I. GOALS AND OBJECTIVES

Pediatric Clinical Pathology is a clinical pathology rotation in based at Cardinal Glennon Children’s Hospital. Objectives for this one-month rotation include introduction of resident to and development of an understanding of the basic principles of the following:

1. Point-of-care testing
   A. Methodologies
   B. Policies and procedures
   C. Administrative and medical issues

2. Pediatric hematology/body fluid evaluations - Accent on review of pediatric peripheral bloods and bone marrow specimens and pediatric body fluids specimens.

3. Laboratory Management issues in clinical pathology

4. Problems common to Pediatric Clinical Pathology samples including obtaining samples, small sample size, hemolysis, and fibrin clots. Quality control and methods for ascertaining precision and accuracy will also be stressed.

5. Appropriate methodologies for pediatric specimens will be highlighted.

6. Study of tests routinely employed in Pediatric Clinical Pathology including:
   A. Evaluation of pediatric and neonatal blood gas techniques
   B. Neonatal bilirubin measurement
   C. Iron and iron binding capacity
   D. Sweat chloride collection and assay
   E. Calcium/creatinine ratio
   F. Therapeutic drug monitoring

7. Age-related normal values and pediatric panic values

8. Newborn screening tests

9. State-mandated testing (e.g., PKU, thyroid function, galactosemia)

II. DURATION OF THE EXPERIENCE:

This is a one-month rotation.
III. DUTIES AND RESPONSIBILITIES

The Resident is expected to be in the laboratory at a minimum of from 8AM to 5PM Monday thru Friday. Laboratory experience will be in the Cardinal Glennon Children’s Hospital Chemistry and Hematology Laboratories and Blood Gas Laboratory. During this time the resident will become familiar with processing of small specimens received and with the variety of instruments used in the Chemistry, Hematology Laboratory at Cardinal Glennon Children's Hospital. The resident is particularly expected to gain a familiarity with point-of-care testing methodologies, quality assurance and quality control, policies and procedures and administrative issues related to point-of-care testing. Laboratory management issues will be brought to the attention of the pathology resident. Particular attention will be paid to bilirubin methodologies and use in the laboratory and their application in clinical pediatrics. The resident is expected to review abnormal laboratory values daily and correlate them clinically, gathering additional clinical information as necessary. The Resident is expected to provide interpretive consultation to the clinician caring for the patient with abnormal laboratory findings. Any clinical pathology problems will first be reviewed by the resident and discussed with a technologist or supervisor, and then with a pediatric pathologist. The resident will perform a mock inspection of any of the pediatric laboratories in preparation for a CAP inspection, CAP interim inspection, or AABB inspection.

IV. TEACHING STAFF
Cardinal Glennon Children’s Hospital -
Linda Ellis, M.D., Assistant Professor of Pathology, 577-5337
Cirilo Sotelo-Avila, Professor and Director, Clinical Laboratories, 268-6424
Carole Vogler, M.D., Professor and Director of Pediatric Transfusion Service, 577-5348
David Brink, M.D., Assistant Professor of Pathology, 577-5600

V. MANNER OF SUPERVISION

During the rotation, the Resident will be supervised by Dr. Linda Ellis who is available to review cases with the resident or discuss problems in the laboratory. Residents are evaluated at the end of the rotation using the standard Clinical Pathology/Department of Pathology resident rotation evaluation form. This form will be completed by Dr. Linda Ellis, who will obtain the consensus of other pathologists who have worked with the resident and the rotation evaluation will be discussed with the resident.

VI. OUTCOME ASSESSMENT EVALUATION

A twenty-question examination will be provided to the resident at the end of rotation. The resident is expected to get 70% or greater on the examination in order to receive a satisfactory rotation evaluation.

The resident will present one inservice on a topic of their choice to the technicians and technologists in the chemistry laboratory.
A number of clinical consultations will be reviewed with the resident and included on the final evaluation form.

Competency based objectives

Patient Care
- Processing of small specimens received
- Understand processes related to the variety of instruments used in the laboratory
- Understand clinical application of bilirubin measurement
- Review abnormal laboratory values daily and correlate abnormal results with clinical finding, gathering additional clinical information as necessary.
- Pediatric hematology/body fluid microscopic findings will be reviewed by resident and then faculty.

Medical Knowledge
- Familiarity with point-of-care testing methodologies
- Particular attention will be paid to bilirubin methodologies and use in the laboratory and their application in clinical pediatrics.
- The Resident is expected to provide interpretive consultation to the clinician caring for the patient with abnormal laboratory findings.

Practice-Based Learning & Improvement
- Master quality assurance and quality control as it applies to the clinical laboratory by participating in quality assurance and quality control activities. Assist in troubleshooting common laboratory tests. Perform quality assurance investigations as necessary to evaluate laboratory errors.

System based practice
- Familiarity with point-of-care testing quality assurance and quality control, policies and procedures and administrative issues related to point-of-care testing
- The resident will perform a mock inspection of any of the pediatric laboratories in preparation for a CAP inspection, CAP interim inspection, or AABB inspection

Professionalism
- The Resident is expected to be in the laboratory at a minimum of from 8AM to 5PM Monday thru Friday.
- Appropriate dress, promptness and attendance are expected

Interpersonal skills and communication
- Clinical pathology problems are reviewed by the resident and then discussed with a technologist or supervisor, and then with a pediatric pathologist.
- Demonstrate ability to effectively communicate with laboratory staff, clinicians and other pathologists.

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