

History of HRC support for Pacific health research

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The 1996 funding of two Pacific Health Research Centres in New Zealand is an important step in the Health Research Council of New Zealand's 50-year history of support for Pacific health research.

The HRC was formed from the Medical Research Council in 1990. Health research in Pacific countries was part of the MRC's activities from 1946, when the Island Territories Research Committee was formed. The committee's objectives were:

- The accumulation and recording of all information related to health and disease in the Pacific area.
- Determination of the specific health problems which exist within its own geographical sphere.
- Active research leading to the solution to these problems.
- Liaison

In the first years, teams of three or four researchers from the University of Otago in Dunedin went to different territories each year during the university summer holidays to gather baseline health status information.

Research Unit

In 1952, Dr D McCarthy, a New Zealand medical graduate and former deputy director of medical services in Uganda, was appointed as medical officer of a new Island Territories Research Unit. At that time the unit's work was funded by the New Zealand Department of Island Territories (later the Department of Maori and Island Affairs), which was responsible for the health and welfare of people living in the New Zealand territories of Western Samoa, the Cook Islands, Niue and Tokelau.

Research from 1952 to 1968 concentrated on investigation and management of infectious and parasitic diseases, especially

filariasis, the parasite which causes elephantitis. Some of this research in Western Samoa was funded by a 1960 legacy from the late Dr J Phillips. A research team led by Dr M Marples concluded in 1954 that "the more gross manifestations of filarial disease are due not only to infection but to a quantum of infection which is built up over the years by continuous and regular re-infection".¹

McCarthy gathered information from early research visits in a book *New Zealand Medical Research in the South-West Pacific*, published in 1954. It dealt almost exclusively with nutritional, infectious and parasitic diseases, with one page about blood pressure data.

Successful MRC-funded filariasis control programmes were started in the Cook Islands in 1958, and in Western Samoa and Tokelau around 1965. By 1968 large scale testing showed microfilarial rate in Western Samoa had reduced from an average of 20.4% three years earlier to an average of 1.43%.² Other occasional MRC expeditions studied cardiovascular disease, dental conditions, ophthalmic disease, as well as nutritional disorders and infections.

The unit also investigated infant mortality in the Cook Islands from 1956, identifying pneumonia and prematurity as principal causes. A 1957 report conveys the assumptions of some New Zealand health researchers at the time. "Clinical examination of children and infants and of such fatalities as have been personally investigated suggest that more ante-natal supervision is required and that the management of delivery and the new-born child by ignorant and unqualified persons may be responsible for much of the neo-natal mortality. The problem, however, is not solely a medical one for some of its origins spring from changing economic and social habits resulting from a swing away from a subsistence economy to a money economy. The effect of such change upon a happy-go-lucky, carefree, an largely irresponsible people has fallen most heavily and most drastically upon the infant and child age groups, which most of all age groups require responsible and intelligent parental care for their health and survival."³

The Island Territories Research Unit went out of existence with the retirement of McCarthy at the end of 1968, and the committee's name became the South Pacific Medical Research committee. Its emphasis changed to support of specific investigator-initiated projects.

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Investigator-initiated projects

The major project during this time, started in 1967 by Dr Ian Prior of Wellington Hospital, studied the health of a group of Tokelau people before and after their migration to New Zealand for more than 20 years. The results of this prospective study provided valuable information about the effects of changing environment, diet and life patterns on health. Tokelau migrants were also subjects of genetic, sociological and anthropological studies.

"There is no doubt that priorities are changing," wrote MRC director Jim Holdge in 1971, "and that infective and parasitic disorders, although still of considerable importance, are giving place.. to the metabolic and degenerative problems which are more familiar to our so-called civilised societies,"⁴ From the early 1970s, committee representatives started, regularly attending annual meetings of Pacific health service directors, ensuring better research co-ordination.

Early 1970s funding supported researcher on surgical correction of elephantitis in Western Samoa and Fiji; a survey of TLIC (eye) infectious in Fiji; virus infections in Rarotonga children; nutrition survey of New Hebrides villagers; and a dengue fever outbreak in Fiji.

In 1975 the Ministry of Foreign Affairs took over committee funding from the Department of Maori and Pacific Island Affairs, enabling it to expand the countries in which it could fund research. Late 1970s studies included a range of investigator-initiated research on iron deficiency among Indian women in Fiji; dental health; and wheezing bronchitis in Niue. The late Eru Pomare studied diet and bile function in rural Tongans in 1979.

