ECGTraining.org

12 Lead ECG Interpretation in Acute Coronary Syndrome Workshop

About ECGTraining.org:

Our specialty is the provision of education in all facets of ECG interpretation. Our workshops and textbooks present complex 12 Lead ECG Interpretation in a dynamic and easy-to-understand manner. As the title implies, this workshop focuses on the 12 Lead ECG identification of Acute Coronary Syndrome. A common feature to all of our workshops is the use of actual Case Based Studies featuring patients from the Cardiac Catheterization Lab and /or Electrophysiology Lab.

The final curriculum for this workshop has been reviewed and edited by a team of Board Certified Interventional Cardiologists, Emergency Department Physicians, Nurse Education Specialists and Paramedic Educators (see reviews on page 7).

We receive continuous feedback from workshop participants praising our use of real case based studies. The feedback describes our studies as the feature that "adds the dimension of real-world clinical practice" to academic literature, and "brings the printed word from textbooks to life." The end result is workshop participants – new grads and veteran clinicians alike – leave our classes with a newfound depth of understanding of ECG interpretation, and the value of its application to the assessment and treatment of cardiac patients (see participant's feedback on page 6).

Our current services include workshops in:
- Basic ECG Rhythm Interpretation (single-lead, ACLS-level proficiency)
- **12 Lead ECG Interpretation in Acute Coronary Syndrome with Case Studies from the Cardiac Catheterization Lab**
- 12 Lead ECG Interpretation of Lethal Cardiac Dysrhythmias from the Cardiac Electrophysiology Lab
- Advanced Cardiac Life Support (A.H.A.)
- Experienced Provider Advanced Cardiac Life Support (A.H.A.)
- Pediatric Advanced Life Support (A.H.A)
- Basic Cardiac Life Support (A.H.A.)

We offer our services in both **retail** and **wholesale** markets. In the retail market, we contract with conference centers and market our workshops to individual medical professionals. In the wholesale market, we contract with hospitals, medical practices, EMS agencies, colleges, universities and other organizations to provide ECG education for their staff and /or students.

For a complete, up-to-date listing of our scheduled **retail workshops**, please visit our website at **www.ECGTraining.org** and then select UPCOMING WORKSHOPS SCHEDULED from the menu, or copy and paste the html link: **http://ecgtraining.org/id11.html**

ACCREDITATIONS:

ECGTraining.org is accredited by the following agencies:

- Florida Board of Nursing (CE Broker Provider #50-12998)
- Washington, D. C. Board of Nursing (CE Broker Provider #50-12998)
- State of Florida Bureau of Emergency Medical Services (CE Provider #20-314904)

Our one-day workshop, "12 Lead ECG Interpretation in Acute Coronary Syndrome with Case Studies from the Cardiac Catheterization Lab" has been approved for **10 Contact Hours** by the above listed agencies for Nurses (Advanced Registered Nurse Practitioners, Registered Nurses, Licensed Practical Nurses), and Paramedics.

At the conclusion of each workshop, ECGTraining.org uploads class rosters to CE Broker, who updates the Continuing Education Records for each Florida or Washington, D.C. licensed Nurse, and Florida Paramedics.   We also provide copies of our class rosters to the Education Managers of the organizations who contract with us.

We anticipate applying for CE provider status with the American Nurses Credentialing Center (ANCC) and the Continuing Education Coordinating Board for Emergency Medical Services (CECBEMS) in 2012.   Until then, we cannot guarantee that States outside Florida and the District of Columbia will grant reciprocity to those who complete our workshop.   For those licensed in states other than Florida and Washington DC, you must contact your State Board of Nursing or EMS Bureau to see if reciprocity will be granted for completion of our workshop.

https://www.cebroker.com/public/pb_index.aspx

WORKSHOP DESCRIPTION:

Educational Goals:

This comprehensive, fast-paced one day workshop prepares Medial Professionals to:

- Interpret 12 Lead ECGs
- Assimilate ECG Data into a comprehensive patient evaluation process designed to compensate for the ECGs lack of sensitivity and specificity.
- Identify life-threatening Acute Coronary Syndrome (ACS), Long QT and Brugada Syndromes, by ECG and patient evaluation.
- Identify the most subtle patterns of ACS often missed by Medical Professionals and the ECG machine's diagnostic software.
- Identify the Infarct Related Artery based on ECG interpretation in 11 common classifications of Acute Myocardial Infarction (AMI), and be able to anticipate complications resulting from the failure of critical cardiac structures, *before they occur.*

Curriculum Overview:

The basis for our workshop curriculum is a combination of conventional cardiology and ECG textbooks, 70+ current scientific and medical journal citations, and 30 actual case studies from the Cardiac Catherization and Electrophysiology (EP) Labs.   Our presentation includes over 800 computer generated images, ECGs, Cardiac Cath Lab Angiographic Images, and Electrograms, the "internal ECG" obtained during EP Studies.   All material presented is consistent with American Heart Association's 2010 Advanced Cardiac Life Support (ACLS) guidelines.

