ANNUAL REPORT - 2013
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We recognise the unique position of the Aboriginal and Torres Strait Islander peoples in Australia’s culture and history, and acknowledge them as the traditional owners of the land. The Centre for Research Excellence (CRE) in Immunisation in Under-studied and Special Risk Populations is funded from 2012-16 by the NHMRC, and is dedicated to addressing an identified gap in knowledge using high quality, multi-method research in a collaborative team environment.

The mission of the CRE is to address gaps in knowledge in immunisation of under-studied and special-risk populations through research, consultation, advocacy, policy and capacity building.

The use of vaccines at the population level has increased substantially in both cost and complexity in Australia and internationally over the past decade or more. The National Immunisation Program (NIP) is the single most costly publicly-funded preventive program in Australia, making high quality research evidence to underpin vaccine policy essential. Such evidence relating to vulnerable population subgroups at high disease risk usually remains beyond the scope of funding from government or industry. In industry-sponsored clinical trials, high-risk groups are often specifically excluded. Such research is not commercially viable and is usually outside the remit of government agencies. High-risk groups suffer disproportionate morbidity and mortality, either because of less robust immunity (such as neonates, pregnant women and the frail elderly) or because of co-morbidities and environmental factors (such as Aboriginal and Torres Strait Islanders, migrants, travellers and refugees).

The CRE brings together experts in the field from the University of New South Wales, The National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases, The Children’s Hospital at Westmead, The Kirby Institute, The Centre for Infectious Diseases and Microbiology, The University of Sydney and the University of Antwerp. We fund a range of talented post-doctoral researchers and research students who work with the team of chief and associate investigators to fulfilling our goals under four streams of the CRE:

- Aboriginal and Torres Strait Islander vaccination needs
- Neonatal and Parental vaccination strategies
- Frail elderly
- Migrant, traveller and refugee health

We had a very productive year in 2013, including our second Scientific Advisory Board (SAB) meeting in November 2013. The CRE team was also successful with a range of new grants and fellowships in 2013, outlined in this report, which enabled us to consolidate and build on the research under the CRE streams. The highlight of 2013 was a national workshop on immunisation in migrants, refugees and travellers, which was the first time this topic was discussed at a national forum. This resulted in a position paper and recommendations which were submitted to peak infectious diseases and immunisation committees in the country.

Workshop on allergy and neonatal immunisation was hosted and organised by our CRE and the Centre for Food and allergy in Melbourne. A range of new students and fellows have also joined the CRE, including Aboriginal researcher Megan Williams, bringing a wide range of research interests and expertise to the group.

In summary, 2013 was a very busy and productive year, where we consolidated and built on the achievements of the CRE. The CRE has been enriched by grant-funded research and a range of new affiliates and students. We look forward to consolidating and building on the achievements of 2013 into the future life of the CRE.

Professor Raina MacIntyre
1. Generate new knowledge leading to improved health outcomes
2. Ensure effective transfer of research outcomes into health policy and/or practice
3. Develop the health and medical research workforce by providing opportunities to advance the training of new researchers, for future independent research and leadership roles
4. Facilitate collaboration
5. Record of Research and Translation Achievement

A Scientific Advisory Board (SAB) was established to provide expert advice and strategic direction for the CRE. The 2013 SAB members were Professor Margaret Burgess (Chair), Professor David Scheifele, Dr Wendy Bissinger, Professor Lisa Maher, Professor Terry Nolan, Professor Ross Andrews, Professor Sandra Eades, Dr Margaret Kay and Professor Nicholas Zwar

The terms of reference of the SAB are:

- To advise on the conceptualisation, methods and implementation of the CRE research program;
- To act as a source of expert advice on strategic priorities and policies relevant to the research program;
- To work with the research team to facilitate a research transfer strategy;
- To facilitate communication with government and non-government organisations and their employees;
- To review the scientific quality and outputs of the CRE research program

The second SAB meeting was held on 15 November 2013 at UNSW with 7 SAB members and 16 CRE members attending the meeting. The SAB commended the CRE on the high level of achievement in the first 12 months of CRE.

In terms of common themes, it was noted that lack of whole life register for immunisation was important issue that cross cuts CRE themes and streams. The importance of vaccine economic analyses was discussed.

There is opportunity to work with health services providers to monitor vaccines effectiveness systematically. The SAB suggested that CRE can be part of this. In terms of their advice they felt the main focus should be guidance on research gaps, priorities, methods, and translation.

It was also noted that community studies and community participation should be considered by the CRE. SAB members advised that CRE members discuss ways to carry forward the ongoing work after the life of the CRE.
STREAM 1

ABORIGINAL AND TORRES STRAIT ISLANDER VACCINATION NEEDS

Team members: Al James Ward (Stream Leader), CI Peter McIntyre, CI John Kaldor, CI Rob Menzies, CI Julie Leask, PRP Telphia Joseph, PRP Heather Gidding, PRP Tom Snelling, PRP Bette Liu.

New Students and affiliates

Telphia Joseph: Telphia is a Yamatji woman from Western Australia and the National Indigenous Immunisation Coordinator based with NCIRS. She is CRE Professional research person and MPhil student under supervision of Julie Leask. Project title: ‘Aboriginal Medical Services contribution to Indigenous childhood immunisation in New South Wales and evaluation of reporting of the immunisations to the Australian Childhood Immunisation Register’

Amy Creighton: Amy is a Gomeroi Murri woman from northern NSW and has over 20 years experience in Aboriginal health, she is MPhil student with the University of Sydney under supervision of Julie Leask. Project title: ‘Developing an understanding of how two Aboriginal communities see and experience immunisation during pregnancy’

Dina Saulo: Dina is an Aboriginal researcher at Kirby Institute and MPhil student under supervision of John Kaldor. Project title: ‘Impact of Australia’s HPV vaccination program on prevalence of HPV genotypes in Aboriginal and Torres Strait Islander women attending for Pap testing’

Megan Williams: CRE Profession research person, Megan is part-funded by the CRE since 2013. Project title: ‘Immunisation issues among disadvantaged Aboriginal men’

Jenny Royle: Immunisation Paediatrician in Victoria and CRE fellow. Project title: ‘Identification of culturally sensitive approaches to improve immunization coverage and timeliness among Aboriginal and Torres Strait Islander children and their families’

STREAM ACTIVITIES

RESEARCH HIGHLIGHTS

‘Incidence of Haemophilus influenza type a (Hia) disease in Indigenous Australians in the pre- and post-immunisation eras (R. Menzies)’
This study is completed and the results were published 2013. The study looked at post-vaccination notification rates of invasive Haemophilus influenza disease in the Northern Territory and South Australia with emphasis is on Hia in indigenous children, and comparing them with pre-vaccination rates in Australia, and trends in North America. The study found that there is no evidence of increases in invasive disease due to Hia, other specific non-b types, or non-typeable Hia in Australian Indigenous children

Developing modules for adult and adolescent immunisation on PenCAT – pilot study at Queensland Aboriginal and Islander health Council (R Menzies)
This project emerged from discussion at CRE Aboriginal Health Research Round Table meeting in December 2012, on the need for vaccination coverage data on Aboriginal and Torres Strait Islander adolescents and adults. A proposal was then jointly developed between the CRE and QAIHC, to develop adult and adolescent immunisation modules in the Clinical Audit Tool developed by Pen Computer Systems (PenCAT) the pilot study has been completed the immunisation modules has been rolled out nationally.

