

## Otago Global Health Institute Seed Grant programme-2018-2023

OGHI's mission is to work in collaboration with researchers in under-resourced populations to conduct research that addresses their most pressing health problems. OGHI's strategic goals are to maximise Otago University's participation in global health research, establish global health collaborations, build research capacity with collaborators, and jointly propose, conduct and publish research findings to inform policies and practice to improve health in these under-resourced settings. Since 2018 OGHI has awarded 16 seed grants to projects led by researchers across the four divisions of the University of Otago, addressing the health needs of people in the Pacific, Asia and Africa.

### **Pacific:**

#### **Project 1 (2018): Impact of sugar-sweetened beverage taxation in the Pacific including the Cook Islands**

**Principal Investigator:** Dr Andrea Teng, Department of Public Health, University of Otago, NZ.

**Other Investigators:** Ms Elisiva Na'ati, Non-Communicable Diseases Adviser-Public Health Nutrition, Public Health Division, Pacific Community (SPC)  
Prof Nick Wilson, University of Otago  
Dr Murat Genc, University of Otago  
Prof Louise Signal, University of Otago.

**Abstract:** Health and economic leaders in the Pacific have declared a Non-Communicable Disease crisis and leaders have called for improved evaluation of policy interventions. The Pacific accounts for some of the world's highest rates of obesity and diabetes. Half of countries have introduced sugar-sweetened beverage (SSB) taxes, yet no empirical SSB tax evaluations have been done. This project (PhD) aimed to examine the impact of SSB taxes on the price and consumption of beverages in the Pacific. This was done using time series analysis of trade data, controlled before-and-after studies of household purchasing, and qualitative contextual information from expert interviews. Findings of this project have international implications and create the opportunity for additional external funding through the development of networks, improved policy evaluation expertise, and by generating new ideas.

### **Outcomes:**

- 1) Partnerships with key health leaders in Cook Islands, Tonga and the broader Pacific and multilateral organisations including SPC and WHO colleagues in the Pacific.
- 2) \$50,000 UORG grant from University of Otago to carry on the work in Tonga.

### **Outputs:**

- 1) SSB taxation reports submitted to Cook Island and Tongan Govt.
- 2) Teng AM, Genc M, Herman J, Signal L, Areai D, Wilson N. Impact of sugar-sweetened beverage taxes on price, import and sale volumes in an island nation: interrupted time series analysis. *Public Health Nutr.* 2021;1-19.
- 3) Teng A, Snowdon W, Win Tin ST, Genç M, Na'ati E, Puloka V, et al. Progress in the Pacific on sugar-sweetened beverage taxes: systematic review of policy changes from 2000 to 2019. *Aust N Z J Public Health.* 2021;Online 8 June 2021.

- 4) Teng A, Buffiere B, Genc M, Latavao T, Puloka V, Signal L, et al. Equity of expenditure changes associated with a sweetened-beverage tax in Tonga: repeated cross-sectional household surveys. *BMC Public Health*. 2021;21(1):149.
- 5) Andrea Teng VP, Louise Signal, Nick Wilson. Pacific countries lead the way on sugary drinks taxes: lessons for New Zealand. *N Z Med J*. 2021;134(1543):137-40.
- 6) Teng A, Puloka V, Genc M, Filimoehala O, Latu C, Lolomana'ia M, et al. Sweetened beverage taxes and changes in beverage price, imports and manufacturing: interrupted time series analysis in a middle-income country. *Int J Behav Nutr Phys Act*. 2020;17(1):90.

**Project 2 (2020):** Cultural Perspectives on behaviour change related to non-communicable diseases among women of reproductive age in Fiji.

