



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**



Research Projects Semester 2, 2026

School of Population
& Global Health



Research Projects Available in the School of Population & Global Health (SPGH)

As a world-class research university, UWA offers research opportunities of the highest calibre. You will work closely with an expert supervisor on a specific research topic to produce a manuscript of significant academic scholarship.

Your initial research training can include a postgraduate coursework Master of Public Health (MPH) with a 24-point dissertation. This can lead to enrolment in a Master of Philosophy (MPhil) or Doctor of Philosophy (PhD).

As a 24-point MPH dissertation research student with us, you will develop, under supervision, a paper for publication in an academic journal - this is the first step in your research career!

How does research training at SPGH work?

You will work with an academic researcher to investigate an important and topical area of public health. Responsible, conscientious students, who meet the eligibility criteria, with well-developed interpersonal and written communication skills, are sought for these projects.

If you are interested in one of these projects, please contact the person named below the project title. If you would like to undertake a project not listed here (e.g., one where the supervisor is within a different School or not based at UWA) you will still require a supervisor within SPGH. Please contact the Dissertation Coordinator to discuss.

Want to know more?

If your question is specific to the project you're interested in, please contact the academic named under the project title. For other enquiries, contact the Dissertation Coordinator; Dr Dani Barrington – dani.barrington@uwa.edu.au

Research Areas at SPGH

The Busselton Health Study

[Enquire](#)

The Busselton Health study is a series of cross-sectional and longitudinal population health studies carried out on the population of Busselton, WA which aims to provide a better understanding and management of disease and illness.

Research activities undertaken as part of the Busselton Health Study are diverse and encompass a wide range of health conditions and measures.

These have included cardiovascular disease, respiratory disease, diabetes and endocrine disorders, gastrointestinal, kidney and liver diseases, cancer, obesity, sleep disorders, cognition and genetic epidemiology.

Extensive information on demography, lifestyle and behaviour have also been collected at each of the surveys along with blood samples for biochemical measures and genetic studies.

Epidemiological data analysis driven projects are available for Masters students. Please contact A/Prof Kevin Murray (kevin.murray@uwa.edu.au) for details.

Cardiovascular Disease Epidemiology

[Page 4](#)

Research in this area aims to reduce the burden of cardiovascular disease through research into trends and determinants of acute events, treatment, management and outcomes.

Child and Adolescent Development and Health

[Page 13](#)

Early influences on child and adolescent health significantly impact on health and development outcomes throughout life. Our research draws on the skills and experience of multi-disciplinary backgrounds to engage with stakeholders and deliver high quality research with real world policy and practice implications.

Environment and Occupation Health


[Enquire](#)

Research in this area investigates the relationships between ecosystems, environmental and occupational agents and health, at local and global scales, in order to determine ways that we can improve global human health. We research disease outcomes resulting from occupational and environmental exposures, such as mining hazards, asbestos, air pollution, heat, noise and water. We are also investigating the positive impact of green and blue spaces on health, and a developing area of interest is health promotion in relation to global and environmental health. If this area interests you, please contact A/Prof Peter Franklin (peter.franklin@uwa.edu.au) for details.

Equity and Oral Health

[Page 18](#)

The Equity and Oral Health Group led by social epidemiologist Professor Linda Slack-Smith and is a multidisciplinary team researching a range of issues related to inequity underpinning population health outcomes. Research in this area is underpinned by equity and social justice in public health, including working with Aboriginal Australians and other cultural groups. Much of their work uses oral health as a lens to explore equity but they work in a range of areas with a focus on social justice. As oral health impacts overall health and wellbeing across the life span, they have explored the lived experience of diverse social



groups and factors underpinning their limited access to health services. They conduct reviews, quantitative, qualitative and translational research that reflects the strengths of incorporating quantitative and qualitative approaches to offer a deeper understanding of issues being investigated.

Genetic Epidemiology

Enquire

Research in this area aims to identify the genetic and environmental determinants of common human diseases and explore ways of using this information to improve human health. Please contact A/Prof Jennifer Stone (jennifer.stone@uwa.edu.au) if you are interested in undertaking research in this area.

Global Health

Page 24

As public health researchers, we are interested not only in the health of Australia's domestic population, but also the health of communities across our region and around the world. We work with partners in neighbouring countries to support primary research on the impact of health programs, local policies, and new interventions or health strategies; and we work with global institutions, such as the World Health Organisation, to undertake cross-country analyses of primary and secondary data on child and women's health, water, sanitation and hygiene, nutrition, and health systems functioning.

Health and Labour Economics

Page 31

Research in this area aims to improve resource allocation and decision making in the health sector we undertake systematic evaluation and assessment, with an economic perspective.

Health Services Research

Page 32

Researchers in the School undertake work with linked medical and health data, other health services data and the evaluation of health services, patient safety, surgical care and pharmaco-epidemiology.

Neuropsychiatric Epidemiology

Page 33

The Neuropsychiatric Epidemiology Research Unit (NERU) focuses on psychiatric epidemiology, taking a cross-disciplinary approach to the study of psychotic disorders including schizophrenia and other severe mental illness.

Priority Populations

Page 34

Research in this area aims to improve health and social outcomes and reduce the disease burden among some of society's most at-risk populations.

Public Health Research Capacity

Page 45

Research in this area seeks to build a public health research workforce capable of effectively responding to current and emerging local, national, and global health challenges. Findings will help public health researchers (from students to senior academics) conduct high-quality research that addresses diverse health issues and inequities; translates evidence into enhanced health practice, programs, and policies; and improves health outcomes for all. This area of research aligns with SPGH's strategic goals to *build a diverse, thriving, and future-ready public health workforce and champion and elevate research*. It will help equip research students and staff to secure competitive funding, lead to high-impact research, and develop the skills needed to become public health leaders.

The Raine Study, established in Perth in 1989, is one of the largest longitudinal, observational and multigenerational pregnancy cohort studies globally. It aims to improve human health and well-being by studying the life-course of a cohort of 'Western Australians', focusing on understanding the multifaceted interactions of genetics, environment, phenotype, behaviour, and other developmental outcomes. For 35 years, the Raine Study has been instrumental in helping researchers and policymakers gain a deeper understanding of the factors influencing human health and well-being. It has grown to span four generations and includes Generation 1 - the original mothers (2900 women recruited at 18 weeks pregnant) and fathers. Generation 2 – the babies born into the study between 1989 and 1992. Generation 3 – biological children of Generation 2, and Generation 0 – the biological grandparents of Generation 2.

The Raine Study is a world-class research enabling platform providing researchers access to a rich data holding, including 30 million genetic and epigenetic data points, 170,000 curated biological samples and 30,000 phenotypic variables. The Raine Study contributes to life-changing scientific discoveries, advancements in clinical practice, and influences future health policies, with its research impact further evidenced by over 760 publications in peer reviewed journals. The Raine Study is currently undergoing its 18th and largest ever follow-up, collecting phenotypical data via questionnaires, physical assessments, matched biological measures from Generation 1, 2, and 3 participants' and obtaining consents to link the whole Raine Study dataset to the Commonwealth and WA administrative datasets. As a research-enabling platform, the Raine Study team works closely with researchers, providing active support and expert guidance to identify the most appropriate data for each research project.



Cardiovascular Disease Epidemiology

State-of-the-Art Cardiovascular Disease (CVD) Research

A/Prof Lee Nedkoff - lee.nedkoff@uwa.edu.au
Dr Siobhan Hickling – siobhan.hickling@uwa.edu.au

Background: CVD is a major cause of morbidity and mortality worldwide. Monitoring and reporting trends is a national priority health area and is a driver of health policy, aimed at improving healthcare delivery and outcomes.

Outline: Various projects in specific areas are offered. These will involve examining trends and models of care in CVD prevention, treatment and management and may include clinical epidemiology, health outcomes, pharmacotherapy, prevention, cost-effectiveness and community engagement.

A range of topic areas include:

- Atherothrombotic disease across the vascular territories.
- Monitoring coronary artery disease and stroke
- Cardiomyopathies
- Management of CVD in First Nations people
- Diabetes and CVD
- Peripheral arterial disease
- Risk factor prevalence and outcomes
- Coronary artery revascularisation

Methodology: The Cardiovascular Epidemiology Research Centre (CERC) uses national and state person linked administrative data, together with clinical patient data to examine trends and epidemiology of CVD health outcomes.

Project Specific Requirements: Project dependent

Project Length: One semester full-time or two semesters part-time.



Development of an electronic phenotype for investigating chronic coronary disease

A/Prof Lee Nedkoff - lee.nedkoff@uwa.edu.au

Background: Coronary heart disease is a progressive and long-term condition resulting from atherosclerosis in the coronary arteries. It is the leading cause of death in Australia, resulting in 17,731 deaths in 2019, and costing the Australian health system \$2.4 billion in 2018-19. Many patients live with the chronic form of the disease, chronic coronary disease (CCD), for many decades, requiring long-term drug therapy and multiple diagnostic and interventional coronary procedures.

We don't know the true prevalence of CCD in Australia. While there are strong methodological approaches for measuring incidence and hospitalisations for acute coronary syndromes (ACS, comprising myocardial infarction (MI) and unstable angina), there is no evidence-based method for identifying CCD patients at a whole-population level in Australia. Without accurate prevalence estimates, there are limited data to inform health policy and service design regarding the effectiveness of secondary prevention therapies.

