PREVENTION

**PEDIATRIC ECG
SCREENING**

The results of a new study, published in *Circulation*, suggest that ECG screening to identify cardiac disorders in two pediatric populations potentially at high risk of sudden cardiac death (SCD)—school-aged children initiating medication for attention-deficit/hyperactivity disorder (ADHD) and adolescent sport participants—would not be cost-effective. Computer models incorporating prevalence, sensitivity and specificity, and treatment algorithms were used for the analysis.

The models used “conservative estimates”, says report author Dr Laurel Leslie. “We chose data that would err on the side of showing that screening is worthwhile. We also optimistically assumed that any treatments children received [after having cardiac disorders identified by ECG] would completely eliminate the risk of SCD and that no harm would occur from falsely identifying [disorders in healthy children].”

The simulations showed that, on average, ECG screening would extend the life expectancy of each US high school athlete by 17 h and each child with ADHD by 7 h. Screening would cost \$90,000–\$200,000 per life-year saved.

Dr Leslie explains that the difference in benefit might be a result of the differing age groups assessed. “Symptoms for some of these disorders may not be present until adolescence or early adulthood and ECG may be negative in younger children, even if they are at risk of developing a heart condition later in life.” She emphasizes that “as parents, clinicians, and researchers, we want to prevent as many childhood deaths as possible”, but concludes that ECG screening is “on the expensive side, compared to other potentially life-saving interventions ... finite public health resources might be better spent elsewhere, such as [on] anti-tobacco programs, promoting the use of child car seats, or vaccinations”.

Professor Erik Meijboom, Chairman of the International Olympic Committee Working Group on Sudden Death in Athletes and author of the Lausanne Recommendations (2006), agrees that screening young athletes using ECG alone is “ineffective and expensive”. He hopes that these new data “will prevent [the] spending of a lot of health-care money on pseudo solutions”.

Ellen F. Carney

Original article Leslie, L. K. *et al.* The costs and benefits of targeted screening for causes of sudden cardiac death in children and adolescents. *Circulation* doi:10.1161/CIRCULATIONAHA.111.087940