**Principal Investigator:** Dr Patrick Vakaoti, University of Otago

**Collaborators:** Dr Gade Waqa, Fiji National University, Fiji

**Abstract:** Non-communicable diseases (NCDs), including ischaemic heart disease, stroke, and diabetes, account for the leading causes of death globally. NCDs have a gender dimension and evidence showed that women respond differently to certain risk factors than men. Diet is an important modifiable risk factor for the prevention of cardiovascular disease apart from smoking, alcohol, physical activity, and stress, yet there is a lack of evidence to support the cultural perspectives of behavior change related to NCDs among women. While there were proactive and innovative policy responses that have focused on prevention; shaping consumer behavior and the practices of multinational alcohol, tobacco, and food industries, there remains a significant knowledge gap as to why women choose not to adopt or reject healthy behaviors related to NCDs. This study was undertaken as a collaboration between the Otago Global Health Institute (OGHI) at the University of Otago and the Fiji National University (FNU) through its Pacific Research Centre for the Prevention of Obesity and Non-Communicable Diseases (C-POND), a WHO Collaborating Centre for Obesity Prevention and Management at the Fiji Institute of Pacific Health Research (FIPHR), the research arm of the College of Medicine, Nursing and Health Sciences (CMNHS).

**Outcomes:** A closer collaboration between OGHI and FNU, which continues to be fostered.

**Project 3 (2020):** Investigating the transmission of carbapenem-resistant Gram-negative pathogens in Colonial War Memorial Hospital, Suva, Fiji.

**Principal Investigator:** Mr. Sakiusa Cabe Baleivanualala

**Collaborators:**

1. Dr. James Ussher, Senior Lecturer and Clinical Microbiologist  
Department of Microbiology and Immunology, University of Otago, New Zealand
2. Prof John Crump, McKinlay chair of Global Health, Department of Preventive and Social Medicine, University of Otago, New Zealand.
3. Dr. Donald Wilson, Associate Dean Research and Associate Professor Epidemiology, College of Medicine, Nursing and Health Science, Fiji National University, Fiji.

**Abstract:** This retrospective study focussed on the transmission of carbapenem resistant *Acinetobacter baumannii* at the Colonial War Memorial Hospital (CWMH) from 1st January 2019 to 31st December 2019. This is the first genomic analysis of carbapenem-resistant *Acinetobacter baumannii* strains from adult intensive care unit (ICU) of the CWMH. Based on our analysis we confirmed a prolonged outbreak of nosocomial infection associated with international high risk clone

CR-Ab sequence type 2 (ST2) within the adult ICU. These CR-Ab ST2 strains also shared a common ancestral linkage to the outbreak clone that caused an outbreak amongst Fijian new-borns in the neonatal ICU (NICU) at CWMH from 2016 – 2017. In addition, we showed that these outbreak clones were derived from common sources that have persisted in the environment for more than 1 year. The study raises concerns about an unmitigated prolonged nosocomial outbreak of carbapenem resistant *A. baumannii* ST2 in Fiji's largest hospital. These findings underscore the need for improvement in antimicrobial stewardship and extra infection prevention and control precautions. In addition, it will help in the implementation of Fiji's Antimicrobial Resistance Action Plan regarding early detection and strengthening of AMR surveillance system in CWMH and other medical facilities in Fiji to combat the threat posed by AMR pathogens.

**Outcomes:**

1. Implementation of phenotypic carbapenemase screening by mCIM to CWM Hospital, Labasa and Lautoka hospital.
2. Recommendations for improvement of processes in infection control, antimicrobial stewardship, and surveillance as per research findings.

**Project 3 (2020):** Molecular Characterization of the HIV Epidemic in Fiji

**Principal Investigator:** Professor Miguel E. Quiñones-Mateu, Webster Family Chair in Viral Pathogenesis, Department of Microbiology & Immunology, University of Otago, New Zealand.

**Collaborators:**

1. Atlesh Nand Sudhakar, Pathology and Medical Laboratory Science, College of Medicine, Nursing and Health Science, School of Medicine, Fiji National University
2. Taina Kanaiwaqa Naivalu, Head of Department, Lecturer in Microbiology & Immunology, Pathology and Medical Laboratory Science, College of Medicine, Nursing and Health Science, Fiji National University.
3. Dr. Donald J. Wilson, Associate Professor, Associate Dean Research, Department of Epidemiology and Biostatistics, College of Medicine, Nursing and Health Science, School of Medicine, Fiji National University.

