

2014

Annual Report





The Menzies School of Health Research was established in 1985 as a body corporate of the Northern Territory (NT) Government under the Menzies School of Health Research Act 1985. This Act was amended in 2004 to formalise the relationship as a controlled entity of Charles Darwin University (CDU). Menzies is now a major partner of CDU, but remains controlled by its own board, has its own financial and administrative structures, and can enter into contracts in its own right.

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For the purposes of this document, 'Indigenous' refers to Australia's Aboriginal and Torres Strait Islander peoples.

In the spirit of respect, Menzies School of Health Research acknowledges the people and elders of the Aboriginal and Torres Strait Islander Nations who are the Traditional Owners of the land and seas of Australia.

Zane from Bagot Community

Cover photo:
Clifton and Kayla Gaykamangu at Bagot Community

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Professor Alan Cass and Mr Peter Plummer

MESSAGE FROM THE CHAIRMAN AND DIRECTOR

Real and sustained advances in Indigenous health will be realised when research teams engage with communities, health services and policy makers to pursue a research agenda focused on achieving change.

At Menzies, our research teams work hand-in-hand with communities to ensure our research, education and training address fundamental health and developmental priorities. This represents a foundation pillar of our work.

These same teams are making discoveries that will shape the future of Indigenous and tropical health, and will benefit all Australians and many others in our region.

Although we understand more now than ever before about which factors influence poor health outcomes, it remains a constant challenge to develop alternative approaches and effective treatments that will contribute to Closing the Gap.

In 2014, a number of our teams made important breakthroughs.

We developed an alternative and painless way to treat skin sores (impetigo); an infection which currently affects more than 110 million children worldwide. Previously treated by painful injections, the research team found oral treatments to be just as effective. This has already significantly improved rates of treatment in communities; helping children who most need treatment.

A Menzies report into the devastating problem of petrol sniffing revealed a significant decline in its prevalence among remote Aboriginal communities. Our research, in 15 Aboriginal communities, has shown that there was more than an 80 per cent decline in the number of petrol sniffers since 2005-07, which can be attributed to the roll-out of low aromatic fuels.

Our pioneering global and tropical health research being conducted in more than 20 countries across the Asia-Pacific region, addresses life-threatening illnesses such as malaria and tuberculosis. In 2014, we developed an improved understanding of the extent and nature of drug resistant malaria to enhance treatment regimes that will ultimately eliminate malaria from the region.

The Northern Territory Diabetes in Pregnancy Partnership Project (PANDORA) continues to play a critical role in improving clinical care for women with diabetes in pregnancy. In 2014, the study recruited its 700th participant and received additional National Health and Medical Research Council (NHMRC) funding to recruit additional women to follow them and their children until three years of age/post-partum.

Complementing our laboratory-based and biomedical research, is our work to boost the capacity of health service providers, community health workers and health services – to deliver better care based on evidence about what works, and what doesn't.

The graduation of 13 community-based researchers in the Certificate II in Child Health Research was a highlight for our education and training division and reinforces the importance of this critical network to conduct health research in their respective communities.

Our strong track record on the national competitive grant stage continued in 2014.

In an environment where fewer than 1 in 6 applications for national competitive research funding are successful, Menzies was awarded federal funding for more than 1 in 3 of our submitted competitive grants and fellowships by Australia's peak body for supporting health and medical research, the NHMRC.

One major success was the announcement that both of our submissions for Centres of Research Excellence (CRE) were successful. The CREs in Indigenous ear and hearing health and improving Indigenous primary health care, were some of a select few national centres of excellence announced.

These new funding streams will allow Menzies to bring together key researchers, practitioners, health and community organisations from across Australia, and actively promote the translation of research knowledge into health policy and practice. Most importantly it will allow us to train a new generation of researchers.

Recognition of the world-class quality of our work was provided by the Australian Academy of Science. Menzies' Professor Nick Anstey, one of Australia's leading infectious diseases specialists, was named as the inaugural recipient of the prestigious Gustav Nossal Medal for Global Health for his outstanding contributions in tackling the global burden of malaria.

Despite these successes, we cannot afford to be complacent. We operate in an environment of tight fiscal constraints and ever increasing competition for the available dollars. Our size and location are both an

advantage and disadvantage. We work at the coal face, with local communities and demonstrate expertise built on long-term partnership. However, we are based in Darwin and address problems that at times seem remote to the boardrooms of Sydney and Melbourne.

Our fundraising team based in Melbourne continue to explore new and exciting fundraising opportunities among the high level corporate and philanthropic community. Such funding gives certainty to researchers to continue their critical work and helps retain highly skilled staff at Menzies.

A key part of our renewed engagement with Territory industry and organisations will occur in 2015 as Menzies proudly celebrates 30 years of research, innovation and education.

Our 30 year journey has seen us design and conduct, research and report and translate the findings thereby making a difference to the lives of many. We look forward to reconnecting with people who have played a key part in shaping our story and to engaging new friends of Menzies as we celebrate our people, achievements and rich history throughout 2015.

2014 also saw long-serving Chair of the Menzies Board, Professor Simon Maddocks, end his highly productive term to take up the position of Vice-Chancellor of Charles Darwin University. Professor Maddocks' appointment should facilitate deeper engagement with CDU. Such engagement will reap significant benefits to both organisations, the population of the NT and the region.

We understand that our success lies in our ability to work in true partnership with Indigenous people, their communities, health services, policy makers and our donors and supporters. Together we will shape the next chapters of the Menzies story, improving access, health and wellbeing for generations to come.

In finishing, we would like to thank everyone involved with this wonderful organisation - our staff, students, Board and committee members, collaborators, donors and community members. Your commitment, contribution and dedicated support are essential for the ongoing success of Menzies. We look forward to the rewards and challenges that the coming year will bring.

Director, Professor Alan Cass

Chair of the Menzies Board, Peter Plummer

WHO WE ARE

At the Menzies School of Health Research, we seek solutions to critical health problems affecting the ability to learn, train, get and retain a job, raise a family and participate fully in the community. We undertake research aiming to make a difference in the lives of people in the NT and across our region. We want our impact to be measurable and sustainable.

OUR INSPIRATION

Understanding which factors influence poor health outcomes and developing alternative approaches and effective treatments provide us the greatest opportunity to improve health.

OUR VISION

We endeavour to break the cycle of disease and to reduce health inequities in Australia, particularly for disadvantaged Aboriginal and Torres Strait Islander populations.

Our work addresses critical issues such as child health and development, nutrition, mental health, substance abuse as well as chronic diseases such as cancer, diabetes, kidney and heart disease. We also lead global research into life-threatening illnesses in the Asia-Pacific such as malaria and tuberculosis.



Alana Nilco at the Bagot Community Health Clinic

SPOTLIGHT ON RESEARCH TRANSLATION

A Northern Territory-based research project investigating alternative and more practical treatments for skin sores (impetigo) is set to benefit the millions of children worldwide who suffer from this infection.

The Menzies paper outlines the efficacy, feasibility and benefits of a new, non-injection treatment and has been published in the prestigious medical journal, The Lancet.

In Australia, 8 out of every 10 children living in remote Aboriginal communities will have skin sores at least once before their first birthday.

Lead author of the paper, Dr Asha Bowen said the study was one of the largest clinical trials of skin sore treatment ever conducted and formed an important part of an ongoing push to denormalise skin sores in Indigenous populations

“Until recently the recommended method of treating skin sores in the NT had been by painful intramuscular injection,” Dr Bowen said.

“Previous Menzies research showed that very few children who needed treatment were actually receiving it; possibly because of the associated pain of the injection.”

The new research has shown that simple, short duration oral treatments, worked just as well as the injection in resolving the skin sore infection within seven days.

This work has already been incorporated into treatment guidelines, both as a short course treatment in the Central Australian Rural Practitioners Association Inc (CARPA) Guidelines and the national Therapeutic Guidelines.

A portrait of Dr Asha Bowen, a woman with brown hair, smiling, wearing a pink floral patterned shirt. The background is a blurred outdoor setting with a white railing.

Dr Asha Bowen

WHERE WE WORK

Menzies' headquarters are in Darwin, with offices in Alice Springs, Brisbane, Melbourne, Timika (Indonesia) and Kota Kinabalu (Malaysia). Our work spans central and northern Australia and developing countries within our global neighbourhood.



GLOBAL SITES

- Afghanistan
- Bangladesh
- Bhutan
- Cambodia
- China
- Democratic People's Republic of Korea
- Ethiopia
- Indonesia
- Lao People's Democratic Republic
- Kiribati
- Malaysia
- Myanmar
- Nauru
- Nepal
- Pakistan
- Philippines
- Republic of Korea
- Solomon Islands
- Sri Lanka
- Tanzania
- Thailand
- Timor Leste
- Tuvalu
- Vanuatu
- Vietnam

See page 16 for full map of global sites

HOW YOU HAVE HELPED

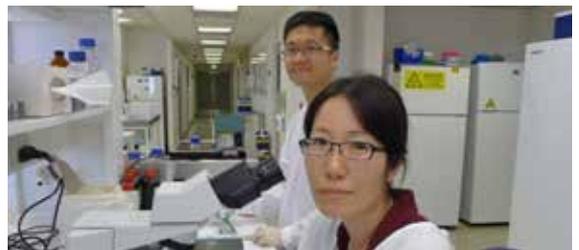
Our key supporters, and the many people who quietly donate funds to Menzies each year, continue to make an enormous difference to people's lives. Your support is crucial to driving our research and efforts to innovate and respond to major health problems.

Menzies extends its appreciation and gratitude to all of our donors and supporters. Every day you help Indigenous Australians and other disadvantaged populations in our region to exercise their right to good health.

YOUR GENEROUS SUPPORT HAS HELPED US TO



Develop treatments of middle ear infection
So children can hear



Reduce malaria related deaths in Papua Indonesia
By rolling out better treatments



Pioneer child lung disease research
To prevent irreversible damage



Improve diabetes care
For mothers and their babies

Menzies – a high impact charity

Life expectancy for Indigenous Australians remains 10 years lower than non-Indigenous Australians.

The Difference Magazine reviews the charity sector looking for exceptional performance in addressing poverty, exclusion and poor health in Australia.

Its 2014 report shows an improvement in Indigenous mortality with the Menzies School of Health Research leading the charge.

As Australia's leading Indigenous health research institute, Menzies received the second highest charity rating possible with its research outputs recognised as 'High Impact'.

the
difference



High Impact

CELEBRATING 30 YEARS OF HEALTH RESEARCH

2015 will see Menzies celebrate 30 years of pioneering health research, education and training.

From its headquarters in Darwin, Menzies has conducted and reported research and sought to translate the findings to make a difference to the lives of many – here in the Northern Territory and globally.

Beginning as a bold new vision to establish a dedicated health research centre in the NT to deal with health problems unique to this region, Menzies first began its research efforts in January 1985. Early areas of research focus included heart disease, trachoma, hepatitis B, alcohol related diseases, nutrition and infectious diseases.

Director, Professor Alan Cass said Menzies plans to celebrate the people, partners and communities that have shaped the Menzies story during this anniversary year.

“Menzies is an iconic Territorian institution, one which has a proud history of scientific discovery and public health achievement,” Prof Cass said.

“To mark the anniversary, we have developed resources and interactive materials, in addition to a range of anniversary events, to celebrate 30 years of research, innovation and education with the Territory community.”

Menzies has launched a dedicated anniversary website which includes an interactive achievements timeline, historical image gallery and video testimonials from foundation staff and key partners.

For more information about Menzies’ history, achievements and anniversary events, visit menzies.edu.au/30years.



ADVANCING HEALTH
RESEARCH OVER
THIRTY YEARS
1985–2015



RESEARCH HIGHLIGHTS: CENTRE FOR CHILD DEVELOPMENT AND EDUCATION

The Centre for Child Development and Education (CCDE) was launched in 2011 to conduct research designed to improve the health, wellbeing and education of children, particularly Indigenous children, in the Northern Territory and beyond.