‘Gaba Binggi (Good Needles) Developing an understanding of how two Aboriginal communities see and experience immunisation during pregnancy (A Creighton)’
Amy Creighton started this project in 2013 under supervision of Julie Leask as part of MPhil program. This study uses a participatory action research (PAR) framework to better understand how two rural Aboriginal communities see and experience immunisation during pregnancy. The study flows from the findings of the MumVacc study showing that already there is a gap in influenza vaccination rates between immunisation rates between Aboriginal and non-Aboriginal pregnant women. This study involves in-depth interviews with about 25 Aboriginal people from 2 communities in NSW and semi-structured interviews with health providers within the community. The CRE funds Amy Creighton’s scholarship for the MPhil program.

‘Identification of culturally sensitive approaches to improve immunization coverage and timeliness among Aboriginal and Torres Strait Islander children and their families’ (J Royle)’
This project aims to identify the strategies in place to maintain and increase immunisation coverage and timeliness in Aboriginal children up to 5 years of age. Culturally sensitive approaches to providing immunisations to the Aboriginal Community in Victoria are being examined. The project involves visiting Aboriginal Community Controlled Health Organizations throughout Victoria, and targeted General Practices and Council Clinics in an area of northern Melbourne to identify successful approaches to providing immunisations for Aboriginal children and their families. The project started in 2013 after receiving ethics approval from VACCHO. CRE provided seed funding for this project.

‘Linkage of the Australian Childhood Immunisation Register (ACIR) and State-based registers to evaluate and inform Australia’s immunisation program (H Gidding)’
To optimise the health and cost benefits of Australia’s immunisation program, accurate data are required about how well the program is performing. Currently, this information is derived from stand-alone databases such as the Australian Childhood Immunisation Register (ACIR; for vaccine coverage) and compared to separate databases about the occurrence of vaccine preventable diseases. While analysing these datasets in isolation is useful, their linkage would allow more accurate and detailed studies on the relationship between vaccination uptake, timeliness of vaccination, and development of disease, particularly in specific at risk populations who may.
Participants at the Aboriginal Health Research Round Table

**WORKSHOPS AND OTHER ACTIVITIES**

National Indigenous Immunisation Workshop 2013: Lessons learnt and future directions,

The Telethon Institute for Child Health Research hosted this very successful national workshop in November 2013, the workshop was held in Perth in conjunction with the CRE in Immunisation in Under Studied and Special Risk Populations and the National Centre for Immunisation Research and Surveillance. The workshop brought together vaccine researchers with policymakers, service providers and interested stakeholders to present recent and current work in this field, to discuss research priorities, and to foster collaboration and research translation.

CRE’s PRP Tom Snelling was the principal organiser and the CRE was represented on the organising committee. Several members of the stream attended and presented their research projects. The CRE also contributed by sponsoring Associate Professor Kelvin Kong to give a keynote presentation at the conference.

The aims of the workshop were to identify priorities in Indigenous immunisation research; facilitate engagement and networking among researchers, policy makers, immunisation providers, the community and other relevant stakeholders and to facilitate implementation and translation of research into policy and practice.

Follow up with the Aboriginal Health Research Round Table

On 3rd December 2012, the CRE hosted a Stakeholder discussion on with the Aboriginal Community Controlled Health sector. The round table was facilitated by James Ward from the CRE, and Dr Ngiare Brown and Janine Milera from the National Aboriginal Community Controlled Health Organisation (NACCHO), and was attended by 30 participants with expertise and an interest in Aboriginal and Torres Strait Islander vaccination issues from the National Aboriginal Community Controlled Health Organisation (NACCHO) and its affiliates, Aboriginal health councils and Aboriginal health services.
The roundtable aim was to assist the CRE with identifying research priorities in the area of Aboriginal and Torres Strait Islander vaccination needs from the ground up. The roundtable offered the opportunity to hear the views of Aboriginal and Torres Strait Islander people. The stakeholders recommended that the focus of CRE research should be on strategies to improve immunisations coverage and timeliness across the life span, across the rural and urban parts of the country and on the issues of workforce for immunisations. Following the roundtable, 5 newsletters have been sent to the roundtable delegates to keep them informed of on going activities within the stream.

IN THE SPOTLIGHT - DR JENNY ROYLE

Dr Jenny Royle is a Community Immunisation Paediatrician, Medical Officer of Health at Stonnington, chair of Eastern Region Immunisation Committee and conjoint senior lecturer at the School of Public Health and Community Medicine at UNSW.

Jenny has 15 years experience providing clinical immunisation advice for parents and hospital staff, Community Immunisation Providers and the Victorian Department of Health. As an immunisation educator Jenny provides immunisation up-dates for Victorian and national Immunisation Providers. In these up-dates she advocates for Aboriginal Identification and Cultural Safety and facilitates presentations by local Aboriginal Health Workers. Jenny’s project is to identify culturally sensitive approaches to improve immunisation coverage and timeliness of Aboriginal and Torres Strait Islander children and their families. She is collaborating with Brendon Kelaher, Robert Menzies, Wendy Bissinger, Peter McIntyre, Amy Creighton, James Ward, Kate Russo, Julie Leask, Telphia Joseph, and other members of the CRE team. Jenny has been consulting with VACCHO and staff at Aboriginal Community Controlled Health Organisations throughout Victoria. The community input in the preparation of this study has been invaluable.

What is your most memorable experience in doing research with the Aboriginal communities?

Consultation with staff working at Aboriginal Community Controlled Health Organisations throughout Victoria has been both helpful and enlightening. I have visited these organisations in inner and outer metropolitan Melbourne (Fitzroy, Dandenong, Geelong), regional sites within an hour or two of Melbourne (Bendigo, Ballarat, Warrnambool) and more regional sites (Albury-Wodonga and Mildura). I have been welcomed at every Community Health Organisation I have visited. I have benefited greatly from the discussions, opinions and knowledge about their holistic approach to patient care. I am building relationships with Aboriginal Health Workers at each centre and through this engagement I am developing a deeper understanding of cultural safety and therefore approaches to my research in these diverse communities. An example of this personal engagement has been with Lyn Rickerby, midwife at the Dandenong and District Aboriginal Medical Centre (Bunurong Health Service). Through our discussions I have developed a greater understanding of the local Aboriginal communities in this area and the engagement of their service with young mothers and their infants. The strength of their holistic approach is that immunisation is one aspect of primary health care in an all-of-family and all-of-life model of care. Through Lyn I have participated with health promotion on live 3KnD 1503 (local Indigenous radio), and workshop discussions with the Dept. of Health Victoria. Lyn has been guiding me on cultural safety and appropriate wording of academic pieces that include information on members of the Aboriginal community.
NEONATAL AND PARENTAL VACCINATION STRATEGIES

Team members: CI Peter McIntyre (Stream Leader), CI Nicholas Wood, CI Cheryl Jones, CI Julie Leask, Al Kristine Macartney, Al Ben Marais, PRP Tom Snelling

Students and affiliates

Fereshteh Dastouri, University of Sydney, National Centre for Immunisation Research and Surveillance (Supervisor Robert Booy) Research topic: ‘Meningococcal Disease: Understanding Sequelae in Children’ (MUSIC)

Jean Li Kim Moy, University of Sydney, National Centre for Immunisation Research and Surveillance (Supervisor Robert Booy) Research topic: ‘Influenza: Novel Aspects in Diagnosis, Management and Prevention in Children’

Gulam Khandaker PhD (Supervisor Robert Booy) University of Sydney – research topic “The epidemiology, control and management of Influenza”

Dr Ahmed Moustafa, Childrens Hospital at Westmead (Supervisor Nick Wood ) Research topic: ‘Early infant pertussis: prevention and outcomes study (EIPPOS)’

In Australia, pertussis (whooping cough) is a particular problem in infants under 4 months old, who experience the most significant pertussis-related morbidity and are incompletely protected by the current pertussis vaccine strategies. The birth acellular pertussis vaccine trial has finished recruitment and 160 participants from the original study have been enrolled onto a follow up trial examining immunogenicity and reactogenicity of a booster dose of DTPa vd dTpa vaccine in the second year of life. Immunogenicity results from both studies should be available in the first quarter of 2014. In 2013 another infant pertussis vaccine trial was commenced with Financial Markets Foundation for Children funding to examine a 2+1 accelerated infant pertussis vaccine schedule with doses being given at 6 weeks, 12 weeks and 10-11 months old. In addition in 2013 a study exploring pertussis antibodies detected from newborn screening cards was commenced.

