

"I Didn't Know That! More Important Facts About SCA and AEDs"

Presented by:

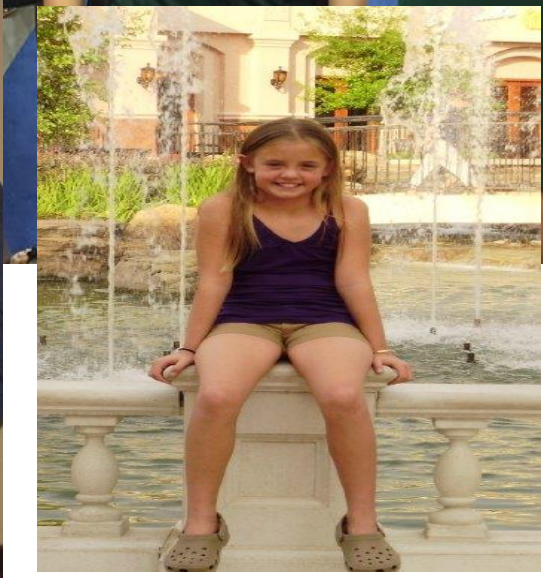
Shawn Sima

PA-C, MPAS, Major (RETIRED) USAF

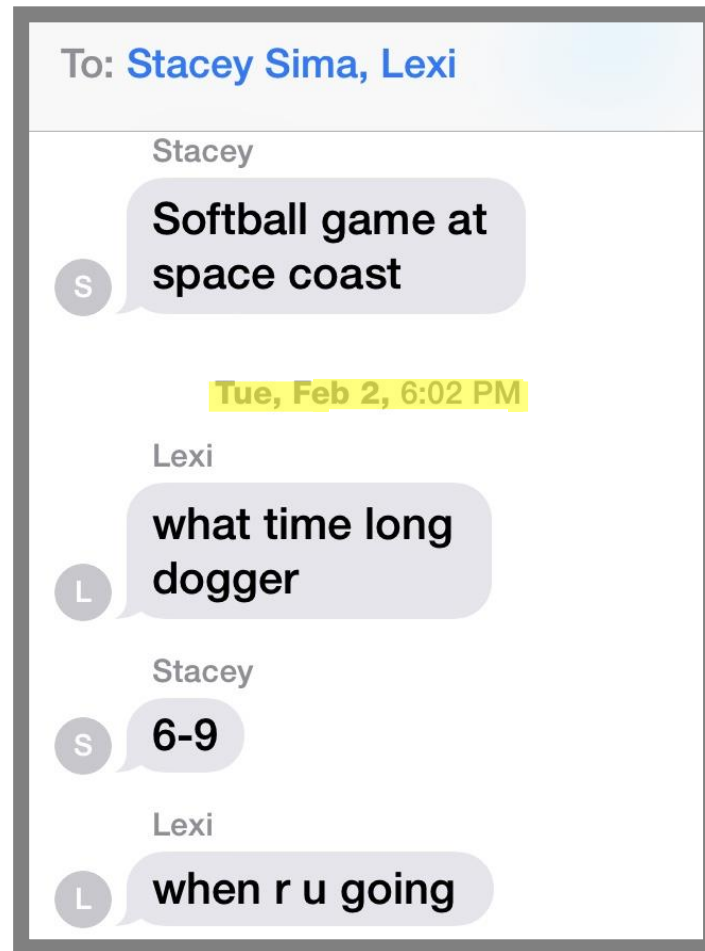
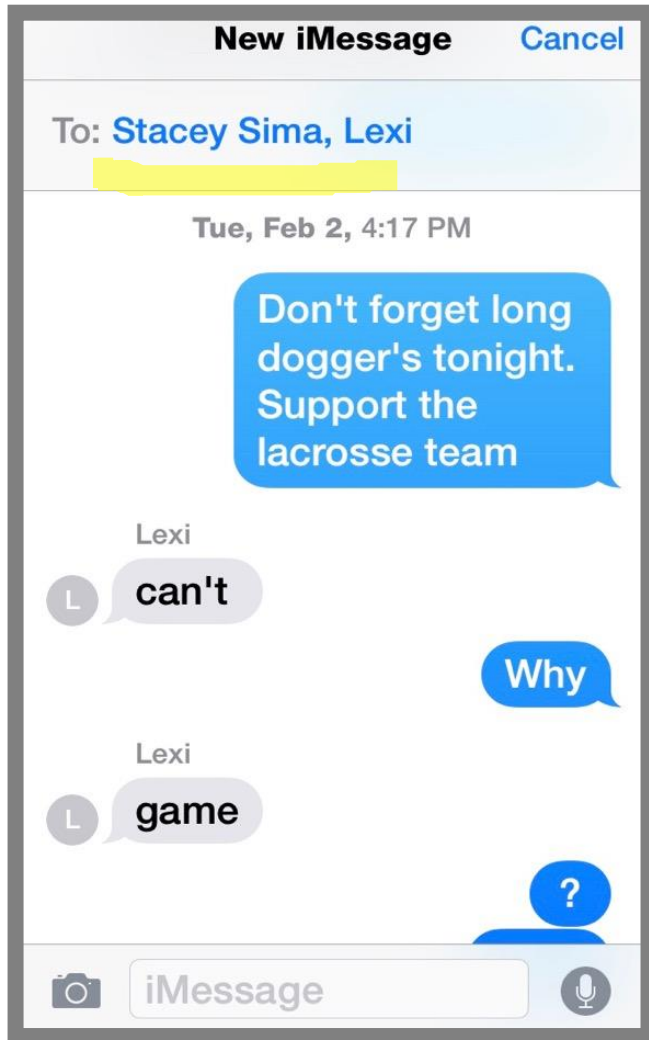
Board Member Who We Play For

