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KENTUCKY CHILDREN'S HOSPITAL

SPORTS PHYSICALS, THE YOUNG ATHLETE, AND YOU

Dr. Callie Rzasa

Laura Murphy APRN

BEST CHILDREN'S HOSPITALS U.S.News & WORLD REPORT PEDIATRIC & ADOLESCENT BEHAVIORAL HEALTH 2024-2025

BEST CHILDREN'S HOSPITALS U.S.News & WORLD REPORT CARDIOLOGY & HEART SURGERY 2024-2025

The Joint Pediatric and Congenital Heart Program, a collaboration of Cincinnati Children's and Kentucky Children's Hospital, is jointly ranked by *U.S. News and World Report*.

DISCLOSURES

- We do not have a financial interest, arrangement, or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

- We do not anticipate discussing the unapproved or investigative use of a commercial product or device during this activity or presentation.

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OBJECTIVES

- Discuss the current recommendations for pre-participation screening and when an electrocardiogram is indicated in this process
- Review reasons to refer syncope and chest pain or a pre-participation concern to a cardiologist, and when these conditions require activity restrictions

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IMPROVING DETECTION OF ATHLETES AT RISK OF SUDDEN CARDIAC DEATH

- Pre-participation screening varies widely internationally
- Current pre-participation screening guidelines recommended by the AHA are not universally followed in US
- At-risk athletes often have no symptoms, and cardiac arrest is the first manifestation of the disease

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IN THE LOCAL NEWS

FAYETTE COUNTY

Dunbar basketball player collapses during open gym at school, dies

BY VALARIE HONEYCUTT SPEARS
vhoneycutt@herald-leader.com

April 26, 2017 10:55 PM
Updated April 27, 2017 11:50 AM

Paul Laurence Dunbar boys' basketball player Star Ifeacho died Wednesday after collapsing during open gym at the school, according to the Fayette County coroner's office.

The cause of death was not immediately known. An autopsy will be performed Thursday on Star, who was pronounced dead at University of Kentucky Hospital at 5:47 p.m.

Star, 15, was a sophomore at Dunbar

Student who died during baseball training, and later revived, speaks from his heart

By Elizabeth Dorsett | Posted: Thu 6:44 PM, Feb 14, 2013 | Updated: Thu 10:50 PM, Feb 14, 2013

anything about that day," Ben Highland explained while hitting golf balls on a course. He was describing last day he died and was brought back to life.

oning with Lafayette's baseball team," his mother, Carey Highland, said.

who were there thought I just fell down or something," Ben said after another swing.

tic Trainer, Jenni Williams, described her role in that day. "Running out there, it's your worst fears as a trainer

Georgetown firefighters Brad Polley, left and Paul Goodman, right, with Savanna Noe, age 14, center at her home in Georgetown, Ky., on Aug. 23, 2012. Both responded while off duty when they heard an emergency on the radio scanner with an and helped rescue Noe who was having a heart attack. Goodman's home, in the background is a few hundred yards away. Polley also lives nearby. Photo by Pablo Alcala | Staff Lexington Herald-Leader

FAMILY

Girl, 14, whose heart stopped beating, recovers thanks to two off-duty firefighters

By Jim Warren - jwarren@herald-leader.com

August 24, 2012 06:38 PM
Updated August 24, 2012 08:48 PM

STAMPING GROUND — Sue Noe remembers July 29 as just a lazy Sunday evening, but it's one she will never forget.

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SUDDEN CARDIAC DEATH - INCIDENCE

- Sudden cardiac death (SCD) is more common in adults
- Reported incidence of pediatric SCD highly variable
  - No pediatric SCD registry/mandated reporting exists
  - Overall incidence of 1:50,000 to 1:60,000
- Leading cause of death in young athletes during sports
  - Aren't these supposed to be healthy, ATHLETIC individuals??
- SCD in young athletes is highly publicized and sparks a great deal of emotion/concern in public

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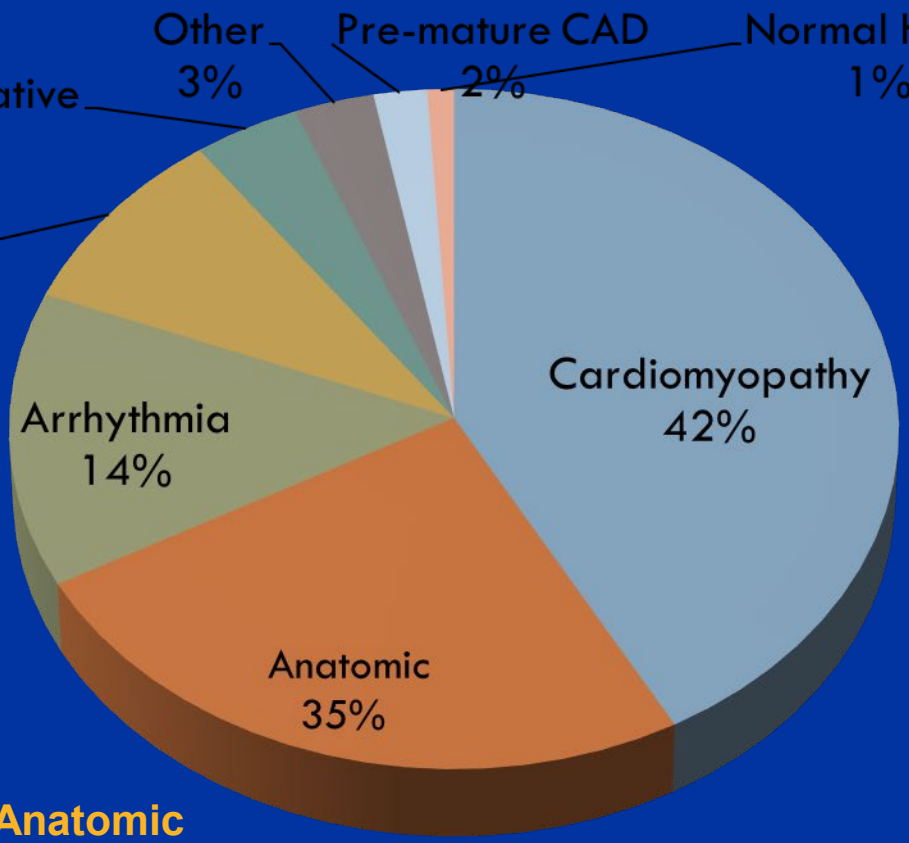
SUDDEN CARDIAC DEATH - EPIDEMIOLOGY

- Approximately 90% of SCD events occur during or shortly after exertion
- Mean age 17-23 (average age 17.5 yrs)
- Most victims are male (90% males; 10% female)
- Basketball & soccer athletes most common (~67%)

Drezner, Jonathan, Et Al. Inter-association Task Force Recommendations On Emergency Preparedness And Management Of Sudden Cardiac Arrest In High School And College Athletic Programs: A Consensus Statement. Heart Rhythm Society. 2007;4:549-565.

