



HEART RESEARCH CENTRE NEWSLETTER

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New developments in the Cardiac Partner Study

Our donors will have read about the Centre's recent work in investigating the impact of cardiovascular disease on the partners of patients. Research Fellow, Dr Michelle Macvean, is leading this project, which has been given the short title of the "Cardiac Partner Study".

The project represents the first major Australian longitudinal study into the impact of cardiovascular disease on partners of patients. The purpose of the study is to develop a psychosocial intervention designed to assist partners in the aftermath of their loved one's cardiac event. The research team plans to devise the intervention with a focus on cognitive behaviour therapy.

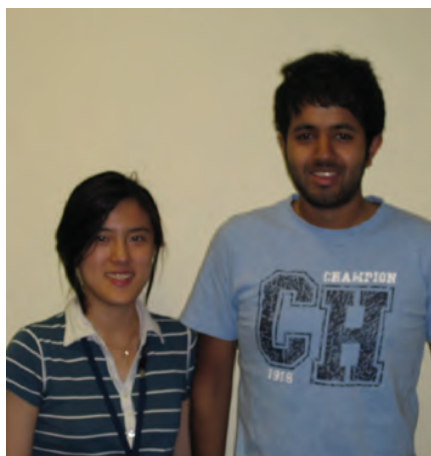
Patients are being recruited from the Royal Melbourne Hospital and Melbourne Private Hospital after coronary artery bypass graft surgery. Patients and partners are interviewed in hospital or by telephone shortly after discharge from hospital. Partners are invited to participate in follow-up telephone interviews after two, four and 12 months. Bilingual interviewers are used where appropriate. The project is expected to run for approximately two years.

Interestingly, many participants expressed surprise at the team's interest in their stories. Generally, patients

receive the bulk of attention from hospital staff. Less attention is paid to the partners' need for information and emotional support.

As one participant said:

"I feel that there should be someone, like a counsellor, to provide a bit of support for patients' wives. You do not know what's happening. I was relieved when one of the nurses eventually explained the recovery process to me and answered my questions."



Above: Ms Vanessa Law and Mr Laxman Tharmarajah

Ms Vanessa Law and Mr Laxman Tharmarajah are both undertaking the Bachelor of Medical Science at the University of Melbourne. As part of this course, students must complete a year-long subject entitled Advanced Medical Science (AMS). The students chose to undertake their AMS year at the Heart Research Centre, participating in the Cardiac Partner Study.

Laxman notes that his work at the Centre has been useful because it has not only given him an insight into current research, but has also provided a valuable opportunity for him to participate in hospital-based interviewing and other work. Both Laxman and Vanessa have enjoyed speaking with patients and partners, learning about their experiences first-hand and about the psychosocial factors which have influenced their illnesses and recovery. The project has provided them with a more holistic perspective than the biomedical model of patient care.



Disasters and heart attacks



When “natural” disasters occur, the pattern of attendance at hospital emergency departments tends to change. There is an increase in the number of people complaining of chest pain. Many of these attenders also have other symptoms associated with anxiety and are found not to be suffering from what they fear – a heart attack. However, many do indeed have a heart attack, presenting with chest pain in the front of the chest, often associated with aching in the arms, throat or jaw, often with a sense of pressure in the chest. There have been several large studies about the changed pattern of hospital admissions following earthquakes in Los Angeles, in Greece, in Newcastle (Australia) and China. The “9/11” terrorist attack in New York had similar effects.

The temporary increase in sudden deaths, heart attacks and hospital admissions has been attributed to profound stress, which may be physical but is more likely to be psychological. Such stress causes an increase in heart rate and blood pressure due to a release of neurologic hormones as a defence mechanism, enabling one to cope when under acute stress (see newsletter number 3, 2009 “The jungle path”). Other hormonal responses also occur.

Floods and bushfires are less clearly related to heart attack events, partly because the stressor (fire or flood) tends to occur over many hours or may increase or lessen at any one time for any group of people. The concentration of heart attacks is less apparent with floods and fires though the number of heart attacks may well be increased overall.

