

Australian Centre for Heart Health

Annual Report

2021



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Annual Report

Improving the lives of people living
with heart disease

2021

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From the Director & President



In the second week of February 2020 the World Health Organisation formally named a novel corona virus that was appearing around the world, COVID-19. Three weeks later we had the first death in Australia and by the 16th March a State of Emergency was declared in Victoria. From that time, and through almost all of 2021, the Centre functioned primarily in a remote working mode with staff working from home while the cardiac rehabilitation workforce saw itself re-deployed in many cases to front-line nursing duties with closure of many cardiac rehabilitation programs. We reflected on the impact of these events in articles in the *British Journal of Cardiac Nursing* and the *European Journal of Cardiovascular Nursing*, while also sharing our concern by social media.

Remarkably, there were some positives coming out of the pandemic. We saw the Commonwealth Government greatly expand the options for people to access telehealth psychological services – something that had only been available to people in very rural and remote areas. Because of this new-found ability to reach a national population in need of cardiac psychology counselling, we were able to establish the Cardiac Counselling Clinic as a truly national specialist psychocardiology counselling service as part of our Cardiac Wellbeing Program. This is unique in Australia and is one of only a handful of such centres internationally. You can read about who we are reaching with this program in this Annual Report.

During 2021 we were able to further refine our vision of how we can deliver this national program, through the development of the **Emotional, Mental and Behavioural Recovery After a Cardiac Event (EMBRACE)** model, described later in the Report. This model is based on the best evidence of what works in the provision of targeted responses to people experiencing the mental health impacts of a cardiac event. It is our version of precision medicine but, as with precision medicine, there is a reliance on being able to measure what you want to target therapeutically.

The development of the Cardiac Distress Inventory (CDI), a key component of the Centre's international Cardiac Emotions Study, will help us gain the right level of precision, as we understand more clearly what the nature of cardiac distress is, and how it is much more than simply anxiety and depression, notwithstanding the importance of these.

Our invited article on 'Unravelling Cardiac Distress', for the journal *Frontiers in Psychiatry*, gives us an opportunity to present our ideas more broadly. Already we have teams of clinicians and researchers in Germany, Italy, Hong Kong, Iran, Turkey and Israel ready to undertake translation and validation studies of the CDI from about mid-year 2022.

Other strong research projects reported on in this Report include the randomised controlled trial of our self-management program, Back on Track, funded by the HCF Research Foundation, and our study on The Emotional Impacts of Spontaneous Coronary Artery Dissection (SCAD). This SCAD study is important, as the first study of its type in Australia, and also because it gives us an opportunity to work with the Victor Chang Cardiac Research Institute (VCCRI), Australia's foremost centre for research on the genetics of SCAD. As a small research, training and treatment centre we value highly the research partnerships we have with the VCCRI, Monash University, Barwon Health, Stanford University, Queen's University Belfast, Suffolk University, Federation University, Adelaide University and our emerging relationship as a research and program development partner of the Heart Foundation and the Stroke Foundation.

The Report contains information on other research, and some of our community engagement activities. We also must note the great success of our training program, which in November delivered the Cardiac Disease, Rehabilitation and Secondary Prevention course, which for the first time in its' 30-year history was delivered exclusively online, reaching almost 70 health professionals from around Australia and New Zealand. In 2022 we will aim to deliver this program into the Asia Pacific Region as well.

We also need to mention that the Centre's achievements have been due to the hard work of the staff, the support of the Board, and the generous support of our donors. We still lack meaningful government or large philanthropy or corporate support, a situation that we will continue to rectify in 2022.



Professor Alun Jackson
Director



Professor Edward Janus
President



Board Members

The Centre continues to benefit from the strong leadership provided by its Board and the expertise they bring in medical research and health services management, cardiology, fundraising, financial management, education development as well as research and education administration.

Professor Edward Janus

President

Professor Edward Janus is a physician and Director of General Internal Medicine in the Department of Medicine at the University of Melbourne at Western Hospital in Footscray.



Mr David Young

Secretary

Mr David Young joined the Board in 1993 when the Heart Research Centre (now the Australian Centre for Heart Health) became an independent organisation. He has been Honorary Secretary of the Board since that time.



Ms Beverley Knowles

Member

Ms Beverley Knowles, who joined the Board in 1997, is a corporate social responsibility and marketing consultant, and an executive volunteer for Leadership Victoria - GreatConnections.



Dr Robert Newman

Member

Dr Robert Newman is Head of Clinical Cardiology at Western Hospital in Footscray and an Honorary Senior Lecturer in the Department of Medicine at the University of Melbourne.



Mr Andy Sattler

Treasurer

Mr Andy Sattler has experience of a 30+ year hands on finance career, strong in treasury, financial control, forecasting and modelling.



Dr Tangerine Holt

Member

Dr Tangerine Holt is currently Academic Program Director at the Melbourne School of Professional and Continuing Education (MSPACE), University of Melbourne. She is also an Adjunct Professor at La Trobe University with over 20 years' tertiary education industry experience in academic and senior leadership positions with a proven track record in building and expanding partnership programs.



Dr Alan Hutchinson

Member

Alan is President of Heartbeat Victoria and has enjoyed a long and successful career in educational administration and leadership. He holds a University of Melbourne Doctor of Education degree in public policy analysis and evaluation; is a Fellow of the Australian Council for Educational Leaders and a Fellow of the Institute of Managers and Leaders.



In 2022 we will welcome two new Board members: Ms Kaylene O'Shea and Dr Andre La Gerche.

With broad multinational pharmaceutical industry experience, Kaylene has managed budgets of more than \$30M and teams of up to 120 across companies such as CSL, Amgen, Calgene and Bristol Myers-Squibb. Kaylene has first hand experience of the impact our Cardiac Counselling Clinic can have on a patient's recovery.

Andre is Head, Clinical Research Department and Head of Sports Cardiology at Baker Heart and Diabetes Institute and works as a cardiologist at St Vincent's Hospital in Melbourne, specialising in cardiac imaging. He is a Future Leadership Fellow of the National Heart Foundation and a NHMRC Career Development Fellow. He completed a PhD at the University of Melbourne and 4 years of postdoctoral research studying the effect of endurance exercise on the heart at the University Hospital of Leuven, Belgium, where he is a Visiting Professor.

Improving the lives of people living with heart disease...

