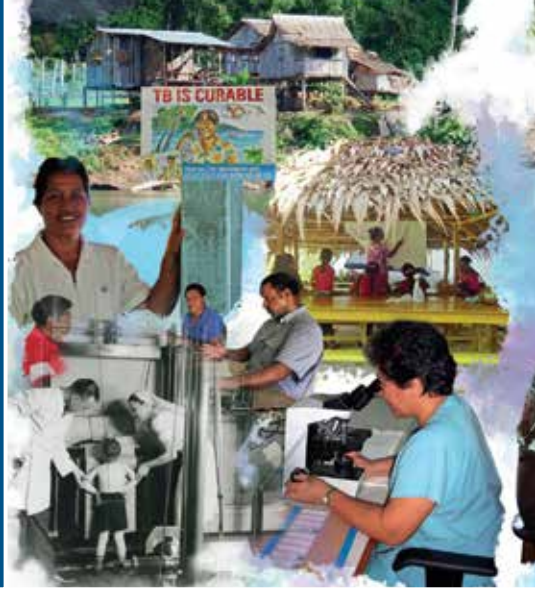
2021 ANNUAL REPORT

NO. 108



arc

australian respiratory council

prevention and cure of respiratory illness

Our Patrons

Her Excellency The Honourable Margaret Beazley AC QC
Governor of New South Wales
and Mr Dennis Wilson

The Australian Respiratory Council (ARC) confirms that in the pursuit of its mission and vision it has no tobacco exposure in regard to direct stocks or managed funds exposures held within its' Investment Portfolio.

The ARC welcomes feedback. Please send feedback or complaints to arc@thearc.org.au or write to the Executive Director, Australian Respiratory Council, PO Box 942 Broadway, NSW 2007.

The ARC confirms its commitment to full adherence to the ACFID Code of Conduct. Complaints relating to a breach of the ACFID Code can be made to the ACFID Code of Conduct Committee www.acfid.asn.au

ACFID MEMBER

The Australian Respiratory Council is a member of the Australian Council for International Development (ACFID) and is a signatory to the ACFID Code of Conduct. The Code requires members to meet high standards of corporate governance, public accountability and financial management.

The Union
International Union Against Tuberculosis and Lung Disease
Health solutions for the poor

The Australian Respiratory Council is a Heritage Member of the International Union Against Tuberculosis and Lung Disease (The Union). The mission of The Union is to bring innovation, expertise, solutions and support to address health challenges in low and middle income populations.

REGISTERED CHARITY
acnc.gov.au/charityregister

The Registered Charity Tick is a way for registered charities to easily show the public that they are registered with the Australian Charities and Not-for-profits Commission (ACNC), and it will also help members of the public find information about the charity on the Charity Register. The ACNC encourages members of the public to use the information on the Charity Register to make informed giving decisions.

arc australian respiratory council
prevention and cure of respiratory illness

Our Vision

A world free of tuberculosis and lung disease.

Our Mission

The mission of Australian Respiratory Council is to improve lung health for vulnerable communities in Australia and the Indo-Pacific through translation of research and evidence-based practice into sustainable health solutions.

Organisational Values

The values that ARC strives to reflect and embody include the following:

- Accountability to stakeholders
- Ethical and sustainable practice
- Credibility and professionalism
- Consultative and participatory practices
- Leadership in respiratory health
- Maintaining a development based focus
- Contributing to intellectual and professional development
- Implementing evidence based practices and activities that are community led, innovative, efficient, caring, compassionate and respectful.

ARC PRESIDENT'S REPORT 2021

As President, I am pleased to report on the activities and outcomes of the Australian Respiratory Council (ARC) in 2021. My report will highlight key events and the work undertaken by our organisation over the year.

To begin my report I would like to acknowledge the continued challenges and impact of the COVID-19 pandemic. Over the past two years, the pandemic has caused enormous health, social and economic impacts. Globally, countries and communities continue to be severely affected by the virus. Frontline health care and essential workers continue their work to save lives for the most vulnerable within communities, researchers and scientists remain focussed on developing effective vaccines and the implementation of global vaccination programs continues. In the context of the global tuberculosis (TB) epidemic, COVID-19 has impacted on recent progress towards global TB targets, with people in many countries unable to access diagnostic, care and treatment services. To support global TB elimination efforts ARC remains committed to fund research and project activities to achieve our mission of a world free of TB and lung disease.

Associate Professor Peter Gianoutsos OAM and Kerrie Shaw

I would like to congratulate Associate Professor Peter Gianoutsos on receiving a Medal of the Order of Australia (OAM) for his service to medicine as a respiratory physician in the January 2022 Australia Day Awards. The award recognises Associate Professor Gianoutsos' outstanding contribution to the field of respiratory health through the promotion of high-quality clinical care, education, research and advocacy for people affected by respiratory illness. Further information about the award can be read on page 10 of this report.

I am pleased to report that Kerrie Shaw was appointed as a Life Governor of ARC at the 2021 Annual General Meeting. This appointment is in recognition of Kerrie's significant contribution to ARC in her role as the Executive Officer for the period 2009 to 2013, through her work over the past eight years as a Director, Chair of ARC's Project Group and as a foundation member of ARC's Nurse Consultants Group. Further information about Kerrie's appointment can be read on page 10 of this report.

This year, I am pleased to report, Cathie McKenna became the first graduate of the Western Sydney University Master of Nursing (TB Management) course. On behalf of the Board of Directors I extend our congratulations to Cathie on her graduation.

The Master of Nursing (TB Management) course was developed as a collaboration between ARC, the National TB Program and the Western Sydney University School of Nursing and Midwifery to support capacity building within the Australian nursing workforce. The ARC Nurse Consultants Group continue to be involved in the course design and implementation. To support the course and students ARC awards annual scholarships. This year , scholarships were awarded to Cathie McKenna and Amy Peachy to undertake the TB specialist units within the course.

ARC's contribution to the course and scholarship program demonstrates our commitment to supporting capacity building for the Australian TB Program through the development of specialist nurses. Further information about the course and scholarship recipients is available on pages 20 and 21 of this report.

Over the past year ARC has worked in partnership with Professor Ben Marais, Professor Warwick Britton AO, the PEARL Project Team and the Kiribati Ministry of Health and Medical Services to implement the PEARL Project. The project is focussed on developing a pathway for the elimination of TB and leprosy in Kiribati, and the wider pacific more generally. The ARC is leading the component of the project relating to building workforce capacity through training and education. The work undertaken by ARC will build on exiting expertise and activities within the pacific to deliver in-country training and clinical mentoring in Kiribati and the Pacific. Further information on the project is available on page 24 of this report.

Acknowledgement and thanks

I would like to extend my personal thanks to ARC's Directors who continue to provide their time and expertise in a voluntary capacity to the organisation. The commitment and contribution of each Director is greatly valued and appreciated.

I would like to acknowledge the retirement of my friends and colleagues Associate Professor Peter Gianoutsos and Ian Ramsay from the Board of Directors in March 2021 and January 2022 respectively. On behalf of the Directors and staff of ARC, I wish both Peter and Ian well for the future and

thank them for their outstanding service and wise counsel over many years on operational and governance matters. Your work and contribution to the organisation has been highly valued.

Ian Ramsay

In 2021, the Finance Team, led by Chris Turner and supported by Robyn Johnson and the staff of the ARC worked diligently to ensure that ARC was positioned to continue funding operational, research and project activities. Further information on ARC's financial statements are detailed on pages 35 to 54 of the annual report.

On behalf of Greg Fox, I would like to thank ARC's Research Committee for their support and time in assisting ARC to achieve our research goals. The past year has shown that research continues to be fundamental in the fight against COVID 19, tuberculosis and lung disease. We are pleased to be able to be able to continue to support research initiatives and innovation. Further information on the grants awarded this year to ACTnet and through the ARC Research Support Grant Scheme are included in the annual report on pages 12 to 19.

I would like to acknowledge the ongoing relationship ARC has with the Woolcock Institute of Respiratory Medicine and thank Robert Estcourt AM and Professor Carol Armour AM for their shared vision and continued collaboration between our organisations.

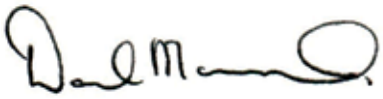
In 2021, ARC continued to work with global and local partners to fund and deliver projects, provide training and technical support for health care workers, and promote respiratory health and the elimination of TB. Partner agencies include: The International Union Against TB and Lung Disease (The Union), the US Centers for Disease Control and Prevention, the Pacific Island Health Officers Association, the US Southeastern National TB Center, Sydney University and the Clubs NSW Grant Scheme. I would like to acknowledge the grants received from a number of these agencies this year to support and contribute to our project activities. Further information on ARC's project activities and funding are included in the annual report on pages 22 to 27.

I would like to thank the ARC Nurse Consultants Group (Pam Banner, Amanda Christensen, Chris Lowbridge and Kerrie Shaw) for their ongoing contribution to the project work and activities that ARC supports and delivers within the region. Your expertise and continued commitment to ARC's projects and partners is greatly valued.

My thanks and those of the Board are extended to David Conroy and Patryk August, from Conroy Audit & Advisory for their expertise and assistance in meeting our annual auditing responsibilities. I would also like to thank our investment adviser Daniel Meech from Koda Capital for his financial guidance over the past year.

I extend my sincere thanks and gratitude to ARC's loyal and generous donors who continue each year to support our work and activities that focus on the promotion of respiratory health and the elimination of tuberculosis within Australia and the Indo-Pacific Region. I am pleased to be able to share with you through this report, how your donations contribute to the research and project work ARC undertakes and supports.

Finally, to Amanda Christensen our Executive Director, thank you for your work and contribution to the success of the organisation again this year.



David Macintosh AM
President

GOVERNANCE

BOARD OF DIRECTORS

AMANDA CHRISTENSEN AM

Registered Nurse

Appointed as the ARC Executive Director from April 2008 to May 2009 and April 2013 – Present. NSW Tuberculosis (TB) Program Manager 1997- 2013; various positions in public health for over twenty-five years including: clinical nurse consultant in public health Corrections Health Service and TB prevention and control services for the NSW Ministry of Health. Member of the NSW Ministry of Health TB Advisory Committee 1997 to Present. Member of the Commonwealth Department of Health National TB Advisory Committee 1997 – 2013. Appointed to the Board of ARC in 2001. Elected as a Life Governor of ARC in 2011. Treasurer & Executive Committee Member for the International Union Against TB and Lung Disease (The Union) Asia Pacific Region 2015 to Present. Programme Secretary of The Union Nursing and Allied Health Professionals Sub–Section 2017 – 2019. Chair of the Nurses and Allied Health Professionals Sub-Section of The Union 2019 to Present. Appointed a Member of the Order of Australia June 2019 "for service to community health particularly to respiratory diseases".

PROFESSOR GREG FOX

PhD MIPH FRACP MB BS BSc(Med) GAICD

Professor of Respiratory Medicine at Sydney University and Respiratory Physician at Royal Prince Alfred Hospital, Sydney. Area Director of Tuberculosis Services, Sydney Local Health District. Research Leader for the Woolcock Institute of Medical Research, and jointly leads the Woolcock's Vietnam research team. Professor Fox heads a number of NHMRC-funded clinical trials and translational research studies relating to tuberculosis, lung disease and antimicrobial resistance. His research aims to develop new approaches to TB control, COPD, asthma and tobacco control in resource-limited settings. Appointed to the Board of ARC in 2017.

CLINICAL ASSOCIATE PROFESSOR PETER GIANOUTSOS

MB, ChB (Univ of Otago), FRACP, FCCP

Appointed Emeritus Consultant Physician RPAH, 1 January 2014; Senior Consultant Thoracic Physician (VMO) Dept of Thoracic Medicine RPAH 1971-2013; Member TSANZ, ATS, ACCP, BTS, ALF, MLS (NSW); Chairman RPA Medical Board 1989-1991; Chairman of the NSW Branch of the Royal Australasian College of Physicians 1978 – 1982; Member of Medical Board of NSW 1978-1982; Chairman UMPS Medical Expert Panel 2002 – 2007; Member of Board of Directors UMP 2000-2003. Appointed to the Board of ARC in 2006. Vice President 2008 - Present. Elected Life Governor of ARC in 2012. Retired from ARC's Board of Directors 1 March, 2021.

ROBYN JOHNSON

GAICD

Robyn Johnson has had a prominent career in the tourism and event sector in senior management roles. She has worked extensively in the not-for-profit sector and has a background in the development and implementation of business growth strategies and establishing start-ups or re-aligning existing organisations and programs to achieve successful outcomes. Robyn has developed and designed accredited education and training programs to upskill the workforce and she has commissioned research into industry skills to identify and measure skills shortages and trends to advocate to government on behalf of the meetings and events sector. Robyn is currently working with government and industry on new regional programs in response to impact of COVID-19 and bushfires on the visitor economy. She is a graduate of the Australian Institute of Company Directors. Appointed to the Board of ARC in 2012.

DAVID MACINTOSH AM

BBS (UTS), FCA

Member of the Order of Australia 2011, awarded National Medal for Service 2014, Chairman, The Macintosh Foundation, Macintosh Chair of Paediatric Respiratory Medicine - Endowed Chair in perpetuity; Founder since 2013 and Benefactor since 2007, Royal Alexandra Hospital for Children - The Children's Hospital at Westmead; Director, Woolcock Institute of Medical Research 2000-2011, re-appointed 2021 to Present; Director, The Australian Lung Foundation 1994-2013; Governor, St Vincent's Hospital, Curran Foundation; Life Governor, Melanoma Institute of Australia; Deputy Chairman, Ainsworth Charitable Foundation 2016 – Present; 35 years of Senior Management and Director level in the Transport and Construction Industries in Australia and Europe; Actively involved in the Surf Life Saving movement for over 50 years; Life Member, Long Reef Surf Life Saving Club Inc.; Life Member - Collaroy Surf Life Saving Club Inc.; Life Member – City Tattersalls Club ; Director, Vice President - United

Nations Australia Association (NSW) 2017 – 2019; Appointed Australia's United Nations Goodwill Ambassador Oceans – Life Under Water SDG-14 and The Pacific, 2018 – 2019 and Principal Advisor, Marine Life, and Oceans and The Pacific; Awarded Honorary Associate Life Membership TSANZ 2020; Appointed to the Board of ARC in 1997; President of ARC 2000-2013; 2019 - Present. Vice President of ARC 2013 - 2019; Elected Life Governor of ARC in 2010.

IAN W. RAMSAY

LL.B (Syd.)

Solicitor, Supreme Court of NSW; General Manager and Board Director, WorkCover Authority of NSW 1988-1997; Chairman, Dust Disease Board of NSW 1988-1997; Member, National Occupational Health and Safety Commission 1988-1997; Chairman, Sporting Injuries Committee 1988-1997; Member, Joint Coal Board Health and Safety Trust 1993-1997. Appointed to the Board of ARC in November 2008 - 2011. Chair, of Centenary Celebration Committee. Reappointed to the Board of ARC in 2012 – Present.

JEAN MARIE SANTOS

BSCS IT

Bachelor of Science in Computer Science major in Information Technology with a career spanning over 20 years of experience, successfully delivering business improvement, business transformation, infrastructure and application projects globally. Presently employed at Lendlease as Product Owner holding accountability over new innovations & leveraging technologies to deliver business value. Jean's acquired skills in corporate social responsibility, environmental awareness and philanthropy has earned her the positions as Director of The Australian Respiratory Council 2019-Present, Non-Executive Director for the United Nations Association of Australia (UNAA) NSW Division 2018-Present, Director of the UNAA National Peace Program 2013-2018 and UN Women Australia NSW Chapter Executive Committee 2012-2014.