In 2014, the Centre completed a period of consolidation and established footholds in new areas of research. The year also signalled a number of exciting changes to the Centre's leadership structure. Professor Gary Robinson stepped into the role of director, continuing the outstanding work of outgoing director Professor Sven Silburn. Dr Marion Scrymgour was named as co-patron of the Centre and Ms Olga Havnen named as chair of the Centre's advisory committee.

Building connections to help NT children

A CCDE data-linkage project will draw on data from over 60 000 children born in the Northern Territory as part of a ground-breaking new study.

Researchers will explore four key factors of disadvantage: (i) early childhood development and readiness for school learning, (ii) school attendance, literacy and numeracy, (iii) the child protection system, and (iv) the juvenile justice system.

Linking data from different sources (health, education, justice and child protection) enables researchers to investigate risk and protective factors for children's development at a population level. Work from the National Health and Medical Research Council (NHMRC) funded project will assist policy development and improve the targeting of health and education services for disadvantaged children.

Science of Learning Research Centre

The Science of Learning Research Centre (SoLRC) is a nationwide project spanning eight research organisations including CCDE, and involves researchers in education, neuroscience and cognitive psychology working together with teachers to better understand how children learn.

This project aims to improve teaching practices and to establish new criteria to assess the impact of different learning strategies. It will inform teaching practices for the benefit of all Australians.

At CCDE, Dr Helen Harper is contributing to the SoLRC with her work on improving the effectiveness of classroom teaching of Aboriginal children from remote communities. Her project is addressing fundamental questions about classroom learning as she investigates how 'teacher talk' relates to students' engagement with learning and to their academic achievement.

Case Study: Developing Skills for Life

A CCDE project is aiming to build resilience and social-emotional skills to enable young Indigenous people to make positive life choices and to help them to avoid self-destructive behaviours.

Skills for Life began with funding from the Commonwealth Government's Taking Action to Prevent Suicide Strategy to develop and pilot a life skills program for Indigenous youth in remote communities. During the pilot, the study team explored the effectiveness of the proposed approach to community engagement and barriers to implementation.

In 2014, the Indigenous Youth Life Skills Curriculum was delivered to middle years students at Maningrida College in collaboration with the local community youth centre.

Following the success of the pilot, the project has now received a further five years funding as one of four programs supported under the NHMRC's Suicide Prevention in Aboriginal and Torres Strait Islander Youth – Targeted Call for Research. The project is supported by the NT Government Department of Education and aims to extend the implementation of the Skills for Life program in Maningrida and in additional NT secondary schools and communities.



Zenayha Doolan and Jess Gannaway

RESEARCH HIGHLIGHTS: CHILD HEALTH

Menzies child health research continues to investigate strategies to improve the health of Indigenous children. Illnesses in their earliest years not only impact on a child's health, but also affect their ability to grow, develop and learn.



NT Thunder's Jonathan Peris and Sebastian Guilhaus with Dr Gabrielle McCallum and Cate Wilson

Asthma education and research partners with NT schools

Asthma and smoking are major health problems for young people in our community. The Asthma & Smoking Prevention Project is a peer-led education initiative that aims to improve the health and wellbeing of students with asthma and promote resilience against smoking.

The project was piloted in two schools in the Darwin and Palmerston area and consisted of two phases. Phase 1 of the project, the Triple A (Adolescent Asthma Action) program, used a student-centred approach whereby students are the drivers of both the teaching and learning processes.

The second phase of the project involved students with current respiratory symptoms being offered the opportunity to participate in a clinical check-up to establish if symptoms were related to asthma.

The successful pilot project funded by Asthma Australia, was run in partnership with Menzies, Asthma Foundation NT, the University of Sydney and NT Thunder.

Ear and hearing health research: national centre of excellence

An expanded ear and hearing health collaborative research program, led by Professor Amanda Leach, has been recognised as a national Centre of Research Excellence (CRE).

Middle ear infection (otitis media, OM) is common amongst young children but especially prevalent amongst Indigenous Australian children, many of whom have eardrum perforations or "runny ears". The infection causes hearing loss, and if not properly treated, has significant impact on the development of speech and language. OM is thus linked to educational disadvantage, communication and behavioural problems.

Funded by the National Health and Medical Research Council, the CRE aims to conduct multidisciplinary research to increase the efficacy of OM prevention and treatment strategies, and thereby ensure better outcomes for Indigenous children across Australia. Research innovation, capacity building and Indigenous leadership are cornerstones of the CRE's national strategy.

Study takes aim at Indigenous lung health

The first ever detailed study of the bacteriology of bronchiectasis in Indigenous children has been undertaken to better understand and prevent disease progression.

Bronchiectasis is relatively rare in developed countries, however many Indigenous children in the Northern Territory have the condition.

The study has revealed that bacterial pathogens were the same for Indigenous and non-Indigenous children with the disease. The same strains were also found in upper and lower airway specimens, strongly supporting the hypothesis that aspiration of nasopharyngeal secretions contributes to the pathology.

Continued research in this field will be vital to improving respiratory health for Indigenous children through better understanding of infectious disease pathogens.

Case Study: Encouraging Territorians to live healthier lives



Assoc Prof Heidi Smith-Vaughan and Clare Wilson at a HealthLAB pilot event held at Nightcliff markets

Territorians have been urged to take greater ownership of their own health following the successful rollout of a mobile health outreach program.

Launched during National Science Week 2014, the pilot for the Menzies HealthLAB engaged more than 750 Territorians to conduct their own health tests and find out what the results mean for their general wellbeing.

Held at several locations including Northern Territory Parliament House and Charles Darwin University's Open Day, participants were able to conduct a comprehensive health check including body fat percentage analysis, blood pressure, ear health test, grip strength and smokerlyzer test and receive information about the long-term health implications of their results.

Following the success of the pilot, Menzies is developing a mobile HealthLAB to visit Indigenous communities, schools and public places across the NT.

Case Study: Rain, hail or shine - Landmark study rolls on

The largest, longest-running and most significant study of the lives of Indigenous babies born in Australia continued its fourth wave of data collection throughout 2014.

The Aboriginal Birth Cohort (ABC) Study has spent the past three decades checking for the earliest signs of chronic disease such as diabetes, heart, kidney disease, anxiety and depression in 686 Aboriginal people born between 1987-1990.

Now in its 27th year, the research team is currently conducting its fourth wave of data collection with participants now aged 23-27 years.

"We don't expect all our participants to come and see us in Darwin; we go to them," project manager Belinda Davison explains.

"Visiting each of the 40 remote communities and outstations we work with across the Top End involves travelling vast distances, sometimes by light plane but more often bumping along in four-wheel drives in all weather.

"This wave's success in seeing more than 430 participants has been largely due to the help, advice, assistance and general goodwill of the many communities and participants involved."



The ABC Study team prepare to visit a remote Indigenous community

RESEARCH HIGHLIGHTS: WELLBEING AND PREVENTABLE CHRONIC DISEASES

Menzies' Wellbeing and Preventable Chronic Disease Division seeks to advance the health of Indigenous Australians by researching the causes, prevention and treatment of chronic disease, and translating the results into practical solutions.

Our research examines the many environmental factors that shape behaviour over the life course and contribute to the development and progression of chronic disease. We strive to inform policy and practice by conducting 'real world' research that demonstrates the most effective solutions to chronic disease.

Completion of the eGFR follow-up study

Chronic kidney disease (CKD) remains up to 15 times more common amongst the Australian Indigenous population. With around 90 per cent of the population unaware they have early signs of the disease, it is critical to be able to accurately assess whether people have CKD.

The eGFR Study was conducted over a six-year period in remote, rural and urban areas in the Northern Territory, Western Australia and Queensland. The study team has recruited over 750 Indigenous and non-Indigenous people in the first stage of the study which established that a new formula to estimate kidney function (CKD-EPI) was more accurate in determining kidney function among Indigenous Australians.

The follow-up phase, involving 413 of the 620 eligible Indigenous participants, is currently underway and is examining the progression of kidney damage in Indigenous Australians. Results of this phase are expected in early 2015.

Evaluating smoke-free NT prisons

In 2013, the Northern Territory became the first Australian jurisdiction to introduce a smoke-free policy for all correctional facilities. The policy protects non-smoking prisoners, staff and visitors from second-hand smoke, and is part of a move to promote healthy lifestyles among prisoners.

In 2014, the Menzies Tobacco Control Research team undertook a preliminary evaluation of the policy. The report identified a number of key lessons learned, and has been distributed nationally to assist other states and territories as they plan to go smoke-free.

Menzies is planning further collaboration with correctional services to improve health outcomes for prisoners in the NT.



A screen shot of the AIMhi Stay Strong iPad app

Increasing mental health engagement through new technologies

In October 2014, Menzies launched the AIMhi Stay Strong iPad app onto the online marketplace; an app that hopes to promote engagement and mental wellbeing among Indigenous Australians.

A study investigating service providers' perspectives identified a very positive initial response to the utility and appropriateness of this new and innovative resource, whilst also identifying some implementation challenges.

As part of the National e-Mental Health Strategy, Menzies delivered training and support in the use of e-mental health resources to 145 service providers working with Aboriginal and Torres Strait Islander people through the e-Mental Health in Practice (eMHPac) project.

The Stay Strong App was also a highlight of the Menzies e-Mental Health Showcase held in June.

Case Study: Kidney Story - A personal journey



The real-life journey of Aboriginal kidney patient, Ronno Morgan is the basis for a new educational resource package

At age five, Ronno Morgan was a young Aboriginal boy from the Kimberly suffering from kidney failure and requiring emergency surgery.

Following a life-saving operation in which his mother donated a kidney, life returned to normal for Ronno and his family. 24 years later, Ronno's donor kidney began to fail and he was heading for a life on dialysis.

Menzies, in partnership with Ronno and award-winning filmmaker, Brendan Fletcher, are producing a story chronicling Ronno's journey. The documentary aims to promote greater awareness of the devastating impact of kidney disease on Indigenous Australians.

The team, through the 'Communicate, Know, Decide Appeal', are developing accessible educational resources that can guide clinicians, educational institutions and Indigenous Australians through the various treatment options available and assist in developing a better understanding of renal health care and how to engage with, and negotiate, the health system.

Case Study: Report reveals decline in petrol sniffing

A report revealing a significant decline in the prevalence of petrol sniffing in a number of Aboriginal communities has been welcomed by both state and federal authorities.

The report has shown that in 15 Aboriginal communities where available data enables comparisons to be made, there was more than an 80 per cent decline in the number petrol sniffers from 2005-07 to 2011-12.

Report co-author, Professor Peter d'Abbs, said the introduction of low aromatic fuel had been a critical factor in the fight against petrol sniffing and the subsequent issues communities have faced with social and behavioural problems.

"The decline our research has revealed is hugely encouraging, however much work remains to be done to stamp out petrol sniffing," Prof d'Abbs said.

Prof d'Abbs said the rollout of low aromatic fuel over recent years had benefited from a national petrol sniffing strategy supported by a bipartisan approach on the part of successive federal governments.

"With this in place, we can continue to work towards a comprehensive rollout of low aromatic fuel, complemented by other measures such as adequately funded youth services," Prof d'Abbs said.



Petrol sniffing has been a major source of illness, death and social dysfunction in Indigenous communities

RESEARCH HIGHLIGHTS: EPIDEMIOLOGY AND HEALTH SYSTEMS

Menzies' Division of Epidemiology and Health Systems partners with health service providers, researchers, consumer advocacy groups and key organisations across Australia to reduce the burden of chronic disease.

Cancer Council grant enables further discovery

In 2014, the division received a substantial boost to its cancer program when it was awarded a \$1.9 million Strategic Research Partnership (STREP) Grant from Cancer Council New South Wales and a supplementary grant of \$500 000 from Cancer Council Western Australia.