Our Mission

Our mission

Our mission is to improve the lives of people living with heart disease so they can lead engaged and productive lives. In doing so, our aim is to reduce cardiac morbidity and premature mortality.

Our vision

Our vision is to be Australia's leading centre of excellence in the psychological, social and behavioural aspects of recovery from a cardiac event and one of the top international centres for psychocardiology research, training and clinic support.

Our specialty

The speciality of the Centre is recovery and secondary prevention of heart disease. We aim to achieve our mission by focusing on two major areas:

Psychocardiology, or cardiac psychology. This addresses research in, and treatment and prevention of the psychosocial and behavioural aspects of, coronary heart disease.

Psychocardiology is a branch of Health Psychology and Behavioural Health, which is the study of psychological and behavioural processes in health, illness, and healthcare, and is concerned with understanding how psychological, behavioural, social and cultural factors contribute to physical and mental illness and wellbeing.

Cardiac rehabilitation. Through our research and translational work in training and in the development of best practice guidelines, we aim to contribute to the effective delivery of evidence-led practice in cardiac rehabilitation.

We are

- A Commonwealth Government-recognised, independent Medical Research Institute (iMRI).
- A National Health & Medical Research Council (NH&MRC) administering institution.
- An affiliated centre of Deakin University's Faculty of Health and the University of Melbourne's Faculty of Medicine, Dentistry and Health Sciences.
- A not-for profit company limited by guarantee, incorporated under the provisions of the Companies (Victoria) Code on 11 June 1993 (ABN: 87 267 901 425) and
- A registered charity with the Australian Charities and Not-for-profits Commission with Australian Taxation Office recognition as an income tax exempt health promotion charity with deductible gift recipient status.



How can we best meet the mental health needs of cardiac patients?

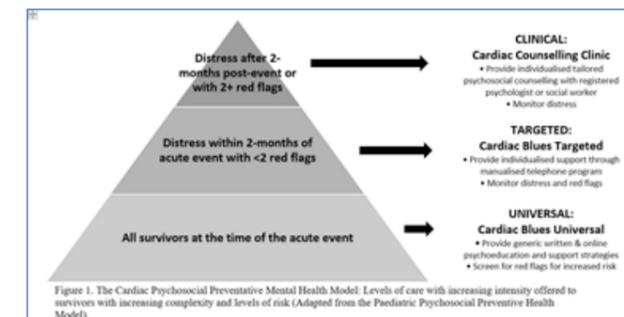
Based on research undertaken by the Centre, of the 59000 Australians who will have an acute coronary event during the next year, over 40,000 will experience the cardiac blues, or early adjustment issues. These will resolve for many, but almost 17,000 people will still be anxious or depressed by 6-12 months post-event.

Survivors at risk of persistent or worsening anxiety/depression can be distinguished from those with the more transient cardiac blues using various risk factors or 'red flags' which are easily identifiable at the time of the event. These include having a history of mental health problems, experiencing current financial strain, being aged under 55, living alone or being isolated, having diabetes, being a smoker, and having experienced other recent stress or bereavement. Our research has shown that the presence of two red flags results in a 66% likelihood of having anxiety/depression by 6-12 months post-event, while three red flags results in an 85% likelihood. In addition, cardiac-related mental health problems are currently under-detected and under-managed.

Our vision

We are proposing a new model of care – the EMBRACE program - to support the mental health of Australians who survive an acute cardiac event. This is a tiered and stepped-care model of mental health recovery support based on survivors' complexity of need and risk, with universal low intensity generic support offered to all survivors and two subsequent levels of more targeted higher intensity and tailored support offered to those with increasing risk for ongoing mental health problems and therefore poorer prognosis. Stepped care is an efficient and effective way of delivering targeted services to clients. The essence of a stepped care/tiered service approach is that people are offered services according to their need; that there is appropriate measurement of acuity to indicate whether movement to another step is warranted; and that a first level service may be appropriate for many patients. Importantly, lower intensity services can be delivered in highly cost-effective ways, using online and telephone-delivered support, with more intensive interventions such as individual counselling being reserved for the smaller number of patients with more severe mental health problems.

The program is based on the Cardiac Psychosocial Preventative Mental Health Model shown below.



Ideally, Step 1, Cardiac Blues Universal would see all cardiac patients on discharge from hospital being offered a written Cardiac blues brochure and access to a 1-hour Cardiac blues online module. Both resources outline the cardiac blues symptoms, with the aim of normalising patients' experiences, reassuring them that symptoms are likely to resolve, alerting patients to 'red flags', and providing simple self-management strategies, including information about Steps 2 and 3. The Centre has developed these resources, but at present lacks the funding to implement this stage for all cardiac patients.

In Step 2, which we have termed Cardiac Blues Targeted, we would like to see all patients with distress and whose cardiac event occurred within the last two months and where <2

red flags are present, offered a manual-driven telephone-delivered support program involving two 50-minute sessions with a trained facilitator. The sessions would further normalise symptoms and reassure patients (given that they have <2 red flags), encourage them to monitor their distress symptoms, and provide evidence-based self-management strategies to support their emotional recovery. A version of this program, Teleheart, has been co-designed and pilot-tested and, in its original group format, was shown to reduce depression symptoms and severity. Step 3 sees patients with distress and whose cardiac event occurred more than two months earlier, or where 2+ red flags are present, offered individual personally-tailored counselling with a Medicare-registered psychologist through the ACHH Cardiac Counselling Clinic. Patients will be offered ten Medicare-rebated sessions on a mental health plan, which means sessions are bulk-billed and offered at no cost to the patient. The Clinic is in place.

The vision is there, and much of this program is in place. It just needs a higher level of secure funding, to enable the Centre to deliver it fully. Acquiring this funding will be a priority in 2022.

The Cardiac Counselling Clinic: Who are we helping?