Outline: This study aims to bring together a broad scope of multi-jurisdictional Australian linked health data to develop a method for identifying people with chronic coronary disease (known as an electronic phenotype) and to investigate the burden and management of people with this disease.

Methodology: The study will use linked hospitalisation, emergency department, mortality, PBS and MBS data from multiple jurisdictions in Australia. Machine learning techniques will be used to develop the electronic phenotype; health service utilisation and medication adherence will be measured in the patient cohort.

Project Specific Requirements: Requires some experience with using linked data and/or statistical software packages, e.g., SAS, STATA.

Project Length: Two semesters part-time.

Measuring cardiovascular health in First Nations communities using routinely collected primary health care data: a scoping review

Dr Ingrid Stacey - ingrid.stacey@uwa.edu.au

Dr Emma Haynes – emma.haynes@uwa.edu.au

Samantha Stiles – samantha.stiles@uwa.edu.au

A/Prof Judith Katzenellenbogen - judith.katzenellenbogen@uwa.edu.au

Background: Aboriginal and Torres Strait Islander (First Nations) people experience an inequitable life expectancy gap relative to non-Indigenous Australians, with almost one-fifth of premature deaths caused by cardiovascular disease (CVD). Improvements in First Nations cardiovascular (CV) health demands data that goes beyond high-level descriptions of these disparities and instead identifies “what works” for each community. This evidence-based approach to health improvement is foundational to public health. First Nations-led interventions to improve CV health are urgently needed, which could build upon the strength of Aboriginal Community Controlled Health Organisations (ACCHOs) to provide culturally safe primary care. Knowledge gaps to inform this do exist however, and ACCHOs have identified “increased data capacity” as one of their four key priority reform areas in the “National Agreement on Closing the Gap”.

Outline: The proposed project aims to generate a synthesis of CV health measures derived from primary health care and examine their use, within the context of Indigenous Data Sovereignty principles. This information will inform future projects to be undertaken in partnership with several ACCHOs.

1. What current CV health and wellbeing measures based on primary health care data have been reported in peer-reviewed and grey literature?
2. How do the reported measures align with the principles of Indigenous Data Sovereignty?
3. Where are the CV health measurement gaps in routine primary care data collection?

Methodology: This project does not involve the collection of primary data in a traditional sense. Due to the collaborative nature of First Nations health research and broad topic areas considered CV health, codesign of the scoping review strategy will be undertaken by the student in partnership with national experts in CV health and community health service providers. So attendance and coordination of these meetings will form part of scoping review activities.

Scoping review methodology is outlined by: Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil, H. Scoping Reviews (2020). Aromataris E, Lockwood C, Porritt K, Pilla B, Jordan Z, editors. JBI Manual for Evidence Synthesis. JBI; 2024. Available from: <https://synthesismanual.jbi.global>. <https://doi.org/10.46658/JBIMES-24-09>

Project Specific Requirements: NA

Project Length: This project is time critical so is offered for one semester full time only. There is an opportunity for PhD supervision thereafter on a related mixed methods research project that involves the collection and analysis of primary data.



Pharmacoepidemiology studies using the 10% PBS sample

A/Prof Frank Sanfilippo - frank.sanfilippo@uwa.edu.au

Background: We have applied to obtain a 10% sample of data from the Pharmaceutical Benefits Scheme (PBS) with linkage to deaths. The dataset will provide a longitudinal source of records for medicines dispensed in Australian pharmacies from 2012 onwards. This will allow various analyses on use of medicines in Australia.

Outline: To investigate the use of specific groups of medicines in a 10% random sample of patients receiving medicines through the PBS in Australia.

Methodology: The PBS data contains information on medicines dispensed from Australian pharmacies, including hospital pharmacies that are registered with the PBS (i.e. all private and some public hospitals). Variables include age, sex, name and strength of the drug, quantity dispensed, ATC code, PBS item code, date of supply, date prescribed, beneficiary status (concession card, general beneficiary) and date of death. The dataset will be supplied on approval by the Department of Human Services. It consists of linked data of PBS records and matching death record from a random 10% sample of people in Australia. Various analyses can be completed using these data, with specific examples including: (i) use of psycho-active medicines in the elderly; (ii) use of low dose vs high dose statins by patient characteristics; (iii) patterns of medication use before and during the COVID-19 period (e.g. supply of hydroxychloroquine); (iv) use of medicines in the very old; (v) adherence of specific drug groups (e.g., anti-retroviral drugs, statins, beta blockers, antiplatelet agents).

Analysis will require identifying the specific drug groups of interest, applying multivariable regression methods, estimating medication adherence using the proportion of days covered (PDC) method, describing patient characteristics, and simple univariate and bivariate statistics. There is potential to publish the findings in a suitable journal.

Project Specific Requirements: Knowledge of medicines and therapeutics would be an advantage, although an interest in this area would be sufficient, with additional training provided. Analysis will require use of multivariable regression methods. The data are linked and some knowledge or understanding of how to handle these data would be useful.

Project Length: One semester full-time or two semesters part-time.



Western Australian Heart Valves Study (WAVES)

Dr Charley Budgeon – charley.budgeon@uwa.edu.au
Georgie Graham – georgie.graham@research.uwa.edu.au
Graham Hillis, Primeo Ng, Tom Gilbert, Royal Perth Hospital Clinical Trials Team

Background: To establish the WAVES registry and inform clinical practice on the treatment of valvular heart disease, improve patient outcomes, and design future trials which have global health implications.

Outline: Research Objective 1: Create a historical registry of all patients and outcome measures after surgical heart valve replacement and/or repair in one of the three tertiary public hospitals in Western Australia (WA) between 1 January 2010 and 31 December 2020 (retrospective cohort).

Research Objective 2: Create a new registry of all patients and outcome measures after surgical heart valve replacement and/or repair in one of the three tertiary public hospitals in WA from 1 January 2021 onwards with prospective periodic follow-up.

Methodology: A combination of data sources including local and national retrospective and prospective clinical/surgical quality registries, patient-reported measures, and routinely collected hospital morbidity and mortality collections.

Project Specific Requirements: Requires knowledge and competency with common data analytical software and in statistical regression.

Project Length: One semester full-time or two semesters part-time.

Understanding trends and patterns of medicine utilisation to manage cardiovascular disease

A/Prof Frank Sanfilippo - frank.sanfilippo@uwa.edu.au

A/Prof Lee Nedkoff – lee.nedkoff@uwa.edu.au

Dr Derrick Lopez – derrick.lopez@uwa.edu.au

Keira Robinson - keira.robinson@uwa.edu.au

Background: Cardiovascular disease (CVD) is a leading cause of morbidity and mortality worldwide. In Australia, it accounts for 27% of deaths every year and around 1.2 million Australians have one or more heart or vascular conditions. One of the means of preventing and treating CVD is using evidence-based pharmacotherapies. These drug groups include blood pressure lowering drugs, lipid lowering drugs, and vasodilators, and they account for around one third of all Pharmaceutical Benefits Scheme (PBS) prescriptions in Australia. While there is some data available on supply trends of CVD medicines in Australia, there is limited research investigating other aspects of pharmacological management. In particular, most studies concentrate on trends in various measures for individual drug groups, with limited data on patterns in people taking multiple drugs. Little is known about the use of nitrates (a subgroup of the vasodilator category) and the patterns of use in combination with other CVD drug groups. Nitrates are an anti-anginal drug and some are highly specific for the management of coronary artery disease-related chest pain. Therefore, they could potentially be used to identify the portion of this patient group who are not hospitalised for their condition. However, we have limited data on patterns of use of this drug group, of different nitrates, and of how they are used in combination with other CVD drugs.

Outline: The primary aim of this project is to examine trends in the dispensing of PBS-listed CVD pharmacotherapies, stratified by age, sex and state. Specifically, the aims are to:

- Examine the dispensing trends of major CVD drug groups, including vasodilators, beta blockers, calcium channel blockers, agents acting on the renin-angiotensin system, and lipid modifying agents.
- Determine the prevalence and incidence of use of these drug groups.
- Determine the co-prescribing patterns for people using the CVD medications of interest.

Methodology: This study will utilise the PBS 10% sample dataset to examine trends and patterns in government-subsidised CVD pharmacotherapy use from 2005 to 2022. This dataset contains information on medicines dispensed from Australian pharmacies. Variables include age, sex, name and strength of the drug, quantity dispensed, PBS item code, supply date, prescribed date, beneficiary status and year of death. Various analyses can be conducted using this dataset to understand trends and patterns in dispensing of CVD pharmacotherapies.

Project Specific Requirements: Knowledge of medicines and therapeutics would be an advantage, although an interest in this area would be sufficient, with additional training provided. Analysis will require use of multivariable regression methods and some knowledge or understanding of working with linked data.

Project Length: One semester full-time or two semesters part-time.



Acute Coronary Syndromes and Stroke

A/Prof Lee Nedkoff - lee.nedkoff@uwa.edu.au
Keira Robinson – keira.robinson@uwa.edu.au

Background: Acute coronary syndromes (ACS) occur when there is a reduction in blood supply to the heart and include ST-segment elevation myocardial infarction (STEMI), non-STEMI and unstable angina. In 2020, 56,700 Australians aged 25 and over suffered an acute coronary event. Stroke is a known complication following ACS and is associated with increased morbidity and mortality. There were around 39,500 new and recurrent stroke events in Australia in 2020. Currently, age-specific incidence of stroke and long-term cardiovascular outcomes following hospital admission for ACS is unclear. A more accurate understanding of stroke risk in the ACS population is needed to inform health policies pertaining to stroke prevention strategies.

