needed
- Complete General Pediatrics Consults from surgical services within 24 hours, including staffing with an Attending Physician and documentation in the EMR
- Attend and participate in check-out rounds at the beginning and end of the shift; check-out should be thorough, with attention to patient safety as well as communication of history and plan of care within the time allotted.

## **Medical Knowledge**

**GOAL 1:** Residents will be able to manage common signs, symptoms and conditions associated with the hospitalized pediatric patient. They will demonstrate the ability to acquire, critically interpret, and apply knowledge to patient care.

### **OBJECTIVES FOR RESIDENTS AT ALL LEVELS:**

- Access medical information efficiently
- Critically evaluate medical literature
- Demonstrate a commitment to acquire a knowledge-base needed to adequately care for hospitalized children.

**GOAL 2:** Residents will understand the clinical presentation and pathophysiology of *diseases* which commonly require inpatient care and develop appropriate knowledge regarding diagnostic and treatment options.

## **OBJECTIVES FOR PGY 1 RESIDENTS:**

- Describe the clinical presentation and pathophysiology of *diseases* as listed below
- Describe the diagnostic work up and treatment options of these *diseases*
- Describe the complications from these *diseases* and their treatment

## **OBJECTIVES FOR SUPERVISING RESIDENTS:**

- Recognize the clinical presentation and pathophysiology of *diseases* as listed below
- Become competent in making the diagnosis of these *diseases*
- Become competent in treatment of these *diseases*
- Recognize and manage complications of these *diseases* and their treatment
- Provide appropriate patient and family education
- Provide appropriate education to PGY-1's about the conditions.

## **Inpatient specific *disease* list (should include, but not limited to)**

### Gastrointestinal:

- Gastroesophageal Reflux Disease (GERD)
- Abdominal Pain
- Failure to Thrive/ Malnutrition
- Acute Gastroenteritis (AGE)
- Dehydration
- Hepatitis
- Pancreatitis
- Liver disease in children
- Foreign body ingestion

### Respiratory:

- Bronchiolitis
- Croup
- Epiglottitis
- Pneumonia/Emphyema
- Asthma/ Reactive Airway Disease (RAD)
- Foreign body inhalation
- Cystic Fibrosis

### Genitourinary/Renal:

- Urinary Tract Infection/ Pyelonephritis (UTI)
- Hemolytic Uremic Syndrome (HUS)
- Henoch-Schonlein Purpura (HSP)
- Renal Failure
- Nephrotic Syndrome

- Hypertension
- Glomerulonephritis

Neurology:

- Seizures (Febrile and Afebrile)
- Ventriculoperitoneal (VP) shunt infections/ malfunctions
- Headache/ Migraines
- Guillian-Barre Syndrome
- Developmental Delay
- Cerebral Palsy
- Muscular Dystrophy
- Pain/ Sedation
- Neurodegenerative disorders

Endocrine:

- Diabetes Mellitus/ Diabetic Ketoacidosis (DKA)
- Diabetes Insipidus
- Hypothalamic-Pituitary Axis Dysfunction
- Adrenal Disorders

Rheumatology/Immunology:

- Juvenile Rheumatoid Arthritis (JRA)
- Systemic Lupus Erythematosus (SLE)
- Other rheumatologic conditions
- Immunodeficiencies

Infectious Disease:

- Fever of Unknown Origin (FUO)
- Febrile illnesses
- Osteomyelitis
- Cellulitis (including periorbital and orbital)
- Meningitis
- Bacteremia/ Sepsis
- Septic Arthritis
- Lymphadenopathy
- Kawasaki Disease (KD)
- Group A Strep/ Rheumatic Fever
- Central line infections
- Herpes Simplex Infection
- Tick-borne illnesses

Dermatology:

- Atopic Dermatitis/ Eczema
- Stevens-Johnson Syndrome

- Drug Eruptions

Ear, Nose, Throat:

- Cervical Adenitis
- Retropharyngeal Abscess

Psychiatry/Social:

- Drug Overdose
- Suicide Attempt
- Depression
- Conversion Disorder

Cardiology:

- Heart Murmur evaluation
- Congenital Heart Disease
- Congestive Heart Failure

Newborn and Infant specific issues

- Apparent Life-Threatening Event (ALTE)
- Neonatal Jaundice (direct and indirect hyperbilirubinemia)
- Febrile infant

Others

- Inborn errors of Metabolism:
  - differential diagnosis, Initial workup, treatment
- Special needs of technology-dependent children
  - Gastric tube dysfunction
- Surgical pre – and post-op consultation and evaluation

**GOAL 3:** Evaluate and manage, with consultation if indicated, patients with *signs and symptoms* that commonly present for hospital admission as listed below.