Father of Sudden Cardiac Arrest Survivor and CPR Advocate



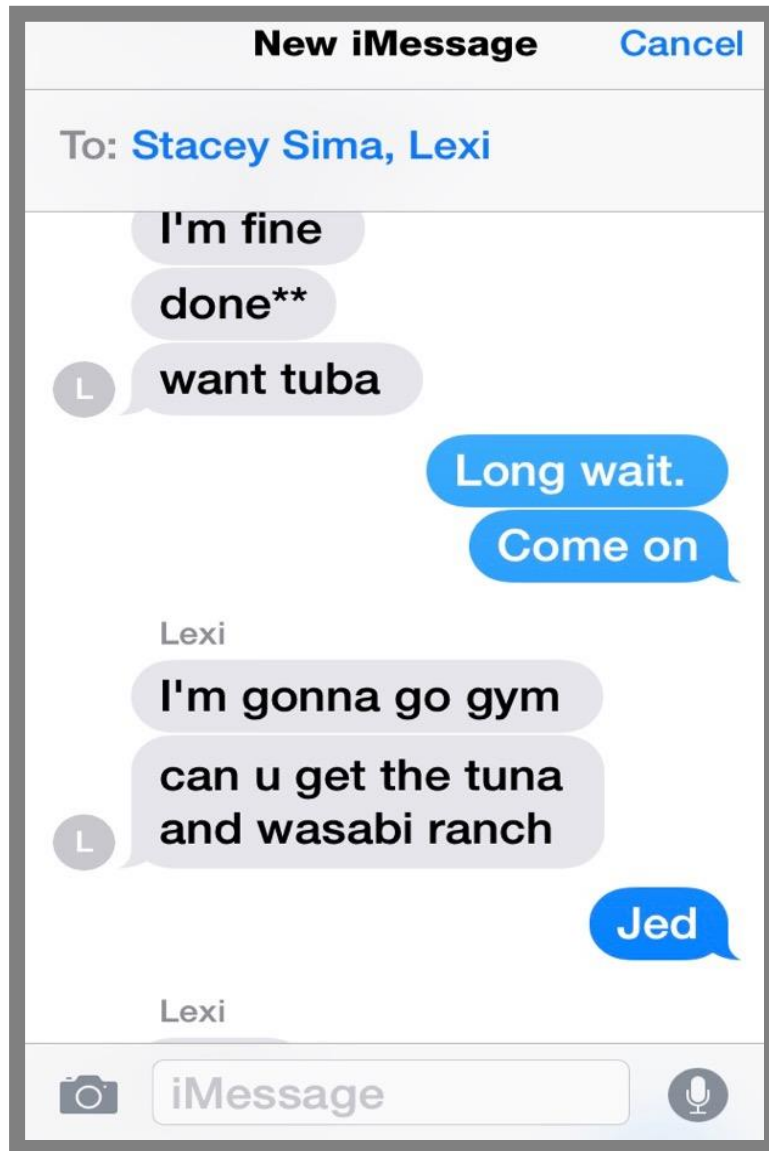


OUR STORY



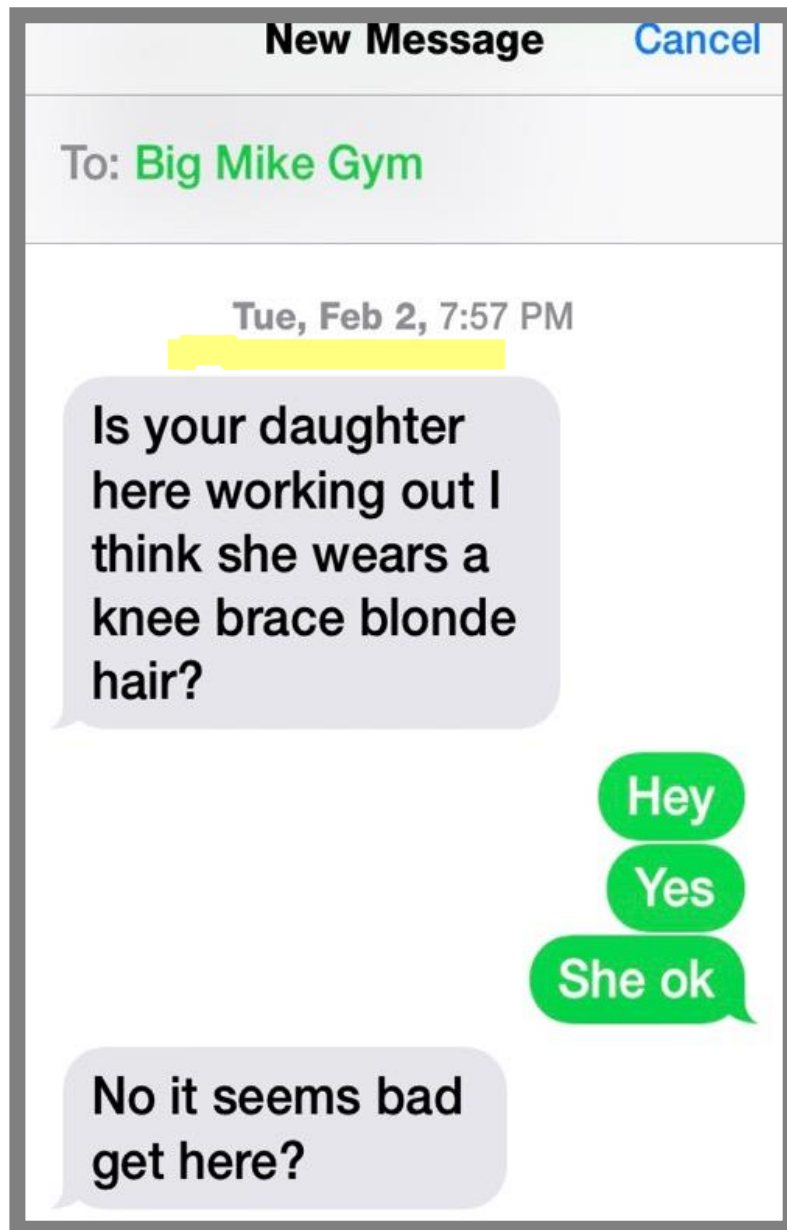
OUR STORY

FEBRUARY 2, 2016



OUR STORY

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OUR STORY

FEBRUARY 2, 2016



OUR STORY

THIS IS WHAT I SAW



OUR STORY

THIS IS WHAT I SAW

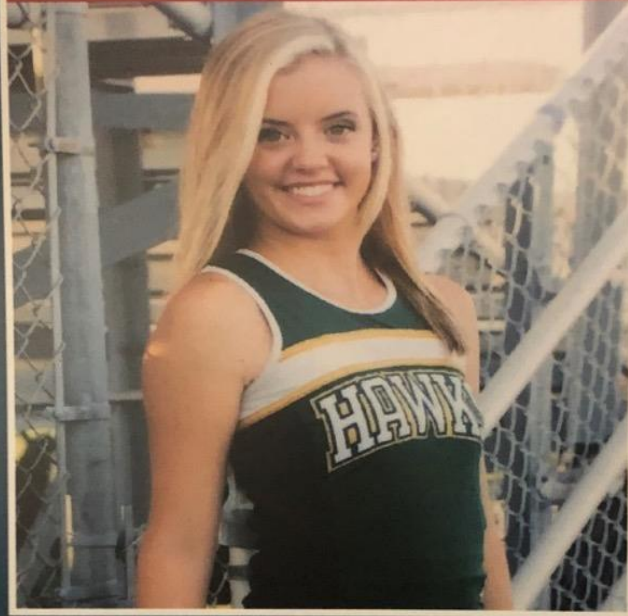




Parent Heart Watch.

THE NATIONAL VOICE
PROTECTING YOUTH FROM SUDDEN CARDIAC ARREST

SURVIVOR



Lexi Sima

Lexi, an avid athlete, suffered cardiac arrest at age 16 while at the gym running full pace on a treadmill. Bystanders quickly jumped into action administering CPR and using the gym's AED to shock her heart back to rhythm. Lexi was airlifted to the hospital where doctors implanted an internal defibrillator. The underlying cause of Lexi's cardiac arrest is unknown. Lexi now advocates for heart screenings of student athletes, CPR and widespread availability of AEDs.

www.ParentHeartWatch.org

HER GREATEST TITLE

SUDDEN CARDIAC ARREST
SURVIVOR



Quick thinking, AED machine saves Viera teen's life after treadmill tumble

BY GEORGE WHITE

Published: July 5, 2016



Bill Sick, left, Jack Rhodes John Lynch and Amanda Miller (not pictured) helped save Lexi Sima's life after she fell off a treadmill at a fitness center.

PHOTO BY GEORGE WHITE

OUR HEROES





“You have no idea what just happened to your family. Only 7 out of 100 survive what Lexi just survived.”

- Roland Filar, MD.
(Lexi's Cardiologist)

WHY I'M SO PASSIONATE

florida today Home Education

Daughter's heart scare prompts CPR training requirement for Brevard high schoolers

JESSICA SAGGIO | FLORIDA TODAY
Updated 9:28 a.m. EDT Nov. 2, 2017



Lexi Sima stands to be recognized by Matt Susan for her work to push legislation that made CPR a graduation requirement in Brevard.

Arron Lampkin/For FLORIDA TODAY

BPS Brevard Public Schools (official) 1 hr · 🌐



FLORIDATODAY.COM

Heart screenings to become mandatory for Brevard student-athletes



1/29/18 Senate Education Committee



SH SCHOOL HEALTH®

CARDIAC science

SUDDEN CARDIAC ARREST 101: A REVIEW

HEART ATTACK



PLUMBING PROBLEM

CLOGGED ARTERY

“TYPICALLY YOU HAVE TIME”

