First Response AUSTRALIA

FIRST RESPONDER

June '05 Newsletter

IN THIS ISSUE:

Oxy Kit Special

$ 1499.00 (GST Free)

KIT INCLUDES:

* DHS 100 Oxy Resus Pack
* All brass multiflow regulator
* Bag Valve Mask Devices - disposable including masks, tubing and reservoirs
  - Adult Size Bag Valve
  - Child Size Bag Valve
  - Infant Size Bag Valve
* Therapy Masks (adult / child)
* Set of 4 Oropharyngeal Airways
* V-Vac Suction Kit with spare cartridge
* Stifneck Select Cervical Collar
* Instructions for Use

Postage and Handling not included

Editors note

Resuscitation as we have known it for the last 25 years is going through its most dramatic change. Those forward thinking people must now be saying to themselves "we really had got it wrong". We've come to see in this country the inflexibility and conservatism of traditional groups who control the way in which resuscitation is taught. From my perspective it seems that the politics and process is more important than the lives we are trying to save.

It is encouraging to see that a whole community and EMS system in Tuscon, Arizona has basically told the American Heart Association and other international guiding bodies "we can't wait for you" and have gone it alone with what amounts to the most radical change in how people are taught resuscitation and how a complete EMS system has implemented a new way of delivering resuscitation in the streets.

First Response Australia has been following the progress and evolution of these changes now for the last 3-4 years and has adopted many new strategies in how Resuscitation is taught and delivered by our company.

Take the time to look at some of our backssues of "First Responder" and you will get the idea that its time to "think outside the box".

Read on and hopefully you will share our support for change. Hallaleula!!

Hope you enjoy the other articles.

FRA launches newly accredited Low Voltage Switchboard Rescue program

FRA launches its newly acccredited program in Low Voltage Switchboard Rescue (LVR) this month. The LVR program was designed to satisfy electrical workers requiring qualifications as Safety Observers for live low voltage switchboard work to comply with Australian Standards AS/NZS 4836:200 and Electrical Safety Regulation: 2002 in regard to Safety Observers.

The qualification is required to be renewed every six months and participants receive a unique Identification Card enabling them to instantly verify their skill currency before entering the worksite where required. The program was developed in a "distance education" format to lessen the class time. This was an important consideration especially when many participants will be required to renew the qualification every six months. Participants will gain two units of competency, one for Life Support/CPR and the other for Switchboard Rescue.

FRA's unique ID card . Accreditation /expiry date details are printed on the back of the card

WOUND CLOSURE PROGRAM

CAIRNS
August 27, 2005
November 26, 2005
(1 day full-time plus pre course study)

IV FLUID THERAPY PROGRAM

CAIRNS
August 24, 2005
November 23, 2005
(1 days full-time plus pre-course study)

Limited spaces
Conditions and prerequisites apply

EMERGENCY MEDICAL TECHNICIAN PROGRAM
CERTIFICATE LEVEL IV

CAIRNS
August 2005
(8 days full-time)

CAIRNS
November 2005
(8 days full-time)

PLEASE ENQUIRE ABOUT OUR ON-SITE PROGRAMS

Emergency Medical Helicopters to face stricter flying regulations

Do you rely on emergency helicopters to assist personnel on your worksite? Well, read on as new findings show some of the problems associated with such operations. Australia's emergency helicopter pilots could face stricter flying regulations as a result of concerning crash statistics in Queensland. The Civil Aviation Safety Authority (CASA) is reviewing the community-run flights after a study found the crash rate of Queensland's emergency helicopters was 5 times the national average. A CASA spokesman accepted it needed to do more to educate and train pilots operating the helicopters in addition to tougher guidelines to ensure equipment upgrades in single-pilot operations and two pilots in single engine helicopters.

Under the current system, emergency pilots are allowed to operate without the full instrument licence needed by commercial pilots carrying passengers. Instead, the emergency pilots use night visual flight rules, so they can legally fly at night without a "full suite" of equipment but must have at least 800m of clear vision. The ruling exposed a grey area but CASA conceded that many emergency groups could not afford to install complete night flying equipment and would have to shut down if the full equipment was required. Commercial pilots use devices such as artificial horizon and radio beacons to fly at night in poor visibility. The research found that Australian emergency medical service helicopters had an accident rate of 4.38 for every 100,000 flying hours. The Queensland rate however, was 25.03 for every 100,000 flying hours with three of the four most recent accidents happening when pilots were flying under night visual flight rules in a single engine helicopter flown by a lone pilot. The study found that, overall, Australia had an accident rate similar to other countries with only one patient death in more than 50,000 missions and an average of one accident every 16,721 missions. How much do you know of the helicopter operations providing your emergency services?

