



U.S. Department of Health and Human Services



Exemplary Practice Citation Application

- ▶ Automated External Defibrillator Program in Federal Workplace by Federal Occupational Health

- ▶ Item 2.3 Non-Occupational Illness Management



FEDERAL OCCUPATIONAL HEALTH:

- ▶ Part of the U.S. Department of Health and Human Services and a component of the U. S. Public Health Service
- ▶ Became fully reimbursable in 1984, operating with no Congressional appropriations



FOH's *Mission*

To improve the
health, safety, and
productivity of the
federal workforce.





Division of Clinical Services



FOH Automated External Defibrillator (AED) Programs in Workplace

Commander John J. Perkner, DO, MSPH (USPHS)
jperkner@psc.gov



AED PROGRAM- HISTORY

- ▶ Sudden Cardiac Arrest – responsible for 300,000 deaths per year (workplace deaths prevalence unclear)
- ▶ American Heart Association - supports AEDs as integral part of response to Sudden Cardiac Arrest in late 90's
- ▶ ACOEM Position Statement on workplace AEDs -2001



FOH AED PROGRAM

- Need for Workplace AED Program assessed by FOH 1999; pilot program started 1999-2000
- FOH program has grown to over 4000 AEDs in workplaces in over 100 sites



Federal Support for AED Programs

- ▶ **Clinton Radio Address - May 2000**
- ▶ **Cardiac Arrest Survival Act - November 2000**
- ▶ **DHHS Guidelines for Placement of AEDs in Federal Buildings - May 2001**
- ▶ **OSHA Technical Bulletin**
- ▶ **FAA - Placement of AEDs in planes**
- ▶ **Rural AED Grants**

The NEW ENGLAND
JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

AUGUST 12, 2004

VOL. 351 NO. 7

Public-Access Defibrillation and Survival
after Out-of-Hospital Cardiac Arrest

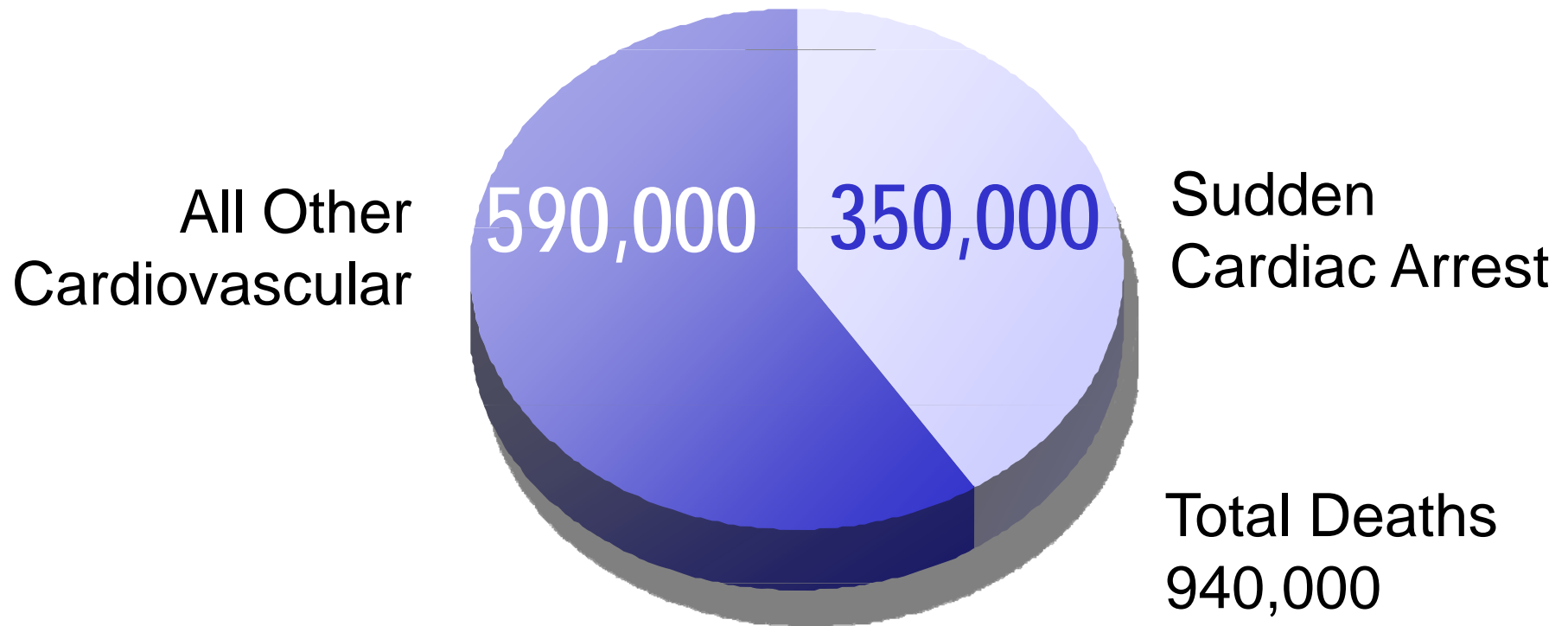
The Public Access Defibrillation Trial Investigators*

- Lay responder defibrillation significantly increases survival after cardiac arrest if the program is able to defibrillate prior to EMS arrival and the PAD emergency response plan is effectively implemented and sustained.



The Odds

Annual Deaths from Cardiovascular Disease – U.S.





