



Government of Western Australia
Department of Health

Human Research Ethics Committee

Project Summaries for Approved
Proposals

January to March 2016 Quarter

Project summaries for proposals approved by the Department of Health Human Research Ethics Committee - January to March 2016 quarter.

The material contained in this document is made available to assist researchers, institutions and the general public in searching for projects that have ethics approval from the Department of Health Human Research Ethics Committee (DOH HREC). It contains lay description/summaries available for the January to March 2016 quarter.

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| Project Title | Western Australian Family Cancer Study – Genetic epidemiology of colorectal cancer [Short title: The WA Family Cancer Study] | | |
| Principal Investigator | Professor Eric Moses | | |
| Institution | The University of Western Australia | | |
| Start Date | 1 July 2016 | Finish Date | 1 December 2021 |

The aim of this research is firstly to investigate the trends and risk factors for colorectal cancer in the Western Australian population, which will improve our understanding of the underlying biology of the disease. The project will then investigate the impact of using genetic data, combined with lifestyle data, to classify the population into risk groups for colorectal cancer screening. This would enable more a personalised approach to prevention and detection methods, such that screening processes could be tailored to the individual. For example, for some high risk individuals, more frequent screening may increase the chances of early detection of colorectal cancer, or prevention of the disease from polyp detection and removal, while for lower risk groups less intensive surveillance may be appropriate, thus reducing the burden of unnecessary screening.

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| Project Title | The association between maternal ultraviolet radiation exposure and serum 25(OH)D levels during pregnancy and subsequent risk of Type 1 diabetes mellitus in offspring. [Short title: Maternal sun exposure and Type 1 diabetes.] | | |
| Principal Investigator | Professor Nick de Klerk | | |
| Institution | Telethon Kids Institute | | |
| Start Date | 1 March 2016 | Finish Date | 30 March 2019 |

In 2015, 7,404 Australian children had Type 1 diabetes and an average of nearly three new cases of Type 1 diabetes every day among children has been estimated. The onset of Type 1 diabetes is typically in childhood or adolescence and the disease has a significant impact on quality of life and life expectancy. Presently, there is no cure or known way of preventing the development of Type 1 diabetes (3). Current research suggests that ensuring adequate levels of vitamin D intake during pregnancy and early infancy may be one of the most promising interventions for preventing the disorder (4). The aim of this study is to determine whether higher levels of ambient ultraviolet (UV) radiation and/or maternal vitamin D status during pregnancy are associated with a reduced risk of Type 1 diabetes in the offspring.

This retrospective population-based case control study will involve the linkage of routinely collected data from pre-existing administrative datasets with NASA satellite data to determine ambient UV radiation during pregnancy and at the time of offspring diagnosis of Type 1 diabetes.

Serum 25 hydroxyvitamin D (25(OH)D) levels will also be obtained for pregnant mothers, and for children at the time of diagnosis of Type 1 diabetes, for a subset of the cohort, to determine the correlation between serum levels of 25(OH)D and ambient UV radiation in these two specific populations. This study responds to calls for further research into the area and will provide a critical body of knowledge.

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| Project Title | Evaluating the creation of small area synthetic estimates of health outcome prevalence from the Western Australian Health and Wellbeing Surveillance System. [Short title: Small area synthetic estimates of health outcome prevalence] | | |
| Principal Investigator | Dr Delia Hendrie | | |
| Institution | Curtin University | | |
| Start Date | 30 March 2016 | Finish Date | 30 March 2018 |

The Western Australian Health and Wellbeing Surveillance System (WAHWSS) has an untapped potential to be a significant evidence base to inform and target social, socio-economic and health policy across WA neighbourhoods. This project will uncover this potential by; (1) determining which survey responses have the potential to be used in our statistical modelling. A multilevel modelling approach will (2) determine the relationships between individual and area based characteristics and the selected self-reported responses. These relationships in conjunction with Australian Bureau of Statistics datasets will be used to (3) estimate prevalence of health and other outcomes at the neighbourhood level.

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| Project Title | Analysing key performance indicator data to enable performance monitoring and evaluation within the WA public health system. [Short title: Improving the effectiveness of key performance monitoring for Annual Reports] | | |
| Principal Investigator | Mr. Anthony Jones | | |
| Institution | Department of Health | | |
| Start Date | 15 February 2016 | Finish Date | 30 September 2018 |

In Western Australia key performance indicators are reported in the Annual Reports. The WA Health Annual Reports are required by legislation for the Department of Health, Metropolitan Health Service and WA Country Health Service. These reports consist of a core set of key performance indicators that have been approved by the Department of Treasury and are tabled in Parliament.