Maron, Barry J., et al. Profile and Frequency of Sudden Deaths in 1,463 Young Competitive Athletes: From a 26-year U.S. National Registry, 1980-2005. Minneapolis Heart Institute Foundation. [poster];2006



Arrhythmias
- Long QT
- Brugada
- CPVT
- WPW

Cardiomyopathies
- Hypertrophic Cardiomyopathy
- Arrhythmogenic Right Ventricular Dysplasia
- Dilated Cardiomyopathy

Anatomic
- Coronary Artery Anomaly
- Aortic Stenosis
- Aortic Rupture (Marfan syndrome)

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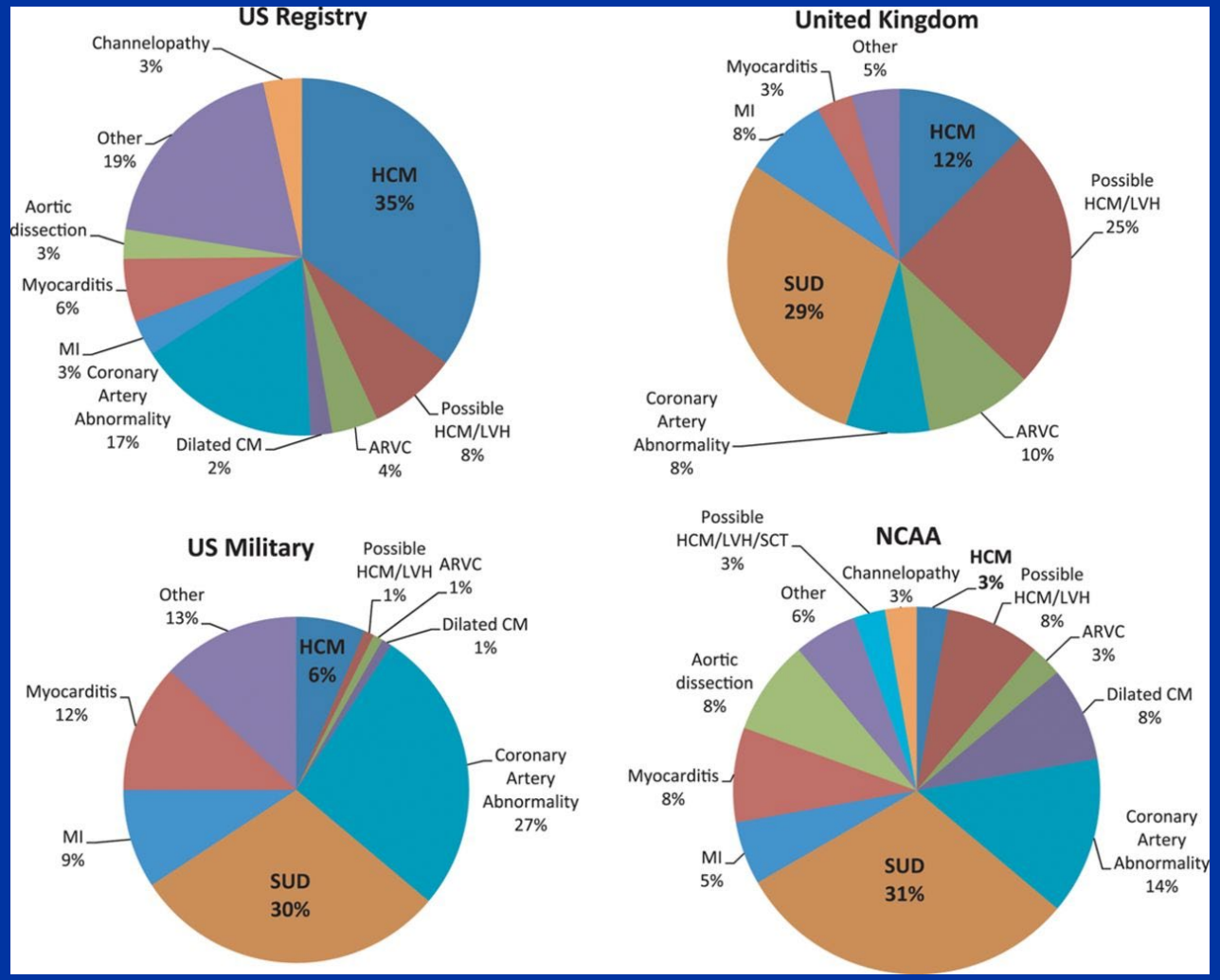
Maron, et al. Circulation. 2007;115:1643-1655



Harmon et al., “Pathogeneses of SCD in NCAA Athletes,” Circ Arr and EP, 2014.