KERRIE SHAW

Registered Nurse

TB Coordinator South Eastern Sydney Local Health District (Northern Sector) 2013 - Present; Executive Officer Australian Respiratory Council 2009-2013; Manager Department of Respiratory Medicine, TB Coordinator, TB and Respiratory Clinical Nurse Consultant 1998-2009; Asthma Coordinator and TB Clinical Nurse Specialist South Eastern Sydney and Illawarra Area Health Service (Southern Sector) 1992-1998; Chair and Program Secretary, Nurses and Allied Health Subsection International Union Against TB and Lung Disease 2009-2013; Appointed to the National Asthma Expert Advisory Group 2006; Appointed to the Board Asthma Educators Association (NSW) 1992 and Board Australian Asthma and Respiratory Educators Association 2006, Life Member 2011; Appointed to Board of ARC in 2013.

CHRISTPOHER TURNER

BCom Dip FS FPA

Principal Financial Planner for 'Turner Wealth Pty Ltd' (Corporate Authorised Representative (No.1241514) of Capstone Financial Planning Pty Ltd. ABN 24 093 733 969. Australian Financial Services License No.223135. December 2019 – to Current;

Principal Financial Planner for 'Turner Wealth Pty Ltd' (Corporate Authorised Representative of Commonwealth Financial Planning Limited) May 2016 – December 2019; Senior Financial Planner - Relationship Managed Clients (Representative of Commonwealth Financial Planning Limited) Oct 2010 – May 2016; Branch Financial Planner (Inner and Mid-West suburbs of Sydney) (Representative of Commonwealth Financial Planning Limited) May 2007 – October 2010; Business Analyst / Project Manager (CMLA) (Commonwealth Bank of Australia) January 2004 – May 2007, Diploma of Financial Planning 2006; Manager of Operations/Projects, Resource Planning (Commonwealth Bank of Australia) September 2002 – January 2004; Service Consultant / Resource Analyst (Commonwealth Bank of Australia) August 1999 – September 2002; Senior Sales & Marketing Manager (Sarran Pty Ltd) 1994 – 1995; B. Commerce Newcastle University 1990 – 1993. Appointed to Board of ARC as Finance Director in May 2017.

RESEARCH COMMITTEE

Professor Greg Fox (Chair of the Committee)

NHMRC Career Development Fellow and Professor in Respiratory Medicine at Sydney University and Royal Prince Alfred Hospital, Sydney. Area Director of Tuberculosis Services, Sydney Local Health District.

Professor Carol Armour AM

Executive Director Woolcock Institute of Medical Research and Respiratory Researcher.

Associate Professor Justin Denholm

Medical Director, Victorian Tuberculosis Program, Melbourne Health; and Principal Research Fellow, Department of Microbiology and Immunology, University of Melbourne.

Associate Professor Claudia Dobler

Conjoint Associate Professor University of NSW, Associate Professor Bond University, Consultant Respiratory Physician NSW Health

Professor Peter Gibson

Conjoint Professor, School of Medicine and Public Health University of Newcastle

Professor Emma McBryde

Professorial Research Fellow - Infectious Disease and Epidemiology Australian Institute of Tropical Health & Medicine, James Cook University

David Macintosh AM

ARC President

PRESIDENTS AND LIFE GOVERNORS

The National Association for the Prevention and Cure of Consumption

Year	President
1913 - 1917	Sir Phillip Sydney Jones
1918 - 1922	Dr Frederick Sobieski Vladimir Zlotkowski
1922 - 1928	Hon. George Frederick Earp MLC
1929 - 1930	Thomas Ernest Rofe

Anti-Tuberculosis Association of NSW (from 1931)

Year	President
1931 - 1934	Thomas Ernest Rofe
1935 - 1941	William Grazebrook Layton CBE
1941 - 1942	Phillip Lazarus JP
1942 - 1944	Sir Ernest Thomas Fisk
1944 - 1953	Zade Lazarus
1954 - 1955	Hon. Justice Edward Parnell Kinsella CBE
1955 - 1959	Ebenezer Richard Bagery-Parker
1959 - 1960	Harold Bruce Gibson
1960 - 1967	Hon. Justice Edward Parnell Kinsella CBE
1967 - 1972	Professor Noel Desmond Martin AM

Community Health and Anti - Tuberculosis Association (from 1973)

Year	President
1973 - 1994	Professor Noel Desmond Martin AM
1995 - 1999	Professor Ann J Woolcock AO
1999 - 2000	Dr Gregory Joseph Stewart
2000 - 2001	David Hugh Macintosh AM

Tuberculosis Australia (from 2001)

Year	President
2001 - 2006	David Hugh Macintosh AM

Australian Respiratory Council (from 2006)

Year	President
2006 - 2013	David Hugh Macintosh AM
2013 - 2019	Emeritus Professor J Paul Seale AM
2019 - Present	David Hugh Macintosh AM

Year	Life Governors
1932	Honourable George Frederick Earp MLC, CBE (C)
1934	Sir John Sulman
1934	Sir Kelso King and Lady King
1966	Sir Harry Wyatt Wunderly
1996	Dr Keith Wellington Hills Harris AM
2003	Professor Noel Desmond Martin AM
2003	Clinical Professor Iven Young AM
2003	Emeritus Professor Ian W Webster AO
2007	Emeritus Professor Charles Baldwin Kerr AM
2007	Emeritus Professor J Paul Seale AM
2009	David Hugh Macintosh AM
2011	Amanda Christensen AM
2011	Professor Gavin Frost
2012	Robert Horsell OAM
2012	Clinical Associate Professor Peter Gianoutsos
2021	Kerrie Shaw

ACKNOWLEDGING THE CONTRIBUTION OF ARC'S DIRECTORS

ASSOCIATE PROFESSOR PETER GIANOUTSOS AWARDED A MEDAL OF THE ORDER OF AUSTRALIA (OAM) IN THE GENERAL DIVISION

Associate Professor Peter Gianoutsos OAM

In the January 2022 Australia Day Awards, Associate Professor Peter Gianoutsos was awarded a Medal of the Order of Australia (OAM) for his service to medicine as a respiratory physician. The Australian Respiratory Council (ARC) congratulates Peter Gianoutsos on this award recognising his outstanding contribution to the field of respiratory health through the promotion of high-quality clinical care, education, research and advocacy for people affected by respiratory illness.

During a career that has spanned more than five decades, Peter Gianoutsos has been actively involved as a Consultant Physician and Respiratory Physician in the Department of Respiratory and Sleep Medicine, at Royal Prince Alfred Hospital, and was appointed a Clinical Associate Professor at the University of Sydney in 2006.

Peter Gianoutsos has been engaged in and served a number of national respiratory and medical organisations: he was a founding member of the Australian Lung Foundation and held leadership roles in the ARC; the Thoracic Society of Australia and New Zealand, the Royal Australasian College of Physicians and the United Medical Protection Society.

Peter Gianoutsos was appointed to the Board of the ARC in 2006 and elected Vice President soon after, in 2008. Peter served as a Director of ARC for 15 years from 2006 to 2021. Through his ongoing participation on ARC's Board of Directors and Finance Committee, Peter continued his commitment to respiratory health, in the service of ARC's mission. In recognition of his contribution to the organisation, Peter was appointed as a Life Governor of ARC in 2012.

Further information on Associate Professor Peter Gianoutsos' citation can be found at the following link: https://www.gg.gov.au/sites/default/files/2022-01/ad22_media_notes_-_oam_-_f-l.pdf

KERRIE SHAW APPOINTED AS A LIFE GOVERNOR OF ARC

In recognition of service to ARC, Kerrie Shaw was appointed as a Life Governor of ARC at the Annual General Meeting, held in 2021. Kerrie has been involved with the work of the ARC from 2009 to 2013 as the Executive Office of the organisation and through her role as a Director of ARC and Chair of ARC's Project Group since her appointment in 2013.

David Macintosh AM and Kerrie Shaw

As the Executive Officer of ARC, Kerrie implemented a number of activities that contribute to the ongoing success of the organisation today. These initiatives include undertaking a review of ARC's fundraising activities, expanding ARC's training programs and project portfolio within the Indo-Pacific Region, building on relationships with key partners and stakeholders to increase the impact and reach of the organisation and raising awareness through advocacy activities. Kerrie through her work with ARC continues to make a significant contribution to the elimination of TB and the promotion of respiratory health.

Kerrie is seen as an innovative nursing leader and has contributed significantly to the development of her nursing colleagues and peers. Kerrie was a member of the group that developed and implemented the Core Competencies for Asthma Education in Australia. Kerrie also led the development of the national clinical skill sets and competency standards for Australian TB Nurses and has contributed to the development of policy and practice guidelines that underpin the work of her nursing colleagues.

Kerrie has contributed to the development of her nursing colleagues and peers through developing and delivering training, education and capacity building activities for nurses and outreach workers in the fields of asthma and TB within Australia and the Indo-Pacific Region. Over the past two years, Kerrie has led the development and implementation of the Western Sydney University School of Nursing and Midwifery Master of Nursing (TB Management) course. This course, the first of its kind internationally is an important contribution to workforce development globally and an important legacy for Kerrie and ARC.

For further information on Kerrie's work please see the following link to her Life Governor citation on ARC's website: https://www.thearc.org.au/about-arc/governors/

SUPPORTERS OF ARC

BREATH OF LIFE

A Bequest to ARC provides a way to continue a lifetime of generous giving

One of the most important ways that ARC's loyal donors are helping ARC's work is by including a bequest to ARC in their Will. Bequests left to ARC are made from people from all walks of life, not just the wealthy. Even a modest gift can be life-changing for someone in need. When you choose to leave a gift in your Will, it benefits the whole community.

Your Will allows you to express support for your fundamental values and can have an impact on the health and well being of future generations – not only by the inheritance you leave to your family and friends but also the gift you can leave for the well-being of the community through ARC. After you have made provision for your family and friends in your Will, you may like to consider the ARC as a worthy recipient.

Such a gift to ARC would ensure that your name would always be remembered. By informing us of your intended bequest, ARC will be able to acknowledge you as a member of The Breath of Life group. The Breath of Life is a group of people who have told us that they plan to leave at least part of their estate to ARC. Through the Breath of Life group ARC can recognise the generosity and honour the contribution of its members. There is no obligation to becoming a member of The Breath of Life other than letting us know that you intend leaving a bequest in your Will.

A bequest can be of any size and can be given as cash, property or shares. All gifts large or small are important and greatly appreciated. All gifts make a difference.

Whatever amount you bequeath to ARC, be assured that it will be an enduring tribute to your generosity and concern for the welfare of your fellow man. Your bequest ensures the personal link and "journey' you have had with ARC over many years continues into the future.

Your Bequest will allow ARC to continue to offer the quality of service you have come to expect from us - reducing the incidence and impact of tuberculosis and respiratory disease in Australia and the Indo-Pacific Region.

If you would like to consider leaving a Bequest to ARC, please contact us for a copy of our Bequest booklet, "Your Security, Your Future".

UNDERSTANDING THE TRUE BURDEN OF PAEDIATRIC RESPIRATORY SYNCYTIAL VIRUS (RSV) IN ORDER TO OPTIMISE PREVENTION PROGRAMS

Principal Investigator:

Dr Hannah C Moore, Telethon Kids Institute, University of Western Australia, Western Australia

Background

Respiratory syncytial virus (RSV) globally causes 3.2 million hospitalisations1 and ~650-800 hospitalisations in young children in Western Australia (WA) annually. However, the true burden is likely to be much greater as RSV is not a notifiable disease, meaning testing is not routinely performed. There is no licensed RSV vaccine, but >30 prevention products are currently under development. To assist with future prevention policy, we need to better understand RSV epidemiology. WA is one of a limited number of jurisdictions worldwide with established record linkage systems including access to perinatal, hospital and laboratory datasets. Our group has previously estimated that only 10% of children aged <17 years were ever tested for RSV and variable testing trends were seen between age groups and year.2 This project was established to estimate the true burden of RSV, enhance dynamic transmission models for RSV that we have previously established3,4 and gain insights into the contemporary burden of RSV.

Project Aims

The aims of the project were a) estimate the under-ascertainment fraction of RSV infection using our pre-existing record linked dataset from 2000 to 2012, b) assess the impact of an infant vaccination strategy from population-wide RSV transmission models and c) obtain approvals for data linkage and extraction.

Synopsis of Major Findings

- RSV-positivity was more common in children that were younger (aged <3 months), non-Aboriginal, male, had mothers with average SES, lived in a metropolitan residence, had a hospital admission in the Australian winter months between June and August and had a primary or secondary diagnosis of acute bronchiolitis.
- The 10-fold cross-validated model showed accurate and robust performance of the prediction model (AUROC=0.87, 95% CI 0.86 to 0.88), reflecting excellent ability of the model to predict RSV-positivity. The sensitivity of the final model was 58.4% (95% CI 57.3-59.6%) and specificity was 92.2% (95% CI 91.8-92.5%). The model had a positive predictive value of 68.6% (95% CI 67.5-69.7%) and a negative predicted value of 88.3% (95% CI 87.9-88.7%).
- We estimated that the predicted RSV-related hospitalisation rates were 43.7/1000 child-years (95% CI 42.1-45.4) for <3 months, 27.9/1000 child-years (95% CI 26.8-29.0) for 3-6 months and 12.8/1000 child-years (95% CI 12.3-13.4) for 6-11 months, respectively.
- A data linkage platform has been established (in-principal support granted by relevant data custodians and is currently under ethical review) to provide contemporary population-based data for RSV to refine our RSV prediction models.
- The dynamic model structure has been refined and coded in R software using the parameters from our predicted RSV model and current literature on RSV vaccine trials. This work will be ongoing.

Outputs

Conferences

1. WA 2020 Child Health Symposium; 3-5 Nov 2020, Perth Children's Hospital, Western Australia.
   Speaker: Amanuel Gebremedhin. Title: "Developing a prediction model to estimate the true burden of RSV in hospitalised children in Western Australia"

2. World Congress of Epidemiology; 3-6 September 2021, Melbourne, Australia. Speaker: Amanuel Gebremedhin. Title: "Estimating the true burden of RSV in hospitalized children in Western Australia (WA): Predictive modelling study" *(Abstract submitted)*

Publications acknowledging this ARC funding

1. Gebremedhin A, Hogan AB, Blyth CC, Glass K, Moore HC. Developing a prediction model to estimate the true burden of RSV in hospitalised children in Western Australia. Submitted to Scientific Reports 3 April 2021 *(Under peer review)*

Submitted grant applications resulting from this work

1. **WA Child Research Fund.** "Modelling the future impact of RSV prevention strategies in at-risk popualtions. Co-investigators: Dr HC Moore, Dr AB Hogan, Mr A Gebremedhin, Prof P Richmond, A/Prof CC Blyth, Dr A Levy, Dr D Foley, Ms A Bates A, Prof T Strunk $249,977.14 (2021-2023). *Under review.*

2. **NHMRC Investigator (Emerging Leader 2) Fellowship**. "Data driven approaches to vaccine development, implementation, and evaluation. Chief Investigator: Dr H Moore. $1,554,485 (2022-2026). *Under review.*

3. **Stan Perron Charitable Foundation Award – People Support.** "Data driven approaches to vaccine implementation and evaluation for respiratory infections in Western Australian children". Chief Investigator: Dr H Moore. $984,790 (2022-2026). *Under review.*

References

1. Shi T, McAllister DA, O'Brien KL, et al. Global, regional, and national disease burden estimates of acute lower respiratory infections due to respiratory syncytial virus in young children in 2015: a systematic review and modelling study. *Lancet*. 2017;390(10098):946-958.

