CASE STUDY

It started out like any other weekend for 16-year-old Nicholas Varrenti. A football player to his soul, Nick followed up a week of two-a-day practices with stellar performances in both the varsity and junior varsity games at his high school. He was happily looking forward to doing it all over again. But…it was not to be. Instead, on Labor Day of 2004, Nick suffered a sudden cardiac arrest.

Nick had an undiagnosed heart condition known as HCM, or hypertrophic cardiomyopathy, a thickening of the heart muscle, and the leading cause of sudden cardiac arrest (SCA) in young, exercising athletes. The alarming statistic is that approximately every six days a young, athletic person dies from SCA caused by HCM, long Q-T syndrome (an electrical abnormality of the heart), or other conditions that go undiagnosed. Experts estimate that athletic young people, and those who pursue vigorous sports such as soccer, are three times as likely to experience an SCA event than those pursuing sports requiring less exertion, or who do not participate in sports at all.

Tragedy Propelled Nick’s Family into Action

Devastated by the loss of Nick, who was always “perpetually in motion,” Darla Varrenti, Nick’s mom, and Sue and Steve Apodaca, his aunt and uncle, wanted to connect with others who shared common experiences. In January 2006 they traveled to a conference sponsored by Parent Heart Watch, a nonprofit, national organization of parents and others who are committed to preventing the tragic loss of young people to SCA. On the journey home, Varrenti and the Apodacas talked about their wish to prevent future tragedies. The Nick of Time Foundation was born.

The family is determined to educate other families and communities to take action and protect their children from what happened to Nick, the youngest of Varrenti’s four children—all athletes. The Apodacas have three children who also compete in sports. “We wanted to channel the energy we had about preventing these tragedies into something that would honor Nick and carry on his memory,” Apodaca said. “My sister did not want Nick to be forgotten.”

Varrenti and the Apodacas advocated with the Washington State Legislature to mandate Automated External Defibrillators (AEDs) in schools. These efforts were unfruitful due to competing priorities, liability concerns, and pushback from schools, which had funding requests for “more urgent” projects. Although the sisters continue talking with legislators, they decided their important lifesaving mission could not wait.

The Foundation became a springboard for launching their own plans to save more lives. Through their efforts with the Legislature they met a strong ally, Dr. Jon Drezner, an advocate for saving more lives from Sudden Cardiac Arrest.

Nick Varrenti’s legacy lives on due to the Nick of Time Foundation’s Lifesaving Mission—after AED placements in Seattle Public Schools, a life was saved in less than six weeks.

Public Awareness Programs: CPR/AED Use

Volunteer opportunities abound with the Nick of Time Foundation in its lifesaving mission. When you visit the website at www.nickoftimefoundation.org you can learn about opportunities to help at a fundraiser, screening event or public awareness program.

Volunteers at public awareness events, such as school screenings and county fairs, educate people about SCA and how to detect problems early through cardiac screenings. They also provide CPR and AED training so that more young people and adults know how to effectively respond to an SCA event—ultimately saving more lives.

Takeaway Thoughts

To get a program going in your community, contact the Nick of Time Foundation.

Remember:

- Early treatment with CPR and AED defibrillation saves lives
- Heart screenings help prevent tragic sudden deaths among athletic youth, as well as adults on school campuses
- Many more lives can be saved with public awareness and education about SCA, early CPR and defibrillation with an AED
for the same cause. Dr. Drezner is professor, Department of Family Medicine at the University of Washington (UW) School of Medicine; associate director, Sports Medicine Fellowship at UW; team physician, Seattle Seahawks and UW Huskies men’s basketball team; and president, American Medical Society for Sports Medicine.

They forged a partnership that would propel a movement forward to help prevent SCA events, provide prompt treatment when they occur, and raise public awareness about SCA, CPR and AED use. Dr. Drezner is now the Foundation’s medical director.

A Strong Coalition, Three Lifesaving Pathways

The Foundation is a stellar example of how individuals and organizations can work together to accomplish significant change. Varrenti, the Apodacas and Dr. Drezner worked to build a solid board structure with medical direction from diverse healthcare organizations and partnerships with local firefighters, the Seattle Seahawks, and many others, with the goal of saving more lives.

The Foundation focuses on three key areas: 1) the Heart of Schools Program, 2) youth heart screenings, and 3) CPR and AED awareness and education for youth and adults.

Heart of Schools Program

The Foundation works with school districts and communities to implement public access defibrillation (PAD) programs that include AED placement and training in CPR and AED use. Working with key partners such as the Washington State Athletic Trainers Association and Physio-Control, they provide site assessments, emergency preparedness guides, training, and program/supply management for sites with existing PAD programs, and also set up new AED programs.