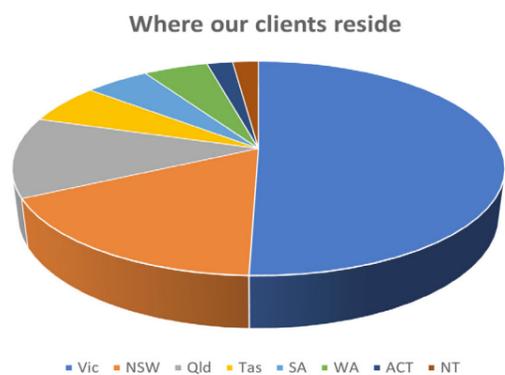
The **Cardiac Counselling Clinic** was established in early 2020 with the aim of providing specialist psychological and behavioural support to people with heart disease and their families. The psychological services offered through the Clinic are evidence-based and draw on the Centre's own world-leading research and that of other experts in the cardiac field. We deliver this support through our team of highly experienced registered cardiac psychologists

Clients access the services of the Clinic through a variety of pathways, including both self-referral and referral via a health professional. In order to access the service free of charge, clients are referred to their general practitioner to obtain a Mental Health Treatment Plan (previously a Mental Health Care Plan), which enables counselling sessions to be bulk billed through Medicare.

In the 22 months from 1 March 2020 to 30 November 2021, 162 clients accessed the services of the Cardiac Counselling Clinic. Here we present a profile of these 162 clients as well as outcome data for 49 clients who had completed their sessions and been discharged from the clinic at the time of preparing this report.

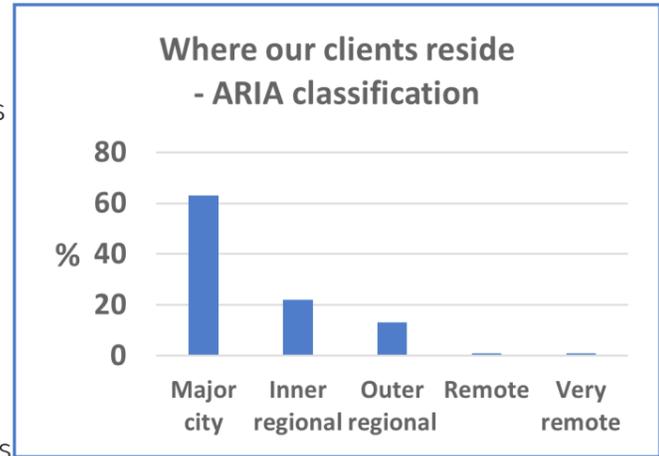
Characteristics of Clients of the Cardiac Counselling Clinic

Sociodemographic profile



Of the 162 clients, 52% were female, 48% male. They ranged in age from 17 to 87 years with an average age of 57.3 (SD=14.6 years). Clients had a range of years of education, and most were currently in the workforce. All States and Territories of Australia were represented, and around a third lived outside major cities. It is important to note that 61% of clients resided outside metropolitan Melbourne, underscoring the benefit of the service being delivered via telehealth, given that the ACHH is located in inner Melbourne.

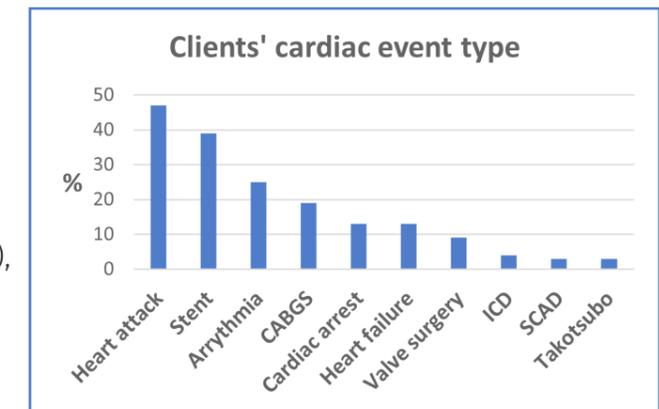
Clients were asked about their level of financial strain during the two weeks prior to commencing counselling, using a 5-point scale from 'no strain' to 'extreme strain'. Over a quarter (26%) of clients reported experiencing extreme or considerable financial strain during the two weeks prior to their counselling. Clients were also asked whether they had private health cover, which is associated with outright home ownership, luxury vehicle ownership, and an annual income greater than AUD \$100,000 [1], and thus is used as an indicator of socioeconomic status. Half the clients (49%) did not have private health cover.



Medical profile

In terms of clients' most recent cardiac event, 47% reported having had an acute myocardial infarction (AMI), 39% reported having undergone percutaneous coronary intervention (PCI), 25% reported having rhythm disturbance including atrial fibrillation, and 19% reported having undergone coronary artery bypass graft surgery (CABGS). Less common cardiac events included cardiac arrest (13%), heart failure diagnosis (13%), valve surgery (9%), insertion of an implantable cardioverter defibrillator (4%), spontaneous coronary artery dissection (SCAD; 3%) and takotsubo cardiomyopathy (3%).

Clients' most common cardiovascular risk factors were high blood pressure (41%), positive family history of heart disease (35%), hypercholesterolemia (32%), obesity (21%), and sleep apnoea (18%) or other sleep disorders (14%), and current smoking (8%). Overall, 75% of clients had at least one CVD risk factor, with 29% having one, 25% having two, 13% having three, and the remaining 8% having four or more. Clients also reported a range of other physical health conditions that they experienced, in addition to their acute heart condition. As shown in Figure 6, these included musculoskeletal conditions (MSK; 32%), heart failure (26%), diabetes (16%), cancer (9%), COPD (5%) stroke (3%) or other neurological conditions (3%), and kidney disease (2%). Overall, 61% of clients had at least one comorbidity, with 37% having one, 15% having two, 18% having three, and the remaining 8% having four or more.



Presenting mental health issues

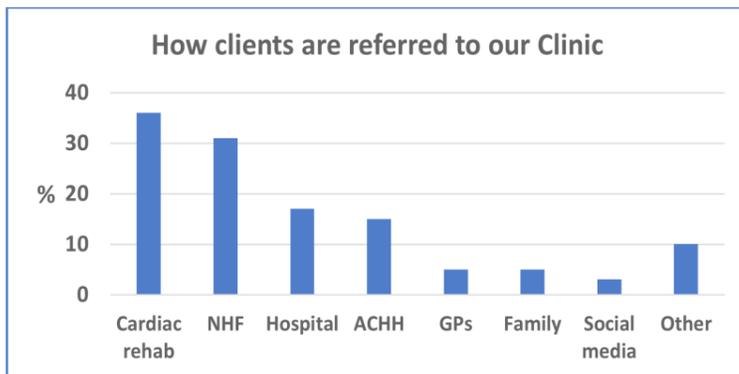
Clients presented to the Clinic with a range of cardiac-related mental health issues, most commonly anxiety (55%), depression (48%), and post-traumatic stress disorder (14%). A very small proportion of clients (<6%) reported less common mental health conditions including bipolar disorder, phobias, obsessive compulsive disorder, and psychosis.