Influenza vaccine has been recommended during pregnancy for some years but vaccine uptake remains low. There are many reasons for this, including provider reluctance to recommend vaccination at this time and barriers to access. This CRE enhances knowledge on the parental and health professional attitudes to maternal and neonatal vaccination, and explore which types of vaccine messages and programs are most effective in delivering vaccines to pregnant women to influenza vaccines and vaccine efficacy in protecting mothers and babies through a series of clinical trials and epidemiological studies. A range of studies conducted by PhD students have been conducted. This includes studies on attitudes and uptake of influenza vaccine in pregnancy, uptake of pertussis vaccine in the peripartum period, as well as a randomised control trial on health message framing (gain vs loss vs NSW health control pamphlets).
Two papers have been published on influenza and pertussis-related results. The influenza-related publication has already informed immunisation promotion in one region of NSW and assisted in state-wide awareness rising. An overview of factors that contribute to vaccine uptake in pregnant women has also been published in Lancet Respiratory Medicine.

WORKSHOPS AND OTHER ACTIVITIES

Workshop on allergy and neonatal immunisation in collaboration with food allergy CRE

This workshop was hosted and organised by the CRE and Centre for Food and on 28th October 2013 in Melbourne. The workshop was very well attended, with over 20 participants and included leading Australian experts in allergy from the CRE in Food Allergy and leading vaccine experts from our CRE and other invited guests. Discussion topics include the epidemiology of allergic diseases, biological plausibility of any relationship to vaccines and identify potential studies to examine further any association between food allergy and vaccines. Potential grant applications for the future were discussed.

IN THE SPOTLIGHT - DR MICHELLE BARNES

Dr Michelle Barnes is an advanced paediatric trainee registrar at The Children’s Hospital at Westmead. She completed a PhD examining the symptomatic and serologic epidemiology of pertussis in Australia, which had significant impact on Australian immunisation policy.

What is your most memorable experience in doing your project?

When I did my PhD in epidemiology I was still in medical school and did not have the patient experience that I have since accumulated. There is an interesting dichotomy between the face-to-face, therapeutic relationship with a child and his/her family and the relatively faceless, but more far-reaching aspects of public health research. And although the two, at times, seem disparate, the chance to observe health care at two very different levels has given me a greater insight into health care and the responsibility it places on doctors and public health researchers. I know this will stay with me.

I feel I am only just coming into the public health fold now, and definitely, my research is just in it’s infancy so it is hard to determine the greatest memory that I will have of the projects. Having said that, both projects offer significant benefits, both at the individual level and the community at large. As with most things, it is the people that you interact with that makes the biggest and longer-lasting impression. The warmth, help and humour that everyone in the department has shown me makes it such a pleasure to be here. (And I am not just saying that as I am sure none of them are going to read this.)

Dr Barnes projects include an immunogenicity study of the Human Papilloma Virus vaccine in immunocompromised children; the character of the relationship between influenza infection, influenza vaccination and acute myocardial infarcts; immunogenicity and safety profile of the pneumococcal conjugated vaccine in children who have undergone haematopoietic stem cell transplantation; as well as researching the epidemiology of Ebola virus to provide information that can be translated into a meaningful way to assist health care workers involved in the current pandemic. She will be working with Prof Raina MacIntyre Dr Holly Seale and Dr Anita Heywood, as well as other members of the CRE team.
STREAM 3

FRAIL ELDERLY VACCINATION

**Team members:** CI Raina. MacIntyre (Stream leader), CI Robert Booy, Al Christopher Poulos, PRP Anita Heywood, PRP Holly Seale, PRP Bette Liu

**Students and affiliates**

Amalie Dyda, University of New South Wales (Supervisors Bette Liu, John Kaldor, Raina MacIntyre) PhD student, “Influenza vaccination in the elderly (45 and up study)”

Sevan Dirmesropian, University of New South Wales (Supervisors Anthony Newall, James Wood, Raina MacIntyre) – PhD student, “The impact and cost-effectiveness of vaccination programs in the elderly”.

**STREAM ACTIVITIES**

**RESEARCH HIGHLIGHTS**

*Providing the evidence to guide adult immunisation strategies: a novel approach using a large prospective cohort study and record linkage. Data linkage and prospective population cohort study–45&up study (B. Liu, A. Newall, R. MacIntyre, P. McIntyre, J. Kaldor, A. Heywood, Post Doc Muscatello):*

Vaccine preventable diseases are responsible for substantial morbidity, mortality and health care costs in Australian adults. However adult vaccination is a comparatively under-researched area with many unanswered questions regarding who would benefit most from vaccination, and what are the most appropriate and cost-effective vaccination strategies. This project aims to use a large scale population based prospective cohort study to better quantify the serious spectrum of disease resulting from vaccine preventable diseases such as hospitalisations, and estimate health service costs related to vaccine preventable diseases in an Australian adult population. It will use the 45 and Up Study, which has recruited more than 260,000 adults, 65% aged between 45-64 years at recruitment and 35% of them aged over 65 years. Study participants have provided information on individual risk factors for a wide range of diseases and they have been linked to disease notifications and health service outcomes including diagnosis-specific hospitalisations. The study will focus on four vaccine preventable diseases in older Australian adults for which there are new or existing efficacious vaccines: herpes zoster, influenza, invasive pneumococcal disease and pertussis. The data from this study will be used to guide and refine current vaccination programs for common vaccine preventable diseases in adults.

**The immunogenicity of 7-valent pneumococcal conjugate vaccine (PCV- 7) in vulnerable elderly populations at high risk for invasive pneumococcal disease (CI R MacIntyre, CI P McIntyre)**

The aim of this study is to compare impact of the 7-valent pneumococcal conjugate vaccine (PCV7) with that of the 23-valent polysaccharide vaccine (PPV) in hospitalised frail elderly, comparing the current and longstanding pneumococcal polysaccharide vaccine (23vPPV) to the newer 7-valent conjugate (PCV7) vaccine followed by 23vPPV 6 months later. This is the 1st long term follow-up comparative study internationally to look at duration
and persistence of immunity for these vaccines in the frail elderly. The results were published 2014 Data from the study, will contribute to estimating the cost-effectiveness of polysaccharide vs conjugate vaccines in the frail elderly. This study also has a long-term duration of immunity study for which testing is underway.

Participants at the National Stakeholders workshop: Immunisation policy for Migrants, travellers and refugees

Panel discussion at the National Stakeholders workshop Immunisation policy for Migrants, travellers and refugees
STREAM 4

VACCINATION IN MIGRANTS, TRAVELLERS AND REFUGEES

Team members: PRP Anita Heywood (Stream leader), CI Raina MacIntyre, CI Robert Booy, CI Dominic Dwyer, PRP Holly Seale, PRP Mohamed Sheikh, PRP Harunor Rashid.