Outline: This study aims to describe the age-specific risk of stroke in people admitted to hospital with ACS. This may include estimation of:

1. age-specific stroke incidence and recurrence rates in the ACS population, stratified by sex.
2. short, medium, and long-term risk of stroke in the ACS population.
3. the population attributable risk of stroke due to ACS.

Methodology: A linked dataset containing hospital, emergency department, and mortality data for all cardiovascular disease presentations in Western Australia since 1985 is available. A retrospective cohort of ACS patients will be constructed based on International Classification of Diseases (ICD) coding, and relevant statistical and regression analyses will be undertaken.

Project Specific Requirements: This is a linked data project. Requires some experience using SAS, STATA or R programming, and completion of Epidemiology and/or Biostatistics units.

Project Length: Two semesters part-time.



Enhancing the surveillance of cardiomyopathy in Australia

A/Prof Lee Nedkoff – lee.nedkoff@uwa.edu.au
Samantha Stiles – Samantha.stiles@uwa.edu.au

Background: Cardiomyopathy is a clinically significant but under-recognised contributor to cardiovascular disease (CVD) burden in Australia. The 2023 European Society of Cardiology (ESC) guidelines recently refined the classification of cardiomyopathy phenotypes (dilated, ischaemic, hypertrophic, and arrhythmogenic), each associated with varied aetiology and prognosis and occurrence throughout life. Most subtypes are linked to the development of heart failure, with several also associated with cardiometabolic conditions such as diabetes and ischaemic heart disease. However, the temporal relationship between heart failure and cardiomyopathy varies by subtype, and important knowledge gaps remain regarding disease progression across cardiomyopathy phenotypes in diverse populations.

Despite their clinical importance, cardiomyopathies are not specifically monitored in Australian national statistics. This study will provide crucial data on the burden of cardiomyopathy subtypes in Australia and establish best-practice methods for ongoing monitoring.

Outline: This study will utilise WA and national data linked health data to develop methods to identify cardiomyopathy and investigate the burden of cardiomyopathy subtypes, including their associations with heart failure and coronary heart disease.

Several potential projects associated with this project are available for students, including a scoping review and epidemiological analyses using linked datasets.

Methodology: A scoping review will be conducted to summarise methodological approaches for the identification of cardiomyopathy in population-based health data.

Linked hospitalisation, emergency department, mortality, Pharmaceutical Benefits Scheme (PBS) and Medicare Benefits Schedule (MBS) data will be used to develop and test an algorithm to identify cardiomyopathies. There is also the potential to use linked clinical data for validation of the algorithm. Trends in age-standardised rates for cardiomyopathy subtypes and risk of cardiovascular complications will be investigated.

Project Specific Requirements: For linked data analysis, some experience with using linked data and/or statistical software packages, e.g., SAS, STATA, R is preferred.

Project Length: One semester full-time or two semesters part-time. There is an opportunity for PhD supervision on this project upon completion.



Western Australian Heart Valves Study (WAVES). Evaluating Patient-Reported Outcomes and Long-Term Survival Following Valve Surgery

Dr Siobhan Hickling – siobhan.hickling@uwa.edu.au
Prof Tim Briffa – tom.briffa@uwa.edu.au
Prof Graham Hills, Head of Cardiology Royal Perth Hospital
Dr Tom Gilbert, Royal Perth Hospital Clinical Trials Team

Background: Valvular heart disease significantly impacts morbidity and mortality, particular in ageing populations. While surgical interventions such as valve repair or replacement are standard treatments, there is little data on patient-reported outcomes and long-term quality of life post-surgery. The WAVES registry, encompassing patients from 2010 onwards at all four tertiary public hospitals and prospectively at Royal Perth Hospital since 2020, offers a unique opportunity to analyse these outcomes. Baseline data using the EQ-5D-5L have been collected from registry participants who underwent surgery between 2010 and 2020 with a varying interval between surgery and questionnaire completion. Follow-up questionnaires have also been administered to those who completed the initial survey, providing insights into patient experiences and recovery trajectories.

Outline:

- Evaluate differences in health-related quality of life among the subset of patients at high-risk undergoing heart valve surgery, stratified by sex, using the EQ-5D-5L questionnaire.
- Examine whether baseline EQ-5D-5L score can predict clinical outcomes over time, including rehospitalisation and mortality, in patients' post-valvular surgery.
- Explore sex- specific difference in days alive and out of hospital in this high-risk subset post valvular surgery.

Methodology: Using data from the WAVES registry and baseline and follow-up EQ-5D-5L questionnaires, descriptive statistics will be used to examine patient-reported outcomes by sex. Days alive and out of hospital will be calculated for each patient, with subgroup analyses conducted to explore sex-specific differences. The predictive value of baseline EQ-5D-5L scores for outcomes over time, including rehospitalisation and mortality, will be assessed using regression modelling.

Project Specific Requirements: Sound knowledge of statistical software for data analysis statistical regression (such as SPSS or SAS).

Project Length: One semester full-time or two semesters part-time. Suitable for Honours, MPH or MD Scholarly Activities Research.



Child and Adolescent Development and Health

Physical activity interventions targeting dog owners

A/Prof Hayley Christian - hayley.christian@uwa.edu.au

Background: Almost half of all Australian households own a dog. Dog walking has been shown to be a potentially viable strategy for increasing the number of people (adults and children) who meet national physical activity recommendations.

Outline: This project will involve intervention research to examine the potential of dog walking and active play to improve physical activity levels, health and wellbeing. The project is likely to have significant implications for physical activity promotion and will involve working closely with key stakeholders, nationally and internationally.

Methodology: Qualitative; Quantitative community-based survey; Intervention research.

Project Specific Requirements:

Ability to conduct quantitative / qualitative research.
Excellent writing skills.
Statistical analysis (SPSS and/or SAS).
Ability to work as part of a team.
Good interpersonal communication skills.

Project Length: Two semesters part-time.



Children's Physical Activity, Health and Development

A/Prof Hayley Christian - hayley.christian@uwa.edu.au

Background: This research forms part of the PLAYCE program of research – Places Spaces & Environments for Children's Physical Activity. PLAYCE examines the influence of the physical, social and policy environment on young children's physical activity, sedentary behaviour, eating behaviour, weight status, sun exposure and development: at home, around the neighbourhood and whilst attending early childhood education and care (ECEC). This research will provide information on how best to create healthy home, neighbourhood and ECEC environments.

Outline: The project involves qualitative research with children, parents, staff and key stakeholders in the ECEC setting, as well as quantitative research measuring young children's movement behaviours (physical activity, sedentary time and sleep), overweight/obesity, development and the influence of the ECEC physical, policy and social environment. There is scope to evaluate the impact of policy and practice-based interventions to improve children's movement behaviours at ECEC.

Students have the option to work on the PLAYCE cohort study which details patterns of movement behaviours, and the effect movement behaviours have on weight status and socio-emotional, cognitive, and motor development across childhood (2-9 years).

Methodology: Literature Review; Quantitative/qualitative research.

Project Specific Requirements:

- Ability to conduct quantitative and/or qualitative research.
- Excellent writing skills.
- Statistical analysis (SPSS and/or SAS).
- Ability to work as part of a team.
- Excellent interpersonal and communication skills.

Project Length: Two semesters part-time.



How do environmental and pharmacological exposures during pregnancy impact maternal and child health?

Dr Erin Kelty - erin.kelty@uwa.edu.au
A/Prof Caitlin Wyrwoll - caitlin.wyrwoll@uwa.edu.au
Ebony Quintrell - ebony.quintrell@uwa.edu.au

Background: Exposure to extreme heat, medications, pollution, alcohol, and illicit drugs during pregnancy can have a profound impact on maternal, neonatal and child health. For a lot of these exposures, we are only just beginning to understand their potential impact. This research is becoming increasingly important, particularly with increasing global temperatures and frequency/severity of heat waves, and the increasing use of medication during pregnancy. Understanding the impact of exposure to environmental and pharmacological factors during pregnancy is important for working towards mitigating hazardous risks and ensuring the health of pregnant persons and their children.

Outline: We currently have several projects with potential for student involvement. These include:
Examination of the impact of prenatal exposure to extreme heat on child health (e.g. in terms of immune related conditions such as asthma, allergies, infections).
Examining the maternal and neonatal safety associated with the use of medications during pregnancy (particularly mental health medications).
Examining the use of contraceptives in women prescribed medications that are not safe to use in pregnancy.
Conducting systematic/scoping reviews on medication safety or maternal/neonatal health in pregnancy (including topics related to alcohol use).
However, we do have additional projects available, which we are happy to discuss.

Methodology: Our research primarily involves the use of large retrospective cohorts, which are linked with state health data (e.g. hospital, deaths). Typically, this involves the use of state-wide perinatal records which are linked with exposure data (e.g. weather data or medication dispensing data) to identify exposed neonates. Linked state health data can then be used to examine outcomes like perinatal mortality, congenital anomalies, hospitalisation. However, there is also scope for systematic/scoping reviews and potentially a qualitative study within the same themes.

