



# EMS NEWS

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## My Sudden Cardiac Arrest

By Dwight T. Mensinger



On the morning of Monday, February 2<sup>nd</sup>, 2004, I was in a meeting with a co-worker at my office in Fremont. I was feeling run down and tired,

but otherwise okay. I had just finished a cigarette and was feeling a little anxious since I was in the "Quitting Smoking Program" at Kaiser and at 6 PM was to give up smoking. I remember talking and that's all I remember. One-minute life was normal, the next - I was gone. No conscious thoughts, no bright lights or long lost relatives.

My coworker screamed for help and called 9-1-1. Two other co-workers came in and administered CPR with the help of the dispatcher. A short time later, Engine 7 and Truck 7 from the Fremont Fire Department arrived and immediately went to work to bring me back. Thus began a long process of resuscitation and recovery. According to both the responding paramedics and several doctors and nurses from Kaiser, if I had not received the initial CPR from my co-workers, I would probably not be here today. Even so, all have told me that they did not expect me to leave the hospital on my own.

*"Dying is something the vast majority of us do one time in our lives, and that is the way it should be. For those of us who have been brought back ... it has a profound impact on your life."*

Dwight Mensinger

In reality, thanks to the work of incredible people and luck on my part, and a mission in life that God has yet to define, I am here to, hopefully, make a difference.

Dying is something the vast majority of us do one time in our lives, and that is the way it should be. For those of us who have been brought back or have survived an event like a SCA (Sudden Cardiac Arrest), it has a profound impact on your life. It is not unique to me. I have spoken to other survivors who share many of the same feelings. Those who have not experienced this event cannot fully comprehend its personal impact. It slams your whole being right up

against a wall—you see life and living very differently. Life becomes a wonderful gift to be fully cherished. Love feels different and better. You feel for your loved ones, your family and friends in a totally different way. You feel humbled and fortunate to be with everyone. Helping people feels different, because you look at people so differently.

My life now is focused on helping save lives, at least one life a day either directly or indirectly. I speak to anyone and everyone I can about SCA. I try to help educate people about this killer. In order to offer people the greatest chances of sur-

## "Heroes" Honored by the City of Fremont

On February 8, 2005, the Fremont City Council, Fremont Fire Department and Senator (name) Alquist of Santa Clara County honored six Fremont Firefighters, two 9-1-1 dispatchers, two AMR paramedics and three citizens for their life saving efforts, and contributions to the chain of survival, for the successful resuscitation of Mr. Dwight T. Mensinger.

Mr. Mensinger suffered a sudden cardiac arrest (SCA) at his place of employment in the City of Fremont at 10:27 a.m., February 2, 2004. The Alameda County emergency response system and all who were involved made the difference between life and death that day.

Living SCAs, heart attacks, drownings, etc., we must ensure that the majority of our society knows CPR. I am talking with teachers, school administrators and politicians about teaching students in the use of CPR and Automatic External Defibrillators (AEDs).

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I am also talking to everyone I can about AEDs. They should be as common as fire extinguishers and everywhere, particularly schools, office buildings, and police cars. I've become a proponent of [chest compression belt] resuscitation. Every fire truck in the state should have one. It provides chest compressions in a way that no rescuer can and if its use became more widespread, we'd see more people surviving SCAs.

Finally, I want to make people aware that "heroes" are not rock stars and rappers— they are our firefighters, paramedics, EMT's and police officers. These people go to war with death. They do not always win, but they are fighting for us as hard as they can.

Thank you for the opportunity to share how this experience has changed my focus on life. Like everyone, I still need to earn money to help care for my family but I cannot go back to my prior life because that was a life that was focused on money issues. Now, when I do find a new career path, it will be doing something I love and care very much about – helping people live.

*Editor's Note: The EMS Agency would like to thank Mr. Mensinger for*

*submitting this article—this is what it is all about! For more information on SCA, CPR and chest compression belts, see the stories on page 3.*

## EMS Week is May 15-21

The 32nd annual Emergency Medical Services (EMS) Week will be observed throughout the nation May 15-21, 2005. "EMS is a vital part of every community, but recognition of its contribution is often lost in the broader focus on fire, police, public health and homeland security," said American College of Emergency Physicians President Robert E. Suter, DO. "The events during this week are important to bring together local communities to honor the more than 750,000 EMS providers nationwide and to raise public awareness about important health and safety issues."