Students and affiliates

Tara Ma, School of Public Health and Community Medicine, UNSW (Supervisor Raina MacIntyre and Anita Heywood). Project title: ‘Australian Chinese travellers visiting friends and relatives: New approaches to understanding and reducing infectious disease risks. Airport substudy’

Mohamed Tashani, University of Sydney, National Centre for Immunisation Research and Surveillance (Supervisors Robert Booy and Harunor Rashid) Project title: ‘Optimising immune responses to vaccination in Australia Hajj Pilgrims’

STREAM ACTIVITIES

RESEARCH HIGHLIGHTS

Travellers visiting friends and relatives: New approaches to understanding and reducing infectious disease risks. Airport survey of VFR travellers (R MacIntyre, A Heywood, H Seale, PhD student Dr Tara Ma)

Funded through ARC DP. An airport survey of VFR travellers departing to target countries (China, India and Vietnam) started in 2013. This large scale survey will examine the knowledge, attitudes and practices (KAP) around travel patterns, travel preparation, pre-travel health advice seeking behaviours, vaccine uptake and risk perceptions of this high-risk travel group with the purpose of quantifying the health behaviours of VFR travellers and supporting the development of interventions targeting this risk group

WORKSHOPS AND OTHER ACTIVITIES

National Stakeholders workshop: Immunisation policy for Migrants, travellers and refugees

The Centre for Research Excellence convened this meeting to bring together key stakeholders from around the country to address immunisation needs of refugees, migrants and travellers, particularly in relation to “catch up” vaccines for older migrant and refugee children and awareness of important travel vaccinations. The workshop looked at practical solutions to ensuring older children who have immigrated to Australia are fully vaccinated according to the current Australian National Immunisation Program schedule. The workshop heard that currently catch-up vaccination is not routinely funded for such children, leading to risk of outbreaks of infectious diseases in under-immunised communities. This was the first workshop dedicated to issues of immunisation in migrants, refugees and travellers and has informed policy and research priorities for the CRE, as well as allowing an exchange of ideas and solutions among the key stakeholders in the field.
Megan Williams is a lecturer with Muru Marri in the School of Public Health and Community Medicine, UNSW. Megan is descendent of the Wiradjuri and Pallawa people through her father’s family.

Megan has experience in health service delivery and research, and is nearing completion of a PhD about social support among urban Aboriginal people post-prison release. Megan has planned a mixed-methods research project about immunisation issues particularly among Aboriginal people who have been engaged in the criminal justice system, working with Professor James Ward and Mibbinbah Men’s Spaces, an Aboriginal and Torres Strait Islander health promotion charity.

What is your most memorable experience in doing research with the Aboriginal communities?

My most memorable experience was working on the ‘Mad Bastards: Be the best you can be’ project. This project developed an ‘outreach education package’ to accompany the much-loved Australian feature film ‘Mad Bastards’. The film had already been released, and over 70 requests had been made by Aboriginal and Torres Strait Islander communities across Australia to show it. The film maker, Brendan Fletcher from Bush Turkey Films, received a grant to produce an ‘education outreach package’ – to some ‘something’ with the film because it resonated so well with people and was a powerful tool to bring people together. Through networks I was invited to be part of a team to produce the package. It was a clear opportunity to translate my PhD and other research findings about Aboriginal peoples’ processes of support in the criminal justice system and post-prison release, and share my skills in writing and project work. Together with my close collaborators at Mibbinbah Men’s Spaces, we worked with The Republic, a production company, as well as the film maker, a media consultant and other leaders in Aboriginal male health care in Australia. We thoroughly appreciated being exposed to each other’s’ worlds, and sharing our experience and networks. Our Working Group has some further funding and Muru Marri colleagues have designed and piloted evaluation research – there remains much to do. I have seen the Mad Bastards film many times, but am still humbled and amazed each time – to see the power of the human story accompany and enliven our research on such sensitive issues for Aboriginal people.
CRE METHOD STREAMS

Clinical and Epidemiological Research (Stream leader: CI R Booy); Disease and economic modelling (Stream leaders: CI P Beutels and PRP A Newall); Use of large administrative datasets (Stream leaders: PRP H Gidding and PRP B Liu); Social Sciences (Stream leader: J Leask)

Students and affiliates

Dr Lauren Gardner – Network modelling, University of New South Wales
Dr Virginia Wiseman – Health care financing and economic evaluation, University of New South Wales
Josephine Reyes – Post doc, School of Public Health and Community Medicine, UNSW - (Supervisor Anthony Newall)

STREAM ACTIVITIES

Survey design workshop

CRE’s survey design workshop was conducted on November 5 at UNSW. This was an interactive workshop, the aim was to equip students and investigators within the CRE with basic tools and insights to develop surveys of immunisation knowledge, beliefs, attitudes and behaviours. The workshop was open to others undertaking immunisation surveys. CRE’s Julie Leask, Raina MacIntyre, Holly Seale, and Hal Willaby from the University of Sydney presented at the workshop.

Participants at the Survey design workshop

Health Economics & Modelling of VPDs Workshop

The CRE held a workshop on transmission and economic modelling in immunisation in November 2012, convened by PRPs Wood and Newall and CI Beutels. The workshop covered basics of transmission modelling, herd immunity and cost-effectiveness analysis. This workshop was an opportunity to build knowledge and awareness of modelling in immunisation and to act as a seed towards new collaborative projects with investigators within and outside the CRE.
WHO coordinated workshop on broad impact of vaccine

This workshop was convened by Dr Tony Newall in July 2013 around the International Health Economics association in Sydney

Collaboration with the University of Antwerp in Belgium

Disease and economic modelling stream has attracted new PhD students and affiliates, including new collaborations in travel related infections modelling. In 2013, a PhD student of CI Dr Beutels, Jeroen Luyten, from the University of Antwerp, Belgium, visited UNSW and spent time with the CRE team on collaborations in modelling. In addition, PRPs James Wood and Tony Newall have visited the University of Antwerp for collaborations

TOP NHMRC EXCELLENCE AWARDS

CRE PRPs Dr Nicholas Wood and Dr Bette Liu have been awarded top NHMRC Excellence awards.

Dr Wood has receives the award for having the highest ranked Career Development Fellowship for 2013, the award’s title is, Career Development Fellowship (Clinical Level 1) - ‘Immunisation safety and adverse events: Improving our understanding of causes and management

Dr Liu has also been awarded top prizes for excellence for having the highest ranked Career Development Fellowship - population health research for 2013. her award title is, Career Development Fellowship (Population Health Level 1) - ‘Large scale studies to inform and guide public health policy’.

Congratulations Bette and Nick!
Throughout 2013, CRE members, led by Raina MacIntyre, consulted with a range of stakeholders in the four stream areas of the CRE to ensure awareness of the CRE and its mission, and to seek engagement with the health sector in the CRE. These include the consultation with Border Health, Department of Health and Ageing – traveller airport survey. This has been valuable in not only increasing awareness of the CRE among stakeholders, but in developing linkages with key stakeholders and in advancing key policy issues through the CRE.

The proceedings of the refugee, migrant and traveller stakeholder workshop (held in August 2013) were sent to ATAGI, NIC and CDNA for consideration in the National immunisation policy.

