

Welcoming In The New Year

Well it's hard to believe we are well into 2009. Thanks to everybody for your support in 2008 and we trust 2009 is a peaceful and productive year.

For this edition of the HeartStart Times we pay tribute to Jeff Wassertheil who will be remembered as a medical pioneer who made significant contributions to many organisations in Australia. Numerous people at Laerdal had the pleasure of dealing with Jeff and although he will be sorely missed, his legacy will continue.

In this edition we also feature the results of several interesting product trials and studies and feature another timely example of the Public Access Defibrillation (PAD) program run by St John Ambulance Australia.

We are also excited to make available Laerdal MediCool which is a new, simple & safe treatment option to induce cooling after a cardiac arrest.

As always this edition of the HeartStart Times is available on our websites www.laerdal.com.au or www.laerdal.co.nz. On the menu, just look under publications.

We are always interested in story ideas so please email us at customer.service@laerdal.com.au or customer.service@laerdal.co.nz. You can use this email address also to be added or removed from the distribution lists for the HeartStart Times and/or Simulation Update.

You will be happy to know we are using recycled paper for this publication.

Celebrating A Medical Pioneer

Leading emergency medicine doctor and educator Jeff Wassertheil passed away on 22nd September 2008 in Melbourne, aged 55. A/Professor Wassertheil's contributions to emergency medicine, resuscitation, disaster medicine, mass casualty and major event management are recognised internationally, however he may best be remembered locally for his work and long involvement with St John Ambulance Australia.

As a young St John volunteer, Jeff met his future wife Correne, whom he married in 1979 and together had five children. For over 30 years, Jeff actively volunteered as a doctor on public duties and as an educator, since he liked to work and teach simultaneously. He was a senior medical officer in Victoria and a member of the St John National Medical Standards Committee, co-wrote the national policy on infection control and national research policy, and was a member of Council and Chairman of Training in Victoria.

Through St John, Jeff was instrumental in response strategies for major events and public venues, including emergency care for players and spectators at the MCG (Melbourne). His research with fellow volunteers within St John, on cardiac arrests at the MCG and Shrine of Remembrance, changed the way sudden collapse was handled around the world and was a leading influence in public access defibrillation. His interest in emergency care both on and off the field led to his work as a football club doctor for over 17 years with the Sandringham and South Melbourne / Sydney Swans football clubs.

Since 1992, Jeff worked as Clinical Associate Professor and Director of Emergency Medicine at Peninsula Health and Monash University, and was based at Frankston Hospital's Emergency Department. His research during this time earned him the prestigious John Gilroy Potts Research Award in 2000, for the widespread introduction of defibrillation in the community.

Jeff was involved in a myriad of medical and educational associations, including the Australian Resuscitation Council, and was a medical and clinical surveyor for the Australasian Council on Healthcare Standards. He recently assisted as panel member in assessing overseas-trained doctors seeking registration for the Australian Medical Council.

Jeff was one of the few medical practitioners with formal and advanced qualifications in clinical education, which was backed by extensive practical experience. A passionate and dedicated teacher of many, he always sought to vigorously contribute to the lives of young and emerging health professionals. A recent



Jeff Wassertheil: 1953-2008

achievement was his completion of the undergraduate curriculum for emergency medicine at Monash University. And it is notable that most Victorian paramedics owe their knowledge of spinal cord injury and medicine to his teachings. Amongst his many career achievements, Jeff took great pride in the teams he coordinated, together saving hundreds of lives in the many hospitals and medical arenas he worked within.

In addition to his extensive and inspirational professional life, Jeff found time for his family, pursued his personal interests in photography, and was a drummer in a rock band.

A/Professor Jeff Wassertheil will be sorely missed by members of the emergency medical community: the hundreds of students, paramedics, nurses and medical practitioners he worked with, as well as the thousands of lives affected by his life and research. His legacy will continue to advance the delivery of and excellence in emergency medicine throughout Australia. Laerdal's condolences are extended to his wife Correne and his children Leoni, Andrew, Michael and Ben.