EMS Week is sponsored by the ACEP. For more information on EMS Week go to [www.acep.org](http://www.acep.org).

## EMS Staff Member selected for National Speakers' Bureau on Older Driver Safety

Colleen Campbell, Senior Injury Prevention Project Coordinator for the Alameda County Public Health Department, EMS Division, has been selected by the American Society on Aging as one of 17 individuals to serve on the Drive-Well National Experts Speakers' Bureau that will promote older driver safety and mobility.

With guidance from Ms. Campbell and other members of the speakers' bureau, communities nationwide soon will introduce a new approach to older driver safety—one that encourages communities to think more broadly about how America's burgeoning elderly population should get around. The public information experts will serve as technical resources on older driver safety and mobility in their regions of the country. The experts and the community-based professionals they work with will use an array of tools and materials about older driver safety and mobility recently developed by ASA and other organizations in cooperation and support from the National Highway Traffic Safety Administration.

"This is an exciting opportunity that will provide us with the latest tools as well as a forum to work together as a community to address the transportation and mobility issues of older adults in Alameda County and surrounding Bay Area counties", states Ms. Campbell. We need to ensure that the older adult population is provided with information on options that prolong safe driving years as well as access to effective alternatives to driving." While Americans aged 70-plus are among the safest drivers on the road, they tend to suffer more serious injuries. Contact Colleen Campbell at 577-3535 or [ccampbel2@co.alameda.ca.us](mailto:ccampbel2@co.alameda.ca.us).



Dwight Mensinger and his "heroes" from: American Medical Response, The Fremont Fire Department, and his co-workers, who started CPR and called 9-1-1.



By Jim Pointer, MD

**CPR - Are We Doing The Best That We Can?** Two recent studies have demonstrated that out-of-hospital personnel may not be performing CPR in an optimal fashion according to the guidelines published by the American Heart Association (AHA).

Let's take a look at these studies. Dr. Tom Aufderheide and his colleagues reported a clinical observation study using human and animal subjects in Milwaukee. The researchers observed 13 consecutive adults who received CPR. The average ventilation rate was 30/minute ( $\pm 3.2$ , range 15 to 49). The average duration of each breath was 1.0 second ( $\pm 0.07$ ). No patient survived.

The authors then studied nine pigs in cardiac arrest that were randomly ventilated, with 12, 20, or 30 breaths/minute. Coronary perfusion pressures (blood flow to the coronary arteries in mmHg) were much higher in the 12 breaths/minute group 23.4 ( $\pm 1.0$ ) vs. 19.5 ( $\pm 1.8$ ), and 16.9 ( $\pm 1.8$ ) respectively.

The authors correlated the Milwaukee professional rescuers' hyperventilation during performance of CPR with the pig studies. The conclusion was that the rescuers greatly exceeded the Heart Association's CPR recommendation of 12 -15 breaths/minutes, and that the high ventilation rates prevented coronary flow due to high intrathoracic pressures that impeded venous return.

Dr. Wik and his colleagues looked at the quality of chest compressions during CPR among paramedics and nurse anesthetists in Stockholm. The researchers measured chest compressions as a percentage of total CPR time as well as the depth of

these compressions. They found that the chest compressions were not given 48% of the time in which patients were without spontaneous circulation. When time for performing EKG analysis and defibrillation was subtracted, that percentage dropped to 38%. In only 28% of the cases did compressions meet the AHA guideline for depth of compression (4-5 cm, 1½ -2 inches). The authors concluded that chest compressions were not delivered during half of total CPR time, and that these compression were too shallow.

Effective performance of CPR is increasingly being shown to produce dramatic effects on survivability from cardiac arrest. The authors in the Aufderheide study recommended extensive retraining of out-of-hospital personnel to ensure that the breaths delivered did not exceed approximately 12 per minute. They suggest using a Bag-Valve-Mask system that flashes a light every five seconds.



Chest compression device in use

Remember that the AHA recommended guidelines for chest compression rates of 100/minute, 12-15 breaths/minute, and a chest compression depth of 1½-2 inches, are based on science. Be aware of yours and your colleagues' performance of this important, but basic, life saving tool. The use of a chest compression belt may help to facilitate chest compressions.