Key performance indicators are required to be relevant, appropriate and fairly represent WA Health's performance. This project will link data that will assist in the analysis of performance by the hospitals within WA Health.

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| Project Title | Development of serum models that can accurately predict clinical outcomes in chronic liver disease | | |
| Principal Investigator | Winthrop Professor Gary Jeffrey | | |
| Institution | Sir Charles Gairdner Hospital | | |
| Start Date | 1 January 2016 | Finish Date | 30 December 2018 |
| <p>Chronic liver disease including chronic hepatitis C, chronic hepatitis B, no-alcoholic fatty liver disease and alcoholic liver disease have similar nature histories with a prolonged asymptomatic early phase and variable later clinical progression. It has long been a challenge to identify patients with chronic liver disease who have more severe disease and have a greater risk of developing liver related morbidity and mortality. The aim of this study is to develop serum models that directly predict the risk of liver related death, liver decompensation and hepatocellular carcinoma (HCC) in chronic liver disease. About 16,000 patients who have chronic liver disease and had Hepascore test performed in Sir Charles Gairdner Hospital or Royal Perth Hospital from 2004 to present will be included. Serum test results will be extracted. Patient's clinical outcome information (liver related death, liver decompensation and hepatocellular carcinoma) will be extracted using WA data linkage unit. Statistical analysis will be performed to identify those serum markers that are significantly associated with each of the clinical end point and to develop serum models that can accurately predict each clinical end point.</p> | | | |

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| Project Title | Enhancing the accuracy of heart disease risk assessment in Indigenous Australians [Short title: CRISP (Cardiovascular Risk in Indigenous People)] | | |
| Principal Investigator | Dr Elizabeth Barr | | |
| Institution | Menzies School of Health Research | | |
| Start Date | 4 January 2016 | Finish Date | 30 June 2016 |
| <p>Cardiovascular disease (CVD) is the leading cause of death for Aboriginal and Torres Strait Islander Australians and compared to non-Indigenous Australians, CVD leads to more hospitalisations, disability, and premature mortality. Whilst information collected by the Australian Institute of Health and Welfare has measured the prevalence of CVD risk factors, hospitalisations and deaths among Indigenous and non-Indigenous Australians, there are very few studies that have individual level longitudinal follow-up data from Indigenous populations. It is this longitudinal follow-up data of individuals that is required to properly assess the relationship between CVD risk factors (eg. age, sex, blood pressure, diabetes, abnormal kidney function and obesity) and CVD events (eg hospitalisations or deaths for heart attacks and strokes). This project aims to collect follow-up data on hospitalisations and deaths for participants who have already taken part in health surveys in the NT and WA. We are requesting that we collect hospitalisations from WA Data Linkage Unit (DLU) and SA NT data link for these participants. Mortality data will be collected independently from the National Death Index.</p> | | | |

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| Project Title | The effectiveness of pre-travel health advice on illness rates in Western Australians returning from Bali, Indonesia | | |
| Principal Investigator | Dr Paul Effler | | |
| Institution | Department of Health | | |
| Start Date | 1 December 2015 | Finish Date | 24 February 2018 |
| <p>In 2014, over 430,000 people flew from Western Australia to Bali, where they were likely to have an elevated risk of acquiring communicable diseases compared to their risk in Australia. This project will quantify the rate of infectious disease acquisition in travellers to Bali, and evaluate the use of pre-travel health advice (PTHA) to reduce the risk.</p> <p>This study will recruit individuals through online advertising, who are aged 18 and over, and planning travel to Bali, Indonesia. The sample size estimate is at least 1,500 Bali travellers. Participation will be voluntary.</p> <p>The project aim is to determine the incidence rate of communicable disease symptoms in Western Australian travellers returning from Bali, Indonesia and to ascertain if a (PTHA) intervention results in a lower rate of illness.</p> | | | |

