

**COMPETENCY BASED CURRICULUM FOR PEDIATRIC RESIDENCY EDUCATION
PEDIATRIC CRITICAL CARE AT KCHC PICU – JUNIOR RESIDENT**

PEDIATRIC CRITICAL CARE AT KCHC AND UHB

RESIDENTS: Junior residents: PL-2 categorical pediatrics, PL-1 preliminary pediatrics, R-2 or 3 Med/Ped, PGY 2 or 3 EM

Prerequisites: Completion of rotations and practice in curricular objectives for general pediatric inpatient and neonatal experiences as junior resident with satisfactory summative evaluations. Successful completion of PALS course with certification.

PATIENT CARE: Residents must be able to provide family-centered care for infants, children and adolescents who require intensive care. This care must be developmentally and age appropriate. The care must be compassionate and include effective treatment of the underlying current and potential future health and social problems confronting the patient and family.

GOAL I: Gathering Data by History or Interview. Learn to conduct effective interviews with patients, parents and family members. Initial interview must be focused and directed to the rapid stabilization and initiation of optimal care for the patient. Follow-up interview must be sufficiently detailed and appropriate to ensure quality of on-going care, follow-up and discharge planning including health care promotion and anticipatory guidance and needs.

OBJECTIVES:

- a. Adapt communication strategies to specific clinical situations and settings.
- b. Demonstrate appropriate strategies for communicating based on patient's and parent's educational and developmental level taking into account sociocultural differences.
- c. Select questions that appropriately address the presenting clinical problems and prior risk factors.
- d. Ask open-ended questions to elicit maximum information combined with limited closed-ended questions to make interview more efficient.
- e. Accurately obtain a relevant history of pregnancy, prenatal and perinatal events.
- f. Obtain and interpret detailed history from patients and parents including health concerns, social history, sexual history, etc.
- g. Make use of all resources in gathering information: parents, family members, specialty services, primary care providers, emergency department, EMS, etc.
- h. Avoid judgmental questions and responses
- i. Use openings, transitions and closures sensitively and effectively.
- j. Gather necessary information
 - a. History of present illness
 - b. Birth history
 - c. Past medical and surgical history
 - d. Nutritional history
 - e. Family history
 - f. Social history
 - g. Review of systems
- k. Summarize findings to verify or clarify.

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GOAL II: Gathering Data by Physical Examination. Understand how to perform an appropriate physical exam, demonstrate technical proficiency and sensitivity to needs of the child/parent and the clinical situation.

OBJECTIVES:

- a. Use strategies for approaching children of different ages for physical examination, including ways to put them at ease and gain their trust. Use an examination sequence most likely to result in a successful examination and rapid attainment of critical information for management and stabilization.
- b. Recognize clinical situations that require a rapid focused exam and those which allow for a complete and comprehensive exam.
- c. Demonstrate sensitivity to the needs of the child and parent when performing the exam.
- d. Demonstrate technical proficiency in the comprehensive examination of infants, toddlers, children, preadolescents and adolescents.
 - a. Appropriate hand-washing and infection control
 - b. Effective use of observation
 - c. Thoroughly and accurately assess respiratory, circulatory, neurological status and stability.
 - d. If necessary perform primary and secondary trauma survey
 - e. Complete each step of the exam in a technically proficient manner
 - f. Perform a gender specific and gestational and age appropriate exam
 - g. Perform a detailed organ-specific examination when the patient is stabilized and able to tolerate it.
 - h. Pursue, confirm and explain abnormal findings
 - i. Record findings accurately
 - j. Assign scores as needed (e.g. Glasgow, APACHE)
- e. Identify common and important abnormalities of all major organ systems (e.g. recognize range of normal for given ages).
- f. Describe findings in terms of anatomy and physiology.
- g. Know when parent should be excluded from the area and when parent or other adult should provide accompaniment.
- h. Respect patient privacy and need to not damage the child's self-image.
- i. Discuss consent and confidentiality with respect to treating adolescent patients and parental involvement. Discuss when confidentiality can or should be abrogated.

