

Newsletter #24 - June 2015

SPECIAL FEATURE: RHEUMATIC HEART DISEASE IN PREGNANCY

It is the paradox of rheumatic heart disease in Australia and New Zealand that highlights the importance of our AMOSS research. AMOSS studies rare and serious events. Less than four in 10,000 pregnant women in Australia have rheumatic heart disease (RHD) – yet over two in a hundred Aboriginal and/or Torres Strait Islander women in the Northern Territory journey through pregnancy with this condition each year. Similar high prevalence is seen in the North Island of New Zealand.

The serious complications of RHD are often due to undiagnosed disease, or sequellae of an increased cardiac workload during pregnancy exacerbating already diagnosed RHD. Conversely, early diagnosis and careful monitoring during pregnancy can optimise good outcomes for mother and baby.

This special AMOSS feature on rheumatic heart disease reviews the progress of our NHMRC-funded research, which is in the last year of a four-year mixed methods study on the impact of the disease in pregnant women. We are analysing findings of the two-year quantitative study on the clinical pathways of pregnant women. Principles of care of women with rheumatic heart disease in pregnancy (RHD-P) are highlighted by those obstetricians, midwives and cardiologists who provide health services. Suzanne Belton is leading a qualitative study in the NT of women's journeys with RHD-P, while Geri Vaughan explores the challenges of health services and RHD across Australia.

Underpinning our study is the commitment by all those who care for women with RHD in pregnancy, a disease that should be long gone; and the expert support provided by the reference group, investigators and study team. Thank you to all the AMOSS sites and data collectors who have been part of that process and supported the study.

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Enjoy reading this newsletter.

Extrumi

Professor Elizabeth Sullivan
Principal Investigator AMOSS

The rheumatic fever (RF) and RHD landscape is changing. RHD Australia recently led a landmark series of events in Sydney, including workshops and a symposium for health services, and a day-long colloquium to drive solutions. The week-long events were in partnership with Poche Centre for Indigenous Health, Heart Foundation NSW, Agency for Clinical Innovation, Aboriginal Health and Medical Research Council and NSW Health. It brought together other key RF/RHD initiatives including the END GAME for RF/RHD CRE and RhEACH, a global advocacy venture. **Announced at the workshop was the NSW Health proposal to list RF and RHD as notifiable conditions and establish an RF/RHD Register.**

Across the water, New Zealand is spearheading some exciting strategies to combat RF and prevent RHD – see below.

Fighting the fever to stop RHD- the NZ story

Claire McLintock, Chief Investigator AMOSS and Faith Mahony, NZ Coordinator

In April this year NZ Health Minister Jonathan Coleman committed \$65 million over six years to combat rheumatic fever (RF). This substantial investment reflects the burden of untreated RF leading to RHD in NZ. Funding supports a multi-tiered approach. An online, TV and radio media campaign commenced in April. This is being run alongside sorethroat checks at drop-in clinics (16,000+ students to date) and over 200 school-based programs. See rheumaticfever.health.govt.nz for more information.

A lot of the initiatives to fight RF in New Zealand are out of the box. At the 2015 NZ inaugural 'Health Hackathon: Solving self-care —a think-fest and competition to develop collaborative approaches to novel health care solutions' - the 'Fight the Fever' group had a landslide victory. Their innovation helps young people who've had RF to help manage





Claire McLintock and Faith Mahony

monthly antibiotic injections over a ten year period. A multi-phased project has been developed to evaluate and refine a Fight the Fever mobile App for young people with RF/RHD. This app - co-designed with those that have the disease - will promote self-management, and increase understanding of the RF/RHD management. Its whānau ora approach means young people can engage their social network to support antibiotic compliance, clinic attendance and self-management.



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Rheumatic heart disease study

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Gestational Breast Cancer

Professor Elizabeth Sullivan, University of Technology Sydney, Winthrop Professor Christobel Saunders, University of Western Australia; Professor Jan Dickinson, University of Western Australia; Professor Jane Fisher, Monash University; A/Professor Greg Duncombe, Royal Brisbane Women's Hospital; Dr Karin Hammarberg, Monash University

Massive Obstetric Haemorrhage

Professor Elizabeth Sullivan, University of Technology; Dr Claire McLintock, Auckland City Hospital; A/Prof Erica Wood, Monash University; Dr Zoe McQuilten, Monash University; Professor David Ellwood, Griffith University; Dr Wendy Pollock, La Trobe University; A/Prof Andrew Bisits, Royal Hospital for Women; Dr Amanda Henry, UNSW Medicine