**OBJECTIVES FOR PGY 1 RESIDENTS:**

- Perform *sign and symptom* appropriate History and Physical
- Interpret and analyze *signs and symptoms* as listed below
- Begin to prioritize *signs and symptoms* in individual patient
- Begin to recognize patterns of *diseases* in *signs and symptoms* as presented by patient
- Begin to develop appropriate diagnostic plan
- Begin to develop appropriate therapeutic plan

**OBJECTIVES FOR SUPERVISING RESIDENTS:**

- Prioritize *signs and symptoms* in individual patient
- Recognize patterns of *diseases* in *signs and symptoms* as presented by patient
- Evaluate signs and symptoms and develop appropriate diagnostic and therapeutic plan

### **Inpatient *sign and symptom* list**

#### General:

- constitutional symptoms
- hypothermia
- excessive crying
- fatigue
- fever without a source
- weight loss
- anaphylaxis
- angioedema

#### Cardiorespiratory:

- apnea
- chest pain
- cough
- cyanosis
- dyspnea
- hemoptysis
- hypertension
- hypotension
- inadequate respiratory effort
- rhythm disturbance
- shock
- shortness of breath
- stridor
- syncope
- tachypnea
- respiratory failure
- wheezing

#### Dermatologic:

- ecchymoses
- edema
- petechiae
- purpura
- rashes
- urticaria

EENT:

- acute vision changes
- conjunctival injection
- edema
- epistaxis
- hoarseness
- nasal discharge
- stridor
- trauma

Endocrine

- heat/cold intolerance
- polydipsia
- polyuria
- hypoglycemia
- hyperglycemia

GI/Nutrition/Fluids:

- abdominal masses or distention
- abdominal pain
- ascites
- dehydration
- diarrhea
- dysphagia
- hematemesis
- inadequate intake
- jaundice
- melena
- rectal bleeding
- regurgitation
- vomiting

GU/Renal:

- change in urine color
- dysuria
- edema
- hematuria
- oliguria
- scrotal mass or edema

Gyn:

- abnormal vaginal bleeding
- pelvic pain

- vaginal discharge

Heme/Onc:

- abnormal bleeding
- bruising
- hepatosplenomegaly
- lymphadenopathy
- masses
- pallor

Musculoskeletal:

- arthritis/arthralgia
- bone and soft tissue trauma
- limb pain
- limp

Neurologic:

- ataxia
- coma
- delirium
- diplopia
- headache
- hypotonia
- head trauma
- lethargy
- seizure
- vertigo
- weakness

Psychiatric/Psychosocial:

- acute psychosis
- child abuse or neglect
- conversion symptoms
- depression
- suicide attempt

## Practice-based Learning and Improvement

**GOALS:** Residents are expected to investigate and evaluate patient care practices, appraise and assimilate clinical information to make appropriate patient management decisions, and learn from error. They should demonstrate continuous self-assessment regarding their care and learn to improve their care as they learn more about the condition they are treating.

## **OBJECTIVES FOR RESIDENTS AT ALL LEVELS:**

- Consistently review the literature regarding pediatric hospital based care using paper, computer and web-based resources.
- Apply principles of Evidence-Based Medicine to critically evaluate one's patient care practice
- Identify personal learning needs by evaluating their own performance, identify gaps in their knowledge base, and target their learning to fill these gaps
- Consistently demonstrate learning from error
- Consistently work well with other learners to enhance knowledge
- Consistently provide, request, and accept feedback
- Systematically organize relevant information for continuing medical education

## **Interpersonal Skills and Communication**

**GOALS:** Residents are expected to consistently demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with colleagues, patients and their parents, and professional associates.

## **OBJECTIVES FOR RESIDENTS AT ALL LEVELS:**

- Create and sustain a therapeutic and ethically sound relationship with hospitalized patients and their families
- Provide effective patient and family education around conditions requiring inpatient care
- Participate as part of an interdisciplinary team
  - Acting as primary provider to patients, families, nurses
  - Patient presentations on rounds
  - Sign-out rounds
  - Communicating with consultants
  - Communicating with primary care physicians
- Develop effective strategies for teaching medical students, colleagues, and laypersons
- Maintain accurate, legible, timely, and legally appropriate medical records
- Provide effective handoffs to the on-call team

## **OBJECTIVES FOR PGY 1 RESIDENTS:**

- Communicate with patients and their families on a daily basis
- Communicate with each patient's attending daily
- Call consults in a timely manner (as early in the day as possible)
- Complete an evaluation on each student at the end of the block, as well as provide formative feedback during their time on wards