SCA: Heart in Chaos *Ventricular Fibrillation*

- ▶ Abnormal; irregular, very fast heart rhythm
- ▶ Heart can't pump blood effectively
- ▶ Victim:
 - ✓ Unconscious
 - ✓ Not breathing spontaneously
 - ✓ No pulse
- ▶ *Only* definitive treatment: Defibrillation



“Chain of Survival”

*Rapid, Coordinated Response
Improves Outcome*



Early
Access



Early
CPR



Early
Defibrillation



Early
Advanced
Care



AED Components - Team Members

- ▶ AED Medical Director
- ▶ AED Program Specialists
- ▶ AED Administrative Team
- ▶ AED Site Coordinators
- ▶ AED Team Responders





AED Program Components

- ▶ Medical oversight
- ▶ CPR / AED training organization
- ▶ EAP contact / Critical Incident Stress Management
- ▶ AED procurement
- ▶ Integrate with local EMS organization



FOH AED Program

Components

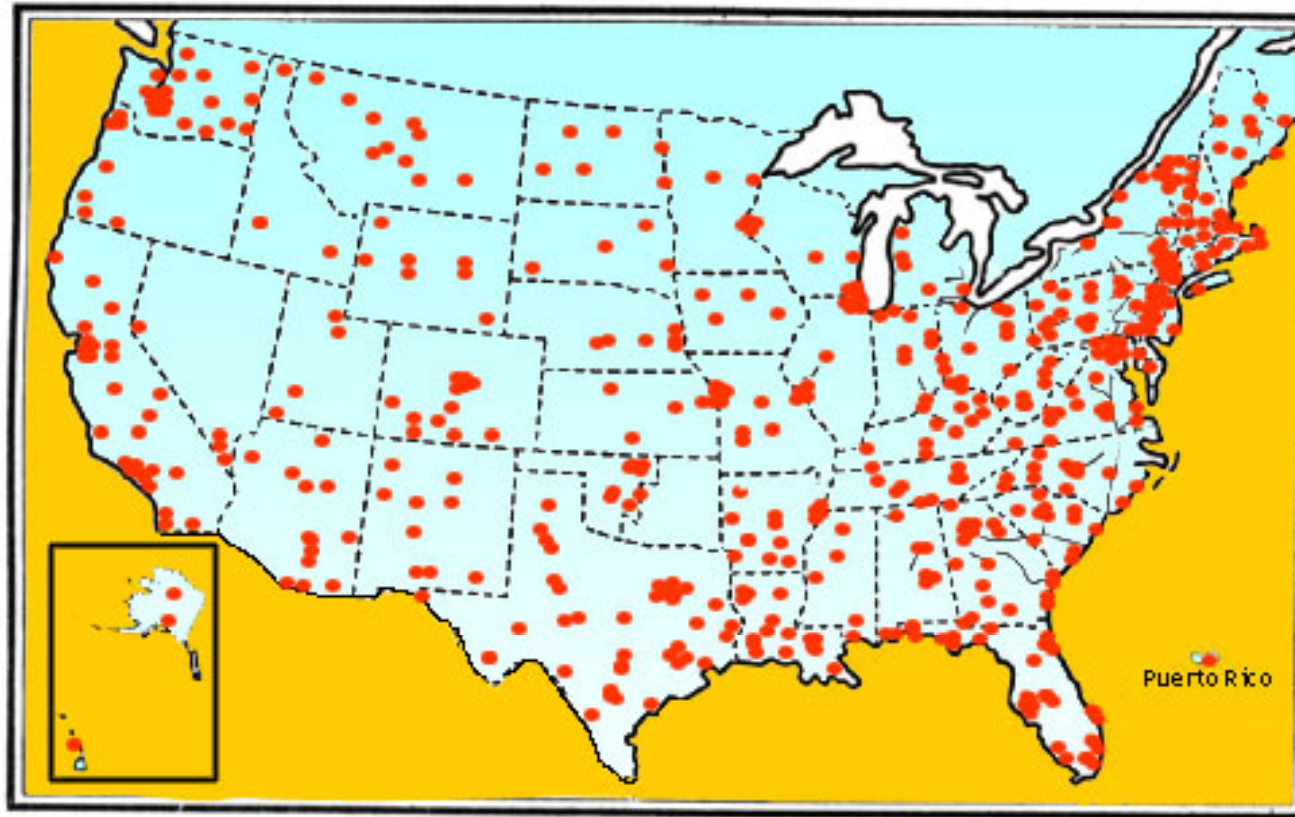
- ▶ Medical Oversight
- ▶ CPR / AED training organization
- ▶ Employee Assistance Program (EAP) contact / Critical Incident Stress
- ▶ Management services
- ▶ Integrate with local EMS organization



Division of Clinical Services



FOH AED PROGRAM SITES





FOH STATISTICS

Witnessed Sudden

Cardiac Arrest (less than 5% survival if no AED)



- ▶ 20 males
- ▶ 13 females
- ▶ Males 34 to 73 years of age
- ▶ Females 37 to 72 years of age
- ▶ Average age of males = 54
- ▶ Average age of females = 53
- ▶ Save rate = 39%



SCALABLE PROGRAM:

- ▶ Single AED Program
- ▶ Multi-AED Complex sites





Lessons Learned

- ▶ **Murphy's law is true and MAGNIFIED in large, high profile programs**
- ▶ **Examples of errors: dead batteries, absent data cards, activation of teams, new personnel**
- ▶ **Need management systems; motivated team**



QUESTIONS

- ▶ **COST EFFECTIVE**
- ▶ **LIABILITY CONCERNS**
- ▶ **LOGISTICS**
- ▶ **LONGTERM OUTCOMES**