Health Systems Research – Fiji et, al.

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This issue

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Guest Editorial

‘Eseta Finau, RN, BA, MPH, President of the Tongan Nurses Association of New Zealand (TNA), Onehunga, Auckland, New Zealand.

It has been a while since Pacific Health Dialog (PHD) issues have come in on time. Therefore, it is quite rewarding to introduce the second issue of this volume. From the TNA’s stand point. PHD has been most helpful and enlightening. We have supported PHD throughout its infancy and now childhood. We anticipated being with PHD forever in one form or another.

This issue is about health systems research mainly in Fiji and some other Pacific countries. The papers represent rapid research efforts using existing data sources. It is a combination of using “clean dirt and dirty dirt” data to produce information to guide health services management and delivery.

Shareen Ali and her colleagues in Fiji provide a full report of the recent health systems workshop and their experiences as an example of a strategy to generate health system information. This effort was assisted by World Health Organization (WHO), Fiji School of Medicine (FSMed), and hosted by the Ministry of Health, Fiji. Other consultants from various institutions attended and assisted this venture.

The other papers in this issue examined suicide in Tokelau (an analysis of a combination of routinely collected data and primary data collection). Another paper “Does the Granting of legal Privileges as an Indigenous People Help to Reduce Health Disparities? Evidence from New Zealand and Malaysia” compares health experiences of Maori and indigenous Malaysians. Other short communications touched on a Tongan’s perception of a Pacifically appropriate midwifery service in New Zealand. and a review about Professor John Nash, a schizophrenic, a mathematical genius, and a Nobel prize winner! There is also a paper of a Pasifika research advisory group’s experience in New Zealand.

In the ‘Abstract Section’ are three sets of abstracts from 3 different conferences. The first is from Talanoa Oceania 2008 Conference, the second is from a follow up Talanoa Oceania Conference in 2009. Both these sets of abstracts addresses health, spirituality, theology, culture in Diaspora. The Talanoa Oceania Conferences have been primarily organized by the Pacificans of the Theological Training institutions in Australia and New Zealand. The third set of abstracts is from the 2009 Pasifika Medical Association Conference in the Cook Islands. All these abstracts indicate the diversity and complexities of health development issues in the Pacific. At the end in, ‘PHD Matters’, are a few corrections and apologies for a few inadvertent editorial oversights. For such is the wisdom of a young coconut tree afloat!

This PHD issue was jointly funded by the Ministry of Health Fiji; Health Research Council of the Pacific (HRCP), Cook Islands; and assisted by Massey University through the Directorate of Pasifika@Massey, Albany Campus, Auckland, New Zealand. As you should know by now, the production and management of
Pacific Health Dialog is now from the Directorate of Pasifika@Massey. This issue also carries salutations to friends of Pacific Health Dialog namely: Dr Jim Samisoni and Dr. Terence Roger. God speed Gentlemen!

A significant feature of this issue is the introduction of a new logo for Pacific Health Dialog on the cover. This new logo signifies the importance of the Pacific Ocean in connecting the Pacific islands and the spiritual guidance that monitors progress of the journey across the vastness that is the Pacific, Oceania, or Moananui. The germinating coconut generating light and enthusiasm is Pacific Health Dialog as it maturely addresses the Pacific development issues that are being submerged in the eddy currents of the global rush to dominate.

It’s with some trepidations that we stand spellbound by the future and the potential contributions of Pacific Health Dialog (PHD). At this time, there is animated discussion between interested parties including: the Fiji School of Medicine, Suva, Fiji; the Pacific Island Health Officers’ Association (PIHOA); Pasifika Medical Association of New Zealand (PMA); Health Research Council of the Pacific (HRCP); and all the other institutions and organizations who have supported PHD and been the friends of PHD over the last 15 years. Many of these organizations have had their logos grace the title page of PHD. There is a move to formalize the ownership of PHD by all interested parties.

We at the TNA wish Pacific Health Dialog and all its supporters the very best and offer support for timely production. We hope that PHD will continue to benefit from the goodwill of the “laborers of love” and continue to contribute to Pacific development where it matters but there is insufficient support.

Malo ‘au pito!

‘Eseta Finau

“*The weak can never forgive. Forgiveness is the attribute of the strong.*”

*Mahatma Gandhi*
Fiji National Health Systems
Research Workshop Report

Shareen Swastika Ali

Abstract
The National Health Systems Research Workshop which was organized in conjunction with the World Health Organization, Ministry of Health Fiji and the Fiji School of Medicine was history in its making, the very first for the nation. It was based on the six building blocks as defined in the Framework of Action for WHO; (i) good health services, (ii) a well performing health workforce, (iii) a well-functioning health information system, (iv) access to essential medical products, vaccines and technologies, (v) a good health financing system and (vi) leadership and governance. A total of 27 papers were presented over the two-day program with hundred attendees. SWOT analysis for the workshop was done. Participants were given the opportunity to critically appraise local research papers and hoped that this became a regular event.

Introduction
The health research systems is a method for planning, coordinating, monitoring and managing health research resources and activities; and for promoting research for effective and equitable national health development. A concept that integrates and coordinates the objectives, structures, stakeholders, processes, cultures and outcomes of health research towards the development of equity in health and in the national health system. (1)

Strengthening of health systems is one of the key items on the agenda for World Health Organization (WHO). Over the years, we have progressed immensely in terms of technology, curing diseases and prolonging life, however we cannot ignore the fact that the vulnerable population of the world such as people from middle-low income generating countries, the indigenous people, people suffering from HIV/AIDS, people from South Pacific Island nations who are more prone to the effects of global warming and women and children are still not at the receiving end of these benefits. Year 2015 that is given so much prominence for the conclusion of the Millennium Development Goals is round the corner and we are already seeing indications that reaching these set targets may not eventuate after all.

Therefore, WHO has come up with a Framework for Action which defines a discrete number of building blocks which makes up a health system – (i) good health services, (ii) a well performing health workforce, (iii) a well-functioning health information system, (iv) access to essential medical products, vaccines and technologies, (v) a good health financing system and (vi) leadership and governance.

This workshop was funded by the WHO together with the Ministry of Health Fiji (MoH) and the Fiji School of Medicine (FSMed) under the biennium budget to address all the areas of health systems building blocks in order to achieve improved health, health equity in ways that are responsive, financially fair, greater access to and coverage for effective health interventions without compromising efforts to ensure provider quality and safety and make the best or most efficient use of available resources. (2)
**Rationale**

The paper on *Fijian Participation in Health Research* revealed that the driving force of health research in the Pacific has seen expatriates from developed countries come and do research, without much involvement by locals, take the data off shore to analyze and publish elsewhere, without benefiting the researched communities. For the period July 1965 – April 2002 analysis of 298 Medline publications showed that >80% of the papers had expatriate authorship and only <20% were undertaken by Fiji researchers.(3)

This is further reinforced by a quick review of the applications received by the Fiji National Research Ethics Review Committee in 2008. 35 proposals were received of which 14 (40%) were from local investigators. The reasons for locals to do research were; 7 (50%) were to fulfill academic requirements, 5 (35.7%) as per work requirements and only 2 (14.3%) were out of self interest to better health practice. (4) In addition, over the years, our staff has been attending numerous training programs on epidemiology, research proposal writing and biostatistics but we have hardly seen any publications.

On the other hand, we thought that there was a possibility that people may have been writing but there was never a platform given to them to present or publish such papers. Based on these findings, we conceptualized the idea of hosting a National Health Systems Research Workshop.

**Organization**

Work for organizing the two - day workshop began mid of last year. The Health Research Unit of MoH was delegated the responsibility to organize this workshop. Two days were feasible for us due to budgetary limitations and we could not release clinical staff for any longer period than this. “Call for Abstracts” were sent in December 2008 with the deadline for March 2009 and receipt of final papers by May 2009. We thought this will give enough time for potential local researchers to come up with a paper. To encourage submission we gave incentives which were to nominate five best papers for publication in the Pacific Health Dialog or the Fiji Medical Journal and one local investigator to attend an international conference in Australia or New Zealand and present the selected paper in an international arena.

There were no criteria for submission for papers and no registration fee for attendees as we wanted the workshop to be “local researcher friendly” as possible. An independent committee was nominated to decide on the recipients of the incentives.

We considered the possibility that we might not receive enough papers to host the program, therefore invited guest speakers. However, we were happily surprised to receive an overwhelming response of 30 papers.
The Workshop
All submissions were accepted but only 27 papers were presented due to last minute cancellations.

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<td>Health Information</td>
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<td>Nursing</td>
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<td>Health Policy</td>
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*Table 1: Number of Papers Received According to Different Subject Areas*

The program was divided into plenary sessions in the morning where guest speakers presented their papers. In the midday session, the forum was divided into thematic groups which were color coded. Participants had the opportunity to select the group of their interest and critically appraise their colleagues work through round table discussions. In the afternoon, summary presentations from each group were done followed by paper presentations from guests. Different Chairs were assigned for each of the sessions.

**GROUP 1**
2. Staffing the Fiji Health System. R. Sutton, G. Roberts & D. Lingam.
3. Health Financing in Fiji – Lingam D and Roberts G.

**GROUP 2**
1. Rapid Echocardiographic Screening for Rheumatic Heart Disease in Fiji - Reeves B. Brook M.

**GROUP 3**
1. Changes in Food Eating Pattern in Fiji – Schultz J.
3. Micronutrient Status of Women in Fiji – Vatucawaqa P.

Almost 100 participants from WHO, FSMed, AUSAID, Fiji Health Sector Improvement Project (FHSIP), MoH,
University of Queensland, Fiji Rheumatic Heart Disease (RHD) Program and Fiji Pnuemococcal Project (FIPP) attended the workshop.

Picture 1: Vicki Bennett from Health Information Systems Knowledge Hub, University of Queensland, presenting paper on Patient Information Systems in Fiji.

SWOT Analysis:
Evaluation forms comprising of 10 questions in relation to the concept, program, venue, catering and accommodation were given to the attendees. 80 completed forms were received which was analyzed using the Epi Info 2008 software. Based on the responses SWOT (Strengths, Weakness, Opportunities and Threats) analysis was done.

Picture 2: Participants at the Health Systems Research Workshop held at Fiji School of Medicine from 25th -26th June, 2009.
Strengths: The workshop was organized in such a way to provide an enabling and supportive environment to present research papers from the investigators perspective and identify areas for future research from the audience’s perspective. It aroused interest and gave a chance to critically appraise current practices so that the findings can be transferred to appropriate areas of action within the health settings.

Weakness: Since the submission for papers were not categorized there was a bias for public health issues rather than clinical topics. Similar findings were demonstrated in the analysis done to identify the themes currently being pursued in the research portfolio and agendas within developing countries, which suggested more attention, was given to community levels. Time deadlines given to each speaker was not strictly followed resulting in lengthy presentations.

Opportunities: The Health Research Unit displayed IEC (Information, Education and Communication) materials to a wider crowd demonstrating its functions within the MoH. It was an eye-opener to the staff to know that the Unit provided funding and technical assistance in health research related areas, prospects that were hardly utilized by them. Networks with colleagues from Fiji and abroad were formed. Gaps in the Fijian Health Systems were identified and strategies were suggested to address this.

Threats: Due to the mass retirement of many civil servants in the health sector, and sharing of their workload among the remaining staff, there might be time constraints to write research papers. Moreover there is lack of incentives in terms of salary increments or promotions for evidence based practice in the system.

Recommendations
The following suggestions have been put forward:

1. Guidelines and general themes to be given to interested presenters so that all areas are covered adequately.
2. All details of the workshop to be posted on the MoH Fiji website for wider dissemination of information.
3. Submissions from health professionals in the private sector to be invited in any future workshops.
4. Soft copy of all the materials of the workshop to be given to all participants who do not have access to the internet.
5. Power Point templates to be given to presenters to encourage consistency and for effective time management.
6. Many small incentives to be given to a large number of presenters rather than only one investigator getting a huge prize.

Generally the workshop was enjoyed by all who attended and they hoped it became a regular event.

Acknowledgment
We would like to thank our Partners; World Health Organization for funding the event, and the Fiji School of Medicine for providing the venue. Special thanks to the WHO Representative to the South Pacific, Dr. Chen Ken, the Minister for Health, Dr. Neil Sharma, Permanent Secretary for Health, Dr. Salanieta Saketa and the Dean of Fiji School of Medicine, Professor Ian Rouse for personally attending and supporting the workshop. We also acknowledge presenters who had traveled from abroad at their own cost and staff of MoH Fiji for making this event a success.
Special Feature

“What we are living with is the result of human choices and it can be changed by making better, wiser choices”

Robert Redford

Reference


By: Audrey Aumua1, Janice A Lewis1, Graham Roberts2

Institutions: 1. School of Public Health, Curtin University, Perth Western Australia  
2. Fiji School of Medicine, Suva Fiji

Abstract
This paper reports on a study which analysed the policy implementation experience of the Fiji Health Management Reform Project FHRMP (1999-2004). It is the first in a series of several papers that discuss the policy experience of Fijis Management Reforms. The paper outlines the methodology and approach to the study and highlights the importance of recognizing linkages between institutional actors, policy culture and wider contextual environmental factors in the health sector and their impact on health reform implementation. The study utilised a health policy framework to answer questions related to the health reform implementation experience. The framework included recognition that while there were always technical complexities behind the policy reform programme, the main factor in determining the degree of reform changes in Fiji was the relationship between the policy and the stakeholders and their influence on each other and the policy process. The study highlights the importance of health policy analysis for developing countries like Fiji and for other nations in the Pacific who have undertaken reform initiatives.

Introduction
The notion that health systems, particularly those in low and middle income countries are in urgent need of reform is now firmly entrenched (Blaauw et al., 2003). Many developing countries have been faced with the need to transform their large and highly inefficient health systems which have operated along the same policy lines for many years following their founding in the early post war period (Gonzalez-Rossetti and Bossert, 2000). Subsequently an increasing number of developing countries have incorporated health sector reforms into their policy agendas as they have attempted to improve the health status of their populations and manage their costly health systems (OECD, 1995, 1992, World Bank, 1993, Walt 1994, Fenk et al, 1994, Berman et al 1995, Walt and Gilson 1995). The majority of reform policies used for restructuring health systems in developing countries have tended to be along the lines of decentralisation (OECD, 1994, World Bank, 2000). Decentralisation of health systems as a concept has been particularly espoused by global organizations, who have promoted health system reforms as part of their development agenda (Berman, 1995). However two to three decades of health sector reform in these same countries appear to have done little to improve the stated problems of health systems, effectiveness, efficiency and responsiveness (O.E.C.D., 1994).

Failure of Health Reforms in Developing Countries
Although there have been important advances in health care, developing and developed nations have been challenged with problems of increasing prevalence of disease, changing and rising demands of services and problems of cost containment in managing their health systems generally (Smith, 1997). In the face of these difficulties and with significant influence from the international policy arena developing nations have begun to identify the need for change across all aspects of their systems (Berman and Bossert, 2000). Health
reforms have been on the agenda of nearly all developing nations and the past two decades have seen more than a third of low and middle-income countries undertake health reforms to improve their systems. Whilst global reforms have been nothing short of revolutionary in their intent, they have had mixed results on the ground and almost all governments have embraced reform, at least rhetorically but few have managed to successfully implement (Hutchinson and LaFond, 2004). The lack of cohesive evidence and detail in health reform literature further highlights the lack of success of health reforms in developing countries (Cassels, 1995b, Bossert, 2000a, Gonzalez-Rossetti and Bossert, 2000, Cassels, 1995a).

1. Policy analysts agree that there is no one defining issue responsible for the lack of success of health reforms, rather various studies point to a mixed bag of reasons for poor outcomes in health reforms (Walt and Gilson, 1994, Litvack et al., 1998). Issues related to failure range from the inadequate capacity of policy reforming institutions, health worker capacity, political and economic instability of the country, the role of policy makers and reformists, lack of support by stakeholders, donor agency influence and in particular the complexity and design of reform models used in developing countries (Agyepong and Adjei, 2008b, Bossert, 2000a, Agyepong and Adjei, 2008a). However, the one consistent feature linked to the debate of policy reform failure has been the recognition that much of the health reforms discourse is reflected by a preoccupation of rhetoric and ideology centred on the economics of health. This concerning feature is explained by the extensive influence of neo liberal ideology in policy reform activity during 1970 and 1980s, and the recognition that many reforming countries attempted to find solutions for their troubled health systems by using reform tools that were underpinned by this ideological approach (Gilson and Raphaely, 2008a). What has further been suggested is that reform failure has been the result of the lack of recognition and understanding by reformists of the social, cultural and political dimensions of policy systems in the implementation process of reform programs (Considine, 1994, Colebatch, 1998, Walt, 1994, Walt, 2006, Lewis, 2005).

2. The lack of understanding of the influence of social and political elements within the environment that affect policy formation have not been considered by reformists when undertaking reform programs (Lee et al., 2002). Subsequently reforms have provoked significant resistance and many have questioned the lack of evidence upon which reforms were based. A growing concern over the role of donors and international organizations and the imposition of reform blueprints without consideration of national and local context have further raised concerns for reforming nations (Walt, 1994, Reich, 1995). Consequently successive rounds of reforms have rolled out unevenly across developing countries with considerable evidence of limited progress and poor results leaving the reform agenda largely unfinished in many countries.

**Approaches to Health Reform Analysis**

In the early 1990s policy analysts called for a new approach to health policy analysis, recognizing the problems associated with the trend of economic approaches to health reform development and analysis (Gilson and Raphaely, 2008a). Reform approaches of the 1970s as described in literature studies could not explain how and why certain policies succeeded and others failed, nor they suggest did it assist policy makers and mangers to make strategic decisions about future policies and their implementation. (Walt, 2006, Lewis, 2005, Gilson and Raphaely, 2008a, Considine, 2005). In particular they noted that the gaps and weaknesses in the field of health policy analysis had focused on the content of policy to the neglect of actors, policy context and policy processes. What has now emerged and more recently advocated by the same analysts is the recognition that there is limited knowledge and understanding on the social, cultural and political aspects of policy systems as well as understanding of the role of actors within the policy process and their

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original paper
influence on health reform implementation and effectiveness (Walt and Gilson, 1994, Sen and Koivusalo, 1998). Since the 1990s there has been little discussion or debate of the political social and economical contexts in which reforms have taken place and in particular health policy reforms in developing countries (Gilson and Raphaely, 2008a, Walt, 1998). It has been suggested that this limited knowledge base now poses serious problems for health reformists and health reform research. Analysts now recognize the need for more qualitative research in areas such as the role and influence on implementation of stakeholders and policy actors, power and institutions in the policy, areas, which have not traditionally been well considered by policy analysts (Lewis, 2005). Health policy analysis is described as a multi disciplinary approach to public policy that aims to explain the interaction between institutions, interests and ideas, actors who use structures and argumentation to articulate their ideas about health (Lewis, 2005).

Evaluation of Health Reforms in the Pacific Region

Health Reforms in the Pacific are a recent phenomenon. The central catalyst for many of the reform initiatives have mostly been due to the influence of international funding organizations and regional aid donors who have, through their country specific aid programs, enabled countries to embark on restructuring programs. Tonga, Vanuatu, Fiji, Solomon Islands, Papua New Guinea and Samoa reform programs have been most notably subsidised by the Australian Government (Government of Australia, 2004). The intimate involvement of donors in health reform programs as described in the literature and evidenced in country reform reports has created tensions over health reform processes and has led to problems such as reform design, implementation and reform sustainability (Kolehmainen-Aitken, 1991, Cassels, 1995b, Bossert, 2000b, Romeo, 2003). No formal evaluative work has been done on Pacific reforming nations and their success and there is limited knowledge and information on the health reforms in the region and their experience of health system changes.

Recently however emerging evidence that health reforms in some Pacific nations over the years has been difficult and not delivered the intended outcomes (Kolehmainen-Aitken, 1991, Ministry of Health Solomon Islands, 2008, Ministry of Health Tonga, 2008, Ministry of Health Fiji, 2007, Rokovada, 2006, Soakai, 2006, Kuridrani and Tuisuva, 2004).

The Fiji Health Management Reforms (FHMRF)

Fiji is categorized as a developing nation and has the largest and most extensive health system in the Pacific region excluding Papua New Guinea. It has like many other small island nations in the region struggled over the past two decades to deliver health services to its population whom are spread over a large geographical region that include outer and remote islands and rural village populations. Providing a responsive and appropriate health service in a country of significant geographical challenges is but one of many of Fiji’s health system challenges, others problems have included the management of limited resources, fragmented health services, reducing workforce numbers and a powerful centralized administrative system.


This project was sanctioned as a partnership between the Government of Fiji and the Government of Australia. The goal of the project was to improve health service delivery in Fiji through decentralisation and management capacity building within the health sector (Aus Health International, 2001).
Methodology
The methodological design of the study was an intrinsic case study as described by Stake (Stake, 1995). The study was an empirical inquiry and utilised qualitative data collection methods. The research proposed that there were useful insights to be gained from an investigation between the linkages of health reform implementation and the importance of the wider contextual elements within the policy-making environment. The study utilised a policy framework to analyse the policy reform experience. The four key components of the framework were centred on Fiji’s policy culture, political institutions, the political economy and policy actors and stakeholders within the Fiji health policy-making environment (Considine, 1994). Objectives of the research asked how these four key areas affected the implementation of the Fiji Health Management Reform Project (1999-2003).

Analysis of the FHMRP
The aim of the research was to synthesize a coherent description of the policy implementation process of the Fiji Health Management Reforms (FHMRP 1999-2004).

To achieve this, the study explored numerous issues and factors that affected the reforms implementation. This was a study of policy; it was concerned with examining key areas within the policy making environment that influenced policy implementation outcomes, in particular it was concerned with the architecture of Fiji’s public health policy system and how health reform policy was developed and implemented in this project.

The study had five key objectives:
The first objective related to the experience of key policy actors and stakeholders within the policy system, which included individual actors, professional associations, industrial unions, academic institutions and groupings of actor’s networks. An analysis of the actor roles, their personal experience with the reforms, their relationships with each other and their interrelationships within the policy process was central to the study. This objective answered questions surrounding how actors used their power and influence to develop strategies, which they used as individuals and as groups to get what they wanted in the policy process. Secondly, the study examined the role of policy institutions and was focused at the agency and institutional level. This included examining processes and relationships between the organizations that held institutional and legislative power within the policy making process. It sought to understand how institutions laid down the pathway for which the policy had to travel. An analysis of the financial arrangements, policy and governance legacies and the history of institutions was important to understanding what happened in the policy implementation process. Key institutions included Ministry of Health, the Public Service Commission, the Ministry of Finance, and Ministry of Public Works, Department of Prime Minister, and other Public agencies. Questions were posed to these agencies that revolved around their policy authority, their relationships with each other and their role in the reform process.

The third objective examined the policy culture in Fiji during the reform period. This investigation was a consideration of the policy values and knowledge of the various stakeholders together with the tensions that they brought to bear on the policy process. It sought to understand why policy actors and institutions struggled to control what they held important and how their values influenced behaviour and preferences. An analysis of the culture of Fiji’s public service and the role of Fijian culture within the public sector was an important inclusion. These elements provided the study with important evidence in relation to the implementation of the reforms.
The fourth objective of the study examined the political economy of Fiji’s health system. An analysis of the health systems resources, infrastructure and decision making processes were necessary to understanding the broader context of Fiji’s public policy processes. An examination of Fiji’s societal values and their influence on Fiji’s governance and traditional structures were part of this analysis. Data from reports and archival matter together with interviews by leading politicians, senators and public servants on these issues provided a perspective on the wider political and environmental issues during the reform period.

The fifth objective was an examination of the process of the reforms. This was enabled by analysing project documentation, historical reports and archival data together with evidence from interviews with key stakeholders involved in the planning of the reform process. Its importance lay in the reality of “what really happened” versus what was “intended and planned” and why.

**Implications of the study**

The study will have implications for improving the development of health policy in Fiji. The importance of having appropriate and trustworthy researched information available to policy makers will build a greater confidence for those responsible for using the information (Ritchie and Spencer, 1994). Further and a major priority for the research was the study of the reform process, which included aspects such as the influence of the political, social and economic environment and the distribution of power and influence between stakeholders and the state.

At a government level the research is important for politicians and Government leaders who are ultimately responsible for policy achievement. Information regarding the complexity of the reform process as a government wide strategy and the recognized learning of the many issues that are relative to the development and sustainability of reform programmes will be important for Fiji as it continues implementation of health system changes and public sector reforms.

At the level of policy institutions the study highlighted the challenges of institutions and institutional capacity to undertake reforms. Key issues in the research have been drawn out that will benefit the wider health sector such as non governmental organizations, industrial unions, international aid and donor agencies and other Government organizations. At a Pacific regional level the study will benefit other Pacific nations who have embarked on reforms in recent years and who have similar public service structures and cultural and value based tensions within the policy making environment. Further, international organizations who have promoted health reforms and who have contributed to both policy development advice and funding of reform initiatives in the Pacific region, will observe with interest the findings of this study.

Methodologically the study has contributed to the qualitative research gap on health reforms. The need for better qualitative data in particular more in-depth knowledge on reform experiences in developing nations has been limited in this research field. Case study methodology is a method that entailed the intensive collection of data about all aspects of the case. It was chosen because of its uniqueness for what it could reveal about the phenomena of the reforms, further as a methodology it has not been well utilised in the study of health policy (Merriam,1998, Gilson and Raphaely, 2008b).

The study will ultimately contribute to the body of knowledge regarding health policy analysis and the implementation of health policy in less developed countries. The challenges of implementing a reform programme in small island nations that are reliant on external resources to support its development are
also highlighted. Transferability of the reform experience to other small island nations in the region such as Tonga, Vanuatu and the Solomon Islands and Samoa are linked with many of these elements. These issues are discussed in forthcoming publications.

**Conclusion**

No formal evaluation of the Fiji decentralisation experience has taken place. An end of project report by the reform consultants was completed in 2004 and noted the key milestone achievements of the health reform project. (Aus Health International, 2004). The reports have been viewed with some scepticism as they were presented as a reflective review of the consultant organisations achievements of the projects milestones. In 2006 the Government of Fiji stated that it had now recognized a number of key issues emanating from the reform process that warranted a fuller review of the effectiveness of the health reform project (AusAid Review Team, 2006). Emerging results of this study highlight that the development and implementation of the reform policy was problematic. Implementation challenges related to both difficulties within the MOH itself and its own capacity to support the reforms, whilst other issues that were detrimental to the success of the reforms included public sector institutional problems such as the limited legislative framework to support policy change, external stakeholder resistance as well as problems with reform timing. A difficult political environment and complex social and cultural influences within the policy-making environment further added to the myriad of implementation challenges. The policy reform model and the role of donors was an important aspect of the projects analysis.