In this Edition



Pick Up! There's A Heart Attack On The Line!

MICA paramedics are sending in (ECG) assessments to Monash Medical Centre, saving time and lives.



Bee Gees Music A Life Saver

The rhythm of 'Stayin' Alive' from the John Travolta movie *Saturday Night Fever* is almost the same as the number of beats per minute recommended for CPR.



Two Guards Awarded For Electrician Save

One young electrician can thank the presence of a Public Access Defibrillator (PAD) – and the quick wits of two passers-by.

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**HEARTSTART
ARTICLE**

NZ Resusci Anne Skills Station Trials

A preliminary evaluation of the Resusci Anne Skills Station in New Zealand has shown very positive results. The 30 participants ranging from CPR trainers to novices, operated a Resusci Anne manikin linked to a laptop with the Skill Station software in a dedicated training room at the National Patient Simulation Centre in Wellington.

Ideal for refresher courses and for large organisations with extensive training requirements, Resusci Anne Skills Station objectively measures the performance of all trainees, and produces a CPR competency certificate upon completion. It provides real-time voice feedback that encourages minimal interruptions in compressions to optimise CPR effectiveness.

The evaluation discovered that 21 out of the 30 users felt more confident with their level of competence after using the self-directed system.



**HEARTSTART
CONFERENCES 2009**

Date	Conference	Location
5-7 MAR	Trauma 2009	Auckland, NZ
19 APR	4th Annual Australian College of Neonatal Nurses National Conference	Darwin, NT
19-22 APR	13th Annual Congress of the Perinatal Society of Australia & New Zealand	Darwin, NT
30 APR -2 MAY	7th International Spark of Life Conference	Hobart, TAS
2-6 MAY	Australian and New Zealand College of Anaesthetists Annual Scientific Meeting	Cairns, QLD
27-29 MAY	4th International Congress on Innovations in Nursing 2009	Perth, WA
29-30 MAY	Critical Care Nursing Continuing Education 10th Annual Meeting ICE 2009	Hobart, TAS
7-10 SEP	SimTecT 2009 Health Simulation Conference	Melbourne, VIC
22-24 SEP	Australasian Fire and Emergency Service Authorities Council 09	Gold Coast, QLD
30 SEP -2 OCT	Australasian Nurse Educators Conference 2009	Christchurch, NZ
15-17 OCT	Australian College of Ambulance Professionals	Auckland, NZ

**HEARTSTART
IN BRIEF**

iPod Link To Poor Rhythm

A recent American study has shown iPod earphones can interfere with the performance of pacemakers and implanted defibrillators. Researchers at a Boston medical centre found that if kept in a shirt pocket or hung around the neck, the magnets in earphones could interfere with heart devices and in some cases, potentially prevent a defibrillator from delivering a lifesaving shock. Study leader William Maisel said: "I don't think people should overreact to this information. But it's smart to keep small electronics at least a few inches from implanted medical devices."

The Furry Kiss Of Life

A Massachusetts moggy was lately saved by a firefighter who revived it with some old-fashioned mouth-to-mouth. Rescued from a burning apartment, quick-thinking Al Machado saw that the cat needed air, and performed immediate resuscitation on the tiger angora. The traumatised puss recovered and was resting comfortably soon after. When asked what it was like to deliver the kiss of life to an animal, Officer Machado simply said: "Like fur."

Massive Defib Study Says Don't Delay

An extensive study reveals that more than ever, time is of the essence for effective defibrillation. The US National Registry of Cardiopulmonary Resuscitation study utilised data collected from 369 hospitals over 5½ years, and using 14,190 cases of cardiac arrest. In 2,045 cases, defibrillation was delayed by more than two minutes, with only 22 per cent of patients living long enough to be discharged from hospital. And although circulation was restored in 49 per cent of cases, this was considerably less than the 67 per cent that survived after prompt treatment. The study overall has demonstrated a significant association between death and delayed defibrillation.