**CRE GRANTS/FUNDING -2013**

**Research grants secured by CRE members**

- **NHMRC Project Grant:** “Providing the evidence to guide adult immunisation strategies: a novel approach using a large prospective cohort study and record linkage” (Liu, Newall, MacIntyre, McIntyre)
- **NHMRC Project Grant:** “Q fever: How common is it and how can we best prevent it? Research to inform Q fever vaccine policy in Australia and Internationally” (Wood N, Gidding, McIntyre et al)
- **NHMRC Project grant:** “Pneumococcal conjugate vaccine (PCV) schedules for the Northern Territory (NT): randomised controlled trial of booster vaccines to broaden and strengthen protection from invasive and mucosal infections.” (McIntyre et al)
- **ARC Linkage Project Grant:** “Post-implementation economic evaluation of childhood vaccination programs”. (Newall, Wood, McIntyre, Beutels, Menzies)
- **ARC Discovery Project Grant:** “Travellers visiting friends and relatives: New approaches to understanding and reducing infectious disease risks” (MacIntyre, Seale, Heywood, Sheikh and other UNSW and NSW Health Investigators)
- **International Program Development Fund:** “A multi-disciplinary international collaboration to improve communication about vaccination.” (Leask)
- **Population Health Research Network (PHRN) fund:** “Linkage of the Australian childhood immunisation register (ACIR) and state based registers to evaluate and inform Australia’s immunisation program” (Gidding, Liu, McIntyre, Jorm and WA researchers)
- **International Society of Travel Medicine (ISTM) Research Awards:** “Determinants of infectious disease incidence and risk behaviours in Australian travellers visiting friends and relatives – a prospective cohort study” (Heywood, Seale)
- **Sanofi Pasteur investigator-drive research fund:** “GP Travel Medicine Survey – Understand barriers to the provision of pre-travel preventative health advice to migrant Australians in primary care” (Heywood, Seale and)

**Fellowships and other awards awarded to CRE members**

- **NHMRC Career Development Award** - Bette Liu
- **NHMRC Career Development Award** - Nick Wood
- **NHMRC Postgraduate scholarship** - Amalia Dyda
1. MacIntyre CR. Elderly vaccination—The glass is half full. Health. 5 (12A): 80-85. December 2013. [Full text]


5. Wiley KE, Massey PD, Cooper Robbins SC, Wood N, Quinn HE, Leask J. Pregnant women's intention to take up a part-partum pertussis vaccine, and their willingness to take up the vaccine while pregnant: a cross-sectional survey. Vaccine. 31 (37):3972-3978. August 2013. [Full text]


Chief investigators

Chief Investigator A

**Raina MacIntyre** is Professor of Infectious Diseases Epidemiology and Head of the School of Public Health and Community Medicine at UNSW. She is an international leader in emerging infections and vaccinology, and is involved in numerous influenza and respiratory virus research studies that directly inform national and international policy and practice in communicable disease control.

Professor MacIntyre is Director of this CRE and also Stream Leader for Frail elderly. In addition to providing overall direction on the CRE, she also has a key role in building capacity in methodological research across these areas by acting as a mentor to post-doctoral researchers within the CRE.

Chief Investigator B

**Professor McIntyre** has a clinical appointment at The Children’s Hospital at Westmead as a Senior Staff Specialist in Infectious Diseases and a conjoint academic appointment as Professor in the Discipline of Paediatrics and Child Health and in the School of Public Health of the University of Sydney. As a Chief Investigator B on the CRE, Peter McIntyre provides leadership and mentoring through his role as Director of the National Centre for Immunisation Research and Surveillance and works closely with CIA MacIntyre with respect to governance and external relationships for the CRE. His primary research theme is neonatal and maternal vaccination and he forms the link for the indigenous research theme between the CRE and the activities of the SEARCH cohort study (on which he is a CI) being conducted through a number of Aboriginal Community-Controlled Health Services in New South Wales. His primary method stream contribution is in clinical trials and the use of routine data sets to inform policy.

Chief Investigator C

**Robert Booy** is Head of Clinical Research at NCIRS. His research interests extend from understanding the genetic basis of susceptibility to, and severity of, infectious diseases, especially influenza and invasive disease caused by encapsulated organisms; the clinical, public health, social and economic burden of these diseases; and means by which to prevent or control serious infections through vaccines, drugs and non-pharmaceutical measures. Professor Booy is developing a research program and research capacity in clinical vaccine research focusing on children, and the frail elderly.

Chief Investigator D

**Julie Leask** is Associate Professor at the University of Sydney, School of Public Health and Visiting Senior Research Fellow at the National Centre for Immunisation Research & Surveillance. She has a background in nursing and midwifery with a Master of Public Health (1998) and PhD (2003) from the University of Sydney. She is an affiliated with the Centre for Values, Ethics and the Law in Medicine at the University of Sydney and was a visiting research fellow with the School of Healthcare University of Leeds, UK. Her research has focused on social and behavioural determinants of immunisation uptake and risk communication. A/Professor Leask leads the social sciences component of the CRE. This includes mentoring postdocs and supervision of postgraduates. A particular focus has been in developing and running workshops for capacity building and she is particularly involved in the Aboriginal and Torres Strait Islander stream.
Chief Investigator E

**Dr Nicholas Wood** is a staff specialist general paediatrician and senior lecturer in the Discipline of Paediatrics and Child Health at the University of Sydney. He is involved in the Immunisation Adverse Events Clinic and Refugee Clinic at The Children's Hospital at Westmead. Dr Wood is NHMRC Career Development Fellow. He is interested in maternal and neonatal immunisation, as well as immunisation in Indigenous communities and developing countries.

Dr Wood assists the design and conduct of maternal and newborn vaccine program at the Children’s Hospital at Westmead (CHW) site. He has extensive experience in the recruitment of infants onto clinical trials and has conducted two successful neonatal vaccine trials. He is also experienced in the management of immunisation adverse events and this will be an asset to any study where safety of vaccines is one of the outcome measures.

Chief Investigator G

**Dr Rob Menzies** is an epidemiologist. He leads the NCIRS surveillance unit, which covers surveillance of vaccine preventable disease, vaccination coverage and adverse events, as well as immunisation in Aboriginal and Torres Strait Islander people. He has particular interests in expanding the use of large administrative datasets and facilitating the use of vaccines in disadvantaged communities. He supervises the Aboriginal Professional Research Persons on the CRE and further work on assessing validity of immunisation register and morbidity datasets.

Chief Investigator H

**Professor John Kaldor** is Professor of Epidemiology at KIRBY Institute, based at the UNSW in Sydney. His interests have included the development and implementation of public health surveillance systems, investigations of HIV-related cancer, cohort and cross-sectional investigations of risk factors for infectious disease transmission, and interventional trials of potential biomedical prevention agents. With his background in the technical methods of quantitative study design and analysis, and experience across a very wide spectrum of research topic, John Kaldor acts as an advisor at both the strategic and technical level in the development and conduct of research projects undertaken by the CRE. He works with Al James Ward and post doc Bette Liu on investigating the impact of vaccines for hepatitis B and human papillomavirus in Aboriginal and Torres Strait Islander communities, determining the extent and risk factors for incomplete uptake, and devising and evaluating strategies for closing coverage gaps for these vaccines in Indigenous populations.