## From the Medical Director

As usual, please contact me if you have any comments or concerns at [james.pointer@acgov.org](mailto:james.pointer@acgov.org) or 618-2022.

### References;

Aufderheide, T., et al . Hyperventilation-induced hypotension during cardiopulmonary resuscitation. *Circulation*, April 5, 2004. 109:1960-1965.

Wik, L., et al. Quality of cardiopulmonary resuscitation during out of hospital cardiac arrest. *JAMA*, January 19, 2005; 293: 299-304.

### Technology Transforms CPR

Fremont Fire is conducting a trial of a chest compression belt resuscitation system. The belt performs CPR on the patient at 80 compressions/minute. CPR is performed without interruption, which frees up EMS personnel for other tasks.

The system consists of a platform about 32 inches in length that goes under the patient's upper torso and head, a single-use compression belt assembly, and a rechargeable battery. The compression belt is designed to fit patients weighing up to 300 pounds. The assembly applies pre-programmed compression to the patient's chest. The unit automatically adjusts to each patient and maintains a consistent depth and rate of compressions for a minimum of 30 minutes from each battery.



Chest compression belt - how it works

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May is . . .

**Bike Safety Month**

**Did you know...** More than 40% of all bike related deaths are due to head injuries, about 75% of all bike related head injuries happen to children under 14 years old. To help keep your child safe on his/her bike follow these tips:

- ✓ Teach your child to ALWAYS wear their helmet. It is the law that all children under 18 must wear a helmet when riding their bike, skateboard, scooter or roller blades.
- ✓ Go With The Flow; always ride your bike with the flow of traffic (in the same direction as the cars).
- ✓ Know the rules of the road. Bikes must follow the same traffic laws as cars. This includes stopping at red lights and stop sign and signaling when you are going to turn.

For more information, visit [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov) or [www.safekids.com](http://www.safekids.com).

Injury  
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**Kaiser Permanente Safety Grant**



By Mona Mena

Kaiser Permanente East Bay Service Area awarded \$5,000 to Alameda County Emergency Medical Services in August 2004 for a "Childhood Injury Safety Program."

All the grant funds are being used to purchase car seats and bike helmets to distribute to low-income families. The bike helmets will be distributed by the three trauma centers in the county. The car seats will be distributed through the Child Passenger Safety program at EMS to community clinics, Head Start programs, and hospitals. The EMS staff would like to thank Kaiser Permanente for their contribution to help keep our children safe!

**What's New on the Web**



- **New EMS Website address:** [www.acgov.org/ems](http://www.acgov.org/ems)
- **Updated information** on the newly required EMT skills testing.

**News & Announcements . . .**



**5<sup>th</sup> Annual Senior Injury Prevention Conference** will be held on May 19<sup>th</sup> at the Courtyard Marriott Hotel in Sacramento. This is the first year we will move the conference out of Alameda County. We will vary the location in the future to ensure that the conference is accessible to senior injury prevention advocates throughout the state.



In addition to our on-going partnership with the Center for Injury Prevention Policy & Practice, this year UC Davis Medical Center and the California Department of Health Services will join SIPP in hosting this one-day conference.

Topics that will be discussed are: falls prevention, mental health, fitness, and driving safety & mobility. Attendees will be afforded an opportunity to examine some of the latest "tools of prevention" in a hands-on session showcasing videos, CDs and interactive software.

For more information on the Conference contact Colleen Campbell at (510) 577-3535 or [ccampbel2@avgov.org](mailto:ccampbel2@avgov.org).

**New position for EMS staff member** Dale Fanning, who has served as the EMS Bioterrorism Specialist, will step into the role of Quality Management Coordinator. Dale can be reached at 618-2030 or [dale.fanning@acgov.org](mailto:dale.fanning@acgov.org).

**Comings and Goings:**



Marla Blagg has accepted the bioterrorism position beginning on March 28. She is transferring from the asthma program in the Community Health Services Division of the Public Health Dept.

Dave Sullivan, Disaster Training Coordinator, has accepted a position with the City and County of San Francisco effective March 28.