GOAL III: Resuscitation and Stabilization. Understand how to rapidly resuscitate and stabilize the critically ill child in the PICU setting.

OBJECTIVES:

- a. Learn and perform steps in resuscitation and stabilization, particularly airway management and resuscitative pharmacology.
- b. Recognize the common causes of acute deterioration in the previously stable patient.
- c. Function appropriately in codes and resuscitations as part of the PICU team.

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GOAL III: Continuum of Care. Understand the continuum of care for children with acute illness/injury, from initial presentation (office, clinic, ED), through acute care (including transfer in and out of PICU), to discharge planning, home health services, and follow-up care.

OBJECTIVES:

- a. For a representative sample of children and families, provide/participate in care across the full continuum of services, including:
 1. Presentation in clinic/office, transferring medical facility, ACRC or ED
 2. Decision to admit to the PICU
 3. Acute and post-acute to chronic care
 4. Decision and criteria for transfer into and out of the PICU
 5. Discharge planning to facilitate transition to home care or alternative care facility.
 6. Post hospital care (coordinating home health services, providing office/clinic follow-up care, communication with primary/subspecialty care providers)
- b. Develop case management skills for complex multi-problem patients under high stress situations using principles of decision-making analysis and problem solving and understanding one's own limits.
- c. Develop and maintain a detailed problem list with accurate prioritization.
- d. Coordinate orderly transfer of care to another provider when necessary.
- e. Recognize the burdens of illness and limitations of health care resources in an underprivileged urban population.
- f. Recognize the burden and impact of chronic illness on the child, parents and family unit.
- g. Make informed diagnostic and therapeutic decisions based on patient information, current scientific evidence, and clinical judgment.
- h. Develop and carry out patient care management plans in conjunction with the senior resident, attending physician, and others on the patient care team.
- i. Mobilize appropriate support services to help meet the long-term care needs for a child with chronic illness.
- j. Utilize information technology to optimize patient care.

GOAL IV: Diagnostic Testing. Understand the indications, limitations, and interpretation of common laboratory tests and imaging studies utilized in pediatric intensive care. Prescribe and perform competently all medical procedures considered necessary in the scope of pediatric intensive care practice.

OBJECTIVES:

For each of the laboratory or diagnostic tests listed below:

- a. Understand and explain the indications and limitations of each test and be aware of the age-appropriate normal results.
- b. Interpret results and abnormalities in the context of specific physiologic derangements as well as the prevalence of disease in the community.

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- c. Discuss therapeutic options for correction of abnormalities when appropriate.
- d. Understand the cost-effective use of diagnostic tests.
- e. Communicate orders appropriately to other healthcare staff.

Laboratory Tests (include bedside point-of-care tests)

- 1. CBC with differential, platelet count, indices
- 2. Blood chemistries: electrolytes, glucose, calcium, magnesium, phosphate
- 3. Renal function tests
- 4. Tests of hepatic function and damage
- 5. Drug levels and toxicological studies
- 6. Coagulation studies: platelets, PT/PTT/INR, fibrinogen, FSP, D-dimer, “DIC screen”
- 7. Arterial, capillary, and venous blood gases
- 8. Cultures, rapid antigen tests and other studies for infectious agents
- 9. Urinalysis
- 10. CSF analysis
- 11. Blood typing and cross matching
- 12. Other tests as indicated by the individual patients’ condition.

Imaging Studies

- 13. Chest x-ray
- 14. Abdominal series
- 15. Skeletal survey
- 16. Cervical spine films
- 17. Computerized tomography of head, chest, abdomen
- 18. Ultrasound of abdomen and pelvis
- 19. Echocardiogram

GOAL V: Proficiency in Therapeutic and Technical Procedures. Demonstrate technical proficiency and appropriate use of procedures and technical skills required of general pediatricians.