Chief Investigator F

**Professor Cheryl Jones** is Head of the Centre for Perinatal and Emerging Infection Research at The Children’s Hospital at Westmead (CHW), a bench to bedside research program that spans laboratory based research, epidemiology and surveillance of infectious diseases to clinical research and translation into practice and policy. Professor Jones leads research themes of vaccinology as it applies to newborn vaccination (with CI Wood) and maternal vaccination to prevent vertical transmission of infections. She coordinates CRE in vaccinology with University of Sydney initiatives in the field, particularly the Sydney Emerging Infectious Diseases Institute activities. She utilises her educational expertise to contribute to programs for mentorship, and professional development for postgraduate students, postdoctoral fellows and clinical researchers employed on this CRE.
Chief Investigator I

Philippe Beutels is currently Associate Professor and scientific director of the Center for Health Economics Research and Modelling Infectious Diseases (CHERMID) of the Vaccine & Infectious Disease Institute at the University of Antwerp in Belgium. His main research interests are health economic evaluation, modeling infectious diseases and economics of infectious disease prevention and control. He is the Senior Visiting Fellow in School of Public Health and Community Medicine at The University of New South Wales. He supervises pre and post doc researchers in relation to modeling and economic evaluation in Antwerp and Sydney during this CRE, and works closely with CIA MacIntyre in building the links between his organisation and the Australian-based organisations in the CRE.

Associate investigator

Chief Investigator J

Professor Dominic Dwyer is a medical virologist and infectious diseases physician in the Centre for Infectious Diseases and Microbiology Laboratory Services, located in the ICPMR at Westmead Hospital, Sydney. He has a clinical and research interest in viral diseases of public health importance. This includes HIV (where he coordinates an active program in antiretroviral drug resistance and HIV molecular epidemiology in Australia and the region), influenza and other respiratory viruses, and arboviruses. He leads an antiviral trials unit that has participated in over sixty studies of antiviral drugs and vaccines. His influenza research includes assessing interventions to prevent influenza transmission in closed environments, and developing assays for seasonal and pandemic influenza. CIDMLS has enhanced the laboratory investigative capacity in NSW for infectious disease outbreaks, with his particular focus being rapid detection and molecular epidemiology of outbreak and emerging viruses. Dominic Dwyer mentors researchers involved in the laboratory aspects of the CRE, and in some of the planned clinical trials.

Associate Professor Christopher Poulos is the Hammond Chair of Positive Ageing at UNSW. He works on frail elderly vaccinology research within the Hammond care aged care facility. He holds a Master’s Degree in health policy and management, and in 2012 was awarded his PhD for work on utilisation review and the rehabilitation patient journey. He has many years of clinical experience working with people with disabling conditions, helping them to achieve their maximum level of functioning, quality of life and independence. He is an experienced researcher and teacher in the areas of rehabilitation and aged care and is a Visiting Principal Fellow with the Australian Health Services Research Institute, University of Wollongong. In addition, he has undertaken a number of consultancies about the delivery of rehabilitation and sub-acute care services. His main clinical and research focus is on helping individuals and their carers achieve whole person wellness and developing workforce models to promote this aim.
James Ward is an Aboriginal man of Pitjantjatjara and Nurrunga descent from Central and South Australia. He is the former Program Head of Aboriginal and Torres Strait Islander Health, at the Kirby Institute of University of New South Wales. He is a senior researcher at the Baker Institute in Alice Springs. He leads and collaborates on 20 national research projects with mixed methods, including a community clustered randomised trial in 68 remote communities in the Northern Territory, Western Australia and Far North Queensland aimed at reducing long standing endemic rates of STIs; the first national cross sectional survey of young Indigenous people regarding STI and BBV knowledge, risk behaviour, and health service access, as well as a peer led and respondent driven sampling study of people who inject drugs in Queensland. James Ward is Stream Leader of the Aboriginal and Torres Strait Islander Immunisation in the CRE.

Dr Rachel Skinner is Associate Professor in the Discipline of Paediatrics and Child Health, Faculty of Medicine, University of Sydney and Adolescent Physician at the Children’s Hospital Westmead in Sydney, Australia.

Her clinical work is focussed on sexual and reproductive health and she consults in adolescent gynaecology through the Adolescent Medicine Unit at the Children’s Hospital Westmead. She works on social science research around HPV vaccination.

Dr Ben Marais is a South African trained Infectious Diseases Paediatrician who is an internationally recognized researcher in international child health, particularly tuberculosis, and other diseases affecting poor and marginalized populations.

His contribution to the CRE will be to undertake the study of travel related disease in children including in migrant and refugee children. He utilises the PAEDS national surveillance system to monitor causes of fever in children hospitalized following recent international travel, to inform pre-travel advice, travel vaccination and parental knowledge/attitudes would be assessed.

Kristine Macartney is a paediatrician specialising in infectious diseases. She is a medical graduate of the University of New South Wales, and gained much of her experience in the United States where she worked at the Children’s Hospital of Philadelphia. Her Doctorate of Medicine was on rotavirus infection, in particular the mucosal immune response to novel vaccine candidates. She was also a member of the Vaccine Education Center at the Children’s Hospital of Philadelphia, and is interested in all aspects of vaccine preventable disease research. Associate Professor Macartney has a clinical appointment at The Children’s Hospital at Westmead as a Staff Specialist in Infectious Diseases and Microbiology and a conjoint academic appointment as Associate Professor in the Discipline of Paediatrics and Child Health of the University of Sydney. She is a member of the Therapeutic Good’s Administration Advisory Committee on the Safety of Vaccines (ACSOV). She works on pregnancy perinatal studies, safety issues, and policy related projects on the CRE.
Ms Telphia Joseph, a Yamatji woman from Western Australia and the National Indigenous Immunisation Coordinator based with NCIRS. She has qualifications in Community Development which led to her initial interest in environmental health and otitis media. Telphia has a qualitative research base and now acts in a liaison position between the National Immunisation Committee and service providers offering immunisation programs for Aboriginal and Torres Strait Islander people. She has completed Master of Philosophy at the University of Sydney involving an evaluation of immunisation activities in Aboriginal Medical Services and their reporting procedures to the Australian Childhood Immunisation Register. She is a member of the National Immunisation Committee and moderates the National Aboriginal and Torres Strait Islander Immunisation Network.

The CRE project with the help of Professional Research Person Ms Joseph will focus on behaviour, attitudes and barriers to HPV vaccination in Indigenous women in remote and urban settings in Australia.

Dr James Wood leads the mathematical modelling group and is senior lecturer at SPHCM UNSW specialising in modelling of infectious diseases. He gained his PhD in 2004 at University of Queensland. He will be responsible for developing transmission models that specifically incorporate infection and disease risk factors that relate to the special populations (modelling analysis of maternal infections and comparisons of the effectiveness vaccination options for pertussis) in CRE. Dr Wood works closely with CI Beutels and his modelling group in Belgium, collaborating with key researchers in the European Union through this link.

Dr Mohamud Sheikh is a Senior Lecturer in International Health, Tropical and Infectious diseases at SPHCM, UNSW. He graduated from the University of Sydney with double Master in Health Sciences and International Public health and a doctorate in public health. Dr Sheikh has established himself as a young leader in research and intervention to improve the health of immigrants and refugees. His research focuses on immigrants and refugees health within CRE specific projects and has extensive links and networks with key refugee and migrant groups in Australia. His other research interest include, infectious diseases research (such as TB, Malaria, Vaccine Preventable diseases among other), International Health Development, Infectious Diseases Outbreak Investigation and Humanitarian Emergencies, Public Health Anthropology, Human Rights and Public Health, Tropical Diseases Surveillance and Control among other. He has had several peer reviewed publications and also reviews for several international health journals.

Dr Holly Seale, a Senior Lecturer at SPHCM, UNSW, completed her PhD at the University of Sydney in 2008. She has qualifications and experience in microbiology, virology, public health and epidemiology of vaccine preventable diseases. As an infectious disease public health researcher, she has conducted clinical, behavioural and data based research. She is currently working with Dr Anita Heywood on improving the uptake of immunisation amongst migrants and refugees.