This research partnership grant will allow the team to extend and consolidate the capacity of its existing DISCOVER-TT Centre of Research Excellence to support and extend its partnerships and provide seed funding for selected research projects. The aim of this work is to improve the survival and quality of life of Indigenous people with cancer, through a strategic focus on health system performance in the areas of diagnosis, treatment and care.

Results from the ABCD National Research Partnership

The ABCD National Research Partnership (2010–2014) brought together stakeholders and research organisations from across Australia to guide research in the quality of primary health care (PHC) for Indigenous communities.

Analysis of continuous quality improvement (CQI) data from 175 PHC centres identified a general trend of improvement in overall quality of care amongst health centres participating in ABCD CQI projects. However, wide variation between health centres and jurisdictions in the delivery of PHC is evident.

Important findings include the need for a sustained commitment to CQI and a broader systems focus to address common barriers to improvement across the different aspects of care.

In response to expressed health service needs, the Partnership supported the development of new CQI tools and processes for monitoring and improving key functions of PHC where good quality CQI are not available or where standards are not yet well articulated.

Quality Improvement taskforce evaluation in Malawi

The African country of Malawi is one of the poorest in the world; facing a very high burden of disease and significant challenges for health service coordination, scale up and sustainability. Many challenges are similar to those faced in Aboriginal and Torres Strait Islander health.

Professor Ross Bailie recently undertook a fellowship in Malawi with the aim of enhancing linkage and exchange in primary health care quality improvement, and thereby improving service performance and outcomes for Indigenous peoples.

This work has provided an opportunity to evaluate the implementation of Quality Improvement programs in a low-income country, and share experience relevant to Menzies' Centre for Primary Healthcare Systems Continuous Quality Improvement work.

Building a critical network of stakeholders

The Engaging Stakeholders in Identifying Priority Evidence- Practice Gaps and Strategies for Improvement Project, is drawing on CQI data to improve critical stakeholder collaborations across jurisdictions.

The project, a key initiative of the ABCD National Research Partnership, uses aggregate CQI data to stimulate discussion about systemic barriers or enablers that could improve various priority aspects of PHC.

Over 300 chronic illness care stakeholders identified priority gaps in follow-up of abnormal findings, brief interventions, medication management and emotional wellbeing assessment and support.

Identified barriers related to community engagement, workforce support and development. Strategies to address these barriers focused on staff capability in providing holistic care, recruitment and career pathways for Indigenous practitioners, and community involvement in service design to align with community need.

These strategies provide a basis for stakeholders to work collaboratively across jurisdictions to share knowledge and advocate for change at local, regional and national levels.



Delegates of the National Indigenous Breast Cancer Research Roundtable

Case Study: Roundtable to improve cancer outcomes

Some of the country's leading authorities on cancer and cancer survivors themselves were a key part of a National Indigenous Breast Cancer Research Roundtable held in August 2014.

Coordinated by the National Indigenous Cancer Network (NICaN), of which Menzies is a key partner, the roundtable was attended by more than 40 researchers, health professionals, consumers and cancer survivors.

Attendees focussed on how best to maximise the impact of current and future Aboriginal and Torres Strait Islander breast cancer research by identifying research priorities and collaborative research efforts.

Menzies senior research fellow, Associate Professor Gail Garvey said the roundtable identified national research priorities that can contribute to better outcomes for Aboriginal and Torres Strait Islander people who develop breast cancer, their families and communities, and also facilitated collaborative research efforts.

The event, opened by the Honourable Dame Quentin Bryce AD CVO, was funded by the National Breast Cancer Foundation and held at the Lowitja Institute, Melbourne.

RESEARCH HIGHLIGHTS: GLOBAL AND TROPICAL HEALTH

Menzies' Global and Tropical Health Division works with health research organisations and institutions across the Asia-Pacific to improve the research, skills and governance capacity of regional partners. A major focus of this work is optimising the prevention and clinical management of malaria, tuberculosis, pneumococcal disease, rheumatic fever and rheumatic heart disease, melioidosis and malnutrition.

In tropical northern Australia, the focus is on melioidosis, *Staphylococcus aureus* and *Streptococcus pyogenes*, bacteria that cause skin disease, scabies, rheumatic fever and rheumatic heart disease, and other infectious diseases including, influenza, hepatitis B and Acinetobacter.

GLOBAL AND TROPICAL HEALTH RESEARCH AREAS AND PARTNERS



Melioidosis study reaches 25 year landmark

September 30, 2014 saw the completion of the 25th year of the Darwin Prospective Melioidosis Study.

The study has the ongoing primary objectives of improving the diagnosis and treatment of melioidosis. Additional aims include: developing a better understanding of the epidemiology of melioidosis and unravelling the environmental and ecological drivers of the presence and proliferation of the causative bacterium *Burkholderia pseudomallei*. Menzies also works in collaboration with multiple overseas colleagues to define why infection with *B. pseudomallei* in humans can result in such diverse and severe manifestations.

These collaborations are progressing toward both improved diagnostics and a preventative vaccine. Since the study began there have been over 900 confirmed cases of melioidosis diagnosed and treated by the Royal Darwin Hospital Infectious Diseases Department.

Mortality in the Northern Territory has fallen to less than 10 per cent, from a previous high of 30 per cent. The exact reasons for a surge of urban Darwin cases in the last five years remains to be elucidated as the studies continue.

Improving the radical cure of vivax malaria

One of the greatest challenges for malaria control in the Asia-Pacific region is tackling the dormant liver stages of *Plasmodium vivax*.

Current policy is a 14-day course of primaquine, but this has poor compliance and can cause side effects in patients with G6PD deficiency. Over the last four years Menzies has been setting up an ambitious multi-centre randomised controlled study which will follow more than 2500 patients from six countries. The study cohort will be followed for a year to test the safety and efficacy of a novel primaquine treatment regimen.

Enrolment began in Afghanistan and Vietnam in 2014 and will extend to include Pakistan, Indonesia and Ethiopia in 2015.

Optimising malaria treatment regimes

Plasmodium knowlesi remains the most common cause of malaria in Malaysia, however the optimum treatment regimen is not known. Menzies research teams have completed a large-scale *Plasmodium knowlesi* randomised controlled trial (RCT) with key partners in Sabah, Borneo.

Results from the trial showed that artemisinin-containing combination therapy (ACT) results in faster parasite clearance than chloroquine, enabling earlier hospital discharge.

Combining results from the RCT and a parallel trial, which revealed high rates of chloroquine treatment failure and a 100 per cent efficacy of ACT for *Plasmodium vivax*, have led to Ministry of Health national policy change to the use of a unified ACT regimen for all species causing malaria in Malaysia.

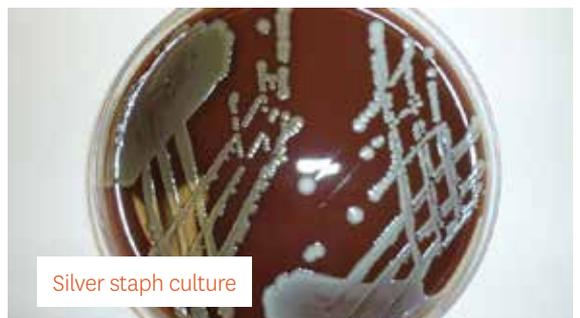
Silver lining to staph discovery

Several years ago Menzies researchers began to notice a strange golden staph (*Staphylococcus aureus*) bacteria causing skin infections in Aboriginal children.

Investigations in 2014 determined that the bacteria was not a golden staph, but rather a strain of 'silver' staph. The scientific community has since formally recognised this as a new species of staph – *Staphylococcus argenteus*.

The new species has earned its name because it cannot make the golden pigment that is a defining characteristic of *S. aureus*, and appears a brilliant silvery white on agar plates.

Such classifications are important to better understand and identify what exactly is a staph bacteria. Menzies research has determined that *S. argenteus* causes less severe disease than standard golden staph. Defining a new bacterial species also opens the door for researchers elsewhere in the world to identify and describe the clinical manifestations of *S. argenteus*.



Case study: Telling the Hep B Story



A community member trials the Hep B iPad app at the launch event

The launch of a new iPad app is hoping to address the prevalence and severity of hepatitis B infections in remote Indigenous communities.

Infection with hepatitis B virus (HBV) can lead to liver failure and liver cancer. In some areas of northern Australia, up to 10 per cent of the population can be infected with hepatitis B.

This project was initiated by a request from a remote community in East Arnhem for more information about the infection. A research team, including staff from Menzies, the community, and the health clinic, was formed and interviews with key informants, hepatitis B patients and community members were carried out.

Using the data from the interviews and repeated cycles of community consultation, the Menzies Hep B team designed and finalised the Hep B iPad app which uses visual and spoken cues in English and Yolŋu matha to explain the natural history and treatment of hepatitis B infection.

The collaborative development of this app has led to capacity building for all involved, employment for local people, a launch party event in the community, and most importantly, a culturally appropriate educational resource on hepatitis B

A web version of the app can be viewed here: www.menzies.edu.au/hepbstory

Case study: Collaborative approach unravels fungal mystery

Tropical skin infections are common in Darwin. When local gardeners began developing skin ulcers during 2013-2014, it took time to recognise that this was being caused by an unusual fungus.

Ten people in 2013-2014, all of whom were frequent gardeners, developed non-healing, spreading skin lesions. An investigation by the Northern Territory Centre for Disease Control, with Menzies researchers led by Dr Anna Ralph, in conjunction with Royal Darwin Hospital, found that these were infections with *Sporothrix schenckii* (sporotrichosis); a fungus associated with decaying plant matter.

Further investigation revealed that the affected people had all handled hay from the same local vendor. The outbreak, caused by the hay becoming mouldy during the wet season, was terminated after consultation with doctors, the public, and the hay vendor. Doctors have been asked to remain alert to further potential sporotrichosis cases.



Senior clinical research fellow, Dr Anna Ralph

HIGHLIGHTS: RHDAUSTRALIA

Rheumatic heart disease (RHD) is preventable, yet Australia has the highest recorded rate in the world. Indigenous people are up to eight times more likely than non-Indigenous people to be hospitalised, and nearly 20 times more likely to die from the disease. Indigenous children aged five to 14 years are the most vulnerable.

RHDAustralia is the National Coordination Unit for the Australian Government's Rheumatic Fever Strategy. It aims to prevent and reduce acute rheumatic fever and rheumatic heart disease in Australia through education, access and use of quality data and national engagement.

E-learning modules target world's highest rates of RHD

RHDAustralia has launched 15 new clinician e-learning modules as part of Australia's Rheumatic Fever Strategy.

Developed by RHD experts from around Australia, the modules are designed for clinicians and senior health staff to improve the prevention, control and management of Acute Rheumatic Fever (ARF) and RHD.

The first of the modules builds clinicians' basic knowledge, then covers 14 specialised areas. Each module has been developed by the clinical champion in that field, trialled with several doctors, and provides best-practice information.

Forum to forge path to end RHD

Two hundred international leading experts and advocates for RHD converged for the Third Global Rheumatic Heart Disease Forum held in Melbourne in May 2014.

Government officials, public and private sector stakeholders, and non-government organisation representatives, joined academic leaders and clinical experts to develop a time-bound roadmap to control and improve outcomes for people with RHD.

In addition to identifying opportunities to control RHD globally, the forum also demonstrated the value of a coordinated national approach, reviewed barriers to reach the five targets of the World Heart Federation to control rheumatic fever and RHD, and provided a patient's perspective from a young Australian Indigenous person living with RHD.

Case study: Sharing stories of RHD

Education and advocacy are key components of RHDAustralia's strategy for the prevention and reduction of ARF and RHD. Reaching the geographically dispersed and transient health workforce across northern and central Australia is one of the challenges RHDAustralia faces.