OBJECTIVES:

- a. Maintain certification and proficiency
 - 1. Basic Life Support (BLS)
 - 2. Pediatric Advanced Life Support (PALS)
- b. For each of the following procedures:
 - i. Perform the procedure or task correctly (including pain management if needed).
 - ii. Counsel patient/parents about indications, contraindications, complications, risks, benefits, and alternatives.
 - iii. Obtain informed consent for invasive procedures and/or sedation.
 - iv. Understand related ethical, legal and financial issues.
 - v. Provide accurate, timely and appropriate written documentation.

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- a. Conscious sedation
- b. Topical anesthesia
- c. Arterial line placement
- d. Bladder catheterization
- e. Cardiopulmonary resuscitation
- f. Cardioversion
- g. Central venous line insertion
- h. Endotracheal intubation
- i. Rapid sequence intubation (gain exposure to technique)
- j. Electrocardiography
- k. Gastric tube placement
- l. Injection/medication (including fluids and nutrients) delivery
- m. Therapeutic gas (oxygen, nitric oxide) delivery systems
- n. Physiologic monitoring
 - a. Blood pressure
 - b. Body temperature
 - c. Cardiac
 - d. Respiratory
 - e. Oximetry
 - f. Capnography
- o. Seldinger technique (gain exposure to technique)
- p. Ventilation, bag-valve-mask
- q. Ventilator operation: conventional, high frequency
- r. Interpretation of x-ray, nuclear, CT scan, MRI and ultrasound examinations
 - a. Head and neck
 - b. Chest
 - c. Abdominal
 - d. Pelvis
 - e. Extremities
- s. Thoracotomy and chest tube placement

GOAL VI: Monitoring and Therapeutic Modalities. Understand the application of physiologic monitoring and special technology and treatment in the PICU setting.

OBJECTIVES:

- a. For each of these invasive techniques, understand the indications, limitations and general technique and appropriately interpret results of such monitoring with respect to patient age and clinical setting:
 - 1. Central venous pressure
 - 2. Pulmonary artery pressure
 - 2. Pulmonary capillary wedge pressure
 - 3. Intracranial pressure monitoring
 - 5. Bedside EEG
- b. Participate in the daily care of "technology dependent" children and those who require parenteral hyperalimentation and enteral tube feedings; describe key issues for on-going

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management both in the hospital and at home.

- c. For the common therapies listed, learn to integrate understanding of physiology and pathophysiology to determine the appropriate use of therapy and how to monitor its effect and describe potential complications of therapy:
 - 1. therapeutic gas administration by cannula, masks, hood
 - 1.oxygen
 - 2.nitric oxide
 - 3.helium oxygen
 - 2. positive pressure ventilation
 - 3. basic ventilator management
 - 4. analgesics, sedatives, paralytics
 - 5. enteral and parenteral nutrition
 - 6. blood and blood product transfusions
 - 7. vasoactive drugs (vasopressors and inotropes)
- e. Demonstrate understanding of risks, benefits, and alternatives to treatment modalities (such as antibiotics, anticonvulsants, parenteral fluids and enteral nutrition, diuretics, cardiac drugs, respiratory medications, immunomodulators, etc.)
- f. When using therapeutics:
 - 1. Consistently strive to keep up-to-date on efficacy information, contraindications, complications, costs.
 - 2. Recognize variables such as age, weight, co-existing conditions, allergies, drug interactions which may require modification of standard practices.
 - 3. Use correct procedures for instituting and monitoring therapy and response.
 - 4. Complete orders, prescriptions and maintain medical records properly.
 - 5. Discuss factors that may contribute to variations in pharmacokinetics
 - 6. Describe and take into consideration key factors that affect compliance
- g. Discuss management of complex subspecialty patients with the appropriate services
- h. Discuss management options with and involve parents in the decision making process
- i. Effectively utilize available resources including medical informatics (computers), libraries, and consultant specialists.