Project Specific Requirements: Completion of Biostats 1 is preferred for quantitative projects.

Project Length: Two semesters part-time.



Parent engagement in the Play Active Program

A/Prof Hayley Christian - hayley.christian@uwa.edu.au

Background: Daily physical activity is critical during the early years of life for facilitating children's health and development. Only one in three Australian children aged 2 to 5 achieve the recommended level of three hours of daily physical activity. Early childhood education and care (ECEC) services are a key setting to intervene to increase physical activity.

Outline: The student will be part of a multi-jurisdictional NHMRC funded project (Play Active) and have the opportunity to work with eight partner agencies.

The project will use qualitative research to identify barriers and enablers for improving parent-child, and parent-educator engagement around children's physical activity.

This will involve exploring, identifying and better understanding the factors that strengthen the educator-parent engagement process to boost children's physical activity in the home and ECEC environment.

Methodology: Literature review; Qualitative.

Project Specific Requirements:

- Ability to conduct quantitative/ qualitative research.
- Statistical analysis (SPSS and/or SAS).
- Ability to work as part of a team.
- Excellent interpersonal, written, and oral communication skills.

Project Length: Two semesters part-time.

Maternal imprisonment and implications for children's health and development

Dr Megan Bell – megan.bell@uwa.edu.au
Prof David Preen – david.preen@uwa.edu.au

Background: Despite being recognised as one of the most vulnerable groups in society, the health and wellbeing of children of prisoners in Australia is noticeably absent from policy and practice. There are no official statistics on the number of children with a mother in prison, and limited population-level research on their health and developmental outcomes, in Australia and internationally. In Western Australia, there are no dedicated services supporting children when their parent goes to prison. An empirical evidence base is crucial for developing appropriate health-focused policies, guidelines, referral pathways, and staff training that effectively respond to the needs of children of incarcerated mothers.

Outline: Project aims include:

1. Quantify the number of children in WA with an incarcerated mother and describe their developmental profiles.
2. Determine the impacts of maternal incarceration on children's physical and mental health outcomes across the life course; and
3. Determine the associations between when, how often, and how long mothers are incarcerated with the health and developmental profiles of their children.

Research findings will inform policies and services aimed at supporting positive health outcomes for children of incarcerated mothers.

Methodology: This project uses over 30 years of whole-population de-identified linked administrative data, enabling the investigation of outcomes for the children of all female prisoners without compromising privacy. Data has already been obtained for this project and are accessed through a secure e-research environment, ERICA.

Administrative data from the WA Departments of Justice, Health, Education, and Communities have been linked along with birth and death data. The cohort includes all children born from 1985 to 2019 in WA, comprising a sample size of more than 980,000 individuals. Data on mothers of the cohort and children born to the cohort are also linked, enabling the investigation of intergenerational patterns of health and disadvantage.

Project Specific Requirements:

- Completion of PUBH5785 Introductory Analysis of Linked Health Data, or equivalent experience working with linked data
- Competence in using R for data preparation and analysis
- High level of quantitative skills, including experience working with large complex datasets

Project Length: Two semesters part-time.



Equity and Oral Health

Smoking, Vaping and Pouches

Prof Linda Slack-Smith - linda.slack-smith@uwa.edu.au

Background: Smoking is a major health issue in our society and globally with increasing vaping and use of pouches.

Outline: There are a range of potential projects around smoking, vaping and pouches.

Methodology: The project would use epidemiology or qualitative approaches.

Project Specific Requirements: Requires strong epidemiology and biostatistics skills or qualitative skills for most projects.

Project Length: Normally two semesters part-time, but potentially full time.



Public health issues in formal and informal childcare for children, parents, grandparents and workplaces

Prof Linda Slack-Smith - linda.slack-smith@uwa.edu.au

Members of the Equity and Oral Health Group or collaborators

Background: Childcare plays a significant role in our society, allowing women to return to work or study and for many children to experience good quality care during an important stage of development. There are important issues around the health of children (for example diet, physical injuries, immunisation, medication use, infectious diseases, general health), parents (managing work and family responsibilities, parent health) and childcare workers (health, turnover, experience of racism). In addition to formal childcare (centres and family day care), there is significant care provided by grandparents, which is unregulated and often places high demands on our older adults.

Outline: To explore one aspect of health in childcare.

Methodology: Options include systematic or realist reviews, qualitative research, quantitative research, policy exploration.

Project Specific Requirements:

- May require Working with Children Check.
- Basic knowledge of qualitative research approaches.
- Literature searching skills.
- Good communication skills.

Project Length: Normally two semesters part-time, but potentially full time.

Social inequities and health

Prof Linda Slack-Smith - linda.slack-smith@uwa.edu.au
Various team members and collaborators.

Background: Quotes “The measure of a civilisation is how it treats its weakest members” and “The greatness of a nation can be judged by how it treats its weakest member” have both been attributed to Gandhi.

Our group is interested in many aspects of inequities and there are many potential projects. If you are interested in social inequities and health, we can collaboratively develop a project to suit your interest and expertise. The recent extraordinary experiences of the pandemic (COVID-19) have demonstrated the vulnerability of our society where people are marginalised. Inequities occur across the life-course from access to safe contraception to how we treat older adults. Potential projects also include oral health in primary care and role of inter-professional collaboration.

Outline: There are a range of potential projects to explore inequities and health (potentially with the influence COVID-19 or not) in different groups.

Examples of types of projects include:

- Contextual factors and smoking.
- Projects related to the commercial determinants of health.
- Barriers and enablers to people with mental health disorders in accessing health services?
- What have been the outcomes of COVID-19 on CALD communities accessing health and dental care?
- What do adults with CALD backgrounds consider effective ways of communicating public health messages to their communities? Who do they trust?
- What influence does age and gender have?
- How have CALD communities communicated about COVID-19?
- Health, diet or oral health in women and children in prison (with Dr Jocelyn Jones, Curtin University).
- Breastfeeding, birth and perinatal issues.
- Diabetes care in older adults.
- Physical activity in older adults.
- Health and dental care for those with HIV.
- Other groups may include the aged, those with disability, refugees and others.

Methodology: Qualitative or quantitative.

There are a range of potential projects investigating and addressing health inequities (oral health or otherwise) across the lifespan (including child or older adult) and in various groups: Aboriginal Australians, people with disability, people with mental health issues, young children, the aged, those in residential aged care refugee and migrant groups, rural Australians, homeless and those with co-morbidities.

Project Specific Requirements: Skills required will depend on the particular project.

- Ability to work independently and under direction.
- Interest in inequities and social justice.
- Working with Children Check (possibly).
- Basic knowledge of qualitative research approaches.
- Literature searching skills.
- Good communication and project management skills.

Project Length: Normally two semesters part-time, but potentially full time.



Sugar (including Commercial Determinants of Health)

Prof Linda Slack-Smith - linda.slack-smith@uwa.edu.au
Various team members and/or collaborators

Background: Sugar has long been associated with poor oral health and obesity, yet it remains a common part of our diet. There are a range of potential projects.

Examples may include qualitative interviews to investigate community perceptions and/or investigation of the role of the media or policy in promoting sugar despite evidence of its relationship to significant health problems.

There is potential to look at various groups - for example preschool, ageing etc. (Project could be systematic review, qualitative, quantitative or mixed methods studies).

There is an important opportunity to investigate commercial determinants of health in relation to sugar and other areas.

Outline: Potential projects may include:

- a Literature Review or scoping review to determine the context in which sugar/oral health is portrayed in the media using quantitative and qualitative approaches (frequency of use, terminology used, contexts, related terms in text).
- determining community perceptions about the role of sugar in diet and meanings associated with it e.g., rewards in various groups such as parents/older adults/refugees etc (perceived risks, role in health).
- conducting a comparative analysis of similarities and differences between groups.

Methodology: There are options to undertake simple content analysis of news media, collect quantitative data or to undertake qualitative interviews depending on skills and preferences of students. News media would be extracted using Factiva or similar approach.

Project Specific Requirements:

- May require Working with Children Check.
- Basic knowledge of qualitative research approaches.
- Literature searching skills.
- Good communications skills.

Project Length: Normally two semesters part-time, but potentially full time.



Social practices and domestic violence

Prof Linda Slack-Smith - linda.slack-smith@uwa.edu.au

Background: Family and domestic violence is a complex challenging problem with substantial toll in terms of mortality, morbidity and psychological damage to family members. Social practice theory is a novel approach gaining substantial traction in public health moving the focus away from individuals to the practices or cultures/habits around an issue.

Outline: The aim is to analyse existing published qualitative studies to explore potential social practices impacting family and domestic violence. This would likely be through a qualitative metasynthesis (see example: Girard IM, Ward P, Durey A, McLean C, Lund S, Calache H, Baker SR, Slack-Smith L. (2024) A qualitative meta-synthesis of carers' perceptions of factors influencing preschool children's oral hygiene practices—A social practices perspective. *Community Dent Oral Epidemiol.* 2024; 52(5):677-689. doi:10.1111/cdoe.12973)

Methodology: Data sources are existing papers – the project does not require ethics approval.

Project Specific Requirements: This would suit a student with a social science background.

Project Length: Best as two semesters part-time, but negotiable.



Dental Services and Oral Health Projects

Prof Linda Slack-Smith - linda.slack-smith@uwa.edu.au

Background: Oral health is an important aspect of public health that is often siloed.

