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Mapping UNSW Impact
Global Development

Primary SDG	**3: GOOD HEALTH AND WELL-BEING**
Broad theme	Cardiovascular disease, disease and death records
Research	Trialling interventions to reduce cardiovascular disease and improving the accuracy of disease and death recording
Impact region	Sri Lanka, Fiji, Tonga, Samoa, French Islands (Pacific)
Faculty	Medicine
School/Institute	School of Public Health and Community Medicine
Academics	Professor Richard Taylor, Dr Christine Linhart, Dr Stephen Morrell
Project partners	Sri Lanka: local government, Pacific: local government
	Indonesia: National Institute of Health and Research Development, UNSW Indonesia
Related SDGs	16: Peace, Justice and Strong Institutions

Elevator pitch

Richard, Christine and Stephen are working with local government in Sri Lanka and Pacific Island countries to trial interventions that reduce cardiovascular risk and disease, and to better estimate trends in disease and mortality, improving local health and advancing healthcare policy.

The Challenge: Cardiovascular disease a leading cause of death, inaccurate health records

Non-communicable disease (NCD), including cardiovascular disease and diabetes, is the leading cause of death around the world. Sri Lanka is no exception, with NCD becoming more prevalent especially in urban areas. In the Pacific, NCDs account for around 70-80% of total deaths in more developed Pacific countries like Fiji, Tonga, Samoa, and the French Islands. Inadequate diet and a lack of exercise are key contributors.

The World Health Organisation (WHO) recently published diabetes data for people living in Tonga, Fiji and Samoa. Curiously, the rates were double than expected. Has there really been a 100% increase in diabetes in these countries, or is something else going on?

UNSW's solution: Help measure the success of interventions, recode health and death data

Richard, Christine and Stephen are currently investigating what public officials and local government in the Western Province of Sri Lanka can do to control cardiovascular disease. In partnership with local investigators they surveyed 1,000 adults aged 25-64 years in four urban districts about their diet, smoking, exercise, diabetes, and prevalence of high blood pressure. They also measured glucose and cholesterol levels. They then designed an intervention to help reduce NCD risk factors in the areas surveyed. In partnership with local communities and public healthcare organisations, public health fairs were held and women's groups were targeted with information about reducing salt and animal fat intake, limiting smoking, and increasing physical activity. These initiatives proved to be very popular. Three years later the adults from the four areas were surveyed. Preliminary results suggest risk of cardiovascular disease has fallen considerably - especially among

women - with lower average blood pressure, cholesterol and glucose levels, and correspondingly lower hypertension and diabetes prevalence.

Richard, Christine and Stephen have also examined diabetes rates in Tonga, Fiji and Samoa, as reported by the WHO. They discovered the results were being affected by errors in the analysis phase, and that diabetes prevalence had not increased by 100% as originally reported. They are now examining death records in Fiji and Tonga, with the help of two Scientia PhD scholars, focussing on large unexplained changes in cardiovascular and diabetes mortality rates which may be due to inaccurate cause-of-death recording.

In the past, Richard and Stephen analysed levels of mortality and causes of death from records held by the Aboriginal Medical Service Redfern. This involved computerising over 40,000 paper records dating back to 1971 when the medical service was first established. As a result of this work, life expectancy of an Indigenous person in NSW was estimated to be five years higher than previously estimated. They are also working with the University of New England and Aboriginal communities in Western NSW to measure the effectiveness of an adult literacy program. And Christine is helping to train Indonesian government officials in how to analyse WHO survey data on children and health, am publish articles on health and lifestyle.

The Impact: Improving people's health and the effectiveness of government healthcare policy

Through their work with public health officials in Sri Lanka and Pacific countries, Richard, Christine and Stephen are helping to evaluate and shape public health campaigns to increase their effectiveness. Lowering the risks of cardiovascular and other NCDs in these populations increases people's longevity and reduces future costs to the public health systems in countries with exceedingly limited healthcare resources.

Their work with health and death records in Fiji, Tonga, and Samoa is helping governments to better understand trends in NCD and the causes of death. With more accurate data, governments have a clearer picture of emerging health challenges and how best to respond to these, whether in the form of public awareness campaigns or other preventive initiatives. Ultimately, the populations of these countries will benefit in the form of healthier and longer lives.

Researchers

Professor Richard Taylor is Professor of Public and International Health at UNSW. After working as a physician and studying Tropical Medicine and Hygiene at the London School of Tropical Medicine and Hygiene, he researched diabetes and cardiovascular disease in Pacific Island countries at Monash University in Melbourne. Richard was Epidemiologist at the South Pacific Commission (SPC) in Noumea (New Caledonia) during the 1980s, and he has worked in Indigenous Australia, Asia, and most Pacific countries. He is passionate about saving lives on a large scale without the need to be thanked.

Dr Christine Linhart has worked in research and teaching in SPHCM at UNSW since 2011. During this time she has specialised in cardiovascular disease, type 2 diabetes mellitus and cancer, and was co-investigator on a DFAT project assessing trends in cardiovascular disease risk factors in Pacific Island populations (Fiji, Samoa, Wallis Island). Christine has worked in Melanesia, Micronesia, Polynesia, Southeast Asia, and in 2015/16 worked for the Secretariat of the Pacific Community in Noumea. She is determined to show the world that cardiovascular disease is not simply a lifestyle disease.

Dr Stephen Morrell is employed as a Senior Research Fellow at SPHCM. He has a PhD in epidemiology and biostatistics and has been involved in public health research for 28 years. His is an expert in suicide, cancer epidemiology and screening, and mortality, particularly in Pacific Island countries. In 2011 he received a lifetime award for research into suicide from Suicide Prevention Australia. Stephen is driven by the adventure of discovering something new, that no one was aware of before.

Ben Falkenmire 05.06.18