MEDICAL KNOWLEDGE: Residents must demonstrate knowledge about established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, and the application of this knowledge to care of the critically ill infant, child and adolescent. The resident will demonstrate an investigatory and analytic thinking approach to clinical situations. The resident will critically evaluate and use current medical information and scientific evidence for patient care.

GOAL VII: Common Signs and Symptoms. Understand how to evaluate and manage common signs and symptoms seen in critically ill children, including when to transfer to an intensive care setting.

OBJECTIVES:

For each of the following signs and symptoms which may herald the onset of serious or life-threatening events in infants, children or adolescents:

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- a. Rapidly recognize the sign or symptoms as heralding the onset of critical disease or injury and perform a directed history and physical examination.
- b. Formulate an age-appropriate differential diagnosis.
- c. Know clinical significance and pathophysiologic basis.
- d. Understand indications for admission to and discharge from intensive care, and indications for emergent intervention, as well as procedures for stabilization prior to transport to the intensive care setting.
- e. Formulate a plan for stabilization, further evaluation, diagnosis and definitive management, and be able to describe the physiologic basis for therapies.
- f. Identifies signs and symptoms indicating need for critical care.

Signs and symptoms (PICU)

1. **Cardiovascular:** hypotension, hypertension, rhythm disturbance, bradycardia, tachycardia, cardiopulmonary arrest, shock/poor capillary refill
2. **Dermatologic:** petechiae, purpura, ecchymoses, urticaria, edema, extensive desquamation or tissue loss
3. **EENT:** Trauma, edema, epistaxis, airway obstruction
4. **Endocrine:** polyuria, tetany
5. **GI/Nutrition/Fluids:** profuse diarrhea, vomiting, dehydration, inadequate intake, dysphagia, abdominal pain, abdominal distension, acute gastrointestinal hemorrhage, peritoneal signs, jaundice
6. **GU/Renal:** anuria, hematuria, oliguria, polyuria
7. **Hematologic/Oncology:** pallor, abnormal bleeding, anemia, purpura, neutropenia, thrombocytopenia, massive leukocytosis
8. **Musculoskeletal:** trauma
9. **Neurologic:** Seizure, altered mental status, extensive muscular weakness, coma, head trauma, intracranial hemorrhage, acute focal neurologic deficits
10. **Respiratory:** Increased or decreased respiratory effort, poor air movement, cyanosis/hypoxia, apnea, dyspnea, tachypnea, wheezing, stridor, hemoptysis, pulmonary edema

GOAL VIII: Common Conditions. Understand how to assess and manage (as reasonably expected of a general pediatrician) common childhood conditions cared for in the PICU setting.

OBJECTIVES:

For each of the following conditions/diagnoses which may require PICU monitoring and management:

- a. Understand the pathophysiologic basis of the disease or injury
- b. Describe criteria for admission to and discharge from PICU.
- c. Formulate a plan for the PICU evaluation, diagnosis, monitoring and treatment.
- d. Know the progression of the condition from presentation through improvement with an understanding of the potential acute and long-term consequences and complications of the disease and treatment.

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- e. Avoid unnecessary interventions and testing.
- f. Consider psychosocial implications and interactions.
- g. Describe principles of discharge planning.
- h. Arrange for appropriate discharge follow-up and outpatient therapy.
- i. Utilize medical information sciences to obtain current knowledge.