Outline: Various projects looking at dental service use or oral health outcomes.

Methodology: Potentially scoping review, systematic review, quantitative, qualitative or mixed methods study.

Project Specific Requirements: May require Biostats 1 or 2 or qualitative unit completed to satisfactory level.

Project Length: Prefer two semesters part time.

Global Health

There are many ways to get involved with global health research at SPGH. For examples of specific projects, you can see the opportunities below. If you have your own interests that aren't mentioned here, it may be possible to develop your own research project, using secondary data from global data repositories, or by undertaking a literature review or scoping review of existing evidence.

Developing an mHealth intervention to promote antenatal health and immunisation

A/Prof Julie Saunders - julie.saunders@uwa.edu.au

Background: mHealth initiatives are becoming more prominent in low- and middle-income countries as a means of engaging residents in public health activities. The Kaski District Public Health Office (DPHO), located in Pokhara, Nepal wish to develop more effective ways of delivering health reminders around antenatal care and vaccinations to persons living in rural Nepal. Mobile phones are commonly used in Nepal, thus mHealth initiatives may be an efficient method of reaching families living in rural areas. DPHO and Kanchan Nepal, our partner organization, will provide advice on the local context, including antenatal care and immunisation schedules.

Outline: To develop a culturally relevant mHealth intervention to convey specific health messages to rural Nepalese women. This includes a number of smaller projects, including:

- A scoping review the of the types of mHealth interventions in low- and middle-income countries.
- A systematic review of the effectiveness of mHealth interventions in low- and middle-income countries.
- Determining the type of health messages that might be most effectively conveyed by an mHealth intervention.
- Developing culturally appropriate and engaging messages with input from the local community.
- Piloting and evaluating the health messages for the mHealth intervention among the local community.

Methodology: The student will work with DPHO and Kanchan Nepal to determine the schedule for delivery of health messages and seek their input into the appropriate style of message. The project may include interviews with staff of the DPHO and community health posts as well as focus groups with rural community members. The student will prepare a project plan for the mHealth intervention that includes recruitment, access, messages and ongoing or longer-term evaluation.

Project Specific Requirements: Completion of PUBH4401 and PUBH4403 with mark >70.

Project Length: Reviews full time or part time, message development, piloting and evaluation part time.



Lives Saved Tool (LiST) for modelling child and maternal health outcomes in low- and middle-income countries

A/Prof Tim Robertson - tim.roberton@uwa.edu.au

Background: The Lives Saved Tool (LiST) is a mathematical modelling tool for estimating changes in child and maternal health. It is widely used by Ministries of Health and global organisations, such as the World Health Organisation, UNICEF, and the World Bank, to model the impact of programs on child, neonatal, and maternal mortality, and birth outcomes such as preterm and small for gestational age. Countries use LiST to help prioritise interventions, evaluate health programs, and develop their national health strategies.

Outline: Research projects involving LiST typically aim to estimate the number of lives saved by increasing the coverage of basic health interventions in low- and middle-income countries. Using LiST, we can answer questions such as: What reduction in child mortality can be attributed to a country's health strategy? Which interventions were responsible for saving the most lives? How many maternal deaths could be prevented over the next 10 years by scaling-up coverage of basic obstetric interventions?

If you are interested in child and maternal health in a specific country, or have a specific analysis question in mind, we can likely develop a research proposal that matches your interests.

Methodology: Most LiST analyses involve secondary data from large-scale household surveys, such as DHS or MICS. We put this data into LiST, enter additional parameters for a scale-up scenario, and use LiST to generate results that will be useful for policy makers.

Project Specific Requirements: Anyone who is interested in child and maternal health is welcome to use LiST. Although it is a mathematical modelling tool, it does not require advanced quantitative skills. Most students will be able to start using LiST after only a few hours.

Project Length: One semester full-time or two semesters part-time.

Migration widows: The impact of the international migration of workers on those who stay behind

A/Prof Julie Saunders - julie.saunders@uwa.edu.au

Background: Nepal has a long history of labour migration, with an estimated 3.5 million Nepalese working abroad (Simkhada et al. 2017). Labour migrants from Nepal are predominantly males; 15% of all economically active males (aged 15 years and older) compared with 2% of Nepali females (Maharajan, Bauer, Kner, 2012). The majority of these males are from agricultural backgrounds.

Despite research into the health risks for those who migrate for work, there is little research on the health and wellbeing impacts for those who stay behind. However, an understanding of the contextualised impact on women and families left behind is important.

Outline: To estimate the extent of social, health and gender impacts of the international migration of male workers from Nepal on the women and families left behind. Specific objectives are to:

- Develop a questionnaire based upon the results of recent qualitative research.
- Pilot the questionnaire with 100 women in the Central (Kathmandu) and Western (Pokhara) Development Regions in Nepal.
- Undertake a reliability study with a sub sample of this population.
- Estimate and compare the prevalence of key impacts among those left behind with those whose partner has not migrated for work.

Methodology: We have undertaken qualitative research with women whose partners have migrated for work and the current study will build upon those findings to develop a questionnaire.

A quantitative survey of 100 women who have a child aged under 5 will be undertaken. The sample will be stratified on the basis of whether a partner has migrated for work in the past 12 months. A sub-sample of 50 women will participate in a test-retest reliability study completing the questionnaire on two separate occasions, two to three weeks apart.

The student will be supported by a local research assistant to recruit the sample and administer the questionnaire. The student will analyse and interpret the data and write up these findings. The student will prepare a report the findings to be provided to the NGOs, prepare a video of the key messages of this research and a conference abstract.

Project Specific Requirements: Completion of PUBH4401 and PUBH4403 with mark >70.

Project Length: Two semesters part-time.



Understanding drivers of menstrual stigma from menarche to post-menopause

Dr Dani Barrington – dani.barrington@uwa.edu.au

Dr Inga Winkler, Associate Professor in human rights at Wageningen University

Professor Carmen Logie, Canada Research Chair in Global Health Equity and Social Justice with Marginalized Populations

Dr Julie Hennegan, Co-lead Adolescent Health, Burnet Institute

Background: Whilst many studies have documented the negative impacts of menstrual stigma on groups and individuals, few have investigated how this stigma perpetuates through society, particularly in the form of systemic violence. If we are to dismantle menstrual stigma we need to understand its roots.

Outline: This project will be a systematic review and qualitative analysis of the literature to inform the development of a research instrument to understand how people of all genders are involved in perpetuating menstrual stigma and its negative impacts.

Methodology: Systematic literature review (no collection of primary data).

Project Specific Requirements: 70 or above in PUBH5805: Qualitative Research Methods.

Project Length: One semester full-time or two semesters part-time.

CHERish Kids: Determinants of childhood overweight and obesity in Northern Thailand.

Dr Siobhan Hickling - siobhan.hickling@uwa.edu.au

A/Prof Tim Robertson - tim.roberton@uwa.edu.au

Background: The global rise in childhood overweight and obesity presents new challenges for low- and middle-income countries, including Thailand, where both undernutrition and overnutrition coexist in the same communities. In northern Thailand, recent data from the CHERish Kids project (n=629 children aged 2–5 years) revealed not only high stunting prevalence in Hill Tribe populations but also emerging rates of overweight and obesity. Understanding the sociodemographic, household, dietary, and behavioural factors driving childhood overweight and obesity in this setting is essential for guiding prevention strategies and local policy interventions.

Outline:

- Examine associations between individual, household, and caregiver factors, including sociodemographic, food security, and dietary behaviours, and childhood overweight and obesity.
- Assess whether Hill Tribe status independently predicts or modifies the relationships between key individual and household factors and childhood overweight and obesity.

Methodology: This project will use data from the CHERish Kids study, a collaboration between Mae Fah Luang University and The University of Western Australia. The study included 629 caregiver–child pairs from seven districts of Chiang Rai province, Thailand, selected through a community-based sampling approach. Data were obtained via structured caregiver questionnaires, child health records, and anthropometric measurements of children aged 2–5 years. Information covered key domains of child nutrition and wellbeing, including growth, dietary behaviour, feeding practices, food security, hygiene, sanitation, and caregiver sociodemographic characteristics, knowledge, and attitudes toward food.

The project will describe the prevalence of overweight and obesity using international child growth standards and examine how these outcomes vary across districts and population groups. It will explore relationships between overweight and obesity and key individual, household, and caregiver factors to identify potential drivers and at-risk groups. Findings will help clarify the emerging burden of childhood overweight and obesity in Northern Thailand and support locally relevant health promotion strategies

Project Specific Requirements: Sound knowledge of statistical software for data analysis (such as SPSS, STATA or SAS) and basic regression modelling. Interest in child nutrition and double burden of malnutrition in low-middle income countries

Project Length: One semester full-time or two semesters part-time. Suitable for Honours, MPH or MD Scholarly Activities Research



Understanding nutrition, growth and early childhood health in a birth cohort in Northern Thailand.

A/Prof Tim Robertson - tim.roberton@uwa.edu.au

Dr Siobhan Hickling - siobhan.hickling@uwa.edu.au

Background: The NEST-WK (Nutrition and Early-life Study in Thailand - Wiang Kaen) study is a longitudinal birth cohort designed to follow mothers and their children from pregnancy through early childhood in Wiang Kaen District, Northern Thailand. Building on the CHERish Kids project, which identified high rates of food insecurity and child stunting in the region, NEST-WK aims to provide deeper understanding of the early-life determinants of growth, development, and wellbeing.

