Play Smart Youth Heart Screening Program Reduces False-Positive Rates for Screening Electrocardiograms

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The Play Smart Youth Heart Screening program (Play Smart) is a free community-based electrocardiogram (EGC) screening program sponsored by the Providence Heart Institute in Portland, Oregon. The goal of Play Smart is to identify young people who may need further follow-up and treatment of newly diagnosed, asymptomatic heart disease.

The majority of sudden cardiac arrests in young people are caused by cardiac conditions that may be diagnosed by a 12-lead ECG, including hypertrophic cardiomyopathy, Long QT Syndrome and Wolf-Parkinson-White Syndrome. While some individuals may have previously experienced symptoms such as chest pain, shortness of breath or syncope, many experience sudden cardiac arrest as their initial presenting symptom.

Since its inception in 2012, Play Smart has screened over 35,000 children ages 12-18 years. Each participant completes a brief health questionnaire and receives a blood pressure measurement, an ECG and written information about sudden cardiac arrest and heart disease prevention. If the screening ECG is abnormal, participants are encouraged to either seek medical attention for a confirmed diagnosis (Wolf-Parkinson-White Syndrome, Long QT Syndrome) or schedule a free screening echocardiogram for evaluation of possible structural heart disease (hypertrophic cardiomyopathy). If the follow-up echocardiogram is interpreted as normal, the abnormal ECG is considered to be a false-negative ECG.

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