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Structural or Functional	Electrical	Other
Hypertrophic Cardiomyopathy	Long QT Syndrome (LQTS)	Drugs and Stimulants
Idiopathic Left Ventricular Hypertrophy	Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT)	Primary Pulmonary Hypertension
Coronary Artery Anomalies	Wolff-Parkinson-White Syndrome (WPW)	Commotio Cordis
Myocarditis	Brugada Syndrome	Autopsy Negative Sudden Unexplained Death (ANSUD)
Arrhythmogenic Right Ventricular Hypertrophy (ARVD/C)	Short QT Syndrome	
Aortic Rupture (Marfan's)		
Aortic Stenosis		
Atherosclerotic Coronary Artery Disease		
Postoperative Congenital Heart Disease		

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CURRENT US SCREENING PRACTICE

- Preparticipation Physical Evaluation (PPE)
- Supported by both the general public and by national medical organizations (AAP, AHA, American College of Sports Medicine)
- Estimated national cost of at least $250 million per year
- One of the top 5 most common PCP clinic visits

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UNIVERSAL SCREENING

- ECG/ECHO for all athletes is highly controversial
- Unclear benefit
- High variability in performance & interpretation
- Resource-intensive
- More research with sound EBM standards necessary

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PREPARTICIPATION PHYSICALS (PPE)

- **Goals**
  - Determine general physical and psychological health
  - Evaluate for conditions that may be life-threatening or disabling
  - Evaluate for conditions that may predispose to injury or illness
  - Provide an opportunity for discussion of health and lifestyle issues
  - Serve as an entry point into the health care system for adolescents without a medical home
- **Unintended Consequences**
  - Possible exclusion from participation
  - Anxiety, extra incurred medical cost for further evaluation

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PREPARTICIPATION PHYSICAL EVALUATION

MEDICAL ELIGIBILITY FORM

Name: _____ Date of birth: _____

☐ Medically eligible for all sports without restriction

☐ Medically eligible for all sports without restriction with recommendations for further evaluation or treatment of

_____

_____

☐ Medically eligible for certain sports

_____

_____

☐ Not medically eligible pending further evaluation

☐ Not medically eligible for any sports

Recommendations: _____

_____

_____

I have examined the student named on this form and completed the preparticipation physical evaluation. The athlete does not have apparent clinical contraindications to practice and can participate in the sport(s) as outlined on this form. A copy of the physical examination findings are on record in my office and can be made available to the school at the request of the parents. If conditions arise after the athlete has been cleared for participation, the physician may rescind the medical eligibility until the problem is resolved and the potential consequences are completely explained to the athlete (and parents or guardians).

Name of health care professional (print or type): _____ Date: _____

Address: _____ Phone: _____

Signature of health care professional: _____, MD, DO, NP, or PA or DC (if within scope of practice)

SHARED EMERGENCY INFORMATION

Allergies: _____

_____

_____

Medications: _____

_____

_____

Other information: _____

_____

_____

Emergency contacts: _____

_____

_____

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MEDICAL ELIGIBILITY CATEGORIES

- Medically eligible for ALL activities without restrictions
- Medically eligible for all activities with recommendations for further evaluations or treatment (ex. check BP in 1 month)
- NOT medically eligible for any activities UNTIL additional evaluations, treatment or rehabilitation
- NOT medically eligible to participate in SPECIFIC activities
- NOT medically eligible to participate in ANY sport or physical activities

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HEART HEALTH QUESTIONS ABOUT YOU

4. Have you ever passed out or nearly pa
during or after exercise?
5. Have you ever had discomfort, pain, t
or pressure in your chest during exerc
6. Does your heart ever race, flutter in y
or skip beats (irregular beats) during
7. Has a doctor ever told you that you h
heart problems?
8. Has a doctor ever requested a test for
heart? For example, electrocardiogra
or echocardiography.

PREPARTICIPATION PHYSICAL EVALUATION (Interim Guidance)

HISTORY FORM (FOR COMPLETION ASSISTED OR UNASSISTED BY STUDENT AND PARENTS)

Note: Complete and sign this form (with your parents if younger than 18) before your appointment.

Name: _____ Date of birth: _____

Date of examination: _____ Sport(s): _____

Sex at birth (F, M): _____

Have you had COVID-19? (check one): ☐ Y ☐ N

Have you been immunized for COVID-19? (check one): ☐ Y ☐ N If yes, have you had: ☐ One shot ☐ Two shots ☐ Three shots ☐ Booster date(s) _____

List past and current medical conditions. _____

Have you ever had surgery? If yes, list all past surgical procedures. _____

Medicines and supplements: List all current prescriptions, over-the-counter medicines, and supplements (herbal and nutritional).

Do you

HEART HEALTH QUESTIONS ABOUT YOU (*CONTINUED*)	Yes	No
9. Do you get light-headed or feel shorter of breath than your friends during exercise?		
10. Have you ever had a seizure?		

HEART HEALTH QUESTIONS ABOUT YOUR FAMILY	Unsure	Yes	No
11. Has any family member or relative died of heart problems or had an unexpected or unexplained sudden death before age 35 years (including drowning or unexplained car crash)?			
12. Does anyone in your family have a genetic heart problem such as hypertrophic cardiomyopathy (HCM), Marfan syndrome, arrhythmogenic right ventricular cardiomyopathy (ARVC), long QT syndrome (LQTS), short QT syndrome (SQTS), Brugada syndrome, or catecholaminergic polymorphic ventricular tachycardia (CPVT)?			
13. Has anyone in your family had a pacemaker or an implanted defibrillator before age 35?			

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KHSAA Form PPE01
Optional PPE Examination Form, 3 of 3
Rev 5/23

■ PREPARTICIPATION PHYSICAL EVALUATION

PHYSICAL EXAMINATION FORM

Name: _____ Date of birth: _____

PHYSICIAN REMINDERS

1. Consider additional questions on more-sensitive issues.
   - Do you feel stressed out or under a lot of pressure?
   - Do you ever feel sad, hopeless, depressed, or anxious?
   - Do you feel safe at your home or residence?
   - Have you ever tried cigarettes, e-cigarettes, chewing tobacco, snuff, or dip?
   - During the past 30 days, did you use chewing tobacco, snuff, or dip?
   - Do you drink alcohol or use any other drugs?
   - Have you ever taken anabolic steroids or used any other performance-enhancing supplement?
   - Have you ever taken any supplements to help you gain or lose weight or improve your performance?
   - Do you wear a seat belt, use a helmet, and use condoms?
2. Consider reviewing questions on cardiovascular symptoms (Q4–Q13 of History Form).

This form should be placed into the athlete's medical file and should not be shared with schools or sports organizations.