RHD in pregnancy

Chief: Professors Elizabeth Sullivan, University of Technology; Lisa Jackson Pulver, UNSW Medicine; Jonathan Carapetis, Telethon Institute for Child Health Research; Dr Warren Walsh, UNSW Medicine; Professor Michael Peek, University of Sydney; Dr Claire McLintock Auckland City Hospital

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Vasa Praevia

Professor Elizabeth Sullivan, University of Technology; A/Prof Yinka Oyelese Jersey Shore University Medical Centre; A/Prof Robert Cincotta, Mater Mothers Hospital; A/Professor Greg Duncombe, Royal Brisbane Women's Hospital; Professor Caroline Homer, University of Technology Sydney

LISTENING AND SEEING WITH TWO CULTURES

Qualitative study into RHD in pregnancy in the Northern Territory

Dr Suzanne Belton, Kylie Tune, Heather D'Antoine, Quitaysha Thompson,

Menzies School of Health Research, Darwin



Quitaysha Thompson, Suzanne Belton, Kylie Tune

Having a diagnosis of RHD adds a level of risk to a woman's pregnancy journey. Globally, rheumatic heart disease is overwhelmingly seen in those women who are most disadvantaged and vulnerable. In Australia, Indigenous women are more likely to die during pregnancy and childbirth than non-Indigenous women. Living in remote places, often vast distances from health and welfare services, the women we are seeing in the Northern Territory with RHD-P are indeed disadvantaged and vulnerable. They face problems of accessing maternity services and cardiac care. They face problems in understanding their caregivers who often do not speak the same language. They face problems of long periods of time away from their husbands, children and families if they need specialised or even ordinary maternity care. They are sometimes sent thousands of kilometres interstate for specialised care. And they are susceptible to comorbidities and often serious complications - including death.

Our intention was to recruit any pregnant woman with a diagnosis of RHD in the NT. Yet only Indigenous women seem to have this disease in the Northern Territory.

The pregnancy journeys of eight Indigenous women with rheumatic heart disease from different parts of the Northern Territory, who have different parities, different levels RHD, and different social backgrounds – have been followed for the duration of their pregnancy by a team based at Menzies School of Health Research. The women are invited to converse with the researchers as they attend health services or at home about their lives and living with RHD. The women are remarkably resilient and cope with extreme overcrowding in housing, poverty, violence and a confusing health system that does not necessarily link primary and tertiary services or cardiac and maternity services well.

Our research questions are quite simple: What specific cultural, community and social needs do Aboriginal women have that are not currently addressed in health services, counselling and clinical management of RHD in pregnancy, and how does that vary across the Northern Territory? What degree of health literacy and awareness exists amongst women with RHD in relation to this condition and its impact in pregnancy? And how can health services more effectively meet the needs of these women, including access, education, counselling and clinical management of RHD in pregnancy? The answers may be more challenging.

Led by Dr Suzanne Belton, the local research team is formed from experts in Indigenous knowledges, health care and qualitative research. The project is guided by Indigenous and non-Indigenous researchers Professors Sue Kruske, Lisa Jackson Pulver, Juanita Sherwood, Elizabeth Sullivan and Geri Vaughan who contribute to the methodology and interpret the meanings. The importance of this research in revealing the women's stories is realised by the research team, who have found the work a privilege and a challenge.

Meeting in July in Darwin, the research team is preparing to analyse the stories, using qualitative methods and reflection to find the patterns within these journeys. And while the journeys are different on one level, all tell a story of survival, resilience and of hardship. A hardship that we believe is unacceptable in this country, Australia.



RHD IN PREGNANCY: CLINICAL & HEALTH SERVICE ISSUES

Data from the two-year AMOSS quantitative study of RHD-P are currently being analysed, but what do we know already?

The obvious clinical implications for pregnant women who have RHD is that the extra work (30-50%) that happens in a normal pregnancy is being done by a heart that is not working as it should.

While there are risk factors associated with many of the conditions that AMOSS studies, they are often unpredictable – for instance, a catastrophic amniotic fluid embolism event cannot usually be anticipated. In contrast, many of the principles that prevent complications and support good outcomes of women with RHD and their babies are premised on awareness, careful monitoring and collaborative care during pregnancy.