This study goes some way to assisting Fiji to understand the nature of health policy and reforms in particular it highlights the importance of policy knowledge when introducing administrative system changes. Within this context the project was important for Fiji as it works towards developing a health system that is more efficient and effective in the delivery of services.

**References**

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“Always dream and shoot higher than you know you can do. Don’t bother just to be better than your contemporaries or predecessors. Try to be better than yourself”

William Faulkner
A Double-Blind Clinical Safety Study of Noni Fruit Juice


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Abstract
A safety study of TAHITIAN NONI® Juice from Tahiti was conducted with ninety-six healthy volunteers. For 28 days, participants consumed one of four daily quantities of noni juice: 0 mL (placebo), 30 mL, 300 mL, or 750 mL. All daily dose formulations were standardized to 750 mL by making up any volume differences with the placebo. Hematology, biochemistry, urinalysis, vital signs, and adverse events measurements were made at 0 (baseline), 2, and 4 weeks, as well as during a two-week follow up (week 6). Electrocardiogram (ECG) measurements were also made for each volunteer during the pre-study screen and at week 6. During the trial, those in the noni groups experienced 20 to 50% fewer total adverse events than those in the placebo group. A marginally significant (P < 0.1) reduction in the number of constant adverse events experienced by the volunteers was also found in the 300 mL noni juice group. A similar trend was observed in the other noni juice groups, as well. No other clinically significant differences between any of the groups were noted in the parameters and measurements of this study, nor was there evidence suggesting any adverse dose-related effects. The results of this study indicate that drinking up to 750 mL TAHITIAN NONI Juice per day is safe.

Introduction
Noni (Morinda citrifolia) is a plant that is widely distributed among the tropics. It is a small to medium sized tree (3-10 meters high) that has large, evergreen, dark, glossy, prominently veined, elliptical to oblong leaves.1 (Morton 1992). Pacificans2 (Pacific Islanders) aided the dispersal of this plant by carrying it with them as one of the “canoe plants” as they colonized islands scattered over the vast Pacific Ocean.3 Noni was highly valued for its variety of uses. Prominent among these were its role as food and medicine. The potential health benefits of the fruit may be attributed to nutritionally important phytochemicals, such as antioxidant flavonoids and lignans.4-6

While noni fruit is most famous for its role in folk medicine, there are numerous reports of its use as food.7-18 This food use was not limited to only times of scarcity, as it was eaten often by Rarotongans,19 was a favorite ingredient in curries prepared by Burmese,20 and the Australian Aborigines were known to be very fond of the fruit.21 The written record of food use dates from 1769, when Sydney Parkinson, one of Captain James Cook’s crew on the Endeavour, recorded that Tahitians ate noni fruit.22 Nearly two centuries later, in 1943, a United States military emergency survival manual described the fruit as edible.23 The noni plant, specifically the leaves, are included in the World Health Organization’s (WHO) and Food and Agriculture Organization’s (FAO) food composition tables for East Asia and the Islands of the Pacific.24, 25
The popularity of noni fruit juice is growing rapidly throughout the world. More than 80,000,000 bottles of just one commercial brand have been sold since 1996, with hundreds of other commercial sources also available to consumers. With such a large global consumption and limited familiarity among many health professionals of noni’s use as a supplementary food, it was necessary to conduct a clinical safety study.

Materials and Methods

This study was conducted as a single-center, double-blind, three-dose level, parallel-group, placebo-controlled trial to better understand the suitability of commercial noni fruit juice as a safe food. A commercial source of the juice (TAHITIAN NONI® Juice), was supplied by Tahitian Noni International Inc., Provo, Utah, USA, in its pasteurized form in dark-green glass bottles at a volume of 750 mL each. In its commercial form, it is a blend of noni, grape, and blueberry juices.

Ripe noni fruits contain fatty acids commonly found in cheese, particularly octanoic and hexanoic acids. This property is responsible for the cheese-like flavor of noni and one of its vernacular names, cheesefruit. Therefore, the placebo for this study contained a food-grade natural-cheese flavor in a grape and blueberry juice blend. The placebo was pasteurized and bottled in the same bottle and fill volume (750 mL) as the commercial noni juice.

Three formulations of the commercial noni juice were used: 1) low dose, consisting of a blend of 30 mL commercial noni juice and 720 mL placebo, 2) mid dose, containing 300 mL commercial noni juice with 450 mL placebo, and 3) high dose, consisting of 750 mL commercial noni juice. All formulations were pasteurized and filled into dark green glass bottles containing color-coded caps.

Ninety-six subjects, 28 males and 68 females, ages 18-64 years, were randomly assigned, in blocks, to four groups. These groups included a placebo and the three dose groups, as determined by color coding of the bottle caps. The clinical investigators and subjects were blinded as to the composition of the bottles. The color coding was only revealed to the statistician after the statistical analysis was made.

Subjects were prescreened prior to enrollment. Inclusion criteria included adult (18-64 years) males and females with a body mass index (BMI) between 19 and 30 kg/m², documented medical history, normal blood biochemistry, hematology, and urinalysis within 21 days of study commencement.

Excluded from the study were those with any evidence or history of hepatic, renal, cardiovascular, respiratory, metabolic, immunological, neurological, psychiatric or gastrointestinal disease. Also excluded were those with a positive test for hepatitis B or C, a history of alcohol abuse, asthma, allergies, or hypersensitivities or intolerances to drugs. Activities which required exclusion included smoking more than five cigarettes/day, participation in another clinical trial, donation of more than 500 mL of blood within the previous three months, use of over-the-counter drugs, vitamins, or herbal remedies within one week of the start of the study, and current use of prescription medication. However, concurrent use of hormone replacement therapy or contraceptive pills was allowed. Females of child-bearing age who were lactating, pregnant, or trying to become pregnant were not enrolled in the study.

The primary variables measured were hematology, biochemistry, urinalysis, vital signs, and 12 lead electrocardiograms (ECG). Secondary variables were adverse events and screening of sera for immuno-reactive molecules where a hypersensitivity response is suspected. Hematological measurements included
hemoglobin, hematocrit, mean cell volume, red cell count, prothrombin time, activated partial thrombin time, total and differential white cell count (basophils, eosinophils, lymphocytes, monocytes, and neutrophils), and platelet count. Biochemistry analysis included alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase, total bilirubin, lipids (LDL, HDL, cholesterol, triglycerides), creatine kinase, creatinine, gamma-glutamyl transferase, glucose, total protein, and uric acid.

Urinalysis involved semi-quantitative analysis for leucocytes, nitrite, urobilinogen, protein, blood, ketones, bilirubin, and glucose. When any of the foregoing measurements was positive, a urine cyto-bacteriological examination was performed to characterize or count crystals, casts, epithelial cells, white blood cells, red blood cells, and bacteria. Urinalysis also included pH and specific gravity determinations. Measured vital signs included systolic and diastolic blood pressure, and heart rate. Body weights were also recorded. Adverse events were recorded on two-week diary cards, which were replaced at each visit.

Volunteers consumed up to 750 mL daily of either the placebo or juice containing one of three doses of commercial noni. All variables were measured during subject attendance at the clinic at weeks 0 (study start), 2, and 4. Two weeks following the in-use phase a follow-up visit was also scheduled for all subjects (week 6), where all variables were again measured. However, ECG measurements were only made for each subject at the pre-study screen and at week 6. Subjects were instructed to fast 10 hours prior to attending the clinic, but water was permitted during the fast.

Comparisons of variables at weeks 0 (baseline), 2, 4, and 6 were made between the treatment groups and the placebo groups, as well as against baseline values. Dose-related trends over all the groups were evaluated. Descriptive statistics of demographics were also determined. Presence/absence variables were analyzed with Fisher’s exact test. Continuous and semi-continuous variables were analyzed with the Kruskal-Wallis test, although in some instances analysis of variance was performed for intergroup differences and dose-related trends after Bartlett’s test determined homogeneity of variance. To evaluate change over time within groups, the Wilcoxon signed-rank test was used.

Informed consent was obtained from all participants, and this study was conducted according to the declaration of Helsinki, the ABPI Guidelines for Medical Experiments in Non patient Human Volunteers, the Report of The Royal College of Physicians on Research on Healthy Volunteers, the CPMP note on Good Clinical Practice for Trials on Medicinal Products, and ICH Harmonized Tripartite Guideline for Good Clinical Practice. All non-clinical portions were conducted according to internationally recognized standards of Good Laboratory Practice. Written unanimous approval to proceed with the study was given by the Carshalton Medical Research Ethics Committee (CMREC), Carshalton, Surrey, U.K.

Results
the study screening, all participants satisfied the inclusion and exclusion criteria, and there were no substantive differences between the groups in demographics (Table 1), lifestyle factors, vital signs, ECG, medication use, and medical histories. Females were predominant in the trial, 2.5 times more women than men. No participant was older than 64 years, with the average age of each group being 38-39 years. The mean BMI of each group was below 25. The range of BMI’s for all volunteers was 19.1-30, with only one male and one female at 30.
Table 1: Participant Demographics by Dose Group

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Placebo</th>
<th>30 mL</th>
<th>300 mL</th>
<th>750 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (yr)</td>
<td>38</td>
<td>38</td>
<td>39</td>
<td>38</td>
</tr>
<tr>
<td>Age range (yr)</td>
<td>23-64</td>
<td>19-64</td>
<td>18-63</td>
<td>18-58</td>
</tr>
<tr>
<td>Males</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Females</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Mean BMI at screening</td>
<td>24.56</td>
<td>24.18</td>
<td>24.66</td>
<td>24.25</td>
</tr>
</tbody>
</table>

The study completion rate was 97%. Three volunteers, from the placebo and noni juice groups, were later excluded from the study. Two volunteers satisfied the inclusion criteria at screening, but subsequently failed to do so before the start of the trial (week 0). One was a female who experienced an elevation in liver enzymes between screening and week 0. The second was a male subject whose total and LDL cholesterol had also increased above normal limits before week 0. The observed elevations in liver enzymes and cholesterol were not related to noni juice, as these occurred before either volunteer consumed any noni juice or placebo. Another female dropped out after experiencing an intermittent increase in bowel movements, an effect that may be expected from drinking large quantities of fruit juice, especially when previous dietary patterns are low in fruits and vegetables. Compliance was very high in those completing the study, where all subjects ingested the assigned dose formulations every day for four weeks, with the exception of only one volunteer missing one day.

Noni juice did not have any significant effect on weight or vital signs (Table 2).

Table 2: Mean Weight and Vital Signs

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Week</th>
<th>Placebo</th>
<th>30 mL</th>
<th>300 mL</th>
<th>750 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg)</td>
<td>0</td>
<td>69.93</td>
<td>67.69</td>
<td>69.32</td>
<td>70.05</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>70.08</td>
<td>67.61</td>
<td>69.51</td>
<td>69.77</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>70.23</td>
<td>67.78</td>
<td>69.20</td>
<td>70.61</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>70.22</td>
<td>67.67</td>
<td>69.11</td>
<td>69.57</td>
</tr>
<tr>
<td>Heart Rate (bpm)</td>
<td>0</td>
<td>66.79</td>
<td>65.21</td>
<td>67.29</td>
<td>64.83</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>64.04</td>
<td>64.54</td>
<td>65.92</td>
<td>63.54</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>64.71</td>
<td>66.75</td>
<td>66.79</td>
<td>63.87</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>67.88</td>
<td>64.58</td>
<td>65.88</td>
<td>63.67</td>
</tr>
<tr>
<td>Systolic Blood Pressure (mmHg)</td>
<td>0</td>
<td>116.38</td>
<td>118.83</td>
<td>120.13</td>
<td>120.29</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>114.96</td>
<td>117.29</td>
<td>122.21</td>
<td>117.50</td>
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<td></td>
<td>4</td>
<td>118.00</td>
<td>118.54</td>
<td>122.04</td>
<td>119.83</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>119.21</td>
<td>121.50</td>
<td>119.13</td>
<td>117.04</td>
</tr>
<tr>
<td>Diastolic Blood Pressure (mmHg)</td>
<td>0</td>
<td>68.88</td>
<td>67.75</td>
<td>73.21</td>
<td>71.38</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>68.33</td>
<td>68.63</td>
<td>73.63</td>
<td>70.88</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>69.33</td>
<td>69.92</td>
<td>70.79</td>
<td>71.09</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>68.96</td>
<td>68.83</td>
<td>70.75</td>
<td>72.63</td>
</tr>
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</table>
The mean diastolic blood pressure was 6-12 mmHg below the upper normal limit of 80 mmHg in all groups at all time points. There was no more than 3 mmHg difference in mean systolic blood pressure between all weeks in all noni juice groups. Over the course of the trial, the largest difference in the placebo group’s mean systolic blood pressure was approximately 5 mmHg. During the in-use phase of the trial there were no substantial differences in mean weight between the groups. Week 6 ECG results were similar to those at week 0. No ECG abnormalities were found in the 750 mL noni juice group. Further, no clinically significant differences existed in heart rate, PR, QRS, QT, QTc axes between the groups. Clinically significant blood and urine tests were rarely reported. No significant dose-related trends in urinalysis, hematology, and biochemistry test results were observed (Tables 3 - 5).

Table 3: Urinalysis

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Week</th>
<th>placebo</th>
<th>30 mL</th>
<th>300 mL</th>
<th>750 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Leucocytes (≥ small)</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Blood (≥ small)</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nitrites (positive)</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Protein (≥ 1 mg/L)</td>
<td>0-6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ketones (≥ 2 mmol/L)</td>
<td>0-4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2-4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Urobilinogen (&gt; 3 μmol/L)</td>
<td>0-4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bilirubin (positive)</td>
<td>0-6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Glucose (positive)</td>
<td>0-6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>pH (mean)</td>
<td>0</td>
<td>5.979</td>
<td>6.021</td>
<td>5.708</td>
<td>5.859</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>6.375</td>
<td>6.104</td>
<td>6.042</td>
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<tr>
<td></td>
<td>6</td>
<td>6.521</td>
<td>5.896</td>
<td>6.063</td>
<td>5.750</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1.012</td>
<td>1.013</td>
<td>1.013</td>
<td>1.013</td>
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<tr>
<td>Specific gravity (mean)</td>
<td>2</td>
<td>1.007</td>
<td>1.013</td>
<td>1.014</td>
<td>1.012</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1.015</td>
<td>1.014</td>
<td>1.013</td>
<td>1.016</td>
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<td></td>
<td>6</td>
<td>1.012</td>
<td>1.016</td>
<td>1.014</td>
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</table>
Table 4: Mean Hematology Values

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Week</th>
<th>Placebo</th>
<th>30 mL</th>
<th>300 mL</th>
<th>750 mL</th>
</tr>
</thead>
<tbody>
<tr>
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### Table 5: Mean Biochemistry Values

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Adverse events, both intermittent and constant, reported in the placebo and noni juice groups were headache, cough, nausea, menstrual cramps, nasal discharge, stomachache, toothache, other aches, sore throat, vomiting, increased bowel movements, gum, upper respiratory, and urinary tract infections. During the trial, 20 to 50% fewer total adverse events were experienced by the noni groups than in the placebo group. A marginally significant decrease in the number of constant adverse events was evident in the 300 mL noni juice group, compared to the placebo (P < 0.1). A similar trend of lower constant adverse events was observed in the other noni juice groups, as well. Headache was the most commonly reported constant adverse event; however, a lower incidence was reported for this and other aches in the noni juice groups. No increased use of concomitant medications was observed in any of the noni juice groups.

Discussion

This clinical safety study substantiates the use of noni juice as a safe food, and revealed a lack of adverse effects from any of the biochemical and physiological parameters tested. Noni fruit was commonly consumed among past generations of Pacificans as a supplementary food, not eaten in every meal as some staples were, but quite often nevertheless. Other examples of supplementary foods consumed by Pacificans are telie or tavola (Terminalia catappa) nuts and fruit, fao or vao (Neisosperma oppositifolia), and louakau or hala (Pandanus tectorius). Noni fruit was also used to promote endurance on long ocean voyages, no doubt a function of its antioxidant properties. It is likely that this use, and its value as food and medicine, was the motivation for Pacificans to take noni with them from island to island as they colonized the Pacific.

Through generations of use, Pacificans understood the nature of the fruit and found it suitable for use among the elderly. It was reportedly consumed frequently by the elderly in Kiribati after boiling. We have observed frequent consumption of the fruit by elderly Tongans, as well. Once a week, the fruit was washed and cut into several pieces, chewed, and then swallowed. This was thought to strengthen the body and promote gastrointestinal health. The flesh of the coconut was also scraped, mixed with noni fruit, and then eaten. Over time, any toxic or side effects from noni fruit would have become apparent, as the elderly are typically more susceptible than younger adults. Use of noni fruit by the elderly seems to agree with the results of this trial.

In vitro toxicity tests and oral toxicity tests in vivo have not revealed any toxic effects from high doses of noni juice. Clinical symptoms, body weights, blood tests, and histopathology examinations did not suggest any potential or actual toxic effects. The results of this study confirm that the previous in vitro and in vivo conclusions of safety are applicable to humans, even at relatively high quantities of noni juice ingestion. A lower number of constant, as well as total, adverse events in the noni juice groups indicate that noni juice may positively influence health, especially headaches and other aches. However, this trial was conducted in healthy adult volunteers and not during the typical cold and influenza season. Thus, large differences in illness rates would not be expected.

The differential leukocyte counts reveal much about the possible mechanism behind potential increased resistance to infection, as well as potential for any adverse effects from noni juice. Increases in certain leukocyte populations may result in unhealthy states, such as eosinophilia. However, no such proliferation occurred, and there were no differences between any groups. It seems apparent, therefore, that any improvement in immune system performance is kept under control through feedback mechanisms and is specific. Research conducted ex vivo reveals that specific and controlled immunomodulatory effects...
follow oral administration of noni juice, where an increase in interferon-γ and a decrease in interleukin-4 (associated with eosinophilia) production were observed. It appears that leukocyte performance is apparently modulated, and not white cell count.

Noni juice had no effect on liver function tests. Alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase, and γ-glutamyl transferase were all within normal levels. Recent case reports of liver toxicity from noni juice are not supported by the results of this trial.

Conclusion
There was some limited indication that noni juice may improve overall health. However, the ability of this trial to reveal such effects is limited since the design of the trial was to evaluate the safety of noni juice. No adverse changes to weight, vital signs, or ECG results occurred. Further, adverse physiological effects were not evident in urinalysis, hematology, or biochemistry tests. Although there were no statistically significant differences between the placebo and noni juice groups, relative to occurrence and severity of adverse events, there was a decreasing trend among consumers of all noni juice doses compared to the placebo group. A marginally significant decrease in the number of subjects experiencing constant adverse events was evident in the 300 mL noni juice group, when compared to the placebo group. This human clinical safety study reveals that daily consumption of noni juice is well tolerated, even at high doses.

Acknowledgements
This trial was completed in collaboration with Scot Davies and Dr. Christopher Mugglestone, who provided clinical direction and oversight at BIBRA International Ltd. The randomization schedule and statistical analysis was performed by Peter Lee. Funding for this trial was provided by Tahitian Noni International Inc., manufacturer of TAHITIAN NONI® Juice. Three authors of this report are employed by Tahitian Noni International Inc.

References

“The aging process has you firmly in its grasp if you never get the urge to throw a snowball.”

Doug Larson
Cross-Infection Potential of Impression Compound

By: Arpana Devi

Abstract

**Purpose:** To determine the cross-infection potential of impression compound as used clinically in certain developing country settings.

**Materials and Methods:** Microbiological tests were conducted on impression compound that are reused at the Colonial War Memorial Hospital, Fiji, to detect the presence of bacteria. Swabs of impression compounds were taken to identify the critical points at which bacteria may survive on the compound leading to the potential introduction of organisms into a patient’s mouth. For plates showing growth, colonies were observed and identified using Gram staining, Microbact™ identification kits and other biochemical tests.

**Results:** Transfer of viable organisms from patient’s mouths was found on the compound at all stages of the impression process. Improper disinfection and storage of impression compound and trays allowed for the introduction of hospital pathogens on the compound that were not initially present from the patients.

**Conclusion:** Financial constraints may tempt the reuse of impression compound; they should however not be reused on different patients and appropriate universal precautions must be followed to decrease the likelihood of cross-contamination. PHD, 2009; (15) (2); pp. 33 - 37.

**Keywords:** Impression compound; cross-infection; nosocomial infections; Fiji.

Introduction

Dental professionals are potentially exposed to a wide variety of pathogenic microorganisms in the blood and saliva of patients. It has been shown that impression material can act as a vehicle for the transfer of both pathogenic bacteria and viruses which has an obvious implication for cross contamination in the clinic and from the clinic to the laboratory and patients1.

Impression materials have been shown to absorb and retain viruses and viable organisms can still be present on impressions after five hours. In one dental laboratory, an outbreak of Mycoplasma pneumonia infection was traced to a patient’s denture and dental technicians have been deemed to be more at risk to hepatitis B than dentists and auxiliaries. In developing countries where there are severe economic constrains, impression compound is the material of choice for taking impressions of edentulous ridges as it can be reused.

The literature indicates that there are no studies available to indicate the appropriateness or safety of simple disinfection of compound for reuse. As this material is used in the edentulous, who are often elderly and can be immuno-compromised, there is an increased potential health hazard risk when using contaminated dental materials. Studies have cautioned that the immuno-compromised patients may have an altered flora and be susceptible to infection with less than usual organisms that may result in septicemias that are potentially fatal2.
With the steadily increasing frequency of diseases such as tuberculosis, hepatitis and AIDS, disinfection and sterilization procedures within dentistry have attracted the interest of many clinicians and researchers. The ethical and legal implications of infection control in the dental setting require that attention be paid to potential avenues of transmission that may have been ignored in the past.

The study aimed at determining if any viable organisms could be transferred from patients onto impression compound and if they are removed upon rinsing, and if impression compound acquires hospital pathogens following subsequent storage in an open environment before reuse.

**Material and Methods**

Ethical approval for the study was obtained. Written informed consent was obtained from ten edentulous participants at the Prosthetic Clinic seeking complete denture treatment.

Microbiological tests were conducted on impression compound to determine the presence of bacteria on it and their type. The samples, which were taken, all started as new, sealed and packed in their original boxes. The temperature of the water and the time in which the compound was immersed was also noted. The mean temp was 71.9°C and standard deviation of 9.90.

Swabs of the compound were taken at different points to establish at which stage dentists or technicians may be contaminating the compound with pathogenic bacteria that could be potentially introduced into patients’ mouths.

The different swabs were taken as stated below:
1. Swabs of tray
2. After removal from original packaging.
3. After taking out of hot water (to see if the water had microorganisms).
4. After putting on to tray: before putting in patients’ mouth
5. After rinsing with running tap water thoroughly so that no visible debris is seen on the compound.
7. Swab after storage of compound in the clinic for 1 week
8. Swab of water after reheating the compound.
9. Before reuse: before putting the compound into another patient’s mouth

The swabs were taken, by slightly moistening in sterile saline and then randomly wiping across the entire surface of the compound. The swabs were placed into 1 ml of sterile saline and then vortexed for 1 min to separate out the organisms. Following this a 0.1ml of the liquid was used to inoculate the plates and broth.

Swabs of the compound were inoculated in chocolate agar for 48hrs and MacConkey agar for 24hrs while the inoculate from water baths were incubated in cooked meat medium for one week.

All media were incubated at 37°C. For plates showing growth, colonies were observed and identified using gram staining, Microbact™ 12A and 12B system to identify aerobic and facultatively anaerobic gram negative bacteria, coagulase, catalase and other tests. If growth was present in the cooked meat medium
it was subcultured into chocolate agar plates that were incubated aerobically and blood agar plates that were incubated anaerobically.

Each medium was challenged three times with a mixture of the following four isolates: *E. coli*, *S. aureus*, *P. aeruginosa* and *Streptococcus fecalis* to ensure that the media supported growth of common microorganisms.

**Results**

20 out of the total 90 sample plates (9 samples from each participant), which were inoculated did not show any growth. 60% of the unused compound from the manufacturers and its subsequent storage had bacteria (hospital pathogens) such as *Actinobaccillus species*, *Neisseria spp*, *Actinobacter baumanii*, *Capnocytophaga spp* and *Morgenella morganii*.

80% of disinfected trays also showed bacterial presence and these bacteria were also hospital pathogens. The mean temperature of the water in the baths was 72°C (Range= 55-91°C) and the impression compound was kept in the hot water for a mean time of 78 seconds (Range= 36-120 secs). 40% of the water, from the hot water baths in which the compound was immersed before being moulded also showed presence of bacteria. A total of 70% of the compounds displayed bacteria before being placed into the patient’s mouth. 90% of compound samples displayed the presence of oral (eg: stomatococcus, *S. aureus* etc) and hospital bacterial following rinsing under tap water after impression taking. Following impression pouring, 80% of swabs from casts revealed bacterial transfer from impressions to the casts. Storage of the impression compound showed that keeping the compound in the hospital setting acts as a colonizing medium for hospital pathogens as all the samples (100%) showed presence of hospital pathogens.

Some species of hospital bacteria that appeared at all stages of this study, which could be pathogenic were; *Capnocytophaga species*, *Actinobaccillus species*, *Actinobacter baumanii*, *M. morganii*, *Hemophillus species*, *Staphylococcus aureus* and *Viridans Streptococci*.

**Discussion**

Our study revealed that over half (60%) of our new impression compound possessed hospital pathogens. It is suspected that the compound became contaminated during storage in the clinical environment; hence it would seem prudent to isolate the impression compound.

In addition to the unused compound, the improperly sterilized trays (80%) can also be another source of cross-infection. Good practice recommends that impression trays are properly packaged, autoclaved and stored. The water used in the hot baths was not sufficiently effective in killing bacteria as, 40% of the sampled water was contaminated, even though the mean temperature of the water used was 11°C greater than that recommended by the manufacturers (61°C) to make the compound moldable.

As shown by our study, greater than two-thirds (70%) of impressions about to be inserted into the patients’ mouths were contaminated, this is the first crucial stage where cross-infection can occur.
Merely rinsing impressions under tap water until all visible debris is removed does not disinfect the impressions. Furthermore, improper disinfection of impressions and impression pouring procedures produced contaminated casts, which can be a source of infection to laboratory and clinical staff. Casts improperly disinfected can be an occupational hazard for technicians and dentists. Viable microorganisms can be recovered even from within casts from impressions experimentally inoculated with bacteria.

After one week’s (inappropriate) storage in a clinical environment of the compound and subsequent remolding for reuse by placement in hot water baths, the hot water was as previously mentioned, ineffective in killing bacteria at this crucial stage, leaving all (100%) impression material contaminated solely with hospital pathogens. This study revealed that most of the bacteria identified throughout the various stages were hospital pathogens, and may be a source of nosocomial infections. Usually the virulence of a microorganism is the major factor in determining whether infection occurs however, when considering nosocomial infections, an equally important factor is the patients overall health status, and their general resistance to infection. While in the past (eg in the early 1950’s) some highly virulent pathogens for example *Staphylococcus aureus*, were considered to be an essential prerequisite for infection, it is now recognized that host factors play an essential role in infections.