**Abstract:** According to UNAIDS, in 2018 almost 38 million people globally were living with HIV (PLWH) and roughly 61% of them had access to antiretroviral therapy (ART). Interestingly, close to 80% of all new HIV infections had been recorded in Asia and the Pacific region, where approximately 5.9 million are living with HIV. In the case of Fiji, 930 people are estimated to be infected with HIV (~0.1% prevalence) while 377 (41%) have access to ART ([www.who.int](http://www.who.int)). Unfortunately, the HIV incidence in the country has been increasing over the last 25 years, i.e., from 0.7 to 7 per 100,000 people. Still, very limited information about the HIV epidemic in Fiji is currently available. Patient monitoring (i.e., CD4+ T-cell counts and plasma viral load quantification) is done at each of three STI Regional Hubs (Fig. 1) and the Reference Laboratory at Fiji Centre for Communicable Disease Control, respectively. Funded by the government, basic (i.e., NRTIs, NNRTIs, and PIs) but not the latest (integrase nor entry inhibitors) ART is available to all PLWH in Fiji; however, HIV drug resistance testing is not currently available in the country. Moreover, with the exception of a very small (27 patients) subtyping study done in 2009 [2], nothing is known about the HIV strains circulating in the country. Since the genetic diversity across HIV subtypes have implications for patterns and magnitude of resistance development this project will use a deep sequencing-based HIV genotyping assay to fully characterize the HIV epidemic in Fiji.

**Project 4 (2021):** Vakadidike kei na veitalanoa ni kakana ni Itaukei: combining indigenous foods database with storytelling to promote positive food choices and dietary practices.

**Principal Investigator:** Dr Dominic Agyei, Lecturer, Department of Food Science, University of Otago.

**Collaborator:** Dr Gade Waqa, Head, Pacific Research Centre for the Prevention of Obesity and Non-communicable diseases (C-POND); Acting Associate Dean (Research), Fiji National university, Fiji.

**Abstract:** This study aimed to investigate the feasibility and perceived effectiveness of an indigenous food database for Fiji that includes holistic and detailed information such as the nutrient content, ethnomedicinal uses, and socio-cultural stories around these foods. The long-term goal was to increase awareness and consumption of indigenous foods. However, this was impossible without knowledge of and access to high-quality food composition data. In Fiji, some progress has been made, including the development of the “My Kana Apps” to help people understand and track the nutritional value of what they eat. However, the data used in this app was sourced from the old 2004 Pacific Island Food Composition Table (PIFCT) and the foreign AUSNUT 2011-13 Food Nutrient Database. Our preliminary findings from interviewing 15 stakeholders revealed a high awareness and use of the 2004 PIFCT, particularly in education and training, dietary assessments, and public health research. However, all stakeholders mentioned the need to update the 2004 PIFCT and welcome the inclusion of indigenous foods in this important resource. The research findings have demonstrated a high appetite for an indigenous foods database with detailed information that goes beyond nutrient content but includes ethnomedicinal uses and socio-cultural stories around these foods.

**Project 5 (2021):** Fluoride: too little or too much? A comprehensive nutritional assessment including oral health of children living on Efate and Tanna islands, Vanuatu.

**Principal Investigator:** Professor Sheila Skeaff, Department of Human Nutrition, Division of Sciences, Otago University.

**Collaborators:**

1. Associate Professor Vincent Bennani, Oral Rehabilitation/Dentistry/Division of Health Sciences, Otago Uni, NZ
2. Dr Jenny Tangis, Health Promotion Unit, Vanuatu Government, Port Vila
3. Elizabeth (Liz) Webb, School of Biological Sciences, Victoria University, NZ.
4. Associate Professor Carol Stewart, School of Health Sciences, Massey University, NZ

This was an observational study investigating the nutrient intakes and oral health of children aged 6-8 and 10-12 years living in Port Vila on Efate Island. A convenience sample of children (n=57) from two primary schools near the village of Pango, Port Vila, Efate were included in the study. Almost a quarter of the children often experienced toothache or discomfort due to their teeth. The majority of children had never received dental care or visited a dentist. Following the South Pacific Guidelines, energy foods made up 58% of the diet, which was primarily rice, bread and sugar sweetened beverages, followed by body-building foods (23%) and then protective foods (20%). Children consumed less vegetables, fruit and high-protein foods than recommended. The fluoride content of water in Port Vila is below the WHO recommended range of 0.5 to 1.5 ppm, and below the New Zealand Ministry of Health recommendation for fluoridation of 0.7 to 1.0 ppm.