Dr Anthony Newall is a Senior Lecturer in health economics at the
SPHCM, UNSW. He completed his PhD at the University of Sydney on the economic evaluation of vaccination programs. He has published cost effectiveness, statistical and epidemiological analyses on a range of infectious diseases. He contributes to disease and economic modelling projects within the CRE, working with CI Beutels and other CRE members.

Dr Bette Liu is a medically trained epidemiologist and senior lecturer at the School of Public Health and Community Medicine, UNSW, obtained her PhD in 2009. She has extensive experience in conducting large-scale epidemiological studies involving record linkage and amalgamation of individual data. She contributes her epidemiologic expertise to the analysis and interpretation of the study results on the CRE.

Dr Anita Heywood is an infectious disease epidemiologist and lecturer at SPHCM, UNSW. Her doctoral work commenced in 2007. Her research focuses on traveller behaviours and travel patterns of Australian international air traffic examining the knowledge, attitudes and behaviours of international travellers to infectious disease risks and preventative health practices. She works on attitudes and risk perceptions in travellers and travel health within CRE specific projects, focusing on migrant VFR travellers and their risk of introducing vaccine-preventable diseases into Australia.

Dr Heather Gidding is an infectious diseases epidemiologist and biostatistician and Senior Research Fellow at SPHCM, UNSW. She completed her PhD in 2011 while working at the Kirby Institute. Her main areas of interest include the use of routinely collected data for epidemiological research, in particular using data linkage methods, and longitudinal data analysis techniques. She has comprehensive training in diagnostic microbiology, infectious diseases epidemiology, vaccinology and biostatistics. Her experience in managing complex epidemiological studies and analysing large longitudinal datasets contributes widely in this study.

Dr Harunor Rashid received paediatric training in Bangladesh, Turkey, Saudi Arabia and the UK ultimately receiving, in 2009, Doctor of Medicine (MD) degree from the University of London for the thesis entitled, ‘Epidemiology of respiratory infections associated with Hajj pilgrimage’. He joined NCIRS in June 2011 as an epidemiologist. He is particularly interested in vaccine-preventable infections among travellers.

Dr Tom Snelling is a paediatric infectious diseases physician at Princess Margaret Hospital and NHMRC Frank Fenner Early Career Research Fellow at the Telethon Institute for Child Health Research. His work has a strong focus on vaccine-related questions in relation to Aboriginal and international child health, in particular the evaluation of vaccination and other public health strategies to minimise the burden of infectious diseases. His PhD studied the impact of vaccination in reducing gastroenteritis in remote Australian settings. His post-doctoral work will investigate optimal schedules for delivering rotavirus vaccines in remote Australia and in resource poor settings. He is also investigating the safety of pertussis vaccination in early infancy, and the relationship (if any) with the risk of allergic disease. His contribution to the CRE is on the application of case-control and other epidemiological methods to answer vaccine-related policy-driven questions, particularly in relation to Aboriginal and international child health. He is convening the National Indigenous Immunisation Research Workshop in November 2013.
CRE Fellows

Megan Williams is a descendent of the Wiradjuri people through her father’s family. She has experience in health service delivery and research, and is currently working on a PhD about social support among urban Aboriginal people post-prison release works with AI James Ward on immunisation issues in Aboriginal people, with a focus on adults and vulnerable populations. She has a rare mix of qualitative and quantitative research specialising in Aboriginal and Torres Strait Islander health.

Dr Jenny Royle is an Immunisation Paediatrician who has 15 years of experience working at the Immunisation Service of the Royal Children’s Hospital (RCH), Melbourne, providing clinical immunisation advice for parents and staff, Community Immunisation Providers and the Victorian Department of Health. Her contribution to the CRE is a project looking at the identification of culturally sensitive approaches to improve immunisation coverage and timeliness of Aboriginal and Torres Strait Islander children and their families. She will be collaborating with Prof Peter McIntyre, Dr Julie-Anne Leask, Dr Robert Menzies, Ms Telphia-Leanne Joseph, Dr Nick Wood and other members of the team.

Dr. Lauren Gardner is a lecturer in the School of Civil and Environmental Engineering at the University of New South Wales. Her core research area is network modelling; specifically developing network based mathematical models to quantify metrics for risk, health, economic, environmental and societal impacts of transport systems. Her contribution to the CRE is a project on quantifying the combined impact transportation systems, ecological systems and social networks have on the epidemiological process. She has recently developed predictive models which exploit the use of network optimization tools, real-time infection data, ecological models, and properties of the transport system. These models can aid in surveillance and policy decisions for the prevention and control of emerging infectious diseases. She will be collaborating with Prof Raina MacIntyre, Anita Heywood, James Wood and other members of the team.

Dr Virginia Wiseman joined SPH&CM (part time) in 2012 where she leads an AusAID funded study assessing equity in health care financing in the Pacific. She continues to work at the London School of Hygiene and Tropical Medicine where she has been based for the past 12 years working across a range of Sub-Saharan countries. Virginia conducts research in the fields of health care financing, economic evaluation of complex public health interventions, health systems strengthening and health equity analysis. Much of this work has been in the area of malaria control investigating ways of improving access to malaria treatment. She currently leads a study evaluating alternative strategies for the deployment of artemisinin-based combination
therapy and rapid diagnostic tests at the community level in Nigeria and Cameroon (ACT Consortium funded by the Gates Foundation: http://www.actconsortium.org/).

**CRE Postgraduate students**

**Alexander Rosewell** is the PhD student of CIA Professor Raina MacIntyre. His PhD is on surveillance for vaccine preventable diseases in remote and under-served area

**Amy Creighton** is an MPhil student with the University of Sydney with supervisors Associate Professor Julie Leask and Dr Peter Massey. Amy is a Gomeroi Murri woman from northern NSW and has over 20 yrs experience in Aboriginal health. She works directly with some Aboriginal communities on a research project to develop understandings about immunisation during pregnancy.

**Dr Teresa Wozniak** is a Public Health Officer Trainee at the NSW Ministry of Health and is completing DrPH in the UNSW School of Public Health and Community Medicine under the supervision of Professor. Raina MacIntyre. Her background is medical research where she worked on designing a vaccine against tuberculosis. Currently, her research interests are in public health surveillance and hospital acquired infections.

**Dr Catarina Aneman** is a Physician specialised in Infectious Diseases and Infection Prevention and Control. She is a PhD candidate in the School of Public Health & Community Medicine at UNSW under supervision of Dr Holly Seals and Prof Raina MacIntyre. In her PhD she is investigating the prevalence and severity of Clostridium difficile infections in hospitalised patients and treatment and prevention of infections, specifically among elderly and immuno compromised patients.

**Dr. Abrar Chughtai** is an overseas trained medical graduate. He completed Master in Public Health in Infectious Diseases Epidemiology and Control from the University of New South Wales in 2009. Currently he is doing PhD from School of Public Health and Community Medicine, under supervision of CIA Professor Raina MacIntyre and PRP Dr Holly Seals. The topic of his thesis is “Face masks in the protection of healthcare workers in resource poor settings”.

**Dr Michelle Barnes** is an advanced paediatric trainee registrar at The Children’s Hospital at Westmead. She completed a PhD examining the symptomatic and serologic epidemiology of pertussis in Australia, which had significant impact on Australian immunisation policy.

