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### New "wound closure" course a hit.

Last month saw First Response Australia delivery it's new and accredited program in Wound Closure. Seven participants from varied backgrounds completed the program as an elective of the Certificate IV in Emergency Medical Response Course. Some of the participants were already qualified as "Industrial Paramedics" or Nurses and the program gave them the opportunity to formalise their skills and knowledge as well refine their techniques.

The program requires pre course study and assignments, followed by 5 hours of intensive workshops and assessments in wound cleaning/assessment techniques, how to maintain a sterile field and employ aseptic techniques, then finally lots of practise in suturing. The program emphasised the need to carry out wound closure under "medical direction". Alternatives to wound closure such as simple steristrips and "epiglu" are also covered. (see page for scheduled dates)



*Participants practising their new skills (simulation) during the "Wound Closure" program*

### More evidence supporting " more compressions - less breaths"

A study from Germany compared the "difference in time to defibrillation and intubation between two different ventilation/compressions ratios". During basic life support (BLS) by a two rescuer team, it is optimal that early defibrillation and ALS procedures should be performed without unnecessary interruptions to the BLS - ventilation/compression sequence. The study's objective was to determine the impact of a ventilation/compression ratio of 5:50 versus 2:15 on the time intervals "start of BLS to first shock" and "start of BLS to intubation"

40 paramedics were used to perform standard BLS/ALS resuscitation according to international guidelines on a manikin simulating Ventricular Fibrillation (VF) using the 2:15 and then the 5:50 ratio. BLS was started with bag valve mask ventilation and a semi-automatic defibrillator was connected to the manikin. The ventilation/compression sequence was only interrupted for ECG

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## WOUND CLOSURE PROGRAM

### CAIRNS

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

## IV FLUID THERAPY PROGRAM

### CAIRNS

August XX, 2005  
(1 day full-time)

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)

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analysis and defibrillation. The results showed that "time to first shock" was achieved 15 seconds earlier using the 5:50 ratio than using the 2:15 ratio, whilst "time to intubation" occurred over 30 seconds earlier again with the 5:50 ratio. Paramedics also appraised the work-flow and emotional stress during the exercise and concluded that the 5:50 ratio was significantly superior. The study also showed that more compressions per minute occurred with the 5:50 ratio.

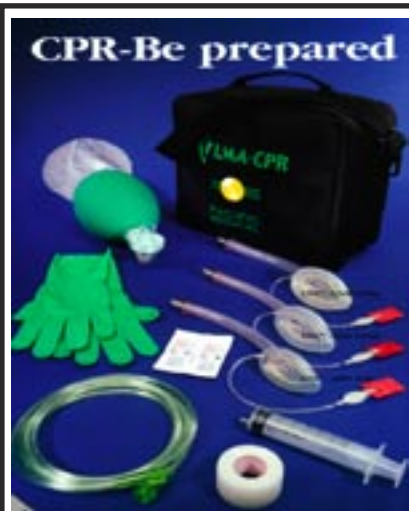
The information now available from numerous studies are showing:

- \* The longer the period of uninterrupted compressions can be, the better the coronary artery perfusion pressure is, because every interruption of cardiac compression causes an immediate fall in arterial pressure.
- \* Computerised studies has shown that only with at least 50 non-interrupted compressions, tissue perfusion and oxygen delivery can be optimised.
- \* Investigations in animals shows the importance of fewer interruptions of external cardiac compressions required to increase outcomes.
- \* In the beginning of CPR by laypersons, ventilations may not be necessary.
- \* Recently published data showed patients in VF with ambulance response longer than 5 minutes had better outcomes when resuscitation was initiated before delivery of the first shock
- \* Animal investigations in pigs found improved outcomes with ventilation/compression ratios up to 2:100.
- \* Physiological and mathematical analysis of data of optimal ratios in CPR under realistic, practical conditions showed the best oxygen delivery at a ventilation/compression ratio near 2:30.
- \* Using the 2:15 ratio, paediatric resuscitation could be prolonged without loss of ventilation volume when compared to the currently recommended 1:5 ratio.
- \* Prediction of the success of defibrillation can be directly linked to the length of interruptions to cardiac compression.

All these studies and investigations, demonstrating the importance of non-interrupted chest compressions seems to be underestimated, whereas the necessary minimal ventilation volume can't yet be defined.