**Outcomes:** Formed the basis of the MSc research of Ms Stephanie Dike (graduated)

**Project 6 (2021):** Assessment of health impacts of climate change in Kiribati

Principal Investigator: Dr Mary Anne Teariki (formerly Thompson), Department of Public Health, University of Otago.

**Collaborator:** Dr Tinte Itinteang, Ministry of Health, Kiribati

**Abstract:** The low-lying nation of Kiribati is at the forefront of climate change that is already impacting on the health and wellbeing of its people. This research examined some of the key associations between climate change and health in Kiribati. It draws on a targeted review of articles published in peer-reviewed journals, grey literature and empirical qualitative research drawing on the expertise of I-Kiribati health professionals, decision makers and research experts. The report sought to answer the research question: what are the critical health impacts from climate change for those living in Kiribati?

Five key climate change health impacts were identified: (a) increasing salination of underground water supplies and reduced quality of drinking water resulting in diarrhoeal disease underpinning infant mortality; (b) rising salination and prolonged drought reducing supplies of staple food sources, influencing the move away from a traditional diet to the consumption of high-caloric low nutritional value imported foods, and a leading cause of non-communicable diseases (NCDs); (c) the rise of temperatures and heat stress and rise in food spoilage leading to gastrointestinal diseases; (d) rising sea levels and sea surges leading to coastal erosion and loss of land, homes, and ancestral connections resulting in displacement and declining mental wellbeing. Persistent inundation is also identified as one of the factors behind a rise in skin infections and children play in contaminated surface water bodies. The last impact (e) is the ability of an already over-stretched health system to deal with the multiplier effects of climate change, which points to the need for continued investment and capacity building.

**Outcomes:**

- 1) A report on the health impacts of climate change in Kiribati that will form the basis for an article to be published in a peer-reviewed Journal.
- 2) Establishing enduring relationships with a range of I-Kiribati experts, spanning political decision makers, researchers, and high-ranking health professionals, including the Director-General of Health and Health Services in Kiribati.

**Project 7 (2021):** Community-based surveillance of SARS-CoV-2 and other viral agents using distributed sewer sampling in Fiji.

**Principal Investigator:** Professor Miguel E. Quiñones-Mateu, Webster Family Chair in Viral Pathogenesis, Department of Microbiology & Immunology, University of Otago, New Zealand.

**Collaborators:**

Taina Kanaiwaqa Naivalu, Head of Department, Lecturer in Microbiology & Immunology Pathology and Medical Laboratory Science, College of Medicine, Nursing and Health Science, School of Medicine, Fiji National University

Atlesh Nand Sudhakar, Lecturer, Pathology and Medical Laboratory Science, College of Medicine, Nursing and Health Science, School of Medicine, Fiji National University

**Abstract:** The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the etiological agent of COVID-19, was first identified in Wuhan, China in 2019 [1], before quickly expanding worldwide. More transmissible than other recently identified human coronaviruses (e.g., SARS-CoV and MERS-CoV), SARS-CoV-2 is now responsible for more than 130 million cases and close to 3 million deaths globally