Wiang Kaen is a geographically remote area where families face challenges related to food access, seasonal employment, and service provision. Over the coming years, this cohort will generate valuable insights into maternal and child nutrition, early development, and changes in the local environment and community systems. The study is a partnership between Mae Fah Luang University and The University of Western Australia.

Outline:

NEST-WK will enrol pregnant women in their final trimester and follow them and their children at multiple timepoints: during pregnancy, within 1 month post-delivery, and through early childhood. At each wave, information will be collected on infant feeding practices, dietary patterns, maternal and child health, household food security, and early childhood growth and development. The resulting dataset will enable exploration of a wide range of research topics across maternal, infant, and child health domains.

Methodology: Each project will draw on NEST-WK data as they become available. Projects can be tailored for specific areas of interest depending on scope and timing.

Project Specific Requirements: Sound knowledge of statistical software for data analysis (such as SPSS, STATA or SAS) and basic regression modelling. Interest in child nutrition and double burden of malnutrition in low-middle income countries

Project Length: One semester full-time or two semesters part-time. Suitable for Honours, MPH or MD Scholarly Activities Research



The public health impact of roads and related infrastructure in low-and middle-income countries

Dr Barbara Nattabi – barbara.nattabi@uwa.edu.au

Background: Roads have a myriad impact on public health and social determinants of health; they improve access to health care and other health supporting services, increase access to education, travel, improve connectivity within and across countries, support trade and other economic activities. However, roads also have a deleterious impact on health – they increase number of road injuries; enhance disease transmission as seen during the early days of HIV transmission in Sub-Saharan Africa and expose individuals to air and other forms of pollution.

Outline: The aim of this project is to conduct a scoping review of literature around the public health impacts of major road systems in low- and middle-income countries in Africa and Asia including the impact of transcontinental road corridors, major expressways, and feeder roads. Public health impacts include benefits and harms that new roads exert on human health and wellbeing and cover a range of areas including road traffic injuries, infectious disease transmission, chronic illnesses, psychosocial effects, and pollution.

Methodology: Scoping Review (no collection of primary data)

Project Specific Requirements:

- Excellent Literature searching skills.
- Excellent writing skills.
- Ability to work as part of a team.
- Excellent interpersonal and oral communication skills.
- Willingness to learn about Covidence and other literature searching platforms.

Project Length: One semester full-time or two semesters part-time



Health and Labour Economics

Household, Income and Labour Dynamics in Australia (HILDA) Survey: Investigating Social Determinants of Health

Dr Wendy Feng – wendy.feng@uwa.edu.au

Dr Charley Budgeon – charley.budgeon@uwa.edu.au

Background: The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a household-based panel study which collects information about various life aspects including household and family relationships, income and employment, and health and education. The annual survey, which commenced in 2001, follows more than 17,000 Australians over the course of their lifetime.

Outline: Given the extensive amount of information collected through the HILDA Survey, there are a number of potential research projects which could be undertaken. Some examples include:

- Examining health impairments on educational and employment outcomes.
- Investigating the long-term health effects of major life stresses including financial, employment and familial/relationship stresses.
- Examining the effect of caregiving and changes in mental health wellbeing.

Methodology: Quantitative research study (analysis of secondary data)

Project Specific Requirements: PUBH5769 Biostatistics II must be completed prior to or taken concurrently.

Project Length: Two semesters part-time.

Health Services Research

Linking for Life: Enhancing pathways to well-being for all Australians

Prof David Preen - david.preen@uwa.edu.au
A/Prof Rebecca Glauert - rebecca.glauert@uwa.edu.au

Background: The Linking for Life Project will identify pathways to wellbeing and better social outcomes across the life-course for high-risk/vulnerable individuals and their families to streamline service provision, improve outcomes and identify cost-efficiencies across government agencies. The work will expand cross-sectoral data linkage capability, enhancing research capacity to generate evidence-based policy to improve integrated service delivery across government.

The project involves the analysis of longitudinal, whole-population, genealogically linked data, across seven government departments in order to determine pathways (across individual, family, community and system levels) that reduce vulnerability to adverse outcomes including social disadvantage, child abuse and neglect, mental illness, poor educational attainment, justice system involvement, and restricted access to public services.

Outline: Research questions in this project are categorised under three intersecting domains:

1. Resilience and overcoming disadvantage.
2. Families and Intergenerational Effects.
3. Aboriginal Wellbeing,

With the primary aims of the current program being to:

- Determine pathways that reduce vulnerability to adverse outcomes and restricted access to public services.
- Identify critical transition points to target prevention and intervention strategies across government sectors; and
- Identify factors associated with resilience in disadvantaged groups to improve intergenerational outcomes.

Methodology: The sub-projects developed under this program of work will utilise up to 40 years of whole-population, genealogically linked data, across seven government departments including the WA Dept. of Communities, Dept. of Justice, WA Police, Dept. of Education, Dept. of Health, Mental Health Commission and the Commonwealth Dept. of Education and Training.

Statistical analysis and multivariate modelling of these data will be undertaken using SPSS, Stata or SAS to address the above-mentioned research aims.

Project Specific Requirements:

- Knowledge of epidemiology and biostatistics.
- Completion of PUBH5785 Analysis of Linked Health Data or equivalent prior experience.
- Experience with writing statistical syntax to complete data analyses.

Project Length: One semester full-time or two semesters part-time.



Neuropsychiatric Epidemiology Research Unit

Survey of High Impact Psychosis (SHIP) projects

The SHIP survey took place in 2010 and is one of the largest and most comprehensive face- to-face assessments of psychotic disorders undertaken in Australia and internationally. Its main aim was to collect prevalence and profile data on a representative Australian sample of men and women with psychotic illness in contact with public mental health treatment services and NGOs.

Over 1500 data items were collected from 1825 participants covering, among others: education, housing, employment, income; psychopathology; cognition; functioning and quality of life; service utilisation; medication use; and physical health (including fasting blood tests). Students interested in undertaking epidemiological projects using the SHIP data should contact Assist/Prof Anna Waterreus – anna.waterreus@uwa.edu.au



Priority Populations

Investigating the health and social outcomes of children exposed to family and domestic violence

Dr Carol Orr - carol.orr@uwa.edu.au

Background: Despite the high prevalence of family and domestic violence (FDV), it is only in recent years that significant steps have been made to understand the impact of the exposure on children. Much of the existing research on the outcomes of children exposed to FDV is limited in its scope. Additionally, the tendency to focus on children whose mothers are involved in specialist FDV services only represent a subsection of those exposed in the wider community. Linked administrative data present an opportunity to address these issues by merging individual unit-records for the entire population from a variety of sources, enhancing the potential to identify the outcomes of children exposed to FDV at the population level.

Outline: A number of potential projects are available utilising our dataset, including epidemiological analyses of different health and social outcomes of children exposed to FDV.

Methodology: The project is a retrospective cohort study utilising linked administrative datasets including hospital and police data.

Project Specific Requirements:

- Good statistical knowledge and skills.
- Competent in SAS or equivalent.

Project Length: One semester full-time or two semesters part-time.



Social Media use and Mental Health

Dr Cecily Strange - cecily.strange@uwa.edu.au
A/Prof Kevin Murray - kevin.murray@uwa.edu.au

Background: The potential impact of social media on mental health is gathering interest topically, in education and health. Literature indicates several benefits from online communication through social media, including reduced isolation for many people. This has been particularly evident during the Covid-19 pandemic. However, there is a body of research where social media use has been found to be negatively associated with mental well-being for adults, for adolescents, and cautionary views indicating use can result in increased isolation and negative social comparison. Therefore, it is important to further examine the relationships between social media and mental health.

Outline: This research will investigate the potential bi-directional relationships between mental health and social media. The study will use data from the children of the Raine study who are referred to as the second generation and are now adults. The data for this study will be from the questionnaire data collected at 28 years (Gen2_28).

Methodology: To investigate the potential bi-directional associations between variables measuring mental health and social media (internet socializing using smart phones and computers) use for young adults using Raine Study data from Gen2_28.

Covariates include – demographics, parenthood, technology use, health and physical activity, sleep, self-perception, body image and risk-taking behaviour.

If there is interest and scope within student project data from earlier Gen2 questionnaires can be included. Cross sectional bi-directional analyses for each of Gen2_28 data will look at correlates of mental health outcomes with specific focus on social media use. Analyses required include descriptive statistics, cross tabulations, and linear models and generalized linear models to examine the relationships between mental health outcomes and social media use adjusting for demographics, and potential confounders such as lifestyle variables.

Project Specific Requirements:

- Good statistical knowledge and skills.

Project Length: One semester full-time or two semesters part-time.



Evaluation of a physical activity intervention for people experiencing homelessness

Dr Claire Boulange – claire.boulange@uwa.edu.au

A/Prof Julie Saunders – julie.saunders@uwa.edu.au

Background: This research is in collaboration with On My Feet (OMF), an Australian registered not for profit organisation providing free running and fitness training to individuals experiencing homelessness. OMF has developed a 12-week intervention program designed to empower participants to achieve self-sufficiency and independence through exercise, community support and education, as well as to improve their mental and physical health. This research project aims to assess the effectiveness of the program in realizing these goals and the impact it has on the lives of individuals experiencing homelessness.