Dr Warren Walsh, chief investigator and cardiologist at Prince of Wales Hospital in Sydney, agrees. He stresses the importance of early assessment – ideally before pregnancy. "Women do get missed. A stethoscope is not very reliable, and it's easy to miss mitral stenosis and aortic regurgitation even by experienced clinicians. An echocardiogram is absolutely essential for any woman with suspected RHD or a cardiac history." Service delivery in regional areas provides challenges. "It's improved over the last few years with portable echo machines –initiatives such the Poche Centre for Indigenous Health sponsorship of echo machines help outreach work – but we still have a long way to go", Dr Walsh continues. "You need skilled operators and clinicians to perform and read those echos. We know about the high prevalence in NT, Qld and WA, and the north island of New Zealand, but regions such as western NSW have gaps in services – and so women get missed, and then end up in hospital with complications that are often avoided with earlier diagnosis and management. More cardiac outreach services are critical to support local health services that provide care for the women."

Unsurprisingly, the features of care that promote good outcomes for pregnant women with RHD align with initiatives to make maternity services more accessible and culturally appropriate. Services such as the NSW Aboriginal Maternal and Infant Health Service (AMIHS) build on existing available maternity services whilst adding an innovative approach, underpinned by culturally appropriate and collaborative care[1], with Aboriginal and non-Aboriginal midwives and Aboriginal Health Workers working to care for women through pregnancy.

Linda Bootle, Clinical Midwife Consultant in the Western NSW Local Health District AMIHS describes her group: "Our teams work with Aboriginal mothers and babies across Western NSW with many sites geographically isolated. We have been educating the AMIHS teams and midwives on RHD in pregnancy so they ask further questions during their history taking, in particular if they received monthly injections as a child. The awareness is so important. In one education session one of our senior Aboriginal Health Workers commented that 'I had that when I was young'. Good history taking is crucial with further medical consultation arranged during the pregnancy. Geographical isolation and distance can be a barrier to receiving specialised care and we work hard to make sure the women don't miss the care they need".

Professor Elizabeth Sullivan, Principal Investigator on the RHD-P study, comments "We are discovering many different stories and clinical pictures of women. A 38 year old refugee woman from Sudan has a very different story from a young Wiradjuri woman from western NSW, and different again from a Maori woman in urban Middlemore – but the features of care that Warren and Linda highlight- early (ideally pre-pregnancy) diagnosis of RHD, better access to diagnostic and treatment services, collaborative care, are all

Thanks and chocolates to ...

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Simon Quilty, Kimberley Window, Judy Burke, Katherine Hospital.

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All at Danila Dilba Health Service Angela Bromley, Wendy Corkill, Jhansi Lakshmi, Alice Springs Hospital.

Western NSW Aboriginal Maternal and Infant Health Service (AMIHS).

Julie Dunn, Monash Medical Centre.
All the RHD Register teams

.... And thanks to all our NZ coordinators

Challenges of health services and RHD in pregnancy

A mixed methods doctoral study of the barriers to access of timely, best practice maternal and cardiovascular care for pregnant women with RHD, through 1) a quantitative study of surveillance and health information systems related to RHD in pregnancy; and 2) a qualitative examination of health professionals' knowledge, experiences of and attitudes to provision of care for pregnant women with RHD. Contact Geri Vaughan for more info g.vaughan@uts.edu.au

(cont)

critical priorities to minimise the impact of RHD in pregnancy. I would also add that there is an imperative to improve health systems that talk to each other more effectively. We need to make it easier to monitor history and treatment of women with RHD in pregnancy: it's a critical part of an effective model of care."

1. Best E: Closing the gap through innovative maternity care (The Aboriginal Maternal and Infant Health Service). Women and Birth 2011, 24, Supplement 1(0):S16.



Thanks to the following participating AMOSS sites

Albany Regional Hospital, WA Albury Wodonga Health, VIC Alice Springs Hospital (ASH), NT

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Bathurst Base Hospital, NSW Bay of Plenty DHB, NZ

Beaudesert Health Service, QLD

Bega Hospital, NSW Benalla & District Memorial Hospital, VIC

Bendigo Health Care Group, VIC Bentley Health Service, WA Biloela Hospital, QLD Blacktown Hospital, NSW Bowral Hospital, NSW Box Hill Hospital, VIC

Bridgetown District Hospital, WA Broken Hill Health Service, NSW Broome District Hospital, WA Bunbury Regional Hospital, WA Bundaberg Hospital, QLD Burnside War Memorial Hospital, SA

Busselton District Hospital, WA Caboolture Hospital, QLD Cairns Base Hospital, QLD Cairns Private Hospital, QLD Calvary Health Care, SA Calvary Health Care ACT, ACT Calvary Health Care Riverina, NSW Calvary Health Private, TAS Calvary John James, ACT Campbelltown Hospital, NSW Canterbury Hospital, NSW