2. Fathima P, Blyth CC, Lehmann D, et al. The impact of pneumococcal vaccination on bacterial and viral pneumonia in Western Australian children: record linkage cohort study of 469,589 births (1996-2012). *Clin Infect Dis*. 2018;66(7):1075-1085.

3. Moore HC, Jacoby P, Hogan AB, Blyth CC, Mercer GN. Modelling the seasonal epidemics of respiratory syncytial virus in young children. *PLoS One*. 2014;9(6):e100422.

4. Hogan AB, Campbell PT, Blyth CC, et al. Potential impact of a maternal vaccine for RSV: A mathematical modelling study. *Vaccine*. 2017;35(45):6172-6179.

Dr Hannah Moore and Amanuel Gebremedhin

THE ROLE OF THE PLACENTA IN DETERMINING THE POST-NATAL EFFECTS OF IN UTERO EXPOSURE TO BUSHFIRE SMOKE

Principal investigator:

Professor Graeme Zosky, Universty of Tasmaina

With climate change driving an increase in the frequency and severity of bushfire events in Australia, the health impacts of poor air quality are only going to become more prominent in our landscape. Unfortunately, there is a rapidly growing body of literature showing the adverse impacts of early-life exposure to air pollution on post-natal health. Epidemiological and experimental studies have shown a link between in utero exposure to short-term, high intensity air pollution events and increased post-natal contact with health services, impaired foetal growth, prescriptions for antibiotics and respiratory conditions. However, there is a significant gap in knowledge as we do not understand the mechanism(s) driving these associations.

Based on our preliminary studies, and work done by others, there is evidence to suggest that the placenta is a key mediator of the health effects induced by in utero exposure to short-term, high intensity air pollution. The aim of our Australian Respiratory Council funded study was to examine the association exposure to air pollution and the placental response from children born in Tasmania after the 2018/2019 fire season. To achieve this, our team (Fig 1), made use of placentas collected as part of another study led be Associate Professor Brad Sutherland aimed at understanding the link between foetal growth restriction and placental function. This unique resource allowed us to, not only assess the effect of air pollution on the placentas, but also the modifying effect of growth restriction which is also linked to in utero exposure to air pollution.

We had access to 75 placental samples including 57 from pregnancies carried to term with normal growth and 18 from term pregnancies with evidence of foetal growth restriction (FGR). Samples of placental tissue were processed for proteomic analysis. This specialised technique allows us to assess the expression of many different proteins simultaneously. Using this approach, we were able to accurately quantify more than 3600 proteins in the placental tissue. In an initial analysis of this extensive dataset, we compared the protein expression signature in the FGR placental tissue with the normal growth placental tissue (Fig

***Fig 1**. Research team. (L to R) A/Prof Brad Sutherland, Dr Yong Song, Dr Jo-Maree Courtney, Prof Graeme Zosky (Prof Fay Johnston – not pictured).*

2). We were able to identify 44 proteins with higher expression (up-regulated) in the FGR placental tissue and 80 proteins that had lower expression (down-regulated) compared to the normal growth placental tissue. We then used an analytical approach that allows us to identify common pathways (i.e. collections of proteins) that were dysregulated in the FGR placental tissue. Interestingly, we found altered expression of a number of proteins linked to the structural integrity of the placenta, suggesting this may be an important mechanism for driving FGR.

Having established that our samples are high quality and that we can detect differences in expression, we have sent further samples to the Australian Genome Research Facility for additional analyses to assess variations in gene expression (using a technique called RNAseq that can simultaneously assess the expression of >25000 genes).

While we await these results, we are in the process of generating the data required to determine the association between exposure to air pollution in utero and the molecular signature (proteins and genes) in the placentas. We will achieve this using the Base Line Air Network of EPA Tasmania (BLANkET) monitoring stations which provide a rich historical dataset for air quality for the Tasmanian population. We anticipate having these data ready for analysis by the end of 2022. This will be the first study worldwide to directly link exposure to air pollution with placenta responses using human tissue. It will provide a unique insight into the possible mechanisms underlying the adverse health effects of early life exposure to poor air quality. This work would not have been possible without the generous support of the Australian Respiratory Council.

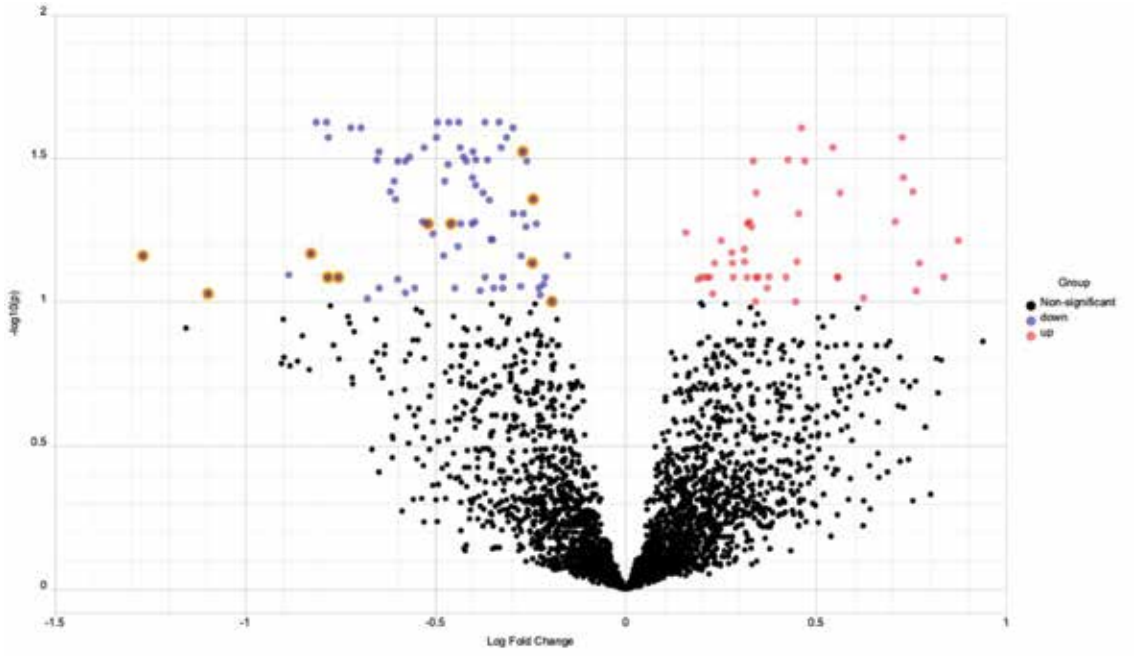


***Fig 2**. Protein expression. Plot showing the expression of >3600 in the tissue from placentas from children born at term with foetal growth restriction (FGR) compared to children born at term with normal growth. We identified 44 proteins that had higher expression (pink dots – top right) and 80 that had lower expression (blue dots – top left).*

IDENTIFYING AGE, SEX AND VITAMIN D MODIFIED IMMUNE CORRELATES OF TB RISK

Principal investigators:

Dr Anna Coussens and Dr Dylan Sheerin, Infectious Diseases and Immune Defence division, Walter and Eliza Hall Institute of Medical Research

Interim Progress Report

Our hypothesis is that unique immune cell phenotypes which develop during puberty increase TB risk in certain individuals, and that vitamin D can boost TB immunity by modifying circulating immune cell functions and frequencies prior to, and following, *Mtb* infection.

Background

One of the most intriguing immunological phenomena of human tuberculosis (TB), and the basis of our research, is that even in high-burden settings, children aged 5-10 rarely develop symptomatic TB, despite high rates of infection (Figure 1). Epidemiological studies in Cape Town, South Africa, which nears the highest global TB incidence, indicates that the first exposure to *Mycobacterium tuberculosis (Mtb)* often occurs during childhood; 28% of children 5-9 yrs, 42% of adolescents 10-14 yrs, and 51% of adolescents 15-17 yrs have *Mtb*-antigen immune sensitization, indicating mycobacterial exposure. Yet, despite extensive community mixing and continual exposure to *Mtb*, those between 5-14 yrs have the lowest risk of developing TB. This risk dramatically rises from age 15, following which males 20-35 yrs share the highest case burden.

We know that the function and quantity of circulating immune cells during life can be dramatically influenced by fluctuations in sex hormones. Changes in the concentration of these circulating metabolites therefore have the potential to profoundly affect TB immunity through gene transcription factor modulation (Figure 1). Despite the potential for sex hormones to disrupt protective immune cell homeostasis required for *Mtb* control, the specific functional subsets of cells which arise during puberty and thereby increase TB risk are not yet defined.

In addition to sex hormones, the active metabolite of vitamin D is a micronutrient hormone. It similarly functions as a transcription factor ligand when binding the vitamin D receptor, regulating expression of > 900 genes. We know that patterns of epigenetic DNA methylation in the vitamin D receptor gene promoter associates with TB susceptibility. For over a decade, Dr Coussens' team has defined vitamin D to be dual antimicrobial and anti-inflammatory, demonstrating its epigenetic and transcriptional modification of circulating human immune cells.

Project Aims

Aim 1. Phenotype longitudinal changes in circulating immune cell function in children during pubertal transition and compare these to immune cells identified in adult TB contacts who do and do not progress to TB disease

Aim 2. Characterise longitudinal sex hormone and vitamin D fluctuations in children during pubertal transition and map these patterns to immune cell dynamics we identify to be associated with TB risk

Progress

To perform this research we are using samples we collected from two clinical cohorts Dr Coussens is conducting in collaboration with researchers at the University of Cape Town, South Africa and Queen Mary University of London, UK. In the ViDiKids trial (NCT02880982), we have randomized 1683 primary school children (6-11yrs at enrollment) to receive 10,000 IU oral vitamin D_3 or placebo, weekly for 3 yrs. In this trial we are testing whether vitamin D will prevent *Mtb* infection, assessed by QuantiFERON positivity (QFT+) [IFN>0.35 IU/ml], and a secondary endpoint of reduced QFT+ conversion with IFN > 4 IU/ml. In a subset of 200 enrolled children we have fixed and stored ex vivo whole blood and plasma annually. We will use these for longitudinal evaluation of immune cell and sex hormone changes, which we will investigate in Aims 1 & 2. We will compare changes in immune cell phenotypes between those who do or do not become *Mtb* infected and determine if vitamin D supplementation modifies the abundance of phenotypes of cells that may be associated with protection from infection.

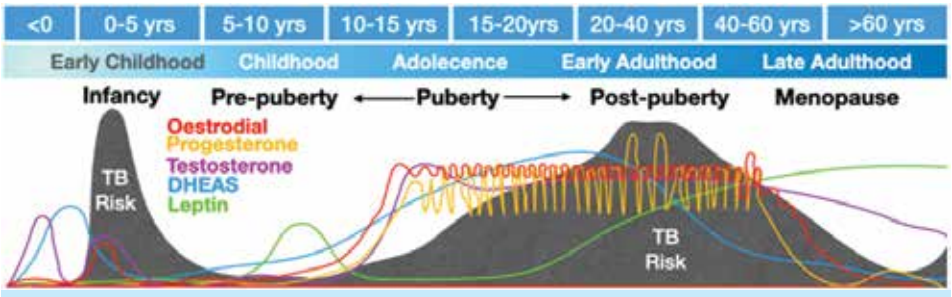


***Figure 1**. Change in TB risk and hormones during life course.*

To understand how immune cell changes which arise during puberty correlate with markers of TB risk in adults we will conduct identical immune cell phenotyping and hormone quantification in samples biobanked from an adult TB household contact in a second study, also performed

in Cape Town. From a total of 250 HIV-uninfected adults we have identified 20 which developed TB over 3-years. We will also select a further 70 controls; 20 we identified to have radiographic abnormalities consistent with TB using positron emission tomography with computed tomography (PET/CT) who didn't develop symptomatic TB, 40 QFT+ with no PET/CT evidence of active TB infection, and a rare group of 10 who remained QFT-negative during follow-up, despite living in the high-transmission setting.

We completed collection of the 36-month end of follow-up samples in November 2021 (Figure 2). We are now awaiting export permit approval to ship samples to WEHI to begin our analyses. These have been extensively delayed due to COVID-19-related restrictions. We are also coordinating shipment of serum samples to the UK for vitamin D metabolite testing. Once we receive the samples at WEHI we will quantify sex hormone concentrations in plasma samples using a Luminex multi-plex based assay. This will allow us to correlate changes in cell frequencies to vitamin D and sex hormone concentrations.

In preparation for receiving the blood samples at WEHI we have optimised a multi-parameter 23-colour spectral cytometry antibody panel which we will use to quantify innate and adaptive immune cell subsets in the fixed whole blood samples (Figure 3). Spectral cytometry is preferred to mass cytometry due to limited blood volumes collected from children. We will profile annual fluctuations in the 200 children enrolled in ViDiKids to determine the kinetics of immunophenotype change during puberty and following recent *Mtb* infection. We will contrast these phenotypes with those form the 90 adults with varying TB risk and protection from infection. We will then test the effect of vitamin D on immune cell phenotypes once the ViDiKids Trial is unblinded in Mid 2022.

Expected outcomes and significance

Our goal is to identify immune cell functional correlates of increased TB risk which emerge during puberty. Our results will provide unprecedented insight into differences in childhood and adult TB immunity and determine the contribution of sex hormone fluctuations and vitamin D on immunological development. This work may have broad relevance to other infectious diseases, such as COVID-19, where children are also generally protected and men are also at higher risk. Changes we identify that correlate with vitamin D supplementation will also provide immunological understanding of the outcomes of the ViDiKids phase 3 prevention of infection trial.

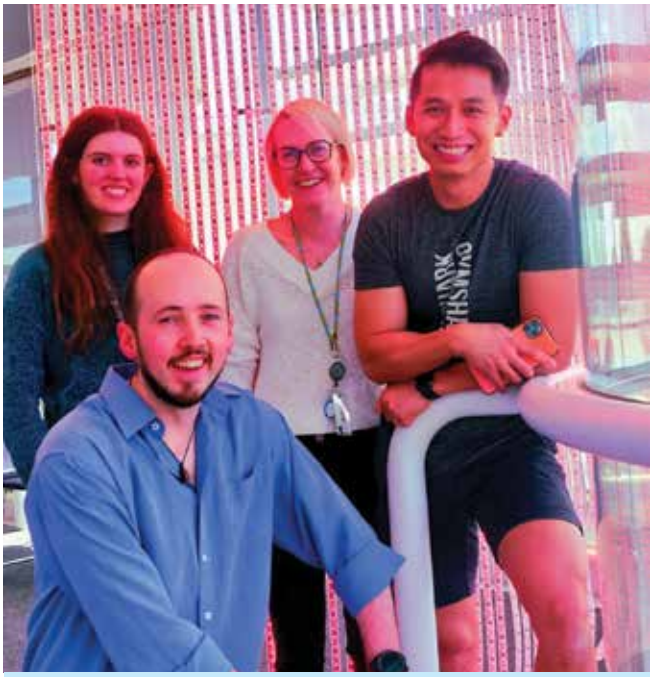


Figure 2. *Members of Coussens lab 'Lighting up Red' for World TB Day 2022. (From left to right, Rachel Evans, Dylan Sheerin, Anna Coussens, Kha Phan).*

Figure 3. *Dr Dylan Sheerin (left) and undergraduate student Rachel Evans (right) who are using the Aroura Spectral Cytometer to perform whole blood immunophenotyping*

ANNUAL REPORT OF THE AUSTRALASIAN CLINICAL TUBERCULOSIS NETWORK (ACTNET)

Dr Andrew Burke
Chair ACTnet Steering Committee

Dr James Trauer
Deputy Chair ACTnet Steering Committee

The **Australasian Clinical Tuberculosis Network** is a network of clinicians and researchers in Australia and New Zealand who aim to conduct high-quality multicentre clinical research. The focus of ACTnet is the development of new evidence to support TB elimination in Australia and beyond. The Australian Respiratory Council is the principal partner organization of ACTnet. ARC provides funding for administration officer salary support for which we are grateful.

