

Higher Degree by Research Projects 2017

Table of Contents

Higher Degree by Research Projects 2017	1
Exploring drivers of the sugary drinks consumption among school children living in remote communities of northern Australia.	3
Exploring the relationships between usual diet (foods and drinks) and educational outcomes in children living in remote communities of northern Australia	4
Association between scabies, skin sores and strongyloidiasis for children and adults in a remote Aboriginal community.	5
Antibiotic use in the first two years of life for children from three remote Aboriginal communities.	6
The 'Communicate' study: an intervention to improve inter-cultural communication between healthcare providers and Aboriginal clients.	7
Australian Indigenous Medicinal Plants	9
Dietary intake of Yolngu children aged <2 years.....	10
Hygiene hands and Otitis Media in Indigenous families	11
Housing needs and the impact of dislocation on patient, family and community	12
Impact on urban schools and educational outcomes of children of adults relocated for medical treatment (dialysis)	14
NT & Far North Queensland Diabetes in Pregnancy Partnership	15
Clinical and Molecular epidemiology of hepatitis B virus in northern Australia.....	17

Exploring drivers of the sugary drinks consumption among school children living in remote communities of northern Australia.

Summary:

A 55% higher risk of being overweight or obesity has been associated with high sugary drink consumption (>250 ml/d) and this is of concern in remote Aboriginal communities where per capita consumption is over 400 ml/day. High sugary drink consumption is also likely to be a direct risk factor for metabolic syndrome, type 2 diabetes and cardiovascular disease risk independent of obesity.

Sugary drinks consumption has been found to be related to individual (gender, taste preference, attitude towards drinking sugary drinks) and environmental (family meals, family rules, sugary drinks availability and so on among non-Indigenous population. There is a gap in the evidence base relating to patterns and determinants of sugary drinks consumption among Aboriginal and Torres Strait Islander people.

A systematic review of the literature will be conducted to investigate factors driving consumption of sugary drink among children to inform the development of health promotion programs aimed to decrease the consumption of sugary drinks. This study will also explore sugary drinks consumption patterns, enablers and barriers to its consumption and scope for change among school aged children living in remote communities. Interviews will be conducted with school primary school children and their families.

Supervisors:

Primary

[Dr Selma Liberato](#)

Location of the project:

Darwin

Type of project:

PhD

Exploring the relationships between usual diet (foods and drinks) and educational outcomes in children living in remote communities of northern Australia

Summary:

Diet has been shown to influence behaviour, concentration and cognitive ability, as well as immune system and therefore ability to attend school. However children's diets are not meeting the dietary intake recommendations with low intake of fruits and vegetables and high intake of energy dense nutrient poor foods with particularly high intakes of sugary drinks.

This study will investigate the relationship between dietary intake and educational outcomes including school performance and absenteeism (for illness and non-illness related) among primary school children living in remote communities. Data on school performance, absenteeism and dietary intake of primary school aged children living in remote communities will be collected.

Supervisors:

Primary

[Dr Selma Liberato](#)

Location of the project:

Darwin

Type of project:

PhD/Master by Research

Association between scabies, skin sores and strongyloidiasis for children and adults in a remote Aboriginal community.

Summary:

A population census and ivermectin mass drug administration was conducted in 2010 and 2011 in a remote Aboriginal community. GIS mapping of all three diseases indicated that there may be an association between skin sores and strongyloidiasis that has not yet been explored.

Supervisors:

Primary

[Dr Thérèse Kearns](#)

Location of the project:

Negotiable

Type of project:

Masters

Antibiotic use in the first two years of life for children from three remote Aboriginal communities.

Summary:

Children in remote communities have high attendance rates at local Primary Health Care (PHC) centres but there is a paucity of studies documenting antibiotic use in the first two years of life. Data has been collected from a sample of children in three remote Aboriginal communities to report on antibiotic use.

Supervisors:

Primary

[Dr Thérèse Kearns](#)

Email: therese.kearns@menzies.edu.au

Location of the project:

Negotiable

Type of project:

Masters

The ‘Communicate’ study: an intervention to improve inter-cultural communication between healthcare providers and Aboriginal clients.

Summary:

Rationale:

Miscommunication between healthcare providers and Aboriginal people has been shown to result in poor health outcomes and even death. Best practice in communication requires a systems-level approach addressing complex challenges we have identified.

Overall goal:

In a partnership between Menzies School of Health Research, Charles Darwin University, the Aboriginal Interpreter Service and the Northern Territory Department of Health (DoH), this study will address inter-cultural communication by strengthening Aboriginal cultural competence of the workforce, and improving access to and uptake of Aboriginal interpreters for patients who primarily speak an Aboriginal language.

Aims:

1. To at least double the uptake of Aboriginal interpreters in healthcare settings from an estimated 6.5% to at least 13% over a 5-year period
2. To improve patient-centered outcomes of care

Design:

Multi-component intervention to improve inter-cultural communication in selected Northern Territory primary and tertiary care settings, using mixed methods. There will be scope within this large study to support several higher degree research candidates, focusing on qualitative, quantitative or mixed methods.