On assessment, using the Generalised Anxiety Disorder-7 Questionnaire (GAD7) and the Patient Health Questionnaire-9 (PHQ9) half the clients were classified as having moderate to severe anxiety (53%), and over half as having moderate to severe depression (58%).

Over half the clients (56%) had a mental health history and almost three quarters (71%) were socially isolated, both these factors being ‘red flags’ for post-event mental health difficulties. In terms of the broad range of known red flags, including mental health history, social isolation, age under 55, significant comorbidity, poor self-rated health, financial strain, recent bereavement and current smoking, almost all clients (98%) presented with at least one red flag.

Source of referral

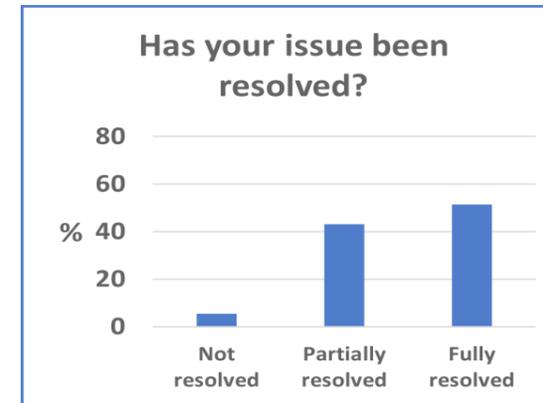
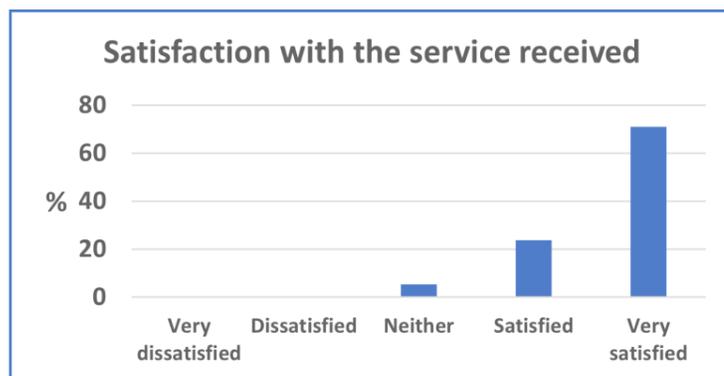
Clients were referred to the Clinic via a range of sources, most commonly through cardiac rehabilitation programs (36%) and through the National Heart Foundation (NHF; 31%).



This finding is testament to the strong collaborative relationships that the ACHH has built with CR programs and the NHF. While general practitioners (GPs) were the source of only 5% of referrals to date, the ACHH continues to strengthen its relationship with GPs, to further optimise direct GP referrals.

Outcomes after receiving counselling

Outcomes for clients who have been discharged from the Clinic have been incredibly positive. Of the 49 clients for whom discharge data has been collected to date, almost all clients reported being satisfied or very satisfied (95%) with the service they received, and stated that their presenting issues had been resolved (95%).



On discharge, clients demonstrated statistically significant improvements in levels of anxiety, depression, and self-rated health. All these factors are strongly associated with post-event survival, underscoring their relevance in terms of client outcomes. Clients also showed statistically significant improvements in their self-efficacy (confidence) in relation to managing their emotional wellbeing, being physically active, managing their sleep, and getting

needed social support. Self-efficacy is a strong predictor of successful lifestyle modification, highlighting the value of these improvements.

It is clear from the findings of this report that the Cardiac Counselling Clinic is filling an important gap in the cardiac rehabilitation service system by providing much needed mental health support for Australia's cardiac patients.

Unravelling Cardiac Distress

In the 2019 Annual Report we introduced our new research project to explore the concept of cardiac distress and to develop a new clinical tool, the Cardiac Distress Inventory. We can now report the major developments in this program of work.

We established the conceptual base for the project, later termed the Cardiac Emotions Study, and published the rationale for the study in the *British Journal of Cardiac Nursing*. In this paper, we argued that the challenging emotions, changes and experiences that follow an acute cardiac event could all be grouped under the concept of 'cardiac distress', which we defined as:

A persistent negative emotional state rather than a transient state; involving multiple psychosocial domains; that challenges a patient's capacity to cope with living with their heart condition, the treatment of the condition, and the resultant changes to daily living; and challenges the person's sense of self and future orientation.

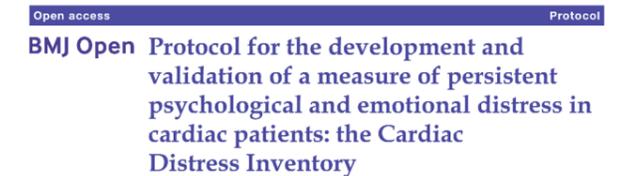


We addressed the second part of the question - regarding how we should measure distress - by designing the study to develop the Cardiac Distress inventory. This design was published in the *British Medical Journal Open*.

Recruiting the 400 or so people we needed to develop the clinical measure was a real challenge, being carried out during the COVID-19 pandemic, but we did so, with the superb cooperation of our colleagues at Monash Health, Barwon Health and the Stanford Women's Heart Health Clinic in California. For the first time in recruiting for as study, we also used social media. At least one-third of our participants were recruited through this medium and we will now compare responses for the people we recruited through hospital with those recruited through social media to see if this method of recruitment for studies is something that we would do again.

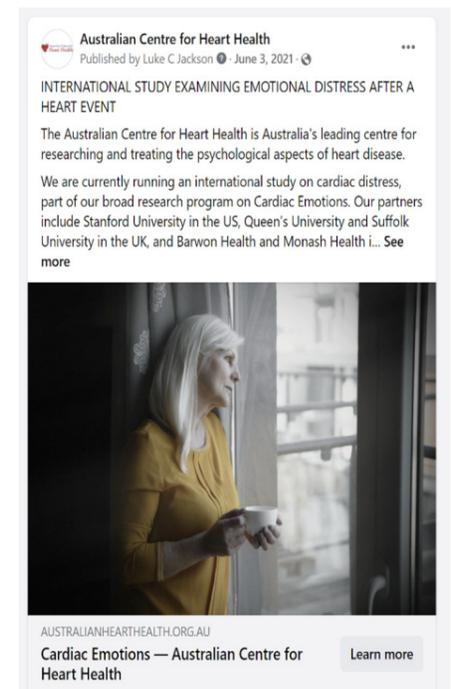
One unanticipated benefit of recruiting through social media is that many of the people who engaged with this invitation to participate in the study wrote of their own experiences of cardiac distress and engaged with other people with similar experiences on our facebook page. Through our interaction with these people, we were able to guide those struggling with their adjustment issues to our Cardiac Counselling Clinic.