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| Project Title | INSPIRED (WA): Investigating services provided in the residential care environments for dementia in Western Australia | | |
| Principal Investigator | Dr Rachel Milte | | |
| Institution | Flinders University | | |
| Start Date | 1 December 2015 | Finish Date | 31 May 2017 |
| <p>INSPIRED (WA) is a cross-sectional, observational study to evaluate the resource usage, cost effectiveness and resident care outcomes for specialised dementia services currently being provided at residential aged care facilities in WA. This study will contribute to an evaluation of models of residential aged care at a national level, with a focus on those for dementia, as it is a partner project to work using the same protocol in SA and NSW.</p> <p>The research team is recruiting residents from Brightwater Care Group's WA-based residential aged care facilities to participate in the study. One of the key aims of our study is to access the opinions and information from residents and family members themselves. Residents (or their proxy family members where levels of cognitive deficit impede informed consent or direct participation), are providing data on their quality of life, quality of care, care preferences and functioning through a once off one hour interview. Consent from participants will also be obtained to access cost, resource use and health outcome data pertaining to these individuals from other sources including facility records, Emergency and Hospital Data, MBS and PBS databases. Once collected, all data is de-identified and individual participant's responses remain confidential at all times.</p> <p>Collected data will be linked together and collated with that collected on participants including their quality of life, physical function, cognitive function etc. Complex statistical analysis and data modelling will assist the research team to analyse the cost and resource usage and the associated participant health outcomes achieved under different care philosophies. This will enable comparisons of alternative service models to inform planning for new models of care and funding.</p> | | | |

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| Project Title | Increasing population health by making better funding decisions: estimation of the cost-effectiveness threshold for the Australian health system [Short title: A cost-effectiveness threshold for the Australian health system] | | |
| Principal Investigator | Dr Laura Edney | | |
| Institution | University of Adelaide | | |
| Start Date | 5 January 2016 | Finish Date | 30 June 2017 |
| <p>Total health expenditure in Australia was estimated to be \$147.4 billion in 2012-13, representing 9.7% of total GDP (AIHW, 2014). Given cost constraints and ever increasing demands, it is imperative that the health system extracts maximum value from this health expenditure.</p> <p>To determine funding allocations for new health technologies, incremental cost-effectiveness analyses are often employed to balance health improvements and increased costs. A recent study by Claxton et al. (2015) estimated a 'central' cost-effectiveness threshold of £12,936 (\$AUD26,600) per Quality Adjusted Life Year (QALY) gained for the National Health Service in England. Retrospective analysis of previous funding decisions in Australia suggests that the Pharmaceutical Benefits Advisory Committee (PBAC) have a cost effectiveness threshold between \$37,000 and \$69,000 per life year gained (George, Harris & Mitchell, 2001). This provides an implicit cost-effectiveness threshold used in Australia. Adopting this as the threshold provides historical uniformity, but it is not an empirically-based estimate and has no relation to opportunity cost.</p> <p>In this study we seek to replicate and extend the methodology employed by Claxton et al. (2015) to estimate a cost-effectiveness threshold for Australia. Data routinely collected on healthcare expenditure including hospital, pharmaceutical and medical expenditure, and on health outcomes including mortality and health related quality of life will be used to estimate the cost-effectiveness threshold for Australia. Econometric methods will be used to estimate the relationship between healthcare expenditure and health outcomes controlling for area-based demographics and healthcare needs. These econometric results will then be used to estimate an empirically-based cost-effectiveness threshold that could be used to guide future funding decisions for new health technologies in Australia.</p> | | | |

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| Project Title | Supporting people with mental illness on release from prison- developing and evaluating a pilot multi-agency case management approach [Short title: Prison transition project] | | |
| Principal Investigator | Dr Sophie Davison | | |
| Institution | Graylands Health Campus | | |
| Start Date | 9 December 2015 | Finish Date | 30 November 2017 |
| <p>Prisoners with mental illness re-entering the community face a range of challenges. They have disproportionately high rates of mortality, hospitalisation for physical and mental disorders and contact with mental health services after release (Kinner 2011; Hobbs et al 2006). Many have difficulty accessing and engaging in appropriate support and care leading to poor health and offending outcomes.</p> <p>The Statewide Forensic Mental Health Service, Clinical Research Centre and the Corrective Services Co-morbidity Service have been working with Partners in Recovery (PIR) to develop a pilot service to</p> | | | |

prisoners on release. PIR is a national, federally funded initiative with the aim of better supporting people with severe and persistent mental illness with complex needs who require substantial support and assistance to engage the various services. PIR workers work with individuals to identify their needs, develop a recovery action plan and then act as brokers to ensure service collaboration. The service is in line with the Western Australian Mental Health, Alcohol and other Drug Services plan 2015-2025 which states (section 12.5.4) that one of the aims is to establish appropriate transition services for individuals moving from prison to the community.

