Sudden Cardiac Death

- SCD – natural death from cardiac causes heralded by abrupt loss of consciousness within one hour of the onset of acute symptoms
- Rare and tragic event in young athletes
- 0.5-2 deaths/100,000 athletes/year – U.S data
- Primary cause in US – Hypertrophic Cardiomyopathy (HCM)
- Primary cause in Italy – Arrhythmogenic Right Ventricular Dysplasia (ARVD)
Case for Screening

- First symptom exhibited by 60% of SCD in young athlete victims in the US is cardiac arrest

- Widespread belief that screening of young should exist - American Heart Association, International Olympic Committee, European Society of Cardiology

- Only Japan, Israel and Italy mandate screening
The Italian Experience

- 25 year longitudinal study in Veneto region 1979-2004 – Corrado et. al.
- Athletes aged 12-35
- Screened using the recommendations of the ESC – Questionnaire, Physical Exam and **resting 12-lead ECG**
- 89% decrease in incidence of SCD
The American Perspective

- Recent paper recommending screening **without use of resting 12-lead ECG** by Maron et. al in Circulation magazine - American Heart Association Journal

- AHA recommends physical exam and questionnaire only

- Cites cost-efficiency and problems with sensitivity and specificity as reasons for omitting resting 12-lead ECG
Canada......

- Fundamental lack of data in this area
- Screening isn’t mandated
- No official recommendation exists
- British Columbia has a very unique and ethnically diverse population
- Must develop a data set before any screening recommendations can be made
Our Study

- “Prevalence of Cardiac Disease in British Columbia for Young Competitive Athletes - Screening Using ECG and Personal and Family History Questionnaire”

- Will determine prevalence in a subset of our population

- Will use recommendations of AHA and ESC and compare and contrast efficiencies of screening methods
Thank You