To meet this challenge, RHDAustralia joined forces with its partners in the RHD Control Programs in the Northern Territory, South Australia, Western Australia, Queensland, and other key stakeholders, to run a series of seminars. The seminars provided insights from patients, clinicians and researchers and were attended by over 300 health professionals.

A highlight of the series was a presentation by the McAdams family at the Darwin seminar. Kenya, Luke and their mother Cherie talked passionately about their journey living with ARF/RHD.

"I wanted all my children there so that the audience could see the eyes and hearts of the children, the impact of their work, and how it affects families," Cherie McAdams said.

"I will do whatever is necessary to bring the plight of rheumatic heart disease before the eyes of the public and to make changes."



Fijian Minister for Health, Dr Neil Sharma and Commonwealth Chief Medical Officer, Prof Chris Baggoley speak at the 3rd International RHD forum co-hosted by RHDA and RhEACH

RESEARCH IMPACT IN THE COMMUNITY

Beyond its commitment to research excellence, Menzies sets its sights on solutions — using our research findings to kick-start and sustain positive change.

We are committed to ensuring that the research we do is put into practice and policy by health care providers, governments and other key stakeholders to achieve practical and tangible health outcomes.

Respiratory health collaboration results in new guidelines

Bronchiolitis causes a significant burden of disease globally. In the Northern Territory (NT), Indigenous infants have very high rates of hospitalised bronchiolitis, more severe disease and re-hospitalisations for respiratory illnesses.

The Child Health Respiratory team are leading a binational, multicentre randomised controlled trial among 219 Indigenous children to examine whether use of azithromycin improves clinical outcomes, progressive symptoms and rates of re-hospitalisation.

Researchers identified that respiratory symptoms after hospitalisation were common (i.e. cough at three-weeks), increasing the risk of developing the lung disease, bronchiectasis at 13-months.

In collaboration with the NT Department of Health, these results are currently changing clinical care. It is now recommended that children discharged from hospital are clinically reviewed at their usual health clinic three-four weeks after hospitalisation. Prior to this, children were not systematically reviewed.

Health promotion across borders

It is critical that community members who access primary health care services are supported by effective health promotion.

The Watto Purrunga wellbeing team in South Australia recently participated in health promotion auditing and systems assessment training conducted by One21seventy on invitation from Director, Aboriginal Health Services, North Adelaide Local Health Network, Kurt Towers.

Participants attending the two-day program undertook a range of capacity building activities, including a systems assessment, to determine strengths and opportunities for improvement of their health promotion programs.

The systems assessment led to the identification of program gaps, and goals being set to improve programs - a first for a primary health care service in Australia.



The Watto Purrunga wellbeing team

New resource addresses community nutrition

A new resource package focused on improving health communication and practices in remote Indigenous communities will help to strengthen efforts to support good nutrition, health and wellbeing.

With funding from The Fred Hollows Foundation, Menzies has developed the teaching and learning resource entitled, Food and Health Communication Across Cultures.

Dietary improvement for Aboriginal and Torres Strait Islander Australians remains a priority for reducing the health gap between Indigenous and non-Indigenous Australians.

The resource package provides practical guidance to support strength-based approaches, critical reflective practice and health and nutrition communication. The guide holds potential relevance for a range of health professionals and workers who spend time in remote Indigenous settings including nutritionists, health promotion staff, health workers and nurses.



The PANDORA study team

Case study: Improving diabetes outcomes for mothers and babies

Improving clinical care for women with diabetes in pregnancy, and improving the future health outcomes of mothers and babies, are key aims of the Northern Territory Diabetes in Pregnancy Partnership Project (PANDORA).

Since the partnership commenced in 2012, the study team have seen a heightened awareness of diabetes in pregnancy, an increase in screening for diabetes in pregnancy, and thus, increasing numbers of women diagnosed.

This is a significant step towards improving management and outcomes of diabetes in pregnancy for mother and baby; enabling the prevention of chronic disease to occur as early as possible in the life course.

Whilst the emphasis to date has been on women with diabetes in pregnancy, the team will now switch focus to post-natal management incorporating inter-pregnancy health of women and their future pregnancies.

INDIGENOUS CAPACITY BUILDING



Menzies staff gather for the launch of the Reconciliation Action Plan

Menzies' Indigenous Capacity Building Unit (ICBU) aims to create a capable and sustainable Indigenous workforce through employment, training and professional development opportunities in a culturally safe environment.

With this in mind, the Aboriginal and Torres Strait Islander Employment and Development Strategy 2010–2015 and the Reconciliation Action Plan (RAP) 2014–2016, were the two key focus areas for the ICBU in 2014.

Other major ICBU activities for 2014 included the implementation of the network of Community-Based Researchers (CBRs) project and the launch and commencement of the implementation phase of the Menzies RAP.

The unit also oversaw the re-establishment of Menzies' partnership with Group Training Northern Territory, to offer school leavers employment under the traineeship initiative and promote Menzies as an employer of choice to students from both urban and remote communities in the Northern Territory.

Creating a network of knowledge

Menzies was successful in winning a grant under the NT Department of Business Indigenous Workforce Participation Initiative Program (IWPIP) to establish the Network of Indigenous Community-Based Researchers project.

This was achieved by providing participants with both accredited and non-accredited training and a mentoring support program that increased both the pool of available local researchers and their employment prospects.

The program aims to increase workforce participation for Indigenous Territorians by assisting industry and business, including the not-for-profit sector, to plan and establish practices and systems that engage and expand the number and skills of Indigenous Territorians in employment across the NT.

Fostering capacity in community health research

Menzies' Certificate II in Child Health Research provides participants with flexible on the job training which can be adapted to a variety of research project needs.

Participants are required to complete four units of competencies, and of the 21 community-based researchers enrolled, 13 graduated the course.

Recently reviewed and reaccredited for five years, the new look Certificate II in Community Health Research is more flexible and will include training in foundation skills.

Eight participants from the 2014 cohort will transition to the renewed Certificate II.



Veronica Gondarra, George Gurruwiwi, Roslyn Dhurrkay and Jodi Phillips

YOUTH ENGAGEMENT STRATEGY

The Youth Engagement Strategy (YES) is designed to provide and enhance interactions for young Territorians with leading health researchers.

Activities are designed to attract youth to a career in health and science, and to demonstrate clear pathways to study and work.

Strategic goals of the YES are:

1. Attracting more Indigenous and non-Indigenous youth to health research and science
2. Increasing opportunities for youth to experience science events and experiments
3. Attracting and retaining Indigenous and non-Indigenous students to a career pathway at Menzies
4. Raising Menzies' profile with NT youth.



Rebecca Cass, Nelson Rossingh and Cain Hendy in the Menzies laboratory

Trusting in our trainees

In 2014, Menzies partnered with Group Training Northern Territory to provide several traineeship opportunities for school leavers. These positions included a range of activities to facilitate Menzies' engagement with youth, science and schools.

The successful applicants under the Gap traineeship initiative were Cain Hendy, Rebecca Cass and Nelson Rossingh. All three Gap trainees were enrolled in the Certificate III Laboratory Skills and successfully completed the course throughout 2014.

Shennelle Waters was selected as the successful applicant for the Kick-start traineeship program. Shennelle is also enrolled in the Certificate III Laboratory Skills.

The successful applicant for Menzies' Indigenous Business Traineeship, Krystah Thomas has built heavily on her business acumen through the Certificate III Business Administration.

Rebecca champions HealthLAB

Gap trainee, Rebecca Cass' role with the HealthLAB pilot saw her drive the initiative from a grant writing stage through to the management and coordination of the various mobile health outreach events held across Darwin.

Rebecca said a major outcome was being able to educate youth and the wider community on lifestyle strategies to reduce disease.

"We always hoped that the pilot program would help change community attitudes and behaviour towards their own health through a hands-on, science-oriented teaching package," Rebecca said.

"The feedback we received throughout the various events was overwhelming with 96 per cent of those surveyed saying the workshop had helped them better understand their health."



Rebecca Cass and Bronwyn Nankervis at the NT Parliament House HealthLAB pilot event

CAPACITY BUILDING

In addition to its cutting-edge laboratory-based and biomedical research, Menzies also strives to increase the capacity of communities, health service providers, Indigenous health workers, professionals and researchers – to help them deliver better services based on evidence about what works, and what doesn't.

APMEN champions fight against vivax malaria

Menzies coordinates the Vivax Working Group (VxWG) of the Asia-Pacific Malaria Elimination Network (APMEN).

The coordinating team works with country partners and partner institutions to develop a comprehensive *Plasmodium vivax* agenda, to build regional capacity and gather evidence for policy.

In November 2014, the working group held a two-day workshop aimed to facilitate the exchange of experiences, dialogue and approaches to data analysis and build further capacity among local researchers.

The workshop was attended by researchers from Bhutan, Malaysia, Vanuatu, Solomon Islands and Bangladesh, who had received funding for clinical antimalarial studies through the VxWG technical grants scheme.

Preliminary analysis of these studies showed that the current first-line treatments in Bhutan and Bangladesh are working well, whereas reduced efficacy of first-line treatments has been found in the studies in Malaysia and Vanuatu.

Evaluating No Germs on Me

An evaluation of a suite of advertising concepts promoting the importance of hand washing has been undertaken to determine its effectiveness in reducing rates of respiratory disease among Indigenous children.

The No Germs on Me social marketing campaign was a joint project involving Menzies and two territory/state Departments of Health. Government and non-government service providers are currently implementing health promotion programs to promote hand washing with soap, facial cleanliness including nose blowing, and the regular bathing of children using soap.

Past evaluations have generally lacked credibility because of a reliance on generating findings based on self-reported behaviour. The No Germs on Me evaluation has sought to address this by trialling an alternative evaluation approach so findings would be of practical use to service providers.

Environmental health officers, who regularly visited and provided services in remote communities, participated in all intervention development, evaluation planning, implementation and reporting activities.



Alana Nilco practises good hand washing hygiene

Developing new tools in the fight against cancer

The evaluation of an assessment tool specifically designed for Indigenous Australians with cancer is hoping to improve cancer outcomes for patients and health professionals.

The project evaluated the acceptability and feasibility of the Supportive Care Needs Tool for Indigenous People (SCNAT-IP); an unmet needs assessment tool specifically designed for Indigenous Australians with cancer.

This project was completed in March 2014 and found preliminary evidence of the feasibility and acceptability of the SCNAT-IP for use within diverse cancer care settings across New South Wales, Victoria and Northern Territory.

Importantly, the results demonstrated the tool to be acceptable to both Indigenous cancer patients and clinical staff.

This study has enabled capacity building in clinical staff who indicated a significant increase in confidence and knowledge following training and support modules.



Delegates from the Talking About the Smokes stakeholder forum held in Sydney

Case study: Talking About the Smokes

Stakeholders from a large national research project aiming to better understand the pathways to smoking and quitting for Indigenous people met in mid-2014 to discuss nationwide results and trends.

Talking About the Smokes is a collaboration between Menzies, the National Aboriginal Community Controlled Health Organisation (NACCHO) and a number of other research institutions and Aboriginal community controlled health services (ACCHSS).

The project is overseen by a group with wide experience in Indigenous health and tobacco control from research institutions and the ACCHS sector.

In 2012-2013, the project employed more than 100 local research assistants to interview over 2500 community members and conduct follow up interviews 12 months later.

Local agreements were made with each participating ACCHS, and local staff were trained and supported by project staff employed at NACCHO.

Local results have been fed back to each ACCHS, with relevant stakeholders participating in a project forum to discuss early baseline results in July 2014. These results will be published as a special supplement of the Medical Journal of Australia in 2015.

MENZIES IN THE COMMUNITY



June Oscar AO delivers the 2014 Menzies Oration

Menzies Oration

Leading advocate for Indigenous Australian social justice and the rights of women and children, June Oscar AO, was the focus of a standing room only Menzies Oration held on 7 November 2014.