The most clearly defined maximal stress, well studied, was the effect of the Los Angeles earthquake some years ago. On the day of the earthquake, the number of cardiac deaths and the number of hospital admissions with heart attack doubled, with the highest level occurring in the area of maximum destruction.

The terrorist attack on the Twin Towers was associated with increased nationwide heart attacks on that day. The timing of the onset of heart attack symptoms was mainly in the evenings, while viewing the attack and collapse of the towers on television. It is clear from these and other studies that acute stress induces changes in a coronary artery leading to clot formation and death of heart muscle cells (coronary artery thrombosis leading to myocardial infarction ie heart attack).

We can understand possible mechanisms but these remain questioned. One mechanism accepted by many is that an existing plaque in a coronary artery “ruptures” and clot forms at that site. The concept of “rupture” may, however, not be correct. Pathologists have told us for some decades that thrombus builds up gradually and painlessly for days or weeks before pain appears. The timing of onset of pain is generally taken to represent the onset of the heart attack.

Now for an additional piece of important evidence about what may be

happening. The abrupt increase in the occurrence of heart attack on the day of the earthquake in Los Angeles was followed, for the next few days, by a drop in the number of heart attacks to levels significantly lower than the number usually recorded. This suggests that, in the “normal” community, there are large numbers of people poised for a heart attack. The sudden crisis may shift many of these ensuing attacks to today rather than their occurring tomorrow. Over the period of a few days after the Los Angeles earthquake, there appeared to be no overall increase in numbers. One may think of a gun being loaded with a finger on the trigger. That analogy leads to the view that acute stressors, physical or psychological, may act as “triggers” to provoke heart attacks which, without the stressor, would occur tomorrow. We don’t know.

What can we do about this? The first answer is that we should do what we can to avoid the development of coronary artery disease with cholesterol containing plaques. This means to be and remain a non-smoker, to achieve or attain a normal weight, become or remain active, know our blood pressure and cholesterol levels, discuss our risk factors with our doctor and not slip up by missing medications which should be taken on a daily basis.

Some may say “embrace tranquillity”. Most stressors arise through adverse personal, interpersonal, financial, social and environmental stimuli. Whether chronic stressors lead to heart attack is unknown except through the listed risk factors. Congratulations to those who can achieve tranquillity. Most of us seem to have some symptoms of either anxiety or depression from time to time. “Life was not meant to be easy”.

Dr Alan Goble
Cardiology Consultant

Sue Crebbin



SNAP SHOT

Ms Sue Crebbin joined the Heart Research Centre approximately 18 months ago while working on her doctoral research at the University of Melbourne. Dr Barbara Murphy, Principal Research Fellow at the Centre

and Dr Lisa Phillips, of the University's psychology department, are supervising Sue's research.

Sue holds an honours degree in psychological science and has an interest in the mental and emotional aspects of physical conditions. Her research project bears the short title "The Cardiac Wellbeing Study". The purpose of the study is to investigate positive aspects of cardiac illness and the possible "benefits" people find from this otherwise difficult experience. Recruitment for this study began in April 2010 and will continue through to the end of 2011.

Patients recruited to The Cardiac Wellbeing Study had participated in a previous project conducted by the Centre. As part of that earlier study, these patients were extensively interviewed about returning to work after their cardiac event. For The Cardiac Wellbeing Study, patients will complete a questionnaire two years after their heart attack or coronary bypass surgery.

To date, 60% of participants have reported some personal or health benefits since their cardiac event. Many have said they were making a greater effort to be healthy. Some report greater appreciation of life and the people close to them.

Sue hopes that the findings of the study will inform and add another element to the rehabilitation and counselling of cardiac patients, thus improving their mental and emotional wellbeing to cope with their experiences. The Centre is well placed to support PhD students in work of this nature.