We look forward to shortly being able to share the results of this internationally significant project, with the first set of results to appear in an invited paper for a special issue of *Frontiers in Psychiatry*, in early 2022.



Alun Jackson^{1,2}, Michelle Rogerson¹, Michael Le Grande^{1,2}, David Thompson^{1,4}, Chantal Ski^{1,4}, Marlies Alvarenga^{5,6}, John Amerena^{7,8}, Rosemary Higgins^{1,2}, Michela Raciti¹, Barbara M Murphy^{1,2}

ABSTRACT
Introduction: Distress is experienced by the majority of cardiac patients, yet no cardiac-specific measure of distress exists. The aim of this project is to develop and validate the Cardiac Distress Inventory (CDI). Using the CDI.
Strengths and limitations of this study:
 This will be the first available cardiac-specific distress measure based on a multidisciplinary conceptualisation.



Strengthening People's Capacity to Manage their Recovery

One of the major projects undertaken by the Centre in 2021 was the *'Back on Track'* trial. *Back on Track* is an online self-management program for people who have had a heart event, such as heart attack or heart surgery. It has been adapted from a previous ACHH program, *'Beating Heart Problems'*, which was an evidence-based, face-to-face group program. Designed to extend both reach and availability, *Back on Track* is undertaken online and at any time, in the comfort and privacy of one's home.

What is the *Back on Track* trial?

The *Back on Track* program helps people manage their health behaviours and emotional wellbeing. The program begins with a goal-setting module, followed by four lifestyle modules relating to dietary change; physical activity; smoking cessation; and emotional recovery. Participants complete whichever of the modules are relevant to them at their own pace. The trial involves random allocation of participants into either the 'self-directed' group, in which participants complete the online modules alone or the 'supported' group, which provides participants with two telephone calls with a specially trained facilitator to assist them in completing the online modules. Baseline and 2- and 6-month post-program questionnaires assess changes in emotional and behavioural outcomes.

The *Back on Track* trial is funded by the HCF Research Foundation, received ethics approval from the Deakin University Human Research Ethics Committee and is endorsed by the Australian Cardiovascular Health and Rehabilitation Association (ACRA).

How is the *Back on Track* trial progressing?

The *Back on Track* trial commenced in May 2020 and whilst data collection is still continuing, we have successfully recruited 122 participants into the trial. Participants are taking part from all over Australia, including many regional and rural areas. The program has been very well received and we have been incredibly fortunate to have been supported in recruitment by cardiac rehabilitation (CR) co-ordinators and coronary care staff at major hospitals across Australia.

Results of the *Back on Track* trial will be available in mid-2022. The findings will reveal whether people using the program obtain the same or different benefits depending on whether they undertake it on their own, or with telephone support from a trained health professional. Most importantly, the findings will tell us the best format for how we should continue to offer the program to clients accessing the Cardiac Wellbeing Program.

Why is *Back on Track* important?

For many people, accessing and attending centre-based CR programs is not possible. Now more than ever with the COVID-19 pandemic, there is a need for innovative e-health programs to assist cardiac patients with their recovery, especially in behavioural and emotional self-management. *Back on Track* provides an evidence-based program that offers a flexible, easily accessible, user-friendly and effective adjunct to centre-based programs.

"The Back on Track program helps people who have had a heart event manage their health behaviours and emotional wellbeing. The program is all done online in the comfort of their own home".

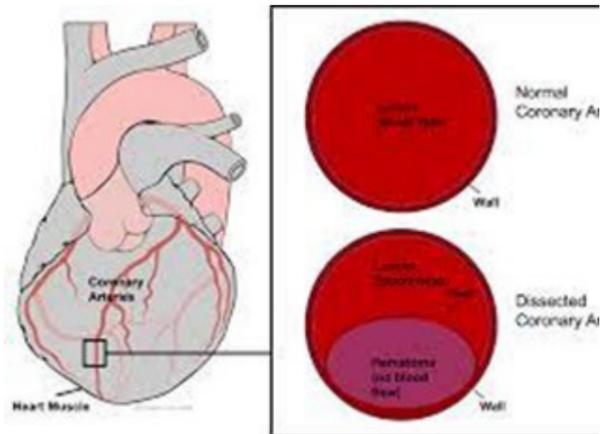
Dr Michelle Rogerson,
Senior Research Fellow,

 *back on track*
PROGRAM

Emotional Impacts of Spontaneous Coronary Artery Dissection

A relatively new and emerging area in cardiac research is investigating Spontaneous coronary artery dissection (SCAD), an increasingly recognised cause of acute myocardial infarction (AMI). The Centre has launched an exciting study investigating the emotional experiences and support needs of Australians who have experienced SCAD.

What is Spontaneous Coronary Artery Dissection?



SCAD is a nonatherosclerotic condition, where people have a heart attack in the absence of plaque in the coronary arteries. Instead, the heart attack occurs when a coronary vessel develops a tear causing coronary artery obstruction. SCAD predominantly affects younger women and accounts for a large proportion of AMIs in this group, although around 10% of people affected are men

What is currently known about SCAD?

The identification and treatment of SCAD has improved dramatically in the past decade, with increased understanding of the causes of and mechanisms for the condition. However, very little research has been undertaken to investigate the emotional and psychological impacts of SCAD. The few previous studies have been undertaken overseas, most often in American and Canada. Almost no psychosocial research with SCAD survivors has been done in Australia.

How is our work contributing to the understanding of SCAD?

Ours is one of the first studies in Australia to investigate the psychosocial aspects of SCAD. We are currently working with colleagues at the Victor Chang Cardiac Research Institute in Sydney to undertake an intensive and extensive study to better understand the experiences and support needs of survivors of SCAD in Australia. This is a very productive partnership, as the Victor Chang team are experts in the identification and management of SCAD, while we at the ACHH are experts in psychosocial research and intervention.

“We aim to investigate and document the psychosocial experiences and needs of a sample of Australian SCAD survivors to inform the development of effective support programs for this particularly vulnerable and under-researched group”.