Laerdal Compact Suction Unit 3 300ml

Compact. Powerful. Reliable

The new LCSU 3 is always ready to assist you in providing quality suctioning, because its compact size and shape enable you to carry it to every call. Its unique 300ml canister system, coupled with a variable vacuum regulator and LED display, gives you the capacity and control you need to quickly clear a blocked airway.

A state-of-the-art, field-changeable, rechargeable NiMH battery pack and the ability to operate the LCSU 3 from external AC/DC sources assure you always have the power to get the job done.



2 year limited warranty*

- On/Off
- External Power Indicator
- Battery Charge Indicator
- Low Battery Indicator
- LED Regulator
- Variable Vacuum Regulator (50-550mmHg)
- Field Replaceable Rechargeable NiMH Battery Pack

*2 year limited warranty excludes battery, canister system, power cords, and normal wear and tear.



HEARTSTART FEATURE

Pick Up! There's A Heart Attack On The Line!

In a Pilot Program involving Metropolitan Ambulance Service MICA units from Dandenong, Moorabbin, Springvale and Hampton Park, MICA paramedics are sending in the results of in-ambulance electrocardiogram (ECG) assessments to the cardiac unit at Monash Medical Centre by mobile phone, saving time and lives.

What makes sending in the results possible is the use of a 12 lead ECG machine instead of the standard 3 Lead ECG. The 12 Lead ECG provides a higher level of detail regarding a patient, who is presenting with cardiac chest pain. When the 12 lead ECG is transmitted to Monash the greater detail allows confirmation in the Emergency Department of the MICA paramedic assessment and activation of the cardiac team. This team then meets the patient on arrival at the hospital and takes them to the specialist cardiac diagnostic and treatment area.

MICA Paramedic Ian Jarvie said that reduced time would save lives and improve patients' recovery. "If we can provide the ECG directly to Monash they can activate the specialist team before the ambulance arrives at the hospital."

Once at Monash, the patient is not taken to emergency as would be standard practice but instead is taken directly to the cardiac unit's catheter lab where a specialist team is waiting.

HEARTSTART ARTICLE

Bee Gees Music A Real Life Saver

Even if you thought disco was long dead, an Illinois study on chest compressions during CPR has found it can help keep more people alive. Researchers discovered that at 103 beats per minute, the rhythm of 'Stayin' Alive' from the John Travolta movie *Saturday Night Fever* is almost the same as the number of beats recommended for CPR.

Fifteen doctors and students at the University of Illinois medical school performed CPR on manikins while listening to the song on their iPods. Five weeks later, they performed the compressions without the song playing, but were told to think of it in their heads. The rate turned out to be 109-113 beats per minute, only slightly higher than the Australian Resuscitation Council and New Zealand Resuscitation Council's recommended 100 beats.

However study author Dr David Matlock observed that when it comes to trying to revive a stopped heart, more compressions per minute is better than too few. With many people unsure about remembering the proper rhythm, the results of this study are promising enough to pursue larger, more definitive studies with real patients and untrained people.

So whether you're a brother or whether you're a mother, it looks like it's time to dust off that old Bee Gees collection – all in the name of CPR.



MICA paramedics Matthew Shepherd (L) and Brendan Webster (R) treat a patient with a 12 lead ECG.

The transferral of information in this manner has cut the at hospital arrival to treatment time in the catheter lab from an average of 106 minutes to around 60 minutes. During the trial, arrival at hospital to treatment times have been cut to just 24 minutes in some cases. The international benchmark for this time is less than 90 minutes.

Saving every minute possible is important because every minute that passes before treatment is undertaken means the patient is losing heart muscle. During a heart attack the parts of the heart affected by the blockage of an artery are

starved of oxygen and start to die, weakening the heart. Every minute that can be saved getting a patient to treatment therefore saves heart muscle and allows for a better outcome for the patient.