List of Common Conditions

1. **General:** submersion injury, shock (cardiogenic, hypovolemic, septic, toxic), burns (thermal, electrical), common intoxications
2. **Allergy/Immunology:** acute and significant hypersensitivity reactions/drug allergies/anaphylaxis, complications of congenital immunodeficiency/acquired immunodeficiency (AIDS), complications of collagen-vascular and autoimmune disease
3. **Cardiovascular:** life-threatening dysrhythmias, congestive heart failure, myocardial ischemia, post-op cardiac surgery
4. **Fluids, electrolytes, metabolic:** severe dehydration/vascular volume depletion, diabetic ketoacidosis, syndrome of excess ADH secretion, diabetes insipidus, severe metabolic acidosis, severe electrolyte derangements, poisoning
5. **GI/Surgery:** stress ulcer, massive GI bleeding, abdominal trauma (blunt, penetrating), acute abdomen, pre-op and post-op management, hepatitis with encephalopathy, pancreatitis
6. **GU/Renal:** acute renal failure, hypertensive crisis
7. **Hematology/Oncology:** disseminated intravascular coagulopathy, cell lysis syndrome, severe anemia
8. **Infectious Disease:** meningitis, sepsis, encephalitis, severe pneumonia
9. **Neurology:** head injury, acute increased intracranial pressure, cerebral edema, status epilepticus, acute altered mental status, shunt malfunction, toxic ingestion
10. **Pulmonary:** Adult type respiratory distress syndrome (ARDS), respiratory failure/impending respiratory failure, apnea, status asthmaticus, upper airway obstruction, pneumothorax, chest trauma (blunt, penetrating), severe pleural effusion
11. Pre- and post-op evaluation of surgical patients.
 - a. Demonstrate knowledge about available surgical resources
 - b. Demonstrate ability to evaluate patients and provide medical clearance with regard to risk of anesthesia, bleeding, and possible respiratory complications.
 - c. Consult on post operative surgical patients with attention to fluid and electrolyte therapy, fever, stridor, bleeding, and other complications.

PRACTICE-BASED LEARNING AND IMPROVEMENT: Residents must be able to use scientific methods and evidence to investigate, evaluate, and improve their patient care practices.

GOAL IX: Performance Improvement. Residents will participate in the analysis of their own and other's practice experience and perform practice-based improvement activities using a

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systematic methodology.

Objectives:

1. The learner will analyze his/her practice experience to recognize one's strengths, deficiencies and limits in knowledge and expertise. He/she will use evaluations of performance provided by peers, patients, and superiors to improve practice. Residents are expected to acknowledge medical errors and develop mechanisms to prevent them.
2. Residents will be able to locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
3. Residents will obtain and use information about their own population of patients and the larger population from which their patients and families are drawn.
4. Knowledge of study design and statistical methods will be attained and applied to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
5. Information technology will be used to manage information, access on-line medical information and support their education in the course of the pediatric intensive care experience.
6. Residents will facilitate the learning of students, parents, families and other health care professionals.

INTERPERSONAL AND COMMUNICATION SKILLS: Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

GOAL X: Communication. Understand and appreciate the basic principles of effective communication with children and families.

OBJECTIVES:

- a. Consider the following during communication with children and family:
 - a. Learning style
 - b. Developmental stage of patient and family
 - c. Educational level of family
 - d. Cultural, ethnic, socioeconomic issues
 - e. Language barriers
 - f. Hearing, vision, speech impairments
 - g. Health and religious beliefs
 - h. Personal factors
- b. Non-verbal communication skills and cues
- c. Need to negotiate effectively
- d. Listen, avoid interruptions and allow for periods of silence
- e. Demonstrate empathy, reassurance, encouragement and supportive communication
- f. Respond non-defensively and non-judgmentally
- g. Avoid medical jargon
- h. Attend to privacy and confidentiality
- i. Verify understanding
- j. Create and sustain a therapeutically and ethically sound relationship with parents

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- k. Work effectively with others as a member of a health care team
- l. Be able to act in a consultative role to other physicians and health care professionals

GOAL XI: Medical Records. Understand how to maintain accurate, organized, timely and legally appropriate medical records in the pediatric ICU setting.

OBJECTIVES:

- a. Maintain daily, timed notes that clearly document the patient's diagnoses, progress, relevant investigations, ongoing evaluation and plan and the need for continued hospitalization. Include assessment of fluid and nutritional status, medication summary, review of vital signs and systems review.
- b. Develop and maintain a detailed problem list with accurate prioritization.
- c. Appropriately select those cases when more frequent than daily documentation is required.
- d. Document precisely and concisely.
- e. Review notes written by other providers and consultants.
- f. Prepare appropriate and timely discharge summaries, transfer notes and off-service notes, including written communication with the primary care provider.
- g. Indicate in notes contacts with consultants and supervisors especially noting involvement of the attending of record as well as documenting communication with parents.
- f. Participate in chart audits as part of a quality assurance process: describe how this process can improve charting and patient care.