as of April 3rd, 2021 (<https://gisanddata.maps.arcgis.com>). Due to the fact that a large number of individuals infected with SARS-CoV-2 are asymptomatic through the entire disease public health policies, informed by community-level surveillance indicators, are critical to control the spread of the virus. Despite being a classical respiratory virus, SARS-CoV-2 can be detected in stool samples from infected individuals [2, 3] and viral RNA can be isolated from excreted feces in the wastewater from communities with SARS-CoV-2 infection [4, 5]. For that reason, multiple studies around the globe are currently exploring the potential use of community sewer systems to detect and monitor SARS-CoV-2 infections [6]. In addition to SARS-CoV-2, wastewater testing enables the creation of sensitive monitoring tools for a diversity of viruses (or other pathogens) to mitigate environmental and health risks. Equally important, wastewater testing provides fully anonymized data for monitoring community-level infection indicators, while also allowing the spatial distribution of cases through a given city, region. Therefore, surveillance through wastewater can be a COVID-19 indicator that is independent of community perspectives of health-care seeking and access to clinical testing, a clear challenge in low-income settings. In this project we propose to characterize the virome (virus diversity) in wastewater samples from Suva, Fiji, focusing on SARS-CoV-2.

**Project 8 (2022):** Fijian Youth Perspectives and Priorities for Climate Change: Consequences for Mitigation, Adaptation and Wellbeing Strategies.

**Principal Investigator:** Dr Christina Ergler, Senior Lecturer in Geography, School of Geography, University of Otago, New Zealand

**Other Investigators:**

Dr Patrick Vakaoti, Associate Professor Sociology, School of Social Sciences, University of Otago, New Zealand

Claire Allan, MIDP student, School of Geography, University of Otago.

**Abstract:** While there is a growing body of research on climate change risks and mitigation, very little is known about how young people's aspirations and worries for a good quality of life align with the current climate change strategies in Pacific Islands and particular Fiji. Since 1750, global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have significantly increased through anthropogenic causes including fossil fuel consumption, land use change and agriculture. This has contributed to the global phenomena of climate change, posing varied, yet significant risks to countries and the health and wellbeing of populations worldwide. Furthermore, much of this research has focused on richer, more developed countries, neglecting poorer countries, including many Pacific Island nations. It is predicted that Fiji will be significantly impacted by changing climates, through sea level rise, cyclones, increasing air and sea surface temperatures, and changing rainfall patterns. Over recent years, these risks, the changes that are already occurring, and the need for intergenerational equity have driven an increase in active involvement and participation of young people in climate action globally and in the Pacific. This project aims to explore Fijian youth's aspirations for a good life, their engagement in climate change, their priorities and perceived risk, and how these align with government action, and how they could influence future mitigation strategies to maintain and enhance the health and wellbeing of the Fijian population.

**Project 9 (2023):** The effectiveness of hands-on training of Samoan health workers for knowledge and skill development regarding non-surgical interventions for Pelvic Organ Dysfunction

**Principal Investigator (PI):** Professor Jean Hay-Smith, Professor of Rehabilitation Department of Medicine, University of Otago Wellington, New Zealand; Ms Uila Lima, Nursing Lecturer, School of

Nursing, National University of Samoa, Samoa; Ma Fulu-Aiolupotea, Nursing Lecturer, School of Nursing, National University of Samoa, Samoa, Dr Ramona Boodoosingh, Department of Sociology and Anthropology, Rochester Institute of Technology, USA, Dr Melanie Dembinsky, Research Fellow, Department of Nursing & Community Health, Glasgow Caledonian University, Scotland UK, Professor Suzanne Hagen, Deputy Director, NMAHP Research Unit, Glasgow Caledonian University, Scotland UK.

**Abstract:** Pelvic Organ Prolapse (POP) is altered position of the uterus, bladder, rectum, or small intestine, which protrude into or descend outside the vagina. Consequences are pain, urinary or fecal incontinence, and organ descent outside the body. Severe prolapse often requires surgical correction. From 30 studies, average prevalence in developing countries is 19.7% (3.4-56.4%). No study was from a Pacific Island country. Since Samoan women have relatively high rates of two risk factors for POP (a fertility rate of 3.877 in 2018, and about 81% of women are obese. it is important to find out the likely prevalence in Samoa and what impact this has on women's health and well-being in their communities (e.g. marriage, family, work, religious, recreational). First, however, we need a local workforce can comfortably initiate conversations about prolapse and know enough to help women recognise whether they have it. Our previous research found that prolapse was an 'unknown' condition for most Samoan healthcare workers and women, without directly translatable terminology from English, and has symptoms considered 'private' and potentially shameful. The proposed project builds on three previous studies from an existing research collaboration between the School of Nursing at the National University of Samoa, Glasgow Caledonian University and the University of Otago. This project will further strengthen the collaborative relationship between the University of Otago and the NUS School of Nursing, Samoa and test the effectiveness of the training strategy to increase knowledge of POP and skills in non-surgical interventions for the condition.