MEDICAL	NORMAL	ABNORMAL FINDINGS
Appearance • Marfan stigmata (kyphoscoliosis, high-arched palate, pectus excavatum, arachnodactyly, hyperlaxity, myopia, mitral valve prolapse [MVP], and aortic insufficiency)		
• Hearing		
Lymph nodes		
Heart[a] • Murmurs (auscultation standing, auscultation supine, and ± Valsalva maneuver)		
Neurological		

MUSCULOSKELETAL	NORMAL	ABNORMAL FINDINGS
Neck		
Wrist, hand, and fingers		
Hip and thigh		
Knee		
Leg and ankle		
Foot and toes		
Functional • Double-leg squat test, single-leg squat test, and box drop or step drop test		

[a] Consider electrocardiography (ECG), echocardiography, referral to a cardiologist for abnormal cardiac history or examination findings, or a combination of those.

Name of health care professional (print or type): _____
Address: _____
Phone: _____

Signature of health care professional: _____, MD, DO, NP, or PA

[a] Consider electrocardiography (ECG), echocardiography, referral to a cardiologist for abnormal cardiac history or examination findings, or a combination of those.

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Contact	Limited – Contact	Noncontact
Basketball	Baseball	Badminton
Boxing	Bicycling	Bodybuilding
Cheerleading	Canoeing; Kayaking (White water)	Bowling
Diving	Fencing	Canoeing; Kayaking (Flat Water)
Extreme sports	Field Events (High Jump; Pole Vault)	Crew or Rowing
Field Hockey	Floor Hockey	Curling
Football, tackle	Football (Flag or Touch)	Dance
Gymnastics	Horseback Riding	Field Events (Discus, Javelin, Shot Put)
Ice Hockey	Martial Arts *	Golf
Lacrosse	Racquetball	Orienteering
Martial Arts *	Skating (Ice, In-Line, Roller)	Powerlifting
Rodeo	Skateboarding	Race Walking
Rugby	Skiing (Alpine, CC, Slalom, Water)	Riflery
Skiing (Downhill) ; Snowboarding	Softball	Rope Jumping
Soccer	Squash	Running
Team Handball	Volleyball	Sailing
Ultimate Frisbee	Weightlifting	Scuba Diving
Water Polo	Windsurfing or Surfing	Swimming
Wrestling		Table Tennis
		Tennis
		Track

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AAP Council on Sports Medicine and Fitness. Medical conditions affecting sports participation. Pediatrics. 2008; 121 (4): 841-848

HAVE YOU EVER HAD DISCOMFORT, PAIN, TIGHTNESS, OR PRESSURE IN YOUR CHEST DURING EXERCISE?

- Description of pain, location
- Other situations where CP occurs
- When during exercise: beginning, middle, end or after?
- How long does it last?
- Syncope or near syncope with CP?
- Additional symptoms?
- Have to stop or modify your exertional activities b/c of CP?
- Medications, supplements, enhancements?
- Family hx

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HAVE YOU EVER PASSED OUT OR NEARLY PASSED OUT DURING OR AFTER EXERCISE?

- During or immediately after exercise?
- If after exercise, where you already stopped or still moving?
- Any prodromal symptoms (CP, Palps, Vision changes, Nausea, Wheezing/SOA, or Itching?)
- What happened after?
- Any meds/supplement prior to event?
- Illness/sickness prior?
- Prior syncope?
- Family hx of collapse w/ exercise or sudden death?

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DO YOU GET LIGHT-HEADED OR FEEL SHORTER OF BREATH THAN YOUR FRIENDS DURING EXERCISE?

- New SOA or existing for months?
- With every type of exercise or only with heavy exertional activities?
- Chest discomfort along with SOA?
- Dizziness?
- Syncope during exercise?
- Hx of exercise asthma or allergies?

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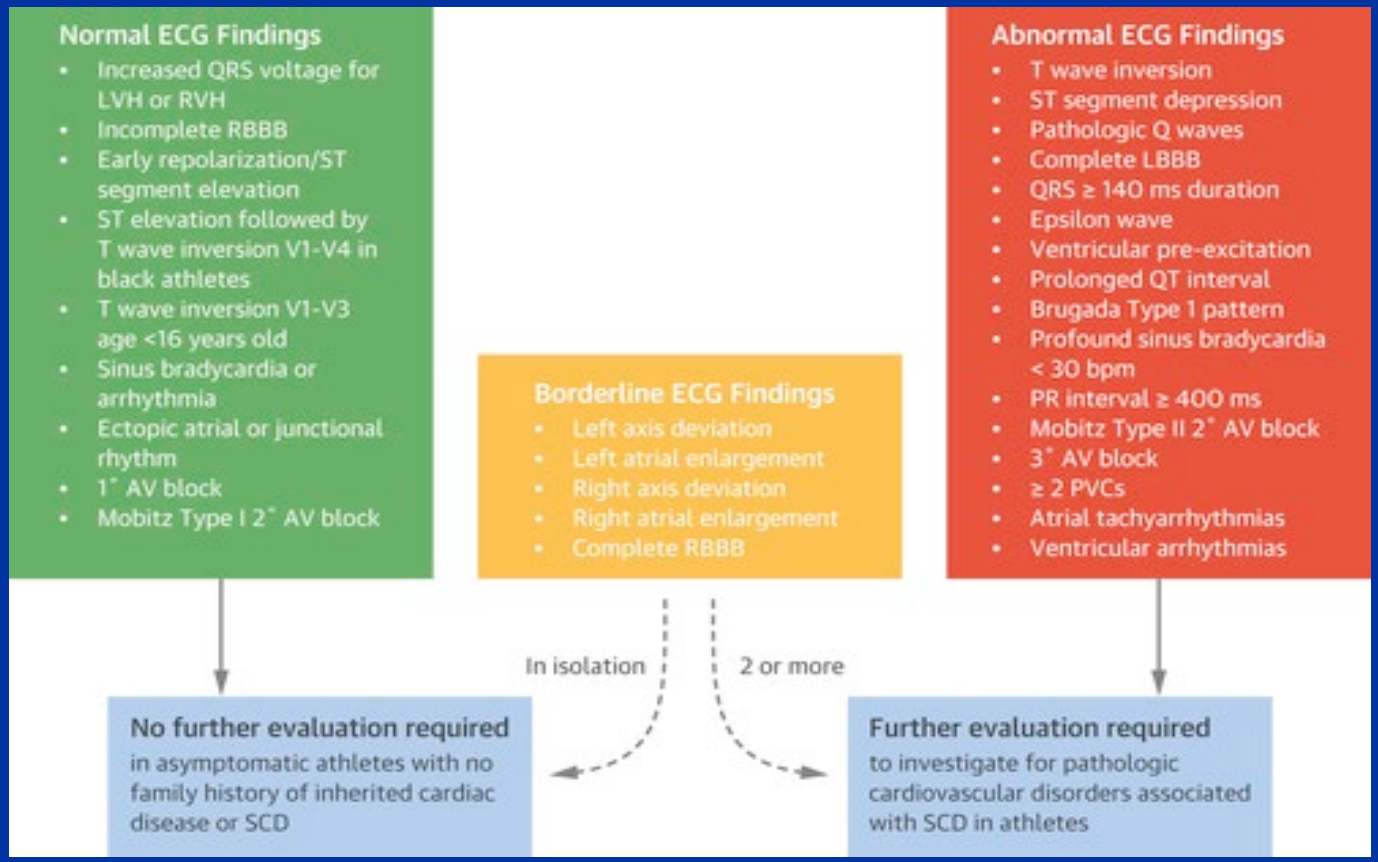
ECG INTERPRETATION FOR THE YOUNG ATHLETE



