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Debate over heart screenings refuses to go away

Her softball team had just won, and Claire Dunlap was kneeling with her teammates for a postgame chat when her heart stopped beating.

As shocked teammates and fans looked on, a trainer and an off-duty paramedic used a defibrillator to shock her heart and save her life. Not all young athletes with undiagnosed heart problems are so lucky.

"I was calling my husband to tell him that we had won," said Patti Dunlap, Claire's mother. "I remember looking out on the field, and hearing my name being screamed to come out so I dropped everything and ran out to see what was happening."

Dunlap, a sophomore at American Heritage High in Delray Beach, Fla., had suffered sudden cardiac arrest caused by an abnormal heartbeat.

Her doctors still don't know what caused the irregular heart beat, but believe the condition is genetic and could have been detected by an EKG. She hasn't resumed playing softball yet but is expected to in a month or so.

Dr. Barry J. Maron, director of the Minneapolis Heart Institute Foundation, estimates that 125 athletes ranging from age 8 to 39 die from sudden cardiac arrest in the U.S. each year.

The debate over whether more intensive screening of athletes could prevent some of these deaths tends to pick up steam after a high-profile case. A recent example is Ryan Shay, the marathoner who died of an irregular heartbeat due to an enlarged heart after collapsing during the U.S. men's Olympic trials in November 2007.

Many groups, including the American Heart Association, say the number of sudden cardiac deaths in athletes is low and more extensive screening isn't practical or cost-effective.

Other experts say most deaths could be prevented by giving athletes who compete in organized sports either an electrocardiogram (EKG), which measures the heart's electrical activity, or the more thorough - and more expensive - echocardiogram, an ultrasound scan of the heart.

"As health care personnel, we struggle with why we have not done a better job to prevent more of these deaths," said Dr. Craig Asher, a cardiologist at the Cleveland Clinic in Weston, Fla. "You can quibble whether it's 100 or 200 or 300 that die, but if it's preventable with a relatively low-cost test, why not?"

Prices for the tests vary, but Asher says an EKG costs about \$100, while an echocardiogram provides a more thorough and accurate screening for around \$1,200.

Yet Maron says to mandate such testing wouldn't be cost-effective for the nearly 8 million high school and college athletes competing in the United States.

"It's very tragic every time it happens, but in numerical terms, it's a low-rate phenomenon," he said.

He also noted that no screening process could detect all heart problems, saying "an estimated one third would be missed."

The American Heart Association says its 12-step screening process, which Maron helped write and does not mandate an EKG or echocardiogram, is sufficient to clear athletes to play sports.

In the screening, athletes answer a questionnaire about personal and family medical histories before having a physical exam. The EKG and the ultrasound tests are only done on the examining physician's recommendation, with the heart association recommending an EKG over echocardiogram.

A regular physical - such as the one Claire Dunlap had - is all that's required for high school athletes by the National Federation of State High School Associations.

"The doctor checked Claire's heart with a stethoscope and he gave her a clean bill of health," Patti Dunlap said. "It was just a regular physical."

At the college level, most schools follow the recommendations of the NCAA, which follows American Heart Association guidelines.

Yet some schools have instituted tougher requirements.

At the University of Georgia, the school pays for every athlete to have an echocardiogram before participation.

"It's certainly worth whatever the price is," Steve Bryant, an associate athletic trainer at Georgia, said of the policy instituted in 1994. "We were just trying to be ahead of the curve when we started this and we asked ourselves, 'What more could we provide the athlete here than the basic physical exam?' I certainly think that in the discussion, the echocardiogram came to the forefront. Fortunately at our level, we can provide this."

Some physicians and parents have followed suit, offering programs that provide more extensive screening.

Sharon Bates started a foundation that provides free EKG screenings for athletes at Kansas State University after her son Anthony died of an enlarged heart - the No. 1 cause of sudden cardiac deaths - after a football workout in 2000.

In Phoenix, Dr. Paul M. Steingard runs the TOPS program - for Team of Physicians for Students - which offers free physicals and an EKG for high school athletes. The results of the cardiac tests are read by cardiologists from the Arizona Heart Institute who volunteer their services.

Of the 2,500 athletes who showed up for the physicals on May 2, more than 20 were referred for further testing.

"The (American Heart Association) says that it's not cost-effective, and they're right. But our programs are free and nothing can be more cost-effective than that," Steingard said.

The former team physician for the Phoenix Suns was prompted to start his program by an Italian study 10 years ago that reported a decrease in sudden cardiac deaths after a nationwide screening system was implemented.

In Italy, athletes can't compete at any level if they haven't been cleared by a physical that includes a medical history questionnaire, physical exam and an EKG.

In 2008, Domenico Corrado - one of the authors of the initial study - reported a 90 percent decrease in sudden cardiac deaths in a study published in the Journal of the American College of Cardiology. The drop was over a 25-year period and focused on athletes who ranged in age from 12 to 35.

A similar nationwide screening program is unlikely to happen anytime soon in the U.S.

"I think a fair thing to say is that the American Heart Association believes that every life is precious, it's just a matter of finding the evidence for something to be done," said Dr. Lance Becker, who is the chair of the association's research working group of the emergency cardiovascular care committee.

"Once that evidence comes to the forefront, I think the AHA would change its stance on this suggestion," he said.

Maron says creating a law similar to Italy's would be a huge undertaking in the U.S. and that the issue of whether to mandate screenings that include an EKG or echocardiogram involves more than just cost.

"I don't want to put a price tag on other people's lives," he said. "(But) to have a federal law would get very complicated (politically). The cost is also another point, but that's not what is fundamental here. There isn't the resources in terms of physician manpower."

Parents or athletes who have been affected see the issue in simpler terms.

"Whatever the cost is for the EKG, it should be mandatory," Patti Dunlap said. "It could save a life."

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