

Pediatric Cardiology Elective

The pediatric cardiology elective is offered to residents in their second or third year of residency.

The goals of the elective rotation include:

I. Patient Care

GOAL:

Residents are expected to be involved in caring for children seen by a pediatric cardiologist. This includes the ability to gather appropriate information on the patient's condition, organize it in a rational manner, and develop a plan of diagnosis and treatment appropriate to the patient's needs.

OBJECTIVES:

1. Take a thorough history, including a personal, family, and social history on a patient with potential cardiac problems.
2. Perform an appropriate physical examination, recognizing findings specific for cardiac disease.
3. Be able to take an accurate blood pressure in children.
4. Decide about appropriate laboratory, radiologic, electrocardiographic, and echocardiographic studies to evaluate patients with cardiac disease.
5. Follow-up appropriately on laboratory and radiologic studies ordered.
6. Develop a diagnostic plan appropriate for the findings.
7. Develop an appropriate treatment plan for children with congenital heart disease.
8. Devise a treatment plan for common cardiac problems, with consideration of the patient's personal and family needs.
9. Differentiate between functional and organic heart murmurs.
10. Be able to effectively evaluate children with fatigue, palpitations, chest pain, and syncope.
11. Recognize when to refer patients to a cardiologist.

II. Medical Knowledge

GOAL:

Residents should become knowledgeable about common cardiac conditions, their evaluation and treatment in children and adolescents. They should understand the role of the heart in health and in common childhood illnesses.

OBJECTIVE:

1. Demonstrate knowledge of normal cardiac physiology, as well as normal developmental changes.
2. Be knowledgeable about the common complaints pediatric patients have related to the heart rate and rhythm.
3. Demonstrate knowledge of normal blood pressure values on the pediatric and adolescent age groups.
4. Understand the causes, evaluation, and treatment of hypertension in children and adolescents.
5. Identify the usual causes of tachycardia, murmur, and hypertension.
6. Identify the signs, symptoms, diagnostic tests and treatment modalities appropriate for endocarditis. This should include indications for laboratory and imaging, types of imaging studies indicated for these patients, and their limitations.
7. Demonstrate knowledge of when cardiac surgery is indicated in children with congenital heart disease.
8. Demonstrate knowledge about non-pharmacological treatment of conditions such as hypertension and syncope.
9. Demonstrate knowledge of commonly used diuretics, vasodilators, and beta blockers. Including indications for use and anticipated side effects.
10. Be knowledgeable about and be able to demonstrate knowledge of common congenital heart diseases.
11. Discuss the usual treatment modalities for treatment of Rheumatic heart disease.
12. Be familiar with commonly used treatment for chest pain, syncope, and palpitations.
13. Be able to discuss the pathophysiology and treatment of common arrhythmias of childhood, such as supraventricular tachycardia. (SVT)
14. Discuss the appropriate pathophysiology, diagnostic evaluation and treatment of cyanotic and acyanotic congenital heart disease.

III. Practice Based Learning and Improvement

GOAL:

Residents are expected to investigate and evaluate patient care practices and to appraise and assimilate clinic information to make appropriate patient management decisions. They should learn to improve their care of any given condition as they learn more about the condition they are treating through the month.

OBJECTIVE:

1. Be able to demonstrate the ability to quickly access the pediatric cardiac literature to determine normal values for heart rate and blood pressure values.
2. Be able to identify the most effective sources of new knowledge of cardiac function, cardiac disease, and high blood pressure, including those in print form (textbooks and journals), and sources on the internet.
3. Consistently evaluate individual performance, identify gaps in knowledge, and target learning from error.
4. Demonstrate learning from error.
5. Work well with other learners to enhance the common knowledge.
6. Be able to identify evidence based diagnostic tests and treatments for symptoms of cardiac disease, as well as functional heart murmur.

IV. Interpersonal and Communication Skills

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. They must be able to approach the patient and families in a patient-centered manner.

OBJECTIVES:

1. Demonstrate empathy and understanding for the concerns patients and families have cardiac symptoms, such as palpitations, chest pain, and syncope, and conditions requiring intrusive diagnostic tests and treatments.
2. Demonstrate an understanding of the necessity of communicating effectively with referring physicians and, if they differ, primary care physicians.
3. Maintain accurate and timely medical records.
4. Demonstrate excellent communication skills with other members of the care team.

V. Professionalism

GOALS:

Residents are expected to understand and demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

OBJECTIVES:

1. Consistently act in the best interest of the patient and family.
2. Consistently demonstrate a caring and respectful demeanor when interacting with patients and families.
3. Maintain patient/family confidentiality.
4. Demonstrate prudence in the use of expensive diagnostic tests and treatments.
5. Be sensitive to the family's impression of the child's condition.
6. Be sensitive to the different expectations of patients and families based on ethnic, religious, and cultural diversity.
7. Respect the integrity of the child and family and their relative roles in decision making.
8. Demonstrate respect for patient modesty.

VI. Systems Based Practice

GOALS:

Residents are expected to practice quality health care that is cost-effective and to advocate for patients within the health care system by helping them successfully navigate through it for the best outcomes possible. They should be able to work effectively in a multi-disciplinary team of providers to aid in the best outcomes possible for cardiology patients.

OBJECTIVE:

1. Consistently advocate for patients and families and help them navigate the healthcare system by assisting them in making appointments, scheduling studies in a timely manner, and calling other providers to communicate about the patient, when necessary.
2. Describe billing and coding procedures and their supporting documentation.
3. Appropriately refer and follow up patients, when necessary.
4. Demonstrate appropriate communication and collaboration with the entire team needed for adequate treatment of seriously ill renal

patients—subspecialty consultants, dietitians, nurses, teachers, and social workers.

5. Shows understanding and sensitivity about the complex environment on which renal patients live, including family relationships, personal relationships, school, and financial needs.

References

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Moss: *Heart diseases in infants, children, and adolescents*, 5th edition.

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Oski: *Principles and Practice of Pediatrics*; 2nd edition.

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