CHEST PAIN

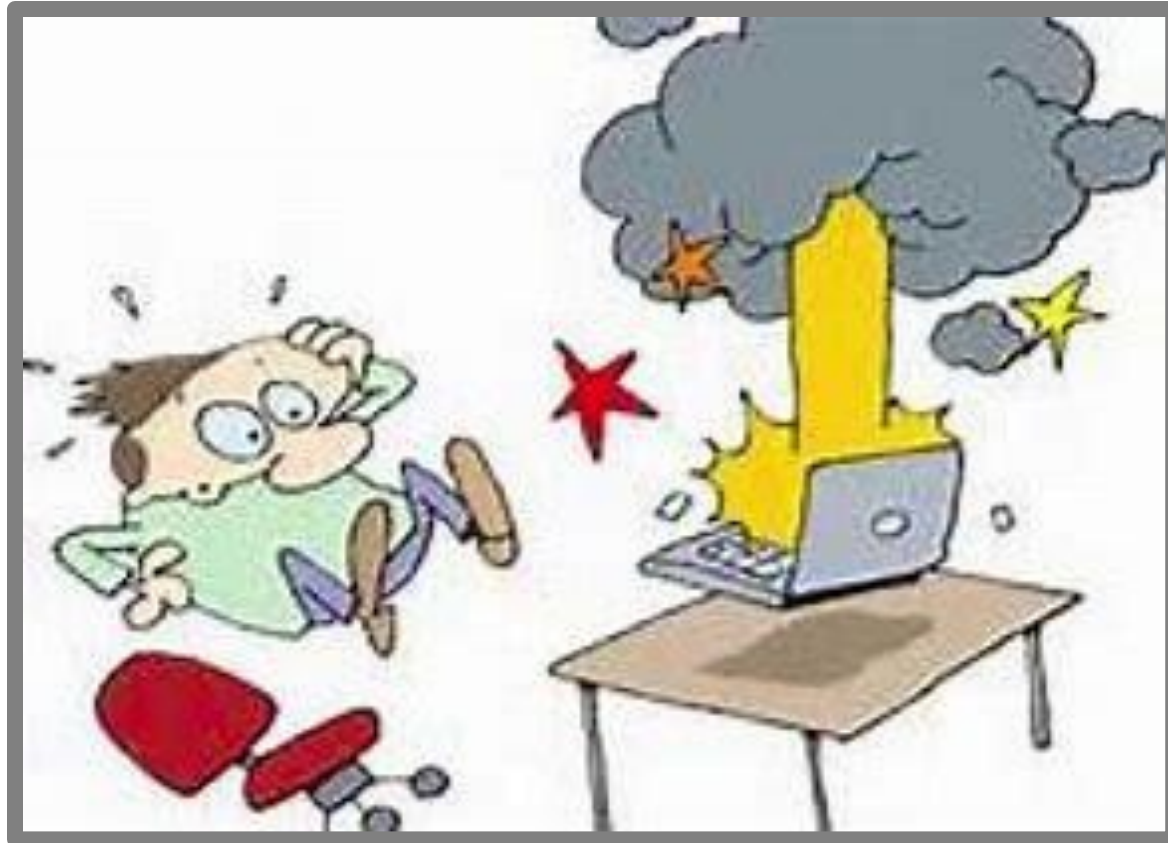
SHORTNESS OF BREATH

LEFT ARM AND JAW PAIN

COLD SWEATS

CAN LEAD TO CARDIAC ARREST

SUDDEN CARDIAC ARREST



ELECTRICAL PROBLEM

POWER SURGE TO THE HEART THAT
SENDS IT INTO CHAOS

“ALIVE TO DEAD”

HEART IS QUIVERING, NOT PUMPING
SUDDEN WITHOUT WARNING
TYPICALLY THE FIRST SYMPTOM IS
SUDDEN DEATH

SUDDEN CARDIAC ARREST STATISTICS



THE SHOCKING FACTS

Sudden Cardiac Arrest (SCA) is a national public health crisis affecting **1,000 people outside hospital settings each day**. It strikes people of all ages who may seem to be healthy, even children and teens.



Today only **1 IN 10 SURVIVES SCA**. If bystanders give CPR and use AEDs immediately **5 IN 10 COULD SURVIVE**.

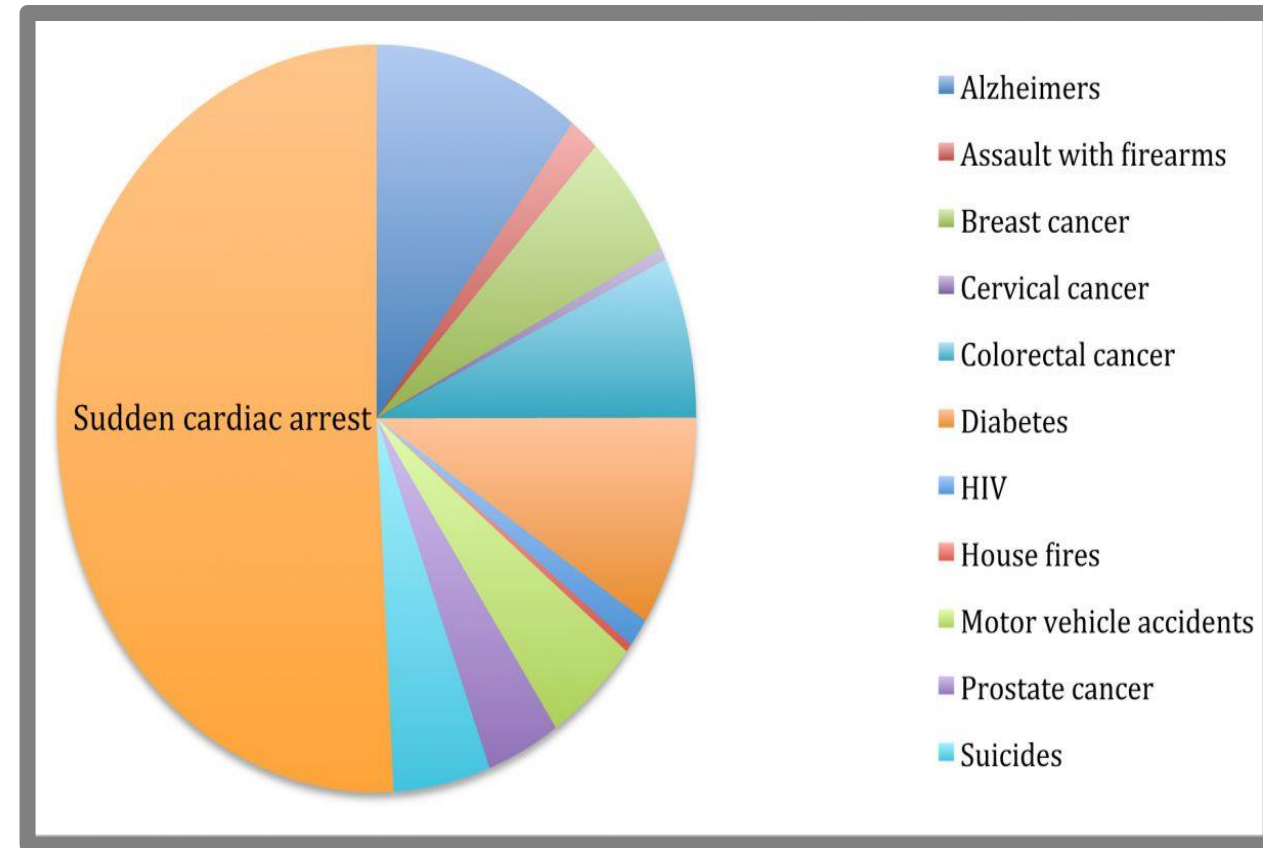


7 IN 10 SCAs HAPPEN AT HOME.

You could save the life of someone you love by starting CPR.

SCA kills more people than most “high profile” diseases and accidents **COMBINED**

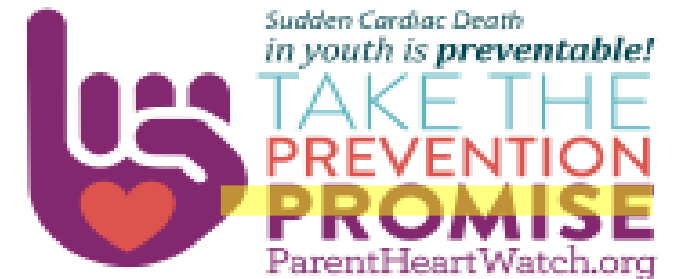
▪ Motor vehicle accidents	(2017)	40,100
▪ House fires	(2016)	3,390
▪ Firearms	(2017)	15,549
▪ Breast cancer (PREDICTED)	(2018)	40,600
▪ Colon cancer (PREDICTED)	(2018)	52,000
▪ Suicide	(2016)	44,965
▪ Prostate cancer (PREDICTED)	(2018)	29,400
▪ Drug Overdose Deaths	(2017)	72,000
▪ HIV	(2015)	6,465
▪ Cervical Cancer (PREDICTED)	(2018)	4,170
▪ Sudden Cardiac Arrest	(yearly)	325,000



#1 Cause of Death at School

Preventing the Leading Cause of Death on School Campuses

Sudden cardiac arrest (SCA) is the leading cause of death on school campuses¹—more than fires, violence, accidents, pre-existing health issues, head injuries, natural disasters or toxins. Many of these events have lessened by national attention or the enactment of prevention standards. Sadly, there is no national standard to prevent sudden cardiac death, even though 92% of victims die.²



#1 Killer of High School Student Athletes

Protecting Students & Student Athletes from Sudden Cardiac Arrest

Did you know that one child suffers sudden cardiac arrest (SCA) nearly every hour each year?¹ In fact, studies show that 1 in 300 youth have an undetected heart condition that puts them at risk.² What's more, SCA is the #1 killer of student athletes.³



To Your Health

Sudden cardiac arrest is a leading killer of college athletes. Here's the NCAA's plan of attack.