Ms Oscar, CEO of Marninwarntikura Women's Resource Centre and proud Bunuba woman from the small town of Fitzroy Crossing, Western Australia, pointed to the critical need to retain and strengthen cultural and family connections as a prerequisite to overcome other seemingly insurmountable challenges in Indigenous health.

Ms Oscar's presentation, 'Speaking truth to community empowerment', focused on the need for governments and other vital stakeholders to engage with people in communities and truly listen to their voices to forge a future of transformational possibilities.

Musgrave Park Cancer Walk

As a precursor to World Cancer Day, more than 200 Brisbane residents descended on Musgrave Park on 2 February 2014 to participate in the inaugural Musgrave Park Cancer Walk to raise cancer awareness among Aboriginal and Torres Strait Islander people.

The walk brought together Aboriginal and Torres Strait Islander and non-Indigenous Australians to talk about cancer in Aboriginal and Torres Strait Islander people, treatment and care options, the importance of early detection and need for regular cancer check-ups.

Senior Menzies cancer researcher, Associate Professor Gail Garvey, said the strong show of public support demonstrated that key messages around cancer awareness, and the continued need for open discussion, were getting through.



Participants walk through Musgrave Park



Menzies staff walk through Darwin city as part of NAIDOC Week 2014

NAIDOC Week

NAIDOC Week 2014 celebrated Aboriginal and Torres Strait Islander culture, providing the opportunity to recognise contributions made by Indigenous Australians in our armed forces.

Menzies' Indigenous Capacity Building Unit coordinated a number of events across its offices to highlight how respect is fundamental to working in true partnership with Aboriginal and Torres Strait Islander peoples.

Menzies staff in Darwin and Brisbane participated in a march for NAIDOC Week under the theme of 'Serving Country: Centenary & Beyond.'



Close the Gap Day Charity Breakfast

Government ministers, private industry, Indigenous organisations and health professionals were among a crowd of more than 200 to attend the 2014 Close the Gap Day Charity Breakfast on 20 March 2014.

Held to coincide with national Close the Gap Day, the charity breakfast is now the Northern Territory's premier Close the Gap Day event.

Attendees enjoyed a sit down formal breakfast, cultural performances and the opportunity to hear from Menzies' leading Indigenous health experts about current projects which are improving Indigenous health.

All funds raised on the day went towards Menzies' Indigenous traineeship appeal which has supported a young Indigenous Australian to pursue their career in medical and health research.

Dr Julie Brimblecombe presents to a capacity crowd

MENZIES AWARD RECIPIENTS

Child Health

- Professor Anne Chang won the 2014 Charles Darwin University (CDU) Library Open Access Award for having the most publications in CDU eSpace, the University's institutional open access repository
- Professor Anne Chang was awarded the Past-President's Award for her dedication to the practice and training of the younger generations in paediatric pulmonology at the 13th International Congress on Paediatric Pulmonology in Bruges, Belgium.

Global and Tropical Health

- Professor Nick Anstey was announced as the recipient of the inaugural Gustav Nossal Medal for Global Health by the Australian Academy of Science for his contributions in tackling the global burden of malaria
- Claire Boardman was announced as a finalist for the 2015 Northern Territory Australian of the Year Award for her contributions to the public health sector.

Epidemiology and Health Systems

- The Menzies Cancer Research Team was named as the winner of the research team category as part of CDU's Vice-Chancellor's Award for Exceptional Performance in Research in recognition for their outstanding dedication, energy and commitment to improving cancer outcomes among Indigenous populations.

Fellowships

- Associate Professor Louise Maple-Brown - NHMRC Practitioner Fellowship, Improving outcomes of diabetes and related conditions for Indigenous Australians: causes, intervention, system change
- Associate Professor Patricia Valery - NHMRC Career Development Fellowship, Reducing the burden of disease and inequity related to Indigenous Australians with cancer
- Dr Josh Davis - NHMRC Career Development Fellowship, Addressing important evidence gaps in the management of severe infectious diseases
- Michael Binks - NHMRC Early Career Fellowship, Reducing the community burden of respiratory infections in Indigenous children
- Bridget Barber - NHMRC Early Career Fellowship, Comparative pathophysiology and clinical epidemiology of knowlesi malaria
- Dr Jaquelyne Hughes - NHMRC Early Career Fellowship, Improving health outcomes for Aboriginal and Torres Strait Islander Australians with chronic kidney disease.

Internal Awards

- The 2014 Menzies Medallion was presented to June Oscar AO and Dr John Boffa for their unwavering efforts in the fight against alcohol-related issues affecting the lives of Indigenous people in Australia
- The 2014 Ryan Family Prize was awarded to Dr Heidi Smith-Vaughan for her outstanding commitment to capacity building through high quality research training
- The 2014 Val Asche Prize was awarded to Heather Wallace (Master of Public Health) and Camille Mewett (Graduate Diploma in Public Health) for academic excellence
- The 2014 Harry-Christian Giese – Research into action award was won by Dr Matt Grigg. Dr Grigg will use the award to support the translation of his research into malaria treatment guidelines and policy.

Menzies recognises long-serving staff

In 2014, Menzies reinvigorated its Long Service Awards program for staff. The awards provide an opportunity to recognise and record the valued contributions of staff members to Menzies over a long period.



The new Long Service Awards were presented in recognition of 5, 10, 15, 20 and 25+ years of continuous service recorded in that calendar year at a special end of year ceremony.

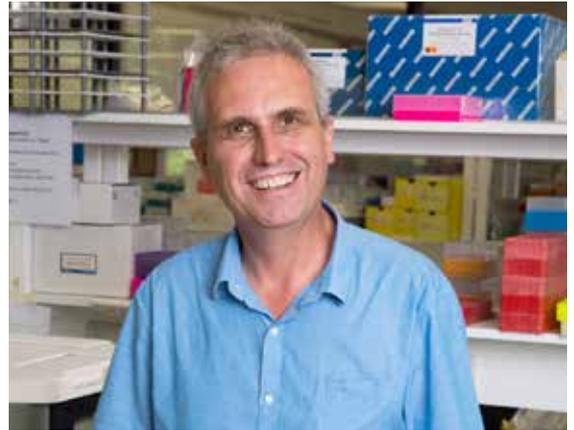
Professors Amanda Leach and Bart Currie received awards for 25 years of long service as part of a special ceremony

Spotlight on infectious diseases specialist

One of Australia's leading infectious diseases specialists has been recognised with a prestigious national award for his contributions in tackling the global burden of malaria.

Menzies' Professor Nick Anstey was announced as the recipient of the inaugural Gustav Nossal Medal for Global Health by Australia's peak scientific body; the Australian Academy of Science. The Gustav Nossal Medal recognises research of the highest standing in the field of global health.

Professor Anstey works with clinical research partners in Papua, Indonesia and Malaysia; and with malaria networks across the Asia-Pacific and Africa. The goal of his research program is the reduction in disease and death from malaria and other tropical diseases.



Inaugural Gustav Nossal medallist, Professor Nick Anstey

Anti-alcohol campaigners honoured with dual Medallions

Two of the most influential identities in the fight against alcohol-related issues affecting the lives of Indigenous people in Australia were awarded the prestigious Menzies Medallion for their unwavering efforts.

CEO of Marninwarntikura Women's Resource Centre in Fitzroy Crossing, June Oscar AO and chief public health medical officer at the Central Australian Aboriginal Health Congress in Alice Springs, Dr John Boffa, were named as dual Medallion recipients during the 2014 Menzies Oration.

A proud Bunuba woman, Ms Oscar is a champion for Indigenous Australian languages, social justice, women's issues, and improving child health and development, with a focus on foetal alcohol spectrum disorder.

In his various roles in Indigenous health, Dr Boffa has played a significant role in Aboriginal health policy developments, the development of the Central Australian Rural Practitioners Association (CARPA) Standard Treatment Guidelines, core indicators for primary health care and addressing the broader social determinants of Aboriginal health.



Menzies Medallion recipients, Dr John Boffa and June Oscar AO with Professor Alan Cass

DONORS AND SUPPORTERS

The impact of the federal budget in the health and education sectors in Australia is particularly pertinent to Menzies and its partners in Aboriginal communities and health services.

Despite our success in securing research grants, we continue to work in a tight external financial environment. The private and philanthropic support Menzies receives is pivotal in extending its national and international impact as it fosters innovation and extends the practical benefits of our research to Indigenous communities across Australia.

The translation of research into action is a fundamental priority for Menzies. Throughout 2014 the development team continued to raise Menzies' profile and promote its impact and leadership in Indigenous health to Melbourne and Sydney corporate audiences through a series of sponsored events.

We would like to thank our hosts **Catherine Livingstone AO, Chairman - Telstra, Maryjane Crabtree, Executive Partner- Practice at Allens, Elizabeth Proust AO, Chairman - Nestle, Verity Shepherdson, Convenor - Victorian Women Lawyers Association & Senior Associate - Herbert Smith Freehills, Clare Martin - Menzies School of Health Research Board Member and Allan Vidor, Managing Director - Toga Group.**

Key donations energise strategic directions and research

Dr Richard Russell and Kate Russell made a significant donation of their time and expertise in 2014 as they championed an organisational review with staff and stakeholders to effectively implement a reinvigorated strategic plan.

Menzies was also privileged to have received a substantial financial contribution from key supporters, Ian Albrey and Edwina Menzies in honour of Ian's mother Irene (Sue) Albrey, which supported the employment of a research nurse in Katherine and Gove Hospitals to extend the PANDORA Study, an important longitudinal birth cohort study of mothers with diabetes in pregnancy and their babies.

PhD research into action

PhD research into optimising treatment therapies for the global burden of malaria has been recognised with the 2014 Harry Christian Giese - Research into Action Award.



Work by Dr Matthew Grigg is recognised as being critical in the fight against malaria

Dr Matthew Grigg was named the 2014 recipient to champion the translation of his research findings into medical interventions.

Dr Grigg will work with a number of hospital sites, community and local government stakeholders in Sabah, Malaysia as part of his research, which seeks to inform malaria treatment guidelines and policy.

Kick-start appeal secures Shennelle

The 2013-2014 Kick-start A Champion for Change Appeal raised over \$30 000 to support an Indigenous trainee to pursue their career in health and medical research. In partnership with Group Training Northern Territory, Shennelle Waters was selected as the successful candidate.

Shennelle is currently training in the field of microbiology and assisting with the IHEARBETA study into Indigenous children with chronic suppurative otitis media as part of her Certificate III in Laboratory Skills.