In fact, many hospital infections are caused by organisms of low virulence (eg *Staphylococcus epidermis*) in patients with a compromised host response. Recently *Staphylococcus epidermis* and other coagulase negative staphylococci, which are found on skin as normal flora, and were considered non-pathogenic, are now recognized as being responsible for many cases of infection.

Currently there are many immuno-compromised patients who are seen by dentists all over the world for prosthodontic therapy. For these patients cross-infection by iatrogenic exposure could be potentially fatal and if these patients are infected they can serve as important reservoir carriers of pathogens.

This study identified bacterial types but did not quantify the bacteria, which could have provided useful information about whether bacterial counts had changed over the different stages and if the bacteria present were sufficient in quantity to be of pathogenic risk.

Other studies examining different impression materials come to comparable conclusions that if proper disinfection procedures are not undertaken the impressions can act as reservoirs for infection. A method of disinfecting impression compound recommended by some is to wash the compound thoroughly under running water as soon as it comes out of the patient’s mouth and then immerse it in a 1:10 dilution of sodium hypochlorite solution for 15 minutes. These recommendations could be further investigated and utilized if practical. Because of the steadily increasing frequency of infectious conditions such as AIDS, disinfection and sterilization procedures within dentistry have attracted the interest of many clinicians and researchers. Moreover, the ethical and legal implications of infection control in the dental setting require that attention be paid to potential avenues of transmission that may have been ignored in the past. Therefore the knowledge and understanding of microorganisms, and the nature of microbial infections, should be appreciated by all oral health professionals. Our microbial evidence illustrates that impression compounds should not be reused after simple rinsing with running tap water as practiced in some locations, on different patients as they can be a source of cross-infection particularly in immuno-compromised patients and dental staff.
Impression trays and poured casts can also be sources of cross-infection if not properly sterilized before utilization in the construction of dentures. Appropriate disinfection and sterilization procedures should be followed to decrease the potential of cross-contamination.

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“You can’t do anything about the length of your life, but you can do something about its width and depth.”

Evan Esar
Executive Summary – Broad Aims and Strategic Goals
The primary aim of Pasifika@Massey is to increase gains for Pacific Peoples through teaching, research and consultancy services at Massey University. Secondary aims are to assist Massey University meet its Charter obligations for Pacific Peoples and to make a positive contribution to Pacific communities and Pacific nations. These aims recognize Massey University as a strategic University in the wider Pacific region, committed to the advancement of Pacific Peoples whether in New Zealand or in island states.
Effectiveness and Efficiency of the Two Trolley System as an Infection Control Mechanism in the Operating Theatre

by: Viliame Tuisawana

Abstract
A good infection control manager understands the need to prevent a complete cycle of infection. The Infection Control Working Group Manual of Fiji, emphasised that the Cycle of Infection is the series of stage in which infection is spread. Operating theatres have infection control protocols. Most equipments and instruments used in operating theatre circulate within the theatre. The theatre trolleys are a main component in managing an operating theatre but the least recognised.

This paper reviews the effectiveness and efficiency of the current two-trolley system as an infection control mechanism in theatre. The paper will discuss infection control using the current trolley system in relation to the layout of Labasa Hospital operating theatre, human resource, equipment standard and random swab results.

The following are random swab results of theatre equipments taken by the Infection Control Nurse from 2006 to 2008. The Labasa Hospital Infection Committee have discouraged random swab sample from mid 2008 based on new guidelines on infection control. The two trolley system, in which an allocated outside trolley transports patients from the ward to a semi-sterile area in theatre. The inside trolley which transports the patient to the operating table. The two trolley system means more trolleys, extra staffs for lifting, additional handling of very sick patients, congestion and delay in taking patients to operating table. in theatres should be considered.

The one-trolley system in theatre greatly reduces the chances of manually lifting patients, thus reducing the risk of patient injury from fall and risk of back injuries to nurses. There are other evident based practices which can compliment the one trolley system for an effective infection control mechanism in theatres. The Fiji Infection Control Manual (2002) emphases the importance of regularly cleaning the environment and equipments in theatre but there is never a mention about using a two trolley system as an infection control mechanism for theatre. PHD, 2009; (15) (2); pp. 39 - 44.

Introduction
Human beings share the world with vast variety of micro-organism whereby a few are able to cause disease (Larvin & Verma, 2009). Larvin and Verma (2009), also noted that media coverage of infections example Bird Flu, worried the public but interested healthcare professionals because they are most vulnerable to contracting the disease. Keeping up to date with information on latest outbreak and infection control practice safeguards the welfare of healthcare professionals, including patients. An infection is the invasion of the body by a pathogenic microorganism which multiples, causing disease by nearby cellular destruction either by secreting toxins or initiating an antibody-antigen response (Mosby, 2006). A good infection control management understands the need to prevent a complete cycle of infection. The Infection Control Working Group Manual of Fiji (2002), emphasised that the Cycle of Infection is the series of stage in which infection is spread. There are six stages in the Cycle of Infection whereby, the first stage is the Agent or harmful microorganism. The second stage is the Reservoir of micro-organism where the environment is suitable
for it to multiply, which is usually dark and moist. The third stage is the Place of Exit, whereby the micro-organism leaves the host or environment example an infected wound, urinary tract, respiratory tract or gastro-intestinal tract. Micro-organism leaves the host organism or environment by many ways example droplet. The fourth stage is the method of transmission of infection from one place to another, which can be by dirty hands, contaminated instruments, insects, water etc. The fifth stage is the place of entry of the infection, which can be a mucus membrane example the urethra or a break in the skin example a wound. The sixth stage is the susceptible host, the likely people to be infected are those handling infection materials, caring for infected patients or standing within a close proximity to an infected person.

Surgical procedure increases the chance for a complete cycle of infection. The Infection Control Working Group Manual of Fiji (2002), stressed that the easiest way to break the cycle of infection is to kill the harmful micro-organism by antisepsis or hand washing, cleaning of instruments ad environments, sterilization of instrustments, high-level disinfection of instrustments, protective clothing and safe waste disposal.

West et al (2008), found that hospitals act as a reservoir for variety of infections because sick patients release large quantity of pathogenic micro-organism into the environment. Operating theatres have infection control protocols for example, sterile surgical scrubbing and gloving which distinguish it from other units. Most equipments and instruments used in operating theatre circulate within the theatre. There are a few which go out of the sterile area and return, one these is the theatre patient trolley. Rainer and Russ (2005), found that the spread of infection in theatre is more likely to be from contaminated surface than the controversial contaminated air. Theatre trolleys or outside trolleys make varies trips to wards and back, which might increase chance of contamination. Fiji’s Ministry of Health Annual Report 2007 (2008) warned the continuing rise and poor record keeping of post-operative infections in caesarean sections, which is further worsen by the non-availability of a Caesarean Section Classification under the current P.A.T.I.S. The theatre trolleys are a main component in managing an operating theatre but the least recognised. Dharan and Pittet (2002), stressed that normal skin bacteria of patients and healthcare workers cause more than half all infection following clean surgery. Surgical site infection is the leading complication of surgery. This paper reviews the effectiveness and efficiency of the current two-trolley system as an infection control mechanism in theatre. The paper will discuss infection control using the current trolley system in relation to the layout of Labasa Hospital operating theatre, human resource, equipment standard and random swab results.

Aim of The Study
The aim of the study is to explore the effectiveness and efficiency of the two-trolley system as an infection control mechanism at the Labasa Hospital operating theatre from 2006 to 2008.

Method
This is a quantitative research whereby data is gathered by literature review and past routine swab results of theatre by the Labasa Hospital Infection Control Nurse from 2006 to 2008.

The Setting
The study would be done on the operation theatre at the Labasa Hospital, involving the transportation of patients into and out of the operating theatre.

The Findings and Discussion
Swab Results: The following are random swab results of theatre equipments taken by the Infection Control Nurse from 2006 to 2008. The swab taken inside theatre on (08/12/06) showed heavy growth of Estsbactirium Agglonerous.
On (02/11/07), the theatre swab showed it’s worst side with Acinetobacter Heamolyticus found in operating room 2 (O.R.2) air-conditioning outlet and the minor operation theatre (M.O.T.) suction tube. Acinetobacter baumanii was found in the suction bottle lid in operating room 2 (O.R.2) and Pseudomonas maltophilia was found in the M.O.T. hand washing sink.

The swabs taken on (23/01/08) showed no improvements as, Proteus retgen was found in O.R.1 operating table (mid-section). Acinetobacter baumanii was found in O.T.1 suction bottle, air-conditioning outlet, anaesthetic machine tube and O.R.2 operating table (mid-section).

The Labasa Hospital Infection Committee have discouraged random swab sample from mid 2008 based on new guidelines on infection control. WHO Guideline for Infection Control (2006), recommends that bacteriological testing of the environment should be reserved for outbreaks when the source of infection needs to be identified.

The Layout
Infection control practise and policy is determined by various factors, examples are the function of the unit, traffic, age of the building and layout (Infection Control Manual of Fiji, 2002). Labasa Hospital is an old building where the layout and age of the building greatly challenges the implementation of current infection control policies. One of the challenges is the narrow one way traffic for pre-operative and post-operative patients into and out of the theatre. When a pre-operative patient trolley enters theatre, the narrow passage way is shared by the anaesthetic room and post anaesthetic recovery unit (P.A.R.U.). This passage leads to the transfer zone which is a wide room with many doors. The tea room, minor theatre sluice room, female and male change rooms are connected to the transfer area. The transfer area leads to another narrow passage which contains the two operating rooms opposite each other. The layout increases the chance of a cycle of infection because there is no definite separation between the sterile area and non-sterile area. Rainer and Russ (2005) identified that most microbes in theatre are from staffs and a few from patients. They found that a well ventilated theatre is more likely to pose a risk of direct contact transmission of infections from contaminated surfaces rather than air.

The Trolley System
The most challenging is to develop a sustainable patient transportation system best suited for the one way traffic layout. The two trolley system is an old but simple method of infection control suitable for this type of scenario. Trolleys have advantages over beds in comparison of size and shape because they are small so it takes less parking-space, mobile and narrow, easy access for doctors and nurses in attending to patients on all sides. The two trolley system, in which an allocated outside trolley transports patients from the ward to a semi-sterile area in theatre. This area is commonly known as the transfer zone. In the transfer zone, the patient is transferred from the outside trolley to another similar inside trolley, while the trolley attendant or a nurse assist in the process. The inside trolley which transports the patient to the operating table. As research have guided evidence-based practise, the two trolley system should be scrutinized as an infection control mechanism. The Infection Control Manual of Fiji (2002), stresses that a good hospital infection control prevents hospital-acquired infections. The prevention of hospital-acquired infection saves life, limbs, money and resources. Micro-organisms are found in everything but in a given environment it multiples to become pathogenic. Rainer and Russ (2005) identified that most microbes in theatre are from staffs and a few from patients. They found that a well ventilated theatre is more likely to pose a risk of direct contact transmission of infections from contaminated surfaces rather than air.
Trolley Contamination Versus Staff and Instrument Contamination

The WHO Guideline for Infection Control (2006), classifies trolleys as a low risk of transmitting infection so emphasis of using two trolleys as an infection control is more cosmetic than science. Theatre personnel infection control attitudes, knowledge and skills should be scrutinised instead. Rainer and Russ (2005), emphases that most micro-organisms found in theatre are from staffs and a few from patients. It was noted that if the ventilation inside the theatre is effective than air should not be a source of infection, regardless whether it is a clean or dirty case. Another way that was recommended would minimise infection in theatre was to limit movement and the number of people present in theatre.

West et al (2008), found that in most surgical situations, transmission occurs by direct contact between contaminated instruments or hands and the patients’ tissues. Basic hygiene and hand washing is a very effective tool in infection control. Chan, et al (2007), emphases the importance of being vigilance in infection control by strict hand washing after contact transmission by personnel was suspected in a drug resistant pathogen outbreak.

The Transfer Area

Transfer areas are supposed to provide a barrier and minimise the contamination of operating rooms from the outside environment. The pathogens usually found in operating theatre are either part of the environment or from patients or staffs.

Ayliffe, Babb, Collins and Lowbury (1969), found that there was a need to warn hospital administrators against the general thinking that the two trolley system into theatre is an effective protection against contamination. It was identified that it was harder to develop an effective and practical infection control measures, for trolley surfaces and wheels. A two trolley system would need a clean area for transferring patients before entering the sterile area. Allocating spaces for transfer area is practical if hospitals can prove it as an effective infection control mechanism. The two trolley system means more trolleys, extra staffs for lifting, additional handling of very sick patients, congestion and delay in taking patients to operating table. Instead, it was emphases that the environment inside theatre should be scrutinized as a source of infection. In a survey of 53 hospitals where 63% had transfer zones, Lewis, et al (1990), found that the bacterial count in theatre did not increase when using the one trolley system as compared the two trolley system. Transfer areas do not improve infection control management so alternative scenarios on how to prevent transmission in theatres should be considered.

The Transfer Process

The transfer process of patients using the two trolley system is a time and resource consuming practise. Also it is a health hazard for patients and an occupational hazard for healthcare professionals or workers. Mathematically, a patient is manually lifted 5 times on the way to the operating table and back to the ward bed, under the theatre’s two-trolley system.

Humphery (2007), discovered that the Guideline National Institute of Occupation Safety & Health of America recommends that an average woman should only lift 19kg but with 2 out of 3 adults are overweight and a quarter of the population obese, this puts nurses at greater risk of back injury. Nurses rate high amongst occupation with back pain and back-related injuries.

Brown (2003), found there needs to caution in the recommended lift teams and training of nurses about proper lifting techniques, does not protect from back injury from the long term reparative manual lifting. Manual lifting also puts the patient at the risk of injuries example skin abrasions from friction, fractures from...
fall and dislocation from pulling arms or legs. There are lifting machines available but hospital administrators are reluctant to use it because it is expensive and needs a specialized operator.

In Fiji hospitals, if we are to continue with manual lifting because of financial constraints then we need to reduce the number of lifts for a patient to get to theatre and back to the ward. The one-trolley system in theatre greatly reduces the chances of manually lifting patients, thus reducing the risk of patient injury from fall and risk of back injuries to nurses.

**Recommendations**

There are other evident based practices which can compliment the one trolley system for an effective infection control mechanism in theatres. Patient centred care and decision making helps patients actively participate in controlling the transmission of infection. Naqraj, Clark, Talbot and Walker (2006), survey of 171 in-patients and day cases found that majority of patients would prefer to walk if given the choice. It was also noted that walking to theatre for surgery lessen patient’s anxiety and enhanced autonomy in patient care. Walking to theatre for surgery helps to reduce delay in transferring patients and releases resources for other purposes.

The welfare of healthcare workers should not be compromised for the sake of strict infection control protocol. Demoralised and tired healthcare workers increase the risk of spreading infection. West et al (2008), found that the level of MRSA is often reflective of the total rate of nosocomial infections within a hospital. It also reflects overcrowding, heavy workloads and understaffing in wards.

**Conclusion**

The Fiji Infection Control Manual (2002) emphasises the importance of regularly cleaning the environment and equipments in theatre but there is never a mention about using a two trolley system as an infection control mechanism for theatre. A change to the one trolley would be favourable for healthcare workers and patients. There would be less waiting time for patients and healthcare workers can attend to peri-operative tasks example patient’s vitals. The important lesson is regardless of the mode of transporting the patient to the operating theatre, example the trolley should well maintained and cleaned according to infection control guideline. Lewis, et al (1990), recommends that the one trolley system can be used in theatre but it should be washed regularly, especially the wheels.

The Fiji Infection Control Manual (2002), recommends that all theatre equipments are scrubbed or wiped with soap and water before each day (or shift) begins, after each case and at the end of the each day (or shift). It also stressed the importance of scrubbing surfaces with soap and water is a more effective way to remove micro-organism.

Rainer and Russ (2005), emphased proper cleaning of theatre surfaces between each case. It was also recommended that a trolley needs to be allocated for each theatre which must be kept clean regularly. An effective and efficient infection control management for operating theatres can be achieved, if less emphasis is placed on the type of trolley system used but instead on the regular cleaning of it. Also, those staffs handling the trolleys should practice basic hygiene, example hand washing, and promote patient participation. Infection control is everybody’s responsibility.

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References


Forty Six Years of Health Financing in Fiji (1962 – 2008)

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Abstract
This paper provides an analysis of the Fiji Ministry of Health (MoH) budget for the last 46 years, its share of the national budget and annual percentage of GDP, its revenues, per-capita health expenditure, staff costs, and the performance on key population health indicators and Millennium Development Goals (MDGs). Despite annual increases in dollar terms, the proportion of GDP allocated to the national public health system has fallen from 4% to 2.6% over the last 15 years. Consequently the national performance on key health service indicators and MDGs is declining and health staff are migrating. We outline factors to retrieve the public health system in Fiji, such as the need for political commitment to the health of the people, public policy debate on the nature of the health system, the revision of hospital charges, the need to protect the poor by strengthening means testing, and propose compulsory health insurance for the employed.

Introduction
While there is no golden rule on the optimal percentage of the GDP allocated to health, many developed countries spend at least 7% to 8% of GDP (World Bank, 2005) on health. Fiji’s allocation of 2.6% is the lowest among our regional neighbours (UNDP 2007/2008). The Solomon Islands and Tonga allocate between 5-6% of GDP to health annually, Samoa between 4-5% and Vanuatu and Papua New Guinea over 3%. In Fiji, the proportion of GDP allocated to health has fallen progressively for the past 15 years, placing pressure on the capacity to provide a quality national health care system and to continually upgrade it. That this fall continued during the recent period (1999-2008) of donor-sponsored health sector reform ($15.5 million FJD) questions the nature of the reform process and the common expectation in the donor community that the MoH will be able to sustain new initiatives.

Recent interest in strengthening the private sector has arisen with little public debate yet the fees for private services are well beyond the majority of the population, as over 76% of the employed population earn less than 10,000 p.a (Bureau of Statistics EUS 2005). Health infrastructure, particularly rural nursing stations, health centres and sub-divisional hospitals and their staff quarters have deteriorated due to lack of maintenance. Large capital investments are needed to upgrade these facilities and re-equip them with furniture and fittings, medical equipment, supplies, drugs and dressings and to provide clinical learning opportunities.

This review provides an opportunity to generate discussion on critically evaluating health financing, determining an approach to increasing resources, assessing the determinants of past and current trends in health expenditure and looking towards the future. The statistics provided could be further analysed to determine salary and wage increases in line with the Consumer Price Index and in comparison with the private sector and neighbouring countries.
Health insurance is considered as a potential strategy for increasing revenues but it has its own weaknesses of adverse selection, moral hazard and a limited economy of scale, while the administration of membership registration, the determination and collection of premiums and the reimbursement processes to service providers present problems in serving the sparsely distributed population inhabiting approximately one third of the 332 islands that make up the Fiji group.

MoH expenditure has continued to rise in line with the growing economy but the increase in real terms is largely consumed by salaries and wages, leaving limited funds for capital works, maintenance and supplies and for extending the range of services. Over the last 20 years the MoH has considered the following three options to increase its revenues and to complement funding provided by government, but they have not been acted on (Wong & Govind 1992):

1. Increasing user charges by revising the schedule of hospital charges in the Public Hospital and Dispensaries Regulation.
2. Charging market rates for services provided to non-patient groups, such as medical examinations and reports for employment or immigration purposes, quarantine services, environmental impact studies and health inspections; and, medical examination fees and drug supplies for tourists.
3. Health Insurance schemes, either voluntary or compulsory.

In November 1993, following a presentation by the Minister for Health, Cabinet agreed that the MoH undertake a review of its cost-recovery program. Fifteen years later this review has not been conducted, while government continues to finance 71% of health costs and has a negligible cost recovery program of less than 2% of expenditure, while the community bears 20% by way of out-of-pocket expenses. Cost-recovery is not a new feature in Fiji as the ‘user pays’ system has been in operation since 1978 (Laws of Fiji, Chapter 110 Public Hospitals and Dispensaries Act), however, the dollar value of these fees has not been revised since 1980 despite an estimated 500% increase in costs.

Experience elsewhere has shown that cost recovery is much more effective if the collecting agency retains the revenues (Wong & Govind 1992). Currently, revenues collected by the MoH are paid into the government’s consolidated revenue fund. While the MoH can prepare guidelines on fee increases there is little incentive to do so, or to improve collections, if the funds are not retained for health purposes.

**Current Services and Sources of Health Funds**

Health services in Fiji are primarily provided by government and financed almost exclusively through general tax revenues. Other sources of funding are through donor assistance for service enhancements, a small cost recovery program of user charges, a revolving drug fund account from community pharmacies and a government pharmacy bulk purchasing scheme. A small private sector includes one private hospital based in Suva that provides a range of specialized services, and 110 private general practitioners located in the urban centres of the two main islands Viti Levu and Vanua Levu. Another private hospital is planned for Lautoka.

Government provides services through its three Divisional Hospitals, three Specialized Hospitals, 16 Sub-Divisional Hospitals, three Area Hospitals, 74 Health Centres and 100 Nursing Stations. The MoH approved staffing establishment as at December 2007 was 3,199 posts with 3,030 filled and 169 vacancies. In the Medical Officer category 318 positions were filled of the approved establishment of 396, a shortfall of 78
medical officers. In the Nursing category 1,820 positions were filled of the approved establishment of 1,827 reflecting a shortfall of only 7 (MOH Annual Report 2007).

Services provided at outpatient departments are free. These include medical and nursing consultations, laboratory testing for diagnostic confirmation, X-ray and pharmaceutical provision. Inpatient services are also provided freely unless patients choose to be admitted to ‘paying wards’ where a range of fees are charged for diagnostic services in addition to the room charges. These ‘paying ward’ fees are very low compared to hospital charges in the Fiji private sector and in New Zealand and Australia and stock-out of essential items are frequent, so the real costs are transferred to the population, which meets 20% of the national health expenditure from its own pocket (National Health Accounts, 2007) including health insurance premiums and pharmaceuticals purchased from private providers.

**Method**
This study is a desk review of documents in the public domain relating to the financing of health services in Fiji and on Fiji’s performance on selected health indicators and MDGs. Table 3 presents information calculated to a notional 6% of GDP adjusted for the annual rate of inflation.

**Findings**
**Government Financing, MoH Budget and Quality of Service Indicators**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Whole of Govt. Budget (Million FJD)</th>
<th>MoH allocated Budget (Million FJD)</th>
<th>Health Share of Govt. Budget (Percentage)</th>
<th>MoH Revenue (Million FJD)</th>
<th>MoH Revenue as % of Health Expenditure (Percentage)</th>
<th>Per capita Health Expenditure (Million FJD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962</td>
<td>16.10</td>
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<td>4.88</td>
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<td>10.70</td>
<td>0.30</td>
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<td>9.77</td>
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<td>9.01</td>
<td>0.40</td>
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<td>7.67</td>
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<td>8.80</td>
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<td>0.40</td>
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<td>8.00</td>
<td>0.40</td>
<td>4.30</td>
<td>16.14</td>
</tr>
<tr>
<td>1976</td>
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<td>8.10</td>
<td>0.30</td>
<td>2.50</td>
<td>20.52</td>
</tr>
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</table>
Table 1 shows annual financial figures for the years 1962 to 2008. After independence in 1970 Fiji saw the health sector share of government budget fall from around 13% to around 7% - 9% and remain in that vicinity throughout the period. In terms of per-capita spending the dollar amount has risen significantly along with the developing economy, evident in the increased size of the government budget. Yet despite the growing economy there has been a steady decline in health sector revenues over the entire 46 year period, revealing that the health sector has increasingly become one of public provision.

Some anomalous years suggest that revenue collection efficiency varies, but the sustained low level of cost recovery is not surprising given that the fee structure has not been revised since 1980. A virtually free service removes the cost barrier to access and may encourage overuse (Wong & Govind 1992). Conversely,
high fees contribute to under-use by the poor, so determining a level of fees that discourages frivolous use without discouraging essential use has serious ramifications on either side of the equation. Policy inactivity on this issue over recent decades may reflect political caution, but in an era of sharply rising costs it has inevitably propelled Fiji towards under-funded and inadequate services.

Table 2:
Population, GDP, MoH Budget as % of GDP, CPI, and MoH Salary and Wages in FJD and as a Proportion of MoH Budget 1993 -2006.

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Pop.</th>
<th>GDP at Constant Price (Million FJD)</th>
<th>Actual MOH Budget (Million FJD)</th>
<th>MoH budget as % of GDP (Percentage)</th>
<th>Consumer Price Index</th>
<th>MoH Salary &amp; Wages (Million FJD)</th>
<th>Salary and Wages as % of MoH budget (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>771,104</td>
<td>1707.00</td>
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<td>43.40</td>
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<td>1995</td>
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<td>2799.00</td>
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<td>2.79</td>
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<td>3061.00</td>
<td>89.19</td>
<td>2.91</td>
<td>109.70</td>
<td>45.30</td>
<td>50.80</td>
</tr>
<tr>
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<td>3284.00</td>
<td>98.92</td>
<td>3.01</td>
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<td>49.50</td>
</tr>
<tr>
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<td>3662.00</td>
<td>107.90</td>
<td>2.95</td>
<td>118.30</td>
<td>54.80</td>
<td>50.80</td>
</tr>
<tr>
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<td>810,421</td>
<td>3505.00</td>
<td>124.20</td>
<td>3.54</td>
<td>119.60</td>
<td>54.80</td>
<td>44.10</td>
</tr>
<tr>
<td>2001</td>
<td>861,003</td>
<td>3586.00</td>
<td>129.86</td>
<td>3.39</td>
<td>124.70</td>
<td>52.10</td>
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<td>134.60</td>
<td>78.90</td>
<td>58.80</td>
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<td>58.70</td>
</tr>
<tr>
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<td>150.00</td>
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<td>-</td>
<td>94.10</td>
<td>62.70</td>
</tr>
</tbody>
</table>

Source: Bureau of Statistics, Fiji.

Table 2 illustrates how in the 15 year period 1993-2008 the population of Fiji increased by 7.3% (56,096 people), Gross Domestic Product (GDP) more than tripled while the proportion allocated to MoH fell from 4% to 2.57% of GDP. In the same period the Consumer Price Index (CPI) increased by 48 % and Salaries and Wages as a proportion of MoH budget averaged 53% over the period. (MoH salary and wages in relation to the CPI and skills migration is the subject of a subsequent paper).