Sue's career goal is to work in a position that involves a combination of research and clinical practice. In her spare time, Sue likes to keep fit by walking, swimming and doing pilates regularly. During the summer, she also enjoys kayaking. She has two teenage children who travel with her to music festivals and on camping trips.

Managing chronic heart failure

The Heart Research Centre has been the leading provider of training for health professionals since 1993. A program that enjoys continued popularity is the three day program "Integrated disease management for patients with chronic heart failure". It was held at NAB Health, Melbourne, last November.

Many of those who attended the program were practising nurses. Others included medical students, an exercise physiologist and a chronic disease co-ordinator. Training program staff at the Centre believe that tailoring each session to suit the aims of those attending is the best way to ensure programs adapt in line with health professionals' needs. Participants provided positive and constructive feedback.

One participant was very encouraging, noting that this was "an excellent, holistic program".

"Not having had a lot to do with heart failure previously, I found this course very informative and comprehensive. All of the speakers were interesting and thorough in their presentations. I am very glad I took part in this program and would highly recommend it to anyone who works with heart failure patients, or in chronic disease-related areas."

Right: Participants at the "Integrated disease management for patients with chronic heart failure" training program



Centre's research presented at major national conference in Sydney

The Heart Research Centre's Dr Barbara Murphy, Principal Research Fellow, and Dr Alyna Turner, Senior Research Fellow, recently attended the Australian Society for Psychiatric Research (ASPR) 2010 conference held in Bondi, Sydney. The topic of the conference was "glial-neuronal networks in neuropsychiatry".

On the first day of the conference, the Federal Minister for Mental Health and Ageing, Hon Mark Butler, made an encouraging address on future funding of mental health research, setting a positive tone for the event as a whole.

Keynote addresses included those made by 2010 Australian of the Year Professor Patrick McGorry, Professor Ian Everall, Head of Psychiatry at the University of Melbourne and Professor John O'Brien of Newcastle University in the UK, who

gave a particularly relevant presentation on the role of vascular factors in late-life depression. Professor Kathy Griffiths of the Centre for Mental Health Research at the Australian National University also made an insightful address on the stigma associated with mental health issues.

The conference included a specific stream dedicated to the discussion of cardiovascular disease and related mental health issues. This signifies acknowledgement within the general field of psychiatry of the impact cardiovascular disease has on mental health. It also goes one step further in creating a dialogue between cardiovascular and mental health services in discussing the mental health of cardiac patients.

Dr Murphy's presentation was entitled "The when's and what's of depression

screening and cardiac mortality", which focused on the findings of the Heart Research Centre's 12-year follow-up study of female cardiac patients.

The conference also emphasised the potential for internet-based intervention options for mental illness, which ties in with the Centre's current focus on online programs to support both health professionals and patients.

Representatives of the Department of Psychiatry, University of Melbourne, and the University of Newcastle were in attendance. The Heart Research Centre staff are affiliated with and plan further collaborative projects with both universities.

Launch of the Wurundjeri Council initiative



Above: Bundap Marram Durn-Durn Project logo

The Heart Research Centre continues its involvement in a Wurundjeri Council initiative to improve the wellbeing of Wurundjeri and Melbourne-based Aboriginal people with chronic disease and depression, anxiety or related mental illness. The Centre's Project Officer for

Aboriginal Programs, Ms Nell Angus, is co-ordinating the project. The National Depression Initiative, *beyondblue*, has contributed significant funding to the Heart Research Centre for this project.

The project—titled Bundap Marram Durn-Durn, meaning "good", "mind", "body" in Woiwurrung language—was officially launched at the Ngarnga Wulempuri Centre, Abbotsford on 2 December 2010. In his Welcome to Country, Wurundjeri Elder Uncle Ringo Terrik gave a stirring speech in which he spoke of his personal experience with depression, illustrating what is for many Aboriginal people, a shared experience. Other guest speakers included Aunty Di Kerr, Wurundjeri Elder, Ms Suzanne Pope, Director of Research and Planning at *beyondblue*, and Dr Barbara Murphy, of the Heart Research Centre. Wurundjeri Elder Aunty Diane Kerr officially launched the project. Others attending included Aboriginal Elders, members

of Aboriginal organisations and the Wurundjeri community, and Dr Phyllis Lau, a collaborator on the project from the University of Melbourne.