The aims of ACTnet are to be met through 3 main activities:

1. Establishing collaborative networks of researchers (SIGs) in key areas which facilitates discussion at a high level of expertise.
2. Education to clinicians/ researchers and public health professionals
3. Facilitating TB research projects – particularly those that allow for collaboration between different health services within Australia and New Zealand.

One of the goals of ACTnet is to develop networks of established and emerging researchers in TB in Australia and New Zealand. In order to develop productive working relationships, ACTnet is establishing links in the following areas:

1. Epidemiology / data collection
2. TB microbiology / diagnostics
3. Clinical trials / international health
4. Mycobacterial therapy pharmacokinetics.

It is our intention to hold quarterly educational webinars in these areas. As well as facilitating education it is expected this will create interest in TB research opportunities and networking.

On 23rd November, 2021 we co-hosted our first combined webinar with the University of Queensland Centre for Clinical Research in the area of TB pharmacokinetics and pharmacodynamics. There were 250 registrants from Australia and overseas. Speakers included: Dr Chris Coulter (ACTnet), Dr Andrew Burke (ACTnet) and prof Jan-Willem Alffenaar (TB CRE and University of Sydney)

ACTnet has standing representation from ASID and TSANZ. In 2022 with the expected resumption of in-person conferences we plan on having satellite meetings at the ASID and TSANZ conferences. The first of these will be ASID in mid-2022 in Perth. The goal will be to gather interested clinicians and researchers to meet one another and discuss careers and opportunities in the field of TB.

Membership: Our current membership number is 75. We have a larger number of people who follow ACTnet through twitter/social media. It is planned to increase our membership by increasing circulation of the TBPod podcast, sharing information about our activities widely (including to TSANZ, ASID and the TB CRE) and through our research networks across all states and territories.

Recent research activities

ACTnet conducted several multicenter studies that sought to characterize the burden of tuberculosis in Australia. Among our current projects are:

1. **The effect of weekly rifapentine and isoniazid (3HP), compared to 4 months of daily rifampicin (4RIF) upon adherence with treatment for latent TB infection**

This multi-centre prospective, open-label, randomised trial is comparing treatment adherence among patients taking two alternative effective regimens for LTBI. The study is comparing the treatment completion of new weekly 12 dose regimen of rifapentine / isoniazid (3HP), and daily self-administered rifampicin for 4 months (4RIF). The 3HP regimen is be monitored via SMS or phone call, while the 4RIF is self-monitored with a standard clinic follow up. The proposed method may provide an opportunity to improve overall treatment outcomes. The study will also evaluate the feasibility of scaling up these regimens and explore their cost-effectiveness and patient acceptability. The study is underway at eight TB clinics across Sydney, and 210 LTBI patients are planned to participate. Findings of this study will strengthen TB services across Sydney through a transition to new shorter regimens that prevent TB. The study will be completed by 2022.

2. **Evaluating the 'cascade of care' for off-shore migrant screening for latent tuberculosis infection (LTBI): a platform for evidence-based approaches to TB elimination in Australia**

This research project aimed to evaluate the implementation and costs of the new Department of Home Affairs policy to screen all children between 2 and 10 years who migrate to Australia from TB endemic countries (> 40 per 100,000) for latent tuberculosis infection (LTBI). This retrospective cohort study included children eligible for the Australian Child LTBI screening in the first year of implementation. Data for this study have been obtained from NSW, Victoria, South Australia, Queensland and the Northern Territory.

3. **Tuberculosis risk in Australia: An epidemiological assessment of tuberculosis risk factors**

This research project aimed to better characterize the epidemiological profile, risk factors and management of TB patients to improve targeting and delivery of interventions necessary to achieve the elimination of TB in Australia. Dr Kerri Viney (ANU) led this study. Data collection has been completed from Victoria, Northern Territory and Western Australia.

Proposed research activities

We have formalized and streamlined our approach to endorsing projects under the ACTnet banner. In particular, we have developed an application form for proposed research activities undertaken across Australia to be considered part of ACTnet activities. This is anticipated to benefit researchers looking to enhance collaborative projects across our region by providing a formal mechanism to indicate that their project is supported by the broader TB research community across Australia and New Zealand.

We have developed a form to be considered by the broader committee at its next meeting. It is hoped that this will be a useful mechanism for stimulating consideration of research collaborations, particularly within the format of the Special Interest Groups proposed above.

Future research projects that will be considered through this mechanism include:

- Treatment of extrapulmonary immunological manifestations of TB (e.g. ocular)
- Pharmacodynamic studies of anti-tuberculous agents
- A registry of TB reactivation episodes in contacts
- Collation of MDR-TB treatment outcomes

As ACTnet does not hold funding for research, it is expected that our main role will be in connecting researchers acknowledging that many ACTnet members will be conducting their TB research in institutions independent of ACTnet.

ACTnet Podcast

ACTnet and the TB Forum have established The TBPod. The TBPod is a podcast designed for clinicians and policy makers caring for patients with tuberculosis. The TBPod consists of conversations with expert clinicians, researchers, policy makers and advocates about their work in the field of tuberculosis. The available episodes include latent tuberculosis infection with A/Profs Justin Denholm and James Trauer, patient support and tuberculosis treatment adherence with Dr Kerry Viney and Mr Neil Heron and post-tuberculosis lung disease with Dr Anthony Byrne. The "TBPod" episodes can be found on Itunes and the ACTnet website. To date there have been 12 podcasts recorded the latest being an interview with Dr Philipp Du Cross from the Burnet Institute on the TB-Practecal study of short course therapy in MDR-TB. At this point we are focusing our podcasts on domestic researchers to raise the profile of local research.

ACTnet thanks the Australian Respiratory Council for its continuing support. Membership to ACTnet is free. Please see our website www.actnet.org.au for further information

actnet
australasian clinical tuberculosis network

ARC SHEILA SIMPSON OAM NURSING EDUCATION SCHOLARSHIPS

Building Nursing Capacity in Australia

To support elimination efforts in Australia, ARC has been working in partnership with Western Sydney University, School of Nursing and Midwifery and the National TB Program stakeholders to develop and implement the Master in Nursing (TB Management). The course, represents a significant educational opportunity for developing nursing workforce capacity within the Australian TB Program. The ARC is committed to supporting capacity building for the Australian TB Program through the development of specialist nurses.

To support students, ARC awards scholarships each year to enable nurses to undertake the speciality units within the Master in Nursing (TB Management) course. The scholarships have been named in recognition of the outstanding contribution of Sheila Simpson OAM, to the work of ARC, her clinical leadership and mentoring of the nursing workforce within the speciality area of TB, over four and a half decades.

In 2021 scholarships were awarded to Cathie McKenna and Amy Peachy. A profile and feedback from the scholarship recipients is provided below.

This year, Cathie McKenna was the first student to graduate from the Master of Nursing (TB Management). The ARC congratulates Cathie on this significant achievement.

Cathie McKenna

Tuberculosis (TB) and infectious disease nursing in rural and remote communities across NSW has been Cathie's clinical specialty for 27 years, commencing in 1988 at the Wollongong Chest Clinic in the Illawarra and Shoalhaven region of NSW. Over the years, Cathie's work has included providing TB care and prevention work to culturally diverse communities across the socioeconomic and well-being spectrum.

Cathie McKenna and Sheila Simpson OAM

Cathie's current role includes providing nursing consultancy for the communities and health professionals of Southern NSW and Murrumbidgee Local Health Districts (LHD) and mentorship for her peers across NSW. As the District Coordinator, Cathie's responsibilities include ensuring key goals and strategies of National and State TB Programs and public health guidelines are incorporated into localised patient centred care within these communities.

Cathie is currently a member of the NSW TB Advisory Committee, Chair of the MLHD District Clinical Council and M & SNSW LHD TB Reference Group and a member of the NSW TB Program BCG working group.

In 2017, Cathie received the Innovation Award in both MLHD and SNSWLHD for the design and implementation of video directly observed treatment supervision (VDOTS) across both LHDs. This project was also a finalist at the NSW Health Excellence Awards. Since 2017, VDOTs has been implemented as accepted clinical practice across NSW TB Program and replicated as the virtual model of care for many care pathways.

Advocacy for communities and health employees has been central to Cathie's working career within the NSW TB Program. Cathie has served as a Director on the MWAHS Board, member of the Finance and Clinical Governance Committees and Chair of the Ethics Committee. With the support of both the Chair and CEO, Cathie designed, sourced funding and implemented the first 'Staff Health and Well-being Unit' in NSW incorporating a holistic care model for employees. This provided access to generalist health, in addition to TB and immunisation screening and vaccination services. The design of the service underpins current policy and HCW well-being models.

Cathie has gained new knowledge, skills and professional confidence from completing the Master of Nursing (TB Management) course. Cathie has used the content from the TB specialist subjects and her 'Capstone unit' within the course to demonstrate her overall learning to implement an innovative project. Cathie elected to create and implement a patient centred model of care to progress the LHDs towards the WHO (2015) TB elimination goals. The targeted goal is > 90% preventive treatment (TPT) coverage for individuals with latent TB infection (LTBI). The project, 'TB prevention with partners' requires a partnership with the Primary Health Network (PHN) to engage and support general practitioners (GP) to manage people with uncomplicated LTBI in local communities. Education packages, resources and sessions will be made available through the PHN to support the project and service delivery.

Cathie continues to hope that in a post COVID-19 era that she will be able to participate in advocacy, research and clinical support in the Indo-Pacific Region.

Amy Peachey

As a registered nurse for 21 years, Amy advises that she has been fortunate to gain experience in many different fields of nursing, including acute, community, primary and public health care settings. While working in these areas, Amy

obtained postgraduate qualifications in public health, mental health, paediatric and neonatal nursing, sexual health and immunisation as she has always highly valued further learning and education. Amy welcomes the opportunity to put theory into practice in order to develop and improve her nursing skills. Amy advises that the Master of Nursing (TB Management) has been a fantastic example of this, Amy is very grateful to be part of the course and thanks Western Sydney University and ARC for developing and implementing the course.

Amy Peachey

Amy was inspired to pursue a career in public health when working as a child health nurse in remote Aboriginal communities in the Northern Territory. Amy had the opportunity to learn about Aboriginal culture, and gain valuable awareness of the impact of the social determinants of health on individuals and communities. Amy has since worked in a range of public health roles, including at the Centre for Disease Control (CDC) in Central Australia as a program coordinator for the Trachoma Elimination Program, the HPV Surveillance Program as a Clinical Nurse Coordinator, Melbourne Sexual Health Centre as a Sexual Health/Blood Borne Virus Nurse, and the Alfred Infectious Disease Clinical Research Unit as a Clinical Research Coordinator. Amy also completed her nurse immuniser qualification, gaining experience as a Clinical Nurse Consultant (CNC) at Frontyard (Royal Children's Hospital), a youth homelessness service. This wide range of experience has given Amy a strong foundation for her current public health role as a CNC in the Victorian Tuberculosis Program (VTP), a job Amy has been working towards since completing her Master of Public Health in 2012. Amy reports that her work with the VTP is a dream public health role which she feels brings together her passion for public health, infectious diseases, and the health of vulnerable people. In this role Amy aims to make a meaningful contribution to a field that changes lives, not just for individuals and their families, but towards the global elimination of a disease that affects millions.

As a CNC in the VTP team for 2 and a half years, Amy contributes to the Australian Tuberculosis (TB) program through management of active cases of TB and prevention of reactivation of latent TB. Amy provides case management, surveillance, contact tracing, patient and clinician education and liaises with clinical services and treating teams around TB and TB medication, working with individuals and families with active and latent TB to overcome barriers to treatment and care.

Amy reports that she has found information gained from the Public Health Management of TB and the Clinical Management of TB units invaluable in all aspects of her work with the VTP. Amy looks forward to learning more about TB and best practice management in Australia, and implementing the knowledge and skills she gains, to contribute more effectively to such an important public health area. Amy advises that she has been successful in gaining a permanent role within the Victorian TB Program, and is very grateful for the additional foundation the Master of Nursing (TB Management) will provide to perform this ongoing role.

Amy has noted that her ability to contribute effectively to TB elimination in Australia depends upon her knowledge, understanding, and implementation of current best practice of the clinical and public health management of TB. The ARC scholarship has enabled Amy to complete a course that provides her with information to learn, grow, be challenged and develop more effective clinical practice as a CNC.

Amy has also found a core benefit of the TB specialisation units to be connecting with nurses working in TB across Australia; those new to TB and those who have worked in the field since before the establishment of the current programs. Amy plans to further build these networks and learn more from nurses with such depth of experience in order to better serve the patients she manages.

On a personal level, Amy notes that she remains very excited about the learning opportunities presented by the Master of Nursing (TB Management), to empower her own professional development, and enhance and build her contribution to the control and elimination of TB in Australia.

Dr Linda Gregory, UWS Master Course Coordinator, Kerrie Shaw, Cathie McKenna and Sheila Simpson

ARC PROJECT REPORT

Development of Cultural Competency Guides

This year ARC partnered with the United States Southeastern National TB Center to lead the development of cultural competency guides for Chuuk State, Federated States of Micronesia and the Marshall Islands.

Cultural competency guides are a resource that aim to provide health care workers with information to support a greater awareness and understanding of the attitudes, beliefs and practices of people seeking care and treatment for TB.

People from the US Affiliated Annual Pacific Islands (USAPI) move freely and frequently between their own countries and the US mainland, therefore, there is a need for staff within the Pacific and US TB Programs to be aware of cultural beliefs and attitudes to incorporate into the care and treatment of people from the USAPIs. Providing care and treatment services that are culturally appropriate and patient centred is an important strategy for TB elimination.

The guides can be accessed on ARCs website at the following link: https://www.thearc.org.au/resources/

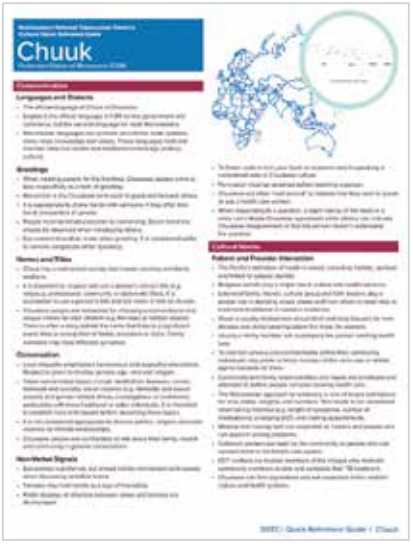
Building Capacity Through Training and Education in the USAPI

Pacific Island TB Controllers Association (PITCA) Annual Conference

Due to border lockdowns and travel restrictions between Australia and the Pacific continuing in 2021 the annual PITCA conference was held virtually this year. Amanda Christensen with support from the ARC Nurse Consultants Group (Pam Banner, Chris Lowbridge and Kerrie Shaw) coordinated and delivered the online program for the nurses and allied professionals. Participants from the USAPI and Hawaii attended the training activity. The benefit of holding the conference online was that a larger number of people were able to attend the sessions. Thirty five nurses and sixteen allied professionals participated in the conference.

The conference consisted of plenary and breakout sessions for the respective professional groups over a four day program. The nurses and allied professionals breakout sessions covered the following topics: Case management; implementation of patient centred care in the USAPIs; health coaching techniques and their application to the care of people with TB; the impact of the COVID-19 Pandemic on TB Nursing Care in the USAPI; Nursing and Outreach Worker Outcomes & Successes 2020/21: Plans for the Year Ahead.