Tucson Arizona goes it alone with revolutionary CPR / Defibrillation guidelines

Survival rates for out of hospital cardiac arrest are remaining fairly stagnant despite the increasing numbers of AEDs deployed in workplaces, homes and recreational areas. Reports from all over the world are revealing a number of resuscitation issues such as: poor bystander CPR, lack of response to initial defibrillation after prolonged ventricular fibrillation (VF) and substantial time without chest compressions during professional resuscitation efforts.

To change international guidelines is difficult and requires optimal evidence such as randomized clinical trails. These types of trials are extremely difficult to accomplish in the cardiac arrest setting, and to meet set criteria can be problematic in the emergency circumstances of CPR.

Continued next page

Advanced Airway Kit SPECIAL

Includes:
Laryngeal Mask Airways - Size 3,4,& 5
Bag Valve Mask - Adult & Child
Tape, Gel, Syringe, Gloves, Carry Case
$ 299.00 (GST Free)
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ATTENTION EMTs

Are you registered with the Australasian Registry of Emergency Medical Technicians

AREMT

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www.aremt.com.au

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Trials of resuscitation therapies often end up being very small due to the problem of obtaining consent for research. Due to complex rules for informed consent researchers in the USA have very little opportunity to conduct trials and basically have to wait for others in the international community to run trials.

Because of this impetus in advancing resuscitation science, the University of Arizona Sarver Heart Center, in conjunction and collaboration with the Medical Director and the leadership of the Tucson Fire Department, a decision was made to alter the local treatment of cardiac arrest. This decision was based on data from controlled animal experiments, published clinical studies and observations from the Tucson Fire Department database.

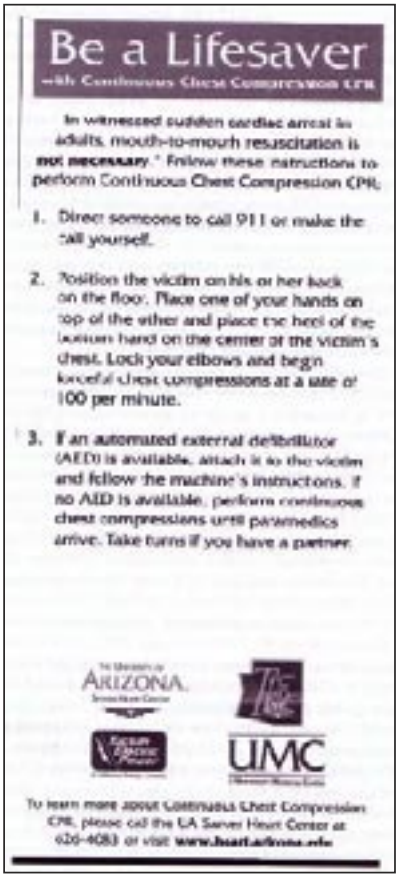
Data from the last 17 years showed that out of hospital cardiac arrest (OHCA) for witnessed VF, plateaued at approximately 12% for the last decade. This was despite the increasing number of AEDs deployed with First Responders. The issues identified most likely to be impairing the improvement of survivability were: lack of bystander CPR, the complexity of basic life support for lay first aiders, an emphasis on defibrillation first regardless of duration of VF and frequent interruptions of chest compressions resulting in marked fall in coronary perfusion presssure. As discussed previously similar data is now avaailable from many others sources.

In Tucson it was found that two thirds of all cardiac arrest victims did not receive bystander CPR. A survey of a thousand people in that city showed that only 15% would definitely do "mouth to mouth" during CPR. When asked if they would do "compression only" CPR, 68% responded positively.

At the Unversity of Arizona Sarver Heart Center (UASHC) experimental work found repeatedly that, during VF cardiac arrest, the provision of ventilations during the first 10 minutes of early basic life support, does not affect 24-48 hour survival. This work showed no difference in survivability between those that recieve ventilations and those that did not.

Another study in Tucson showed that those taught traditional CPR took on average 16 seconds to deliver the standard 2 breaths betweeen 15 compresssions resulting in lengthy interruptions to chest compressions. Those taught "compression only" CPR were shown in a typical 8 minute period of bystander CPR to deliver 675 compressions compared to only 308 compressions for those using standard CPR with breaths. Chest compressions, especially uninterrupted ones, generate circulation, so it appears that continous chest compressions could double circulatory support.