By Erin Blakemore
May 6, 2016



Most Read World

- 1 The Nobel Peace Prize 2018 winners brought attention to sexual abuse in conflicts
- 2 Erik Prince, in Kabul, pushes privatization of the Afghan war
- 3 The Chinese head of Interpol has disappeared — in China
- 4 'Just like Trump': Bolsonaro leads Brazil's presidential race with right-wing populist pitch
- 5 Survivors of the Indonesia earthquake struggle to



#1 KILLER OF COLLEGE ATHLETES



Heart disease is No. 1 workplace killer; here's a solution



Many victims have no prior history of heart disease and are stricken without warning. SCA is the No. 1 cause of death in the workplace, killing 10,000 American workers at their place of employment every year.

**#1 KILLER IN THE
WORKPLACE**

The Shocking Truth

7,037 kids per year (approx. 20 kids per day)
die in the United States from SCA

The Shocking Truth

One student athlete dies every three (3) days
in the United States from SCA

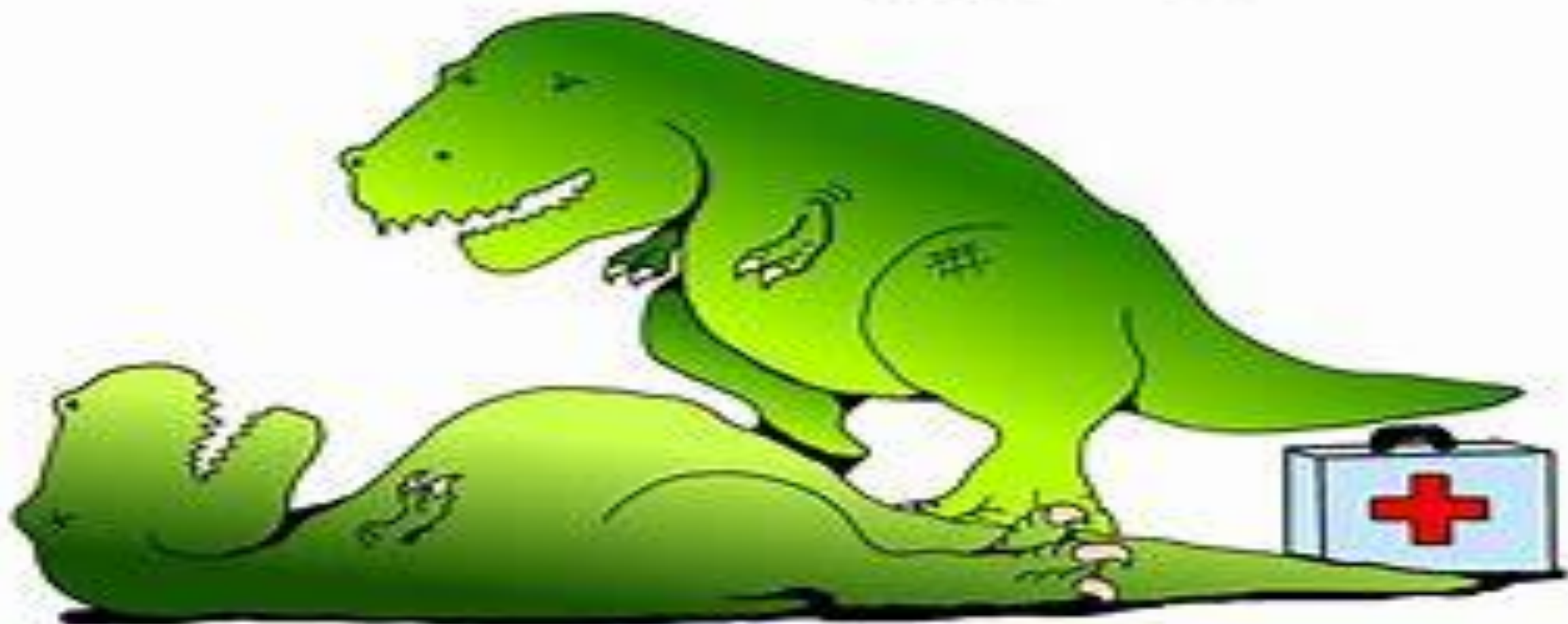
THE SHOCKING TRUTH

Approximately 1 in 300 youth have an undetected heart condition that put them at risk for SCA.

The Shocking Truth

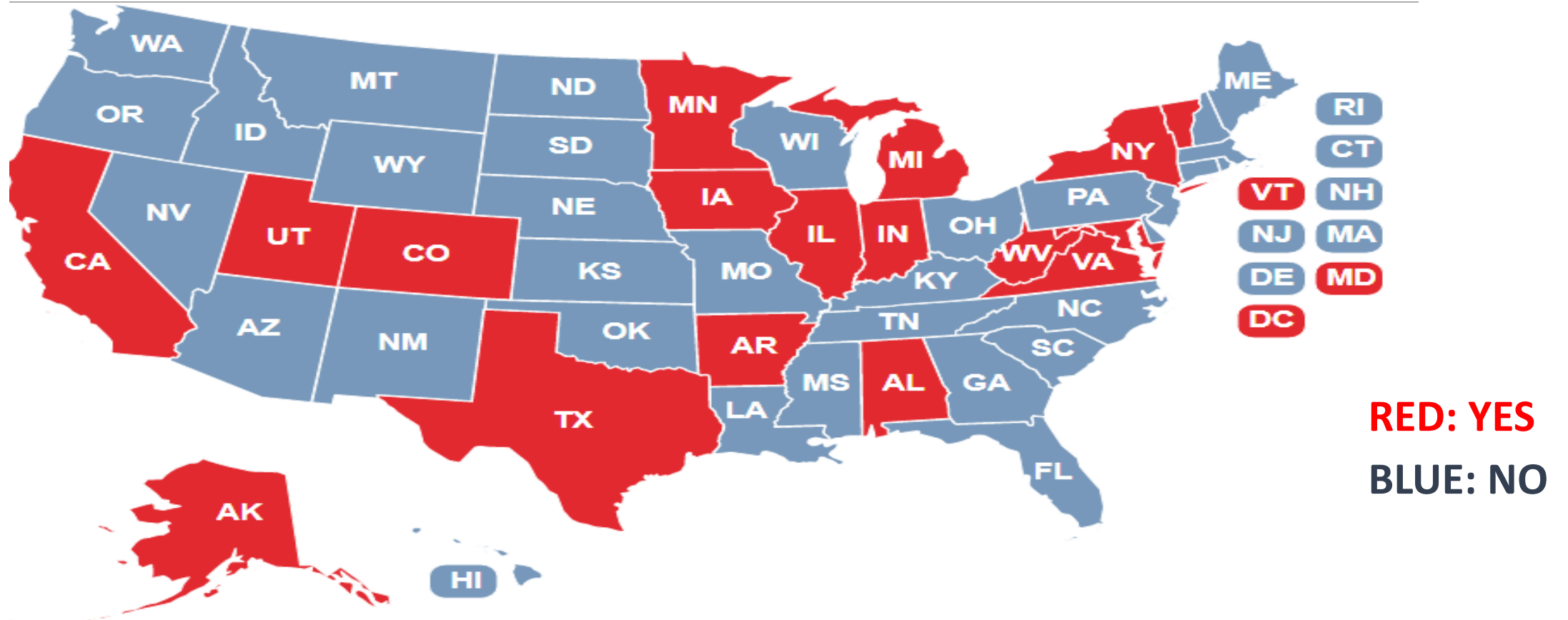
Approximately 1 in 25 schools experience a
SCA event each year

T-Rex *hates* **CPR**



Another theory on why they went extinct

States With Teacher CPR Requirements



States With Mandatory CPR Requirements

Known states where it is currently mandatory:

1. **Alabama** (For P.E. teachers. Health and Sports Management during education at least, but would be a good idea to keep current.)
2. **Alaska** (For school staff trained in de-escalation, restraint, and seclusion.)
3. **Arkansas**
4. **California**
5. **Colorado** (Requires at least one staff member.)
6. **District of Columbia (Washington D.C.)** (For Driver's Ed and P.E. Teachers.)
7. **Illinois** (Driver's Ed Teachers, other teachers encouraged.)
8. **Indiana**
9. **Iowa** (Only for P.E. / Health Teachers)
10. **Maryland** (**Early Childhood Development**, Only Supervisory Teachers)
11. **Michigan** (DOE lists **ProTrainings** as an approved provider. For initial certification for all teachers.)
12. **Minnesota** (For P.E. Teachers. Researching Special Ed. based on feedback.)
13. **New York**
14. **Texas** (Only for P.E. Teachers.)
15. **Utah** (Health / P.E. / Driver's Ed Teachers.)
16. **Vermont** (Health / P.E. Teachers.)
17. **Virginia** (HB 2028, SB 986 – Approved March 18, 2013)
18. **West Virginia**