Carnarvon Regional Hospital, WA Casey Hospital, VIC

Central Gippsland Health Service, VIC

Charleville Hospital, QLD Chinchilla Hospital, QLD

Christchurch Women's Hospital, NZ Coffs Harbour Base Hospital, NSW

Cohuna District Hospital, VIC Colac Area Health, VIC Collie District Hospital, WA CoomaHospital, NSW Cootamundra Hospital, NSW Cowra Health Service, NSW Dalby Hospital, QLD Dandenong Hospital, VIC Darwin Private Hospital, NT Deniliquin Hospital, NSW Derby Regional Health, WA

Djerriwarrh Health Services, VIC Dubbo Base Hospital, NSW Dunedin Hospital, NZ Echuca Regional Health, VIC Emerald Hospital, QLD Epworth Freemasons Hospital, VIC Esperance District Hospital, WA

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Flinders Private Hospital, SA Forbes Hospital, NSW Frances Perry House, VIC Frankston Hospital, VIC

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Geelong Hospital, Barwon Health, VIC Geraldton Regional Hospital, WA Gippsland Southern Health Service, VIC

Gisborne Hospital, NZ Gladstone Hospital, QLD Gladstone Mater Hospital, QLD Glen Innes Hospital, NSW Glengarry Private Hospital, WA Gold Coast University Hospital, QLD

Goondiwindi Hospital, QLD Gosford Hospital, NSW Goulburn Base Hospital, NSW Goulburn Valley Health, VIC Gove District Hospital, NT Grafton Base Hospital, NSW Greenslopes Private Hospital, QLD

Grey Base Hospital, NZ

Griffith Base Hospital, NSW

Gunnedah Hospital, NSW Gympie Hospital, QLD

Hawke's Bay Hospital, NZ Hawkesbury District Health Service, NSW

Hedland Health Campus, WA Hervey Bay Hospital, QLD Hobart Private Hospital, TAS Hornsby Ku-ring-gai Hospital, NSW Hurstville Private Hospital, NSW Hutt Valley Hospital, NZ Innisfail Hospital, QLD Inverell Health Service, NSW Ipswich Hospital, QLD

Jessie McPherson Private Hospital, VIC John Flynn Gold Coast Private Hospital, QLD Joondalup Health Campus, WA

Kalgoorlie Regional Hospital, WA Kapunda Hospital, SA Kareena Private Hospital, NSW Katanning District Hospital, WA Katherine Hospital, NT Kempsey District Hospital, NSW

Kerang & District Hospital, VIC King Edward Memorial Hospital For Women, WA

Kingaroy Hospital, QLD Kununurra District Hospital, WA Kyabram District Health Service, VIC . Latrobe Regional Hospital, VIC Launceston General Hospital, TAS Leeton Hospital, NSW

Lismore Base Hospital, NSW Liverpool Hospital, NSW Logan Hospital, QLD Longreach Hospital, QLD Loxton Hospital Complex, SA Lyell McEwin Hospital, SA Mackay Base Hospital, QLD Macksville Hospital, NSW Manning Base Hospital, NSW Mansfield District Hospital, VIC Mareeba Hospital, QLD

Margaret River District Hospital, WA Maryborough District Health Service, VIC Mater Misericordiae Hospital Mackay, QLD Mater Misericordiae Hospital Rockhampton, QLD

Mater Mothers Hospital Brisbane, QLD Mater Private Hospital Redland, QLD

Mater Women's and Children's Hospital Hyde Park, QLD

Mercy Hospital for Women, VIC Mersey Community Hospital, TAS Middlemore Hospital, NZ Mildura Base Hospital, VIC Millicent & District Hospital, SA Milton-Ulladulla Hospital, NSW Mitcham Private Hospital, VIC Monash Medical Centre, VIC Moree Hospital, NSW Moruya District Hospital, NSW

Mount Barker and Districts Soldiers Memorial Hospital, SA

Mount Gambier & District Health Services, SA Mount Isa Hospital, QLD

Mt Waverley Private Hospital, VIC Mudgee District Hospital, NSW Mullumbimby Hospital, NSW

Murray Bridge Soldiers' Memorial Hospital Inc, SA

Murwillumbah District Hospital, NSW Muswellbrook District Hospital, NSW

Nambour General, QLD Naracoorte Health Services, SA Narrabri Hospital, NSW Narrandera Hospital, NSW Narrogin Regional Hospital, WA Nelson Hospital, NZ Nepean Hospital, NSW