Sanjay Sharma et al. *JACC* 2017; 69:1057-1075.

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JACC
JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY

LEFT VENTRICULAR HYPERTROPHY (LVH)

- Isolated QRS voltage criterion for left ventricular hypertrophy (LVH) does not correlate with pathology in athletes and is present in isolation (without other associated ECG abnormalities)
- <2% of patients with initial diagnosis of hypertrophic cardiomyopathy (HCM) have LVH on ECG
- Pathologic LVH is commonly associated with additional ECG features:
  - T-wave inversion (TWI) in the inferior and lateral leads
  - ST-segment depression
  - Pathological Q waves

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EXAMPLE OF AN ABNORMAL PPE

- 13 year old soccer player
- Skipping heartbeats, shortness of breath, dizziness, and chest pressure
- 4 such episodes in 7 months—3 had occurred during physical exertion and 1 at rest
- Episodes last few seconds, irregular rhythm followed by 1 to 2 minutes of a speeding heartbeat
- Denied syncope and excessive consumption of caffeinated beverages
- No family history of heart disease or sudden death

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DIFFERENTIALS ON PALPITATIONS

Recreational Drug Induced Tachycardia	Cocaine, Meth, Caffeine energy drinks
Supraventricular Tachycardia (SVT)	Palpitations, dizziness and chest pressure
Ventricular Tachycardia (VT)	Likely SCD
HOCM	Palpitations, shortness of breath, chest pain
Endocrine Disorder	Hyperthyroidism and pheochromocytoma can induce tachycardia
Rheumatic Heart Disease	MS, MR can cause palpitations and chest pressure
Pulmonary Embolism	Hypercoagulability and illicit use of testosterone

ECG

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- Diagnosis: WPW pattern

- Subsequent echo and Holter monitoring
- Risk stratification via stress testing
- Beta blockers vs. EP study
- Left lateral pathway s/p successful ablation
- Return to play without restrictions

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EXAMPLE QUESTIONS

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Which of the following scenarios is MOST consistent with a cardiac red flag?

A. Syncope after running in PE class while standing in line
B. Syncope during blood draw
C. Syncope while having hair styled in bathroom
D. Syncope at rest with preceding symptoms of feeling dizzy and weak and a sensation of heart pounding
E. Syncope after running to steal 3rd base

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Which physical examination finding MOST strongly supports cardiology referral/workup?

A. Tall, thin body habitus
B. Cardiac murmur previously diagnosed as innocent by cardiology
C. Systolic murmur which becomes louder when the athlete stands from a squatting position
D. Irregular heartbeat which varies with respirations
E. Morbid obesity with swelling of bilateral lower extremities

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Which of the following is the MOST worrisome cardiac family history?

A. Maternal grandmother with multiple cardiac risk factors (tobacco, obesity, DM, HTN, and HLD) suffered an MI at age 48 yrs
B. Second cousin with peripartum cardiomyopathy
C. Brother with Wolff-Parkinson-White (WPW) syndrome and both grandfathers with atrial fibrillation
D. Unexplained sudden death in maternal cousin, maternal grandfather, and maternal uncle without known cardiac history
E. Paternal grandmother with “thickened heart” related to hypertension

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RETROSPECTIVE: CENTRAL KY CASES (2011-2013)

- 6 teens presented to KCH after resuscitated SCD
- 5 were witnessed arrests, received bystander CPR and survived
- None had any cardiac symptoms prior to arrest
- 1/6 had an abnormal EKG
- 5/6 had normal ECHO, cMRI
- Only 1/6 was participating in school-sponsored athletics
- 3/6 have a definitive diagnosis

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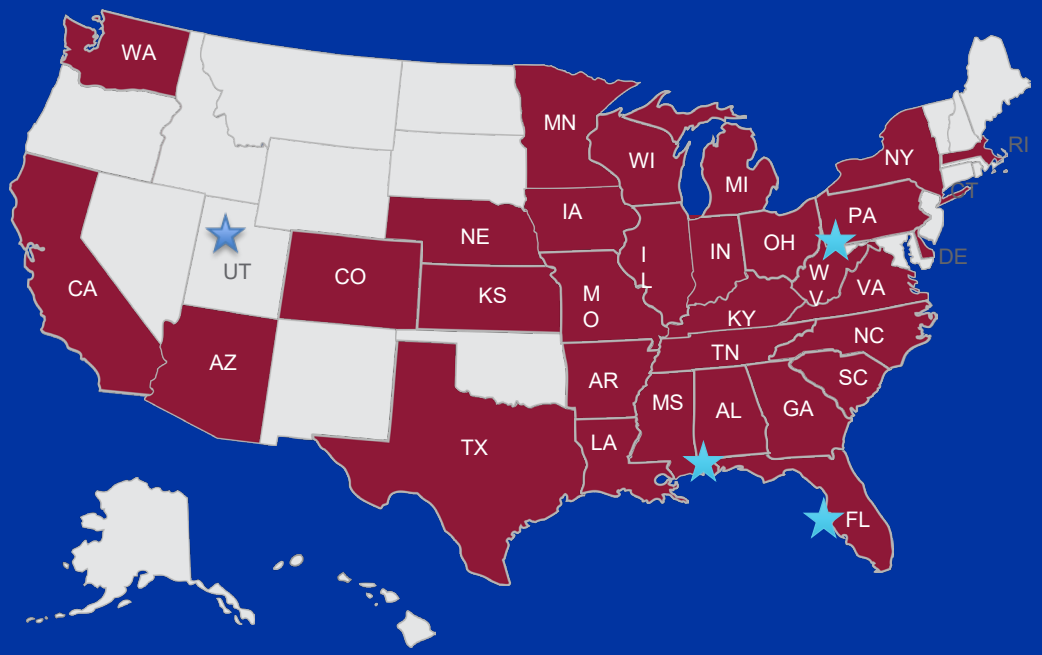
Project ADAM®