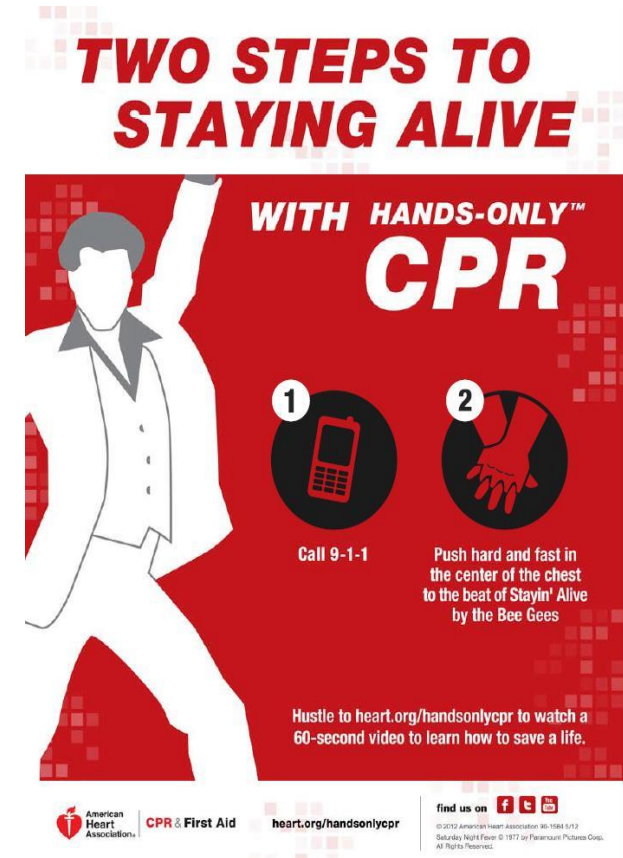
Who Should Know CPR??

1. SCHOOL NURSE
2. COACHES and ATHLETIC TRAINERS
3. TEACHERS
4. GROUP LEADERS/AFTERCARE WORKERS
5. ADMINISTRATIVE STAFF
6. SCHOOL RESOURCE OFFICERS/SECURITY SPECIALISTS
7. VOLUNTEERS
8. BUS DRIVERS
9. CUSTODIAL STAFF
10. FACILITY CREW/MAINTNANCE
11. ALL STUDENTS

EVERYONE!!!

Hands Only CPR

- As of 2008, the use of hands-only cardiopulmonary resuscitation (CPR) became a best practice
- Based on three major studies and with agreement from the American Heart Association, the hands-only CPR method was found to be just as effective as traditional CPR when performed on adults
- Hands-only CPR is beneficial a because it resolves unease that untrained bystanders may have about performing CPR due to health concerns regarding mouth-to-mouth ventilation



Simplifying to hands-only CPR

Experts now believe an adult who suddenly collapses due to cardiac arrest has enough air in his lungs and blood during CPR and doesn't need mouth-to-mouth breathing.

If you see someone collapse ...

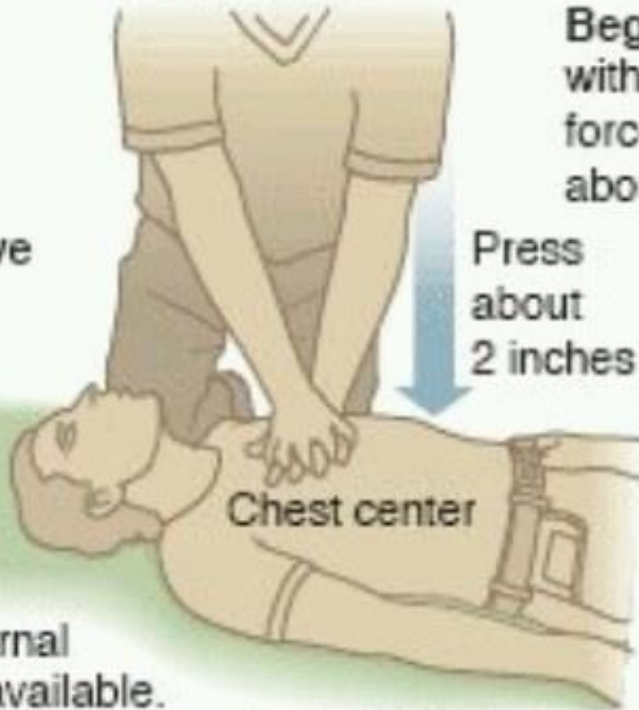
... have
someone
call 911.

Position
unresponsive
adult.



Use an
automated external
defibrillator if available.

Keep CPR interruptions to a minimum.



Press
about
2 inches

Begin hands-only CPR
with straight arms and
forceful compressions at
about 100 a minute.

Lift hands slightly
after each to allow
chest to recoil.

Take turns with
a bystander until
emergency
medical services
arrive.

The NEW CPR

CTRL ALT + DEL for the HEART

SYSTEM
FAILURE

KEEP
CALM
AND
CTRL
ALT+DEL

RESTARTS YOUR COMPUTER

=



RESTARTS YOUR HEART

WOMEN, CPR & SCA

The Shocking Truth

Women are more likely to die from SCA due to
a lack of CPR intervention



Study: Bystanders reluctant to touch a woman's chest

**WOULD YOU GIVE
A WOMAN CPR?**



YES

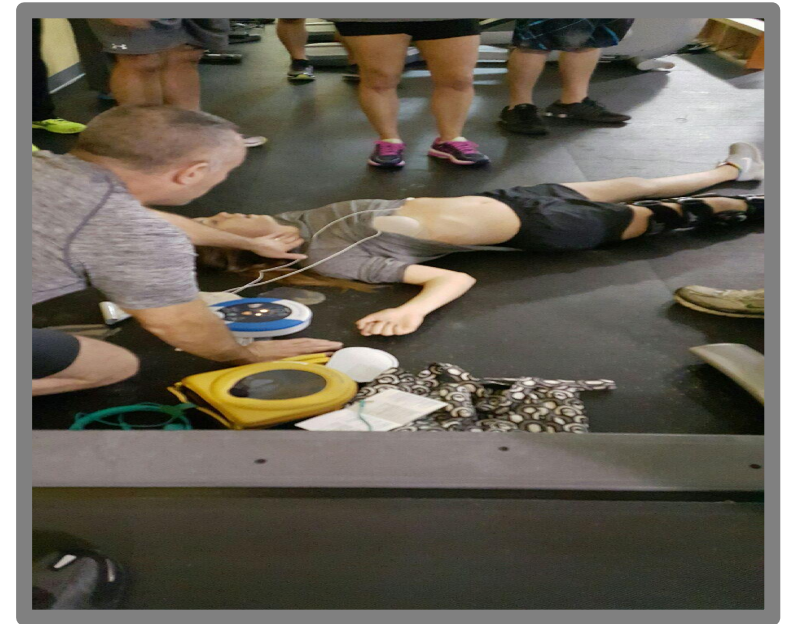


NO

Women are less likely to receive bystander CPR

WHY?

- Inappropriate touching or exposure
- Fear of being accused of sexual assault
- Fear of causing physical injury
- Poor recognition of women in cardiac arrest
 - specifically a perception that women are less likely to have heart problems, or may be overdramatizing or "faking" an incident
- The misconception that breasts make CPR more challenging



Women are less likely than men to receive CPR in public. A new product is designed to change that

By Gianluca Mezzofiore, CNN

🕒 Updated 5:24 PM ET, Wed June 5, 2019



The attachment fits a flat-chested CPR dummy with fabric breasts.

(CNN) — CPR mannequins are getting breasts -- with the goal of saving women's lives.