**Project 10 (2023):** Assessment of Surgical Capacity, Barriers, and Opportunities in Fiji

**Principal Investigator (PI):** Dr Kiki Maoate, Associate Dean Pacific, University of Otago, Christchurch, Dean's Department (Christchurch), Department of Paediatrics (Christchurch), New Zealand, Dr Rennie Qin, General Surgery Trainee Registrar, Te Whatu Ora, Department of General Surgery, Whanganui Hospital, New Zealand, Dr Rajeev Patel, Urologist, Ministry of Health and Medical Services, Fiji, Department of Clinical Services, Ministry of Health and Medical Services, Fiji, Dr Ashneel Sundar, Surgical Registrar, Colonial War Memorial Hospital, Fiji, Department of Clinical Services, Ministry of Health and Medical Services, Fiji, Dr Jope Makutu, Surgical Registrar, Colonial War Memorial Hospital, Fiji, Department of Clinical Services, Ministry of Health and Medical Services, Fiji.

**Abstract:** Surgical, obstetric, and anaesthesia (SOA) care are required to treat a third of the global disease burden. However, five billion people lack access to safe, timely, and affordable surgical care globally; nine out of ten of them live in low- and middle-income countries (LMICs). The World Health Assembly resolution recognised emergency and essential surgical care as indispensable to universal health coverage (UHC). In 2019, Pacific Health Ministers, at their 13th meeting, championed a Pacific-specific approach to advancing the safe and affordable surgery agenda as a critical component of UHC and the Healthy Island Vision, including the development and implementation of National Surgical, Obstetric and Anaesthesia Plans (NSOAPs). PICs face a set of common and unique challenges to surgical care provision, including their small size, geographic isolation, distance to global markets, and vulnerability to external shocks. Previous literature has detailed the burden of diseases requiring SOA care in PICs, highlighting the need to address maternal mortality rates, trauma, complications of non-communicable diseases such as diabetes, and infectious disease sequelae such as cervical cancer and rheumatic heart disease. The collection of the Lancet Commission on Global Surgery (LCoGS) indicators in 13 PICs in 2016 demonstrated challenges in surgical care access, specialist workforce, surgical volume, and financial risk protection. Strengthening surgical care systems requires an

understanding of health system building blocks, the interactions between them, and critical points of constraints and bottlenecks through health system assessments. Qualitative interviews with patients and providers were conducted in Vanuatu. However, comprehensive surgical care capacity assessments have not been conducted in other PICs.

The Fiji Ministry of Health and Medical Services (MHMS) started developing a National Surgical, Obstetric and Anaesthesia Plans (NSOAP) with the support of the WHO Western Pacific Regional Office (WPRO), the Pacific Community (SPC), the Harvard Program for Global Surgery and Social Change (PGSSC), and the Royal Australasian College of Surgeons (RACS). As a part of this process, a mixed-method situational analysis was conducted. This included quantitative facility assessments and qualitative stakeholder interviews. In this study, we plan to analyse the qualitative component of the situational analysis. We aim to analyse stakeholder interview data to understand the barriers, challenges, and solutions for surgical system strengthening in Fiji. This will not only inform policy development but also contribute to generalisable knowledge that may assist other Small Island Developing States with similar challenges in their surgical policy development.

#### **Asia:**

**Project 1 (2020):** The prevalence of smoking among adolescent students aged 13-15 in the Municipality of Dili in 2020, and factors influencing the uptake of smoking.

**Principal Investigator:** Prof Richard Edwards, Department of Public Health, University of Otago, Wellington, New Zealand.