Supervisors:

Primary

[Dr Anna Ralph](#)

Secondary

[Assoc Prof Anne Lowell](#)

[Professor Alan Cass](#)

Location of the project:

Darwin

Type of project:

PhD and master projects both available within this study

Australian Indigenous Medicinal Plants

Summary:

This pilot project seeks to identify native plants that could be developed as antimicrobial agents, which would find acceptance in Indigenous communities and could contribute to improved health outcomes for the people living in these communities. The project proposes to work with an Industry partner with a view to potential commercialisation and generation of employment for Indigenous people on country. The pilot study will focus on topical applications of extracts from plant species with documented traditional usage.

Pilot study aims

- 1. To validate the in-vitro antimicrobial activity of 12 selected traditional Aboriginal medicinal plants against 6 key pathogenic microorganisms.*
- 2. Assess the potential for development and commercialisation of species showing promising activity.*
- 3. Use data from pilot study in grant application for larger study (e.g. ARC Linkage, NH&MRC).*

Supervisors:

Primary

[Dr Greg Leach](#)

Secondary

[Professor Anne Chang](#)

Location of the project:

Darwin, Northern Territory

Type of project:

PhD

Dietary intake of Yolngu children aged <2 years

Summary:

Undernutrition during the critical first 1000 days of life has adverse consequences for optimal health in childhood and later life. Indigenous children in remote communities suffer from significantly worse nutritional outcomes than non-Aboriginal children, with persistently high rates of stunting (17%), wasting (5%), underweight (7%) and anaemia (21%). Food security and dietary patterns play a major role in child nutritional outcomes.

The primary aim of this project is to document the dietary patterns and food security of children under 2 years of age (approx. 40) by interviewing the mothers using a locally appropriate dietary recall survey. Data collection will be conducted in collaboration with two local Indigenous community health workers.

Supervisors:

Primary

[Dr Thérèse Kearns](#)

Secondary

[Assoc Prof Juilie Brimblecombe](#)

Dr Sarah Hanieh

Location of the project:

Negotiable

Type of project:

Masters

Hygiene hands and Otitis Media in Indigenous families

Summary:

The Centre for Research Excellence in Indigenous Children's Health Ears (CRE ICHEAR) is offering scholarship to support a PhD student in the field of Indigenous Ear Health. The research project will have two key aspects:

1. Hygiene for prevention of cross infection and early onset of otitis media in Aboriginal infants - looking to answer the question "Among young Indigenous infants and children living in remote communities, does face and hand washing with soap plus baby or body wipes, compared to face and hand washing with soap alone, reduce hand and face contamination and acquisition of new strains during a two week intervention period".
2. To perform qualitative research to better understand the needs of remote area families who have children with hearing loss, by applying Indigenous knowledge and western scientific approach to qualitative research methods and reporting to improve communication and research transfer.

For more information on the project, contact Amanda Leach -
Email: Amanda.Leach@menzies.edu.au
Phone: (08) 89468560.

Supervisors:

Primary

Must have a CRE ICHEAR CI or AI supervisor or co-supervisor.

Location of the project:

Charles Darwin University or one of the collaborating CRE ICHEAR [institutions](#).

Type of project:

PhD

Housing needs and the impact of dislocation on patient, family and community

Summary:

The burden of Chronic Kidney Disease (CKD) is heavy amongst Indigenous Australians. In the Northern Territory (NT), kidney disease rates are particularly high for Indigenous people who present for dialysis 20 years younger than non-Indigenous people. In regional areas and remote communities, where 70% of Indigenous people live in the NT, the impact on families and communities is devastating as most treatment services are centralised in the urban areas of Darwin and Alice Springs.

Access to treatment, often in the form of dialysis, frequently equates to permanent relocation and dislocation from family, community and support networks. Finding suitable accommodation is just one of the issues facing dialysis patients moving from a rural/remote location to an urban area for treatment. Public housing is in short supply with long wait lists and the higher rent of private housing is not viable for people on limited incomes. Their limited resources also make it difficult once in a house to acquire essential white-goods and furniture. Further, large numbers of visiting family can disrupt routines and create disturbances that threaten the tenancy. Hostels which are furnished and provide three meals a day, offer supported urban living but leave little disposable income. More importantly, hostels do not cater for extended family and residents complain of loneliness, isolation and expense.

This work will be embedded within a larger mixed methods study and therefore this project will draw on both quantitative and qualitative data.

The aim of this project is to explore the impact of relocation on individuals, their families and the community. Identify housing options, patient preferences for a type /model of accommodation and barriers/difficulties patients face in acquiring the accommodation of choice.

This project would see the research student:

- 1) Investigate through a national and international literature review, accommodation supply and tenancy support programs to attain and retain accommodation for similar populations ie relocated disadvantaged populations
- 2) Compare tenancy support programs and the circumstances in which they operate with NT context – opportunities for knowledge transfer, development of pilot programs
- 3) Gain a better understanding through interviews and surveys of housing supply: availability, costs, waitlists (demand), duration available, application processes.
- 4) Investigate the impact on long term hospitalisations as a result of poor access to accommodation.

