Background

Sudden cardiac arrest (SCA) is one of the leading causes of death in male high school athletes participating in competitive sports.

Cardiac abnormalities attributed to SCA:
- Hypertrophic Cardiomyopathy
- Brugada Syndrome
- Long QT Syndrome
- Wolf-Parkinson-White Syndrome (WPW)
- Arrhythmogenic Right Ventricular Dysplasia (ARVD)

Current Practice Guidelines:
- Annual physical with patient and family history

Study Design: Cross-Sectional Prospective with Referral Algorithm

Targeted Sample: n=206

Inclusion Criteria:
- Male, ages of 13-18 years old
- Participating in Basketball, Soccer, Baseball, or Football

Measures (using pre-determined prevention algorithm):
- Athlete AND Family History
- Physical Examination
- 12-lead ECG

Stakeholders:
- Parents
- Fayette County Board of Education
- Principal and Athletic Director
- Pediatric Cardiologists

Purpose

To evaluate if adding a 12-lead ECG to pre-participation screening captures cardiac abnormalities that identify risk of developing SCA in male high school athletes.

Results

To identify the feasibility of adding a screening 12-lead ECG to a pre-participation sports physical to identify male student athletes at an increased risk for SCA.

Goals

A new protocol to include a 12-lead ECG to pre-participation screening for male high school athletes is reasonable to screen for cardiac abnormalities that identify risk factors for SCA.