Introduction to Electrocardiography

Curriculum Overview

Designed for:
• High school students
• Post-secondary students in health occupations courses
• Certified Nursing Assistant (CNA) training courses

Length:
The activities in this curriculum will last approximately 2 hours. With supplemental materials, this curriculum can be adapted to a longer block of time.

Goal:
To help participants learn about electrocardiograms (ECG), interpretation of ECGs, and common arrhythmias.

Synopsis:
This curriculum helps participants learn about electrocardiograms (ECG), interpretation of ECGs, and common arrhythmias. The lesson begins with a pre-quiz that students may complete before the content is presented. Educators will review different ECGs, lead placement, and common artifacts. Students will dive deeper into interpretation of ECGs, lead placement, and common artifacts and their causes. Students will learn the proper procedure for placing leads and interpreting results. A brief quiz is included for assessment.

Curriculum Components:
• Teacher’s guide – Complete lesson, including detailed steps of activities, time and materials needed, student handouts and instructor information to teach the lesson
• Student workbooks
• Flashcards
• Assessment tools
• PowerPoint presentation slides

Learning Objectives:
• To assess students’ knowledge of cardiac conduction
• To describe how an ECG works
• To identify different ECGs, lead placements including 3, 4, 5 and 12-leads, and common artifacts and their causes
• Demonstrate knowledge of lead placement and rhythm interpretation of atrial, ventricular and conduction block arrhythmias
• Identify parts of a waveform
• Explain characteristics of waves, intervals and segments
• Determine heart rate using three methods
• Recognize normal sinus rhythm, bradycardia, and tachycardia