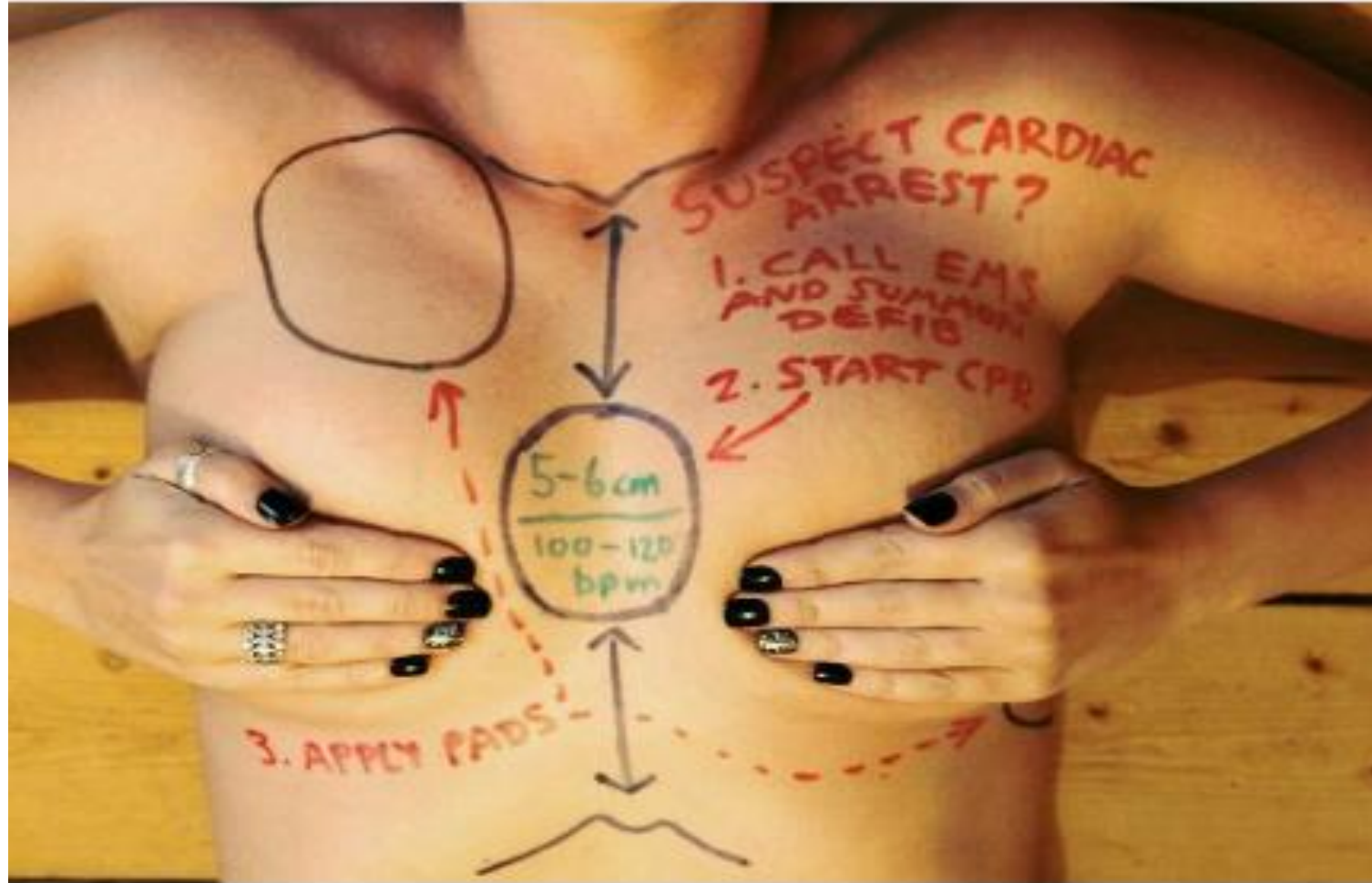
The so-called **Womanikin** is an attachment for flat-chested CPR dummies that aims to change the finding that... **women are 27% less likely than men to receive CPR** if they suffer from a cardiac arrest in public.

Rules of Engagement

If the victim is wearing a **bra**, remove it before placing the electrode pads*

Place **one** electrode pad on the victim's upper right chest and **one** on the lower left side under the victim's left breast.

**There is some risk that the metal in the bra may be a conduit for the electricity. Such contact can cause electrical arcing and patient skin burns during defibrillation and may divert defibrillating current away from the heart.*



CARDIAC EMERGENCY RESPONSE PLANS

Cardiac Emergency Response Plan (CERP)

THE WHAT: A **Cardiac Emergency Response Plan (CERP)** is a written document that establishes specific steps to reduce death from cardiac arrest in school settings.

THE WHY: A carefully orchestrated CERP during an emergency will reduce deaths in school settings, and ensure that chaos does not lead to an improper or no response.

Time is not on your side....

National average EMS response time

Researchers found that the **average time** for an **EMS** unit to arrive on the scene from the **time** of a 911 call was seven minutes. This **time** increased to more than 14 minutes in rural settings. Nearly one in ten encounters wait up to a half hour for **EMS** personnel to arrive. Oct 5, 2017

- The average national response time for EMS to arrive on scene after 911 is called is 7-12 minutes
- If you live in a high traffic urban area or a remote rural area, the average wait can be in excess of 30 minutes
- **Lexi waited more than 15 minutes**

Time is not on your side....

Response with CPR and an AED within 1-3 minutes increases survival rate from 8% to 89%



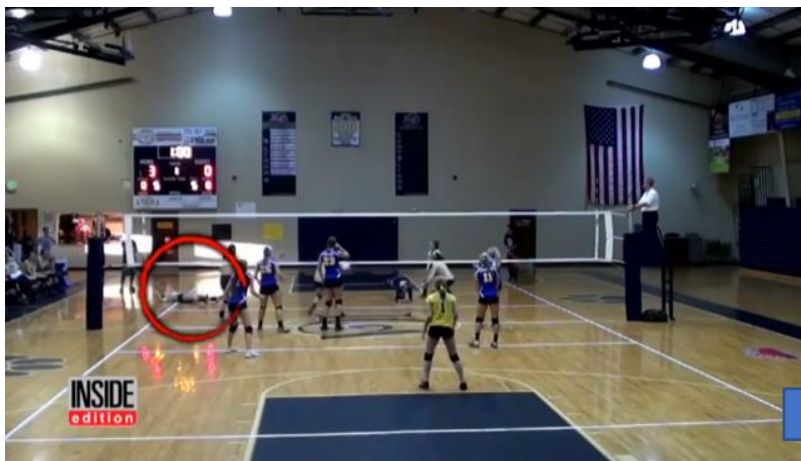
During a high school volleyball game, Claire went into sudden cardiac arrest.



:00 Claire grabs chest



:03 Claire hits floor



:16 911 called

Call 911 now!



:32 AED arrives



1:58 AED analyzing begins

2:18 AED advises a shock

2:23 AED advises a shock

2:26 AED administers 120 joules



4.5 minutes after Claire collapsed, her life returned.



An ambulance arrived 11 minutes after her collapse. Without AED intervention, it's likely that Claire would have died.

Cardiac Emergency Response Plan Quick-Start Guide

Be Prepared to Prevent Sudden Cardiac Death at **Your School**

Sudden Cardiac Arrest (SCA) is the leading cause of death on school campuses, and the #1 killer of student athletes. That's why it's critical for your school to have a written and well-practiced Cardiac Emergency Response Plan (CERP). Created by a national task force of health and safety organizations, a CERP is a vital step towards sudden cardiac death prevention.

STEP 1

Appoint a Cardiac Emergency Response Team

The onsite team helps document the plan, conduct drills and be the first responders.

Use the toolkit to:

- Identify team members who are/will be CPR/AED certified
- Review recommended guidelines for overall staff training

STEP 2

Document Emergency Response Plan

Include CERP in your school/district EAP, School Improvement Plan or Safe School Environment

Use the toolkit to:

- Personalize the plan to document the exact emergency action relevant to your school.
- Evaluate your plan annually

STEP 3

Install & Maintain AEDs Properly

AEDs must be properly installed and never locked away—always accessible.

Use the toolkit to:

- Properly install AED and register with manufacturer and EMS
- Establish protocol to conduct monthly checks & keep batteries and pads current

STEP 4

Conduct Life-Saving Drills

CERPS only work if you practice them. Test your team's readiness and your plan's effectiveness.

Use this toolkit to:

- Plan your annual cardiac emergency drill (like fire drills) & involve local EMS
- Evaluate your drills and make improvements

STEP 5

Share Plan With School Community

Educate students, parents, staff, coaches and facility users how they can be prepared to save a life.

Use this toolkit to:

- Send notices to your school community about SCA awareness and your CERP
- Circulate and post AED location throughout school community

Developing a CERP Team

- The CERP team shall be comprised of those individuals who have current CPR/AED certification.
- It will include the school nurse, coaches, and others within the school.
- It should also include an administrator/office staff who can call 9-1-1 and direct EMS to the location of the SCA.
- Members of the Cardiac Emergency Response Team are identified in the “Cardiac Emergency Response Team” attachment, to be updated yearly and as needed to remain current.
- One of the members shall be designated as the Cardiac Emergency Response Team Coordinator.
- All members of the Cardiac Emergency Response Team shall receive and maintain nationally recognized training, which includes a certification card with an expiration date of not more than 2 years.

How Many AED's Do We Need?

Inside school building – The number of AEDs shall be sufficient to enable the school staff or another person to retrieve an AED and deliver it to any location within the school building, ideally within 2 minutes of being notified of a possible cardiac emergency.