Shennelle Waters was the successful candidate for the Kick-start traineeship program

Major donors and partners

Menzies is grateful to the following donors and partners for their generous support in 2014:

Major donors

Alex Davis	Chris and John Collingwood	Jillian Segal AM	Ray and Margaret Wilson Foundation
Andrew Israel	Colin Eddison	Julie Crisp	Dr Richard Russell
Ann Cole	Diana and Richard Giese	Kate Russell	Richard Ryan AO
Annie Trevillian	Elaine Chang	Lord Mayor Katrina Fong Lim	The Eke Family
Antoinette Paterson	Graham Blashki and Evelyn Firstenberg	Lynne Plate	The Hon Hilary Hannam
Barbara Stewart	Ian Albrey and Edwina Menzies	Lynne Walker	The Hon Robyn Lambley
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Prof Bart Currie	James Hogben	McArthur River Mining	Troy Ryan
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Brian and Lorraine Martin		Paul Trevillian	Vince O'Brien
Cheltenham Cressy Ladies Golf Club		Peter and Natalie La Pira	

Partners and funders

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Allens<<Linklaters	Department of Zoology, University of Colombo, Sri Lanka	International Centre for Diarrhoeal Disease Research, Bangladesh	Pfizer Australia
Amgen Australia	Diabetes Australia	James Cook University	QIMR Berghofer
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BakerIDI Heart and Diabetes Institute	Faculty of Medicine, University of Antioquia, Colombia	Mahidol-Oxford Tropical Medicine Research Unit, Thailand	Social & Health Inequalities Networks, Pakistan
Barefoot Films	Feral Films	Mailman School of Public Health, University of Columbia, USA	The Arnhem Land Progress Aboriginal Corporation
Beyondblue	Financial Markets Foundation for Children	Malaysia Ministry of Health	The Burnet Institute
Bill and Melinda Gates Foundation	Flinders University	Mary Mackillop Foundation	The Cass Foundation
Cancer Australia	Foundation for Alcohol Research and Education	Medicines for Malaria Venture	Toga Group
Cancer Council NSW	Fred Hollows Foundation	Merck Sharp & Dohme	UK Medical Research Council
Cancer Council WA	Gilead Sciences	Ministry of Health, Bhutan	United States Department of Defense
Centre for Tropical Medicine and Global Health, Oxford University	Glaxo Smith Kline Australia	Mura Kosker Sorority Inc	University of Gadja Mada, Yogyakarta, Indonesia
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Channel Seven Children's Research Foundation	Griffith University	National Health and Medical Research Council	University of Melbourne
Channel 7	Hanako Foundation	National Heart Foundation	University of Otago, New Zealand
Charles Darwin University	Health Protection and Research Organisation, Afghanistan	National Institute of Health US	University of Queensland
Collier Charitable Fund	Healthy Living NT	Northern Arizona University	University of South Australia
CSIRO	Heart Foundation Australia	Northern Territory Government	University of South Florida, USA
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Department of Education and Training	Hormozgan University of Medical Sciences, Iran	Oxford University Clinical Research Unit Vietnam	University of Utah, USA
Department of Foreign Affairs and Trade	Ian Potter Foundation	OzEMalaR	VIBE Hotel Darwin Waterfront
Department of Health and Ageing	Infectious Diseases Society Kota Kinabalu Sabah	Papuan Community Health and Development Foundation, Timika, Indonesia	Victorian Women Lawyers Association
Department of Industry – Inspiring Australia	Infectious Diseases Unit, Queen Elizabeth Hospital, Malaysia		Wellcome Trust
Department of Social Services			Western Desert Nganampa Walytja Palyantjaku Tjstaku Aboriginal Corporation
Department of the Prime Minister and Cabinet			

Menzies extends a special thank you to its many Aboriginal Health Organisation partners.



Higher Degree Research students, Evan McRobb, Asha Bowen and Michael Binks

EDUCATION AND TRAINING

In 2014, the Education and Training team, the focal point for health research and public health education, spearheaded the move of Menzies onto the Charles Darwin University (CDU) Campus.

The completion of the new building meant the team had access to the first purpose-built and IT enabled teaching and learning spaces for Menzies. The close proximity to the university community has reinvigorated attendance at seminars, short courses and workshop programs.

The coursework program in public health and health research continues to strengthen with the Master of Public Health, Graduate Diploma in Public Health and the Graduate Diploma in Health Research all meeting the CDU re-accreditation requirements. All courses had a significantly increased participation rate in 2014.

A substantial effort was made to improve educational pathways for Menzies Indigenous community-based researchers, with Menzies developing a nationally accredited Certificate II in Community Health Research

(105103NAT) which replaces the Certificate II in Child Health Research. The course is specifically designed for health research organisations working with Aboriginal and Torres Strait Islander communities. It will build skills and knowledge in the ethical conduct of research, engaging in community consultation and collecting data from community members.

Menzies research academics continue to supervise an outstanding cohort of Higher Degree Research (HDR) students with a strong completion and scholarship success record. The 2014 Menzies PhD graduates are representative of the diversity of student research topics which include: malaria, child development, infectious diseases, epidemiology, health promotion and education.

The year ended on a high for the team with long-serving academic administrator, Catherine Richardson recognised for her 15 years of continuous service and outstanding contribution to Menzies.

Master of Public Health graduates completing with a research thesis

- Helen Kehoe: *So close, yet so far: how a lack of accountability undermined COAG's Aboriginal and Torres Strait Islander health goals*
- Verity Slee: *An Exploration of sexual health (SH) and blood borne virus (BBV) health in the Long Grass in Darwin.*

Higher Degree Research (HDR) graduates in 2014

- Bridget Barber (PhD): *Plasmodium knowlesi: Epidemiology, Clinical Features, Diagnosis and Pathogenesis*
- Anita D'Aprano (PhD): *Improving developmental monitoring practices of remote Australian Aboriginal Health Workers: The TRAK study*
- Kim Hare (PhD): *The Bacteriology of Bronchiectasis and Impact of Azithromycin on Upper and Lower Airway Bacteria and Resistance in Australian Indigenous Children*
- Thérèse Kearns (PhD): *Scabies and Strongyloidiasis Prevalence before and after a Mass Drug Administration in a Remote Aboriginal Community in the Northern Territory*
- Sara Noonan (PhD): *National Surveillance of Rheumatic Fever in Australia, and Continuous Quality Improvement of Rheumatic Heart Disease in Fiji: Contemporary Models for Identification and Management.*

- Georgina Nutton (PhD): *The Effectiveness of Mobile Preschool (Northern Territory) in Improving School Readiness for very remote Indigenous Children*
- Nicole Percival (PhD): *Improving health promotion in Indigenous primary health care: Is a continuous quality improvement approach feasible?.*

HDR scholarships announced in 2014

- Lisa Whop (PhD): Effectiveness of cervical screening for Aboriginal and Torres Strait Islander women compared with other Australian women; a data linkage approach. The Lowitja Institute
- Matthew Grigg (PhD): Disease burden, risk factors and treatment of knowlesi malaria. National Health and Medical Research Council
- Sarah Eastley (PhD): The validation of a purposely devised dietary intake tool for use in Australian Indigenous populations. Australian Postgraduate Award
- Alison Laycock (PhD): Supporting knowledge translation in Aboriginal and Torres Strait Islander primary health care: engaging stakeholders in using evidence to influence system and policy innovations. Menzies Knowledge Translation in Primary Health Care Scholarship
- Gokula Chandran (PhD): Neighbourhoods, Environments and development of children in the NT. Australian Postgraduate Award
- Judy Chan (PhD): Who say I no good? Perceptions of postsecondary student English in Singapore. Australian Postgraduate Award.



Dr Thérèse Kearns, Dr Kim Hare and Dr Georgie Nutton at the 2014 Charles Darwin University mid-year graduation ceremony

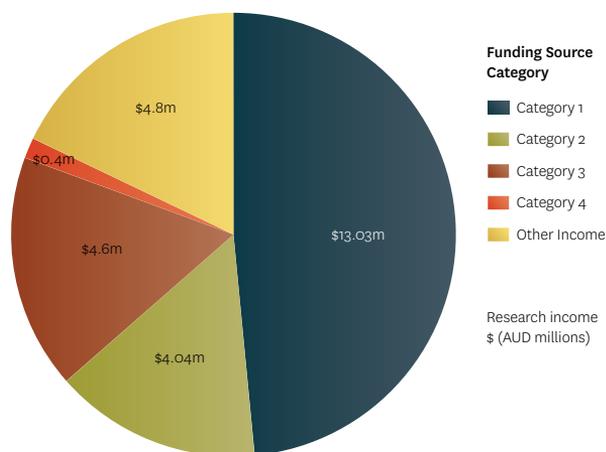
RESEARCH AND EDUCATION AT A GLANCE

Menzies has again achieved a remarkable outcome in the Australian competitive grants space outperforming the nation's top 20 universities and the top 10 medical research institutes in terms of the success rate of our grant applications submitted to the National Health and Medical Research Council (NHMRC).

Menzies 2014 NHMRC funding – addressing national and regional health priorities

Chief Investigator	Title	Funding
Amanda Leach	Centre of Research Excellence (CRE) in Indigenous Children's Healthy EARS	\$2.5M
Ross Bailie	An Innovation Platform for Systems-Wide Improvement in Indigenous Primary Health Care (CRE)	\$2.5M
Louise Maple-Brown	Pregnancy and Neonatal Diabetes Outcomes in Remote Australia (PANDORA) Cohort (Project)	\$2.3M
Josh Davis	CAMERA: Combination antibiotic treatment for Methicillin Resistant Staphylococcus Aureus Bacteraemia - a RCT (Project)	\$1.1M
Sven Silburn	Improving the developmental outcomes of NT children: a data-linkage study to inform policy and practice in health, family services and education (Partnership Project)	\$0.9M
Alan Cass	Improving the quality and access to dialysis treatments by Indigenous Australians from NT remote areas using a patient-centred approach (Partnership Project)	\$1.2M
Gary Robinson	Skills for Life: Rigorous implementation and evaluation of the impact of a life skills curriculum in remote NT Indigenous communities to reduce youth suicide (Suicide Prevention Project)	\$1.7M
Michael Binks	Reducing the community burden of respiratory infections in Indigenous children	Early Career Fellowship
Bridget Barber	Comparative pathophysiology and clinical epidemiology of knowlesi malaria	Early Career Fellowship
Jaquelyne Hughes	Improving health outcomes for Aboriginal and Torres Strait Islander Australians with chronic kidney disease	Early Career Fellowship
Patricia Valery	Reducing the burden of disease and inequity related to Indigenous Australians with cancer	Career Development Fellowship
Josh Davis	Addressing important evidence gaps in the management of severe infectious diseases	Career Development Fellowship
Louise Maple-Brown	Improving outcomes of diabetes and related conditions for Indigenous Australians: causes, intervention, system	Practitioner Fellowship

Menzies research income by funding source category 2014



In 2014, a majority of Menzies' research income came from the Australian Government through competitive research grants.

Funding source categories:

Category 1 – Australian Competitive Grants

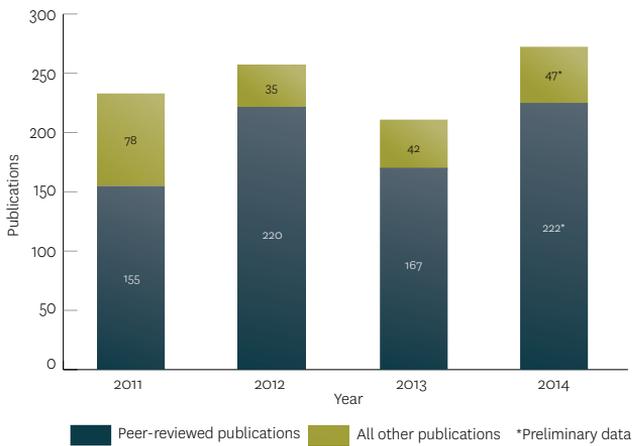
Category 2 – Other public sector income, including grants, tenders and contracts

Category 3 – Australian contracts, donations, international competitive grants and consultancies

Category 4 – Cooperative Research Centres

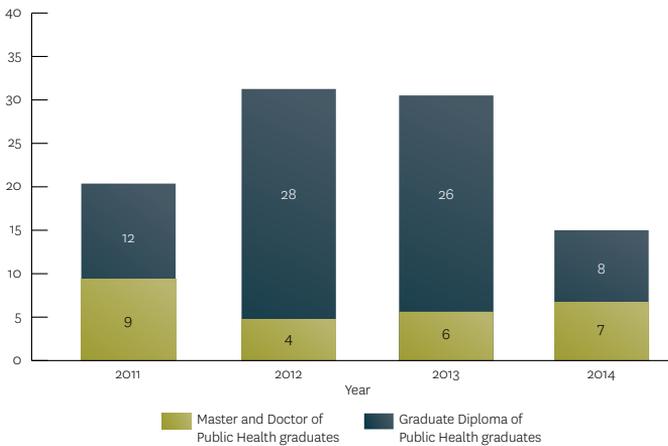
Other income – tenders and consultancies, infrastructure grants, other Australian and overseas grants.