Dr Barbara Murphy, Principal investigator,

What is involved in our SCAD Experiences Study?

This important project is being undertaken in three consecutive steps. First, in Step 1, a series of focus groups with SCAD survivors is being conducted. To date, four focus groups with around 20 people have been undertaken in 2021 and these will continue in early 2022 with a further three focus groups in planning stages. This step will enable us to listen first-hand to the stories of survivors of SCAD, to learn about their emotional responses to this sudden and often terrifying cardiac condition, and to enquire about what types of informational, emotional and psychosocial supports they needed during their recovery. Step 2 will involve taking the findings from the focus group research to develop a comprehensive questionnaire to be used in a larger survey of survivors of SCAD in Australia. Finally, in Step 3, we will develop a support program based on what we have learned from our qualitative and quantitative research studies.

We hope that the findings of the study will enable us to better support the emotional and psychosocial recovery of SCAD survivors in the future.



Survival After a Cardiac Event - the BHP Follow-up Study

The Centre takes pride in conducting invaluable research to help those who have had a cardiac event. Cardiac patients are at increased risk of a subsequent event and need good supports in managing their health behaviours and mental health.

What is the Beating Heart Problems Program?



We developed the *Beating Heart Problems* program to address these issues in secondary prevention care. The program was designed to boost behavioural, psychosocial and cognitive skills to help patients self-manage their health behaviours and mental health in the long term. The group-based program includes sessions on four cardio-protective behaviours, specifically physical activity, healthy diet, medication adherence, and smoking cessation; and sessions on four mental health areas, namely depression, anxiety and anger management, and engaging social support.

The 8-week program is based on the principles of Cognitive Behaviour Therapy (CBT) and incorporates motivational interviewing (MI) techniques and strategies. The program includes activities such as goal setting, self-monitoring, feedback, reward, homework tasks, role modelling, and relapse prevention strategies.

In a randomised controlled trial with 275 cardiac patients undertaken in 2007-09, we demonstrated that the program impacted positively on participants' physiological, behavioural and mental health risk factors. The findings were published in peer-reviewed articles in the *Journal of Cardiopulmonary Rehabilitation and Prevention* (2013) and the *European Journal of Preventive Cardiology* (2014).

What is involved in the Follow-up Study?

The present study is a 14-year survival study, following up this cohort of 275 patients, with the aim of investigating the impact of participation in the Beating Heart Problems program on long-term survival.

The study involves tracking of participants from the original trial through the Australian National Death Index via the Australian Institute of Health and Welfare (AIHW) to ascertain their survival or mortality status. Obtaining ethical approval was a lengthy process that required very detailed applications to several relevant ethical bodies which took nearly 8 months to complete and gain approvals. The review process was thorough and demanded clear and concise information of the study.

Given that our RCT demonstrated cardioprotective changes for the treatment group compared to the control group, we hypothesise that a matching survival gap will be apparent between the two groups, with greater survival for the treatment group. We will begin data analysis and report writing early in 2022 and look forward to reporting on the study findings in future publications.



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Reduction in 2-year recurrent risk score and improved behavioral outcomes after participation in the "Beating Heart Problems" self-management program: results of a randomized controlled trial

Barbara M Murphy¹, Marian U C Worcester, Rosemary O Higgins, Peter C Elliott, Michael R Le Grande, Fiona Mitchell, Hema Navaratnam, Alyna Turner, Leeanne Grigg, James Tatoulis, Alan J Goble

Affiliations + expand
PMID: 23595004 DOI: [10.1097/HCR.0b013e31828c7812](https://doi.org/10.1097/HCR.0b013e31828c7812)

Abstract

Purpose: While behavior change can improve risk factor profiles and prognosis after an acute cardiac event, patients need assistance to achieve sustained lifestyle changes. We developed the "Beating Heart Problems" cognitive-behavioral therapy and motivational interviewing program to support patients to develop behavioral and cognitive self-management skills. We report the results of a randomized controlled trial of the program.

Original scientific paper

An integrated secondary prevention group programme reduces depression in cardiac patients

Alyna Turner^{1,2}, Barbara M Murphy^{1,2}, Rosemary O Higgins¹, Peter C Elliott^{1,2}, Michael R Le Grande¹, Alan J Goble¹ and Marian UC Worcester^{1,2}

Abstract
Objective: Depression is common following an acute cardiac event and can occur at a time when behaviour change is strongly recommended to reduce the risk of further cardiovascular events. The "Beating Heart Problems" programme was designed to support cardiac patients in behaviour change and mood management.
Methods: The programme was based on cognitive behaviour therapy and motivational interviewing. A randomized controlled trial (RCT) comparing the 8-week group programme with usual care was undertaken between 2007 and 2010. All patients attended a hospital-based clinic for assessment of physiological risk factors at baseline (6 weeks after their acute event), and at 4- and 12-month follow up. Psychological and behavioural indicators were assessed by self-report questionnaires. Of the 275 patients enrolled into the RCT, 42 (15%) had Beck Depression Inventory-II scores ≥ 13 at baseline. At 4-month follow up, the proportion of patients with scores ≥ 13 at baseline who had scores ≥ 13 at 4-month follow up was significantly lower in the group programme compared to usual care (OR 0.45, 95% CI 0.25-0.81, p = 0.005). Anger symptoms and management strategies were also significantly lower in the group programme compared to usual care (OR 0.45, 95% CI 0.25-0.81, p = 0.005).

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2014, Vol. 21(2) 153-162
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Community Engagement

'Minding the Heart' community event

At the end of 2021, the ACHH was delighted to present its inaugural session of 'Minding the Heart' – a free community event held in the outer eastern suburb of Lilydale in Melbourne, Victoria.

This event was run in partnership with the Yarra Ranges Men's Health Project and was offered to community members and their families and friends who had experienced a heart event, and anyone interested in wellbeing and mental health after a heart event. The session covered the connections between heart health and mental health and screened the Australian movie 'Pumphead' which highlights the experiences of 8 people following heart surgery. There was also plenty of time for questions and answers and, importantly social and peer interaction.

The event was extremely well received by community members, health and community professionals, and politicians alike. After the challenges of the restrictions and social distancing requirements of the Covid-19 pandemic, we were grateful to be able to engage with the community, in a face-to-face context.