Studies from Europe support this.


Be a Lifesaver

–Hands-Only Continuous Chest Compression CPR

In witnessed sudden cardiac arrest in adults, mouth-to-mouth resuscitation is **not necessary.** Follow these instructions to perform Continuous Chest Compression CPR:

1. Direct someone to call 911 or make the call yourself.
2. Position the victim on his or her back on the floor. Place one of your hands on top of the other and place the heel of the bottom hand on the center of the victim's chest. Lock your elbows and begin forceful chest compressions at a rate of 100 per minute.
3. If an automated external defibrillator (AED) is available, attach it to the victim and follow the machine's instructions. If no AED is available, perform continuous chest compressions until paramedics arrive. Take turns if you have a partner.

ARIZONA

UMC

To learn more about Continuous Chest Compression CPR, please call the UA Sarver Heart Center at 626-4083 or visit www.heart.arizona.edu

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EMERGENCY MEDICAL TECHNICIAN

REFRESHER PROGRAMS

CAIRNS
August 25-26, 2005
(2 days full-time)

CAIRNS
November 24-25, 2005
(2 days full-time)

Continued from previous page

So the University of Arizona and the Tucson Fire Department embarked on a community education program in "compression only CPR" for use in adult sudden collapse/cardiac arrest situations. The chart on the previous page describes the 3 simple steps the community is asked to remember:

A. Direct someone to call the Emergency Services or do it yourself
B. Position the casualty on their back. Place your hands in the centre of the casualty's chest. Lock your elbows and begin "forceful" compressions at a rate of a 100 per minute
C. If an AED is available, attach it to the casualty and follow the machine's prompts. If no AED available perform continuous compressions until paramedics arrive. Take turns with a partner.

Again, data from cardiac arrests in Tuscon showed that EMS response usually didn't start treatment until approximately 7 minutes from receiving the emergency call. None of the first defibrillation shocks delivered resulted in a perfusing rhythm.

This suggested that the "defibrillate first" protocol was not optimal. Studies now show that if "first shock" cannot be accomplished within 4 minutes of arrest, defibrillation is rarely successful in restoring a rhythm which circulates blood. So, the Tuscon Fire Department modified their approach by requiring 200 chest compresssions to be completed as the first step before rhythm analysis and shocking.

Fire Department data showed that in most CPR scenarios, more than 60% of the time was spent without chest compressions being done due to ventilations, intubation and IV catheters being inserted. Now the TFD instructs EMS providers to assign one experienced person to chest compressions only and not to stop except for the briefest rhythm analysis and defibrillation. In addition, they are instructed to include 200 continuous compressions immediately following ANY shock prior to any further rhythm analysis. The emphasis is on circulatory support over anything else including intubation and ventilations. They also suggest that the compresions be "forceful".

The next change was to the 3 stacked shock protocol. The rationale for the 3 stacked shock system comes from reasoning that the success rate of a shock in terminating VF remains constant with time. So if the first shock is 80% successful then the second shock would also be successful for the remainder and then the third shock 80% successful for those remaining in VF after the second shock. This reasoning is obviously flawed with the new information at hand. It usually takes 60 seconds to deliver 3 stacked shocks with AEDs.

Hence the Tucson EMS providers now only deliver defibrillation as a single maximal dose, then return to chest compressions immediately. The community, medical profession and all EMS providers have embraced this bold and revolutionary change to the way adult sudden cardiac arrest is treated. This alternative approach to advancing resuscitation science is to be supported.

SUMMARY OF TUCSON FIRE DEPARTMENT GUIDELINES

- **DETERMINE CARDIAC ARREST**
- **START COMPRESSIONS ONLY (200 Forceful Compressions)**
- **ESTABLISH AIRWAY with OPA & OXYGEN (intubate but do not stop for compressions)**
- **DETERMINE RHYTHM AFTER 200 COMPRESSIONS**
- **SHOCK AS REQUIRED (One shock only)**
- **IMMEDIATELY CONTINUE 200 CONTINUOUS COMPRESSIONS AFTER SHOCKING AND BEFORE ANALYSING (complete intubation & cannulation but do not stop for compressions)**

****** **CIRCULATORY SUPPORT OVER ALL ELSE INCLUDING INTUBATION AND VENTILATIONS** *******

First Response Australia for the last year has adopted much of this approach in developing continuing education programs and encouraging participation in our much simplified training.
Thanks Tucson.

Edited by Charles Makray
Managing Director

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