Publications authored by Menzies researchers, 2011-2014



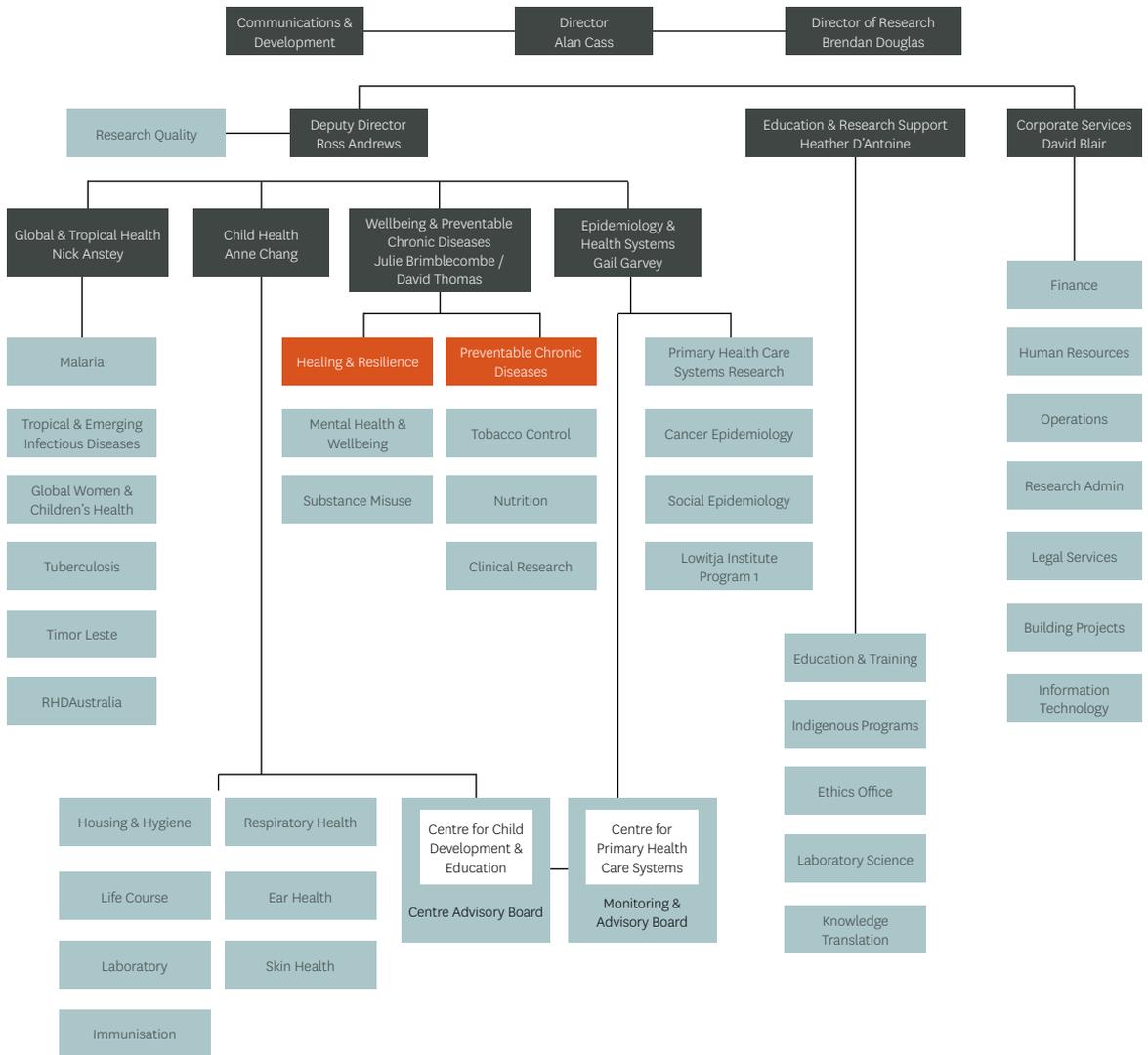
In 2014, Menzies researchers significantly grew their publications output with more than 260 publications, with 222 as peer-reviewed articles.

Graduate Diploma, Master and Doctor of Public Health graduates



In 2014, Menzies consolidated its recent growth in the Graduate Diploma, Master and Doctor of Public Health.

ORGANISATION STRUCTURE



New leadership groups unveiled

As part of the organisational review championed by Dr Richard and Kate Russell in mid-2014, Menzies have created new leadership groups which will enable the organisation to work more effectively across all of its offices and divisions. These groups are the Research Executive group and the OneMenzies Executive group.

The overarching aim of these groups is to encourage and enable people to work more efficiently and to work across Menzies, collaborating beyond their own areas of content expertise, to address strategic priorities for Menzies.



The Menzies Board at the February 2015 Board meeting

The Menzies School of Health Research (Menzies) is an independent body corporate under the control of a governing board. Menzies is also a controlled entity of Charles Darwin University (CDU).

Menzies is required to furnish an annual report and audited financial statements to an annual general meeting, with financial results consolidated within those of CDU.

Menzies financial statements are subject to audit by the Auditor-General of the Northern Territory.

BOARD



Mr Peter Plummer (Chair)
From November 2014



The Honourable Clare Martin
(Deputy Chair)
Acting Chair from May – November 2014



Professor Alan Cass



Mr Richard Ryan AO (Treasurer)



Professor David Celemajer AO



Mr Robert Wells



The Honourable Justice Hilary Hannam



Mr Rowan Johnston



Mr Jeffery Moffet
Until February 2014



Professor Sharon Bell



Mr Ken Davies



Professor Simon Maddocks
Chair until March 2014

FEATURED PUBLICATIONS

At the Menzies School of Health Research, our researchers are committed to conveying their research findings to a wide audience. In 2014, Menzies researchers published over 260 publications, including 222 peer-reviewed articles (these are preliminary data). This ensures our research is effectively translated, leading to better outcomes for Indigenous and non-Indigenous Australians, as well as disadvantaged populations in our global neighbourhood. Below is a selection of highlighted publications from 2014.

Smith-Vaughan HC, Chang AB, Sarovich DS, Marsh RL, Grimwood K, Leach AJ, Morris PS, Price EP (2014). Absence of an Important Vaccine and Diagnostic Target in Carriage- and Disease-Related Nontypeable Haemophilus influenzae. Clinical and Vaccine Immunology 21(2): 250-252.

Nontypeable Haemophilus influenzae (NTHi)-associated disease is a major health problem globally. Whole-genome sequence analysis identified the absence of hpd genes encoding Haemophilus protein D in 3 of 16 phylogenetically distinct NTHi isolates. This novel finding is of potential clinical significance, as protein D and hpd represent important NTHi vaccine antigen and diagnostic targets respectively.

Marsh RL, Thornton RB, Smith-Vaughan HC, Richmond P, Pizzutto SJ, Chang AB (2014). Detection of biofilm in bronchoalveolar lavage from children with non-cystic fibrosis bronchiectasis. Paediatric Pulmonology 10.1002/ppul.23031.

The presence of Pseudomonas aeruginosa biofilms in lower airway specimens from cystic fibrosis (CF) patients is well established. To date, biofilm has not been demonstrated in bronchoalveolar lavage (BAL) from people with non-CF bronchiectasis. The aim of this study was to determine (i) if biofilm was present in BAL from children with and without bronchiectasis, and (ii) if biofilm detection differed between sequentially collected BAL. Biofilm is present in BAL from children with non-CF bronchiectasis even when BAL-defined clinically important infection was absent.

McCallum GB, Versteegh LA, Morris PS, McKay CC, Jacobsen NJ, White AV, D'Antoine HA, Chang AB (2014). Mobile phones support adherence and retention of Indigenous participants in a randomised controlled trial: strategies and lessons learnt. BMC Public Health 14:622.

Ensuring adherence to treatment and retention is important in clinical trials, particularly in remote areas and minority groups. The use of mobile phones within an Indigenous-appropriate framework has been an effective strategy to support a clinical trial involving Australian Indigenous children in urban and remote Australia.

Leach AJ, Wigger C, Andrews RM, Chatfield M, Smith-Vaughan HC, Morris PS (2014). Otitis media in children vaccinated during consecutive 7-valent or 10-valent pneumococcal conjugate vaccination schedules. BMC Paediatrics 14:200.

In 2001 when 7-valent pneumococcal conjugate vaccine (PCV7) was introduced, almost all (90%) young Australian Indigenous children living in remote communities had some form of otitis media (OM), including 24% with tympanic membrane perforation (TMP). In late 2009, the Northern Territory childhood vaccination schedule replaced PCV7 with 10-valent pneumococcal Haemophilus influenzae protein D conjugate vaccine (PHiD-CV10). Around 90% of young children have some form of OM. Children vaccinated in with PHiD-CV10 had less suppurative OM than children vaccinated with PCV7.

McDonald EL, Bailie RS, Morris PS (2014). Participatory systems approach to health improvement in Australian Aboriginal children. Health Promotion International 10.1093/heapro/dau003.

The factors underlying poor child health in remote Australian Indigenous (Aboriginal and Torres Strait Islander) communities are complex. There is a lack of consistent and reliable information that allows: (i) the identification of priorities or areas of particular need at household and community levels; (ii) monitoring progress over time; and (iii) the assessment of the impact of interventions. Two tools have been developed and are now in use in the practice setting. One assesses social determinants of health at the community level, for example water supply, food supply. The second applies to individual households and assesses the social and environmental indicators that are recognised as placing children at greater risk of poor health and development outcomes.

Bowen AC, Tong SY, Andrews RM, O'Meara IM, McDonald MI, Chatfield MD, Currie BJ, Carapetis JR (2014). Short-course oral co-trimoxazole versus intramuscular benzathine benzylpenicillin for impetigo in a highly endemic region: an open-label, randomised, controlled, non-inferiority trial. The Lancet 384(9960): 2132-2140.

Impetigo affects more than 110 million children worldwide at any one time. The major burden of disease is in developing and tropical settings where topical antibiotics are impractical and lead to rapid emergence of antimicrobial resistance. Results for twice-daily co-trimoxazole for 3 days and once-daily co-trimoxazole for 5 days were similar. Short-course co-trimoxazole is a non-inferior, alternative treatment to benzathine benzylpenicillin for impetigo; it is palatable, pain-free, practical, and easily administered.

Podin Y, Sarovich DS, Price EP, Kaestli M, Mayo M, Hii K, Ngian H, Wong S, Wong I, Wong J, Mohan A, Ooi M, Fam T, Wong J, Tuanyok A, Keim P, Giffard PM, Currie BJ (2014). Burkholderia pseudomallei isolates from Sarawak, Malaysian Borneo, are predominantly susceptible to aminoglycosides and macrolides. Antimicrob Agents Chemother 58(1):162-166.

The finding that the melioidosis-causing bacteria in Malaysian Borneo commonly have a different profile of antibiotic sensitivity from usual has major implications for current attempts to map the global distribution and boundaries of melioidosis. Standard techniques for culturing the bacteria from both the environment and from patients may not be able to detect bacteria with the Borneo profile found in this study.

Yeo TW, Lampah DA, Kenangalem E, Tjitra E, Weinberg JB, Granger D, Price RN, Anstey NM (2014). Decreased Endothelial Nitric Oxide Bioavailability, Impaired Microvascular Function, and Increased Tissue Oxygen Consumption in Children with Falciparum Malaria. Journal of Infectious Disease, 210(10):1627-32.

As in our earlier studies in adults, the lining of blood vessels cannot produce enough protective nitric oxide and cannot compensate for blockage by malaria parasites in severe malaria in children, the age group in which most malaria deaths occur. Findings suggest agents to increase nitric oxide production may be suitable additional treatments in severe malaria in children as well as in adults.

Davis JS, McMillan M, Swaminathan A, Kelly JA, Piera KE, Baird RW, Currie BJ, Anstey NM (2014). A 16-year prospective study of community-onset bacteremic *Acinetobacter pneumonia*: low mortality with appropriate initial empirical antibiotic protocols. *Chest* 146(4): 1038-45.