We would like to acknowledge the support of the Yarra Ranges Men's Health Project, in particular the project manager, Mr Brian Miers who organised the event and enabled the idea of a community session to come to fruition. Also, to Ronin Films for providing us with access to view the Pumphead movie and to the Yarra Ranges council for providing the venue and catering. We very much look forward to further engaging the community and providing similar sessions to Minding the Heart across more community settings in 2022 and beyond.



Parliamentary Secretary for Health, Mr Steve McGhie opening the 'Minding the Heart' event

Heart Health Connect and Cardiac Connect - ACHH newsletters

2021 also saw the creation of the ACHH community e-newsletters; HeartHealth Connect (for people with heart disease and their family and friends) and Cardiac Connect (for health professionals).

At the ACHH, we are acutely aware of the increased stress and isolation that many people have experienced during the Covid-19 lockdowns and restrictions and believed that it was crucial to provide our community members, clients and health professionals with a sense of connection to the Centre. The newsletters are published four times per year and include articles on aspects of heart health and behavioural and emotional health, information on our Cardiac Counselling Clinic, our research programs and our training program. We have received very positive feedback about the newsletters and will continue to provide this service to our community.



Publications

The Centre continues to take its role of knowledge dissemination very seriously, through its publication program.

We began the year with a publication arising from our sleep and cardiovascular disease research area:

Le Grande MR, Jackson AC, Beauchamp A, Kerr D, Driscoll A, Diagnostic accuracy and suitability of instruments that screen for obstructive sleep apnoea, insomnia and sleep quality in cardiac patients: a meta-analysis, *Sleep Medicine*, 2021; 86, 135-160



Original Article

Diagnostic accuracy and suitability of instruments that screen for obstructive sleep apnoea, insomnia and sleep quality in cardiac patients: a meta-analysis

Michael R. Le Grande ^{a, b, c, *}, Alun C. Jackson ^{a, b, d}, Alison Beauchamp ^{a, e, f, g}, Debra Kerr ^b, Andrea Driscoll ^{b, h}

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^c Melbourne Centre for Behaviour Change, School of Psychological Sciences, The University of Melbourne, Parkville, VIC, 3052, Australia

^d Centre on Behavioural Health, Hong Kong University, Pokfulam, Hong Kong

^e Department of Medicine - Western Health, The University of Melbourne, VIC, 3052, Australia

^f Australian Institute for Musculoskeletal Science (AIMSS), St. Albans, VIC, 3021, Australia

^g School of Rural Health, Monash University, Newborough, VIC, 3825, Australia

^h Centre for Quality and Patient Safety Research, School of Nursing and Midwifery, Deakin University, Geelong, VIC, 3220, Australia

This article addressed the critical issue of accurate measurement of sleep disorders in cardiac patients to aid health practitioners in both primary and secondary prevention, while in a related paper we argued for the importance of cardiac nurses having high levels of sleep literacy:

Le Grande MR, Kerr D, Beauchamp A, Jackson AC. Why cardiac nurses should have good sleep literacy, *British Journal of Cardiac Nursing*, <https://doi.org/10.12968/bjca.2021.0061>

This year, we were also able to report on the findings of our women's cardiac rehabilitation project, that we carried out over 2019 and 2020 and build on this exploration of the importance of yoga in recovery, in a paper with colleagues from the stroke research field.

Murphy BM, Zaman S, Tucker K, Alvarenga M, Morrison-Jack J, Higgins R, Le Grande M, Nasis A, Jackson AC. Enhancing the appeal of cardiac rehabilitation for women: development and pilot testing of a women-only yoga CR program. *European Journal of Cardiovascular Nursing* 20 (7): 633-640.



European Journal of Cardiovascular Nursing (2021) 20, 633-640
doi:10.1093/eurjcn/zvab008

ORIGINAL ARTICLE

Enhancing the appeal of cardiac rehabilitation for women: development and pilot testing of a women-only yoga cardiac rehabilitation programme

Barbara M. Murphy ^{1,2,3,*}, Sarah Zaman ^{4,5}, Kim Tucker ^{1,4}, Marlies Alvarenga ^{1,4}, Jenni Morrison-Jack ^{1,6}, Rosemary Higgins ¹, Michael Le Grande ^{1,2}, Arthur Nasis ⁴, and Alun C. Jackson ^{1,2,7}

¹Australian Centre for Heart Health, 75-79 Chetwynd Street, North Melbourne, VIC, Australia; ²Faculty of Health, Deakin University, Melbourne, VIC, Australia; ³Department of Psychology, University of Melbourne, Parkville, VIC, Australia; ⁴MonashHeart, Monash Health, Clayton, VIC, Australia; ⁵Monash Cardiovascular Research Centre, Faculty of Medicine, Nursing and Health Sciences, Monash University, Clayton, VIC, Australia; ⁶Ithana Yoga Centre, St Kilda, VIC, Australia; and ⁷Centre on Behavioural Health, University of Hong Kong, Pok Fu Lam, Hong Kong

Received 16 September 2020; revised 14 December 2020; accepted 20 January 2021; online publish-ahead-of-print 22 March 2021

We were also able to reflect in an editorial on the different needs of men and women in cardiac care:

Murphy BM, Kuhn L, Cameron J. Understanding the differences between women and men: Reflections on recent studies in cardiovascular care, *European Journal of Cardiovascular Nursing*, zvab095, <https://doi.org/10.1093/eurjcn/zvab095>

Two related articles examined in some detail the issue of rumination. We argued that one characteristic that differentiates patients with elevated risk of persistent post-event anxiety and depression is their style of cognitive processing, particularly whether they engage in negative ruminative thinking. We were then able to highlight the importance of identifying ruminators early on in their recovery in order to appropriately direct and tailor mental health supports for those who need it most.

Murphy B, Phillips L, Jackson A. Rumination as a key to understanding anxiety and depression in cardiac patients. *British Journal of Cardiac Nursing*. 2021. <https://doi.org/10.12968/bjca.2021.0046>

Guan YY, Murphy BM, Phillips L, Crebbin S, Le Grande M, Worcester M, Jackson AC. Impact of rumination on severity and persistence of anxiety and depression in cardiac patients, *Heart & Mind*, 2021;5:9-16.