In 1981 the committee asked heads of health services in Niue, Tonga, the Cook Islands, Fiji, Western Samoa and Tokelau for research priorities and comment on its work. By 1982 it had identified priorities by country. In Niue liver disease, especially hepatitis, was a research priority; for the Cook Islands it was respiratory disease, hypertension, gout, diabetes, dental caries, filariasis and health service delivery. Fiji identified gastroenteritis, filariasis, respiratory disease, diabetes, gout, hypertension and heart disease, while nutrition was most important in the Solomon Islands. Tongan officials nominated hepatitis, rheumatic fever, peptic ulcer and filariasis,

and Western Samoan officials identified peptic ulcer and respiratory disease.

Diverse methodologies

Research topics and methodologies became increasingly diverse in the 1980s, including several public health and qualitative studies in previously unfunded topics – Samoan women's experience of pregnancy and childbirth; alcohol policy and consumption in different groups; fertility and birth patterns in Tuvalu; establishing a community periodontal disease prevention programme in Tonga; the quality of life of Indian women in Fiji.

In 1985 the committee allocated the first seven of a new category of travel grants, open to medical, dental and social science students for health research projects during their elective periods in any south west Pacific country. However, during the 1980s it regularly noted that it received fewer applications than it could fund.

After the MRC became the Health Research Council in 1990, the renamed South Pacific Health Research Committee brief was extended to include health research relevant to Pacific people living in New Zealand as well as the Pacific. The committee consulted with Pacific groups in New Zealand and the Pacific

about research priorities, and held meetings in Auckland and Wellington about its plans to establish a Centre for Pacific Health Research.

In 1995 Dr Colin Tukuitonga, a Niuean public health medicine specialist, became the first Pacific person to chair the committee. Other new appointments meant that for the first time the committee had a majority of Pacific Islands members. Ms Moera Douthett, a nurse and health consultant, was appointed to a part-time position as Pacific Islands Health Research Co-ordinator.

Areas of special interest

The committee's focus is on building the number of Pacific Islands researchers through career development awards ranging from 10 week summer studentship to four year postdoctoral fellowships. Areas of special interest to the committee include:

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- Behavioural science, looking at psycho-cultural and behavioural understanding, for example, reasons for alcohol abuse
- Specific diseases affecting certain groups, for example, respiratory disease in young children
- The development, implementation and evaluation of intervention or preventing strategies, for example, nutritional studies on obesity.

The committee encourages projects which are initiated by or working in partnerships with Pacific communities, or which enable Pacific health workers to train in research. One example is Ola Fa'autauta, the Samoan Lifewise Project. This was initiated by three Auckland Samoan churches, to reduce their congregation's risks of diabetes and heart disease. Church members are participating in health surveys and organising nutrition and exercise programmes.

The Pacific Health Research Centres are based at the Auckland School of Medicine, which has strong links with policy makers, providers and purchasers of health services, and the Whitireia Community Polytechnic in Wellington, which has strong support from Pacific Islands communities in Porirua. Both centre plan joint projects with other centres and teams of researchers. The Auckland centre is co-ordinating a study of health care utilisation by Pacific people.

HRC representatives were involved in negotiations for a major programme of health research funding by the UK-based Wellcome Trust. Their grants and career awards aim to support health research projects in Pacific Islands countries and the careers of Pacific health researchers.

Examples of some HRC awards and projects

The HRC is currently funding a range of Pacific research through career development awards to individuals and projects to research groups. A few are highlighted below.

Niuean men and alcohol: For his three year HRC Postgraduate Scholarship, Vili Nosa is interviewing Niuean men about changes in their behaviour and beliefs about alcohol as a result of migration to New Zealand. He will speak with individual men and up to 10 groups in Auckland and on the island, including sports teams, church group, students and village groups. Results will help plan interventions for Pacific people at risk of alcohol-related problems. The study will also identify factors contributing to migration from Niue.

Epidemiology training: David Schaaf is retraining as a public health researcher specialising in epidemiology during his HRC Training Fellowship. He already has a Masters of Science in biochemistry. His research includes analysing information from the 660 Pacific participants from Auckland and Tokoroa in the Workforce Diabetes Survey. The fellowship is enabling him to complete his PhD in the Department of

Community Health at the University of Auckland. His thesis will be part of cardiovascular risk factors in Pacific adolescents in some South Auckland highschoools. The study will compare heart disease and diabetes risk factors between Pacific and Palagi students, and between Samoan, Cook Islands, Tongan and Niuean students.

Samoan women's attitudes to contraception and abortion: Samoan women seem reluctant to use contraception despite its availability, says Ausaga Fa'asalele, whose HRC Postgraduate Scholarship ends in December. Ms Fa'asalele decided to survey Samoan women's attitudes towards contraception and abortion after noticing during her time as a Plunket nurse that a disproportionate number of Samoan women were having abortions. For her MA thesis, later upgraded to a PhD, she interviewed 40 married women between 18 and 70. Some born in New Zealand, some Samoan-born and living in New Zealand, and 13 living in Samoa.