Acinetobacter is a bacterium which is a common cause of hospital-acquired infections. In tropical and sub-tropical regions, it can also cause community-acquired infections, and these tend to be much more severe, with a mortality of around 60% in previous publications. This paper is the largest case series published of community-acquired *Acinetobacter* infections, and shows that, with appropriate hospital antibiotic protocols, mortality can be dramatically reduced.

Maple-Brown LJ, Ekinci EI, Hughes JT, Chatfield M, Lawton PD, Jones GR, Ellis AG, Sinha A, Cass A, Hoy WE, O'Dea K, Jerums G, MacIsaac RJ, investigators of the eGFR Study (2014). Performance of formulas for estimating Glomerular Filtration Rate in Indigenous Australians with and without Type 2 diabetes: The eGFR Study. *Diabetic Medicine*, 31(7):829-38.

This study reported that although the newer equation for estimating kidney function out-performed the previous equation overall; the newer equation had a greater bias in people with diabetes. This finding is of relevance to clinical practice as 75% of Indigenous Australians with end-stage kidney disease have diabetes.

Edwards L, Connors C, Whitbread C, Brown A, Oats J, Maple-Brown L, NT Diabetes in Pregnancy Partnership (2014). Improving health service delivery for women with diabetes in pregnancy in remote Australia: survey of care in the Northern Territory Diabetes in Pregnancy Partnership. *Australian and New Zealand Journal of Obstetrics*, 54(6):534-40.

This study reports results of a survey of 116 NT healthcare professionals providing clinical care for women with diabetes in pregnancy. Results were promising in that many healthcare professionals report following new guidelines in conducting early pregnancy screening for diabetes in pregnancy in high risk women. Challenges identified in healthcare delivery to a high risk population in remote Australia included those of high staff turnover and under-confidence of primary health care staff in their skills to manage diabetes in pregnancy.

Walker N, Johnston V, Glover M, Bullen C, Trenholme A, Chang AB, Morris P, Segan C, Brown N, Fenton D, Hawthorne E, Borland R, Von Blaramburg T, Westphal D, Thomas DP. The effect of a family-centred environmental tobacco smoke intervention to reduce respiratory illness in Indigenous infants: A randomised controlled trial. *Nicotine & Tobacco Research* 2015; 17: 48-57.

We found no effect of this family-centred intervention to protect Indigenous infants against environmental tobacco smoke. The intervention was delivered by community workers in Darwin and Auckland. Most parents reported smoke-free homes and cars, but children were still being exposed to tobacco smoke, so emphasis now needs to shift more towards encouraging parents to stop smoking completely to protect their infants.

Chondur R, Li SQ, Guthridge S, Lawton P (2014). Does relative remoteness affect chronic disease outcomes? Geographic variation in chronic disease mortality in Australia, 2002-2006. *Australian and New Zealand Journal of Public Health*. 38:117-21.

This study examined the variation of chronic disease mortality by remoteness areas of Australia, including states and territories. It showed that chronic disease mortality increases with increasing relative remoteness. The results highlight the importance and opportunity to redress poor health outcomes for rural and remote area populations. The study is limited by absence of reliable Indigenous identification in national death data.

Bailie R, Matthews V, Brands J, Schierhout G (2013). A systems-based partnership learning model for strengthening primary healthcare. *Implementation Science*, 8(1), 143.

Several previously described concepts have been drawn together and refined to build understanding of how Public Health Care systems can be strengthened through systematic and partnership-based approaches. This paper describes and discusses a model that has evolved over more than ten years in the development of a large scale CQI initiative in the Australian Indigenous PHC context.

Matthews V, Schierhout G, McBroom J, Connors C, Kennedy C, Kwedza R, Larkins S, Moore E, Thompson S, Scrimgeour D, Bailie R (2014). Duration of participation in continuous quality improvement: a key factor explaining improved delivery of Type 2 diabetes services. *BMC Health Services Research*, 19;14(1):578.

Variation in quality of care is affected by attributes of health centres and by patient level variables. Analysis of the variation in quality of Type 2 diabetes service delivery, as reflected in over 10,000 clinical audit records from 132 health centres over the period from 2005 to 2012 indicates that long-term engagement in CQI, encouraging regular patient attendance and improving the recording and coordination of patient care could all contribute to improvements in delivery of care for patients with diabetes.

Marriott R, Ferguson-Hill S (2014). Perinatal and infant mental health and wellbeing. In Dudgeon P, Milroy H, Walker R. (Eds.). *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*. (pp. 337-353). Canberra ACT: Commonwealth of Australia.

It is increasingly evident that inequalities exist for Aboriginal and Torres Strait Islander peoples in the recognition and management of perinatal mental health matters. This chapter and the accompanying case study promote reflective practice in order to develop an understanding of, and skills required to identify and manage perinatal mental health needs of parents, and communities, to best support families through this exciting stage of life.

SUMMARY FINANCIAL STATEMENTS

INCOME STATEMENT

MENZIES SCHOOL OF HEALTH RESEARCH FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	2014	2013
		\$	\$
Income from continuing operations			
Australian Government financial assistance	2	21,247,700	43,988,402
NT Government financial assistance	3	4,340,423	4,979,859
Fees and charges	4	2,931,803	2,449,308
Investment income	5	1,062,378	1,738,024
Consultancy and contract research	6	9,629,081	6,636,005
Other revenue	7	4,111,925	2,798,545
Total revenue from continuing operations		43,323,310	62,590,143
(Loss)/Gain on disposal of assets	8	(3,821,386)	11,310
Total income from continuing operations		39,501,924	62,601,453
Expenses from continuing operations			
Employee related expense	9	23,338,819	24,007,856
Depreciation and amortisation	10	638,343	292,079
Repairs and maintenance	11	717,858	762,041
Other expenses	12	13,208,605	13,861,044
Total expenses from continuing operations		37,903,625	38,923,020
Operating result from continuing operations		1,598,299	23,678,433
Operating result attributable to members		1,598,299	23,678,433

STATEMENT OF COMPREHENSIVE INCOME

MENZIES SCHOOL OF HEALTH RESEARCH FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	2014	2013
		\$	\$
Operating result for the year		1,598,299	23,678,433
(Loss)/Gain on revaluation of investments	22	(1,604)	3,983
Total Comprehensive Income		1,596,695	23,682,416
Total Comprehensive Income attributable to members		1,596,695	23,682,416

*To be read in conjunction with the Notes to the Financial Statements

STATEMENT OF FINANCIAL POSITION

MENZIES SCHOOL OF HEALTH RESEARCH FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	2014	2013
Assets			
Current Assets			
Cash and cash equivalents	13	28,974,181	33,091,302
Trade and other receivables	14	4,040,212	2,301,238
Other financial assets	15	1,208,822	1,174,658
Other non-financial assets	16	263,509	311,714
Total Current Assets		34,486,724	36,878,912
Non-Current Assets			
Property, plant and equipment	18	10,359,614	35,007,113
Intangible assets	17	15,866,301	-
Other financial assets	15	22,742	24,346
Total Non-Current Assets		26,248,657	35,031,458
Total Assets		60,735,381	71,910,370
Liabilities			
Current Liabilities			
Trade and other payables	19	5,163,856	2,038,395
Provisions	20	3,256,453	3,162,777
Other liabilities	21	263,600	353,166
Total Current Liabilities		8,683,909	5,554,339
Non-Current Liabilities			
Provisions	20	306,938	290,174
Total Non-Current Liabilities		306,938	290,174
Total Liabilities		8,990,847	5,844,513
Net Assets		51,744,534	66,065,857
Equity			
Reserves	22	6,814,786	9,992,080
Retained earnings	23	44,929,748	56,073,776
Total Equity		51,744,534	66,065,857

*To be read in conjunction with the Notes to the Financial Statements

STATEMENT OF CHANGES IN EQUITY

MENZIES SCHOOL OF HEALTH RESEARCH FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	Reserves (Note 22)	Retained Surplus (Note 23)	Total
		\$	\$	\$
Balance at 1 January 2013		10,988,211	31,395,231	42,383,442
Operating result for the year		-	23,678,433	23,678,433
Net Revaluation gain on investments	22	3,983	-	3,983
Total Comprehensive Income		10,992,194	55,073,663	66,065,857
Transfers	23	(1,000,113)	1,000,113	-
Balance at 31 December 2013		9,992,081	56,073,776	66,065,857
Balance at 1 January 2014		9,992,081	56,073,776	66,065,857
Operating result for the year	23.1	-	1,598,299	1,598,299
Net Revaluation loss on investments	22	(1,604)	-	(1,604)
Total Comprehensive Income		9,990,477	57,672,075	67,662,552
Distribution to Owners	23	-	(15,918,018)	(15,918,018)
Transfers	23	(3,175,690)	3,175,690	-
Balance at 31 December 2014		6,814,786	44,929,748	51,744,534

During 2014 Menzies completed the construction of two new buildings and an auditorium. In early 2015 the refurbishment of the existing John Mathews Building was completed. The majority of funding for these works was provided by the Federal Government, with contributions from the Northern Territory Government and Charles Darwin University. The total funding received was \$47m.

Accounting Standards require that the building funding received is recorded in the Menzies Income Statement in the year in which it was received. During construction, the costs are recorded as work in progress in the Menzies Balance Sheet. The impact of this is to inflate reported income and surplus in the financial year. The impact in 2013 and 2014 is summarised below.

Revenue	2014	2013	Surplus Analysis	2014	2013
Total revenue from continuing operations	43,323,310	62,590,143	Net Surplus	1,598,299	23,678,433
Less: Building Funds received	7,755,468	25,947,766	Represented by:		
Total revenue excluding building funds	35,567,842	36,642,377	Building funds received in the year	7,755,468	25,947,766
			Research Project Funds deficit	(1,246,583)	(1,156,319)
			Core Funds deficit	(450,857)	(832,244)
			Depreciation and amortisation	(638,343)	(292,079)
			(Loss)/Gain on disposal & revaluation of assets	(3,821,386)	11,310
				1,598,299	23,678,433

The Research Project Funds deficit indicates funding that was received and recorded as revenue in previous years, but was spent in the conduct of research during 2014.

The Core Funds deficit of \$450,587 relates to the shortfall in income over expenditure incurred in providing core (non-research) activities, as well as providing research support functions during 2014.

*To be read in conjunction with the Notes to the Financial Statements

STATEMENT OF CASH FLOWS

MENZIES SCHOOL OF HEALTH RESEARCH FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	2014	2013
		\$	\$
Cash flows from operating activities			
Australian Government grants		18,708,953	43,120,883
NT Government funding		4,395,982	5,002,461
Receipts from Student Fees		3,010,133	2,774,783
Interest received		1,062,378	1,738,024
Consultancies and Contract research		10,212,880	7,275,835
Other receipts		3,879,620	4,473,516
Payments to suppliers		(10,562,138)	(14,932,673)
Payments to employees		(23,228,380)	(23,720,106)
Net cash provided by operating activities	28	7,479,428	25,732,723
Cash flows from investing activities			
Proceeds from sale of plant and equipment		19,273	22,730
Payments for property, plant and equipment		(11,615,822)	(27,554,596)
Net cash outflow from investing activities		(11,596,549)	(27,531,866)
Net decrease in cash and cash equivalents		(4,117,121)	(1,799,143)
Cash and cash equivalents at the beginning of the year		33,091,302	34,890,444
Cash and cash equivalents at end of the year	13	28,974,181	33,091,302

The objective of these summary statements is to provide an overview of Menzies' financial affairs for the year ending 31 December 2014. Readers may wish to obtain a copy of the full audited financial statements available upon request.

*To be read in conjunction with the Notes to the Financial Statements

THANK YOU!

Menzies wishes to thank the many individuals and communities who granted permission to use photographic images of themselves and their children throughout this publication.



Lionel Gaykamangu, Sammy Cooper and Brayden Roberts at Bagot Community



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