The aim of this research is to describe the development of the pilot service for people with severe mental illness on release from prison and to compare the outcomes of patients who are supported by the new service with those who are not but are released from prison and referred to local services in the normal way. The hypothesis is that those assisted by PIR will have more contact with community services, less use of emergency and acute services (such as inpatient admissions), and be less likely to be re-imprisoned. We plan to assess the needs of prisoners with severe mental illness prior to release and then contact them 4 weeks after release to ask about their involvement with local supports and services. We will also examine their mental and physical health service use, mortality and re-offending in the six months following release and the year prior to prison.

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| Project Title | ECU-DOH policy and practice brief reports of the health and wellbeing of Western Australians aged 60 years and older [Short title: policy and practice briefs project] | | |
| Principal Investigator | Dr Kim Clark | | |
| Institution | Edith Cowan University | | |
| Start Date | 6 January 2016 | Finish Date | 30 December 2017 |

This project seeks to describe health and wellbeing indicator prevalence among Western Australians 60 years and over in the period 2013-15 and to highlight apparent healthcare policy and practice implications. A sequence of brief "issue" reports will be prepared for distribution by the WA Department of Health (DOH) addressing different aspects of health and lifestyle. These reports are expected to inform health policy and practice in WA and may subsequently form the basis for journal articles. The project is the subject of an agreement between Edith Cowan University (ECU) and WA DOH Public Health Division.

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| Project Title | Primary Care Type Emergency Department Presentations – definition and cost-effective design [Short title: Primary Care Type Emergency Department Presentations] | | |
| Principal Investigator | Associate Professor Alistair Vickery | | |
| Institution | The University Of Western Australia | | |
| Start Date | 1 January 2016 | Finish Date | 31 December 2017 |

This is a study designed to help better define and identify Primary Care Type Emergency Department (PCTED) presentations utilising Primary Care assessment and Emergency Department (ED) physicians to determine the burden of such attendances in WA EDs. This will help to better design cost-effective programs and policies to target appropriate patients to reduce PCTED presentations and

better manage such patients in primary care.

Using GP researchers ED patients will be assessed before discharge home from ED to determine their status as PCTED or not PCTED. The resources that would be required in a hypothetical GP setting to avoid ED presentation will be defined and any additional skill sets of primary care services documented. Additionally, for each patient, the treating ED physician will indicate if they believe the patient was a PCTED attendance. All consenting patients' information will be linked to Emergency Department Data Collection data (EDDC) to determine primary diagnosis, Aboriginal Torres Strait Islander (ATSI) status, presentation rates, and referral to community services. This will be compared to linked de-identified EDDC data for the population of WA across a calendar year. This allows for the determination of the representativeness of the sample and extrapolation of findings across the system.

Analysis of the patient diagnoses will be examined to identify themes related to age, diagnosis, lack of resources in primary care, timing, cost and triage categories. An appropriate definition of PCTED attendance will be identified. Cost-effective primary care interventions required to avoid PCTED presentations will be developed, such as providing alternative services or re-direction policy, cost-effective primary care resources, skill training, or education.

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| Project Title | Alcohol-related harm in WA reduced through cost-effective initiatives | | |
| Principal Investigator | Dr Delia Hendrie | | |
| Institution | Curtin University | | |
| Start Date | 23 March 2016 | Finish Date | 31 December 2017 |

Alcohol-related harm contributes to significant health, social and economic costs to the community, including illness, injury, crime, violence, anti-social behaviour, and family and relationship breakdown. Effective alcohol policy measures can substantially affect alcohol consumption and reduce alcohol-related harm. However, budget constraints necessitate making important decisions regarding how initiatives should be prioritised. The overall aim of this project is to improve understanding of the costs of alcohol-related harm in Western Australia and the potential cost offsets or savings that might be achieved through the implementation of selected alcohol harm reduction initiatives. Estimates of the cost of alcohol-related harm will be calculated using state-based data on incidents of alcohol-related harm and their costs. Findings from existing studies about the effectiveness of initiatives to reduce harm will be localised to make them transferable to the Western Australian context. A comparison of monetised costs and outcomes of alcohol harm reduction initiatives will reveal the extent to which the cost of problematic alcohol use could be offset by implementing effective alcohol harm reduction initiatives. The resultant "What Works?" list of policy options based on effectiveness in reducing harm from alcohol and their cost will assist policymakers in choosing a portfolio of initiatives that are evidence-based and have a high likelihood of producing more benefits than costs or benefits at a reasonable cost.



Delivering a **Healthy WA**