**Collaborator:** Dr João S Martins, Universidade Nacional Timor Lorosa'e, Díli, Timor Leste.

**Other Investigator:** Dr Sue McAllister, Centre for International Health, University of Otago.

**Abstract:** Smoking initiation is concentrated among young people which strongly influences future smoking prevalence. This study aimed to investigate the prevalence of smoking and other tobacco product use and potential determinants in a cross-sectional survey of 1121 students aged 13 to 15 years in Dili, Timor-Leste. The prevalence of ever using a tobacco product was 40.4% (males 55.5%; females 23.8%) and of current use was 32.2% (males 45.3%; females 17.9%). In a logistic multivariable regression, factors associated with current use of any tobacco product were being male,  $\geq$ US\$1 weekly pocket money, parents smoking, exposure at home, and exposure in other locations. The findings suggest that reducing the very high use of tobacco among adolescents in Timor-Leste will require new policy measures, enhanced enforcement of current legislation as well as a focused commitment to targeted smoke-free education campaigns, and community-based health promotion to support parents to quit smoking and not smoke around children.

#### **Outputs:**

- 1) A report was completed on 2 February 2022 and provided to the Ministry of Health and Ministry of Education in Timor Leste.
- 2) Results were presented at the
  - a. Otago Global Health Institute Webinar
  - b. Otago Global Health Institute Conference, 15-16 November 2022 (oral presentation)
- 3) Peer reviewed journal publication: Martins JS, McAllister S, da Conceição Matos L, et al. Smoking Among High School Students in Dili, Timor-Leste: Prevalence, Potential Determinants and Opportunities for Prevention and Control. *Asia-pacific Journal of Public Health*. 2023 Jul;35(5):342-350. DOI: 10.1177/10105395231173743. PMID: 37148123.



**Project 2 (2021): Investigating dietary and activity changes due to the COVID-19 pandemic and its implications on health status of Adolescents and Adults in Bandung, Indonesia.**

**Principal Investigator:** Dr Sherly Parackal, Centre for International Health, Division of Health Sciences, University of Otago.

**Collaborators:** Dr. Nanny NM Soetedjo, Endocrinology and Metabolism Division, Internal Medicine Department, Hasan Sadikin General Hospital, Bandung Indonesia, Faculty of Medicine, Department of Public Health, Padjadjaran University, Bandung, Indonesia.

Dr Bony Wiem Lestari, Faculty of Medicine, Department of Public Health, Padjadjaran University, Bandung, Indonesia.

Dr Novina, Faculty of Medicine, Department of Peadiatrics, Padjadjaran University, Bandung, Indonesia.

Mrs Noormarina Indraswari, Faculty of Medicine, Department of Public Health, Padjadjaran University, Bandung, Indonesia.

**Abstract:** Several studies have been fast tracked and published across the globe to understand the impact of COVID-19 lockdowns on dietary behaviour and activity levels. A scoping review summarised the findings of 23 studies that investigated the impact of COVID-19 lockdown in 2020 on diet. The review included 10 studies from Europe, three each from Americas and India, two from Australia, and one each from China, Africa and the Middle East. These studies indicated an increase in total number of meals consumed, snacking after dinner, binge eating, consumption of sweets, crisps, sugary drinks, and cereals, consumption of processed foods and nutritional supplements. Such studies in Southeast Asian countries such as Indonesia were totally absent. As obesity and the associated complications such as diabetes is rampant in Indonesia, one of the countries with the largest number of people with diabetes in the world,7 documenting dietary and activity changes in the COVID 19 context would be critical to inform diabetes prevention strategies and policies. This study aimed to investigate self-reported dietary and activity changes due to the COVID-19 pandemic in an urban sample of Adolescents (15-18-year-olds; n = 200) and Adults (>18 years; n = 200) and report self-perceived changes in weight, mental, physical health status and nutrition related health status.

**Outcomes:**

1. This seed grant was instrumental in setting up a strong research collaboration to address nutrition related health needs of an urban population in Indonesia.
2. The seed grant facilitated building skills, capacity, and leadership in research for two third year medical students.
3. The seed grant provided data for one PhD project that aims to co-design a diabetes prevention initiative for urban cities in Indonesia.