While staff costs are wrongly blamed for the failings of the health system in Fiji, it’s the falling proportion of GDP that accounts for the bulk of the financial shortfall, as can be seen in Table 3, which illustrates the difference between the actual MoH budget and a ‘notional’ MoH budget had it achieved the level of 6% of GDP similar to Tonga and the Solomon Islands. It reveals that the actual MOH budget has not achieved even 50% of this notional budget since 1994. This notional allocation is theoretical, but when used as an indicator the annual shortfalls are alarming, suggesting that the ills of the Fiji health system are directly attributable to
low budget allocations, and illustrating the lack of policy action, as even the low proportion of 4% of GDP in 1993 had not been preserved, let alone improved on. Over the fifteen year period since, this notional annual shortfall has increased from 33 to almost 190 million Fijian dollars (FJD).

Table 3:
GDP, MoH Budget, MoH Budget as % of GDP, Notional MoH Budget at 6% of GDP, Shortfall as % of GDP and Shortfall of Notional MoH Budget at 6% of GDP Minus Actual MoH budget 1993-2005.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>GDP ($ millions)</th>
<th>Actual MOH Budget (Million FJD)</th>
<th>MoH Budget as % of GDP (Percentage)</th>
<th>Notional MoH budget at 6% of GDP (Million FJD)*</th>
<th>Notional % Shortfall in GDP allocation (Percentage)</th>
<th>Shortfall: Notional Budget * – Actual Budget (Million FJD)</th>
<th>Inflation (%)</th>
</tr>
</thead>
<tbody>
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<td>1993</td>
<td>1707.00</td>
<td>68.57</td>
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<td>97.28</td>
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<td>5.02</td>
</tr>
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<td>1794.00</td>
<td>73.26</td>
<td>4.08</td>
<td>106.97</td>
<td>1.92</td>
<td>32.82</td>
<td>0.62</td>
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<td>3.21</td>
<td>89.29</td>
<td>0.32</td>
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<td>189.07</td>
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</table>

* Source: Bureau of Statistics, Fiji.

Note: 6% of GDP is the approximate allocation of Fiji’s neighbours, Solomon Islands and Tonga
* adjusted for annual inflation rate (Source: International Monetary Fund - 2008 World Economic Outlook)
**Table 4:**
MoH Quality of Health Service Indicators 1990-2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Pop.</th>
<th>Birth Rate per 1000 Pop</th>
<th>Pop. Mortality Rate per 1000 Pop.</th>
<th>Natural Increase %</th>
<th>Peri-natal Mortality Rate *</th>
<th>Infant Mortality Rate **</th>
<th>Child Mortality Rate ***</th>
<th>Maternal Mortality Rate ****</th>
</tr>
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<tbody>
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<td>1990</td>
<td>735,985</td>
<td>24.30</td>
<td>5.70</td>
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<td>10.80</td>
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<td>-</td>
<td>26.80</td>
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<td>13.30</td>
<td>19.00</td>
<td>-</td>
<td>26.00</td>
</tr>
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<td>1.90</td>
<td>12.50</td>
<td>18.40</td>
<td>-</td>
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<td>5.60</td>
<td>1.80</td>
<td>12.20</td>
<td>16.60</td>
<td>-</td>
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<td>783,550</td>
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<td>5.60</td>
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<td>10.30</td>
<td>16.40</td>
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</tr>
<tr>
<td>1995</td>
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<td>5.40</td>
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<td>9.00</td>
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<td>7.90</td>
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* Perinatal mortality rate: deaths in children around the time of birth (between 28 weeks of gestation and one week postnatal) per year per 1000 live births.

** Infant Mortality rate: deaths of children less than 1 year old per year per 1000 children in this age group.

*** Child Mortality rate: deaths of children aged 1-4 years per year per 1000 children in this age group.

**** Maternal mortality ratio: deaths of mothers from causes associated with childbirth per year per 1000 births.

Table 4 presents a selection of quality of health service indicators and Fiji’s MDG health targets. A declining birth rate and an increasing mortality rate have resulted in a declining rate of natural population increase. The increase in the population mortality rate may reflect a change in the age composition of the population, where younger people have migrated since the mid 1990s. The migration of younger people has significant implications for the health system, reducing the pool of potential health workers, reducing the income tax base, reducing the potential revenues from health insurance and increasing the demand on services as the average age of the population increases.
Other than large gaps between current performance and the MDG targets, the most significant findings are the doubling of both peri-natal and maternal mortality rates, and recent increases in infant and child mortality rates. Significantly, Fiji shows little progress in achieving its MDG targets. On these figures, the quality of health services appears to be declining.

**Increasing Health Revenues**

The ability for government to increase its health sector allocations is limited by slowed national economic growth, by a history of significant under-funding and by periodic austerity measures following political events. To increase revenues from service users would represent a major change to public sector provision and would have significant political and population health status ramifications. The introduction of realistic user charges would likely result in much of the population’s inability to pay, reduced access to services and worsening health indicators. The potential for the general population to pay health insurance premiums is similarly limited, although some employers provide health insurance schemes on a co-payment basis with their staff.

The 2002-03 Household and Income Expenditure Survey estimates that more than 34% of the population of Fiji is living below the poverty line. Another 15 to 20% are on the poverty margin and are not in a position to pay for services, so potentially 50% of the population requires some form of protection or exemption from rising costs. Any increase in fees and charges would require the approval of the Prices and Income Board, a public consultative process and negotiations with various organizations, such as the Consumer Council, Ministry of Finance (MOF) and non-government organizations (NGOs), and would likely result in the institution of a means test or the issuance of exemption status.

However, there is still some potential to increase revenues by raising fees for selected services that don’t affect the poor, as identified above. The Health Minister has powers under the Public Hospital and Dispensaries Act to revise current charges through regulation, but this has not happened. That it hasn’t happened reflects the same low level of health policy debate and action that has allowed the decline in the proportion of GDP allocated to health.

**Health Insurance, Adverse Selection and Moral Hazard**

Insurance companies are faced with the problems of adverse selection and moral hazard. Adverse selection arises when people with pre-existing conditions, or in age groups or occupations of high risk, become the majority users of the insurance scheme. This situation arose in Fiji when health insurance was introduced for the Fiji Public Service in 1988. The insurance broker relaxed its membership criteria in order to attract large numbers of members. However, the chronically ill and those at higher risk of illness or injury were the first to join, resulting in the company sustaining huge losses and closing. In order to remain financially viable health insurers require significant numbers of people to pay premiums and not use health services.

The moral hazard argument recognizes that the very act of insurance creates a set of perverse incentives for the insured person. Once insured, the incentive to consume more and better health care than otherwise is increased, while incentives to maintain healthy lifestyles are weakened (Bennet1991). The problems arising from adverse selection and moral hazard can contribute to large increases in insurance premiums, pushing them beyond the means of low paid workers and the unemployed. In Fiji, with 50% of the population near or below the poverty line, the potential for health insurance is limited and the burden of costs for the unemployed and uninsurable will remain on government.
Conclusion
This paper has identified a progressive erosion of funding for Fiji’s public health system in recent decades, resulting from an apparent lack of policy activity to protect or improve the levels of government funding, whereby the 2008 government allocation was among the lowest in the world and significantly less than our regional neighbours. Cost recovery measures may contribute only limited revenues and may only partially guard against the moral hazard of overuse of a free system, but can only be applied to those who can afford to pay and risking the alienation of those who can’t. Health insurance schemes are only feasible among the employed, yet unemployment and underemployment rates are high (Narsey 2006, 2007) while over ¾ of the employed population earn less than the taxable threshold of 15,000FJD. Public debate is needed to halt the progressive erosion of public health financing and staffing in Fiji and to establish feasible principles of revenue collection in the context of the political, economic, social and cultural milieu of the nation. But forums for public debate are limited while the dependency on declining government provision is now absolute for many. What is needed now is the commitment from successive governments to incrementally increase the share of GDP allocated to health to, at least, a level comparable to our poorer neighbours.

References
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Health Promoting Behavior Among Chronically Ill Pacificans Living with Non-Communicable Disease in Fiji, Nauru, and Kiribati

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**Abstract**

**Introduction:** Individuals in the developing world are quick to adopt patterns of behavior that mimic Western trends even when those trends have negative long term effects on health. In this study we relate survey results describing attitudes and perceptions toward individual health responsibility of people being treated for non-communicable diseases including diabetes, hypertension, and cardiovascular disease in order to improve public health interventions. PHD, 2009; (15) (2); pp. 55 - 65.

**Methods:** We conducted convenience sample surveys in both English and native languages at outpatient clinics and hospital centers in Fiji, Nauru, and Kiribati with people being treated for non-communicable diseases. We used the Health Promoting Lifestyle Profile in regression analyses to explore underlying factors explaining patient attitudes in managing their illnesses.

Health Promoting Lifestyle Profile

This section contains statements about your present way of life or personal habits. Please answer as accurately as possible. 1=Never, 2=Sometimes, 3=Often, 4=Always

**I. Health Responsibility** 1=Never, 2=Sometimes, 3=Often, 4=Always

41. Do you try to find reading materials that deal with improving your health? ________.
42. Do you question health professionals in order to better understand your illness? _______.
43. Do you discuss your health concerns with health professionals? _______________.
44. Do you attend educational programs on personal health care? _________________.

**II. Physical Activity** 1=Never, 2=Sometimes, 3=Often, 4=Always

45. Do you engage in physical activity for 30 minutes at least three times per week? ______.
46. Do you walk as exercise? ________________.
47. Do you engage in other types of physical recreational activity? _________________.
III. Nutrition 1=Never, 2=Sometimes, 3=Often, 4=Always
48. Do you choose a diet low in fat and cholesterol? ________________.
49. Do you limit your use of sugars and food containing sugars? ____________.
50. Do you eat 2 to 4 servings of fruit per day? ________________.
51. Do you eat 3 to 5 servings of vegetables each day? ________________.
52. Do you eat 2 to 3 servings of milk, yogurt, or cheese each day? ____________.
53. Do you eat no more than one serving of meat, poultry, or fish each day? ______.
54. Do you read labels to find the sodium and fat content of canned and packaged food? ___.
55. Do you eat breakfast? ____________________.

IV. Stress Management 1=Never, 2=Sometimes, 3=Often, 4=Always
56. Do you get enough sleep? ________________.
57. Do you take time to relax each day? ________________.
58. Do you use specific methods to control stress? ____________________.

Results: Our results suggest that there exist attitudinal differences among afflicted populations with regard to stress, physical activity, nutrition, and health responsibility. One unifying theme is the lack of interest in conventional public health educational methods including printed material and public lectures. These similarities and differences must be recognized by government health ministries as well as international health organizations when developing public health interventions.

Conclusion: Public health professionals and educators must develop ways to transmit the message of healthy lifestyles to populations in the South Pacific that do not give much attention to conventional public health education methods. The epidemic of non-communicable disease that is occurring in many of the Pacific Island nations will only be effectively addressed by new educational approaches.

PHD 2009, 15 (2) p

Key words: Non-communicable disease, diabetes, South Pacific region, health promoting attitudes, health promoting behavior, Fiji, Nauru, Kiribati

Introduction
Stroll along Victoria Parade in downtown Suva, the charming capital of Fiji, and among the throngs of people making their way to the central market or to the port or to any number of large stores and small shops that line the way one notices many overweight people. One would have the same sensation in the teeming, high population density town of Betio on South Tarawa, the capital island of the republic of Kiribati, or in Nuku’alofa the capital city of the Kingdom of Tonga, in Apia, Samoa, or in most other urban aggregations in the South Pacific. What one is witnessing is the physical deterioration of a noble group of peoples that have populated these small isolated islands for many thousands of years; a deterioration that has been swift in its onset and stunning in its debilitating effects on affected populations.

The situation was not always so. Before a strong Western influence was felt in the Pacific, island peoples’ food consumption patterns included root crops, tropical fruits and vegetables, fish, and game, all foods rich in nutrients and low in processed sugars and fat (1). There was little incidence of obesity and the accompanying illnesses that are characterized by being severely overweight including diabetes, cardiovascular disease, hypertension, renal disease, and the retinopathies and neuropathies that are characteristic of diabetes.
Beginning in the 1960s, just prior to the independence granting movement in the region, the wage economy became a much more familiar phenomenon. People could, for the first time, afford to purchase imported food rather than having to farm, fish, or hunt. Epidemiological research has firmly established a relationship between these consequences of higher living standards and ill health (2). The food that was and continues to be imported was much higher in sugar, salt, fat, and cholesterol than the traditional foods of the region. This economic sea change caused a “mortality transition” whereby people began to sicken and die from non-communicable diseases (NCDs).

In the Federated States of Micronesia (FSM) the incidence of obesity in the population of those between 35 and 55 years of age is 80 percent while the rate of diabetes is 20 percent. By comparison, the U.S. rate of diabetes in the age group 45 to 55 is about 7 percent (1). The incidence of diabetes approaches 40 percent in the adult population of Nauru, and 25 percent in both the Indian and indigenous Fijian populations in Fiji (3). These high incidence rates have been attributed to increasing levels of urbanization, changes in diet and physical activity patterns, and possibly a genetic predisposition to obesity. Diabetes affects upwards of 30 million people in the Western Pacific region with predictions of this number doubling over the next twenty years (4). Approximately 20 percent of male Nauruans and I-Kiribati, and 15 percent of females, die due to NCDs before they reach the age of 40. Cardio-vascular disease (CVD) affects approximately 27 percent of the female population of Kiribati. The prevalence of CVD in male and female Indo-Fijians is 25 percent and 17 percent respectively. Further, approximately 20 to 30 percent of the adult population of Fiji is afflicted with diabetes (3).

Governments in all Pacific Island nations (PINs) have dealt with the problem of lifestyle illnesses by offering treatment to those afflicted and educational programs to the general population to control the spread of these illnesses. As the prevalence of NCDs has become more widespread within PINs the cost of treatment has become a financial burden that is no longer sustainable. Public health budgets are spread so thin that even basic medical services such as the provision of oral medication for the control of diabetes and hypertension are many times unavailable or available only at limited times and in limited quantities.

One avenue of epidemiological research dealing with NCDs has attempted to identify unique individual behaviors that contribute to specific health outcomes and the underlying personal factors that determine those behaviors (5). Determining these personal factors can lead to the development of more effective educational programs that attempt to eliminate risky behaviors and promote those that contribute to a healthy lifestyle (6).

Earlier work has demonstrated that positive health outcomes can result from regular exercise (7), quitting smoking (8), maintaining an ideal weight (9), good nutrition (10), and minimizing stress levels (11). In work examining perceptions of diabetes, increased levels of stress from environmental and familial stressors worsened diabetic symptoms among individuals in American Samoa (12).

The purpose of this work was to compare the health promoting lifestyle behaviors of chronically ill populations in Fiji, Kiribati, and Nauru to explain the underlying factors influencing patient attitudes and experiences to better shape and target public health interventions.
Methods
The authors obtained permission from the Ministries of Health of Nauru, Kiribati, and Fiji to conduct surveys during June, 2003, and July 2004, among people being treated for NCDs at primary hospitals and clinics. We visited the Republic of Nauru Hospital in Yaren district and spoke with outpatients in the medical and dialysis clinics. We traveled to Kiribati Central Hospital in the Birkenibau district on Tarawa and spoke with people waiting for treatment and consultation at the daily medical clinic. In Fiji, we visited the Colonial and War Memorial Hospital in Suva, the Raiwaqa medical and diabetic clinic in Suva, the Valelevu medical clinic in the Suva peri-urban region, the Lautoka Hospital in Lautoka on the western side of the main island of Viti Levu, and the Labasa Hospital in Labasa, the largest town on Vanua Levu, Fiji’s second largest island. We spoke with a total of 409 patients, 308 in Fiji, 60 in Nauru, and 41 in Kiribati.

Survey Instrument
A number of health behavior surveys have been developed to enable quantification of health promoting behaviors including the Health Promoting Lifestyle Profile (HPLP)(13). The HPLP was designed to assess the relationship between several different lifestyle behaviors and health status. The questionnaire has a four point response format with seventy items that are divided into six subscales. We chose to use four of the six subscales that were most pertinent to our research interests including health responsibility, physical activity, nutrition, and stress management. (A comprehensive listing of the questions posed is given in the appendix of this paper).

Results
The survey methodology requires that average values for all questions within a particular category are used rather than answers to individual questions. For example, the health responsibility portion has eleven questions dealing with assessing the relative aggressiveness of the survey respondent toward learning more about his illness, toward overall health consciousness, and his willingness to engage health professionals in an information eliciting dialogue. One way to learn more about the character traits and possible motivations influencing actions that enhance health responsibility and other factors in the respondent’s answers is to analyze the average response values for each category. Using these average response values as dependent variables and selecting potentially revealing demographic traits as explanatory variables we constructed four sets of regression equations reflecting the four measures of health promoting lifestyle actions. In what follows we provide our ex ante hypotheses regarding those influences for each of the four measures, the regression results, and analyses of those results.

Health Responsibility
We used uniform variables across all three countries in describing the factors that influence health responsibility. These included age (age), whether a respondent was a diabetic (diab), whether the respondent was married (mari), whether the respondent drank alcohol (alcol), number of family members (numfam), number of school years (yrschol), gender (sex), and for Fiji, race, as the population of Fiji is about evenly split between indigenous Fijians, and people of South Indian ancestry (race).

We believe that as individuals age they become more aware of maintaining their health or, if ill, attempting to alter their lifestyle to enhance their quantity and quality of life prospects. We surmised a positive relation between age and health responsibility. Similarly we thought that diabetics would be more conscious of the factors that need to be changed or implemented in their lives to improve quality and quantity. Further,
marriage generally confers greater responsibility on most individuals including a concern for one’s personal health as a familial responsibility. We therefore expected married respondents to have higher health responsibility average responses measured as a negative sign on the regression coefficient.

We expected non-drinkers to have a greater concern for their health. Further, as family size increases, people have less time to concern themselves with personal health issues and be more concerned about other family members. This is especially true among females. We therefore expected an inverse relationship between number of family members and health responsibility as well as greater personal health responsibility among males than females. We also expected the better educated to be more aggressive in seeking information about their illness and in querying health professionals about better ways to manage their disease.

Finally, we had no a priori sense of how racial categories would influence health responsibility. The only race marker used was in the Fiji survey as the populations of Nauru and Kiribati are homogeneous. The prevalence of diabetes in the population of Fiji is similar among indigenous Fijians and Indo-Fijians.

**Health Responsibility (HRAVG) Discussion**

<table>
<thead>
<tr>
<th></th>
<th>Nauru</th>
<th>Kiribati</th>
<th>Fiji</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.338</td>
<td>0.228</td>
<td>0.041</td>
</tr>
<tr>
<td></td>
<td>(2.285)**</td>
<td>(1.335)</td>
<td>(0.623)</td>
</tr>
<tr>
<td>Diab</td>
<td>-0.138</td>
<td>-0.046</td>
<td>-0.055</td>
</tr>
<tr>
<td></td>
<td>(-1.040)</td>
<td>(-0.285)</td>
<td>(-0.971)</td>
</tr>
<tr>
<td>Mari</td>
<td>-0.024</td>
<td>-0.151</td>
<td>-0.058</td>
</tr>
<tr>
<td></td>
<td>(-0.168)</td>
<td>(-0.960)</td>
<td>(-1.013)</td>
</tr>
<tr>
<td>Alcol</td>
<td>(-0.118)</td>
<td>0.427</td>
<td>0.136</td>
</tr>
<tr>
<td></td>
<td>(-0.858)</td>
<td>(2.223)**</td>
<td>(2.077)**</td>
</tr>
<tr>
<td>Numfam</td>
<td>-0.299</td>
<td>-0.014</td>
<td>-0.098</td>
</tr>
<tr>
<td></td>
<td>(-2.008)**</td>
<td>(-0.083)</td>
<td>(-1.701)*</td>
</tr>
<tr>
<td>Race</td>
<td>-----</td>
<td>-----</td>
<td>-0.153</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-2.469)**</td>
</tr>
<tr>
<td>Yrschol</td>
<td>0.181</td>
<td>0.616</td>
<td>0.213</td>
</tr>
<tr>
<td></td>
<td>(1.313)</td>
<td>(3.390)**</td>
<td>(3.138)**</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.103</td>
<td>-0.065</td>
<td>-0.036</td>
</tr>
<tr>
<td></td>
<td>(-0.732)</td>
<td>(-0.394)</td>
<td>(-0.541)</td>
</tr>
<tr>
<td>F</td>
<td>1.558</td>
<td>2.593</td>
<td>4.123</td>
</tr>
<tr>
<td>R2</td>
<td>0.179</td>
<td>0.362</td>
<td>0.102</td>
</tr>
</tbody>
</table>

§   standardized coefficients  
**  ***  ****  significance at the 90%, 95%, 99% level respectively  
t-statistics in parentheses
Table 1 provides the first equation regression results. Age and number of family members were the only significant variables explaining variation in HRAVG in the Nauru sample. Both variables had the hypothesized sign. Larger families decrease individual health responsibility while older people are more concerned about taking action to improve their health. On Kiribati whether one was a drinker of alcohol was more important in explaining HRAVG than age or number of family members though the signs were the same in both sampled populations. Non-drinkers were more health responsible. School years was highly significant on Kiribati although average number of years in school was much higher in the Nauru sample. Perhaps a more uniform and higher level of education on Nauru caused little variation in attitudes whereas the Kiribati sample had wider variation in that variable and therefore proved significant. Non-drinkers, higher levels of schooling and fewer family members all were significant in the Fiji sample along with race. Indo-Fijians were more concerned about health responsibility than indigenous Fijians. The sign on sex indicates that males in all three sample populations were more active in health responsibility than were females though not to the extent that the gender difference was statistically significant.

**Physical Activity (PAAVG)**

Table 2. Physical Activity (PAAVG)$

<table>
<thead>
<tr>
<th></th>
<th>Nauru</th>
<th>Kiribati</th>
<th>Fiji</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.224</td>
<td>-0.008</td>
<td>-0.072</td>
</tr>
<tr>
<td></td>
<td>(-1.421)</td>
<td>(-0.144)</td>
<td>(-1.085)</td>
</tr>
<tr>
<td>Diab</td>
<td>-0.052</td>
<td>0.151</td>
<td>-0.008</td>
</tr>
<tr>
<td></td>
<td>(-0.371)</td>
<td>(0.881)</td>
<td>(-0.148)</td>
</tr>
<tr>
<td>Mari</td>
<td>-0.051</td>
<td>0.067</td>
<td>-0.008</td>
</tr>
<tr>
<td></td>
<td>(-0.334)</td>
<td>(0.404)</td>
<td>(-0.132)</td>
</tr>
<tr>
<td>Alcol</td>
<td>-0.087</td>
<td>0.345</td>
<td>-0.154</td>
</tr>
<tr>
<td></td>
<td>(-0.596)</td>
<td>(1.698)*</td>
<td>(-2.290)**</td>
</tr>
<tr>
<td>Numfam</td>
<td>0.104</td>
<td>-0.095</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>(0.659)</td>
<td>(-0.528)</td>
<td>(0.186)</td>
</tr>
<tr>
<td>Race</td>
<td>____</td>
<td>____</td>
<td>-0.016</td>
</tr>
<tr>
<td></td>
<td>____</td>
<td>____</td>
<td>(-0.256)</td>
</tr>
<tr>
<td>Yrschol</td>
<td>-0.065</td>
<td>0.396</td>
<td>-0.154</td>
</tr>
<tr>
<td></td>
<td>(-0.442)</td>
<td>(2.060)**</td>
<td>(-2.152)**</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.082</td>
<td>-0.108</td>
<td>0.020</td>
</tr>
<tr>
<td></td>
<td>(-0.545)</td>
<td>(-0.617)</td>
<td>(0.302)</td>
</tr>
<tr>
<td>F</td>
<td>0.560</td>
<td>1.830</td>
<td>2.585</td>
</tr>
<tr>
<td>R²</td>
<td>0.073</td>
<td>0.286</td>
<td>0.067</td>
</tr>
</tbody>
</table>

$\quad$standardized coefficients

* ** ***  significance at the 90%, 95%, 99% level respectively

$t$-statistics in parentheses
Table 2 provides regression results for physical activity (PAAVG). We used the same explanatory variables in the regression equation determining factors that influence physical activity. We expected older people to be more concerned about maintaining activity levels and attempting to remain active to help keep in abeyance the progressive aspect of their illnesses.

We found negative attitudes toward physical activity among both sexes in all three countries. Further, being married and family size would negatively affect openness to exercise because of time and energy constraints we suppose.

We expected those with greater levels of formal education to realize the benefits of exercise and those who regularly consumed alcohol would not. Further, diabetics understand the importance of physical activity in managing their illness and therefore would be more willing to include extra activity if physically possible to their every day pursuits. Finally, race in Fiji. Indigenous Fijians are sports minded and arguably more physically active during the various stages of their lives than Indo-Fijians. The Indian population is better educated and more successful in business, and less physically active. This may make Indo-Fijians more open to exercise regimes.

### Physical Activity Discussion

None of the explanatory variables had significant predictive power for Nauru and the $R^2$ is low. The signs on the regression coefficients agree in most cases with our a priori assumptions. However, those with greater levels of education had lower mean scores in this category indicating that the better educated, who typically are employed in the public sector, were occupied with the significant policy problems that the island faces with little time for exercise. Those who were diabetic engaged in greater levels of physical activity than non-diabetics.

In Kiribati, years of schooling and whether a respondent was a drinker were the only significant explanatory variables. Diabetics were less likely to engage in physical activity, as were the married. Family size was negatively correlated with physical activity.

In Fiji, years of schooling and alcohol were positively correlated with physical activity. The sign on the race variable indicates that Indo-Fijians are more open to exercise although there was no statistical difference between the racial groups. Further, although two variables were statistically significant the overall explanatory power of the equation was low.

### Nutrition

<table>
<thead>
<tr>
<th>Table 3. Nutrition (NUTAVG)$</th>
<th>Nauru</th>
<th>Kiribati</th>
<th>Fiji</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.184</td>
<td>0.383</td>
<td>0.007</td>
</tr>
<tr>
<td>(-1.195)</td>
<td></td>
<td>(2.306)**</td>
<td>(0.109)</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.410</td>
<td>-0.201</td>
<td>0.037</td>
</tr>
<tr>
<td>(-3.138)***</td>
<td></td>
<td>(-1.292)</td>
<td>(0.551)</td>
</tr>
</tbody>
</table>
Table 3 provides regression results for nutrition (NUTAVG). This series of equations includes employment because individuals employed in the formal labor sector may have the ability to provide a greater variety and more nutritious as well as more secure access to food.

We expected that diabetics would be especially concerned with their food intake and therefore thought this variable to be significant in all three equations. In addition, those formally employed may have the means to provide a more wholesome diet for themselves and their families. We had no *a priori* view of the influence of gender. We expected family size to be positively correlated with nutritional issues. Finally, as people age they become more concerned about the nutritional value of the foods they consume and in particular of those foods that could be potentially harmful to their health.