Local artist, Ashley Kerr-Firebrace designed the project logo. It symbolises the project's foundation, showing an eagle, Bunjil, creator of the Wurundjeri, standing strong in his nest and being supported by Country, culture and people. The artwork was displayed at the launch of Bundap Marram Durn-Durn.



From left: Aunty Alice, Dr Rosemary Higgins, Aunty Kitty and Dr Phyllis Lau

Allowing your donations to go further

The Heart Research Centre is a non-profit organisation which relies on the support of donors, who leave bequests or make other gifts, including those made in memoriam. Without such support, the Centre would find it much more difficult to initiate new pilot research projects, many of which form the basis of more extensive studies. We would like to extend our deepest thanks to all of those who have supported, and continue to support, the Heart Research Centre's work in helping to reduce deaths and disability from heart disease. We thank future donors in advance for their assistance.

One of the easiest ways for members of the community to support the Heart Research Centre is through regular giving. The process of direct debit is simple because it is automatic.

Regular giving involves periodic or recurrent donations made through a person's bank or credit card account. Donors elect to pay a given amount at certain intervals throughout the year, with monthly or quarterly giving being the preferred options. Regular giving through direct debit offers donors an easy, "no fuss" way of making their donations. It also means that those who are unable to give large amounts of money are not excluded.

Every gift of \$2 or more is tax deductible. A receipt is sent at the end of each financial year which states the total amount given during the year.

The Heart Research Centre values every donation made, regardless of how big or small it is. Every dollar has the potential to make a difference to our cause, and to the global fight against heart disease. The existence of organisations such as the Heart Research Centre is fundamental to the continued improvement of health care services for the many Australians touched by heart disease.

Regular giving is especially beneficial to the Centre, as it maximises your donation by reducing our processing and administration costs. It also allows future income to be predicted. The research team is able to plan ahead and respond effectively to new research opportunities as they arise.

Mary Cornell has been donating to the Heart Research Centre since 2003. Mary's husband died in 1977 after battling heart disease, which is a hereditary condition within his family. After Mary's husband's illness was diagnosed, the doctor treating him informed the family of the likelihood that they, too, could suffer from heart disease at some stage in their lives.

Both Mary's son and daughter have heart disease. Her son has undergone a procedure to insert coronary stents and her daughter has had coronary artery bypass graft surgery. Both suffer from diabetes. Mary herself has been very lucky not to suffer from heart disease, but she has supported her family through their experiences. For this reason, Mary donates regularly to the Centre.

Mary's daughter participated in cardiac rehabilitation following her triple bypass surgery. Her son received counselling from a psychologist for some time because he was experiencing depression associated with his cardiovascular disease. The Heart Research Centre is proud to work towards improving the lives of those with heart disease through the development of rehabilitation and counselling services.

Mary receives this newsletter each quarter and enjoys reading about the Centre's latest projects. She is a huge tennis fan. Each year her son buys her tickets to the Australian Open. This year Mary turns 85 and is in such good health that she was planning to travel to the

Melbourne Park Tennis Centre by public transport from her home in the suburb of Mount Waverley!

If you would like to join Mary in donating regularly, you can sign up online on a secure page that is part of our website at www.heartresearchcentre.org/how-you-can-help/regular-giving. Alternatively, you may wish to download a hard-copy donation form to post to the Centre, or call us directly on (03) 9326 8544.

If you would like to receive our 2010 Annual Report with up to date information about our heart research, please let us know.

**HEART
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Heart Research Centre

Postal Address:

PO Box 2137
The Royal Melbourne Hospital
VIC 3050

Telephone: (03) 9326 8544
Facsimile: (03) 9326 5066

Email: heart@medicine.unimelb.edu.au
Website: www.heartresearchcentre.org

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