SAVES LIVES



52 ESTABLISHED PROGRAMS

35 STATES

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USA In Progress Sites

Canada In Progress Site; Alberta, Canada

ESTABLISHED AFFILIATE SITES

Children's Wisconsin/National Office

Children's Healthcare of Atlanta

Children's Hospital of Philadelphia

Children's of Alabama

Providence Sacred Heart Children's Hospital

Cook Children's Medical Center

East Tennessee Children's Hospital

U-M Health C.S. Mott Children's Hospital

Children's Hospital Colorado

UC Davis Children's Hospital

Nationwide Children's Hospital

Texas Children's Hospital

Monroe Carell Jr. Children's Hospital at Vanderbilt

Arkansas Children's

Cincinnati Children's

Golisano Children's Hospital, Southwest Florida

KU Wichita Pediatrics

Nicklaus Children's Hospital

Duke Children's Hospital

Ann & Robert H. Lurie Children's Hospital of Chicago

Ochsner Hospital for Children

Children's Mercy Kansas City

WVU Medicine Children's

Rady Children's Hospital

Riley Hospital for Children at IU Health

Maria Fareri Children's Hospital

University of Mississippi Medical Center/Children's Hospital

Le Bonheur Children's Hospital

University of Iowa Stead Family Children's Hospital

Yale New Haven Children's Hospital

Children's Minnesota / Children's Heart Clinic

St. Louis Children's Hospital

USA Women and Children's Hospital

Children's Hospital & Medical Center

Hasbro Children's Hospital

Children's Hospital of Richmond at VCU

Phoenix Children's Hospital

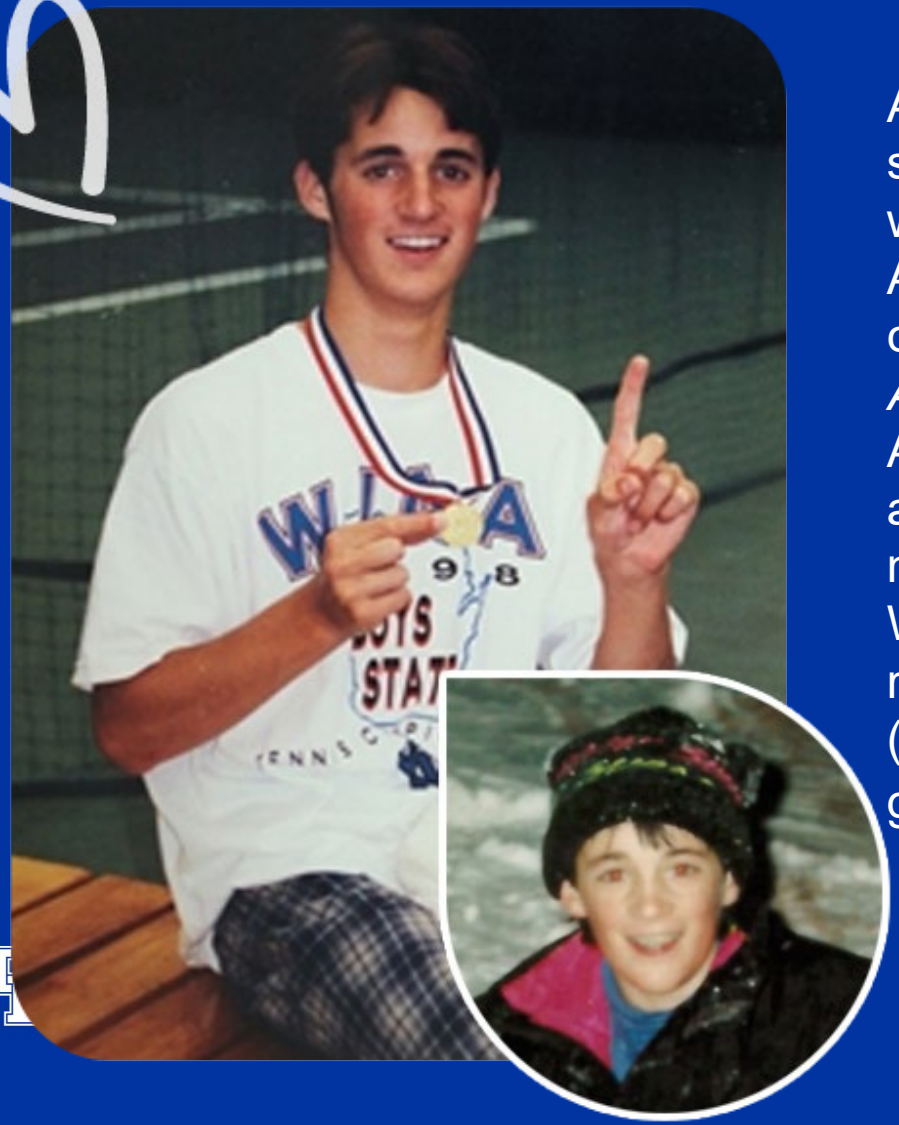
Kentucky Children's Hospital

Norton Children's Hospital

Nemours Children's Health

Updated February 2024

About Project ADAM

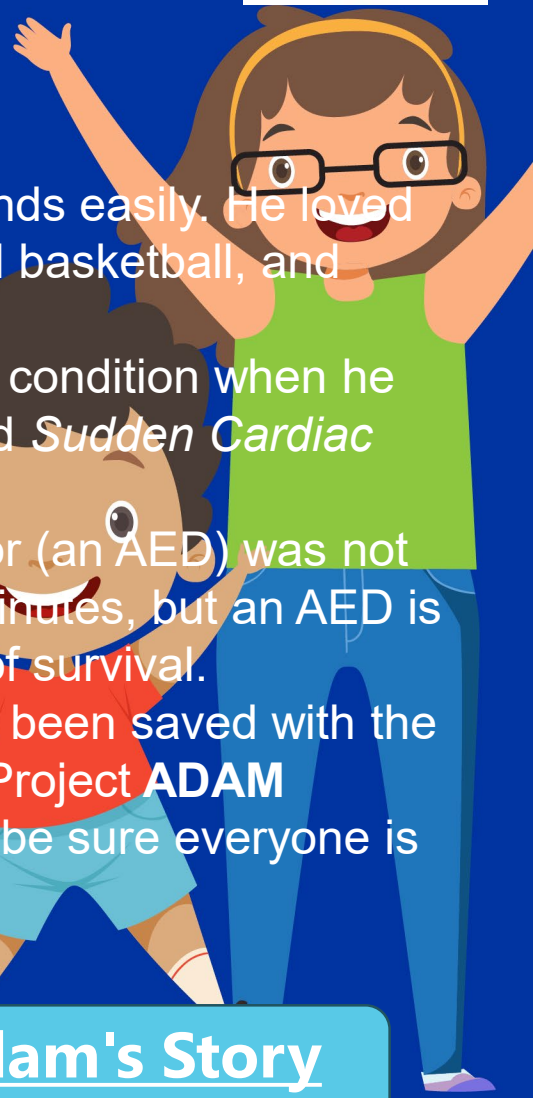


Adam was a happy, athletic teen who made friends easily. He loved spending time with his family, playing tennis and basketball, and wanted to make a difference in the world.