### Nutrition Discussion

The regression equation had significant explanatory power for Kiribati. All the included explanatory variables were significant except sex and the sign on that variable was as expected. As people age their concern for nutrition increases. This was true in all three countries though only in Kiribati was the age variable significant. There is a positive relationship between schooling and concern for nutrition in all countries. As expected, being diabetic concentrated one’s concern for food intake. This was the strongest result across all countries. Diabetics were concerned about maintaining a nutritionally sound diet; one that would potentially improve their diabetic condition or at least prevent deterioration. Men were more concerned with nutritional matters in Nauru and Kiribati. The opposite was true in Fiji. Being formally employed improved nutrition scores for the Kiribati and Fiji samples though only in the Kiribati sample was the variable significant. In Nauru employment played no significant role in nutritional concern.
Finally, indigenous Fijians were more aware and concerned about nutrition than were Indo-Fijians. Both populations suffer from about equal rates of diabetes while native Fijians have higher rates of obesity. Indo-Fijians consume a traditional South Indian diet which is rich in animal fat. The Indian population has maintained this traditional diet to a greater degree than have native Fijians maintained theirs. The R2 on the Fiji equation indicates low explanatory power for the total equation in spite of four of the eight included variables being statistically significant. Both the Kiribati and Nauru equations indicate more explanatory power.

**Stress**

Table 4. Stress (STRESSAVG)$

<table>
<thead>
<tr>
<th></th>
<th>Nauru</th>
<th>Kiribati</th>
<th>Fiji</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.268</td>
<td>0.445</td>
<td>0.034</td>
</tr>
<tr>
<td></td>
<td>(1.701)*</td>
<td>(2.439)**</td>
<td>(0.489)</td>
</tr>
<tr>
<td>Race</td>
<td>—</td>
<td>—</td>
<td>0.041</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.630)</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.152</td>
<td>-0.107</td>
<td>0.050</td>
</tr>
<tr>
<td></td>
<td>(-1.057)</td>
<td>(-0.625)</td>
<td>(0.723)</td>
</tr>
<tr>
<td>Yrschol</td>
<td>0.074</td>
<td>0.519</td>
<td>0.093</td>
</tr>
<tr>
<td></td>
<td>(0.533)</td>
<td>(2.780)***</td>
<td>(1.284)</td>
</tr>
<tr>
<td>Alcol</td>
<td>-0.109</td>
<td>0.244</td>
<td>0.027</td>
</tr>
<tr>
<td></td>
<td>(-0.751)</td>
<td>(1.246)</td>
<td>(0.388)</td>
</tr>
<tr>
<td>Diab</td>
<td>-0.239</td>
<td>0.069</td>
<td>-0.058</td>
</tr>
<tr>
<td></td>
<td>(-1.744)*</td>
<td>(0.414)</td>
<td>(-0.975)</td>
</tr>
<tr>
<td>Employ</td>
<td>0.007</td>
<td>-0.235</td>
<td>0.030</td>
</tr>
<tr>
<td></td>
<td>(0.045)</td>
<td>(-1.368)</td>
<td>(0.470)</td>
</tr>
<tr>
<td>Numfam</td>
<td>-0.056</td>
<td>0.034</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>(-0.364)</td>
<td>(0.197)</td>
<td>(0.138)</td>
</tr>
<tr>
<td>Mari</td>
<td>-0.177</td>
<td>0.085</td>
<td>-0.042</td>
</tr>
<tr>
<td></td>
<td>(-1.209)</td>
<td>(0.529)</td>
<td>(-0.705)</td>
</tr>
<tr>
<td>F</td>
<td>1.351</td>
<td>2.214</td>
<td>0.524</td>
</tr>
<tr>
<td>R2</td>
<td>0.181</td>
<td>0.364</td>
<td>0.016</td>
</tr>
</tbody>
</table>

§ standardized coefficients
* ** *** significance at the 90%, 95%, 99% level respectively

Table 4 provides regression results for stress (STRESSAVG). We expect that older individuals develop better coping mechanisms for stress because of greater life experiences, and of a greater need for methods to deal with chronic long term illness. Further, the better educated may be more successful in using alternative...
stress relief methods. We had no a priori expectations about whether men or women handled stress more effectively, though we expected diabetics to be more successful in dealing with stress.

Employment was seen affecting stress management either positively or negatively. For instance, those employed may be able to deal with stress more successfully since they are subjecting themselves to the dual burden of work and illness management. On the other hand, the unemployed are able to avoid that extra burden of stress associated with the workplace and could focus on dealing solely with their illness. How the family situation affected ability to manage stress was also difficult to hypothesize *ex ante*. Being married and having children could help alleviate the stress burden. But a family situation could also lead to increased stress. Elstad, et al. have recently reported worsening of diabetic symptoms related to familial stressors among people in American Samoa (12).

**Stress Discussion**

The regression equation had reasonable explanatory power for Kiribati but less for Nauru and Fiji. In the Kiribati sample both age and years of schooling were significant, both having positive impacts. Age had similar impacts in Nauru and Fiji. None of the variables were significant in the Fiji equation in explaining stress management. In Nauru and Fiji, being a diabetic increased one’s ability to deal effectively with stress. The other descriptors were insignificant and inconclusive in explaining the variation in the dependent variable. Alcohol consumption, formal employment, marital status, and number of family members changed signs between equations and were insignificant in all equations. The race variable in the Fiji equation indicated that native Fijians were better able to manage stress.

**General Discussion**

The Pacific region has seen an increase in the incidence of NCDs as infectious disease has become less common and as the relative wealth of most of the region has improved. The burden of these illnesses is both financial to the individuals afflicted through lost productivity, and emotional, through increased pain and suffering. The financial impacts are also severe and mounting for the governments involved due to the costs of disease treatment. The cost of managing NCDs in the Pacific accounts for more than half of all health care expenditures in some Pacific island countries. From a personal perspective these illnesses exact a toll on both individuals suffering from these illnesses and their families who are deprived of both the emotional and physical energies someone in good health can contribute to the family hearth as well as the potential financial contribution to the family purse.

We have sought to analyze the factors that contribute to the emotional state of those suffering from NCDs. Though different messages emerge from each of the estimated regression equations there are some unifying themes. One of these is education. Better outcomes can be expected when populations are better educated. They are more aware of effective management mechanisms for dealing with their illness and more willing to apply those mechanisms to their daily lives. Another unifying theme is age. The older the individual the more likely he will be interested in aggressively dealing with his illness in the hope of recovering some level of lost ability and energy.

Of course, the efficient intervention would occur when people at risk for NCDs are young to cause them to avoid lifestyle decisions that contribute to illness onset. Much more aggressive measures to promote prevention among the young are needed which must include novel approaches. Health professionals and educators must develop ways to transmit the message of healthy lifestyles to populations that do not give
much attention to conventional health education methods. The poster and brochure that go unread and unnoticed do little to educate populations that need more information about the choices they make and the lifestyles they lead. From a public policy perspective greater emphasis must be placed on developing more effective educational programs to avoid the concurrent social and financial crises that many PINs face as a result of this public health situation. Effective plans of action to institutionalize prevention in public health care workers and in the general population are needed.

Acknowledgements
This research was funded by a grant from the University Research Committee of the University of the South Pacific, Suva, Fiji. We are grateful for their financial support and confidence. We are indebted to the individuals in the Ministries of Health in Fiji, Nauru, and Kiribati for allowing the research team access to the hospitals and clinics in their respective countries. We thank the student enumerators that worked with us during the survey process for their energy and abilities. And to the 409 people we had the good fortune to meet and speak with about their illnesses and the ways in which they cope, our thoughts are with you and the others you represent. May your lives become easier with new discoveries to deal with NCDs, and may the resources be available in each of your countries to provide you with everything you need to live full and productive lives.

References
Suicide in the Tokelau Islands

By: Mr. Alapati Tavite, Tokelau Health Department, Dr. Silivia Tavite, Flinders University, South Australia

A collaborative effort between the Tokelau Health Department –Tokelau, Health Research Council of New Zealand (NZHRC) and the World Health Organization (WHO)

Abstract
The survey revealed extremely high suicide prevalence in Tokelau within the last 25 years. Attempted suicide rate of 40/1500 (and fatal suicide rate of 6/1500 (1980-2004) with increasing trend in recent years. With consideration of the small population of 1500, these rates are quite devastating.

Attempted suicide was higher among Male (65%) than Female, thou there was a 1:1 ratio between genders in fatal suicides. Suicide was highest among the younger population (14-25) years old. Eighty three percent (83%) of fatalities were below the age of 25 and 67% were below the age of 20. Sixty seven percent (67%) of fatal cases were reported in Fakaofo and none was reported in Nukunonu.

• The most common method of suicide was hanging (40% of attempted cases, 83% of fatal cases hung themselves). This study revealed several factors that could have caused or contributed to suicidal behaviours in Tokelau. These included: failure within family relationships between parents and children; relationships problems such as marriage breakdown; boyfriend-girlfriend relationship problems; people gossiping and public humiliation; lost of loved ones, lost of status within the community; ashamed or afraid because they had done something wrong/unacceptable; depressed, bored; or anger; and failure in school examination.

The outcome of this study calls for a collaborative approach between the Government of Tokelau, non-government bodies, churches, regional and international organizations and the three local communities to develop and implement appropriate preventative strategies to avoid losing another loved one to this devastating action. PHD, 2009; (15) (2); pp. 67 - 83.

Introduction

Terms & Definitions
Suicidal attempts (attempted suicide): suicidal incidences through which the victim survived.
Fatal suicide (cases): suicidal incidences through which the victim died.
Fatupaepae: the local women organization
Taulelea: the local men organization; Tupulaga: youths

Background
Tokelau is a largely self-governing territory of New Zealand and consists of three small atolls with a land area of 12 square miles. It lies about 500 km northeast of Samoa, its closest neighbour. The “Ulu o Tokelau” is the head of government and a titular role that is rotated among the three Faipules (head of each atoll) after each year. The three elected Faipules and the three Pulenuku (mayors) of each atoll make up the Council
for the On-going government of Tokelau (COGT). In a three-year cycle, each village elect specific number of
deleates and together with the members of the COGT, make up the Tokelau General Fono (TGF). The TGF
is the paramount decision making body in Tokelau and meets 3-4 times a year and when not in session, the
COGT functions on their behalf.

Each Council of elders “Taupulega” is the highest decision-making body at village level, supported by the
respective “office of the Taupulega”. The Taupulega is made up of chiefs (matai) of each family in the
respective atoll.

Boats provide the only access to the outside world, and between the three atolls on a fortnightly schedule.
There is no air access, even for emergencies. The closest country is Samoa and it takes about 24-36 hours
by boat from the nearest atoll Fakaofo. Christianity forms the foundation of the Tokelau culture and is highly
respected. People in Atafu are mainly Protentants, Catholics in Nukunonu and a mixture of both Protentants
and Catholics in Fakaofo.

The approximate total population is 1,500, with 700 in Atafu, 500 in Fakaofo and 300 in Nukunonu (2001
census). Each atoll has a community hospital, which provides basic medical services. More than 70% of the
time, these community hospitals are managed by nurses, and often there would be one resident doctor in
one of the atoll that would be able to respond to request for medical assistance from the other two atolls.
Tokelau relies heavily on locum doctors that are contracted by the department to work in Tokelau for short
times for as long as six months.

The Tokelau Health department operates a Tokelau Health Referral Scheme (THRS) in which patients are
referred overseas (Samoa, New Zealand) for medical assessment and treatment due to the limited available
resources in Tokelau.
Suicide in the Neighboring Pacific Islands

Suicide is taking one's own life or attempting to do so. Several biological, psychological and sociological factors can have an impact on an individual that may lead to choosing suicide as an alternative.

The World Health Organization (WHO) had estimated that approximately one million people in the world committed suicide in 2000. Suicide is ranked as the third leading cause of death among youth world-wide. As such, WHO has declared suicide a major global Public Health problem and called on member states to device and implement national suicide preventative strategies.\(^1\)

Global comparison shows Pacific suicide rates are among the highest reported. According to UNICEF, the Pacific Island nations have the highest suicide rates in the world.\(^2\) The Pacific Island Mental Health Network (PIMHnet) was established in 2005 to assist member countries in these challenges with priority focus on advocacy for mental health; human resource training, policy, legislation, planning and service development, research and information, access to psychotropic medicines.\(^3\) Tokelau is a member of PIMHnet and while suicide prevention is receiving increased attention worldwide and in neighbouring countries, it remains low in priority in Tokelau.

Suicide in Tokelau

Suicide is a tragic and a very complex event that often happens so sudden that most often cannot be counteracted by the limited availability of appropriate medical services locally and this has great impact on isolated population and health settings, as in Tokelau.

In recent years, there had been quite a few reported suicide cases in Tokelau, and with consideration of the small population, had become quite a prominent problem and had raised concerns both within the medical and political arena. The scarcity and inconsistency in reporting of suicidal cases in Tokelau was a limitation in health related programs including this survey.

There had not been any study done on suicide in Tokelau and thus this survey was set out to assess the level within the local communities and to be able to identify risk factors and strategies that would provide baseline data and information for planners.

Methodology: Development of the Suicide Research in Tokelau

As part of the Health Research Training workshop organized by the NZHRC and WHO in 2003, Mr Alapati Tavite submitted the proposal for this research, which was approved and funded by the WHO. Mr. Tavite, as the principle investigator and Dr. Silivia Tavite as co-investigator, implemented the survey in 2004.

Aim: To assess suicide level in the Tokelau Islands

Objectives:
- To find out the prevalence of suicide in the Tokelau Islands from 1980-2004.
- To find out and compare suicide cases in terms of gender, age, and among the three atolls.
- Identify the most common form of suicide in the Tokelau Islands in the past 25 years.
- Identify causative and contributing factors to suicide in Tokelau.
- Recommend possible strategies to address this emerging challenge in Tokelau.
Use the results as a developmental tool for the development and implementation of appropriate strategies to address suicide in Tokelau.

The investigators (survey team) implemented the survey in 2004 in three separate phases, first in Atafu in July, Nukunonu in September and Fakaofo in October 2004. The team travelled to the three atolls to implement the study. Members of the local health workforce were briefed on the survey methodology and assisted in the distributions of questionnaires in their respective atolls.

The survey had two main target groups with different approaches:
1. Individuals within the age range 15-45 years old. Data were collected from this group through questionnaires. There was no sampling, and list of eligible participants was drawn from the Tokelau census (2001) and updated on arrival on each atoll.
2. The second target group included survival victims of suicide and their close relatives, close family members of those that died from suicide, and members of the three local communities, selected randomly. These individuals were interviewed, with their approval, by the investigators.

Formulation of questionnaire
- **Content**: Questionnaires were both in English and Tokelauan since some individuals within the target group use English as first language and the others in Tokelauan. Questions were structured into three main subjects: low self-esteem, suicidal thoughts and suicidal attempts targeting information on causative and contributing factors to suicidal behaviours.
- **Letter of consent**: Due to the sensitivity of the issue, letters of consent were attached to an explanatory note for parents to sign if they agree for their under 18 year olds to be involved in the survey.
- **Explanatory note** detailing the objectives of the survey and addressing the confidentiality issue of the survey with contact details, signed by the investigators, and attached as covering letter to all questionnaires that were distributed.

Data collection
- **Questionnaires**: Questionnaires were distributed to individuals within the target population to complete and return to the researchers within 2-3 days.

Assessing of available records on suicide in Tokelau
Upon arrival in the respective atolls, the team worked with local health staffs and several community members to assess all available records on suicidal cases in Tokelau (fatal and non-fatal) from 1980-2004.

Interviews
Due to the poor recording system, the investigators, with the help of local health personnel, worked on the list of suicidal incidences within the year 1998-2004 and produced a list of victims and relatives to be approached for the survey.

The snowball technique of interview was followed with pre-fabricated questions used to guide the interview process.
Data analysis and interpretation
Data were analysed using Epi Info Version 6, Excel Spreadsheet and Microsoft Word for report writing.

Results

Part 1: Questionnaires

Table 1.1: General Make Up of the Questionnaire Respondents

<table>
<thead>
<tr>
<th>Atoll</th>
<th>Age group</th>
<th>Sex</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-25</td>
<td>26-35</td>
<td>36-45</td>
</tr>
<tr>
<td>Atafu</td>
<td>19</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Fakaofo</td>
<td>29</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Nukunonu</td>
<td>8</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>%</td>
<td>39%</td>
<td>32%</td>
<td>29%</td>
</tr>
</tbody>
</table>

142 individuals responded to the questionnaires, which was 38% of the total target population (based on the Tokelau 2001 census).

78% of the respondents were employed and 41% of them were employed under the respective village labour force.

Low Self-Esteem

Table 1.2: Low Self-Esteem vs Age and Gender

<table>
<thead>
<tr>
<th>Low self-esteem</th>
<th>AGE GROUP</th>
<th>ATOLL</th>
<th>GENDER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-25</td>
<td>26-35</td>
<td>36-45</td>
<td>F/N</td>
</tr>
<tr>
<td>Yes</td>
<td>20</td>
<td>9</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>%</td>
<td>52</td>
<td>24</td>
<td>24</td>
<td>26</td>
</tr>
</tbody>
</table>

The above table shows that 27% of the respondents indicated that they once felt low self-esteem in their life and 52% of them were within the younger age group (15-25 years old), and more prevalent among respondents from Fakaofo (45%) and more among male (64%).

To uplift this low self-esteem, 18% indicated that they prayed; 16% talked to someone; 16% left the scene to relax themselves; 11% indicated attempting suicide. 3% turned to alcohol and smoking while others just let it go. There were also concerns about the lack of people to trust within the community for people to talk to, and thus their preference for the other alternatives.
Suicidal Thoughts

Table 1.3: Suicidal Thoughts vs Age, Gender and Atoll

<table>
<thead>
<tr>
<th>Suicidal thoughts</th>
<th>Age groups</th>
<th>Gender</th>
<th>Atoll</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-25</td>
<td>26-35</td>
<td>35-45</td>
<td>F</td>
</tr>
<tr>
<td>%</td>
<td>12</td>
<td>3</td>
<td>4</td>
<td>13</td>
</tr>
</tbody>
</table>

13% of respondents showed that they had suicidal thoughts before, ranging from once to five times and was more prevalent among the younger cohorts (15-25 years old) and more in Female than in Male.

53% of those with suicidal thoughts indicated that they had attempted suicide, and 53% of those with suicidal thoughts also had family relatives that attempted suicide before.

Independently, 14% of respondents revealed that they had attempted suicide before and 63% of these respondents revealed that they had family relatives that attempted suicide before.

Alcohol and Smoking

43% of respondents indicated that they turn to smoking and alcohol for relaxation and comfort. Existing data also revealed that more than 70% of attempted cases were under the influence of alcohol when the incidence happened. However, there was no report of alcohol present among the fatal cases. (Tokelau does not have the technology for alcohol testing and thus victims were not tested for alcohol at time of death)

Causative and contributing factors

Respondents indicated the following factors as the reasons why they felt low, or suicidal thought and eventually, when they cannot handle it, attempted suicide.

Factors that were indicated by majority of the respondents are listed first and down least reported.

- Failure within family relationships between parents and children
  - Children being beaten by parents,
  - Children were not given the chance to voice concerns within the family circle.
  - Parents favouring one child over the other
- Relationships problems such as marriage breakdown
  - Husband or wife having affairs-betrayal of trust and integrity
  - No supportive from husband or wife
- Boyfriend-girlfriend relationship problems
  - Parents not approving of girlfriend or boyfriend
  - Being betrayed by their partners
- People gossiping and public humiliation
- Lost of loved ones, lost of status within the community
- Ashamed or afraid because they had done something wrong/unacceptable
- Depressed; bored; anger
- And failure in school examination.
Part 2: Existing data

There were very little information available from hospital records, and only accounted for suicidal cases that needed medical attention. However, members of the public were aware of several other cases that happened but were not recorded.

The collective data shown below were from both hospital records and from consultations and discussions with local health staffs and several members of the communities.

**Attempted Suicide in Tokelau in the Last 25 Years**

**Figure 1:**

There were 40 attempted cases from 1980-2004, which is 3% of the total population. The above figure shows an increasing trend from 1980 to 2004.

**Figure 2:**

The above figure shows that attempted suicide had happened in Atafu since 1980 and increasing with recent years, whereas it only reported in Fakaofo and Nukunonu between 1996-2000 and had increased in 2001-04.
The above figure shows an increasing trend in both genders with more Male than Female, except in 1996-2000. Overall, 65% of attempted suicides were Male.

Overall, the most frequent mode of suicide was Hang (40%) and this mode was more frequent among Male, whereas Females turned to drug overdose and self-inflicted wound.
Within the past 25 years, there were 6 fatal cases reported in Tokelau, 2 in Atafu and 4 in Fakaofo and there was no case reported in Nukunonu. The figure above shows an increasing trend and was recorded highest in 2001-04.

Four (4) of victims (67%) were below the age of 20. Five (5) of these cases (83%) were below the age of 25 and the youngest victim was 14 years old.
Figure 7 also indicates that Female suicide had been reported earlier (1986-1990) but had remained constant. There was a 1:1 ratio of Male: Female fatal suicide cases.

Figure 8

83% hung themselves and were found dead, while 17% died as a result of drug overdose.

The exact reasons for these fatal incidences could not be accurately pointed out but according to parents and close family members of the victims,

- One case was not purposely to end life, but was an imitating of a video act that went wrong and ended this young person’s life.
- 67% of these cases were believed to be as a result of the victims being beaten by their parents or guardians.
Part 3: Interview

Summarising below are some of the comments and views of survived victims and immediate family members of those that died from suicide, church leaders and members of the general public that were eager to share their experiences and views on suicide in the Tokelau Islands.

There was a general sense of sadness, regret and shame among parents and family members that mourn the loss of their sons or daughters. Parents acknowledged and realised that beating their son/daughter pushed him or her to committing suicide. One parent commented, “If I had known that she would be taking her own life, I would not have beaten her”.

Close families of those that lost their lives to suicide were in deep grief, felt guilty, and blamed themselves for their loss. Often ask “WHY”, and blaming their parenting for such a sudden devastating event. Such an incidence was never raised and discussed in the home, however, deep inside, parents and close families mourned their loss in their own ways. It was a privilege to share with these families and they were moments of tears. For some, this was the first time to openly discuss the incident since.

Individuals that survived suicidal attempts shared their opinions with a hope that others would learn and benefit from their experiences. One member said, “if I could rewind the time, I would not have done it”, “When I recovered, I thought of my family, my parents and my children, and I thanked God that I did not die, I will never do it again.

Some victims indicated that they committed suicide so that their parents would hear them and their views. However, “after I committed suicide, my parents listened for a short time and then it went back to what it was like before”. Others indicated that they committed suicide because they:

• They were involved or did something that their parents would not approved and were afraid that they would be beaten
• Had family problems between husband and wives
• Did something that was not culturally acceptable and were ashamed that the community would talk about it and would bring shame to their families
• Were depressed and angry

One victim advised, “When you feel sad and unworthy, or angry and suicidal, talk to someone and share your problem with them. Pray for God’s help. Committing suicide would not solve your problem”

One church leader commented, “We should not be gossiping about others and their short-comings, we just do not know how much these attitudes could push our own people to their limit and death. Instead, we should be supporting them”

Discussion
This was the first survey into suicide among the local Tokelau communities in Tokelau and thou there were cases before 1980, the study was limited to the last 25 years to reduce unreliability of data collected from beyond 1980.
Suicidal prevalence in Tokelau

The overall result of the survey indicated that between 1980-2004 there were 40 attempted and 6 fatal suicidal cases in Tokelau, with an increasing trend in recent years. Which gave an attempted suicide rate of 40/1500, and fatal suicide rate of 6/1500 within the last 25 years (1980 –2004). Between 2001-2004, there were 4 fatal cases in Tokelau, thus giving a rate of 4/1500. By comparing these raw figures to those from neighbouring Pacific Island countries and world wide, and with consideration of the small population, these suicide rates in becomes the highest in the world. The rate of attempted suicide was higher among Male than there was a 1:1 ratio of fatal cases. This trend aligns with higher Male than Female trend among Pacific Island population and with world norm.

Suicide was more prevalent among the young cohorts (14-25 years old), with 83% of fatalities were below the age of 25. “Societal transition from traditional to modern with attendant intergenerational conflict and pressures on the younger generation is an underlying commonality causal theme of Pacific suicide” (Howard 1986 cited in ref 10). This is reflected in the increasing suicidal trend and the concentration amongst youth. The younger age pattern evident in this study is in accord with the tendency for contemporary youth to rebel at younger ages than in the past.

Low self-esteem

Self-esteem is concerned with the way we judge our own worth, WHO had used low self worth in its discussion of depression and untreated prolonged depression had been widely published as a major risk for suicide. The result indicated a relationship between low self-esteem, suicidal thoughts, and suicidal attempts. 27% reported to have experienced low self-esteem, 13% reported suicidal thoughts and 53% of those that had thought of suicide, attempted suicide and 53% of these had family members that had attempted suicide before.

This clearly shows how depleting low self-esteem could be if not treated. Social network of family, friends and colleague relationships is an important component of and foundation for many people’s sense of self-esteem. It creates a safety net and provides opportunity for emotional release and feeling connected to others. Isolation can lead to feelings of depression that may lead to suicidal thoughts and behaviour.

Attempted and completed (fatal) suicide

There were 40 attempted suicides, which accounts for 3% of the total population.

Studies have shown that people who had attempted suicide before are at an increasing risk of re-committing suicide and death from suicide and this risk can remain up to 10 years. These individuals need psychological and social support both for the immediate and long term to avoid re-committing or death from suicide.

Family members that committed suicide

63% of respondent that revealed that they attempted suicide had family members who also attempted suicide previously. People with a family history of suicidal behaviour are more likely to attempt or commit suicide. Children learn through modelling, by watching their parents and relatives cope, and copy them. So, when family member attempt or commit suicide, children may learn that this is how to deal with the situation.
Culture and suicide
There are political and social changes in Tokelau, with incoming new knowledge that clashes with the cultural approaches especially with the younger generation. Children want to be more independent, to be in control, they expect to contribute more to decision making about themselves. However, within the Tokelau culture, parents make the decision in the home and children are expected to do as they are told. Talking back at one’s parents is very rude and shameful for parents in the eye of the community.

Tokelauans are proud people, and this pride forces most individuals to try to be perfect. A minor disruption that stands to ruin their reputation makes them feel shame, and unworthy and if they lack the self-confidence and coping skills, it can push them towards suicide. This is a critical point in their lives and they need support so that they can get through it.

Copal punishment is an acceptable way of disciplining children in Tokelau and as shown from the findings of this survey, it contributed to 67% of fatal suicides in Tokelau. Harsh disciplinary actions could cause pain, grief and anger among children and push them towards suicide. As one parent who lost a child to suicide commented, “For all of us parents, guardians, brothers and sisters, listen to our children, give them the chance to share their views and consider them. If I had, I would not have lost my child “.