Dr Barnes projects include an immunogenicity study of the Human Papilloma Virus vaccine in immuno-compromised children; the character of the relationship between influenza infection, influenza vaccination and acute myocardial infarcts; immunogenicity and safety profile of the pneumococcal conjugated vaccine in children who have underwent haematopoietic stem cell transplantation; as well as researching the epidemiology of Ebola virus to provide information that can be translated into a meaningful way to assist health care workers involved in the current pandemic. She will be working with Prof Raina Maclntyre Dr Holly Seale and Dr Anita Heywood, as well as other members of the CRE team.
Tara Jane (Chun Hin) Ma is a PhD student of CIA Professor Raina MacIntyre and PRP Dr Heywood. Her PhD is on Australian Chinese travellers visiting friends and relatives: New approaches to understanding and reducing infectious disease risks. She previously completed an undergraduate medical degree and master degrees in public health and infection and immunity. In her PhD she investigates the travel health related attitudes and behaviours of first and second generation ethnic Chinese immigrants to Australia when they are travelling overseas to visit friends and relatives.

Elizabeth Hayles is currently a PhD candidate of the Discipline of Paediatrics and Child Health, under the supervision of Associate Professors Rachel Skinner and John Sinn, and Dr Spring Cooper-Robbins. She received an NHMRC scholarship to conduct her research, entitled ‘Best practice for the communication of perinatal pertussis booster recommendations and optimisation of the cocooning strategy.

Jeroen Luyten is PhD student of CI J A/Prof Philippe Beutels. Jeroen has master degrees in Applied Economic Sciences (University of Antwerp, Belgium) and Philosophy (Catholic University of Leuven, Belgium). His PhD-research lies at the intersection of economics and ethics in infectious disease prevention.

Lander Willem is PhD student of CI I A/Prof Philippe Beutels. Lander has been awarded the master degree of Bioscience Engineering: Biomolecular Engineering with a minor in Bio-Informatics (Catholic University of Leuven, Belgium). His PhD-research at the University of Antwerp is about the development of agent-based stochastic simulations models for Influenza using computational programming techniques.

David Muscatello is an epidemiologist at the NSW Ministry of Health and is completing a PhD in the UNSW School of Public Health and Community Medicine. David’s research interests include use of administrative databases for public health surveillance and estimating the population impact of influenza epidemics.

Amalie Dyda completed a Master of Applied Epidemiology at ANU in 2010. Following this she has worked in food borne disease surveillance and Aboriginal health. She is currently undertaking a PhD investigating vaccine preventable diseases in adults, linking data from the 45 and Up study with other routinely collected datasets. She also works part time as a senior researcher in the Aboriginal and Torres Strait Islander Health Program at The Kirby Institute.
Professor Margaret Burgess (Chair) was the founding director of NCIRS and held the position of Professor of Paediatrics and Preventive Medicine at the University of Sydney. She was a member of the Australian Technical Advisory Group on Immunisation as well as a number of international committees including the Strategic Advisory Group of Experts (SAGE) for Vaccines and Biologicals of the World Health Organization. Professor Burgess carried out the first trials of rubella vaccination in Australia and has a long-standing clinical and research interest in immunisation and in vaccine preventable and congenital infections, especially rubella and varicella. She currently holds the positions of Honorary Professor in the Discipline of Paediatrics and Child Health at The University of Sydney and Emeritus Consultant Physician at the Children’s Hospital Westmead. Her research focuses on the prevention of infectious disease in vulnerable populations and she currently leads a randomised controlled trial of hepatitis B vaccine completion in people who inject drugs and a program of hepatitis C vaccine preparedness studies, including a cohort of anti-HCV negative people who inject drugs. She is an investigator on longitudinal studies of drug users and female sex workers in Canada, female sex workers in Cambodia, and an international collaboration of cohorts examining acute HIV and HCV infection in people who inject drugs and two large community randomised prevention trials. Professor Maher is also responsible for a national program of viral hepatitis surveillance, including Australia’s internationally renowned system for monitoring anti-HIV and anti-HCV prevalence and associated risk behaviour in people who inject drugs.

Professor Lisa Maher holds appointments as a Professor in the Faculty of Medicine at the University of New South Wales in Sydney, Australia, Program Head at the Kirby Institute for infection and immunity and National Health and Medical Research Council (NHMRC) Senior Research Fellow. She has extensive experience in research, program development and service delivery with drug users, sex workers and people living with HIV in North America, South East Asia, Australia and the Pacific.

Professor Ross Andrews is an epidemiologist with major research interests in vaccine preventable diseases and Indigenous health. He is the Head of the Child Health Division at Menzies and leads the Immunisation Team. He is a member of the Australian Technical Advisory Group on Immunisation (ATAGI) and a number of associated working parties: ATAGI Pneumococcal Working Party, the ATAGI Influenza Working Party and the ATAGI Hib Working Party. He has public health experience at local, state and national government level and has published his work on pneumococcal disease and polysaccharide vaccine in the international literature. He played a major role in the establishment of enhanced surveillance for invasive pneumococcal disease in Victoria and has been invited to contribute to the revision of recommendations related to the use of polysaccharide pneumococcal vaccine for the 9th edition of the Australian Immunisation Handbook.

Professor Terry Nolan is the Head of the School of Population Health and Associate Dean in the Faculty of Medicine, Dentistry and Health Sciences at The University of Melbourne. He is also Head of the Vaccine and Immunization Research Group, a joint initiative of the Melbourne School of Population Health and Murdoch Children’s Research Institute. His research is in the epidemiology of vaccine-preventable disease and clinical trials of new vaccines. He is the Chair of the ATAGI, and...
is a member of the Australian Academy of Science’s National Committee for Medicine.

**Dr Wendy Bissinger:**
Representative of the National Aboriginal Community Controlled Health Organisation (NACCHO) in 2013, working as a Public Health Medical Officer at Victorian Aboriginal Community Controlled Health Organisation Inc

**Professor Sandra Eades** is a Noongar woman from Mount Barker, Western Australia. She is Australia’s first Aboriginal medical doctor to be awarded a Doctorate of Philosophy (2003). She started her career in health research at the Telethon Institute for Child Health Research where her focus was on the epidemiology of Indigenous child health in Australia. Over the past decade she has made substantial contributions to the area of Aboriginal health and has provided leadership at a national level in Aboriginal research. She is acknowledged as a leader and role model in Indigenous health research. Professor Eades is the Head, Indigenous Maternal and Child Health and Associate Head, Preventative Health Research, at the Baker IDI Heart & Diabetes Institute and currently based in the Sydney School of Public Health, The University of Sydney.

**Dr Margaret Kay** is senior lecturer at Discipline of General Practice, School of Medicine, the University of Queensland. Dr Kay’s clinical and research areas of interest include doctors’ health and refugee health. She is a Fellow of the RACGP, Hons Secretary of Doctors’ Health Advisory Service Qld and is immediate past chair of Refugee Health Network of Australia (RHeaNA). She is also a member of the Australasian Doctors’ Health Network, a member of RACGP Refugee Health Special Interest Group (RHSIG) and member of the Australian Medical Association (Qld)

**Professor Nick Zwar MBBS,** MPH, PhD FRACGP is Professor of General Practice in the School of Public Health and Community Medicine, UNSW. Nick has a long term clinical, teaching and research interest in travel medicine. He has been involved in research on hepatitis A and hepatitis B risk and vaccination of Australian travelers. He was a founding member of the Australian Travel Health Advisory Group which is a joint medical and travel industry group promoting health travel. He is a member of the editorial board of the journal Travel Medicine and Infectious Disease. Nick has written a regular column on travel medicine for Australian Doctor for the last 17 years. He is a member of the International Society for Travel Medicine and holder of the ISTM Certificate in Travel Health.