Joint sessions were held with colleagues from the laboratory and Program Managers to discuss Documenting TB Culture Conversion at 8 Weeks and Jurisdictional TB Program Objectives and Performance Targets for Sputum Culture Conversion. The nurses and allied professionals also held joint sessions with the medical staff to discuss and review care and management of complex TB cases.



Within the nurses and allied professionals breakout sessions there were a number of presentations by colleagues from the USAPI National TB Programs. The ability for people from across the USAPIs to share their work and identify pacific solutions to the issues and challenges faced is greatly valued by the group.

The ARC would like to acknowledge the following people from the USAPIs for their presentations within the nurses and allied professionals breakout sessions:

- American Samoa – Sandy Nua-Ahoia
- Commonwealth of the Northern Marianas – Patricia Aldran
- Federated States of Micronesia – Foster Waguk (Kosrae State); Mercedes Gilmete (Pohnpei State) and Judy Tiningded (Yap State)
- Guam – Jenette Florig, Teresa Manalo and Kristan Jean Pereda
- Palau – Husayn Beketaut and Sandy Kinto
- Republic of the Marshall Islands – Samantha Anuntak and Patrick Ronald (Majuro) and Limanman Ione (Ebeye).

Pacific Island TB Nurses Network Meetings

Each month the ARC Nurse Consultants meet online with the National TB Program (NTP) Staff of the US Affiliated Pacific Islands (USAPI) and the Division of TB Elimination at the US Centers for Disease Control (CDC) to present cases, discuss clinical issues, undertake educational activities and progress the development of NTP tools and resources. The monthly meetings are coordinated by ARC and hosted by the CDC. Each of the countries within the USAPI actively participate in the meetings and present cases for clinical discussion and review. The number of people attending the meetings within the countries increased over the year which is pleasing as the network continues to expand.

The ARC Nurse Consultants Group provide ongoing technical support, educational sessions and mentoring for the nurses and outreach workers of the USAPI TB Programs. The CDC provide funding for ARC to undertake these activities and support for the USAPIs.

Elizabeth Dibbs, Deputy Chancellor UWS and Cathie McKenna

Master of Nursing (TB Management) Course

The implementation of the Master of Nursing (TB Management) Course continued this year, with all three of the speciality TB units offered for students to undertake. Australian and international nursing students engaged in a range of services, roles and activities are currently enrolled in the course.

The course, the first of its kind internationally is seen as an important opportunity to further develop the speciality of TB nursing within Australia and enhance national efforts towards TB elimination. In 2021, the first student, Cathie McKenna graduated from the Master of Nursing (TB Management) Course. The ARC congratulates Cathie on this achievement. Feedback received from the university and students about the course has been very positive. A profile on two students is provided on pages 20 and 21 of this report.

The course units and content of the three specialist TB units; Clinical Management of TB, the Public Health Management of TB and Care of People with TB were reviewed this year. The ARC Nurse Consultants Group (Pam Banner, Amanda Christensen, Chris Lowbridge and Kerrie Shaw) continue to work with the Western Sydney University, School of Nursing and Midwifery (WSU) to implement the Master of Nursing (TB Management) Course, provide advice on the academic content of the specialist units and provide support for the students through the teaching team

In the coming year, ARC will collaborate with UWS to explore opportunities and scope the potential to offer the course internationally. There is also the potential to identify opportunities to create a pathway and pipeline for nursing education that links other training and education activities that ARC is undertaking in the pacific through the Pacific Island TB Nurses Network and PEARL Project.

Support for Homeless and Vulnerable People with TB

Over the past four years, ARC with the financial support of the Clubs Grant NSW Scheme has implemented a project to support homeless and vulnerable people with TB within the Greater Sydney metropolitan area. Through this project ARC is able to provide funding for people experiencing financial hardship, which was particularly important again this year as the impact of the COVID-19 pandemic continued and was felt by many in the community.

The people ARC supported through the grants were people who were unable to obtain financial support through welfare and emergency payments. The grants recognise the benefits to individuals and community of caring for our most vulnerable during a difficult period in their life. In the past 12 months $7,500 was received in grants from the Bowlers Club of NSW Ltd, the City of Sydney RSL and City Tattersalls Club. With this funding ARC was able to provide seven grants to six people affected by TB. The financial support was used to contribute to the costs associated with accommodation, food and transport (to attend medical appointments).

Homelessness in Australia is a significant social issue that can have a long-term impact on individuals and families. Homelessness is complex issue, it is often the end point of a series of life events and crisis. Homeless people often have a poor general health status, coexistent substance and mental health issues, limited financial resources and support networks in the community which make them vulnerable to TB.

The initial management of the homeless with TB is through admission to hospital. For others, homelessness or housing difficulties may arise as a consequence of TB. Difficulties can also arise when the person is to be discharged from hospital to complete treatment in the community. The path to cure from TB is long and slow, people require treatment for six to twenty-four months. Discharging people to live in unstable settings is extremely problematic with many people defaulting from treatment and becoming lost to follow up. This poses a threat to the individual for reactivation of disease, development of drug resistant TB or death, and for the community this scenario can lead to ongoing transmission of TB.

The ARC is pleased to be able to continue to work in partnership with The Clubs NSW Grant Scheme on this project as support for homeless and vulnerable people with TB is an important social and public health issue.

Cough and Premature Death in the Solomon Islands

The ARC awarded funding in 2020 to Dr Anthony Byrne, a Respiratory Physician from St Vincent's Hospital, Sydney to travel to Gizo, in the Solomon Islands to undertake a lung health project. Unfortunately, due to ongoing travel restrictions and border closures in Australia and the Pacific in 2021, the project implementation has been delayed. It is planned that Dr Byrne and his team will travel to the Solomon Islands in the second half of 2022 to undertake the project.

PEARL PROJECT

The Australian Respiratory Council partners in the Pathway to the Elimination of Antibiotic Resistant and Latent Tuberculosis in the Pacific (PEARL) Study

The Australian Government through the Medical Research Futures Fund Global Health Initiatives Grant Scheme awarded $4.25 million in funding to support research around the diagnosis, prevention and treatment of drug resistant tuberculosis (DR-TB) in Pacific Island Countries.

The funding is for research that will enhance knowledge and develop tools to combat threats to national health security posed by the regional and global challenges of DR TB. The study is being undertaken in collaboration with researchers from pacific countries to promote capacity building to ensure the risks associated with TB can be managed on both sides of the border, in Australia and overseas.

The Australian Respiratory Council (ARC) is partnering with a team of researchers and capacity building experts led by Professor Ben Marais, to deliver the study. The team includes: the Kiribati Ministry of Health and Medical Services (MHMS), the NHMRC TB Centre of Research Excellence, Sydney University, Monash University, the World Health Organisation (WHO) Collaborating Centre for Nursing, Midwifery and Health Development and the South Pacific Chief Nursing & Midwifery Officers Alliance at the University of Technology Sydney, the Australian National University, the WHO Western Pacific Region Office END TB & Leprosy Unit and ARC. The Government of Kiribati has expressed a commitment to the project to support their local efforts and progression towards elimination for TB and Leprosy within their country.

Background

The emergence and spread of antibiotic resistant strains of TB is a major concern globally. Within the Pacific, TB and Leprosy hotspots such as Kiribati pose a particular challenge and threat. The incidence of TB and Leprosy in Tarawa (the main population centre in Kiribati) is amongst the highest globally, combined with the dominance of TB disease in young adults, the population density and ongoing transmission of TB and Leprosy, the potential for amplification of TB, DR TB and Leprosy is a public health concern.

The main objective of the study is to mitigate the threat posed by DR-TB in the Pacific, by enhancing knowledge and testing new strategies to combat TB within the pacific island nations. The Pathway to the Elimination of Antibiotic Resistant and Latent tuberculosis in the Pacific (PEARL) project, proposes a body of work that will provide a pathway towards DR-TB prevention, TB and Leprosy elimination in the Pacific.

Over the past year pandemic border and travel restrictions have impacted on the study commencing. The project team and ARC have been using the time to set up the study, build relationships with the Kiribati MHMS, develop information, education and communication resources and develop the training programs to support the study and more broadly education within the pacific. It is expected that the study will commence mid-2022.

Screening and Active Case Finding

Every person aged three years & older in a population of more than 60, 000 people in South Tarawa, Kiribati will be offered screening for TB & Leprosy. A series of mobile clinics will be set up in the community for people to access. The screening sites will move around Tarawa over a three-year period to reach maximum numbers of people. A team of local staff will be employed to work in collaboration with the project team to undertake the screening activities.

People with active TB and/or Leprosy will be referred to the Kiribati National TB and Leprosy Program for TB care and treatment. People identified with TB infection (sleeping TB) will be treated with preventative therapy to reduce the number of people at risk of developing active TB in the future. Single dose preventive therapy will be given to people to prevent people developing Leprosy.

Community engagement and participation in the screening is critical to the success of the program and the goal TB and leprosy elimination. Activities to engage the government, community leaders, health services and population will be undertaken throughout the study.

The ARC is leading the component of the study relating to building workforce capability through training and education for TB/DR-TB control and elimination in Kiribati, and more broadly within the Pacific. This will be achieved through a program of training and mentoring. The work undertaken by ARC will build on exiting expertise and activities within the pacific to deliver in-country training and clinical mentoring in Kiribati and the Pacific more broadly.

The project will strengthen collaborative partnerships between Australia and Pacific Island Countries. The training and mentoring program will establish better surveillance and care networks across the Pacific to prevent the emergence and spread of DR-TB, while the intervention and modelling data will have direct impact on practice and policy. Overall, the project will strengthen regional Health Security by reducing the threat of DR-TB and Leprosy in the Pacific and play a catalytic role in regional TB and Leprosy elimination efforts.

SOLOMON ISLANDS PROJECT

Community-based TB case finding and treatment support: working with Baru Conservation Alliance rangers in the remote mountain areas of East Kwaio

Report submitted by Tommy Esau and Associate Professor Peter Massey

Why TB:

- TB was brought to Solomon Islands and is seen as an invader or a small giant attacking people.
- TB remains at unacceptable rates in the East Kwaio area of Solomon Islands. At the Atoifi Adventist Hospital (AAH) approximately 10-15 people are treated for TB each year. In a population of 10,000 this equates to 100-150 cases/100,000 pop. There are many more undiagnosed cases known to occur in mountain areas and distant villages.
- TB disrupts families and ways of life.
- Kwaio people live close together in family units, cooking fires and no windows are usual houses.

Why Baru?

- Baru Conservation Alliance is a well-respected community based organisation in Kwaio, Solomon Islands. Supporting remote villages and families to maintain conservation values.
- Baru has a holistic approach to care for plants, animals and people within mountain conservation areas. Baru works within Wado (land), Fufutunga (geneology) & Falafola (custom/culture)
- Baru has a well-trained, capable and willing ranger workforce.

- The rangers identified TB as an ongoing threat to the people who live within the conservation areas.

Baru Rangers become TB Rangers

- To fight back against TB, and to help conserve people, who are part of the environment, genealogy and culture the Rangers were keen to learn about TB.
- Rangers are keen to visit every family in their area to talk about TB and find people with symptoms to support them to get help.
- With funding support from ARC the Rangers were

SOLOMON ISLANDS PROJECT (cont.)

trained in detection of TB and what to do.

- Rangers provided community awareness and consultations in the four conservation areas. The previously developed ARC/Kwaio TB DVDs were used as part of the awareness raising.
- Rangers work as TB Rangers 3 days per week and are paid equivalent of $15/day.
- A female and a male Ranger were designated for each area to enable good access to all people within the hamlets and tribes of the conservation areas.

Some wins in the battle against TB

- The first person was diagnosed and treatment commenced without coming to the hospital. Currently there are 3 people on treatment. Due to important cultural issues many people cannot attend the hospital so the hamlet/home based model of TB detection, diagnosis and treatment is saving lives and preventing the spread of this "little giant".
- Across the year the following number of people were detected with possible TB, and the number seen in each conservation area:
    - **Aifasu:** 75 people seen,15 people detected with possible TB, 6 people seen, 2 positive currently on TB treatment, but monitoring for other possible sickness like lung cancer
    - **Kwainaa`isi:** 37 people seen, 13 detected with possible TB; 5 positive cases. However, 1 died on treatment, but 4 still on treatment.
    - **Burui:** 104 people seen, 6 people were detected with possible TB, however, all results were negative.
    - **Fulantofe:** 57 people seen, 7 people detected with possible TB, however, no positive cases found.
- Of the 41 total people with possible TB, 6 people were diagnosed with TB and started treatment.
- For each case of TB successfully treated 10-15 new infections are likely prevented, so this program of work is already delivering generational impact.
- In May 2021, BCA brought together national, provincial and local managers of the Solomon Islands health system to the BCA base in Auki. The BCA Secretariat supported by JCU and NSW Health facilitated a 2-day TB workshop in Auki. The workshop was attended by representatives from the Solomon Islands Ministry of Health, the TB coordinator and representatives from the Malaita Provinicial Health Department, the primary health care leader and TB coordinator from Atoifi Adventist Hospital, BCA TB rangers and members of the four BCA-managed conservation areas.
- In culturally appropriate gendered groups and later as a whole group, workshop participants shared stories about their TB program experiences and offered suggestions for improvement. BCA provided advice to Atoifi Hospital, and provincial and national TB program managers on how to provide locally appropriate TB services for people living in TB hotspots in the remote mountains of Malaita. Four skills training activities were provided by BCA: (1) how to weigh TB patients in the mountains using swing seat scales for adults and a sling for babies; (2) how to improve protein rich food sources by linking the TB program with the grasshoppers for nutrition program (see Objective Eight); (3) how to coordinate both male and female TB rangers to work in small teams, rather than as individuals, to improve TB service; (4) how to provide information to Atoifi Hospital and Kilu'ufi Hospital TB services about the tribal model of TB service for people living in Kwaio mountains

Some losses in the battle against TB

- Weather: rain, flood, wind most time caused big challenges for Rangers to walk to the hospital with specimens and if they don't arrive on the same day, all the sputum are spoiled and they have to go back and re-collected again.
- Health systems designed by European centric, paternalistic people so are not attune to the real needs of the people the health systems serve.
- Ongoing struggles with the hospital system to process specimens that have not been ordered by a Doctor or Nurse.
- TB is really tough for women. Tough at home, tough to access health care, tough to make space to regain health. The female Rangers found the work difficult because of the needs at home in gardening and care of their own families, as well as the need of the wider community to be checked for TB.

A female TB Ranger Fiiringi talking with a suspected patient

TB Ranger – Sale left giving TB treatment tablets to his first positive TB patient

Next steps

- Baru to continue support the work of Rangers in conservation.
- Rangers to continue with their work on visiting families in the conservation area and talk with them about TB, check for symptoms, and support families with TB. Dependent on funding.
- Continue to build the network with the hospital, and advocate for the hospital to have a real focus on community.
- TB rangers continue to support treatment of people with TB.
- Reflection and evaluation. Learning together about how communities and families can work together to hunt out TB. Developing and trialling a community based model of care that supports the female TB Rangers to be released and back-filled to enable their work.