Outline: To conduct the baseline, mid-study, and final assessments and collect quantitative data on health parameters, well-being, physical activity levels, nutrition and other relevant factors.

Methodology: Collect data at the beginning, midway, and end of the 12-week intervention program on the participants - people experiencing homelessness, aged 18 – 75, living in shelters or temporary or government-subsidized homes who have previously experienced homelessness and who have been with On My Feet for less than 3-months. The data will be collected via questionnaires, cardiovascular endurance tests, and vital sign measurements. The data will then be analysed, and the findings reported.

Project Specific Requirements:

- Interest in physical activity and physical activity assessment.
- Ability to conduct quantitative research.
- Excellent writing skills.
- Experience with vulnerable populations.
- Ability to work as part of a team.
- Good interpersonal communication skills.

Project Length: Two semesters part-time.



Investigating the experience of loneliness among people experiencing homelessness and the impact of a physical activity program

Dr Claire Boulange – claire.boulange@uwa.edu.au

A/Prof Julie Saunders – julie.saunders@uwa.edu.au

Background: This research is in collaboration with On My Feet (OMF), an Australian registered not for profit organisation providing free running and fitness training to individuals experiencing homelessness. OMF has developed a 12-week intervention program designed to empower participants to achieve self-sufficiency and independence through exercise, community support and education, as well as to improve their mental and physical health. This research project aims to assess the effectiveness of the program in realizing these goals and the impact it has on the lives of individuals experiencing homelessness.

Outline: To investigate the issue of loneliness among people experiencing homelessness and to examine the impact of the 12-week intervention program designed by OMF on this issue.

Methodology: Collect data on loneliness and social isolation at the beginning, midway, and end of the 12-week intervention program on the participants - people experiencing homelessness, aged 18 – 75, living in shelters or temporary or government-subsidized homes who have previously experienced homelessness and who have been with On My Feet for less than 3-months. The data will be collected via questionnaires and focus groups.

Project Specific Requirements:

- Strong interest in qualitative research.
- Data analysis and qualitative research skills.
- Excellent writing skills.
- Experience with vulnerable populations.
- Ability to work as part of a team.
- Excellent interpersonal communication skills.

Project Length: Two semesters part-time.



Measuring the cost-effectiveness of a physical activity and education program for people experiencing homelessness

Dr Claire Boulange – claire.boulange@uwa.edu.au

A/Prof Julie Saunders – julie.saunders@uwa.edu.au

Background: This research is in collaboration with On My Feet (OMF), an Australian registered not for profit organisation providing free running and fitness training to individuals experiencing homelessness. OMF has developed a 12-week intervention program designed to empower participants to achieve self-sufficiency and independence through exercise, community support and education, as well as to improve their mental and physical health. This research project aims to assess the effectiveness of the program in realizing these goals and the impact it has on the lives of individuals experiencing homelessness.

Outline: To conduct a Cost-Benefit Analysis to compare the 12-week intervention program's costs to the potential economic benefits. This research will quantify the costs and benefits associated with the intervention and compare them to the costs and consequences of homelessness without the intervention.

Methodology: Collect cost data related to the program and estimate the economic consequences of homelessness, such as preventable diseases and chronic conditions. Perform a CBA, with sensitivity analysis, and prepare a report with recommendations.

Project Specific Requirements:

- Foundations in health economics.
- Strong analytical and quantitative skills.
- Excellent writing skills.
- Statistical analysis.
- Experience with vulnerable populations.
- Ability to work as part of a team.
- Good interpersonal communication skills.

Project Length: Two semesters part-time.



How young people with intellectual disability and their families navigate the onset of menstruation

Dr Dani Barrington - dani.barrington@uwa.edu.au

Jess Keeley, The Kids Research Institute

Thom Nevill, The Kids Research Institute

Background: The onset of puberty can be challenging for all adolescents and their families, but particularly so where the young person has intellectual disability.

Outline: We are offering two qualitative research projects which together will help us understand how young people with intellectual disability can be better supported through menarche, early menstruation and the associated reproductive-decision making:

- Speaking with young people with intellectual disability and their caregivers
- Speaking with medical professionals and other experts

Methodology: Semi-structured interviews with young people, caregivers and professionals

Project Specific Requirements: May require working with children check if interviewing young people.

Project Length: Two semesters part-time.



Experiences of LGBTQA Women or Non-Binary People Accessing Support Services for Family and Domestic Violence

Prof Colleen Fisher - colleen.fisher@uwa.edu.au
Dr Chantal Orgeas - chantal.orgeas@uwa.edu.au
Dr Craig Cumming - craig.cumming@uwa.edu.au

Background: Colleen, Chantal and Craig are open to supervision on a range of projects in family, domestic and sexual violent (FDSV) of women and children using qualitative and quantitative methodologies.

Outline: Our research program focuses on understanding factors involved in the healing and recovery of women and children exposed to FDSV, investigating the impacts on health and broader social outcomes in the short, medium, and longer-term. We aim to analyse linked data in the future to examine longitudinal health and social outcomes related to experiences of FDSV. Specifically, we are interested in understanding how exposure to the continuum of FDSV affects these outcomes over time. We are open to discussing new project ideas with potential students and encourage interested students to reach out to discuss potential projects further.

Methodology:

Projects may include:

- **Analysis of existing international datasets:** Students with strong statistical skills may undertake secondary data analysis of established international datasets examining healing and recovery from gender-based violence. These projects offer opportunities to investigate patterns and predictors of recovery across diverse populations and contexts.
- **Primary qualitative research:** Students may conduct qualitative studies exploring women's and children's experiences of recovery, with participants recruited independently through community organisations, FDV sector partners, and established research networks.
- **Systematic or scoping reviews:** Students may undertake evidence synthesis projects examining specific aspects of healing and recovering from FDSV,

Additional projects analysing existing data are also available. We encourage interested students to get in touch to discuss potential projects further. We use mixed methods, thus will consider qualitative and quantitative studies.

Project Specific Requirements: Depends on the project selected. Projects involving secondary analysis of international datasets require strong quantitative and statistical skills.

Project Length: -One semester full-time or two semesters part-time

Pathways to Confident Health Choices: a model for the design, implementations and evaluation of programs and services: a scoping review

Dr Emma Haynes – emma.haynes@uwa.edu.au
Danie Zappa – SWAMS
Alice Mitchell – Menzies

Background: Despite important shifts in policy and practice, Aboriginal health continues to be influenced by systemic inequities, including the privileging of Western biomedical frameworks and a limited understanding of Aboriginal worldviews. Many mainstream public health interventions overlook Aboriginal concepts of health, contributing to variable outcomes and, in some cases, unintended negative consequences in the implementation of health promotion strategies in Aboriginal communities.

Conventional Western health promotion models often assume a linear progression from knowledge to behaviour change, from awareness-raising to shifts in individual action. However, evidence suggests that such approaches, particularly those relying on information-based campaigns directed at individuals, can reinforce or exacerbate health inequities, especially in low-socioeconomic and marginalised populations. 'Culturally-tailored' interventions may enhance knowledge and attitudes, but questions remain about their effectiveness in achieving sustained behaviour change in complex community contexts.

Outline: A new model, **Pathways to Confident Health Choices**, has been developed to better reflect the multifaceted influences on health decision-making. Drawing on an ecological approach, the model incorporates the nested levels of individual, family, community, and health systems — similar to the Social Ecological Model — but extends this by introducing six cross-cutting dimensions that allow for a more nuanced exploration of how power, knowledge, values, emotion, and risk perception operate across different contexts. This framework supports a more culturally grounded and reflective approach to preventive health.

The current project will contribute to refining this model by undertaking a scoping review and analysis of the literature that describes the use of similar frameworks and models in the design and evaluation of preventive health programs. In particular, the project will identify key enablers and barriers to implementation, offering insights into how complex, culturally responsive models can be successfully operationalised in diverse settings.

Methodology: This project does not involve the collection of primary data. Due to the collaborative nature of First Nations health research and broad topic areas considered, codesign of the scoping review strategy will be undertaken by the student in partnership with community health service providers and community members. Attendance and coordination of these meetings will form part of scoping review activities.

Scoping review methodology aligned with Indigenous methodologies is outlined by: Tina Brodie, Natasha J. Howard, Odette Pearson, Kootsy Canuto, Alex Brown, The Advisory Group; 2023. Enhancement of scoping review methodology to reflect Aboriginal and Torres Strait Islander ways of knowing, being and doing <https://doi.org/10.1016/j.anzph.2023.100096>

General scoping review methodology is outlined by: Peters MDJ, Godfrey C, Mclnerney P, Munn Z, Tricco AC, Khalil, H. Scoping Reviews (2020). Aromataris E, Lockwood C, Porritt K, Pilla B, Jordan Z, editors. JBI Manual for Evidence Synthesis. JBI; 2024. Available from: <https://synthesismanual.jbi.global>. <https://doi.org/10.46658/JBIMES-24-09>

Project Specific Requirements: NA

Project Length: One semester full-time or two semesters part-time.