Supervisors

[Gillian Gorham](#)

Location of the project

Darwin – NT

Type of project

PhD/Masters

Impact on urban schools and educational outcomes of children of adults relocated for medical treatment (dialysis)

Summary:

The burden of Chronic Kidney Disease (CKD) is heavy amongst Indigenous Australians. In the Northern Territory (NT), kidney disease rates are particularly high for Indigenous people who present for dialysis 20 years younger than non-Indigenous people. In regional areas and remote communities, where 70% of Indigenous people live in the NT, the impact on families and communities is devastating as most treatment services are centralised in the urban areas of Darwin and Alice Springs.

Access to treatment, often in the form of dialysis, frequently equates to permanent relocation and dislocation from family, community and support networks. Children whose parent requires dialysis may also relocate. Anecdotally children who do relocate struggle in the new environment with the different language and faces and have poor attendance. Conversely, those that are left behind with extended family may also struggle with school attendance. The impact on educational outcomes and pressure on educational resources in the urban areas, to keep children engaged, is unknown.

This work will be embedded within a larger mixed methods study and therefore this project will draw on both quantitative and qualitative data.

Aims:

- what is the evidence around children remaining engaged in school (remote or urban) when a parent has a chronic illness
- what additional supports do relocated children require eg interpreters, teacher assistants, social support such as community navigators;
- what are the demands on urban schools for placements; and
- is there evidence suggesting these children have lower educational attainment.

Supervisors

[Gillian Gorham](#)

Location of the project

Darwin – NT (The project can be conducted via phone and internet).

Type of project

PhD/Masters

NT & Far North Queensland Diabetes in Pregnancy Partnership

Summary:

Diabetes in pregnancy both carries significant risks and provides an early opportunity for intervention in the life course for both mother and baby. We have developed a partnership between researchers, health care providers and policy organisations in the NT (Northern Territory) & FNQ (Far North Queensland) to address this issue. We aim to improve clinical care and outcomes of diabetes in pregnancy and future health outcomes for both the mother and her baby through a multi-faceted approach. This includes establishing a clinical register, system development focused on an appropriate model of care for these women, and delivering a detailed research component focused on pregnancy outcomes for mother and baby. The health of mothers after pregnancy (PANDORA Mothers) is a new focus for the partnership and provides an opportunity for medical and public health research.

Research associated with the NT & FNQ Diabetes in Pregnancy Partnership includes qualitative methods regarding health systems and models of care and quantitative approaches for the more detailed study, PANDORA (Pregnancy and Neonatal Diabetes Outcomes in Remote Australia). The NT DIP Partnership received further funding for PANDORA Wave 1, which is a sub-study of PANDORA and relates to the clinical assessment of a sub-group of mothers with and without diabetes and their infants in order to identify predictors of chronic conditions such as obesity, diabetes and heart disease later in life. We will explore the maternal and infant consequences of diabetes in pregnancy, and gain insights to inform the timing and types of interventions to prevent the development of later chronic conditions.

The NT partnership has been underway since 2011 and has recently expanded to include FNQ, offering a broad opportunity for researchers according to their area of interest and expertise and on discussion with the investigators.

Specific opportunities include mixed-methods studies of a health systems intervention to improve maternal health post-partum and inter-pregnancy, and improving models of care for diabetes in pregnancy in Far North Queensland; and qualitative research exploring women's experience of diabetes in pregnancy.

Supervisors:

Primary

[Associate Professor Louise Maple-Brown](#)

Secondary

Other investigations of the NT & FNQ DIP Partnership, according to topic/field of research within partnership.

Location of the project:

Darwin or Alice Springs, NT

Type of project:

PhD, Masters, Honors

Clinical and Molecular epidemiology of hepatitis B virus in northern Australia

Summary:

Hepatitis B virus infection is endemic in Indigenous people in Northern Australia. We have recently described a unique genotype (HBV/C4) as the unique circulating genotype in the NT. HBV/C4 has a different serotype and sAg than that of the main vaccine strain. Along with previous observational data, this raises concern about vaccine efficacy in this setting. Furthermore, HBV/C4 contains mutations which are known to convey an increased risk for disease progression and hepatocellular carcinoma, but the natural history of HBV/C4 infection is unknown

The student will join an existing team of clinicians, epidemiologists, laboratory virologists, research staff and aboriginal health workers. The main project will be:

- Co-ordinating the recruitment, data collection and analysis of a cohort of HBV-infected women who have given birth in the NT since 1988, and their babies. Participants will be recruited from Darwin and 3 large remote NT communities. Blood will be tested from mothers and babies for HBV serology and, of positive for HBV genotyping and whole genome sequencing

There is the opportunity to get involved in several other related studies and for the student to design their own further studies to complement the above.

The student will ideally be a clinician (i.e. a medical doctor or nurse with clinical skills) who has some research experience.

Supervisors:

Primary

[Associate Professor Josh Davis](#)

Secondary

[Dr Jane Davies](#)

Location of the project:

Darwin, with some outreach work to remote communities

Type of project:

PhD