HISTORY OF FUNDING FOR RESEARCH ACTIVITIES 1999 – 2021

SCHOLARSHIPS, FELLOWSHIPS
A HISTORY 2001 – 2021

ARC Research Support Grants (Commenced 2020)

Date	Recipient	Subject	Award
2021	Associate Professor Anna Coussens *Walter & Eliza Hall Institute, Victoria*	Identifying Age, Sex and Vitamin D Modified Immune Correlates of TB Risk	$20,000
2021	Professor Graeme Zosky *University of Tasmania*	The role of the placenta in determining the post-natal effects of in utero exposure to bushfire smoke	$20,000
2020	Professor Gary Lee *Institute for Respiratory Health, University of Western Australia*	Mechanisms of Streptococcus pneumoniae mesothelial cell invasion	$20,000
2020	Associate Professor Katharina Ronacher *Mater Research Institute, The University of Queensland*	Pre-clinical validation of a novel target for host-directed therapy for the treatment of TB	$20,000
2020	Dr Hannah Moore *Telethon Kids Institute, WA*	Understanding the true burden of paediatric respiratory syncytial virus in order to optimise prevention programs	$20,000

ARC Harry Windsor Medical Research Grants (2001 - 2020)

Date	Recipient	Subject	Award
2019	Warwick Britton *Centenary Institute, University of Sydney, NSW*	Protecting the lungs against TB by pulmonary delivery of a novel TB Service.	$20,000
2019	Chris Degeling *University of Wollongong, NSW*	TB elimination: a qualitative investigation of the perspectives of South Asian migrant communities in the Illawarra.	$20,000
2019	Justin Denholm *University of Melbourne, VIC*	Evaluating the impact of LTBI treatment strategies in Australia	$20,000
2018	Paul King *Monash Medical Centre and Monash University, VIC*	Influenza A virus (IAV) infection induces the formation of phagocytic extracellular traps, which contribute to the pathogenesis of exacerbations of COPD	$50,000
2018	Cynthia Whitchurch *University of Technology Sydney, NSW*	Understanding the immunology of Pseudomonas aeruginosa lung infection.	$50,000
2017	Michael Berk *Deakin University, VIC*	Can we reduce tobacco smoking using N-acetylcysteine as a cessation treatment	$50,000
2017	Greg Fox *University of Sydney, NSW*	New digital strategies to enhance tuberculosis treatment adherence in Vietnam	$50,000
2016	Graeme Zosky *University of Tasmania, TAS*	Iron laden particulate matter enhances bacterial growth in the lung	$50,000
2016	Paul Foster *University of Newcastle, NSW*	Understanding the role of the newly discovered 2D4 T helper(TH) - 22 cell subset in models of respiratory infection and inflammation	$50,000
2016	Ian Yang *University of Queensland, QLD*	Using the lung microbiome to predict responses to continuous antibiotics in COPD	$50,000
2015	Brian Oliver *The Woolcock Institute and The University Of Technology, NSW*	Understanding the aetiology of small airway fibrosis in COPD	$50,000

SCHOLARSHIPS, FELLOWSHIPS

A HISTORY 2001 – 2021

Date	Recipient	Subject	Award
2015	Harin Karunajeewa *The Walter and Eliza Institute, VIC*	Getting the dose right in Tuberculosis: Pharmacokinetics to improve outcomes in Tuberculosis	$50,000
2014	Daniel Chambers *The Prince Charles Hospital, QLD* *Lung Transplant Service, QLD*	Disease tolerance and transplant tolerance – two sides of the same coin?	$50,000
2013	Brian Oliver *University of Sydney, NSW*	Why do fibroblasts from people with COPD produce extracellular matrix proteins in response to ciagraette smoke?	$50,000
2012	Bernadette Saunders *Centenary Institute, Sydney, NSW*	Microparticles and microRNA as biomarkers of TB disease	$50,000
2011	Ross Coppel, Paul Crellin et al *Monash University, Melbourne, VIC*	Identification of inhibitors of PimA, a new target for tuberculosis therapy	$50,000
2010	Peter Bye *Royal Prince Alfred Hospital, Sydney, NSW*	Novel interventions for the diverse population of Australia with bronchiectasis	$50,000
2009	Sandra Hodge *Hanson Institute, Adelaide, SA*	Investigation of macrophage function as a therapeutic target in chronic obstructive pulmonary disease/emphysema (COPD)	$50,000
2008	Jenny Alison *University of Sydney, NSW*	Optimising mucus clearance with exercise in cystic fibrosis	$50,000
2008	Stephen Stick, Anthony Kicic & Siobhan Brennan *University of WA, Perth, WA*	A randomised controlled trial of L-arginnine or vitamin D to improve outcomes in pulmonary tuberculosis	$50,000
2007	Siobhain Brennan and Anthony J Kettle *Telethon Institute for Child Health Research, Perth, WA*	Investigating markers of oxidative stress in young children with cystic fibrosis: a driving mechanism of pulmonary investigation	$50,000
2007	Stephen Bozinovski and Ross Vlahos *University of Melbourne, VIC*	Cigarette smoke chemically modifies and inactivates lung innate immunity mediated by the bacterial receptor, TLR4	$50,000
2006	Paul Kelly, Graeme Maguire, Peter Morris, Ivan Bastian & Nicholas Anstey *Menzies School of Health Research, Darwin, NT*	Nutritional intervention to improve tuberculosis treatment outcome in Timika, Indonesia: the NUTTS study	$50,000
2006	David Jans *Monash University, Melbourne, VIC*	Role of phosphorylation in regulating nuclear trafficking during infection of respiratory syncitial virus matrix protein	$50,000
2006	Robert Capon *University of Queensland, QLD*	A new non-toxic approach to controlling bacterial infection	$49,000
2005	Paul Reynolds, Gregory Hodge, Sandra Hodge, Mark Holmes *Royal Adelaide Hospital, Adelaide, SA*	Infection versus rejection in lung transplant related bronchiolitis obliterans syndrome: can intracellular cytokines help?	$50,000
2005	Kwung Fong & Annalese Semmler *Prince Charles Hospital, WA*	Novel methylated genes in lung cancer	$52,250
2004	Warwick Britton, Guy Marks and Bernadette Saunders *Centenary Institute of Cancer Medicine & Cell Biology, Sydney, NSW*	Evaluation of genetic and environment risk factors for progression to active tuberculosis in the Liverpool cohort	$44,701
2004	Paul Kelly, Nick Anstey, Graeme Maguire et al *Menzies School of Health Research, Darwin, NT*	Pulmonary Function in Tuberculosis patients in Timika District, Papua Province, Indonesia	$43,267
2002-2003	James Triccas & Warwick Britton *Centenary Institute of Cancer Medicine & Cell Biology, Sydney, NSW*	New strategies to vaccinate against Mycobacterium tuberculosis	$112,588

Date	Recipient	Subject	Award
2002	Amanda Leach, Heidi Smith-Vaughan Marius Puruntamerri, Ross Baillie & Peter Morris *Menzies School of Health Research, NT*	Improved hygiene measures for reduced infection in Australian Aboriginal Children: a randomised controlled trial	$48,424
2002	Evangelia Daviskas, Sandra Anderson & Iven Young *Royal Prince Alfred Hospital, Sydney, NSW*	Effect of mannitol on the clearance of mucus in patients with COPD	$38,593
2001	Amanda Baker and Vaughan Carr *University of Newcastle, NSW*	Randomised controlled trial of a smoking cessation intervention among people with a mental illness	$63,370
2001	Terence Amis and John Wheatley *Westmead Hospital, NSW*	The role of snoring and obstructive sleep apnoea in the pathogenesis of hypertension	$45,665
2001	James Wiley and Tania Sorrell *University of Sydney, NSW*	The monocyte-macrophage P2x7 receptor and susceptibility to tuberculosis	$45,000
2000-2001	John Wiggers, Afaf Girgis, Robyn Considine, Jenny Bowman *University of Newcastle, NSW*	Preventing infant exposure to tobacco smoke: evaluation of an early childhood intervention	$53,006

ARC Ann Woolcock Fellowship Awards (2005 - 2014)

Date	Recipient	Subject	Award
2010-2014	Jodie Simpson *Newcastle University, NSW*	Characterisation and treatment of innate immune dysfunction in older people with obstructive airway disease	$258,763
2005-2009	Ingrid Laing *Telethon Institute for Child Research, Perth,WA*	Genetic Influences on causal pathways of ALRIs in highly susceptible infants	$285,000

ARC Ann Woolcock Biomedical and Postgraduate Research Scholarship Awards (2002 - 2004)

Date	Recipient	Subject	Award
2003-2004 $40,143	Corrina Parker *Canberra, ACT*	Detection, isolation and characterisation of novel *Australian National University,* anti-effective agents from cultured micro-fungi	
2003-2004	Kylie Turner *University of Sydney, NSW*	Investigation of the structure of cryptococcal phospholipases	$40,143
2002- 2004	Zoe Barker-Whittle (McKeough) *Royal Prince Alfred Hospital, Sydney, NSW*	Evaluation of lung volume reduction surgery in patients with chronic airflow limitation	$59,214
2002-2003	Shoma Dutt *Westmead Hospital, Sydney, NSW*	Biliary lipids in liver disease and interstitial phospholipid metabolism in children with cystic fibrosis	$41,793
2002-2003	Rita Machaalani *University of Sydney, NSW*	Neurone receptor systems in sudden infant death and piglets exposed to hypercapnic-hypoxia	$29,214
2002- 2003	Anup Desai *University of Sydney, NSW*	The contribution of obstructive sleep apnoea to driver fatigue in transport drivers	$55,793

ARC Harry Windsor Biomedical and Postgraduate Research Scholarship Awards (1999 - 2001)

Date	Recipient	Subject	Award
2001	Anup Desai *University of Sydney, NSW*	Interaction of mild obstructive sleep apnoea, sleep deprivation and circadian factors in cognitive function	$27,793
2000-2001	Shoma Dutt *Westmead Hospital, Sydney, NSW*	Biliary lipids in liver disease and interstitial phospholipid metabolism in children with cystic fibrosis	$40,311
2000-2001	Rita Machaalani *University of Sydney, NSW*	Neurone receptor systems in sudden infant death and piglets exposed to hypercapnic-hypoxia	$37,454
1999-2001	Anna Hansen *University of Sydney, NSW*	The role of cytokines in the immunity and pathology of malaria	$56,703
1999-2001	Rosemary Santangelo *Westmead Hospital, Sydney, NSW*	Phospholipases of Cryptococcus neoformans	$63,498
1999-2001	George Latouche *University of Sydney, NSW*	Phopholipases as potential virulence factors of Cryptococcus neoformans variety Gattii	$55, 089

PROJECTS

HISTORY 1999 – 2021

Date	Recipient/Project	Award
2021	Development of Cultural Competency Guides for the USAPIs	$13,593
2020	Solomon Islands Cough and Premature Death in the Solomon Islands	$18,000
2020-2021	East Kwaio, Solomon Islands Community based TB case finding and treatment support	$19,703
2018-2021	Australia Homeless and vulnerable with TB	$22,492
2018	The Safe Working Practices Laboratory Handbook - a Global Resource	$13,500
2018-2020	Pacific Island TB Network Sputum Quality project	$10,000
2017	Marshall Islands Funding A1c kits for the screening activity on Ebeye Island	$5,264
2017-2018	Papua New Guinea Economic evaluation of patient costs associated with tuberculosis and care in Papua New Guinea.	$25,000
2015-2021	Australia Establishing a framework for nursing education in Australia	$82,900
2013-2016	Solomon Islands Improving TB control in remote area of Solomon Islands	$64,744
2012	Bangladesh Bangladesh MDR-TB Project, an investigation into risk factors for MDR-TB in communities in Bangladesh	$10,000
2011	Australia Kimberley Aboriginal Medical Services Council (KAMSC) Cultural exchange of Be Our Ally Beat Smoking Study (BOABS) workers to visit Maori Tobacco Control Programs in New Zealand	$10,000
2011-2018	Vietnam MECOR Course - Level 1, Level 2 and Level 3 workshops	$90,000
2010	Secretariat of Pacific Community Evaluation of the effectiveness of the Community Component of the Kiribati Quality TB Epidemic Control Project	$4,800
2010	Australia Menzies School of Health Research Development of educational resources, 3 Talking posters and 3 flipcharts on pneumonia, bronchiolitis and bronchiectasis	$35,000
2009	Federated States of Micronesia Capacity Building for TB nurses and related health workers in the Federated States of Micronesia (FSM) A partnership with Eli Lilly	$31,424

PROJECTS

Date	Recipient/Project	Award
2009-2012	Cambodian Anti-Tuberculosis Association Cambodia: TB control in elderly and vulnerable groups and in factories	$110,637
2008-2009	Secretariat of Pacific Community TB Drama Video Production in Kiribati	$35,000
2008-2009	Federated States of Micronesia (Chuuk) Support of a tutor and education materials for children for MDRTB	$5,537
2007-2009	Australia Aboriginal Health Council of Western Australia (AHCWA) Beyond the Big Smoke: a clear vision for Aboriginal tobacco control in Western Australia	$200,000
2007-2009	Australia Aboriginal Health and Medical Research Council (AH&MRC) BREATHE: Project. This project aims to reduce smoking-related disease and morbidity for Aboriginal people in NSW communities	$490,200
2007-2008	Secretariat of Pacific Community Enhancing Community involvement in TB control through Theatre in Kiribati	$40,926
2006-2021	Pacific Islands TB Controllers Association PITCA – Training of nurses and related workers in the Northern Pacific	$204,898
2006	Kiribati Nurse training in Kiribati	$41,699
2006	Building of TB Laboratory at Tunguru Hospital Kiribati	$30,000
2005	Maningrida Lung Health Community Awareness Raising Pilot Project Funding (James N Kirby Foundation $12,000)	$20,000
2002 - 2005	TB laboratory Training Tonga, Samoa, Kiribati and the Cook Islands	$189,231
2001	Distribution of books: Clinical Tuberculosis and Tobacco or Health: A Global Threat through Teaching Aids at Low Cost.	$2,000
2000	Sponsored Professor Don Enarson, Scientific Director of IUATLD, to be guest speaker at the NSW Health Department TB Nurses Conference	$3,000
2000	Participation in the WHO, "First Stop TB Meeting in the Pacific Islands" in Noumea	$4,000
1999	Provided funding for the translation of "Tobacco or health: A Global Threat" through Teaching Aids at Low Cost	$3,000
1999	Visit to Port Moresby and Lae to evaluate the DOTS TB Programme	$4,000
1999	Funded purchase of course textbooks for Epidemiology Workshop in Port Moresby	$1,000

2021 FINANCIALS AND ACFID SUMMARY FINANCIALS

DIRECTORS' REPORT

ARC's Directors present their report on the Company for the financial year ended 31 December 2021

Australian Respiratory Council (A Company Limited by Guarantee) A.B.N. 11 883 368 767

Directors

The Directors at any time during or since the end of the financial period are:

Name and Qualifications Experience and Special Responsibilities

David Macintosh AM
BBS (UTS), FCA
Appointed to the Board 19 June 1997.
President Interest in contracts: Nil

Robyn Johnson
GAICD
Appointed to the Board on 5 November 2012. Vice President
Interest in contracts: Nil

Christopher Turner
B.Comm Dip FS Assoc Fin FPA
Appointed to the Board 22nd May 2017. Finance Director
Interest in contracts: Nil

Ian W Ramsay
LL.B (Syd.)
Board member 2008 - February 2012 Reappointed to the Board 5 November 2012 Interest in contracts: Nil

Kerrie Shaw
Registered Nurse
Appointed to the Board 4 February 2013. Chair ARC Project Group
Interest in contracts: Nil

Professor Gregory Fox
BSc(Med) MBBS (Hons) FRACP PhD MIPH
Appointed to the Board 22 May 2017
Interest in contracts: Nil

Jean Santos
BSCS IT
Appointed to the Board on 27 May 2019
Interests in contracts: Nil

Clinical Associate Professor Peter Gianoutsos
MB CHB(Univ of Otago), FRACP FCCP
Resigned 1 March 2021

Amanda Christensen AM
Registered Nurse
Appointed to the Board on 22 January 2001. Executive Director
Interests in contracts: Nil

Meetings of Directors

The number of Directors' meetings held during the financial period and the number of meetings attended by each Director were:

Name of Director	Number Held while in Office	Number attended
David Macintosh AM	4	4
Robyn Johnson	4	4
Christopher Turner	4	4
Ian Ramsay	4	4
Kerrie Shaw	4	3
Gregory Fox	4	4
Jean Santos	4	3
Amanda Christensen AM	4	4

DIRECTORS' REPORT

PRINCIPAL ACTIVITIES

The principal activity of the Company during the financial year was to provide funding and expertise of research and projects aimed at improving lung health.

