

The EKG course for HCMC Emergency Medicine Residency is uniquely comprehensive, and taught by one of the nation's leading experts in Emergency Electrocardiography. Stephen Smith is the author and editor of dozens of EKG textbook chapters, the author of *The ECG in Acute MI: An Evidence-Based Manual of Reperfusion Therapy*, and, at 30,000-40,000 pageviews per day, the creator of the world's most visited ECG Blog ([Dr. Smith's ECG Blog](#)).

EKG lecture/conference is once a month for 3 years; below is the curriculum. All presentations are finished by showing ECGs and asking for resident interpretation. Dr. Smith is available to any resident any time for further instruction. Finally, you will read, with supervision of faculty and/or chief residents, approximately 1500 ECGs on ED patients in your clinical work.

### **G1 Curriculum**

- General Features, normal ECG, axis, etc.
- Supraventricular Tachycardias
- Bradycardias
- Ventricular Dysrhythmias
- Intraventricular Conduction Disturbances
- Enlargements / Hypertrophies / Voltage
- Myocardial Injury, Infarction and Ischemia (general: Q-waves, ST elevation, ST depression, etc.)
- Primary ST, T, U Wave Abnormalities (QRS normal: ischemia, digoxin, STEMI, NSTEMI, Wellens, hypokalemia)
- Pseudoinfarction patterns with normal QRS: (Pericarditis, Early Repol, LV aneurysm, Hypokalemia, RVH, hyperK, brugada, WPW, SCM, PE etc.)
- Pseudoinfarction patterns with abnormal QRS (Secondary ST, T, U Wave Abnormalities): LVH and bundle branch block with and without MI, Hyperkalemia
- Subtle ECG findings of acute MI
- Pacemakers and pacing with MI, miscellaneous.

### **G2/G3 Curriculum**

- Inherited disorders of cardiac arrest: Brugada, Hypertrophic Cardiomyopathy, RV dysplasia, WPW, long QT
- Subtle anterior MI vs. Benign Early Repolarization
- Left Ventricular Hypertrophy
- Other pseudoinfarction patterns
- None, ILS day
- Subtle inferior MI
- Subtle lateral MI
- Right Ventricular MI
- ST depression
- T wave inversion

- Posterior MI
- The Beautiful World of Electrocardiography
- Right Bundle Branch Block, RBBB with MI
- Left Bundle Branch Block, LBBB with MI
- SVT - Supraventricular tachycardia, narrow complex
- Wide complex tachycardia, ventricular tachycardia
- Pediatric ECGs
- Blocks and Bradycardia
- Toxic Metabolic ECGs
- Electrolytes and the ECG
- Hyperkalemia
- Pacing
- Subtle MI