## **OBJECTIVES FOR SUPERVISING RESIDENTS:**

- Communicate with patients and their families on a daily basis
- Ensure that communication happens with each patient's attending daily
- Help call consults in a timely manner (as early in the day as possible)
- Model excellent communication skills with health care team members
- Conduct didactic and patient-centered instruction
- Observe one history and physical by each student
- Complete an evaluation on each student at the end of the block, as well as provide formative feedback during their time on wards

## **Professionalism**

**GOALS:** Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

## **OBJECTIVES FOR RESIDENTS AT ALL LEVELS:**

- Demonstrate personal accountability to the well being of patients
  - Follow-up on lab results
  - Write comprehensive notes daily
  - Seek answers to patient care questions
- Demonstrate professional behavior in interactions with staff and professional colleagues
- Adhere to ethical and legal principles
- Show sensitivity to diversity while providing patient care
- Be punctual and dress in a professional manner.
- Fulfill duties within work-hour restrictions and assist colleagues in doing the same
- Sign verbal orders within 24 hours
- Produce adequate and appropriate documentation of patient encounters within 24 hours

## **Systems Based Practice**

**GOALS:** Residents are expected to practice quality health care that is cost effective and to advocate for patients within the context of our current health care system.

## **OBJECTIVES FOR PGY 1 RESIDENTS:**

- Begin to appreciate issues surrounding the cost of hospitalization
  - Billing and coding
  - Charges for procedures, tests, hospital days
  - Resource allocation and cost control measures
  - Optimization reimbursements
  - Cost of medications
- Avoid medical errors by recognizing one's own limits of knowledge
- Work with the health care team to recognize and address system errors
- Recognize each hospital encounter as an opportunity to screen vaccination status and, if indicated, administer needed vaccines including seasonal vaccines. Before discharge from the hospital, children and teenagers should receive vaccinations for which they are eligible by age, chronic medical condition(s) or health status. The child's primary care provider should be informed about the vaccinations administered.
- Coordinate appropriate follow up after discharge

### **OBJECTIVES FOR SUPERVISING RESIDENTS:**

- Attend multi-disciplinary rounds and facilitate communication between all disciplines involved in care
- Describe issues surrounding the cost of hospitalization
  - Billing and coding
  - Charges for procedures, tests, hospital days
  - Resource allocation and cost control measures
  - Optimization of reimbursement
- Actively participate in efforts to decrease the occurrence of medical errors
- Actively participate in efforts to decrease the occurrence of system errors
- Consistently advocate for patients and families
- Demonstrate knowledge of community resources available for at-risk patients and their families
- Recognize each hospital encounter as an opportunity to screen vaccination status and, if indicated, administer needed vaccines including seasonal vaccines. Before discharge from the hospital, children and teenagers should receive vaccinations for which they are eligible by age, chronic medical condition(s) or health status. The child's primary care provider should be informed about the vaccinations administered.
- Master the mechanics of admissions and discharges

### **Schedule**

#### **Personnel**

1-6 medical students

1-2 Sub-interns

2-4 PL-1s, which can include 2 FPs

2 Senior Residents (PL2, PL3 or PL4)

### **Educational Conferences**

Morning Report 0800-0830, T, W, R

Problem Conference 1215-1300, T

Radiology Rounds 1400, M,W

Grand Rounds, 0815, F

Noon Conference 12-1300, M, T, W, R, F

### **Supplements**

### **Reading/Resource List**

Please refer to sentinel articles, clinical practice guidelines, and teaching articles and Web Links on the Child Health Intranet “Hospitalists, Shared Documents”:  
<http://www.inside.ch.missouri.edu/Main/Hospitalists/Shared%20Documents/Forms/AllItems.aspx>

### **Practice Parameters**

American Academy of Pediatrics (AAP) Clinical Practice Guidelines

[\(http://aappolicy.aappublications.org/\)](http://aappolicy.aappublications.org/)

### **Web resources**

#### *Organizations-*

American Academy of Pediatrics (AAP) (<http://www.aap.org/>)

Ambulatory Pediatric Association (APA) (<http://www.ambpeds.org/>)

Society for Hospital Medicine (SHM) (<http://www.hospitalmedicine.org/>)

National Guideline clearinghouse (<http://www.guideline.gov/>)

Cincinnati Children’s Clinical Guidelines

[\(http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/ev-based/\)](http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/ev-based/)

#### *Publications-*

Pediatrics (<http://pediatrics.aappublications.org/>)

Contemporary Pediatrics (<http://www.contemporarypediatrics.com/contpeds/>)

Pubmed (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>)

Lay website/Patient Handouts ( <http://www.kidshealth.org/>)

Ovid on the Web (<http://merlin.missouri.edu/ovid/online>)

J. Otto Lottes Library Online (<http://library.muhealth.org/>)