The Company's short term objectives are to:

i. continue to build expertise in respiratory health.
ii. foster innovation in respiratory health research.
iii. deliver and measure positive impacts to communities and research.
iv. enhance ARC's role in the country as a unique non-government organisation in the area of lung health.
v. advocate to improve respiratory health, particularly in relation to TB and smoking at state, national and international levels.

The Company's long term objectives are to:

i. develop and support innovative and effective approaches to research and development in lung health.
ii. to improve lung health in communities, with an emphasis on disadvantaged groups.

To achieve these objectives, the Company has adopted the following Strategies:

iii. the Board strives to attract sustainable partnerships.
iv. the Board undertakes fundraising.
v. the Board actively seeks funding.

The Company is incorporated under the Corporations Act 2001 and is a Company limited by guarantee. If the Company is wound up, the Constitution states that each member is required to contribute a maximum of $1.00 towards meeting any outstanding obligations of the Company. At 31 December 2021 the collective liability of members was $25 (2020:$25)

AUDITORS' INDEPENDENCE DECLARATION UNDER SECTION 307C OF THE CORPORATION ACT 2001

A copy of the Auditor's Independence Declaration follows this Directors' Report.
Signed in accordance with a resolution of the Board of Directors:

Christopher Turner
Director
Sydney, 26th April 2022

Amanda Christensen
Executive Director
Sydney, 26th April 2022

Auditor's Independence Declaration Under Section 307C of the Corporations Act 2001 to the Directors of Australian Respiratory Council

I declare that, to the best of my knowledge and belief, during the year ended 31 December 2021there have been:
i) no contraventions of the Auditor independence requirements as set out in the Corporations Act 2001 in relation to the audit; and
ii) no contraventions of any applicable code of professional conduct in relation to the audit.

CONROY AUDIT AND ADVISORY

D R Conroy FCA
Principal
Auditor No: 2251
Sydney, 26th April 2022

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the Year Ended 31 December 2021

	Note	2021 $	2020 $
Revenue	2	560,136	583,307
Depreciation and amortisation expense	3	(3,832)	(6,216)
Research grants, fellowships and scholarships		(40,000)	(70,000)
Education & scholarships		(2,795)	(2,250)
Project funding		(119,367)	(100,549)
Investment expense		(19,203)	(18,636)
Employee benefits expense		(194,990)	(264,318)
Other expenses		(150,748)	(100,067)
Profit/(Loss) before income tax		29,201	21,271
Income tax expense	1	-	-
Profit/(Loss) for the year		29,201	21,271
Other comprehensive income after tax:			
Net gain on revaluation of investment property		-	-
Net gain /(Loss) on revaluation of financial assets		161,229	56,224
Other comprehensive income for the year net of tax		161,229	56,224
Total comprehensive income for the year		190,430	77,495

The accompanying notes form part of these financial statements

STATEMENT OF FINANCIAL POSITION

As At 31 December 2021

	Note	2021 $	2020 $
ASSETS			
Current Assets			
Cash and cash equivalents	5	746,789	394,611
Trade and other receivables	6	18,000	26,850
Other current assets	7	7,189	7,883
Total Current Assets		**771,978**	**429,344**
Non-Current Assets			
Financial assets	8	1,894,374	1,680,525
Property, plant and equipment	9	42,309	45,596
Investment property	10	3,000,000	3,000,000
Total Non-Current Assets		**4,936,683**	**4,726,121**
TOTAL ASSETS		**5,708,661**	**5,155,465**
LIABILITIES			
Current Liabilities			
Trade and other payables	11	67,275	67,766
Unexpended Funds	12	354,859	-
Employee Entitlements	13	66,675	58,277
Total Current Liabilities		**488,809**	**126,043**
TOTAL LIABILITIES		**488,809**	**126,043**
NET ASSETS		**5,219,852**	**5,029,422**
EQUITY			
Reserves	13	4,528,880	4,367,651
Retained earnings		690,972	661,771
TOTAL EQUITY		**5,219,852**	**5,029,422**

The accompanying notes form part of these financial statements

STATEMENT OF CHANGES IN EQUITY

For The Year Ended 31 December 2021

	Capital Profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (Accumulated Losses) $	Total $
Balance at 1 January 2020	2,411,980	1,899,447	640,500	4,951,927
Profit/(Loss) attributable to members	-	-	21,271	21,271
Total comprehensive income for the year	-	56,224	-	56,224
Transfers on sale of assets	-	-	-	-
Balance at 31 December 2020	**2,411,980**	**1,955,671**	**661,771**	**5,029,422**
Profit/(Loss) attributable to members	-	-	29,201	29,201
Total comprehensive income for the year	-	161,229	-	161,229
Balance at 31 December 2021	**2,411,980**	**2,116,900**	**690,972**	**5,219,852**

STATEMENT OF CASH FLOWS

For The Year Ended 31 December 2021

	Note	2021 $	2020 $
Cash Flows From Operating Activities			
Receipts from customers		997,243	564,123
Payments to suppliers and employees		(665,459)	(632,543)
Interest received		62	406
Distributions received		86,739	52,187
Net cash provided by (used in) operating activities	18(b)	**418,585**	**(15,827)**
Cash Flows From Investing Activities			
Proceeds from sale of available-for-sale investments		264,468	308,246
Payment for property, plant and equipment		(545)	(7,610)
Payment for available-for-sale investments		(330,330)	(370,528)
Net cash provided by (used in) investing activities		**(66,407)**	**(69,892)**
Net Increase/(Decrease) in Cash Held		352,178	(85,719)
Cash at beginning of financial year		394,611	480,330
Cash at end of financial year	18(a)	**746,789**	**394,611**

The accompanying notes form part of these financial statements

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2021

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting entity

Australian Respiratory Council applies Australian Accounting Standards – Reduced Disclosure Requirements as set out in AASB 1053: Application of Tiers of Australian Accounting Standards.

The financial statements are general purpose financial statements that have been prepared in accordance with Australian Accounting Standards – Reduced Disclosure Requirements of the Australian Accounting Standards Board (AASB) and the Australian Charities and Not-for-profits Commission Act 2012. The company is a not-for-profit entity for financial reporting purposes under Australian Accounting Standards.

Australian Accounting Standards set out accounting policies that the AASB has concluded would result in financial statements containing relevant and reliable information about transactions, events and conditions. Material accounting policies adopted in the preparation of these financial statements are presented below and have been consistently applied unless stated otherwise.

The financial statements, except for the cash flow information, have been prepared on an accrual basis and are based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and financial liabilities. The amounts presented in the financial statements have been rounded to the nearest dollar.

Accounting Policies

Income Tax

No provision for income tax has been raised as the entity is exempt from income tax under DIV 50 of the Income Tax Assessment Act 1997.

Inventories

Inventories are measured at the lower of cost and net realisable value.

Investment Property

Investment property is property held either to earn rental income or for capital appreciation or for both, but not for sale in the ordinary course of business use in the production or supply of goods or services or for administrative purposes. Investment property is measured at cost on initial recognition and improvements have been depreciated over their useful life.

When the use of a property changes such that it is reclassified as property, plant and equipment, its fair value at the date of reclassification becomes its cost for subsequent accounting.

Depreciation

The depreciable amount of all fixed assets, including buildings and capitalised lease assets, but excluding freehold land, is depreciated on a straight line basis and diminishing value basis over their useful lives to the Company commencing from the time the asset is held ready for use.

The depreciation rates used for each class of depreciable assets are:

Class of Fixed Asset	Depreciation Rate
Plant and Equipment	7.5% - 50%

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains and losses are included in the statement of profit or loss.

Impairment of non-financial assets

Non-financial assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount.

Recoverable amount is the higher of an asset's fair value less costs of disposal and value-in-use. The value-in-use is the present value of the estimated future cash flows relating to the asset using a pre-tax discount rate specific to the asset or cash-generating unit to which the asset belongs. Assets that do not have independent cash flows are grouped together to form a cash-generating unit.

Leases

At inception of a contract, the entity assesses if the contract contains or is a lease. If there is a lease present, a right-of-use asset and a corresponding lease liability is recognised by the entity where the entity is a lessee. However all contracts that are classified as short-term leases (lease with remaining lease term of 12 months or less) and leases of low-value assets are recognised as an operating expense on a straight-line basis over the term of the lease.Initially the lease liability is measured at the present value of the lease payments still to be paid at the commencement date. The lease payments are discounted at the interest rate implicit in the lease. If this rate cannot be readily determined, the entity uses the incremental borrowing rate.Lease payments included in the measurement of the lease liability are as follows:–fixed lease payments less

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2021

any lease incentives;–variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;–the amount expected to be payable by the lessee under residual value guarantees;–the exercise price of purchase options, if the lessee is reasonably certain to exercise the options;–lease payments under extension options, if the lessee is reasonably certain to exercise the options; and–payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease. The right-of-use assets comprise the initial measurement of the corresponding lease liability as mentioned above, any lease payments made at or before the commencement date, as well as any initial direct costs. The subsequent measurement of the right-of-use assets is at cost less accumulated depreciation and impairment losses.Right-of-use assets are depreciated over the lease term or useful life of the underlying asset, whichever is the shortest.Where a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the entity anticipates to exercise a purchase option, the specific asset is depreciated over the useful life of the underlying asset.

Trade and other payables
These amounts represent liabilities for goods and services provided to the company prior to the end of the financial year and which are unpaid. Due to their short-term nature they are measured at amortised cost and are not discounted. The amounts are unsecured and are usually paid within 30 days of recognition.

Employee Benefits
Short-term employee benefits
Liabilities for wages and salaries, including non-monetary benefits, annual leave and long service leave expected to be settled wholly within 12 months of the reporting date are measured at the amounts expected to be paid when the liabilities are settled.

Other long-term employee benefits
The liability for annual leave and long service leave not expected to be settled within 12 months of the reporting date are measured at the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the reporting date on national government bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows.

Revenue recognition
The company recognises revenue as follows:

Revenue from contracts with customers
Revenue is recognised at an amount that reflects the consideration to which the company is expected to be entitled in exchange for transferring goods or services to a customer. For each contract with a customer, the company: identifies the contract with a customer; identifies the performance obligations in the contract; determines the transaction price which takes into account estimates of variable consideration and the time value of money; allocates the transaction price to the separate performance obligations on the basis of the relative stand-alone selling price of each distinct good or service to be delivered; and recognises revenue when or as each performance obligation is satisfied in a manner that depicts the transfer to the customer of the goods or services promised.

Variable consideration within the transaction price, if any, reflects concessions provided to the customer such as discounts, rebates and refunds, any potential bonuses receivable from the customer and any other contingent events. Such estimates are determined using either the 'expected value' or 'most likely amount' method. The measurement of variable consideration is subject to a constraining principle whereby revenue will only be recognised to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. The measurement constraint continues until the uncertainty associated with the variable consideration is subsequently resolved. Amounts received that are subject to the constraining principle are recognised as a refund liability.

Sales revenue
Interest revenue
Interest revenue is recognised as interest accrues using the effective interest method. This is a method of calculating the amortised cost of a financial asset and allocating the interest income over the relevant period using the effective interest rate, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to the net carrying amount of the financial asset.

Donations
Donations are recognised when received.

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2021

Grants
Grant revenue is recognised in profit or loss when the company satisfies the performance obligations stated within the funding agreements.If conditions are attached to the grant which must be satisfied before the company is eligible to retain the contribution, the grant will be recognised in the statement of financial position as a liability until those conditions are satisfied.

Other revenue
Other revenue is recognised when it is received or when the right to receive payment is established.

Current and non-current classification
Assets and liabilities are presented in the statement of financial position based on current and non-current classification.

An asset is classified as current when: it is either expected to be realised or intended to be sold or consumed in the company's normal operating cycle; it is held primarily for the purpose of trading; it is expected to be realised within 12 months after the reporting period; or the asset is cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period. All other assets are classified as non-current.

A liability is classified as current when: it is either expected to be settled in the company's normal operating cycle; it is held primarily for the purpose of trading; it is due to be settled within 12 months after the reporting period; or there is no unconditional right to defer the settlement of the liability for at least 12 months after the reporting period. All other liabilities are classified as non-current.

Deferred tax assets and liabilities are always classified as non-current.

Cash and cash equivalents
Cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Trade and other receivables
Other receivables are recognised at amortised cost, less any allowance for expected credit losses.

Goods and Services Tax (GST)
Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Tax Office. In these circumstances the GST is recognised as part of the cost of acquisition of the asset or as part of an item of the expense. Receivables and payables in the statement of financial position are shown inclusive of GST.

Comparative Figures
Where required by Accounting Standards comparative figures have been adjusted to conform with changes in presentation for the current financial year.

Financial Instruments
Recognition and initial measurement

Financial instruments, incorporating financial assets and financial liabilities, are recognised when the entity becomes

a party to the contractual provisions of the instrument.

Financial instruments are initially measured at cost plus transactions cost where the instrument is not classified as

at fair value through profit or loss. Transaction costs related to instruments classified as at fair value through profit or

loss are expensed to profit or loss immediately. Financial instruments are classified and measured as set out below.

Classification and subsequent measurement

1. Financial assets at fair value through profit or loss Financial assets are classified at fair value through the profit or loss when they are held for trading for the purpose of profit or loss in the short term profit taking. Realised and unrealised gains and losses arising from changes in fair value are included in profit or loss in the period in which they arise.

2. Loans and receivables
   Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and are subsequently measured at amortised cost using the effective interest rate method.

3. Held to maturity investments
   Held to maturity investments are non-derivative financial assets with fixed maturities and fixed or determinable payments, and it is the entity's intention to hold these investments to maturity. They are subsequently measured at amortised cost using the effective interest rate method.

4. Available for sale financial assets
   Available for sale financial assets are non derivative financial assets that are either designated as such or that are not classified in any of the other categories. They comprise investments in the equity of other entities where there is neither a fixed maturity nor fixed or determinable payments.

NOTES TO AND FORMING PART OF THE ACCOUNTS

For The Year Ended 31 December 2021

5. Financial Liabilities
   Non derivative financial liabilities (excluding financial guarantees) are subsequently measured at amortised cost using the effective interest rate method.

Fair value measurement
When an asset or liability, financial or non-financial, is measured at fair value for recognition or disclosure purposes, the fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date; and assumes that the transaction will take place either: in the principal market; or in the absence of a principal market, in the most advantageous market.

Fair value is measured using the assumptions that market participants would use when pricing the asset or liability, assuming they act in their economic best interests. For non-financial assets, the fair value measurement is based on its highest and best use. Valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, are used, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

Critical Accounting Estimates Judgments and Assumptions
The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts in the financial statements. Management continually evaluates its judgements and estimates in relation to assets, liabilities, contingent liabilities, revenue and expenses. Management bases its judgements, estimates and assumptions on historical experience and on other various factors, including expectations of future events, management believes to be reasonable under the circumstances. The resulting accounting judgements and estimates will seldom equal the related actual results. The judgements, estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities (refer to the respective notes) within the next financial year are discussed below.

Estimation of useful lives of assets
The company determines the estimated useful lives and related depreciation and amortisation charges for its property, plant and equipment and finite life intangible assets. The useful lives could change significantly as a result of technical innovations or some other event. The depreciation and amortisation charge will increase where the useful lives are less than previously estimated lives, or technically obsolete or non-strategic assets that have been abandoned or sold will be written off or written down.