The Director of MonashHeart and lead investigator Professor Ian Meredith said, "It has the potential to save up to 500 lives a year if the pilot is successful and is extended statewide."

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Laerdal MediCool

Are you looking for a new cooling system?

Designed and Made
in Australia

Designed by a nurse, Laerdal MediCool is a simple, skin-safe treatment inducing therapeutic hypothermia for improved neurological outcomes for the sudden cardiac arrest patient. Laerdal MediCool's external fabric cooling kit covers the body and head of the patient. When frozen, Laerdal MediCool is an effective method for cooling via conduction, convection and evaporation.

- Easy and convenient to store and prepare
- Simple to use and fit for purpose
- Clean with no mess or water spills
- Cost effective for single patient use
- Safe as it's biodegradable, non toxic & latex free
- Travel pack available for prehospital / EMS use



For additional information including FAQs or to order, visit our websites or contact Tracey Dang (Hypothermia Specialist) on (+61) 458-089-891 or customer service on 1800-331-565 (AUS) 0800-523-732 (NZ).





Photograph reproduced with permission from the Maroondah Journal (Fairfax Community Network). Jamie Toomey with a life-saving defibrillator.

HEARTSTART
FEATURE

Two Guards Awarded For Electrician Save

Although many saves happen to elderly people, one young electrician can thank the presence of a Public Access Defibrillator (PAD) – and the quick wits of two passers-by at Eastland Shopping Centre in Victoria.

Part of the ongoing Project HeartStart initiative, one of three PADs installed in April 2008 certainly saved the life of 21-year-old Dwayne Kloet. As he went into cardiac arrest, he was quickly stabilised by a nearby tradesman and a security guard who came to his aid.

The ‘chain of survival’ worked perfectly in the busy environment, with tradesman Justin Gray beginning CPR immediately, and the centre duty manager retrieving a nearby PAD. He then handed the AED to security guard Jamie Toomey, who was trained by St John Ambulance in use of the machines, who then delivered one shock to Kloet. Paramedics arrived only nine minutes later.

Gray and Toomey say they worked together on Kloet until the paramedics arrived, but were grateful for the presence of the PAD unit. “Eastland has three defibrillators, just in case,” noted Toomey. “We all thought we would never have to use them. It’s not something you want to have to do but when

it has an outcome like this, it does feel good.” Both men received a 2008 Ambulance Victoria Community Hero Award for showing bravery and compassion at a ceremony at Parliament House in Melbourne.

Figures on Project HeartStart, which is managed by St John Ambulance Australia, are fast showing the success of the program, with 26 activations around Australia to date. Eleven lives saved have been reported. Public areas such as football stadiums, railway stations, shopping centres, registered clubs and police stations see large numbers of people pass through, and are excellent locations for PAD units. Many organisations such as airports and function centres are currently investing in AEDs.

After plastic surgery to both his hands Kloet is doing extremely well, and was discharged from hospital in October 2008. The save shows that with timely action, training and a convenient PAD, what happens before the paramedics arrive can be critical to patients in a medical emergency.



Chain of Survival

HEARTSTART
ARTICLE

Testing Near-Death Experience

While the ‘out of body’ near-death experience is a cliché of bad American television, the phenomenon is more widely reported than most people think. From bright lights to deceased relatives, many people around the world experience visual or aural events in the process between living and dying.

A research team from the University of Southampton will soon be conducting a large study of near-death experiences over 1,500 patients in 25 hospitals across the UK and America. Study leader Dr. Sam Parnia hopes to demonstrate that if consciousness continues after the brain dies, then this allows for the possibility that consciousness is a separate entity.

An example of this would be the often-reported experience of a person being aware of floating above their own body and observing doctors trying to save their life. It can be up to an hour when brain, heart and lungs stop working, and documenting the event could offer a unique insight into what we can all expect to experience when we die.

Part of the tests for the upcoming study will involve putting objects high on shelves above the subject, which will only be visible from the ceiling. As to whether the patient will be able to identify these pictures remains to be seen.