Outside the school building on school grounds / athletic fields – The number of AEDs, either stationary or in the possession of an on-site athletic trainer, coach, or other qualified person, shall be sufficient to enable the delivery of an AED to any location outside of the school (on school grounds) including any athletic field, ideally within 2 minutes of being notified of a possible cardiac emergency.

Back-up AEDs – One or more AEDs shall be held in reserve for use as a replacement for any AED which may be out-of-service for maintenance or other issues. The back-up AED(s) should also be available for use by the school's athletic teams or other groups traveling to off-site locations.

How Many AEDs Do We Need?

AED Coverage Area: Going back to high school math, we use the formula $\pi \cdot r^2$, where r is a radius of 300 feet, to calculate that the maximum theoretical area an AED can cover is 283,000 square feet (equal to about five football fields). But because AEDs are most often not placed in open areas, we must also account for obstacles such as people, doors, hallways, stairs, elevators, escalators, physical barriers and obstructions, AED storage methods, and similar constraints that reduce the effective area an AED can cover within the two-minute AED retrieval time. Let's assume that obstacles reduce the coverage area radius by half to 150 feet. This means, on average, an AED can cover about 70,650 square feet.

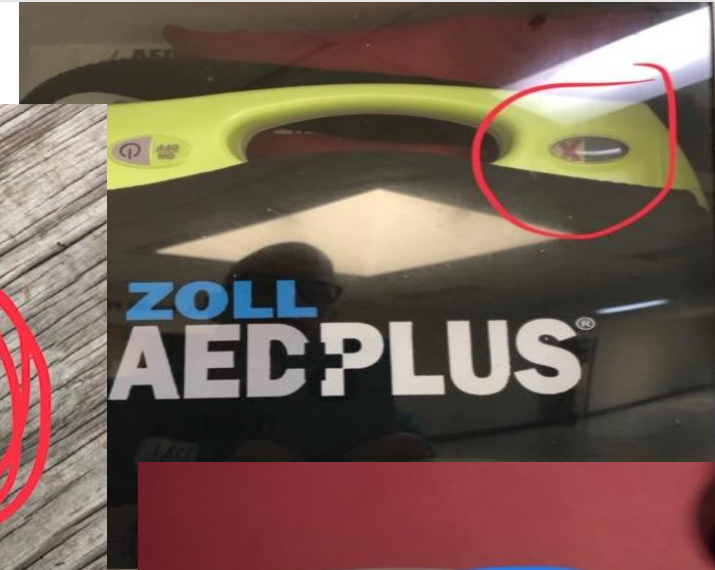
**On average, one (1)
AED can cover
approximately
70,650 square feet**

Is the AED accessible?



Maintain Your Equipment

Who's checking the batteries and pads?



Conduct CPR & AED Deployment Drills



THE IMPORTANCE OF AED DRILLS IN SCHOOLS



Cardiac Emergency Response Plan (CERP) Resources

AMERICAN HEART ASSOCIATION

https://cpr.heart.org/AHA/ECC/CPRAndECC/Programs/CPRInSchools/UCM_477994_Cardiac-Emergency-Response-Plan.jsp

Project ADAM

<https://www.projectadam.com/Heartsafeschools>

Eric Paredes Save A Life Foundation

<https://epsavealife.org/what-is-sca/cardiac-emergency-response-plan/>

Parent Heart Watch

<https://parentheartwatch.org/resources/sca-prevention/cardiac-emergency-response-plan/>

Anyone Can Save a Life

<http://www.anyonecansavealife.org/>

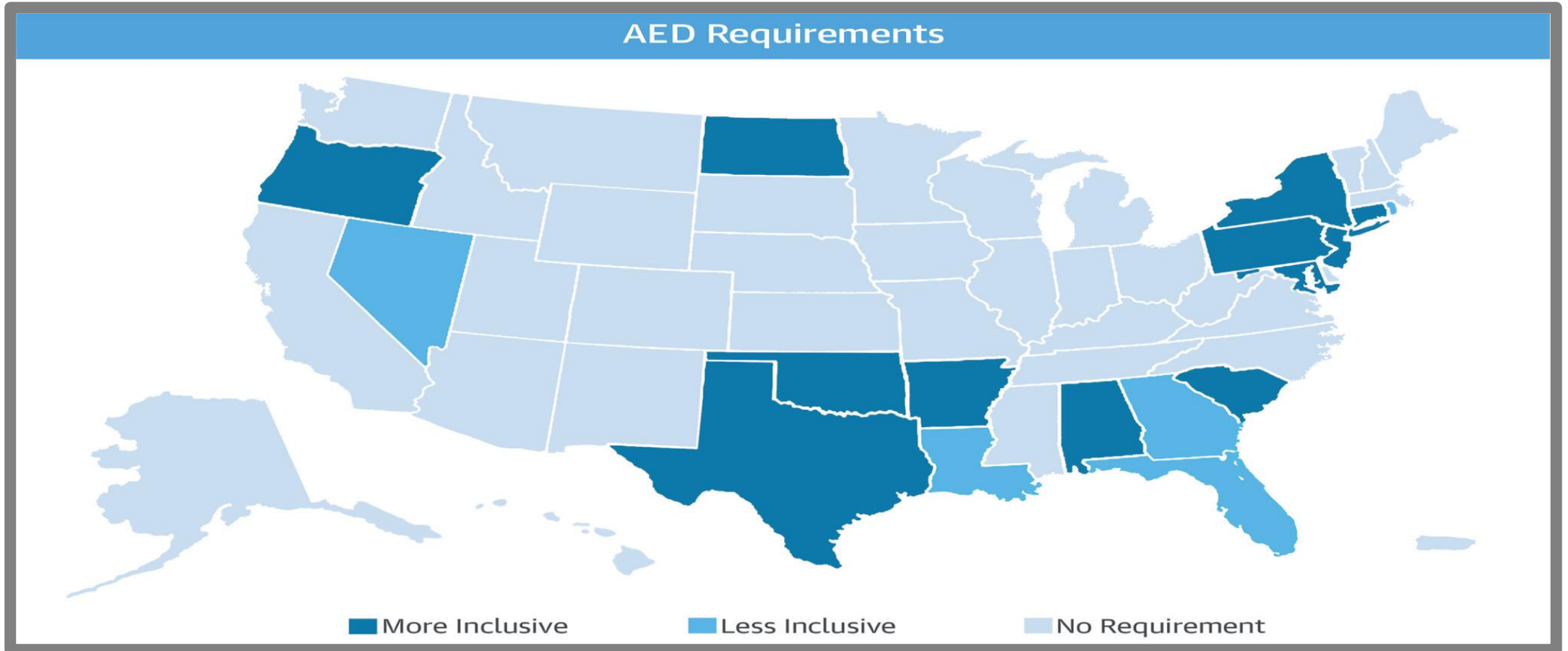
Emergency Care and Safety Institute

American Red Cross

National Safety Council

FUNDING YOUR AED PROGRAM

A sad state of affairs...



States That Require AEDs

According to [research](#) by Mark V. Sherrid, MD, New York University Langone Medical Center, et al, published in the *Journal of the American College of Cardiology* in March 2017, certain states require or recommend AED placement in various settings, including schools. Following is a summary, based on this research.

Schools

AEDs are *required* in schools in the following states:

Public and private schools

1. New Jersey***
2. Oregon*
3. Pennsylvania** (*Note: Sudden Cardiac Arrest Foundation sources indicate PA does not require AEDs in schools*).

Public schools

1. Alabama*
2. Arkansas
3. Connecticut
4. Florida
5. Georgia
6. Louisiana
7. Maryland***
8. North Dakota*
9. Nevada***
0. New York***
1. Oklahoma
2. Rhode Island*
3. South Carolina**
4. Texas*

*Unequivocal state funding

**Contingent state funding

***Local board of education funding

AEDs are *recommended* in schools in the following states:

1. California
2. Colorado
3. Ohio
4. Tennessee
5. Washington

States that require AED's
– is your state on the list?

AED Fundraising Strategies

The #1 KEY to getting funding/grants is to EDUCATE!

- STATS, STATS, MORE STATS (print these slides!) & Google Search
- Share local stories: A Survivor, Family of a loved one lost to SCA
- Find your local champion: Politician, School Board Member, Local Celebrity, Local Professional Team
- Make nice with the media: Exposure is the key. Get your cause on the front page!