Nepean Private Hospital, NSW Newcastle Private Hospital, NSW North Eastern Community Hospital, SA North Gosford Private Hospital, NSW North Shore Private Hospital, NSW North West Brisbane Private Hospital, QLD North West Private Hospital Burnie Campus, TAS Northam Regional Hospital, WA

Northern Beaches Maternity Services, NSW Northpark Private Hospital, VIC Norwest Private Hospital, NSW Orange Base Hospital, NSW Osborne Park Hospital, WA Palmerston North Hospital, NZ Parkes Hospital, NSW Peel Health Campus, WA

Northeast Health Wangaratta, VIC

Peninsula Private Hospital, VIC Pindara Private Hospital, QLD Port Augusta Hospital & Regional Health Services, SA

Port Lincoln Health Services Inc. SA Port Macquarie Base Hospital, NSW Port Pirie Regional Health Service, SA Portland District Health, VIC Proserpine Hospital, QLD

Queanbeyan District Hospital & Health Service. NSW

Redcliffe Hospital, QLD Redland Hospital, QLD

Riverland Regional Health Service, SA Rockhampton Hospital, QLD Rockingham General Hospital, WA Roma Hospital, QLD

Rotorua Hospital, NZ

Royal Brisbane and Women's Hospital, QLD Royal Darwin Hospital, NT Royal Hobart Hospital, TAS Royal Hospital for Women, NSW Royal North Shore Hospital (RNSH), NSW Royal Prince Alfred Hospital (RPAH), NSW

Ryde Hospital, NSW Sandringham Hospital, VIC Scott Memorial Hospital, NSW Seymour District Memorial Hospital, VIC Shoalhaven District Memorial Hospital, NSW

Singleton District Hospital, NSW South Coast District Hospital, SA South Gippsland Hospital (Foster), VIC South West Health Care (Camperdown), VIC South West Health Care (Warrnambool), VIC Southern Flinders Health - Crystal Brook Campus, SA

Southland Hospital, NZ

St Andrew's Ipswich Private Hospital, QLD

St George Hospital, NSW St George Hospital Queensland, QLD St George Private Hospital, NSW St John of God Geelong, VIC

St John of God Geraldton, WA St John of God Health Care Ballarat, VIC St John of God Health Care Berwick, VIC St John of God Health Care Bunbury, WA St John of God Health Care Subiaco, WA St John of God Hospital Bendigo, VIC St John of God Hospital Murdoch, WA St John of God Mt Lawley Hospital, WA St Vincents Private Hospital, QLD St Vincents Private Hospital Melbourne, VIC

Stanthorpe Hospital, QLD Stawell Regional Health, VIC Sunnybank Private Hospital. QLD Sunshine Hospital, VIC Sutherland Hospital, NSW Swan Hill District Hospital, VIC Swan Kalamunda Health Service, WA Sydney Adventist Hospital, NSW Sydney Southwest Private Hospital, NSW Tamworth Rural Referral Hospital, NSW

Tanunda Hospital, SA Taranaki Base Hospital, NZ Tauranga Hospital, NZ Temora District Hospital, NSW The Bays Hospital Mornington, VIC The Canberra Hospital, ACT The Kilmore & District Hospital, VIC The Mater Hospital Sydney, NSW The Northern Hospital, VIC The Royal Women's Hospital, VIC
The Sunshine Coast Private Hospital, QLD

The Tweed Hospital, NSW The Wesley Hospital, QLD
The Whyalla Hospital & Health Services, SA

Thursday Island Hospital, QLD Timaru Hospital, NZ Toowoomba Base Hospital, QLD Townsville Hospital, QLD Tumut Hospital, NSW

Wagga Wagga Base Hospital, NSW Waikato Hospital, NZ Waikerie Health Services, SA Wairarapa Hospital, NZ Wairau Hospital, NZ Waitakere Hospital, NZ Waitemata DHB, NZ Wallaroo Hospital, SA Warwick Hospital, QLD Wellington Hospital, NZ Werribee Mercy Hospital, VIC West Gippsland Hospital, VIC

Western District Health Service (Hamilton), VIC

Westmead Hospital, NSW Westmead Private Hospital, NSW Whanganui Hospital, NZ

Whangarei Hospital, NZ Wimmera Health Care Group (Horsham), VIC

Wollongong Hospital, NSW

Women's and Children's Hospital, Adelaide, SA Wonthaggi Hospital (Bass Coast Regional Health), VIC

Wyong Hospital, NSW Yarrawonga District Health Service, VIC

Young Hospital, NSW