Depression and suicide
Depression had been widely studied and proven to have a strong link with suicide but often, unrecognised and under treated9. But there are also factors that can impact this correlation in both ways, either to push towards suicide or avoid suicide. These negative factors may include low self-esteem (personality); family member committing suicide (childhood experience) and peer relationship.10

The Tokelau communities have little understanding and awareness of depression thus limiting the ability of individuals to define and report symptoms of depression. This survey faced with this challenge and therefore recommending further comprehensive research into the level of depression among the local communities and any impact it may have on suicide.

The study revealed that one contributing factor to suicide was people talking/gossiping. Gossip has suicidal effects on the emotions. Most people think that suicide is harmless, but it is not so. Gossip is abuse and can destroy people’s lives and may lead to suicide.

Alcohol, smoking and suicide
70% of attempted suicides were reported to be under the influence of alcohol when the incidence happened. 43% of respondents also indicated they turn to smoking and alcohol to relieve pressure and relaxation. Thou there is no direct relationship between smoking and suicidal behaviours, it has a direct relationship with depression, which in turn has an indirect effect of suicidal behaviours.11

Alcohol use at the time of suicidal attempt is an important factor 12 Alcohol causes depressed mood, lowers inhibitions and impairs judgement thus increasing vulnerability to suicide.7,13

Recommendations
The recommendations below are general and the Tokelau Government may need to consider each of them
carefully to assess their viability in the Tokelau context and may choose to adapt them or not. If they do adapt the recommendations, there should be clear monitoring and evaluation strategies to allow for better assessment of their success.

**Multidisciplinary Taskforce for Suicide Prevention**
- The Government of Tokelau, in collaboration with the three local communities, should put together a multidisciplinary taskforce for suicide prevention. However, all government, non-government organizations, churches, community groups (Fatupaepae, Taulelea, Tupulaga) and local communities should all work together and support this taskforce.
- Immediate and priority focus on youth and development (capacity building) to improve their ability to cope with life, improve their self-confidence and enhance their ability to effectively involve in decision-making on issues directly related to them.
- Develop a framework for the effective communication of suicide-related information while protecting the dignity and privacy of those involved.
- Develop a local and national reporting and recording system for suicide (one for attempted and one for fatal). This will greatly assist in further research and especially with the evaluation of suicide preventative strategies.

**Review Government Regulations and Village Policies/Rules**
The Government of Tokelau, the three atolls and the Tokelau Legal team should work together through the following recommendations to ensure social policies that are fair, just and equitable and addresses the underlying causes of suicidal thoughts and behaviours among the Tokelau population.
- Review village regulations on girlfriend and boyfriend relationships.
  Some young couples were forced to get married to escape the law (of getting the girlfriend pregnant before marriage) but was not for love and this contributed to marriage breakdown, extramarital affairs, depression and had led to attempted suicide.
- More strict laws on censoring incoming DVDs and movies especially for children
  As indicated in the result, one fatal case resulted from an imitating of a video that went wrong and ended this child’s life. Tokelau should step up on censoring of incoming DVDs especially for children. Parents should also make sure that what their children are watching is acceptable.
- Review alcohol policies both at government and village levels
  Alcohol influenced an individual’s mental state to make good decision, and as indicated in this study, majority of attempted suicide were under the influence of alcohol when the incidence happened.
- Copal punishment should be reviewed under the law
  As revealed in this study, copal punishment contributed to most lives lost to suicide, and thus Tokelau should review copal punishment as an acceptable form of disciplining children.

**Health services**
Tokelau Health department should review its Strategic Directions and put emphasis on Mental Health with consideration of the priority areas of the PIMHNet towards suicide prevention.

Improving facilities and health staffs’ capabilities to address suicidal cases when it happens.

- Medical Officers, Nurses and health professionals in Tokelau should be well-equipped with the appropriate skills to recognize early signs and symptoms of depression early and other mental conditions,
such as alcohol abuse, that increases one’s risk of suicide so that they can manage these cases soon thus helping in reducing suicidal incidences

- The department should consider training or recruiting psychiatrist, counsellors that would have the trust of the people to provide professional support for individuals in need.
- Because most often, nurses manage hospitals, they should be trained in both medical and psychiatric management of suicidal victims.
- Public Health and Mental Health officials should work together to improving public knowledge and literacy of mental health and suicidal behaviour, and this may contribute to suicidal prevention by changing public recognition and attitudes towards mental health. For example, programs which aim to increase public awareness and understanding of depression may lead to better recognition, treatment seeking and support for those with depression.
- The department should provide training programs, which focus on enhancing the skills of the community, other organizations such as those working in schools, Fatupaepae, Taulelea, youth and other community groups, so to improve identification and referral of individuals at risk of suicide.

**Further research**

- Further investigations to the impact of alcohol on suicidal behaviours
- Further research into the extend of depression and the relationship with suicide
- Research into the underlying factors that contributed to the differences in suicide rate between the three atolls

Findings from these researches will provide more detailed information that will assist the Health department and the government in developing more specific and focused strategies for suicide prevention.

**Limiting factors**

The limited understanding of what suicide is among the local communities, the poor recording systems, the public humiliation/community perception of suicide, concealment of suicide, uncertainty of intent, especially concerning reasons for swimming out to see (as reported in the attempted suicide), may have affected the availability and reliability of the data collected. This might have caused an underestimate or overestimate of the extend of suicide in Tokelau.

However, we trust the accuracy of the data collected in this survey and the results will guide suicide prevention in Tokelau and also will provide the platform for further research development in the future.

**Conclusions**

The study revealed high suicide prevalence in Tokelau from 1980-2004: 40/1500 attempted suicide and 6/1500 fatal suicides within the last 25 years with an increasing trend in recent years.

Suicide was more prevalent among the young cohorts (14-25 years old). 83% of fatal cases were below 25 years old. Low self-esteem, suicidal thoughts were also higher among younger cohorts (15-25 years old). This indicates an immediate and priority focus on youth, with appropriate strategies to enhance their self-confidence and their ability to cope with life and prevent suicide.

There were more Male (65%) than Female who attempted suicide, but there was an equal ratio of genders among the fatal cases. Atafu reported a higher number of attempted suicides while Fakaofo reported more fatal cases.
Several factors contributed to someone committing suicide, which included:

- Failure within family relationships between parents and children
  - Children being beaten by parents,
  - Children were not given the chance to voice concerns within the family circle.
  - Parents favouring one child over the other
- Relationships problems such as marriage breakdown
  - Husband or wife having affairs—betrayal of trust and integrity
  - No supportive from husband or wife
- Boyfriend-girlfriend relationship problems
  - Parents not approving of girlfriend or boyfriend
  - Being betrayed by their partners
  - People gossiping and public humiliation
  - Lost of loved ones, lost of status within the community
  - Ashamed or afraid because they had done something wrong/unacceptable
  - Depressed; bored; anger
  - And failure in school examination.

83% of fatal suicidal victim hanged themselves and though it is hard to avoid accessing this method, the people of Tokelau should work together to avoid another victim from getting to the situation that will push one towards hanging and committing suicide.

The likely outcomes of suicide, most often, are by their nature, unpredictable. To avoid this event and to help suicide victims, one should break through the fear, depression, anger, and risk factors discussed above. As often, one could not get through these risk factors themselves, and would therefore need the support of families, friends and the communities. Gossiping and talking behind people’s back do not help.

Culture has both positive and negative effect on someone’s life; some increase (family and community connectedness) or decrease (little input of children in decision making in the home) the risk of suicide and thus individuals should be cautious, considerate and mindful of the impact of their actions on others.

Religious belief and church is sacred in Tokelau and as reported in this study, have huge impact on how individuals deal with situations. Individuals pray to relieve pressure and low self-esteem.

The multifactorial causative and contributing factors to suicide in Tokelau indicate the need for an urgent collaborative approach between the government of Tokelau, local church leaders, health professionals, non-government organizations, and all three communities to address this emerging challenge and avoid losing another innocent life to suicide.

**Acknowledgement**

We would like to acknowledge all individuals and organizations that had provided their supporting hands during all stages of this survey.

Sincere gratitude to the New Zealand Health Research Council (NZHRC) and World Health Organization (WHO), for the technical and financial support for this survey. To Ms. Jacinta Faalili of Pacific Health, NZHRC, for her continuous motivation and encouragement throughout the survey; to the three Taupulega
(Atafu, Nukunonu, Fakaofo) for allowing this survey to be implemented in their respective atolls; staffs and management of Tokelau Health Department and the three hospitals for their assistance in data collection, and to our families and friends for their support and encouragements.

Foremost, to all participants for their courage to share their experiences with us and provided the core information for this report. The highly sensitivity and personalization of the information this survey was set out to collect posed a barrier to success. However, the trusts and confidence these participants had on us, and the support of all those that are acknowledged above, made the survey possible.

This report honours those in Tokelau that had lost their lives to suicide. Our condolences conveyed to all their families and friends. This report would provide a stepping-stone for the government and health department in addressing suicide in Tokelau.

References
1. Khan MM, 2005, Suicide prevention and developing countries, Journal of the Royal Society of Medicine, 98; 459-463
Developing Human Resources for Health in the Pacific

Journal of Community Health and Clinical medicine for the Pacific
March 2007 Volume 14 Number 1
National Health Systems Research Workshop:
Programs and Abstracts

From the Workshop Participants

25th and 26th of June, 2009, Pacifica Campus,
Fiji School of Medicine Programme
### Day 1: 25th June, 2009

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<td>Minister for Health – Dr. Neil Sharma</td>
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<td>WHO Representative in the South Pacific – Dr. Chen Ken</td>
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<td>Fiji Health Sector Situational Analysis 2009 - Sutton R, Roberts G and Lingam D.</td>
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<td>The Renewal of Primary Health Care as an Approach to the Organization of Health Systems – Dr. Amelia Turagabeci</td>
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<td>Long Term Impact of Exposure to Hazards from Ship Breaking on Worker’s Health – Karim M, N. Faruqee M.H</td>
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### GROUP 1

1. Revalidation of Dental Practitioners in Fiji – A More Accountable and Responsible Practice – Clinical Audit, Professional Knowledge and Skills – Devika Ram
2. Cross – Infection Potential of Impression Compound – Arpana Devi
3. Revalidation of Dental Professional in Fiji – Working Towards Safety and Higher Standards in Dental Practice: CPD and Revalidation- Mr Naushad
GROUP 2
1. Rheumatic Heart Disease Control Program – S. Noonan T. Babitu, S. Coluhoun, J.Kado, W. May, K. Prasad, J. Carapetis
2. Underdiagnosis of Acute Rheumatic Fever in Primary Care Settings in Fiji – Tom Parks, Joseph Kado, Samantha Colquhoun, Jonathen Carapetis, Andrew Steer

GROUP 3
1. PICU Mortality Audit in Fiji – Ben Reeves, Monica Brook, Swastika Narayan
2. Evaluation of the Fiji School of Nursing Undergraduate Nurse Perceptor Training Program – Padma Prasad

GROUP 4
1. Effectiveness and Efficiency of Two Trolley Systems as an Infection Control Mechanism in the Operating Theatre – Viliame Tuisawana
2. Stress and Burnout among Fiji Surgeons – Rajeev Patel

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<td>Health Metrics Network – Mere Delai and Elenoa Bukasoqo</td>
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<td>Public Health Information Systems – Marica Kepa</td>
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<td>The Need for a Health Policy and Systems Research (HPSR) Capacity in the Pacific – Graham Roberts</td>
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<td>Voting of Thanks – Ms Laite Cavu</td>
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GROUP 1

1. Implementing Fiji’s Health Management Reforms (1999 – 2004) – Audrey Aumua
3. Health Financing in Fiji – Lingam D and Roberts G.

GROUP 2

1. RHD Control Program – Ben Reeves, Joseph Kado and Monica Brook

GROUP 3:

1. Changes in Food Eating Pattern in Fiji – Jimaima Schultz
2. Assessing Community Readiness for Obesity Prevention in Youths in the OPIC Project in Fiji – An Application of the Community Readiness Model – Waqa Gade, Roberts G.
3. Micronutrient Status of Women in Fiji – Penina Vatucawaga

Fiji Health Sector Situational Analysis 2009. Sutton R., Roberts G., and Lingam D.

In preparation for further support to the Fiji health sector upon completion of the FHSIP in 2009, AusAID wanted to obtain good baseline data and analysis of the health sector situation, including progress towards achievement of the health related MDGs 4, 5, and 6. It commissioned this Situational Analysis to inform a scoping and design team to come to Fiji sometime in mid-2009. The objectives of the Situation Analysis were:

1. To provide a ‘snapshot’ of the current status of the health sector in Fiji from health service delivery and systems levels;
2. To present and assess the state of health based on latest data and statistics, determine limitations of data and propose methodologies to enable tracking for MDGs and any future program support indicators;
3. To identify opportunities and gaps for future AusAID programming, including strategic objectives and likely areas of impact.

Summary of Findings

- The existing health service delivery framework was put in place to provide ready access to all and has been functioning for many years, but over recent years issues such as demographic and social change, improved transport and changing medical standards, the location and size of the building blocks requires review.
- Workforce issues are of major concern to both curative and public health departments of the Ministry with clinical areas most acutely affected with a serious shortage of senior medical officers, including specialists, as 36% of established senior positions are vacant. The continued shortage of specialist medical officers will, over time, lead to a serious deterioration of service levels.
• **Financial constraints** remain an ongoing problem. Although there has been an increase in the size of health budget in recent years, the per capita health expenditure has declined from $176 in 2005 to $163 in 2008 and the MoH budget as a percentage of GDP has declined from 4% in 1993 to 2.6 in 2008, representing a continuing and steady decline to the lowest percentage of GDP of all countries in the Pacific.

• **Progress on health indicators** has stalled or deteriorated since the mid 1990s. The Infant Mortality Rate was 16.8 in 1990 but had worsened to 18.4 in 2007. The Maternal Mortality Rate of 26.8 in 1990 had worsened to 31.1 in 2007. Both were well short of the MDG targets of 5.6 for IMR and 10.3 for MMR. Under 5 mortality, infant mortality and maternal mortality rates are not only worse than the commitment given in the MDGs in 2000, but are considerably worse than in 1990.

• **Other findings reveal** that old or non-functioning equipment impacts on service delivery, stock outs of essential drugs are still occurring despite some progress over the past 12 months, there is a need for more focused planning and better use of management information systems, there is a significant disconnect between the MoH’s corporate plans and achievement of its KPIs, the health sector should be seen as being more than just the MoH – MoH should work more closely with its partners including the private sector, NGOs and the international agencies and there is a need for stronger evidence based approach to policy and planning that will require a dedicated program of operational research.

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**The Renewal of Primary Health Care as an Approach to the Organisation of Health Systems. Dr. Amelia Turagabeci.**

**Introduction:** It has been over 30 years since the Alma Ata Declaration, a historic event not only for health but the birth of Primary Health Care. What is now Almaty – Kazakhstan, in 1978 representatives from 134 countries converged to Alma Ata the former USSR and declared that the key to delivering Health for All by the year 2000 was Primary Health Care (PHC). Primary Care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community [IOM]. It is described as the first line of health service provided alternatively *primary health care* is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.

PHC uses a holistic approach which encompasses comprehensive, universal, equitable and affordable healthcare service for all countries. It appealed for universal coverage of basic services such as education on methods of preventing and controlling prevailing health problems; the promotion of food security and proper nutrition; safe and adequate water supply and basic sanitation; maternal and child health, including family planning; vaccination; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and the provision of essential drugs. *Alma Ata* Health is a human right, and binding in terms that it is included in most national constitution [Kinney]; there is still a margin in terms of service accessibility, affordability and still provision of basic health care services are threatened by national insecurity [Mashal]. As economic development improves the incomes and standards of living in many developing countries, an increasing gap is opening up between the rich and the poor and this is associated with inequitable access to healthcare services [Hall].
**National Health Plan Goals:** To achieve our goal for *Health for All*, we redefine our objectives incorporating the Millennium Development Goals [MDG’s]. Building on the heightened attention to global health issues, during the 1990s, the international community developed the Millennium Development Goals (MDGs), a set of ambitious targets to reach by 2015 with the overall goal of reducing global poverty and improving the health and welfare of the world’s poor. Of the eight MDGs, three relate specifically to health issues with others interconnected/related to health and development through sanitation, education, and poverty alleviation.

**PHC in Fiji:** Fiji has over the years made great achievements in terms of Primary Health Care service delivery. Our own Fiji School of Medicine [FSMed] has a 124 year old history training health care professionals in the Pacific Region. Initially set-up to train vaccinators, the school has grown over the years, and currently has 5 departments namely Medical science, Health science, Public Health and Primary Care, Oral Health and Research department. Students are exposed to the Primary Health Care concepts and practices through various Public Health courses including practical attachments in the community.

The evolution of primary Health Care in Fiji can be dated back to the colonial era with the use of village health workers, and traditional birth attendants, the training of medical assistants. The term PHC was introduced to Fiji in 1977 way before it was ratified in Alma Ata with the decentralising of services to sub-divisional level and also because health care in Fiji was widely available and **free**. The National Health Plan seeks to address issue in PHC by addressing indicators of progress. For referral systems, although health systems should have a mix of primary (community based), secondary (district based) and tertiary (specialised) facilities and services to provide a continuum of prevention and care. On the policy view, Fiji health system is mostly community based driven. To decentralising of services, health care service was brought to the community doorstep by establishing rural nursing stations and having zone nurses’ at the most local level. Community pharmacies were also established and located at the government health centres and sub-divisional hospitals, what was once only accessible through major hospitals and commercial outlets. A new cadre of community health workers [CHW] were also trained to deliver health care services at the community/village level. This was made possible with Ministry of Health and partners in health like the Fiji Red Cross society.

**Impacts of PHC in Fiji:** Since being introduced in 1964, and re-organisation of health structure, family planning user rate have greatly increased. Family planning services were available at community level through CHW. Disease specific initiatives have weakened health systems and limited efforts to improve maternal and child health and our ability to respond to new health and development crises. The threats posed by newly emerging infectious diseases, climate change, urbanization, and the rise of chronic diseases threatens to erase many of the gains we have achieved. Thirty years on, the concept of providing primary health care for all offers a possible roadmap to attain the MDGs by 2015 and create sustainable, long term investments in health. It is heartening to see that global health leaders have recognized the urgent need to create greater coherence among health initiatives and organizations, and focus funding and attention on basic health system investments to save millions of people every year that now perish needlessly from preventable diseases and find new tools to save still more lives.

The community, through its leaders, was to be involved in the planning and implementation of its own healthcare services through community Primary Health Committees. As the world reviews healthcare services beyond 2000, 23 work continues on reducing health inequities for poor people. Many research [on scaling up] questions needs to be addressed, to be embedded on large scale programmes requiring...
collaboration between national policy makers, practitioners, public health researchers and funding/donor agencies. Integrated primary health care approaches are of central importance in tackling the growing burdens of chronic diseases, irrespective of causes. This can also address issues of emerging and re-emergence of diseases. PHC is more effective when complemented with more effective public policies like tobacco control.

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**Long Term Impact of Exposure to Hazards from Ship Breaking on Workers Health.**

*Karim M.N., Faruquee, M.H.*

Ship breaking Industry is an industrial sector with huge economic potential in Bangladesh. However, such alluring potential comes at a cost of serious environmental and public health degradation. Dismantling of ships is a dirty and dangerous occupation. Several types of hazards prevail in the area or work; most of them are derived from the content of the ship. Several of the chemicals used in ship building before 70s were banned worldwide due to their severe impact on human and environment. Those ships are currently at the age of retirement from liner service and contain biological and chemical hazards including Asbestos, Polycyclic Aromatic Hydrocarbons and heavy metals etc. Besides these, repetitive exposure to physical force and poor work environment also contribute to the toll of hazards. All these exposures pose risk of immediate and tardy health consequences. Most researches done in the issue encompassed the immediate impact of such occupation which actually represents only one slice of a bigger pie. The long term and even more debilitating impact like, Cancer, Heart, lung, Liver, kidney diseases and neurological effects are generally ignored, as most of these diseases have longer latent period. In some cases due to long latency, the link with such exposure is even ignored.

The focus of the current research is to explore long term impacts of the hazards involved. Our research will define exposure retrospectively to reduce the lead-time observation period and will focus on most chronic disease that are known to be derived from the hazards the workers exposed while working at the ship breaking yard. All males above 40 years of age, in a village among ten villages of Bagura district, known to be the residence of former and current ship breaking workers were recruited as cohort. Current morbidity is considered as outcome and the exposure is confirmed based on job history at ship breaking yard. Workers’ whose employment at the ship breaking yard started at least 15 before the study and worked at least 2 years in the yard were included. In-built comparison will be sought between the workers and non workers in the cohort. The findings are expected to reveal association of the exposure with several of the chronic diseases and are also expected to unveil the missing link of higher incidence of some diseases with exposure to particular hazards in the cohort.

**Key word:** Ship Breaking, Retrospective cohort, Chemical hazard, Asbestos, Cancer, chronic disease

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**Ministry of Health Website. Rajneshwar Prasad**

**Introduction:** For any organization to be effective and efficient, the organizations website should be customer friendly. It should be organized and presented in such a way that people get access to their particular areas of interest without any hardship. It is crucial for any organization to have a precise definition of their service. For instance, the ministry of health’s website provides a vivid description of the services provided,
the upcoming events and any other health related issues that the public need to be aware of. This enhances each and every individual’s knowledge and understanding about critical health issues.

**Design Process:** In order to design the ministry of health’s website, the analysis of the website that was currently in use at that point in time was carried out. All the relevant information that could be of use to develop the website was gathered and analyzed. Moreover, the information was filtered. This was done because we had surprisingly gathered more than enough information and out of all we had; one had to outweigh the other and there were also that information that was confidential and could not be made public. Based on this we selected what we had to present in our website and what was irrelevant was eliminated. The website was then designed and was presented to the authorized people for their feedback. Taking all this judgments and opinions into consideration the website was redesigned and finally launched on 3rd December, 2008.

**Usage of the Website:** The website is particularly important and handy for everyone. On the website, information on public health, vacancies, etc are posted. It provides awareness on major disease outbreaks; for instance typhoid, dengue fever and others. It also provides tips on the necessary precaution that has to be taken. The website itself is a major source of interaction with outside countries. It gives foreigners an opportunity to interact and provide their views and suggestions via the website. Through the website the promotion of other resources is enabled as well, for example, Hinari, National food and nutrition centre, etc. The website is monitored regularly so that people accessing the website have access to accurate, timely and reliable information.

**Cross-Infection Potential of Compound; A Reusable Impression Material In Dentistry.**

*Arpana A. Devi · Zac Morse · Sharon Biribo*

**Purpose:** To determine the cross-infection potential of impression compound as used clinically in certain developing country settings.

**Materials and Methods:** Microbiological tests were conducted on impression compound that are reused at the Colonial War Memorial Hospital, Fiji Islands, to detect the presence of bacteria. Swabs of impression compounds were taken to identify the critical points at which bacteria may survive on the compound leading to the potential introduction of organisms into a patient’s mouth. For plates showing growth, colonies were observed and identified using Gram staining, Microbact™ identification kits and other biochemical tests.

**Results:** Transfer of viable organisms from patients mouths were found on the compound at all stages of the impression process. Improper disinfection and storage of impression compound and trays allowed for the introduction of hospital pathogens on the compound that were not initially present from the patients.

**Conclusion:** Financial constraints may tempt the reuse of impression compound; they should however not be reused on different patients and appropriate universal precautions must be followed to decrease the likelihood of cross-contamination.

**Keywords:** Impression compound; cross-infection; nosocomial infections; Fiji.
Revalidation of Dental Professional in Fiji: Working Towards Safety and Higher Standards in Dental Practice. CPD and Revalidation. Md Naushad

**Introduction:** According to the current Medical and Dental Practitioners Act of Fiji (cap 255, last revised in 1978) all graduate dental & medical professionals are registered for life owing to the fact that a revalidation system does not exist. The Act is a legal document encompassing the requirements and concerns regarding medical and dental practitioners in Fiji.

There is growing concern amongst patients in Fiji that dental care is not being provided to the highest standards possible and this is becoming a serious issue in Fiji. In the year 2006, the Fijian Parliament granted a review to be carried out on the Medical and Dental Practitioners Act which was to be funded by the AusAID. However, the funding was withdrawn by Australia due to the sudden overthrow of the government in place at the time. This review was proposed to include Revalidation and CPD as a new part of the Act.

**Revalidation** is a process by which a dental or medical practitioner is evaluated on his/her competency and knowledge and his/her practice could be assessed for its safety and standards in order to continue to practice. A key component of revalidation is **Continuing Professional Development (CPD)**, which is the study, training, courses and other activities undertaken by the dental personnel to upgrade their knowledge in the advancement of professional development of dentistry or any area of profession. **Recertification** is another mode of assessing a dental professional on the basis of their level of knowledge and skills.

**Aim:** To explore **Continuous Professional Development (CPD)** requirements as a component of the **Revalidation** process for dentists and to contribute information and data towards current efforts by professional organisations in Fiji in reviewing the Medical and Dental Practitioners ACT along with the need for compulsory **CPD** and membership to a professional body

**Objective:** To gather information related to CPD to assist professional body initiatives towards the implementation of a revalidation process for dentists in Fiji and towards the review of the Medical and Dental Practitioners Act

**Results:** Sixty questionnaires were distributed among dental officers in all the three Divisions of Fiji and yielded a response rate of 41.7% (25) after the first distribution. Paid reply envelopes were included in the dissemination to encourage a faster and favorable response. Female dental practitioners made up 48% (12) of the responses while 52% (13) were males. In all, 76% of the dental practitioners have access to internet at their practice and at home leaving 24% without access to any internet service to update their knowledge. Responses based on journal access revealed that 46.2% of dental practitioners find reading dental journals very valuable in terms of gaining information and updating their knowledge. 23.1% of the dental practitioners find reading journals valuable, 15.4% find some either valuable or very valuable while 15.4% find it extremely valuable. The most common journal of choice amongst dental practitioners in Fiji is BDJ and ADJ followed by Hinari, JADA, Mediscope, NZDA, APDN, SCD and Clinical Perio. 48% of the dentists have dental books for reference on their practice premises as well as 80% said that they also have personal copies of dental books for reference outside of their practice. 18 dentists (72%) thought that life registrations as it currently exists should be changed while seven thought that life registration should continue. Various reasons given to change the registration scheme included: that the benefits through revalidation were found to be (a) the quality of dental services to the public will improve, (b)the public will feel safer when having dental
treatment done by dentists in Fiji, (c) there would be better treatment options available to the public, (d) there could be less complaints from the public about the quality of dental services, (e) it will increase the public’s confidence about the dental profession. 36% of the dentists think that there are some disadvantages to revalidation giving reasons such as: they do not have time to continue their education as they have commitments with government clinics, there is no opportunity to update, the revalidation scheme does not assess how well the dental practitioner is performing and hence depends on the capacity budding of the dental professional, while 64% think that there are no disadvantages to revalidation. 84% of the respondents think that life registration should be replaced revalidation while 16% think that it should not. There were also 4% of the dentists who thought that their career is at risk if revalidation is implemented reason being that they will not have enough time to do what is required as well as they do not understand the criteria and the standards being set for the revalidation process.