Pathways to Confident Health Choices: a model for the design, implementation and evaluation of programs and services: a qualitative study

Dr Emma Haynes – emma.haynes@uwa.edu.au

Danie Zappa – SWAMS

Alice Mitchell – Menzies

Background: Despite important shifts in policy and practice, Aboriginal health continues to be influenced by systemic inequities, including the privileging of Western biomedical frameworks and a limited understanding of Aboriginal worldviews. Many mainstream public health interventions overlook Aboriginal concepts of health, contributing to variable outcomes and, in some cases, unintended negative consequences in the implementation of health promotion strategies in Aboriginal communities.

Conventional Western health promotion models often assume a linear progression from knowledge to behaviour change, from awareness-raising to shifts in individual action. However, evidence suggests that such approaches, particularly those relying on information-based campaigns directed at individuals, can reinforce or exacerbate health inequities, especially in low-socioeconomic and marginalised populations. 'Culturally-tailored' interventions may enhance knowledge and attitudes, but questions remain about their effectiveness in achieving sustained behaviour change in complex community contexts.

Outline: A new model, **Pathways to Confident Health Choices**, has been developed to better reflect the multifaceted influences on health decision-making. Drawing on an ecological approach, the model incorporates the nested levels of individual, family, community, and health systems — similar to the Social Ecological Model — but extends this by introducing six cross-cutting dimensions that allow for a more nuanced exploration of how power, knowledge, values, emotion, and risk perception operate across different contexts. This framework supports a more culturally grounded and reflective approach to preventive health.

The current project will contribute to refining this model by testing its application in a health promotion context. The setting is to be determined but likely to be an Aboriginal Community controlled health service or other organisation providing health promotion to vulnerable groups.

Methodology: This qualitative research project involves the collection of primary data. Research participants will primarily be service providers involved in program/service planning, delivery and evaluation. If time permits the implementation of the model into practice then consumers perceptions will also be investigated. Data sources include project log, field notes, interviews a focus groups.

Research objectives:

1. Investigate the potential usefulness of the model in the planning, delivery and evaluation of health promotion programs and services:
2. enablers of model uptake (e.g. accessibility, acceptability, and value of tools and resources)
3. barriers to model uptake (e.g. limitations of staff training; funding constraints)
4. effectiveness as a framework for program/service planning, delivery and evaluation

Due to the collaborative nature of First Nations health research codesign of the research methods will be undertaken by the student in partnership with community health service providers and community members.

Project Specific Requirements: Knowledge of qualitative research methods is required. Project management skills would also be useful.

Project Length: Two semesters part-time.



Social and Emotional Wellbeing: Translation and Practice

Dr Emma Carlin – emma.carlin@uwa.edu.au

Dr Abby Cox – abby.cox@uwa.edu.au

Background: The supervisors are open to supervision on a range of projects that strengthen the translation and practice of social and emotional wellbeing services in Aboriginal Community Controlled Health Organisations. The supervisors work in partnership with the sector using qualitative and quantitative methodologies.

Outline: This research area focuses on strengthening the translation and delivery of social and emotional wellbeing (SEWB) services within Aboriginal Community Controlled Health Organisations (ACCHOs). Working in close partnership with the sector, projects may explore how services are designed, implemented, and improved to support culturally appropriate, community-led care. Using qualitative and/or quantitative approaches, the research aims to generate practical evidence that enhances service effectiveness and supports better health and wellbeing outcomes for Aboriginal and Torres Strait Islander communities.

Methodology: Methodology will be guided by a health equity focus and an Indigenous standpoint theory tailored to the specific project. Approaches may include document analysis, resource development, and/or mixed-methods research.

Project Specific Requirements: We recognise the importance of lived experience and community knowledge in shaping meaningful research. Students with relevant lived experience are encouraged to apply, alongside those with a strong commitment to working respectfully in this space.

Project Length: One semester full-time or two semesters part-time.



National Health Survey

Dr Wendy Feng – wendy.feng@uwa.edu.au

Background: The National Health Survey (NHS), conducted by the Australian Bureau of Statistics, is a series of Australia-wide health surveys, designed to collect a wide range of information about the health of Australians:

- Health status of the population, including long-term health conditions;
- Health risk factors such as smoking, Body mass index, diet, exercise and alcohol consumption; and
- Demographic and socioeconomic characteristics.

The 2018-19 NHS was conducted from a sample of approximately 21,300 people in 16,400 private dwellings across Australia.

Outline: There are a number of potential research projects which could be undertaken using data from the NHS. Some examples include:

- Mental health status and mental health-related prescriptions in adults with chronic health conditions
- Examining health literacy and perceived access to health care services in the Australian population

Methodology: Quantitative research study (analysis of secondary data)

Project Specific Requirements: PUBH5769 Biostatistics II must be completed prior to, or taken concurrently

Project Length: Two semesters part-time.

Public Health Research Capacity

SPHeRES: Supporting Public Health Researchers Undertaking Evidence Synthesis

Dr Craig Cumming - craig.cumming@uwa.edu.au

Dr Ebony Quintrell - ebony.quintrell@uwa.edu.au

Sam Burrow - sam.burrow@research.uwa.edu.au

Background: High-quality evidence synthesis (conducting scoping reviews, systematic reviews, and meta-analyses) is foundational to the development of evidence-informed practice, policy, clinical guidelines, and grant applications, as well as determining strategic research investment. It identifies, assesses, and synthesises existing research, building the evidence base in a way that no single study can. Evidence synthesis helps to reduce research waste, identify funding priorities, and counter misinformation by clarifying what is already known and identifying where the knowledge gaps lie.

In WA, support for evidence synthesis exists but is dispersed and ad hoc. This fragmentation creates inefficiencies and inconsistent evidence synthesis quality. Appropriate supports are needed to strengthen methodological standards, enhance the competitiveness of WA research grant applicants, and accelerate the pathway from research to impact.

Outline: We are seeking a Master's student to undertake a scoping review of the international public health literature to identify existing strategies for building capacity in the conduct of evidence synthesis. The student will lead the scoping review but will be supported by supervisors and a review team with substantial experience in this area. The review findings will have the potential for immediate real-world application in the development of new supports for public health students, researchers, clinicians, and other practitioners in WA.

Methodology: Data will be extracted from publicly available, peer-reviewed journal articles. The inclusion of any other literature and the choice of scoping review methods used (Arksey & O'Malley, JBI etc.) will be determined in consultation with the supervisory team. No primary data will be collected.

Project Specific Requirements:

- Ability to conduct literature searches, appraise articles, and extract data
- Familiarity with or willingness to learn how to use relevant bibliographic and data management tools e.g. EndNote, Covidence
- Ability to work as part of a team
- Good project management skills
- Excellent writing skills

Project Length: One semester full-time is preferred but two semesters part-time will also be considered

The Raine Study

Background: UWA students have free access to the Raine Study, one of the world's longest-running health cohort studies. Since 1989, it has collected extensive life-course data on the same participants, covering physical and mental health, lifestyle, and genetics. Its rich biological samples and genetic data support multidisciplinary research and enable breakthroughs in understanding complex health issues like obesity, diabetes, heart disease, and mental illness.

The Raine Study provides free access to comprehensive data for UWA students, supporting a wide range of research projects across physical health, mental health, lifestyle, and genetics. It enables multidisciplinary research in areas such as:

- Cardiometabolic
- Cohort Methods
- Diet
- Education and Work
- Environmental and Perinatal Exposures
- Genetics
- Hormonal and Reproduction
- Liver and Gastrointestinal
- Mental Health and Cognition
- Musculoskeletal
- Respiratory, Immunology and Inflammation
- Senses
- Sleep and Activity

Outline: The Raine Study is a world-class research enabling platform supporting student-led projects that explore early-life influences on health and wellbeing. We encourage students accessing this free data to consider projects aligned with one or more of the following top 10 research priorities:

- Mental Health
- Health Education and Intervention
- Reproductive Health
- Cognitive Behaviour
- Generational Impact
- Neurodivergence
- Sex-specific Health
- Environmental Health
- Gastrointestinal Health
- Socioeconomic Effects on Health

With its rich, multigenerational data spanning pre-birth to adulthood, the Raine Study offers unique opportunities to investigate complex health issues and contribute to impactful, multidisciplinary research that can shape future health outcomes and policy.

Methodology: To be confirmed with supervisor

Project Specific Requirements: Completion of Biostatistics 2 (PUBH5769)

Project Length: One semester full-time or two semesters part-time, depending on supervisor.

Other: The staff at the Raine Study do not supervise dissertation projects, but if you are interested in undertaking a project that makes use of their data, please contact the Dissertation Coordinator, Dr Dani Barrington at dani.barrington@uwa.edu.au, to discuss your project idea. As a research-enabling platform,

the Raine Study team works closely with researchers, providing active support and expert guidance to identify the most appropriate data for each research project.

For further information on the Raine Study, visit <https://rainestudy.org.au/home-beta/information-for-researchers/>.



A unique data holding from pre-birth to middle age
FREE or REDUCED FEES to UWA researchers



2,900
pregnant women
recruited (Gen1)

2,868
children born into the
study (Gen2)

600+
offspring born to
Gen2 (Gen3)

30,000
pieces of data
per participant

30 million
pieces of genetic
information per participant

Data available across 14 Special Interest Group
research focus areas





THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

Dr Dani Barrington, Dissertation Coordinator
School of Population and Global Health

T +61 8 6488 1861 E dani.barrington@uwa.edu.au

M431, Perth WA 6009 Australia

uwa.edu.au

CRICOS Provider Code 00126G | PRV12169, Australian University