Impairment of non-financial assets other than goodwill and other indefinite life intangible assets
The company assesses impairment of non-financial assets other than goodwill and other indefinite life intangible assets at each reporting date by evaluating conditions specific to the company and to the particular asset that may lead to impairment. If an impairment trigger exists, the recoverable amount of the asset is determined. This involves fair value less costs of disposal or value-in-use calculations, which incorporate a number of key estimates and assumptions.

Employee benefits provision
As discussed in note 1, the liability for employee benefits expected to be settled more than 12 months from the reporting date are recognised and measured at the present value of the estimated future cash flows to be made in respect of all employees at the reporting date. In determining the present value of the liability, estimates of attrition rates and pay increases through promotion and inflation have been taken into account.

The Notes to the Financial Statements
The notes present information that is relevant to an understanding of the material items contained in the financial statements. The notes give prominence to areas that are considered to be most relevant to an understanding of the statement of financial position and the profit or loss and other comprehensive income and statement of changes in equity and cashflows and are cross referenced to those statements.

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

	2021 $	2020 $
2. Revenue		
Operating Activities		
Appeals	57,311	54,530
Net profit/(loss) on sale of investments	(13,242)	(33,198)
Rental revenue for property investment	238,261	213,624
Interest received	62	406
Fund distributions from investments	86,739	52,187
Legacies & donations	16,226	45,640
Member subscriptions	636	750
Miscellaneous income	1,543	787
Covid 19 Relief - Jobkeeper/Jobsaver	33,000	77,400
Covid 19 Relief - Cash Boost	-	51,463
State Grants	1,500	-
Project Funding	101,272	119,718
Sundry income	36,828	-
Total Revenue	560,136	583,307
3. Profit From Ordinary Activities		
Expenses		
Depreciation of Non-Current Assets:		
Plant and equipment	3,832	6,216
4. Auditor's Remuneration		
Remuneration of the Auditor of the Company for:		
- Auditing the Financial Report	15,400	14,900
5. Cash and Cash Equivalents		
Cash at bank	746,789	394,611
	746,789	394,611
6. Trade and Other Receivables		
Trade debtors	18,000	26,850
	18,000	26,850
7. Other Current Assets		
Prepayments	7,189	7,883

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

	2021 $	2020 $
8. Financial Assets		
Non Current		
Managed funds - at fair value	1,894,374	1,680,525
Total financial assets	**1,894,374**	**1,680,525**
9. Property, Plant & Equipment		
Non Current		
Plant & equipment at cost	128,579	128,034
Less: accumulated depreciation and impairment	(86,270)	(82,438)
Total property, plant and equipment	**42,309**	**45,596**

Movements in Carrying Amounts

Movement in the carrying amounts for each class of property, plant and equipment between the beginning and the end of the current financial year:

	Plant and Equipment $	Total $
Balance at the beginning of year	45,596	45,596
Additions	545	545
Disposals	-	-
Depreciation expense	(3,832)	(3,832)
Carrying amount at the end of year	**42,309**	**42,309**

10. Investment Property		
Non Current		
Investment property - at fair value Directors' valuation	3,000,000	3,000,000
Total	**3,000,000**	**3,000,000**

Investment Property Revaluations

At 31 December 2021, the property has been recorded at Directors valuation which is based on an independent registered valuers report from WK Wotton & Partners Mr Wayne Wotton and Mr Brett Allan Davis, Certified Practice Valuer API Member No: 68007 and 68956 repectively dated 22 November 2017.

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

		2021 $	2020 $
11.	**Trade and Other Payables**		
	Unsecured liabilities		
	Trade payables	4,731	6,200
	Sundry payables and accrued expenses	62,544	61,566
	Total	**67,275**	**67,766**
12.	**Unexpended Funds**		
	Unexpended Funds	354,859	-
	Total	**354,859**	**-**
13.	**Employee Entitlements**		
	Provision for annual leave	38,842	33,214
	Provision for long service leave	27,833	25,063
	Total	**66,675**	**58,277**
	Number of employees		
	Number of employees at year end	3	3
14.	**Reserves**		
	Capital profits reserve	2,411,980	2,411,980
	Asset revaluation reserve	2,116,900	1,955,671
	Total	4,528,880	4,367,651
	Nature and purpose of reserves		
	(a) Capital Profits		
	The capital profits reserve is used to accumulate realised capital profits		
	Balance at end of year	2,411,980	2,411,980
	(b) Asset revaluation		
	The asset revaluation reserve is used to record increments and decrements in the value of non current assets		
	Balance at beginning of year	1,955,671	1,899,447
	Revaluation increment/(decrement)	161,229	56,224
	Transfers	-	-
	Balance at end of year	**2,116,900**	**1,955,671**

15. Members' Guarantee

The Company is limited by guarantee. If the Company is wound up, the Constitution states that each member is required to contribute a maximum of $1 each towards meeting any outstanding obligations of the Company. At 31 December 2021 the number of members was 25 (2020:25).

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

16. Key Management Personnel

Any person(s) having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any Director (whether executive or otherwise) of that entity is considered key management personnel.

The totals of remuneration paid to key management personnel (KMP) of the Company during the year are as follows:

	2021 $	2020 $
Key management personnel compensation	220,844	229,684

17. After Balance Day Events

The Company exchanged contracts for the sale of its investment property at Lot 5, Level 4, 16 O'Connell St Sydney on the 18th November, 2021. The sale price was $5,334,450. The settlement date for the property is between the 1st June 2022 and the 30th June 2022, with the purchaser giving 10 days notice of the settlement between these dates. The sale will be recorded in the company's books on the date of settlement in accordance with accounting standard AASB 140.

17. Cash Flows Information

(a) Cash at the end of the financial year as shown in the cash flow statementis reconciled to items in the balance sheet as follows:

Cash and cash equivalents	746,789	394,611

(b) Reconciliation of Cash Flow from Operations with Profit after Income Tax		
Net income/loss for the period	29,201	21,271
Cash flows excluded from profit attributable to operating activities		
Non cash flows in profit		
Depreciation	3,832	6,216
Net (gain)/loss on disposal of investments	13,242	33,198
Changes in assets and liabilities, net of the effects of purchase and disposal of subsidiaries		
(Increase)/decrease in trade and term receivables	8,850	(8,941)
(Increase)/decrease in prepayments	694	(1,973)
Increase/(decrease) in trade payables and accruals	(491)	(67,089)
Increase/(decrease) in unexpended funds	354,859	-
Increase/(decrease) in provision for employee benefits	8,398	1,491
Net cash inflow/(outflow) from operating activities	418,585	(15,827)

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

	2021 $	2020 $
Information and declarations to be furnished under the Charitable Fundraising Act 1991, Section 23		
(a) Details of aggregate gross income and total expenses of fundraising appeals		
Gross proceeds from fundraising appeals	73,536	100,170
Less: Total direct costs of fundraising	12,126	18,871
Net surplus from fundraising activities	**61,410**	**81,299**
(b) Statement showing how funds received were applied to charitable purposes		
This surplus is used for research grants, fellowships and scholarships.		
(c) Fundraising appeals conducted during the financial period		
Appeals only.		
(d) Comparisons		
Total cost of fundraising/gross income from fundraising	16%	19%
Net surplus from fundraising/gross income from fundraising	84%	81%
Total cost of services/total expenditure	100%	100%
Total cost of services/total income received	16%	19%

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

	2021 $	2020 $
REVENUE		
Donation and Gifts - Monetary & Non monetary	60,073	65,649
Bequests and Legacies	13,463	34,521
Grants		
Other Australian	59,247	81,796
Other overseas	396,885	37,922
Investment Income	311,820	233,019
Other Income	73,507	130,400
TOTAL REVENUE	**914,995**	**583,307**
EXPENDITURE		
International Aid and Development		
International programs		
Funds to international projects	53,157	19,576
Program Support Costs	66,210	66,210
Community education	12,510	16,815
Fundraising Costs		
Public	12,126	18,871
Accountability and Administration	216,369	219,243
Total International Aid and Development Programs Expenditure	**360,372**	**340,715**
Domestic projects	79,863	142,461
Investment Expenditure	61,892	49,829
Grants Unexpended	354,859	-
Other Expenses	28,808	29,051
TOTAL EXPENDITURE	**885,794**	**562,056**
EXCESS/(SHORTFALL) OF REVENUE OVER EXPENDITURE	29,201	21,251
Net gain/(loss) on revaluation of financial assets and investment property	161,229	56,244
EXCESS/(SHORTFALL) OF REVENUE OVER EXPENDITURE	190,430	77,495

During the financial year the Australian Respiratory Council had no transactions in the Revenue or Expenditure for International Political or Religious Adherence Promotion Program categories.

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct. For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

	2021 $	2020 $
ASSETS		
Current Assets		
Cash and cash equivalents	746,789	394,611
Trade and other receivables	18,000	26,850
Other current assets	7,189	7,883
Total Current Assets	**771,978**	**429,344**
Non-Current Assets		
Financial assets	1,894,374	1,680,525
Property, plant and equipment	42,309	45,596
Investment property	3,000,000	3,000,000
Total Non-Current Assets	**4,936,683**	**4,726,121**
TOTAL ASSETS	**5,708,661**	**5,155,465**
LIABILITIES		
Current Liabilities		
Trade and other payables	67,275	67,766
Unexpended Funds	354,859	-
Provisions	66,675	58,277
Total Current Liabilities	**488,809**	**126,043**
TOTAL LIABILITIES	**488,809**	**126,043**
NET ASSETS	**5,219,852**	**5,029,422**
EQUITY		
Reserves	4,528,880	4,367,651
Retained earnings	690,972	661,771
TOTAL EQUITY	**5,219,852**	**5,029,422**

At the end of the financial year the Australian Respiratory Council had no balances in the Inventories, Assets held for sale, Non current Trade and other receivables, Intangibiles, Current tax liabilities and Non Current Liabilities categories.

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct. For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

NOTES TO THE FINANCIAL STATEMENTS

For The Year Ended 31 December 2021

	Capital profits Reserves $	Asset Revaluation Reserves $	Retained Earnings/ (accumulated losses) $	Total $
Balance at 1 January 2020	2,411,980	1,899,447	640,500	4,951,927
Excess of revenue over expense	-	-	21,271	21,271
Total comprehensive income for the year	-	56,224	-	56,224
Transfers on sale of assets	-	-	-	-
Balance at 31 December 2020	2,411,980	1,955,671	661,771	5,029,422
Excess of revenue over expense	-	-	29,201	29,201
Total comprehensive income for the year	-	161,229	-	161,229
Transfers on sale of assets	-	-	-	-
Balance at 31 December 2021	**2,411,980**	**2,116,900**	**690,972**	**5,219,852**

The above disclosures are prepared in accordance with the requirements set out in the ACFID Code of Conduct. For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

DIRECTORS' DECLARATION

The directors of the registered entity declare that, in the directors' opinion:

1. The financial statements and notes, are in accordance with the Australian Charities and Not-for-profits Commission Act 2012 and:

   i. comply with Australian Accounting Standards – Reduced Disclosure Requirements; and

   ii. give a true and fair view of the financial position of the registered entity as at 31 December 2022 and of its performance for the year ended on that date.

2. There are reasonable grounds to believe that the registered entity will be able to pay its debts as and when they become due and payable.

This declaration is signed in accordance with subs 60.15(2) of the Australian Charities and Not-for-profits Commission Regulation 2013.

Christopher Turner
Director
Sydney, 26th April 2022

Amanda Christensen
Executive Director
Sydney, 26th April 2022

INDEPENDENT AUDITOR REPORT

To The Members of the Australian Respiratory Council

Australian Respiratory Council
(A Company Limited by Guarantee)
A.B.N. 11 883 368 767

Report on the Audit of the Financial

Report Opinion

We have audited the financial report of Australian Respiratory Council (the registered entity), which comprises the statement of financial position as at 31 December 2021, the statement of profit or loss and other comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, notes comprising a summary of significant accounting policies and other explanatory information, and the directors' declaration

In our opinion, the accompanying financial report of Australian Respiratory Council has been prepared in accordance with Div 60 of the Australian Charities and Not-for-profits Commission Act 2012, including:

(i) giving a true and fair view of the registered entity's financial position as at 31 December 2021 and of its financial performance for the year then ended; and

(ii) complying with Australian Accounting Standards – Reduced Disclosure Requirements and the Australian Charities and Not-for-profits Commission Regulation 2013, and the Corporations Regulations 2001;

We have also audited the summary financial reports of Australian Respiratory Council which in our opinion are in accordance with the requirements set out in the ACFID Code of Conduct. For further information on the Code please refer to the ACFID website "www.acfid.asn.au".

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Report section of our report. We are independent of the registered entity in accordance with the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110: Code of Ethics for Professional Accountants (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Information Other than the Financial Report and Auditor's Report Thereon

The directors are responsible for the other information. The other information comprises the information included in the registered entity's annual report for the year ended 31 December 2021, but does not include the financial report and our auditor's report thereon. Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon. In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the Financial Report

The directors of the registered entity are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards – Reduced Disclosure Requirements and the Australian Charities and Not-for-profits Commission Act 2012 and for such internal control as the directors determine is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the directors are responsible for assessing the registered entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the company or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

INDEPENDENT AUDITOR REPORT

To The Members of the Australian Respiratory Council

As part of an audit in accordance with the Australian Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

D R Conroy FCA
Principal
Auditor No: 2251
Sydney, 26th April 2022

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WORLD TB DAY 2021

Each year, we commemorate World Tuberculosis (TB) Day on March 24 to raise public awareness about the devastating health, social and economic consequences of TB, and to step up efforts to end the global TB epidemic. The date marks the day in 1882 when Dr Robert Koch announced that he had discovered the bacterium that causes TB, which opened the way towards diagnosing and curing this disease.

TB remains one of the world's deadliest infectious killers. Each day, nearly 4000 lose their lives to TB and close to 28,000 people fall ill with this preventable and curable disease. Global efforts to combat TB have saved an estimated 63 million lives since the year 2000.

The theme of World TB Day 2021 - 'The Clock is Ticking' – conveyed the sense that the world is running out of time to act on the commitments to end TB made by global leaders. This is especially critical in the context of the COVID-19 pandemic that has put End TB progress at risk, and to ensure equitable access to prevention and care in line with WHO's drive towards achieving Universal Health Coverage.

The clock is ticking! A World TB Day campaign for action!

On World TB Day, the call for all nations is to keep the promise to:

- Accelerate the End TB Response to reach the targets set in Sustainable Development Goals, WHO End TB Strategy, the Moscow Declaration to End TB and the political declaration of the UN High-Level Meeting on TB
- Diagnose and treat 40 million people with TB by 2022 including 3.5 million children and 1.5 million people with drug-resistant TB. This is in line with WHO's overall drive towards Universal Health Coverage and the WHO Director General's flagship initiative "Find. Treat. All. #EndTB" jointly with the Global Fund and Stop TB Partnership
- Reach 30 million people with TB preventive treatment by 2022 so that those people most at risk receive TB preventive treatment, including 24 million household contacts of TB patients - 4 million of whom are children under 5 - and 6 million people living with HIV
- Mobilize sufficient and sustainable financing to reach USD 13 billion a year to support efforts to end TB; for every USD 1 invested to end TB, USD 43 is returned as the benefits of a healthy functioning society (Economist/ Copenhagen Consensus)
- Invest in TB research to reach at least USD 2 billion a year for better science, better tools and better delivery.

THE CLOCK IS TICKING. IT'S TIME TO KEEP OUR PROMISES. IT'S TIME TO #END TB.

arc
australian respiratory council
prevention and cure of respiratory illness

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