Adam was a 17-year-old athlete in peak athletic condition when he collapsed during a basketball game and suffered *Sudden Cardiac Arrest*.

A bystander administered CPR, but a defibrillator (an AED) was not available. The ambulance arrived within eight minutes, but an AED is needed within 2-3 minutes for the best chance of survival.

When Adam's family learned that he could have been saved with the right preparation and equipment, they founded Project **ADAM** (**A**utomated **D**efibrillators in **A**dams **M**emory) to be sure everyone is given the best possible chance to survive.



Read Adam's Story

UK Project Adam Team

Shaun Mohan, MD,FAAP, FHRS, FACC
Medical Director, Associate Prof of Pediatrics
Pediatric & Congenital Electrophysiology

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Mindy M. Seeberger
Project Adam Program Coordinator
Joint Pediatric & Congenital Heart Program

Tanya Edwards
Project Adam Program Coordinator
Joint Pediatric & Congenital Heart Program

- **Project ADAM** is a national non-profit organization established in 2004 in memory of Adam Lemel, focused on preventing s**udden cardiac death** through advocacy, education, preparedness, and collaboration.

- **Project ADAM** has saved over 250 lives, and more than **5,000 schools** in the U.S. are certified **as Heart Safe.**

- **Project ADAM** helps schools, sports programs, and community sites become **Heart Safe** by providing the necessary equipment and training for critical first-response actions.

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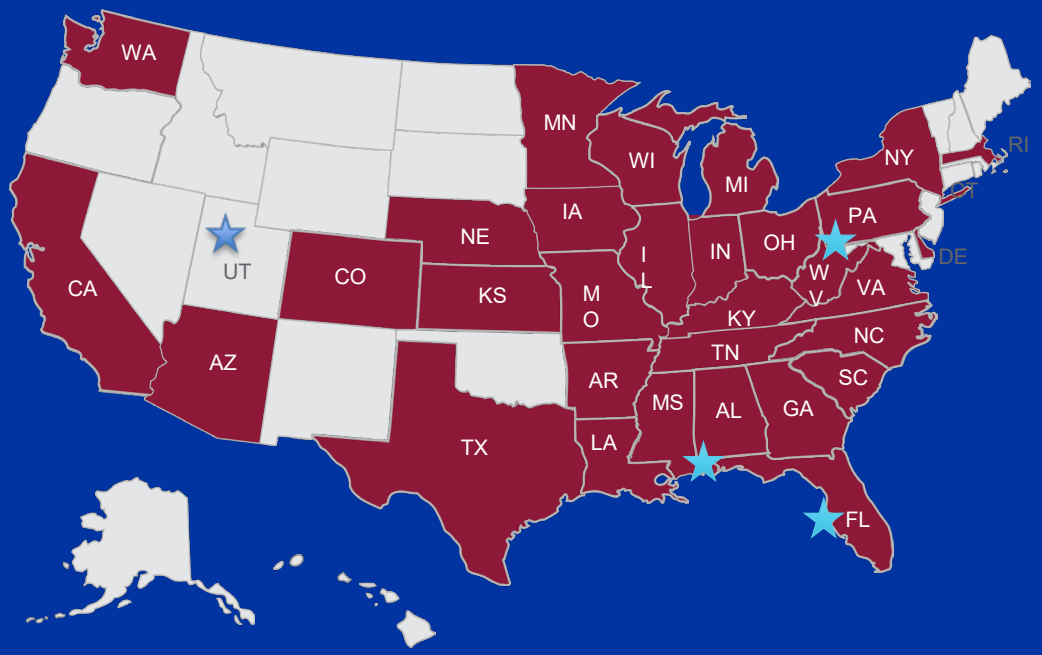
Project ADAM®

SAVES LIVES



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Children's Hospital Colorado