Conclusion: It can be concluded from this survey that there is a need to implement revalidation and recertification to revalidate dental professionals as well as include CPD as a requirement and that this scheme should be widely accepted as a legislation towards providing safer and higher standards of dental care to patients in Fiji.

Rheumatic Heart Disease Control Programme

S Noonan, T Babitu, S Colquhoun, J Kado, W May, K Prasad, J Carapetis

Rheumatic heart disease is a disease of children and young adults. It can be prevented with long-term, regular Benzathine penicillin G injections (secondary prophylaxis) following early identification and treatment of acute rheumatic fever.

The World Heart Federation supports RHD control in the Pacific. Dedicated control programmes are supported in Fiji, Samoa and Tonga, and technical support is provided to a number of other countries as required. Eighteen Pacific Island countries have attended RHD workshops in Fiji and are part of a network of clinicians and policy makers which is attempting to address RHD issues at a regional level.

In Fiji more than 1000 people have been identified with RHD and many have had heart valve surgery. Since 2005 the World Heart Federation has assisted the Fiji Ministry of Health to establish a national RHD programme which focuses on identifying and registering people with ARF and RHD and improving delivery of secondary prophylaxis to prevent recurrent ARF and to help reduce the burden of RHD in the community. This approach is based on international best practice.

Aim: The Fiji RHD Programme project aims to
- Standardise diagnosis and management of disease throughout Fiji;
- Screen children to detect RHD early;
- Record all known individuals onto a central register and use the information to improve long-term care;
- Raise awareness among health staff and the community to improve care

Methods: The RHD programme started in the Central/Suva region and has expanded over 3 years to include all areas of Fiji. A computer database register was developed to record individuals with disease. This
register is able to produce automated reports which are sent out to health centres to provide information and retrieve updated information about patients. In collaboration with the Fiji Group A Streptococcus Project children at schools across Fiji are screened and those with confirmed RHD are referred to the programme. Delivery of long-term secondary prophylaxis has been standardised and the programme works with staff at health centres to ensure that patients receive adequate treatment to prevent recurrent ARF. Benzathine books have been distributed to all health centres where Benzathine injections are given to help standardise recording and monitoring of treatment. Doctors and nurses working in primary health care receive training on the diagnosis and management of ARF and RHD via two-day workshops which are held in Suva, Lautoka and Labasa, and posters and pamphlets have been developed in English, Fijian and Hindi to help increase awareness in the community. Patients receive specific education about ongoing management of disease during hospitalization.

Results: The Fiji RHD programme has identified and registered over 1300 adults and children with ARF and RHD over the last 3 years; many of these were already known to health services. More than 6600 people have been screened for RHD and almost 100 new cases have been identified and added to the register. More than 200 doctors and nurses across have attended workshops on RHD; one international publication resulted from the effectiveness of this training and workshop participants have received a copy of the World Heart Federation curriculum for diagnosis and management of RHD. Improvements in Benzathine penicillin injection delivery have been slow. As at December 2008 only about 46% of people requiring injections are receiving adequate treatment to prevent recurrent ARF.

Discussion: The profile and management of rheumatic heart disease has increased significantly throughout Fiji since the RHD programme was established in 2005; however there have been a number of limitations. Benzathine injection delivery must be improved if treatment is to have a sustainable impact on the burden of disease in the community. To help address this the programme is introducing a continuous quality improvement activity through which the RHD Programme works with individual health centres to review their own health service delivery and plan an individual and sustainable approach to improve health care and patient outcomes. This activity will be trialed in 3 health facilities; one each in the Central, West and Northern Divisions. Further screening activities are planned with the aim of increasing the number of RHD echo technicians who can undertake echocardiography screening in collaboration with school health teams.

Underdiagnosis of Acute Rheumatic Fever in Primary Care Settings in Fiji.
Tom Parks, Joseph Kado, Samantha Colquhoun, Jonathan Carapetis, Andrew Steer

Background: Echocardiographic screening programmes have revealed that rheumatic heart disease (RHD) may be considerably more prevalent amongst school children in the developing world than was previously thought. Acute rheumatic fever (ARF), the antecedent of RHD, may also be more common than was previously thought, but there are currently no epidemiologic data that confirm or refute this. We aimed to determine the incidence rate of ARF in two primary health care clinics, to characterise the clinical features of ARF and to assess the diagnostic evaluation of children presenting with features of possible ARF at two clinics in a region of Fiji where RHD is known to be endemic.
Methods: We reviewed 5 years (2003-2008) of primary health care records from 15,841 patients aged 4-20 years using a predetermined case definition for ARF. Detailed clinical data from 944 cases with features of possible ARF were reviewed.

Results: The crude incidence of first episodes of definite ARF in this setting amongst patients aged 4-20 years was 26.2 per 100,000 person-years. Joint involvement suggestive of a potential first presentation of ARF but not sufficient for a definite retrospective diagnosis was documented in a further 93 records. There were a further 529 cases of joint involvement less suggestive of ARF and 322 cases of unexplained fever with no evidence of localised infection. Patients presenting with potential features of ARF seldom had a diagnostic evaluation sufficient to exclude the diagnosis of ARF.

Conclusions: The incidence of definite ARF at these primary care centres in Fiji is twice as high as that previously reported in a hospital-based study, but is likely to represent only a fraction of the actual number of cases presenting to primary care. There is a need for better surveillance for ARF and to develop simple and practical approaches to diagnosing ARF in primary care in low-resource settings.

PICU Mortality Audit in Fiji. Ben Reeves, Monica T. Brook, Swastika Narayan.

Objective:
1. To carry out an audit of PICU mortality using currently accepted scoring systems employed in developed countries.
2. Compare mortality between Lautoka and CWM hospitals in Fiji.

Method: Data was collected from consecutive admissions into the Lautoka Hospital PICU over a period of ten months from 23/11/07 and into the CWMH PICU over a period of nine months beginning 12/12/07. The data included the duration of stay, diagnosis, ventilator days, inotropic support as well as the parameters of interest in PIM scoring (systolic blood pressure, inspired oxygen concentration, partial pressure of oxygen, base excess, underlying conditions etc.) as set out in the original articles and using the formulae as published. The data was first recorded on printed sheets and then transcribed onto Excel for analysis. Both written admission records and the electronic database were referred to in order to ensure that all admissions were captured for the study. Only the data from the first hour of admission was used to calculate the PIM score. The PIM scores were averaged and then compared to actual mortality.

Results: There were a total of 167 admissions into the Lautoka PICU over the ten month period and 227 admissions into CWMH PICU over the nine month period. Twenty (11.98%) of the 167 patients into the Lautoka PICU died and 44 (19.3%) of the 227 patients into the CWMH PICU died. The PIM score denoting expected mortality based on the severity of illness at admission was 7.48 for the Lautoka PICU and 7.14 for the CWMH PICU.

Conclusion: The difference in the results may be due to inaccuracies in the scoring system itself. However, it is also important to note that during this period significant changes in clinical care were undertaken in Lautoka and this may have contributed to the lower mortality. This audit has shown that Lautoka is getting patients who are just as sick as CWMH so that is unlikely to account for their higher mortality. Therefore,
an ongoing audit to monitor mortality is justified in our setting and could be used to gauge effectiveness of future attempts to improve the service delivery in Fiji.

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**Evaluation of The Fiji School of Nursing Undergraduate Nurse Preceptor Training Program. Padma Prasad**

**Objective:** To assess the effectiveness of the nurse preceptor training program for quality improvement.

**Method:** The study focused on the first two levels of evaluation using the “Kirkpatrick’s” four-level model. Level one was to find out the preceptors reactions towards the training program. Level two was to find out the amount of learning the preceptor acquired.

The sample consisted of registered nurses (n = 21) working in Colonial War Memorial hospital who had undergone Nurse Preceptor Training program. Data was collected through questionnaires after the training program.

**Results:** The reactions of the preceptors towards the training program was very positive showing that majority of the preceptors liked the training program. The findings determining the amount of knowledge gained from the training was also positive and showed that there was increased knowledge.

**Conclusion:** Findings suggest that preceptors value the knowledge they get from the training. However areas have been identified which needs improvement. Also identified is the need for a preceptors handbook to be provided by faculty and the need for continuous training.

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**Effectiveness and Efficiency of the Two Trolley System as an Infection Control Mechanism in the Operating Theatre. Vuli Tuisawana**

**Background:** Infection control practise and policy is determined by various factors, examples are the function of the unit, traffic, age of the building and layout (Infection Control Manual of Fiji, 2002). Labasa Hospital is an old building where the layout and age of the building greatly challenges the implementation of current infection control policies. One of the challenges is the one way traffic for pre-operative and post-operative patients into and out of the theatre. The two trolley system is an old but simple method of infection control suitable for this type of scenario. The two trolley system, whereby an allocated ‘outside trolley’ transports patients from the ward to theatre. They are then transferred onto the ‘inside trolley’ which transports the patient to the operating table. As research have guided evidence-based practise, the two trolley system should be scrutinized as an infection control mechanism. The Infection Control Manual of Fiji (2002), stresses that a good hospital infection control prevents hospital-acquired infections. The prevention of hospital-acquired infection saves life, limbs, money and resources. Micro-organisms are found in everything but in a given environment it multiples to become pathogenic. The Royal Australian College of Surgeons (2008), emphasises that in a surgical setting, the most common mode of transmitting infections is through direct contact from contaminated instruments or hands to the patient’s tissue and bloodstream. Rainer and Russ (2005) identified that most microbes in theatre are from staffs and a few from patients. They found that a well ventilated theatre is more likely to pose a risk of direct contact transmission of infections from contaminated surfaces rather than air.
**Aim:** The aim of the study is to explore the effectiveness and efficiency of the two trolley system as an infection control mechanism at the Labasa Hospital operating theatre from 2006 to 2008.

**Method:** This is a quantitative research whereby data is gathered by literature review and past routine swab results of theatre by the Labasa Hospital Infection Control Nurse from 2006 to 2008.

**The Setting:** The study would be done on the operation theatre at the Labasa Hospital, involving the transportation of patients into and out of the operating theatre.

**Swab Results:** The swab taken inside theatre on (08/12/06) showed heavy growth of Estsobactirium Agglonorous. On (02/11/07), the theatre swab showed it’s worst side with Acinetobacter Heamolyticus found in operating room 2 (O.R.2) air-conditioning outlet and the minor operation theatre (M.O.T) suction tube. Acinetobacter baumanii was found in the suction bottle lid in operating room 2 (O.R.2) and Pseaudomonas maltophilia was found in the M.O.T. hand washing sink. The swabs taken on (23/01/08) showed no improvements as, Proteus retgen was found in O.R.1 operating table (mid-section). Acinetobacter baumanii was found in O.T.1 suction bottle, air-conditioning outlet, anaesthetic machine tube and O.R.2 operating table (mid-section).

**Conclusion:** WHO Guideline for Infection Control (2006), recommends that bacteriological testing of the environment should be reserved for outbreaks whereby the source of infection needs to be identified. The Fiji Infection Control Working Manual (2005) emphases the importance of regularly cleaning the environment and equipments in theatre but there is never a mention about using a two trolley system as an infection control mechanism for theatre. Lewis, et al (1990), recommends that the one trolley system can be used in theatre but it should be washed regularly, especially the wheels. Dharan and Pittet (2002), stressed that normal skin bacteria of patients and healthcare workers cause more than half all infection following clean surgery. Surgical site infection is the leading complication of surgery. Chan, et al (2007), emphases the importance of being vigilance in infection control by strict hand washing after contact transmission by personnel was suspected in an outbreak.

Examining the past swab results it be concluded that micro-organisms have being found in places that patient’s body or a healthcare personnel hands come into contact with an equipment or environment. The floor was never swabbed for culture because procedures are conducted on an operating table, so the two trolley system is insignificant, if vigilant cleaning is practised. To continue the two systems reinforce a false sense of infection control because the basic of infection control such as, hand washing and through cleaning is reflected as 2nd priority.

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**Stress and Burnout Levels among Surgeons in Fiji. Rajeev Patel, Collin Brook**

Job burnout is as an end product to a prolonged response to chronic emotional and interpersonal stressors on the job. Data of burnout levels among the health care workers in the developing Pacific Island countries is very limited to non-existent. This study aims to estimate the prevalence of burnout using Maslach Burnout Inventory (MBI) among Fiji surgeons. This is study currently underway. The results of this study would be presented to the hospital administrators and directors in Ministry of Health with a view of improving the working conditions for the surgeons, provision of more resources for surgeons to work with and provision of counseling services.
The Need for a Health Policy and Systems Research (HPSR) Capacity in the Pacific.  
Roberts G.

Health policy and systems research (HPSR) has been defined as the production and application of knowledge to improve how societies organize themselves in order to achieve health goals.

Abstract: As Pacific nations continue to struggle with health sector development the lack of clear policies and weak policy development process are clearly evident to those who work in the health systems. The Situational Analysis of the Fiji Health Sector (2008) has identified “a need for stronger evidence based approach to policy and planning and this will require a dedicated program or operational research”.

The Fiji School of Medicine is now teaching health policy within its Department of Public Health and will establish a Pacific Centre for Health Policy and Systems Research (PCHPSR) in 2009 with the intention to capitalise on the recent and rising interest in health policy initiatives in the region and globally.

WHO in the Western Pacific Region and The Alliance for Health Policy and Systems Research in Geneva are actively involved in supporting HPSR in low and middle income countries. In conjunction, WHO is developing an ‘Observatory on Health Systems and Policies’ in the Asia/Pacific following the recognition that policy-makers have poor access to relevant evidence-based information in health systems, the dual needs for comparative analysis and information on health systems and to increase the capacity for country specific analysis, and due to rapid economic, demographic and disease patterns changes in the Region; and rising health care costs. The Observatory will develop a systematic approach to country health systems allowing country comparisons, provide analysis and policy briefs and dialogue, build capacity in health systems analysis & policy making and strengthen research network in health systems. Fiji is not yet an active member of the Observatory but it can be anticipated that the PCHPSR will begin to participate.

WHO through The Alliance is also developing the initiative of regional based EVIPNet: Evidence Informed Policy Network for Better Decision Making to encourage policy-makers in low and middle-income countries to use evidence generated by research. It is a collaborative network of researchers, policy makers and civil society to facilitate the use of high quality research evidence to improve policy decisions. EVIPNet has been set up in several regions, was started in Asia in 2005 (with teams in Laos, Malaysia, the Philippines, and Vietnam, and three teams in China), and in Africa in 2006 (with teams in Burkina Faso, Cameroon, Central African Republic, Ethiopia, Mozambique, Niger, and Zambia). Country teams are led by senior health officials from government, in partnership with representatives from national science and technology institutions and academia, among others. The relevance to Fiji can be seen in the EVIPNet brochure, which states “health policies are not always informed by the best available evidence. Poorly informed policy-making is one of the reasons why services may not reach those most in need and why health indicators are off-track”.

Abused Men: The Hidden Side of Domestic Violence in Fiji. Akisi Kasami

This exploratory study examined the prevalence of domestic violence against males in a Fijian context and involved 216 married participants (males = 108, females = 108). The study investigated the different types of spousal violence men experience, the main circumstances that contribute to female violence and how men typically cope with their situation.
Results show that men also suffer from physical, financial, sexual, verbal and psychological types of abuse. Women being angry were identified to be the main causes of mens’ experiences of violence whereby social obligations have been identified as a contributing factor. Most men react emotionally and would seek the assistance of a priest into their experiences. This study also found that most men experienced spousal abuse at home, where children normally act as witnesses into their experiences. This is contrary to the Fijian cultural values where men are viewed as heads of households and are supposed to be treated with respect. Finally, results of this study indicated that according to participants, the pressuring demands of living as a perfect couple has become a threat to their lives because they cannot get out of an abusive relationship. For these reasons, domestic violence continues and becomes a vicious cycle.


The past thirty years have seen more than a third of the world’s developing nations undertake some form of health restructuring activity (OECD 2004; Schou and Haug 2005). Reforms have varied in content and scope from country to country, but most share common features such as changes in the institutional configuration of the health care system, health financing and the role of the public and private sector in health care delivery (Berman and Bossert 2000). Health reforms involving institutional change have included the decentralization of policy decision-making and resource management to sub regional and local levels, and institutional changes have involved the relocation of people and changes in organizational structures. Several countries in the Pacific have implemented health reforms all of which have involved some form of institutional restructuring and service reorientation (Laramour and Qalo 1985; Kolehmainen-Aitken 1991; Aus Health International 1998; World Bank 2003; Ministry of Health Tonga 2004). The Republic of Fiji, similar to other developing island nations in the Pacific, has struggled to maintain a balance between the growing burden of disease within its population, and the ability of its system to effectively respond. As part of a series of responses to these issues the Government of Fiji in 1999 conjointly with the Australian Government embarked upon a programme of health policy reforms entitled the Fiji Health Management Reform Project. (FHMRP). Its purpose to “improve the health outcomes of the people of Fiji” by decentralizing its health system. (Aus Health International 1998).

The bulk of health reform literature points to the lack of cohesive evidence and detail regarding the success of health reforms in developing countries. (Rondinelli and Shabbir 1983 Hutchinson and LaFond 2004). According to Cassels (1995) two to three decades of health sector reform experiences in many countries appear to have done little to improve the stated problems of health system effectiveness, efficiency and responsiveness (Cassels 1995). Furthermore the literature does not point to one defining issue responsible for the lack of success, rather various studies point to a mixed bag of reasons for poor outcomes in health reforms (Cassels 1995; Bossert 2000; Gonzalez-Rossetti and Bossert 2000). Issues range from the inadequate capacity of policy reforming institutions, health worker issues, political and economic instability of the country, the role of policy makers, stakeholders, donor agency influence and in particular the complexity and design of reform models used in developing countries (Walt and Gilson 1994; Litvack, Ahmad et al. 1998).

Health Reforms in the Pacific are a recent phenomenon. The central catalyst for many of the reform initiatives in the region have mostly been due to the influence of international funding organizations and regional aid donors who have, through their country specific aid programmes, enabled countries to embark on restructuring programmes. Tonga, Vanuatu, Fiji, Solomon Islands, Papua New Guinea and Samoa are most notably subsidized by the Australian Government (World Bank 2003; Aus Health International 2004; Australian Government 2004; Ministry of Health Tonga 2004; Bolger 2005).
Although very little evaluative work has been done on Pacific reforming nations and their success, there is evidence that health reforms in the region over the years have been difficult and not resulted in the outcomes that they were designed to achieve (Kolehmainen-Aitken 1991; Ministry of Health Solomon Islands 2008; Ministry of Health Tonga 2008). No formal evaluation of the Fiji Health Management Reforms has taken place. In 2006 the Government of Fiji reported that it had now recognized a number of key issues emanating from the reform process that warranted a fuller review of the effectiveness of the health reform project (AusAid Review Team 2006).

This paper is based on a study undertaken to analyse the policy experience of Fiji's health management reform project (FHMMP). The study utilised a health policy framework to answer questions related to the health reform implementation experience. The framework included recognition that while there are always technical complexities behind policy reform, the main factor in determining the degree of reform changes which are accomplished, is the relationship between the policy and the stakeholders and their influence on each other and the policy process. Analysts in this field assert that policy evolves not only from policy institutions under the control of bureaucrats and political leaders but also from a combination of activities by people, networks, and organizations and environmental factors most of which exist outside the policy institutions. (Considine 1994). Health policy analysis theory highlights the necessity of studying the wider contextual environment of a health system in order to understand what key drivers influence its implementation (Walt 1994).

**Case Study Methodology:** The methodological design of the study was an intrinsic case study as described by Stake (Stake 1995). This has been an empirical inquiry. It has utilised qualitative data collection methods. The study has analysed four key areas, the role of policy actors, the role of political institutions, the policy making culture of Fiji, and the political economy of the health reforms. Objectives of the research asked how these four key areas affected the implementation of the Fiji Health Management Reform Project (1999-2003).

**Results:** Emerging results highlight that the development and implementation of the reform policy was problematic. Challenges related to the problem of the Ministry of Health’s own internal capacity to have supported and implemented the reforms. Other issues that were detrimental to the success of the reforms included an unsupportive public sector, public sector institutional culture, limited legislative framework to support policy change, external stakeholder resistance as well as problems with reform timing. An unstable political environment and complex social and cultural influences within the policy making environment further added to the myriad of implementation challenges. The policy reform model and the role of donors was an important aspect of the projects analysis.

**Implications:** Identifying how Fiji has developed health policy in recent years and continues to develop health policy into the future as it works towards developing a health system that is efficient and effective has been the underlying premise of this study.

Transferability of reform experiences to other small island nations in the Pacific is linked with the elements of political, social and economic influences. A review of international evidence shows that reform failures have little to do with the merits of the reform programme but rather it is reflective of the inadequate process of policy reform implementation and of the management of change. This study’s contribution to policy theory and to Fiji, lies in the analysis of Fiji’s reform experience.
Staffing continues to be a major issue in Fiji and indeed throughout the Pacific. The serious nature of workforce issues, and especially the shortage of key staff such as specialist medical officers, is reflected in the recent creation of the Pacific Human Resources for Health Alliance (PRHRA). The Alliance is a network of representatives from individual Pacific island countries supported by regional training institutions and “interested parties” from universities and professional bodies in Australia and New Zealand. It aims to address continuing problems relating to human resource development in the Pacific. WHO currently provides the secretariat for PRHRA.

Within Fiji, we have found that workforce issues are of major concern to both curative and public health departments of the Ministry—although clinical areas are most acutely affected. In particular a shortage of key cadres of staff was reported to the team as being perhaps the single major issue facing the MoH—and it may worsen with the reduction of the size of the public sector workforce by 10%. These Issues of the adequacy of staff establishments and the difficulties to respond to emerging needs, graduate numbers in all health cadres, emigration of health personnel, remuneration, job evaluation, performance appraisal and career progression have been discussed and disputed in the Fiji health system for many years but without a concerted and coordinated response.

Unfortunately outward migration appears to have been accepted as an unavoidable phenomenon, resulting in the need to train more staff to fill vacant positions. However, the provision of newly trained staff to replace experienced staff is not an adequate response. Senior staff are leaving and being replaced by less senior level staff, thus potentially putting at risk the overall quality of the workforce. Unfortunately in the current economic climate, the potential to increase staff establishments is unlikely, although within-budget changes to the mix of staff should be possible.

Health Financing in Fiji. Lingam D. and Roberts G.

This paper provides an analysis of the Fiji Ministry of Health (MoH) budget for the last 46 years, its share of the national budget and annual percentage of GDP, its revenues, per-capita health expenditure, staff costs, and the association with key population health indicators. Despite annual budget increases, the proportion of GDP allocated to the national public health system has not approached the 8% of GDP considered necessary for the quality provision and upgrading of health services and has fallen from 4% to 2.6% over the last 15 years. We outline factors to be considered in Fiji, such as the need for public policy debate on the nature of the health system, the concept of ‘public good’, the revision of hospital charges, the need to protect the poor by strengthening means testing, and propose health insurance for the employed. Recent interest in strengthening the private sector has arisen due to the public sector’s inability to provide comprehensive services to the population, yet the fees for private services are well beyond the majority of the population.

In 1993 Cabinet agreed that the MoH undertake a review of its cost-recovery program. Fifteen years later this review has not yet been conducted while government continues to finance 98% of health costs and has a negligible cost recovery program of less than 2%. Cost-recovery is not a new feature in Fiji as the ‘user pays’ system has been in operation since 1978, however, the dollar value of these fees has not been revised.
since 1980 despite an estimated 500% increase in costs. This paper identifies a progressive erosion of Fiji’s health financing in recent decades, resulting from an apparent lack of policy activity to protect or improve the levels of government funding, whereby the 2008 government allocation is among the lowest in the world as a percentage of GDP and is significantly less than our neighbours Vanuatu and the Solomon Islands.

**PICU Mortality Audit in Fiji.** Ben Reeves, Monica T. Brook, Swastika Narayan.

**Objective:** To carry out an audit of PICU mortality using currently accepted scoring systems employed in developed countries.

1. Compare mortality between Lautoka and CWM hospitals in Fiji.

**Method:** Data was collected from consecutive admissions into the Lautoka Hospital PICU over a period of ten months from 23/11/07 and into the CWMH PICU over a period of nine months beginning 12/12/07. The data included the duration of stay, diagnosis, ventilator days, inotropic support as well as the parameters of interest in PIM scoring (systolic blood pressure, inspired oxygen concentration, partial pressure of oxygen, base excess, underlying conditions etc.) as set out in the original articles and using the formulae as published. The data was first recorded on printed sheets and then transcribed onto Excel for analysis. Both written admission records and the electronic database were referred to in order to ensure that all admissions were captured for the study. Only the data from the first hour of admission was used to calculate the PIM score. The PIM scores were averaged and then compared to actual mortality.

**Results:** There were a total of 167 admissions into the Lautoka PICU over the ten month period and 227 admissions into CWMH PICU over the nine month period. Twenty (11.98%) of the 167 patients into the Lautoka PICU died and 44 (19.3%) of the 227 patients into the CWMH PICU died. The PIM score denoting expected mortality based on the severity of illness at admission was 7.48 for the Lautoka PICU and 7.14 for the CWMH PICU.

**Conclusion:** The difference in the results may be due to inaccuracies in the scoring system itself. However, it is also important to note that during this period significant changes in clinical care were undertaken in Lautoka and this may have contributed to the lower mortality. This audit has shown that Lautoka is getting patients who are just as sick as CWMH so that is unlikely to account for their higher mortality. Therefore, an ongoing audit to monitor mortality is justified in our setting and could be used to gauge effectiveness of future attempts to improve the service delivery in Fiji.

**Prospective Surveillance of Streptococcal Sore Throat in a Tropical Country**

Andrew C Steer, Adam W J Jenney, Joseph Kado, Michael F Good, Michael Batzloff, Graham Magor, Roselyn Ritika, E Kim Mulholland, Jonathan R Carapetis

**Background:** Acute rheumatic fever and rheumatic heart disease cause a high burden of disease in Fiji and surrounding Pacific Island countries, but little is known about the epidemiology of group A streptococcal (GAS) pharyngitis in the region. We designed a study to estimate the prevalence of carriage of beta-hemolytic streptococci (BHS) and the incidence of BHS culture positive sore throat in school aged children in Fiji.
**Methods:** We conducted twice-weekly prospective surveillance of school children aged 5 – 14 years in four schools in Fiji during a nine month period in 2006, following an initial phase of pharyngeal swabbing to determine the prevalence of BHS carriage.