She found most were resistant to using contraception. She sees this attitude as rooted in the traditional values of Samoan women who feel they know the rhythm of their bodies and when they are safe to have intercourse. Abstinence, breast feeding and withdrawal were thought to work, as were traditional massage techniques designed to turn the fallopian tubes. Women born in New Zealand and exposed to sex education in schools tended to support the idea of contraception but were still reluctant to use it.

First cell changes in diabetes: As part of his HRC Postgraduate Scholarship, Tongan, Edward Saafi has produced outstanding electron micrographs showing the death of cultured pancreatic beta cells, believed to be the first step in adult-onset diabetes. Mr Saafi's micrographs were produced for his PhD, based at the Developmental Biology and Cancer Research Group in the University of Auckland School of Biological Sciences.

The pictures show still healthy islet beta cells from the pancreas immediately after they have been exposed to human amylin fibrils, and 22 hours later. Amylin is a pancreatic hormone normally co-secreted with insulin by beta cells. However, abnormal insoluble deposits of fibrillar amylin have been observed outside the beta cells of people with adult-onset diabetes. These deposits kill beta cells.

In the first picture the cells are covered with microvilli, small finger-like structures on their surface. As 22 hours of exposure to the fibrils, all the microvilli structures are gone. They are replaced by blebs, small balloon-like structures protruding from the cell surface, which collapse to leave pits. The cells also tend to move apart. These are recognised signs of apoptosis, programmed cell death. During this scholarship, Mr Saafi is documenting these beta cell changes in detail, and attempting to isolate a receptor for human amylin likely to exist on beta cell surfaces.

Samoan mental health: Ole Taea Afua, a report about Samoan perspectives on mental health, is an example of a Pacific project funded by the HRC Public Health Committee.

The study, by Tamasese, Peteru and Waldegrave of the Family Centre in Wellington, was written from discussions in focus groups. The groups were organised by gender, age, seniority, and involvement in the mental health sector.

The groups discussed Pacific mental health data, concepts of mental illness, their experience of existing services, and their vision of a service they thought would benefit Samoan people. Their different findings were transcribed into a draft report in Samoan which all groups discussed, arriving at the points of substantial agreement reflected in the final document. The researchers call this the fa'afaletui methodology.

The report identified the Samoan concept of self as a total being comprising the spiritual, mental and physical elements. "The whole person exists, not as an individual, but in relationship with other people. This being has meaning only in relationship, and derives its sense of wholeness, sacredness and uniqueness from its place of belonging in its family and village, its genealogy, language, land, environment and culture," the report says.

Participants maintained that treatment which separated individuals from their communities, and did not address their spirituality, was very likely to fail. They identified the difficulty of fulfilling expected roles and responsibilities in the face of low incomes, the marginalisation of Samoan cultural values and language, and the monocultural nature of the health system as major issues for Samoan mental health.

Funding opportunities for Pacific health research

Available to residents in Pacific Countries and in New Zealand.

Career Development Awards:

- **HRC Postdoctoral Fellowships**
Personal support for outstanding researchers who have recently completed their PhD.
- **Wellcome Trust Travelling Fellowships**
Personal support for up to two years for young New Zealand postdoctoral researchers wanting to work in a Pacific country.
- **Wellcome Trust Research Development Fellowships**
Enables young postdoctoral researchers or health professionals from Pacific countries to develop a research programme in their country in collaboration with a New Zealand research group.
- **Wellcome Trust Research Training Fellowships**
Personal support for academics or health professionals in Polynesia and Melanesia to train at a New Zealand tertiary institution for up to two years, and work in their home country for a further two years.

- **Wellcome Trust Research Leave Fellowships**
Personal support for up to four years for researchers and health professionals in Pacific countries to do a higher degree in a New Zealand tertiary institution, including funding for a replacement in their home institution.

Grants:

- **HRC Seeding grants: Pacific health**
\$5,000 to pilot and develop Pacific Islands health research proposals.
- **HRC Pacific Islands Health Research Grants**
Up to \$25,00 for one year to researchers from Pacific Islands countries and New Zealand on a Pacific Island health topic.
- **Wellcome Trust Research Grants**
Funds a research programme for up to three years by established researchers in Pacific countries in collaboration with a New Zealand laboratory.

Available to New Zealand residents:

- **HRC Summer Studentships**
\$3,000 over 10 weeks for small research projects
- **HRC Junior Awards in Health Research**
\$5,500 over one year for students completing the research component of a Masters degree, BMedSci or equivalent.
- **HRC Postgraduate Scholarships**
Personal support for up to three years for PhD students.
- **HRC Training Fellowships**
Personal support for up to three years for specialised or further health research training.

Information

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