UC Davis Children's Hospital

Nationwide Children's Hospital

Texas Children's Hospital

Monroe Carell Jr. Children's Hospital at Vanderbilt

Arkansas Children's

Cincinnati Children's

Golisano Children's Hospital, Southwest Florida

KU Wichita Pediatrics

Nicklaus Children's Hospital

Duke Children's Hospital

Ann & Robert H. Lurie Children's Hospital of Chicago

Ochsner Hospital for Children

Children's Mercy Kansas City

WVU Medicine Children's

Rady Children's Hospital

Riley Hospital for Children at IU Health

Maria Fareri Children's Hospital

University of Mississippi Medical Center/Children's Hospital

Le Bonheur Children's Hospital

University of Iowa Stead Family Children's Hospital

Yale New Haven Children's Hospital

Children's Minnesota / Children's Heart Clinic

St. Louis Children's Hospital

USA Women and Children's Hospital

Children's Hospital & Medical Center

Hasbro Children's Hospital

Children's Hospital of Richmond at VCU

Phoenix Children's Hospital

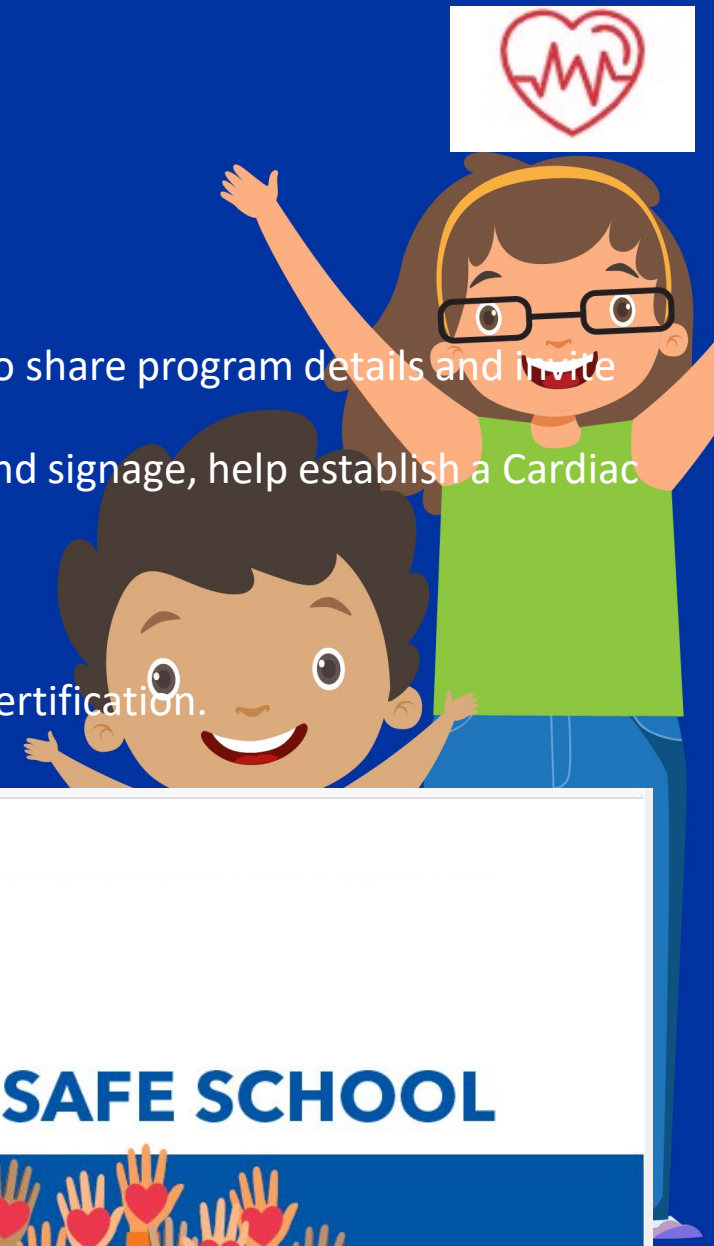
Kentucky Children's Hospital

Norton Children's Hospital

Nemours Children's Health

Updated February 2024

How It Works



We Connect: Our Project ADAM Team connects with schools and community sites via email to share program details and invite the facility to learn more

We Visit: Our team visits the school for an initial walkthrough to assist with AED placement and signage, help establish a Cardiac Response Team, and provide support in preparation for sudden cardiac events

We Evaluate: When ready, our team visits on-site for an official Heart Safe Drill

We Award: Facilities become Heart Safe based on their drill performance

We Provide: Ongoing support such as CPR Training, Project ADAM Resources and Annual re-certification.

Collaboration

- Kentucky Children's Hospital became an affiliate with Project Adam in July 2023
- We collaborated with Fayette County Public Schools as our first partner and High Schools as the first rollout
- All Fayette County Public High Schools are Heart Safe!
- Last summer, we spent time working with other community sites while school was out, including the Lexington Children's Museum, the Living Arts and Science Center, and the YMCA
- Our focus for this year is the 12 Fayette County Middle Schools; we have visited 6 of those, and 3 are Heart Safe

38 Heart Safe Schools and Organizations

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SUMMARY

- Certain red flags in a pre-participation sports screening should warrant restrictions while awaiting further evaluation
- Exercise restrictions are not often needed for many patients, even those with known heart disease
- If it's not straightforward or not otherwise addressed in our letters, please contact us or one of our colleagues

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CLINICAL PEARLS

- Most patients at risk for SCD will NOT be identified by a single routine pre-participation sports screen (but rather by routine high-quality primary care and years assessments)
- Despite providing excellent screening and proper therapy, some children/adolescents will still experience SCD
- CPR and AED's are vital
- Pediatric cardiology accessibility

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QUESTIONS

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Thank you

Dr. Michelle Sykes, MD
Laura Murphy, APRN
Tanya Edwards

Slide presentation and data assistance

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HYPERTENSION

- **Rule out coarctation**
  - Palpate femoral pulses
  - Upper and lower extremity BPs
- **Prehypertension and Stage 1 HTN, assuming no target-organ damage, should NOT limit eligibility**
- **Stage 2 HTN, even w/o target-organ damage, should limit eligibility, particularly from high-static sports, until improved**

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An adolescent who plays football answers “yes” to the question: “Do you experience skipped, irregular or racing heartbeats with exercise?” Which of the following assessment questions should be asked NEXT?

- A. “How much caffeine do you drink daily?”
- B. “Does anyone in your family have a pacemaker?”
- C. “Do palpitations start and stop suddenly or gradually?”
- D. “Have you ever been told you have a heart murmur?”

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