Placing AEDs in all Seattle Public Schools seemed a daunting task, with 93 school and administrative buildings needing coverage, plus an additional 10 outdoor sports fields. The Foundation set to work. They organized community fundraising events with local schools, sponsored a gala, and sold fundraising tickets at sporting events. Five area hospital systems provided seed money of $5,000 each to kick off the program.

A unique arrangement with the Seattle Seahawks helped raise additional funds, enabling the players to contribute through a Garth Brooks charity, Teammates for Kids. The Seahawks’ contributions equipped every outdoor playing field in the Seattle Public School District with a public access AED.

“They [Seattle Public Schools] have taken a lot of ownership for the program,” Varrenti said. “They’ve been great to work with. Our contract with them specified that we would oversee the program for four years, in partnership with Physio-Control. The District made a commitment to oversee the program after that.” It took a year to raise the funds for the AEDs and supplies, and about 18 months to get them all placed by September 2011.

Many were involved in getting the AED programs up and running. School nurses were the first to be trained in CPR/AED use. Athletic trainers conducted the walk-throughs and decided on AED placement. The district’s safety department took responsibility for providing monthly AED checks.

A Life Is Saved

Less than six weeks after the full program launched, a life was saved at The New School at South Shore Elementary in Seattle.

Jamie Alls (45), a radio broadcasting engineer and father of two children, six and 12 years old, dropped by to play a pick-up game of basketball with his friend and others at the school. During the game he experienced chest pain, grew dizzy, laid down, and said, “Call 9-1-1,” before falling unconscious.

Someone remembered the school had recently installed an AED and ran for it while others called 9-1-1 and initiated CPR. Because of these quick actions, including shocks within minutes from the AED, and additional shocks and advanced emergency medical services provided by paramedics on the way to the hospital, his life was saved.
“It’s important to focus on outcomes,” Alls said. “When you save a life, it has a ripple effect—the impact is so huge.” He is now able to run three miles several times a week and take his children camping, and is also a dedicated volunteer with the Nick of Time Foundation.

Free Youth Heart Screenings

Varrenti and Apodaca described their deep shock following Nick’s death in learning that SCA could happen to someone only 16 years old, as they didn’t know this could happen in young people. “We thought if we didn’t know about this problem, most parents didn’t either,” Apodaca said. “These kids are vibrant, healthy, energetic and athletic,” Varrenti added. “They don’t look sick. It’s scary.”

For this reason, the Foundation has organized free heart screenings in schools throughout Puget Sound. Anyone 14-24 years old is invited to participate in the screenings, whether or not they attend the school. “We’ve had people drive to Seattle for screenings from as far as Bellingham and Spokane, Washington,” Varrenti said.

The free screenings are staffed by teams of volunteers—physicians, nurses, firefighters, sonographers, emergency medical technicians, and a host of others. They collect a family heart history from each participant, take blood pressures, perform electrocardiograms (EKGs), and if indicated, provide an echocardiogram test, which provides a moving picture of the heart. Each student is also trained in hands only CPR and how to use an AED.

Dr. Drezner said, “Our goal is to identify young people with an underlying heart condition. The best way to do this is yet to be determined in the medical community. There is controversy about the appropriate protocol, although everyone wants to prevent SCA events. In the U.S. we do a history and physical. The problem is that we still miss the majority of kids who have a problem. Most don’t have warning signs. If they do, they think it is a normal side effect of exercising.”

In 2011, more than 27 medical facilities in the Puget Sound region provided volunteers to help with the heart screening program. Varrenti said, “Over 3,000 kids were evaluated with health histories, blood pressure checks and EKGs. If an abnormality was detected via EKG, an echocardiogram was provided. About 200 young people needed some type of follow up and a handful had serious cardiac issues needing to be addressed.

“It can be bittersweet,” she said. “It is sweet that you can help save a life, but bitter when you have to tell a young person there could be an issue that may require them not to play sports anymore.”

Varrenti noted that the screenings’ benefits extend beyond those participating on-site. Because some heart conditions are hereditary, families have had additional children screened and found they have the same condition. Again, the Foundation’s programs have a ripple effect on families and communities.

The heart screening program is growing, and Varrenti and Apodaca have been asked by other state school districts for advice on how to set up programs. The pair is also providing consultation to people in other states, including Idaho, California, New York and Massachusetts.
Although not everyone can be saved from SCA, studies show that early defibrillation can dramatically improve survival rates. AED users should be trained in CPR and the use of the AED. Most AEDs require a prescription in the U.S. Please consult a physician.

Statements attributed to individuals in this case study reflect the opinion of the individual and do not necessarily reflect the opinion of Physio-Control. For information about specific product claims and labeling, refer to the device operating instructions.

For further information, please contact Physio-Control at 800.442.1142 (U.S.), 888.879.0977 (Canada) or visit our website at www.physio-control.com.

REFERENCES