Inevitably, we addressed the impact of COVID-19 on aspects of professional practice in two papers co-authored with colleagues from the Australian Cardiovascular Health and Rehabilitation Association:

Cartledge S, Rawstorn JC, Tran M, Ryan P, Howden EJ, Jackson AC. Telehealth is here to stay but not without challenges: A consultation of cardiac rehabilitation clinicians during COVID-19 in Victoria, Australia, *European Journal of Cardiovascular Nursing* <https://doi.org/10.1093/eurjcn/zvab118>

Cartledge S, Gallagher C, Rawstorn J, Thomas E, Bourne C, Janssen K, Macauley L, Sanderson S, Jackson AC, Hendriks J. It's easier than you think to make a conference virtual – learning from our pandemic experience. *European Journal of Cardiovascular Nursing*, 20, 8, November 2021, 733–735, <https://doi.org/10.1093/eurjcn/zvab044>

Telehealth is here to stay but not without challenges: a consultation of cardiac rehabilitation clinicians during COVID-19 in Victoria, Australia

Susie Cartledge^{1,2,3*}, Jonathan C. Rawstorn², Mark Tran⁴, Pauline Ryan⁵, Erin J. Howden⁶, and Alun Jackson^{7,8,9}

¹School of Public Health and Preventive Medicine, Monash University, 553 St Kilda Road, Melbourne, VIC 3004, Australia; ²Institute for Physical Activity and Nutrition, Deakin University, Geelong, VIC, Australia; ³Heart Centre, Alfred Health, Melbourne, VIC, Australia; ⁴Health Independence Program, Cardiopulmonary Rehabilitation, St Vincent's Hospital, Melbourne, VIC, Australia; ⁵Heart Foundation, Melbourne, VIC, Australia; ⁶Human Integrative Physiology Lab, Baker Heart and Diabetes Institute, Melbourne, VIC, Australia; ⁷Australian Centre for Heart Health, Melbourne, VIC, Australia; ⁸Centre on Behavioural Health, Hong Kong University, Pok Fu Lam, Hong Kong; and ⁹Faculty of Health, Deakin University, Geelong, VIC, Australia

We published the protocol for our study of the online management of cardiac recovery:

Rogerson MC, Jackson AC, Navaratnam HS, Le Grande MR, Higgins RO, Clarke J, Murphy BM Getting 'Back on Track' after a cardiac event: Protocol for a Randomised Controlled Trial of an online self-management program. *JMIR Research Protocols*. 15/11/2021:34534

We were also able to contribute two more articles in our psychocardiology series for the *British Journal of Cardiac Nursing*. The first of these showcased the approach of our senior clinician, Dr Rosemary Higgins, while the second article explored the issue of depression treatment in cardiac patients:

Higgins R. Supporting patients to make meaning, create connections and live life post cardiac event. *British Journal of Cardiac Nursing*. 2021. <https://doi.org/10.12968/bjca.2021.0125>

Alvarenga M, Murphy BM, Jackson AC. Emerging approaches to the treatment of depression in patients with cardiovascular disease. *British Journal of Cardiac Nursing*. 2021. <https://doi.org/10.12968/bjca.2021.0111>

Finally, the team of Iranian research nurses whom we mentor and students whom we supervise, have been publishing regularly in both Iranian and international journals:

Asgari P, Jackson AC, Bahramnezhad F. Adjustment to a new heart: Concept analysis using a hybrid model. *Iran J Nurs Midwifery Res* 2021; 26:89-96.

Asgari P, Jackson AC, Esmaili M, Bahramnezhad F. Nurses' experience of patient care utilizing extracorporeal membrane oxygenation, *Nursing in Critical Care* DOI:1111/nicc.12684

Asgari P, Jackson AC, Khanipour-Kencha A, Bahramnezhad F. Resilient care of the patient with COVID-19: A phenomenological study, *International Quarterly of Community Health Education*, <https://doi.org/10.1177/0272684X211033454>

Bahramnezhad F, Sanaie N, Jackson AC, Shariati E, Atashzadeh-Shoorideh F. The effect of partnership-based education on adherence to the treatment plans in open heart surgery. *Journal of Education and Health Promotion* 2021; 10:353.

RESEARCH

Nurses' experience of patient care using extracorporeal membrane oxygenation

Parvaneh Asgari PhD, Candidate¹ |
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⁵Nursing and Midwifery Care Research Center,

Abstract

Background: Extracorporeal membrane oxygenation (ECMO) is an advanced form of temporary life support, to aid respiratory and/or cardiac function, which diverts venous blood through an extracorporeal circuit and returns it to the body after gas exchange through a semipermeable membrane. It may be used for oxygenation, carbon dioxide removal, and hemodynamic support. ECMO has been available to patients in Iran for only about 4 years. Because nurses do not widely use ECMO in

Financial Report

2021

Statement of Comprehensive Income

For the year ended 30 June 2021

	2021 \$	2020 \$
Revenue	\$2,521,015	\$1,280,276
Fundraising	(336,605)	(518,128)
Salaries & benefits	(862,399)	(687,945)
Depreciation	(6,447)	(8,040)
Operating & administration costs	(263,838)	(434,635)
Surplus/(Delicit) for the year before tax	1,051,726	(368,472)
Income tax expense	-	-
Surplus/(Delicit) for the year	1,051,726	(368,472)
Other comprehensive income		
Other comprehensive income for the year	-	-
Total comprehensive result for the year	1,051,726	(368,472)

Statement of Financial Position

As at 30 June 2021

	2021 \$	2020 \$
Current Assets		
Cash and cash equivalents	637,406	499,399
Trade and other receivables	22,612	37,596
Financial assets	1,524,750	524,750
Total Current Assets	2,184,768	1,061,745
Non Current Assets		
Financial Assets		
Property, plant & equipment	32,292	21,715
Total Non Current Assets	32,292	21,715
Total Assets	2,217,060	1,083,460
Current Liabilities		
Trade and other payables	90,116	49,956
Employment benefits	104,579	67,132
Total Current Liabilities	194,695	117,088
Non-Current Liabilities		
Employee benefits	9,786	5,519
Total Non-Current Liabilities	9,786	5,519
Total Liabilities	204,481	122,607
Net Assets	2,012,579	960,853
Equity		
Retained surplus	2,012,579	960,853
Total Equity	2,012,579	960,853

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The Australian Centre for Heart Health is pleased to welcome 620 new donors in 2021.

We thank each new donor for joining the community on our journey to improve the lives of people living with heart disease.

Together, we can continue to bring positive change to our community, one step at a time.



Thank you for
your support.

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