Public Access Defibrillation in Phoenix, Arizona

John V. Gallagher MD, FACEP, FAAEM
EMS Medical Director, Phoenix Fire Dept.
Clinical Asst. Professor, Dept. of Emergency Medicine
University of Arizona College of Medicine-Phoenix
Financial Disclosure

None
Phoenix, Arizona USA

- 520 Square Miles
- Population 1.5 million
- Over 700+ cardiac arrests per year.
Public Access Defibrillation

In 2001, over 300 AEDs were placed in various locations around the City of Phoenix – city courts, city office buildings, city community centers, city golf courses, city senior living centers and the municipal airport (Sky Harbor).
City employees at these locations were trained to provide chest compressions, CPR, and taught how to use an AED.
Where is the best place in Phoenix, AZ to have sudden cardiac arrest?
Sky Harbor Airport
Phoenix, Arizona

In January 2001, **85 AEDs** were placed in the 3 airport terminals (2,3,4). **5 AEDs** were placed in airport security cars.

Each AED inside the terminal is located within a 2 minute walk of each other.
Sky Harbor Airport
Phoenix, Arizona

- Each AED is located in a metal case with a glass door (similar to a fire extinguisher).
- There is a placard on each that depicts a heart with a lightning strike through it.
Sky Harbor Airport
Phoenix, Arizona

If the metal case door is opened, an audible alarm is activated and a red flashing light goes on.

This was designed to alert police officers to the location of an emergency incident.
Phoenix Police officers (90) and over 1,000 aviation employees were trained to do chest compressions, CPR and to use an AED.

- 44 million visitors in 2015.
- 43 million visitors in 2016.
Sky Harbor Airport
Phoenix, Arizona

Since 2001, there have been 59 Witnessed Ventricular Fibrillation cardiac arrests incidents.
Sky Harbor Airport
Phoenix, Arizona

- **Bystander Chest Compressions/CPR** occurred in **100%** of these cardiac arrests.

- **AEDs** were used by police officers or a medical professional to **shock patients** within **4 minutes (or less)** from time of collapse.
Survival to hospital discharge, neurologically intact.

(46/59)
Robert S., 82 y.o. male in good health
Just returned from a month long vacation in Puerta Villarta, Mexico
He collapsed while walking to baggage claim
His wife, a retired ICU RN, called 911 and started chest compressions.
2 Phoenix Fire bike teams < 2 min.
AED was used/shocked (2) out of V.Fib.
39th Survivor

- He was alert and oriented on arrival to the cardiac arrest center.
- He received a stent to his mid LAD coronary artery (99% stenosis).
- He had an ICD placed prior to discharge.
- He went home after 5 days in hospital.
We talked about baseball.

- He played college baseball at the University of Notre Dame.
- He was from Detroit, Michigan / and was still a Tigers fan.
- He had been retired and living in Arizona for the past 17 years.
His only complaint was... that his chest was sore!

- His wife told me later that she was very happy that he was still around.
- He told me at a press conference on 5/11/15 that he wanted to live 17 more yrs.
July 31, 2016 (44th Survivor)
Two Thumbs Up for AEDs
Most recent V. Fib. arrest survivor occurred on Oct 16, 2016.

- 75 y.o. male. CPR started by an off duty paramedic.
- Shocked once out of V. Fib.
- Awake and alert on arrival at the hospital.
He told me his chest was sore too and asked me why our firefighters had to be so big. He was kidding of course!
He called me from his home in Sonoma, CA. on 10/27/16. He invited me to visit him there in June which is the next time NASCAR has a race on the race track he manages.
Thanks to the Phoenix Fire Dept. FF/EMTs, FF/Paramedics, Police Officers, Aviation Staff, Nurses, and Physicians who made this all happen (teamwork).
Questions ?
The End
Upset Rapid, Rated 8-10
Grand Canyon, Arizona
October 2013, October 2015, September 2016
Next trip TBD?