AED Fundraising – Hospital Partnerships

- Local Community Hospitals are the epicenter for Public Health Crisis
- Hospitals have money earmarked each year for Community Projects (the “Feel Good Projects”)
- Hospitals have the money and we have to find it. Every hospital in the US has:
 - Community Benefits Department
 - Foundation Team
 - Marketing/Outreach Department
 - Cardiology Department

AED Fundraising – Hospital Partnerships (cont)

Non-Profit Hospitals:

- Non-profit hospitals are mandated to have a Community Benefit Program that gives back to the community.
- Non-profit hospitals are focused on critical unmet needs which are identified every 3 years (Community Health Needs Assessment).

For-Profit Hospitals:

- Are not mandated to have a Community Benefit Program
- Answer to shareholders, less money earmarked for community programs.

If you can get one hospital to support your cause, it is likely to set the trajectory for others to follow

AED Fundraising Resources – Schools/Civic Groups

Other community resources:

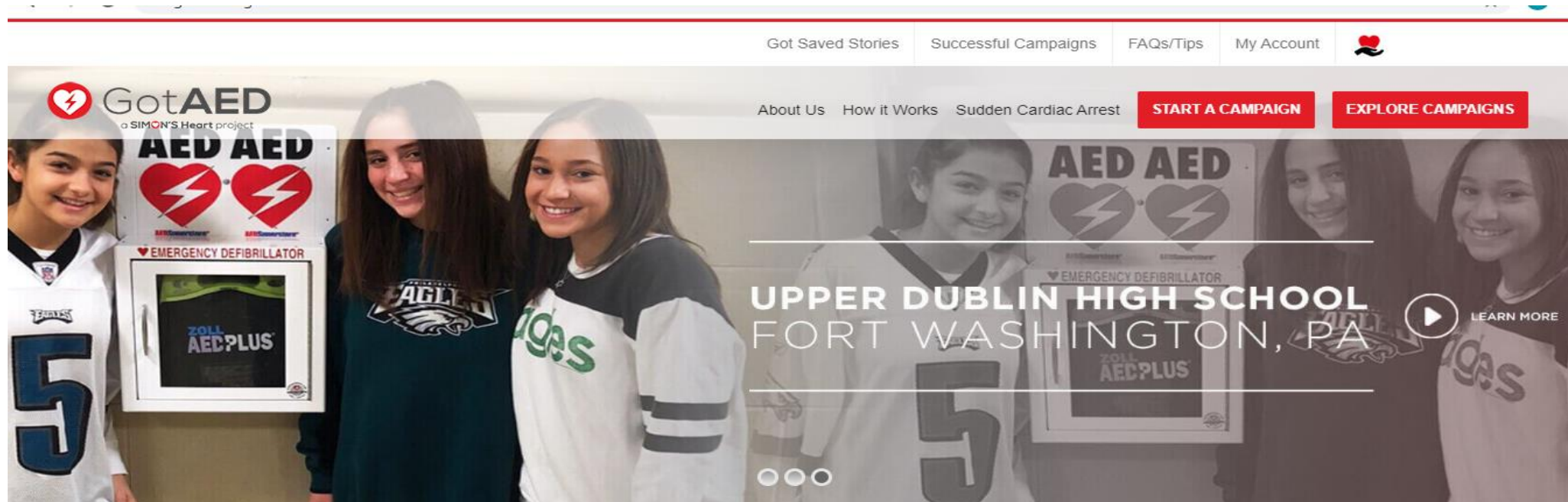
- PTA
- Student or Booster Club Fundraiser
- School Board Initiative
- Rotary
- Kiwanis
- Lions
- Jr. Service League
- Women's Club

AED Fundraising Resources – Internet

- Ask for donations directly from the public
- Social Media: Facebook, Twitter, Instagram
- Amazon Smile/Pay Pal and other apps where you can allocate a percentage of your purchase to a local charity
- GotAED.org, GoFundMe

AED Fundraising Resources – Crowdfunding

“The practice of funding a project or venture by raising many small amounts of money from a large number of people, typically via the Internet”



GotAED is a crowdfunding site dedicated to placing AED in schools and wherever kids learn and play.

AED Fundraising Resources – Grants

Need help funding an AED? Various organizations accept grant applications to support schools:

[AED Superstore](#)

[AED.US](#)

[AEDGrant.com](#)

[California Wellness Foundation](#)

[Cintas](#)

[CPR Savers](#)

[Dick's Sporting Goods](#)

[Firehouse Subs Public Safety Foundation](#)

[Hopey's Heart](#)

[GotAED.com](#)

[Physio Foundation](#)

[State Farm](#)

[Target Foundation](#)

[ThinkAED.com](#)

[Union Pacific Foundation](#)


[Walmart Foundation](#)

[ZOLL](#)

THE POWER OF YOU!



How NASN made a difference....

1. H. RES. 35 relating to AED training in the Nation's schools. 

0 LIKE 



Marlene Gardner,
MS, MBA, RN,
BSN

Posted 27 seconds ago |  [view attached \(3\)](#)

REPLY TO DISCUSSION 

NASN recently hosted a webinar on Sudden Cardiac Death (SCD) presented by Shawn Sima. Shawn is the father of a high school aged SCD survivor (thanks to CPR and an AED). If you've not watched it, I would highly encourage you to do so! SCD is the #1 killer of our students!!

Shawn and I served together in the USAF and he asked if I would share the following as a follow up to the webinar. House Resolution 35 is an easy to read bill (see attached) and it gets AEDs/Training into our high schools. I would urge you as a citizen (not from a Public School position) to call/write your Congressmen and Congresswomen asking for a YES vote on this important legislation.

Attached is also contact information for your representative, and sample wording for either a letter or phone call.

Again, I am not representing my school but feel activated from attending our Virginia School Nurse Association Meeting where we talked about getting involved and that even 4 phone calls can make a difference!

Thank you!

Marlene Gardner
School Nurse
VA United States

Email sent from 2018 School Health
SCA webinar attendee advocating
for House Resolution 35 (AED's in
schools)

JOHN J. DUNCAN, JR.
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WASHINGTON, DC 20515-4202
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800 MARKET STREET, SUITE 110
KNOXVILLE, TN 37902
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FAX: (865) 544-0728

331 COURT STREET
MARYVILLE, TN 37804
PHONE: (865) 984-5464
FAX: (865) 984-0521

Congress of the United States
House of Representatives
Washington, DC 20515-4202

COMMITTEES:
TRANSPORTATION AND INFRASTRUCTURE
VICE CHAIRMAN
SUBCOMMITTEES:
HIGHWAYS AND TRANSIT
RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS
AVIATION
OVERSIGHT AND GOVERNMENT REFORM
SUBCOMMITTEES:
NATIONAL SECURITY
TRANSPORTATION AND PUBLIC ASSETS

December 20, 2018

Dear Mr. Sima, Ms. Gardner, the NASN, and Members of their
Grassroots Team:

All of you tirelessly advocated for H. Res. 35 - the AEDs
Resolution - which expresses the sense of Congress that schools
with AEDs should have annual education on how to use their AEDs.
Every second counts when anyone - including children - are
suffering from sudden cardiac arrest.

Your efforts were unparalleled and made all the difference in its
successful passage on December 12, 2018.

I am deeply grateful to you for all your hard work and for your
dedication to raising awareness and, most importantly, to saving
lives.

With kindest regards, I am

Yours Truly,



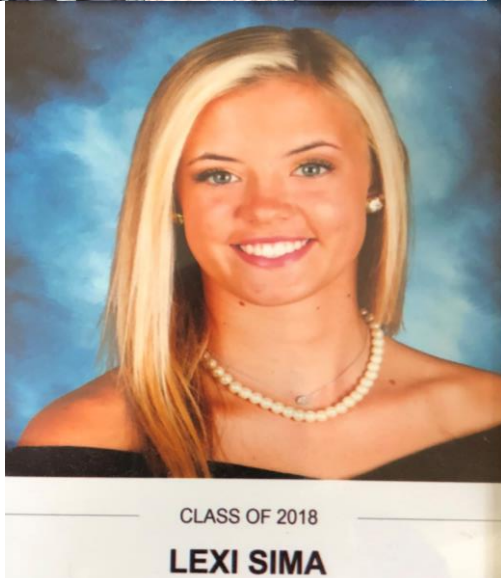
JOHN J. DUNCAN, JR.
Member of Congress (TN-02)

Dear Mr. Sima, Ms. Garner,
the NASN, and Grassroots
Team:

All of you tirelessly advocated
for H Res 35.

Your efforts were unparalleled
and made all the difference in
successful passage on
December 18, 2018.

Lexi Today



QUESTIONS?



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***CPR/AED ADVOCACY, CPR TRAINING, AED DONATION,
HEART SCREENINGS***