GOALXII: Teaching. Understand the methods for teaching to parents, patients, and other members of the healthcare team.

SYSTEMS-BASED PRACTICE: Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents must practice quality health care and advocate for patients in the health care system.

GOAL XIII: Patient Support and Advocacy. Understand how to provide sensitive support acutely to patients and families of children with acute critical illness, and arrange for on-going support and/or preventive services at discharge.

OBJECTIVES:

- a. Demonstrate awareness of the unique problems involved in the care of children with serious acute illness, multiple problems or chronic illness, and serve effectively as an advocate and case manager for such patients.
- b. Demonstrate respect, sensitivity and skill in dealing with death and dying with the child, family and other health care professionals.

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- c. Listen carefully to the concerns of families, and provide appropriate information and support.
- d. Identify and attend to issues such as growth and nutrition, developmental stimulation and rehabilitation during hospitalizations.
- e. Identify problems and risk factors in the child and the family even outside the scope of this PICU admission (e.g., immunizations, social risks, developmental delay); appropriately intervene or refer
- f. Contact outside agencies as appropriate (Poison Control, FDA, CDCP, DOH, etc.)
- g. Demonstrate sensitivity to family, cultural, ethnic, and community issues when assessing patients and making health care plans.
- h. Facilitate the transition to home care by appropriate discharge planning and parental/child education.
- j. Act as a patient advocate by seeking appropriate responses to address patient's and family's problems and needs.
- k. When there are competing options and/or other constraints on therapy, base decisions on the overall best interest of the whole patient and his/her functional status and the family's needs and limitations.
- l. Maintain a problem list towards which care plans are addressed.
- m. Know how to work with health care managers and health care providers to assess, coordinate and improve care and know how these activities can affect system performance.
- n. Know how to advocate for the promotion of health and the prevention of disease seen in neonatology in the general population.

GOAL XIV: Financial Issues and Cost Control. Understand key aspects of cost control, billing, and reimbursement in the PICU setting.

OBJECTIVES:

- a. Demonstrate familiarity with the common mechanisms of PICU cost, including pre-authorization, concurrent review, and discharge planning.
- b. Develop an awareness of costs of PICU care and its impact on families.
- c. Practice appropriate utilization of consultants and other resources.
- d. Show concern for financial circumstances of the patient and refer for social service support as needed.
- e. Know approximate costs of hospital care, devices, medications, supplies
- f. Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs, assuring quality and allocating resources.
- g. Practice cost-effective health care and resource allocation that does not compromise quality of care

PROFESSIONALISM: Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse

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patient population.

GOAL XV: Personal Attitude. Understand the need to function professionally and responsibly.

OBJECTIVES:

- a. Accept responsibility for patient care and continuity of care
- b. Demonstrate respect, honesty, integrity compassion, and empathy
- c. Be responsive to the needs of patients and society that supercedes self-interest
- d. Be accountable to patients, society, and the profession
- e. Demonstrate a commitment to excellence and on-going professional development
- f. Respect patient and family privacy and autonomy
- g. Demonstrate high standards of ethical behavior with a commitment to ethical principles pertaining to clinical care, confidentiality, informed consent, and business practices
- h. Demonstrate sensitivity and responsiveness to patients'/families' and colleagues' culture, gender, age, disabilities, ethnicity, sexual orientation
- i. Recognizes hierarchal authority
- j. Effectively balance common sense, clinical impressions, anecdotal information and intuition
- k. Respect the roles of and interact well with peers, faculty, nursing and other health care providers
- l. Function well as a member of the healthcare team
- m. Accepts feedback, suggestions and criticisms; acknowledges mistakes and makes every effort to correct
- n. Cooperates effectively
- o. Feels competent but accurately acknowledges appropriate limits of ability, skills and knowledge
- p. Recognize limits of tolerance for stress and ask for help as needed
- q. Seeks assistance when needed and not when unnecessary
- r. Accepts responsibility for own education and professional development
- s. Demonstrates initiative and interest in self-directed learning
- t. Likes his/her patients and pediatrics
- u. Behave in a reliable, dependable, trustworthy and responsible manner
- v. Is punctual and completes all duties and responsibilities in a timely manner, and is readily available and willing to participate in all clinical and educational activities