Over the last year, First Response Australia has been publishing information relating to the "new" emphasis which is being placed on compressions during CPR. Much of the information demonstrates the need to initiate chest compressions early and not allow interruptions to compressions when other interventions are required, such as ventilations and advanced airway management. We hope that many training organisations are now looking closely at how trainers deliver their resuscitation classes and what strategies can be utilised to incorporate some of these evidence based findings into their classes whilst staying within recommended guidelines.





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## Mining Department issues Safety Bulletin re lack of "First Aid"

Queensland Government's Department of Natural Resources and Mines late last year issue a "Safety Bulletin" after two incidents, where the injured received what was described as less than adequate first aid. The injured workers were also inappropriately transported to hospital, risking health or worsening the injury with potential serious consequences.

On the first occasion, a contractor was engaged to carry out a short-term task expected to last only a shift or two. A mobile crane was brought in to assist the assembly of an excavator. The crane operator and dogman were first to arrive and commenced setting up. While preparing for the lift, the anti-two block weight dropped crushing the dogman's hand between it and the pulley block. The crane operator, who was untrained in first aid, drove the victim to hospital in his utility vehicle after wrapping the injury with some clean rag. He did not report the accident to his employer or supervisor. Quarry management was unaware of the accident in the first instance and consequently could not enact their emergency procedure at that time including reporting to the Mines Inspectorate.

On the second occasion, the threat of rain created some urgency to move product in bulk bags from open storage to a covered shed. The victim was attempting to engage loops of the bulk bags onto the tynes of a forklift. The forklift operator thought the victim signaled him to move forward and when he did so, one of the tynes struck the victim in the chest causing serious injuries including a fractured sternum. There was potential for the injury to be fatal. No one on site was trained in first aid. No emergency plan was available and no one called an ambulance. Fellow workers placed the victim in the front seat of a utility vehicle and proceeded to drive him to hospital. The road was unformed and the victim complained of soreness. He was later transferred to a sedan car hoping the ride would be more comfortable and was admitted to hospital about 45 minutes after the accident.

The Mining and Quarrying Safety and Health Regulation 2001 requires that: -

- \* a person who is injured or whose health is affected at the mine is given appropriate first aid or medical treatment (reference Section 12)
- \* the resources, facilities and procedures considered in the risk management process must deal with (amongst others) first aid and persons trained in giving first aid (reference Section 32)
- \* the mine has as appropriate, adequate supplies of first aid and trauma kits, basic life support training for workers, facilities and procedures for liaising with, and using, local and state emergency services, if the nature or remoteness of the mine's operation limit the effectiveness of local or state emergency services, the availability of suitably trained site-based personnel and suitable first aid and medical equipment and facilities and procedures for evacuating persons from the site for medical treatment (reference Section 39)
- \* the mine has the first aid supplies and facilities and personal protective equipment recommended in the relevant material safety data sheet (MSDS) for each hazardous substance and dangerous good used at the mine (reference Section 62)

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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)

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- \* each worker is given appropriate induction training and periodic assessment on emergency procedures and basic first aid (reference Section 91)

A timely reminder for Safety and Training Managers in all workplaces to possibly review their current practices and policies (or lack of) in regards to the provisions of first aid / emergency care.

## FRA launches new ID cards for qualifications

Next month will see the introduction of high quality ID cards for our specialist programs. First Response Australia will now include these cards as part of the accreditation pack participants get when successfully completing either an EMT, First Responder or Low Voltage Switchboard Rescue program.

The cards will have pertinent information printed on the rear and can be used to quickly confirm the level and currency of a particular qualification. Just like credit cards which have a validity date, Emergency Care qualifications are no different. This will be very useful in many workplaces such as the electrical industry where qualifications relating to CPR and Low Voltage Switchboard Rescue need to be current within the last six months.

Being the largest provider of First Responder training in Australia meant that our clients often were called upon to use their skills in real life scenarios. Because of this Emergency Care personnel we were often asked to verify qualifications by Workplace Inspectors and this new card ID system will ideal to quickly confirm the currency of the attending responders.

*Pictured on the right are FRA's new qualification ID cards.*

## The Last Word

Remember that the CPR ratio of 2:15 is only a guideline. We recommend that in all cases of CPR that 15 is the minimum number of compressions to be done in any one cycle.

We consider the 2:15 ratio acceptable for two operator CPR where less interruption occurs to compressions, but 2:30 is advised if doing one operator CPR because of the unacceptable interruptions to compressions.

In all workplaces where back up from other First Aiders is fairly immediate - we teach compression only CPR.

**GIVE IT A TRY - IT IS WITHIN THE GUIDELINES !!!!!**

*Edited by Charles Makray  
Managing Director*



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