**Africa:**

**Project 1 (2018): Is smear negative tuberculosis over diagnosed? Determining the diagnosis in those beginning treatment for smear negative TB**

**Principal Investigator:** Dr MJ Maze, Department of Medicine, University of Otago, Christchurch

**Collaborators:** Dr. Kajiru Kilonzo, Department of Internal Medicine, Kilimanjaro Christian Medical Centre, Tanzania; Dr. Matthew Rubach, Kilimanjaro Christian Medical Centre – Duke University Collaboration, Duke University, United States of America

**Other Investigators:** Prof. John A. Crump, Centre for International Health, Department of Preventive and Social Medicine, University of Otago, New Zealand

**Abstract:** Tuberculosis is considered one of the leading causes of death in low- and middle-income countries, such as Tanzania. Due to inaccurate diagnostic tests, over half of people who are treated for tuberculosis in Tanzania do so presumptively, without a proven diagnosis. Many patients diagnosed with tuberculosis in fact have a disease other than tuberculosis. This has major implications for individual patients and global tuberculosis control. This pilot study will investigate how commonly tuberculosis is being over diagnosed, and which diseases are most commonly overlooked. These results will open up new lines of inquiry in understanding the major causes of respiratory illness in Africa and develop a new research stream within an existing OGHl collaboration.

**Outcomes:**

1. RACP Foundation grant of AU\$ 50,000
2. Partnerships with Kilimanjaro Christian Medical Centre and Duke University

**Outputs:**

1. Maze MJ, Nyakunga G, Sakasaka P, Kilonzo KG, Luhwago E, Chelengwa M, Crump JA, Kisonga R, Madut DB, Rogath J, Sadiq A, Theissen R, Rubach MP. ETIOLOGIC INVESTIGATION OF PATIENTS DIAGNOSED WITH BACTERIOLOGICALLY UNCONFIRMED TUBERCULOSIS IN NORTHERN TANZANIA. Poster 1051. American Society of Tropical Medicine and Hygiene Annual Scientific Meeting. 30 October - 3 November 2022, Seattle, USA.

**Project 2 (2019): What are the barriers to implementing the World Health Organization's Framework Convention for Tobacco Control in Sierra Leone (West Africa)?**

**Principal Investigator:** Dr Jerram Bateman, Social and Behavioural Research Unit, Department of Preventive and Social Medicine, University of Otago, New Zealand.

**Collaborator:** Mr Kabba Bangura, Department of Geography, Fourah Bay College, University of Sierra Leone, Sierra Leone.

**Other Investigators:** Professor Tony Binns, Department of Geography, University of Otago, New Zealand; Dr Louise Marsh, Senior Research Fellow, Social and Behavioural Research Unit, Department of Preventive and Social Medicine, University of Otago, New Zealand; Dr Lindsay Robertson, Research Associate, The Stopping Tobacco Organisations and Products (STOP) Initiative, Tobacco Control Research Group, Department for Health, University of Bath, United Kingdom.

**Abstract:** Tobacco is a leading cause of non-communicable diseases globally. In order to curb the tobacco epidemic, the WHO developed and implemented the Framework Convention on Tobacco Control (FCTC). While the FCTC has led to declining tobacco use globally, the prevalence of tobacco smoking is increasing in many low- and middle-income countries, particularly in Africa. Sierra Leone has the dubious distinction of having both the highest known prevalence of tobacco smoking, as well as the lowest known implementation rate of the FCTC, in sub-Saharan Africa. Given the likely correlation between FCTC implementation and smoking prevalence, this project explored the barriers to implementing the FCTC in Sierra Leone through interviews with key stakeholders and provided an exciting opportunity for collaboration with the global Stopping Tobacco Organisations and Products (STOP) initiative to inform further research and interventions aimed at improving FCTC implementation and reducing smoking prevalence in Sierra Leone.

**Outcomes:**

- 1) Built relationships with researchers at Fourah Bay College, Ministry of Health and Sanitation, the College of Medicine and Allied Health Science, the Cancer Society,
- 2) built capacity for further tobacco control research.