

CLINICAL CARDIAC ELECTROPHYSIOLOGY

Department of Medicine

SCOPE OF PRACTICE

PGY-7 & PGY-8

All Clinical Cardiac Electrophysiology (CCEP) residents are expected:

- To be able to perform clinical skill sets outlined for the first 3 years of Cardiology Fellowship.
- To evaluate EP consults and admissions, develop a differential diagnosis, and initiate a plan of evaluation and management in conjunction with CCEP attending.
- To appropriately document all patient consultations and follow-up in patients' medical records.
- To supervise Internal Medicine or Family Medicine residents (PGY-1, -2, and -3) and Cardiology Fellows (PGY-4, -5, and -6) in the evaluation and management of patients with electrophysiologic problems followed by the CCEP Consult Service.
- To round with the CCEP attending during in-patient and consult rounds.
- To attend a CCEP out-patient clinic once per week.
- To evaluate all patients undergoing electrophysiologic procedures prior to performing the procedure.
- To design and perform clinical research in CCEP, present the results at national meetings, and write a manuscript of the results of the study.
- To learn the electrophysiology of atrial and ventricular myocardium, sinus node, AV node and His-Purkinje system under normal and diseased conditions.
- To understand the basic pharmacological properties, actions, pharmacokinetics, and toxicity of antiarrhythmic drugs.

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- To understand how the autonomic nervous system, ischemia, electrolyte disturbances, cardiac disease and other conditions affect cardiac electrophysiology and alter pharmacological properties of antiarrhythmic drugs.
- To learn the pathogenesis of the various arrhythmias, related symptom complexes and syndromes, and neurocardiac disease and to understand the technique, application, indications, limitation, sensitivity and specificity of the various non-invasive and invasive diagnostic tests and the indication, limitations and risks of available and experimental pharmacological and non-pharmacological treatments for these disorders.
- To develop a thorough understanding of the indications, limitation, performance, complications, and interpretation of electrophysiological studies.
- To understand the indications for and appropriate mapping and endocardial and epicardial ablation techniques for ablation of all types of arrhythmias, including supraventricular tachycardias, atrial flutter, atrial fibrillation, premature ventricular contractions, and ventricular tachycardia.
- To understand the basics of arrhythmia mapping and to have exposure to all of the advanced mapping technologies.
- To develop a thorough understanding of the indications, limitation, implantation, complications, and follow-up of pacemaker and implantable cardioverter-defibrillator implantation (including biventricular, His bundle, left bundle branch pacing, single and dual chamber leadless).
- To learn the indications for and implantation techniques for implantable loop recorders.
- To learn the indications or and approaches for lead extraction.
- To learn the indications for and implantation technique of left atrial occlusion devices for prevention of stroke in patients with atrial fibrillation.

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- To understand how to administer moderate sedation and to monitor patients undergoing procedures with sedation in order to insure adequate sedation and safety.
- To gain an advanced understanding of electrocardiography as well as other non-invasive risk stratifying studies such as signal-averaged electrocardiography, T wave alternans testing, heart rate variability analysis, and autonomic testing.
- To acquire skills of arrhythmia management in the ICU setting by actively participating in the care of critically ill patients having recurrent arrhythmias; these skills include appropriate use of anti-arrhythmic drugs, temporary pacing, defibrillation, cardiopulmonary resuscitation, and evaluation and treatment of ischemia-related arrhythmias.
- To attend all CCEP patient conferences, didactic lectures, and journal clubs as well as Cardiology and Internal Medicine Grand Rounds and CCEP and Cardiology Morbidity and Mortality Conference.