METHODS

- a. Serve at the primary caretaker for patients admitted or transferred to the Pediatric Intensive Care Unit at KCHC on a team consisting of 3 PL2 or equivalent, 1 PL3 senior resident, 1 PL3 night shift senior, 1 attending physician.
- b. Be prepared to attend and participate in resuscitations in children anywhere in the hospital including the wards, the ED, the OPD
- c. Attend and participate in departmental conferences as possible
 - a. Resident's Conferences
 - b. Grand Rounds

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- c. Patient Management Conferences
- d. Radiology Conferences
- e. Morning Report
- f. Morbidity and Mortality Conferences
- d. Attend rounds and present and discuss patients
 - a. Work Rounds
 - b. Attending Rounds
 - c. Subspecialty service rounds and consultations
 - d. Weekly discharge planning rounds
 - e. Psychosocial or Ethics Rounds as needed
 - f. Monthly Interdisciplinary Performance Improvement Meeting
 - g. Sign-out Rounds
- e. Self-directed learning activities and literature search (internet connection available in unit)
- f. Small group learning activities with the unit team
 - a. Topics for Discussion
 - 1. ARDS
 - 2. Airway management
 - 3. Respiratory failure
 - 4. Assisted ventilation
 - 5. Renal replacement therapy
 - 6. Disseminated intravascular coagulopathy
 - 7. Analgesics, sedatives, muscle relaxants
 - 8. Pediatric shock
 - 9. Enteral nutrition
 - 10. Status asthmaticus
 - 11. Blood gases and acid-base balance
 - 12. Status epilepticus
 - 13. Head trauma
 - 14. Brain death and organ donation
 - 15. Transportation of the critically ill patient
 - 16. Cardiovascular support medications
 - 17. Diabetic ketoacidosis
 - 18. Acute renal failure
 - 19. Poisonings and intoxications
 - 20. Clinical pharmacokinetics and pharmacodynamics
 - 21. Management of patient with heart disease and post-op cardiac care
- g. Consultation with specialists
- h. Documentation in the medical record

EVALUATION

There will be ongoing formative feedback throughout all activities by all supervisory staff. At the end of the rotation, the attending physician will constructively discuss the final summative evaluation with the resident. Both the attending and the resident are expected to sign the written evaluation form attesting to the fact that the content was discussed. The supervising faculty will subsequently discuss the resident's performance at the monthly house

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staff affairs committee meeting attended by the program director (or designee) and representative faculty.

- a. Observation for attainment of objectives by:
 - a. Senior residents
 - b. Chief residents
 - c. Supervising attending faculty
- b. Review of medical records by:
 - a. Senior residents
 - b. Chief residents
 - c. Supervising attending faculty
- c. Presentations during various rounds and conferences
- d. Participation in discussions during rounds and small-group activities
- e. Demonstration of attributes of professionalism
- f. Pre and post rotation quiz performance
- g. In-training examination performance
- h. Successful performance of procedures and documentation
- i. Nursing, patient and family member comments including compliments and complaints
- j. Patient outcomes
- k. Involvement in total quality management: performance improvement (QA) trending files, incident reports, risk management reports

The resident is expected to complete and submit an evaluation of the rotation, peers and teaching faculty at the conclusion of the rotation. This evaluation may be submitted anonymously and confidentially.