The morning session of our workshop lays the foundation for the development of solid ECG interpretation skills. Because knowledge of common coronary arterial anatomy is the key to understanding the complex pathophysiological changes which occur during Acute Myocardial Infarction, this program employs extensive use of angiographic images obtained during cardiac catheterization.

The afternoon session prepares medical professionals to become proficient in the 12 Lead ECG identification of ACS. 13 ECG patterns associated with ACS are presented, including the most subtle ECG changes often missed by clinicians and the ECG machine's automated interpretation software.   The curriculum provides a balanced approach to Patient Assessment, combining advanced ECG Interpretation skills with patient history, risk factor profile and cardiac marker evaluation.   Correlations of ECG Leads with the coronary arterial distributions which commonly supply each region of the heart are reinforced by actual Case Based Studies from the Cardiac Catheterization Lab.   ST Segment Elevation Myocardial Infarction (STEMI) Case Studies emphasize the ECG identification of the infarct-related artery and complications to expect based on the failure of cardiac structures commonly supplied by the obstructed coronary arterial distribution.

WORKSHOP AGENDA:

AM (morning) Session:

- The ECG in Perspective
- Essential Anatomy and Physiology
    - Heart Sounds & the ECG
    - Coronary Artery Anatomy
- Basic ECG Principles
- Waveforms and Intervals
- Long Q-T Syndrome Overview
- Bundle Branch Blocks
- Fascicular Blocks
- Factors Affecting the ECG
- Axis Deviation
- Axis Rotation
- Wolff-Parkinson-White Syndrome
- Chamber Hypertrophy

PM (afternoon) Session:

- Acute Coronary Syndrome (ACS) Overview
- The Quadrad of ACS
- Typical and Atypical ACS Symptoms
- ECG Patterns of Associated with:
    - Wide QRS Complex Complexes
    - Narrow QRS Complexes
- Serial ECGs and Cardiac Markers
- 15 and 18 Lead ECGs

CASE STUDIES:

- ST Segment Elevation Myocardial Infarction (STEMI)*
- Non-STEMI
- Unstable Angina
- Brugada Syndrome
- Acute Myocarditis / Pericarditis
- Hyperkalemia
- Apical Ballooning Syndrome (Stress-Induced Cardiomyopathy, Tako-Tsubo and "Broken Heart" Syndrome)
- Coronary Artery Vasospasm (Prinzmetal's Angina)
- Early Repolarization

WORKSHOP KNOWLEDGE OBJECTIVES:

AM SESSION: 12 LEAD ECG FUNDAMENTALS:

- Recall sensitivity and specificity problems associated with the 12 Lead ECG
- Recall patient evaluation techniques designed to overcome problems with ECG sensitivity and specificity
- Recall conditions which cause abnormal heart sounds, and their correlating ECG abnormalities
- Recall the two most common coronary arterial anatomic configurations
- Recall critical cardiac structures supplied by each coronary artery
- Identify proper lead placement for obtaining 12 and 18 Lead ECGs
- Identify normal and abnormal ECG waveforms and intervals
- Recall ECG traits and pathophysiology of Long QT syndromes
- Indentify Bundle Branch and Fascicular Blocks
- Recall common factors that alter the 12 Lead ECG
- Identify Axis Deviation and Rotation Abnormalities on the 12 Lead ECG
- Identify the four most common causes of Abnormal Axis Rotation on the ECG
- Identify the presence of non-concealed Wolff-Parkinson-White Syndrome on the ECG
- Identify Atrial and Ventricular Hypertrophy on the 12 Lead ECG

PM SESSION: 12 LEAD ECG IDENTIFICATION OF ACS:

- Recall conditions which comprise Acute Coronary Syndrome (ACS)
- Describe the components of the Quadrad of ACS, and their relevance to maximizing diagnostic accuracy in patients with ACS
- Recall Typical and Atypical Symptoms of ACS
- Recall techniques to aid in the ECG Diagnosis of ACS in the presence of Right and Left Bundle Branch Block QRS Patterns
- Identify 13 ECG Patterns associated with ACS
- Identify the Infarct-Related Artery in 10 common classifications of ST Segment Myocardial Infarction (STEMI)
- Recall complications to be expected in 10 common classifications of STEMI
- Recall diagnostic criteria for Non-STEMI and Unstable Angina
- Recall the etiology, pathophysiology and ECG abnormalities associated with Brugada Syndrome
- Identify Patient Assessment and ECG characteristics associated with
  - Acute Myocarditis / Pericarditis
  - Hyperkalemia
  - Apical Ballooning Syndrome (a.k.a.: Stress Induced Cardiomyopathy, Tako-Tsubo & Broken Heart Syndrome)
  - Coronary Artery Vasospasm (Prinzmetal's Angina)
  - Early Repolarization

For a detailed, specific list of knowledge and skill objectives, described in "Bloom's Taxonomy" format, please contact Program Director Wayne Ruppert at:

wayne@ECGTraining.org

TESTIMONIALS FROM WORKSHOP PARTICIPANTS:

"*Very enthusiastic speaker with use of Cath Lab Case Studies brings the picture together. Excellent instructor!"* Bernice W., RN, Tampa FL

"This class increased my knowledge base and confidence working in CCU." Annette P, RN, Tampa, FL

"*This workshop takes the information from Mr. Ruppert's textbook and adds valuable depth and context. In the workshop, Wayne's expertise is obvious and the case study discussions move the learner from just knowing to actually understanding. The textbook and the workshop are a must for any clinician responsible for the care of cardiac patients."* Amy C., RN, BSN, Education Specialist, Tampa, FL

"Very thorough program - I appreciate the depth of the material presented." Marie L, RN, Tampa, FL

"Fantastic class, interactive with real life examples. Awesome instructor - I can't wait to take more of his classes." Karen K., Tampa, FL

"Very good class, never lost my interest. Extremely knowledgeable instructor, information is up to date." Steve R., RN, New Port Richey, FL

"This was SO much more than a 12 Lead EKG class. Very thorough and comprehensive, this class will help me apply 12 Lead EKGs to my practice in the ICU." Janet L., RN, CCRN, Tampa, FL

"Wayne is a great instructor - explains all topics thoroughly and in a way that makes sense. I highly recommend this class to other RNs." Mark P., RN, Tampa, FL

"Mr. Ruppert is an exceptional teacher. He reaches out and connects with students, has an excellent command of his topic." Danielle C., RN., Lutz, FL

"This class presented a wealth of knowledge that I will utilize for sure! Great case presentations." Toni C, RN, Clearwater, FL

"Very easy to understand. Enjoyed the class, now I want to learn more." Tomas M, RN, BSN, Lutz, FL

"Very, very informative - with a great sense of humor. Great job!" Angel R., RN, Tampa, FL

BIO of WAYNE RUPPERT, PROGRAM DIRECTOR:

Mr. Ruppert has served as an Interventional Cardiovascular Technologist and Electrophysiologist Technologist for the St. Joseph's Hospitals in Tampa and Lutz Florida.   Since joining St. Joseph's in 1996, he has logged over 10,000 interventional cardiac catheterizations and electrophysiology studies.   He has served as the primary 12 Lead ECG instructor for the St. Joseph Hospitals since 1997, and for York Hospital in York, Pennsylvania since 1998.   He has instructed 12 Lead ECG workshops for the University Of South Florida School Of Medicine (1996) and Harrisburg Area Community College in Pennsylvania, and at other locations. He is the author of "12 Lead ECG Interpretation in Acute Coronary Syndrome with Case Studies from the Cardiac Catheterization Lab," published by TriGen Publishing / Ingram Books, 2010.   Mr. Ruppert is the Principal Investigator for the Scientific Validation Study of the Simple Acute Coronary Syndrome (SACS) Score (NIH Registered Clinical Trial #NCT00947804). Mr. Ruppert began his career with York Hospital in 1980, and studied 12 Lead ECG Interpretation under the late Dr. Henry J.L. Marriott in 1982 and 1994.   He has served as an AHA BCLS Instructor since 1980, an ACLS Instructor since 1982, and a PALS Instructor since 1988.