**Results:** We enrolled 685 children. The prevalence of GAS carriage was 6.0%, while the prevalence of group C streptococcal (GCS) and group G streptococcal (GGS) carriage was 6.9% and 12%, respectively. There were 61 episodes of GAS culture positive sore throat during the study period equating to an incidence of 14.7 cases per 100 child-years (95% CI 11.2 – 18.8). The incidence of GCS/GGS culture positive sore throat was 28.8 cases per 100 child-years (95% CI 23.9 – 34.5). The clinical nature of GAS culture positive sore throat was more severe than culture-negative sore throat, but overall was mild compared with that found in previous studies. Of the 101 GAS isolates that underwent *emm* sequence typing there were 45 *emm* types with no dominant types. There were very few *emm* types commonly encountered in industrialised nations and only 9 of the 45 *emm* types found in this study are *emm* types included in the 26-valent GAS vaccine undergoing clinical trials.

**Conclusions:** Group A streptococcal culture positive sore throat was more common than expected. Group C and group G streptococci were frequently isolated in throat cultures, although their contribution to pharyngeal infection is not clear. The molecular epidemiology of pharyngeal GAS in our study differed greatly from that in industrialized nations and this has implications for GAS vaccine clinical research in Fiji and other tropical developing countries.

**Assessing Community Readiness For Obesity Prevention In Youths In The Opic Project In Fiji: An Application Of The Community Readiness Model.** Waqa Gade¹, Roberts Graham¹

**Background:** The HYHC project is the Fiji arm of the Pacific OPIC project. The intervention area of Nasinu is peri-urban and includes seven secondary schools. The control area of Lautoka, Nadi and Sigatoka includes 11 secondary schools.

**Introduction:** The assessment tool of the Community Readiness Model provides the stages of community readiness of community-wide efforts to prevent overweight or obesity in adolescents within the Obesity Prevention in Communities (OPIC) project. The Pacific OPIC Study involves a series of analytical and intervention studies in young populations (ages 13-18) in Fiji, Tonga, New Zealand and Australia.

**Method:** Six dimensions of changes were identified and assessed and are used as a tool for diagnosing the community’s needs for developing strategies that meet those needs. A summary score of the dimensions, made out of nine stages ranging from “no awareness” hence also no actions to a “High Level of Community Ownership” in relation to obesity prevention.

A sample of 40 participants from different background representing different parts of the schools and community settings were recruited and interviewed before the intervention programs in 2006 and after intervention in 2008. The interviews were recorded, transcribed and scored independently by two people before the final score was reached during discussion.
**Results:** Before interventions, at least some community members in the control communities recognized that obesity in youths is a problem with little recognition that it might be a local problem (second stage or resistance). However, most community members in the intervention area felt that overweight and obesity is a local problem, but there is no immediate motivation to do anything about it (third stage or vague awareness). At the end of the two years intervention programs, both communities reached the fourth stage of community readiness (preplanning) out of the ninth stage (high level of community ownership). There is clear recognition that something must be done, there may even be a committee but efforts are not focused or detailed.

**Recommendation:** The community readiness model is a powerful tool for assessing the stages of community readiness for any health promotion programs that are anticipated for high level of community ownership. More awareness and community involvement are needed for more positive results.

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**Micronutrient Status of Women In Fiji. Penina Vatucawaqa**

**Background:** This research aimed to determine the status of micronutrient deficiencies in women of childbearing age.

**Methods:** Data on serum ferritin, hemoglobin, serum retinol and dietary intake using 24 hour recall of women aged 15-44 years (n = 758) were extracted from the 2004 National Nutrition Survey.

**Results:** Overall, iron deficiency affected 23% of women, 40% were anaemic and 13% had vitamin A deficiency. Dietary patterns showed micronutrient deficient women consumed less micronutrient rich foods.

**Conclusion:** Anaemia is a public health problem in Fiji. Vitamin A deficiency exists in the country in certain segments of the population. Poor dietary intakes in micronutrient deficient women need to be addressed by strategies from relevant authorities.

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**Changes in Food, Diet and NCD. Jimaima Schultz**

Food availability data from Food Balance Sheets and food consumption data from the 2004 National Nutrition survey were examined to determine the food and diet factors that have contributed to the increasing rates of NCDs in Fiji. This paper attempts to identify trends and the link between sources of food available nationally, and current consumption of specific dietary factors associated with higher and lower risks of NCDs in Fiji. A model to provide some understanding of the food and nutrition system in Fiji within the context of economic development and globalization is presented.

Suggestions are also made of potential solutions to reverse the current trend in food supply and availability which will impact positively on current diet.
The Pacific Advisory Group: reflections on its utility in health research

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Abstract
There is a prevailing wisdom that in undertaking health research relevant to Pacific peoples, a Pacific or ethnic advisory group will make sensible and positive contributions. These contributions can include enhancing workforce capabilities, providing cultural knowledge and technical expertise, and supplying access to a range of both professional networks and community linkages. However, there are a number of issues that challenge the practical implementation of this wisdom. The aim of this paper is to reflect on, and share practical insights and experiences on the process of operating a Pacific advisory group as part of an injury prevention research project conducted in Wellington, New Zealand. We share five insights, on the practicalities of involving a Pacific advisory group in a research project, with the intent of assisting others who are considering initiating, planning and conducting research with Pacific communities. PHD, 2009; (15) (2); pp. 107 - 115.

All correspondence to Nite Fuamatu.

Introduction: Pacific in New Zealand
There has been a prevailing wisdom that in undertaking health research relevant to Pacific peoples that a Pacific or ethnic advisory group will make sensible and positive contributions. These contributions are seen to include enhancing workforce capabilities, providing cultural knowledge and technical expertise, and supplying access to a range of both professional networks and community linkages. A number of issues challenge the practical implementation of this wisdom however. Within the Pacific peoples that form 7% of the New Zealand population, there is a high degree of diversity. Auckland has 14% of the population who identified as Pacific in the 2001 census and which is 67% of the Pacific peoples in New Zealand. The Pacific community there comprises between 59 – 81% of each of New Zealand’s Cook Islands Maori, Samoans, Tongans, Niueans, Fijians and Tuvaluans. Wellington, with 8% of its population Pacific, has 14% of the Pacific population comprising between 5 – 17% of the same ethnicities as Auckland, and 53% of the Tokelauan group(1, 2). A further challenge is the relatively small proportion of older community members available to undertake the role of advisors. Thirty nine percent of the Pacific population is aged under 15 years and the overall median age is 21 years(1).
Challenges do not mean that the wisdom is not of value or should be ignored and it is formally supported by
the ethical principles of New Zealand-based Pacific health research. The Health Research Council (HRC)
of New Zealand’s policy states: “research that targets the Pacific population entails the participation of
Pacific peoples at all levels of decision-making and implementation of the research project”(3). In practice,
participation in research involves the participation of Pacific peoples on a number of levels, such as,
investigators, advisors, students and interviewers(3). Establishing or consulting with an existent pan-
Pacific or ethnic specific advisory group in health research or service delivery has become acceptable, and
to some extent usual, practice in New Zealand(4-10).

The aim of this paper is to reflect on, and share practical insights and experiences on the process of
operating a Pacific advisory group as part of an injury prevention research project examining child restraint
use in private vehicles(11). During early advisory group meetings it was determined that a scientific paper
be written on the process being used to share challenges and insights with others who are considering
initiating, planning and conducting research with Pacific communities.

Background
The Child Restraint Device (CRD) Study was conducted in Wellington in 2001 following a pilot undertaken
in Dunedin(12). The aim was to identify the prevalence and nature of incorrect use of child restraints (car
seats) and obtain detailed information on barriers to using restraints(11). Data were gathered from a short
interview with the driver and. a close inspection of the child in the restraint in the vehicle. Focus groups
interviews were conducted with groups of parents and caregivers to obtain in depth information on barriers
to restraint use. These methods have been described elsewhere(12). The Wellington study was also to
ascertain how to obtain useable information on restraint use within Maori and Pacific communities.

The research proposal that was funded by the HRC included, as part of its method, that Pacific and Maori
advisory groups would be established prior to undertaking the study. There are a number of reasons for
this. The topic of interest was a national issue, but was of particular interest to those working in Maori and
Pacific child safety. To obtain reliable qualitative information regarding the barriers to using restraints in
these communities, their involvement was needed prior to any research being undertaken. Advice was
needed for the organisation of the cross-sectional survey to ensure that the content was acceptable and
sufficient responses could be obtained to draw conclusions for these populations. The reason, therefore,
why these advisory groups should be set up was clear, but how to set them up was not so obvious. This
paper provides the context for decisions made regarding the study being undertaken in Wellington and the
establishment of the Pacific Advisory Group. It also describes and critically examines the formation and
ongoing life of the CRD Pacific Advisory Group.

Why Wellington?
Because grant applications require approval for the scientific merit and the budget, some decisions
regarding the CRD study were made prior to the formation of the advisory group. One major one was that
the study would be conducted in Wellington although two thirds of the Pacific population in New Zealand
lived in Auckland.

This study is, in terms of the HRC Pacific health research framework, Pacific Relevance research appropriately responsive and relevant to the Pacific community.
One of the key reasons for the study being undertaken in Wellington was the Principal Investigator (PI) links with the area. The PI had previously lived in Wellington and worked in Porirua. She had family and community links through which to develop networks in relation to research. The importance of these links for developing lasting collaboration with local communities was affirmed when the PI contacted two Pacific women, Wellington locals, whom she had met previously through other research initiatives. These women affirmed the need to establish an advisory group to provide research assistance/input and cultural advice on working with Wellington Pacific communities. Both indicated their interest in being part of this group and proposed four as a realistic number of members on this advisory group. Two additional people were suggested whom the PI contacted. These were women with whom she either had informal links or prior knowledge of their area of expertise. Following discussion on the aims of the study and the role of the advisory group, these four women, formed the Pacific advisory group.

**Pacific Advisory Group**

The Pacific Health and Disability Action Plan 2002 is a strategic document aimed at improving health outcomes for Pacific peoples in New Zealand. This Plan was generated from extensive stakeholder and community consultations and builds on previous policy developments addressing the poor health of Pacific peoples. One of the six priorities: child and youth health, has as its goal “to improve and protect the health of Pacific children (0-14 years)”(13). Supporting intersectoral work on Pacific road safety programmes, such as, child car seats, for Pacific families(13) is one of the active ways identified towards improving and protecting the health of Pacific children 0-14 years. It is against this philosophical backdrop that the Pacific advisory group was formed. Approaching established groups, such as, church or community groups is another route to securing Pacific involvement and support. At the time, however, setting up a Pacific advisory group was viewed as a more efficacious means of providing research assistance/input and cultural advice for the study.

The members of the group knew each other from both past personal and professional dealings in the research arena, community initiatives, Pacific health projects and conferences. Each member knew, or knew of the PI and had knowledge of her experience in public health. The members of the advisory group were keenly supportive of the research and in particular, were willing to support the PI leading it. Although the primary investigator was Pakeha, it was her willingness to be a collaborator, and her experience as a community worker and researcher that fostered a strong trust element in the relationship dynamics with the advisory group. The composition of the Pacific advisory group were four Pacific women of Samoan, Tokelau and Cook Islands descent aged 32-52 years and employed in teaching, research, health promotion and managerial positions in Wellington. Each had roles of leadership within her own community. In some cases, this leadership included both ethnic and geographical communities. Each woman had established, over time, a strong pattern of forming community and interagency links, building relationships and strengthening collaborative relationships, and this experience and skill was evident in both their professional occupations, their voluntary community work and personal lives.

The advisory group was formally established over two years (2002-2004). From the early discussion held, four categories of input were sought from it: selection and recruitment of field workers and interviewers, data analysis, dissemination of findings, and cultural oversight to ensure safety for participants, field workers and interviewers. Following this discussion, a written agreement which included milestones of the work that needed to be done and by whom, schedule of meetings and budgetary items, was accepted.
The advisory group and PI communicated through written correspondence, face-to-face meetings, teleconferences, emails and telephone/mobile. The face-to-face meetings were held in Wellington at venues convenient to the advisory group, for example, in their workplace. The advisors were financially recompensed through agreed systems for the tasks undertaken. A Maori advisory group was also formed but each advisory group opted to work separately with the PI.

The Research Process

The CRD Wellington Study
Tasks undertaken by the advisory group came well before the survey of child restraint use or focus group interviews commenced. The draft interview schedules and checklists, piloted in a Dunedin community, were reviewed by the members for their critical appraisal. Modifications were made in response to identified problems. For example, a common question regarding the role of fate in determining safety behaviour was considered to contain nuances and uncertainties in how it might be understood that outweighed any value of including it. During the cross-sectional survey data were collected the same way from all participants, using the interview/inspection method at Wellington supermarkets carparks. Ethnic specific focus groups were run in the community, however, to obtain in-depth information on barriers to restraint use.

Finding suitable Pacific field staff was a major pre-survey task undertaken. A number of Pacific women were needed to carry out the interviews/inspections, undertake focus group facilitation and transcribe the audio-tapes from the focus groups. The Pacific interviewers involved came from around the greater Wellington region and were recruited from a Whitireia Polytechnic research programme enabling interested students to gain actual research experience in the community. They joined field workers recruited through the Maori advisory group and from local contacts. Field staff worked in pairs (often, but not always, working as a Pacific/non Pacific interviewing team) approaching potential participants in the supermarket carparks after they had completed their shopping, and administering a short interview that included basic demographic information on the driver, children, and CRD use and its installation. It should be noted that while the selection of the local Pacific women as field workers was intended to encourage participation by Pacific drivers, they were expected to interview any potential participant regardless of ethnicity. The interview was accompanied by a close observation of the restraint fit in the vehicle and placement of the child in the restraint. Study information had to be given, consent obtained, and questionnaires and forms filled in. Focus group facilitators, interviewers and transcribers were primarily recruited through the advisory groups although some local contacts were used. Details of the training are given elsewhere(11).

The sampling frame was determined and included additional interviews from both Maori and Pacific peoples to allow for statistically significant results for each of these populations. To achieve this weighting, the advisory group identified supermarkets likely to have a high concentration of Pacific clientele. Data collection was undertaken over a four week period in spring 2002. Focus group interviews to collect detailed information on barriers to CRD usage were conducted in a number of first (Pacific) languages. The advisory group recruited participants for the focus groups, identified facilitators or undertook this role themselves, providing verbal translations of participant’s information sheets for each Pacific language used. Transcription of the focus group interviews was undertaken in the language in which each was conducted being transcribed either by the facilitator or by another person for whom it was their first language. Deductive analysis used a coding framework to identify previously noted themes, and inductive analysis ensured that
new themes could be added. Coding was undertaken from the transcript (in the language of the interview) directly into English. This allowed analysis to be closely associated with the original (Pacific) language in preference to translating the transcript into English and then undertaking the coding and analysis in the second language. Advisory group members and selected people from the community proficient in the first (Pacific) and English languages undertook the coding.

**Reflections**

Our experiences of initiating an advisory group and working as an advisory group have been positive. A number of good achievements were made. A relationship of trust, open communication and mutual respect was established early. It became important to institute a common understanding of the study aims and its limitations, and to discuss a number of significant concerns relating to mainstream institutions and funding agencies paying lip service to working with Pacific communities, operating with hidden agendas, engaging in gatekeeping, exploiting Pacific for academic purposes, such as, career advancement and playing power politics. These concerns were discussed at length and addressed accordingly. *Our first insight: make every endeavour to include Pacific researchers and community leaders as early as possible.*

Recruiting and training of Pacific field staff, co-ordinating focus groups to suit availability of participants, coding, commenting on preliminary reports and transcribing of focus groups were completed. It did take longer than anticipated though. However, the Pacific staff (all women) recruited as interviewers, for the interview/inspection at the supermarkets, were very competent. A good support network was instigated. Finding facilitators for the focus groups proved to be a challenging task. Similarly, recruiting participants to take part in these focus groups was challenging. Focus group interviews were conducted, but there were some problems in achieving these in a timely fashion. Three main reasons were the limited number of skilled facilitators available, the competing demands on the field staff because they were also in full time employment, and the pressures of family and community commitments to attend important events such as deaths. There were also difficulties in getting people together when other events coincided with scheduled focus groups. Again communication and taking time was essential for working through these difficulties. Recognition and acceptance of the personal demands on individuals helped manage delays. *Our second insight: don’t exclude Pacific people from research simply because it is too difficult, time-consuming or on the presumption that the issues is unimportant to them because they do not respond immediately. The workforce capacity is not large enough and may need time as well as an investment of resources to build and strengthen it.*

The transcribing and analysis of focus group data using the first language was primarily motivated by the experiences of Pacific researchers who had conducted studies with their respective communities using two or more languages(4, 14). From a research perspective the process ensured that results could be verified, and that although none was conversant with all of these languages, the themes identified were able to be reflected in any report. The idea was for the facilitator to transcribe the focus group and this proved to be difficult with competing demands and pressures on the facilitator as outlined above. Even when others were found to do the task, that process was not easy to accomplish. It took time. The development of a coding framework was logical in theory. In practice it was a complex undertaking partly because the interviews were very long and detailed. To reflect an understanding of what had been discussed took considerable time. The second step of having those analyses checked by an independent person also required people confident in reading both their first language and English. *Our third insight: build in a realistic timeframe*
for the study. The timeframe in mainstream bears little resemblance to a realistic timeframe for Pacific communities.

Disseminating the results to participants, field staff and wider community was considered important. Organising a fono to disseminate the results was, however, problematic. People had difficulty, despite their best intentions of finding a time to meet or even being able to attend when that time had been agreed. One conclusion has to be that this was because it was women old enough to have a wealth of life experience who were involved. In turn these are the women who carry heavy responsibilities in their community and of whom there are high expectations imposed by family and community. In the case of the interviewers, it may also have been that a celebratory dinner, held shortly after the survey had been completed, had inadvertently provided a sense of closure. Even though the fono was selected as the best way of disseminating information, there may be alternative ways of scheduling the fono. Our fourth insight: be prepared to be frustrated. While holding a fono is the best way to disseminate the information, with all the best intentions, it might not happen as you planned.

The sample did not reach the target of 200 Pacific respondents. One of the key reasons was that although it was considered that most supermarkets in the Wellington area were used by Pacific peoples, a large proportion of the Pacific population in Wellington is concentrated in one region. The use of the original randomised sampling frame made it difficult to recruit the number of Pacific people sought. This process was subsequently amended in consultation with the statistician, resulting in an increasing number of Pacific respondents. The low rate of refusals would indicate that the choice of interviewers was likely to have facilitated participation. There was a low proportion of refusals. Our fifth insight: it pays to constantly monitor progress and modify where you can to achieve the optimal outcome. Keep talking.

Discussion

Participation

Participatory research has become a tradition in social science(15) and this model is essential in research undertaken with Pacific peoples(16). It involves negotiation of the research process, active engagement with participants and an emancipatory focus in its research goals(17). The collaborative mode of participation in this study can be defined as "researchers and local people work together on projects designed, initiated and managed by the researchers"(18). Forming a collaborative research partnership between IPRU and the Pacific community was identified and discussed early. The advisory group’s inception was a visible indicator of Pacifi c community support for this study. Such a group can generate more community awareness of the public health issue, to invite participation in the study and to address any concerns the community might have towards research. The composition of this advisory group represents Pacific health research expertise, knowledge of and practitioners in public health initiatives and health promotion, proactive leadership in improving health outcomes for Pacific peoples, and strategic management of Pacific projects. There are possible configurations to the composition of an advisory group and this is contingent on the contribution prospective members can make to the study, and the PI’s access to Pacific networks.
Relationships and Commitment

Larner & Mayow (2003) identified relationship building as being integral to the collaborative research process, and Oneha & Beckham (2004) asserted the importance of researchers investing time and energy in establishing and maintaining relationships with communities. Although the advisory group and PI knew each other, this was the beginning of something new and it required time and energy by all to build a workable and positive relationship with one another. Prior knowledge and respect for each other’s community experience and research backgrounds largely helped to steer the formative relationship into smooth waters. A relevant question raised is would the study have been different if undertaken in Auckland? Probably not. The PI’s personal links might have taken more time to cement, and the pressure of other responsibilities that experienced Pacific women in particular carry would be unlikely to be less.

Genuine commitment to the study coupled with securing the basic necessities of life can often create delays in research as Pacific communities prioritise and reprioritise their time(18). There are also many demands made for Pacific participation in complex and time consuming policy, research and community matters. These demands come from Pacific peoples themselves who wish to be involved in decisions on issues that will affect them. It also comes from outside, sometimes that may be driven purely by policy determined by, for example, HRC and government agencies. Larner & Mayow (2003) iterated that patience, goodwill and the allowance of time are needed to create and sustain the collaborative research framework. The lack of Pacific attendance (including field staff) at the dissemination of the findings, despite interest in coming along to it, is perhaps attributed to negotiating the prioritising of time.

Community Investment in Research

In this research project, a number of the parameters were set prior to the establishment of the advisory group, based on a previous pilot study. Although there was room for negotiation and the setting of agreed milestones was a valuable starting point, it was clear that over time, these needed to be renegotiated. It was important that they did not become set in stone when wisdom suggested that change was needed. When applying for a research grant, however, the application has to describe methods in detail and explain how expected outcomes will be measured and indicate the time frame. Protocols and procedures requiring ethical approval will need to be arranged months prior to the data gathering. Ideally, the advisory group process occurs prior to both the grant and ethics applications. In reality, prior funding is not available to support the consultation process. If the research is not funded, there may be no money to recompense the advisory group. While researchers run that risk knowingly, many of those involved in the Pacific advisory process are not researchers and are in no position to commit considerable time and effort when there is no guarantee that a project, if developed, will go ahead. This is a problem for a participatory process where the investment made by the Pacific community can be high risk for the busy people involved. Similarly, fostering a collaborative research framework raises the question about the suitability of current funding regimes to support the consultation process i.e. advisory group input into research protocols and procedures.

Fostering a Pacific Workforce

The study provided opportunities to build Pacific workforce capacity. Having an advisory group that was well positioned and sufficiently informed to propose effective avenues towards developing and strengthening the Pacific workforce capability and capacity was critical. Some of the advisory group members had access to the Pacific community health workforce and Pacific tertiary students interested in gaining actual
research experience and extending their professional skills. Opportunities to train new Pacific interviewers and transcribers were made available from this CRD study. The eagerness with which the Pacific women sought a reference following their employment indicated the importance of this formal research experience. Two members of the advisory group signalled interest in acquiring research skills and they participated in the training. They subsequently facilitated focus groups and coded transcripts. This study contributed towards achieving the Pacific Health and Disability Workforce Plan objective (1.6) develop Pacific health and disability policy and research expertise (19) and the Pacific health research workforce capacity and capability through the delivery of training and employment opportunities (3).

Youthful Population
A recurring issue was not a lack of skilled people but lack of those people with time to commit to a research project. The introduction identified the demographics of the Pacific population which is predominantly young (as noted earlier, median age 21 years). While working with young people is essential on many issues, the value of advice from those with life experience and relevant learnt skills cannot be underestimated when advice is sought on research projects. The pool of adults available to give the time required for research projects is not large, and there are competing demands for their time with not just research but many other projects operating in the community all seeking advice from Pacific leaders.

Conclusions
The five insights on the practicalities of involving a Pacific advisory group in a research project is shared with the intent of assisting others who are considering initiating, planning and conducting research with Pacific communities. There are challenges, such as, competing demands, constructing realistic timeframes, workforce development, building flexibility and pragmatism into the research project and funding regime, and understanding the youthful proportion dynamic. For a future project would we do it differently? In short, not very differently but celebrating the relationships built, allowing more time and flexibility, and assessing systems to increase this flexibility would certainly be implemented. It is important to remember that despite these challenges, the Pasifika spirit is very generous and willing.

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References


“They can not take away our self respect if we do not give it to them.”

Mahatma Gandhi
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the newest and finest for Pacificans

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Te Kunenga
ki Pūrehuoa
Abstract

Both the Maori of New Zealand and the Orang Asli of Malaysia are indigenous peoples who have been subjected to prejudice, discrimination and displacement in its various forms by other ethnic groups in their respective countries. However, owing to changes in the socio-political climate, they have been granted rights (including legal privileges) in more recent times. Data pertaining to the health and socio-economic status of the Maori and the Orang Asli are analysed to see if the granting of legal privileges has made any difference for the two communities. One conclusion is that legal privileges (and the granting of special status) do not appear to work well in terms of reducing health and socio-economic gaps. PHD, 2009; (15) (2); pp. 117 - 127.

Keywords: Maori, Orang Asli, indigenous peoples, health, socio-economic

Introduction

The Asian Development Bank’s definition of “Indigenous People” include the following:¹

Descent from population groups present in a given area, most often before modern states or territories were created and before modern borders were defined, and maintenance of cultural and social identities, and social, economic, cultural, and political institutions separate from mainstream or dominant societies and cultures.

Indigenous peoples of the contemporary world include the Canadian “First Nations”; Native Americans in the United States; “Indio” of Latin America; Sami of northern Scandinavia; “Pygmies” of Central Africa; !Kung of southwestern Africa; tribal minorities of China, India and Indochina, “Aborigines” of Taiwan and Australia; Maori of New Zealand, Orang Asli of Peninsular Malaysia and so on. Thus, indigenous peoples are basically the original/earlier inhabitants of a geographical region who have often been displaced by later arrivals/invaders, but who have continued to maintain a separate identity.

The Common Fate of Indigenous Peoples

In many countries, indigenous people have experienced displacement. The displacement (and social exclusion) of indigenous peoples can include any of the following:

- Geographical – being pushed to fringe or undesirable areas such as deserts, mountains and jungle
- Political – loss of political power, and being politically subordinated to other ethnic groups
- Economic – impoverishment because of loss of access to (or control over) natural resources²
• Social – being subjected to prejudice and discrimination, with paternalistic treatment at best, and violence and genocide at worst\(^3\)^4
• Cultural – the culture of indigenous people are often disdained or labeled as “primitive” or “backward”. The accompanying assumption is that they need to be “modernised”, “civilized” and “assimilated”.

This process of displacement is reflected in poorer health and socio-economic statistics:\(^5\)

With respect to health, indigenous peoples often suffer from relatively high infant mortality rates, relatively high maternal mortality rates, lower life expectancy at birth, high cause-specific death rates for particular diseases, and show other worrisome population health indicators (high malnutrition rates, unsatisfactory growth indicators of children, high prevalence of specific diseases, high disability rates etc).

As for their socio-economic status, high percentages of the indigenous ethnic groups tend to live in poverty, experience high illiteracy rates, lower levels of educational attainment and high unemployment rates. Other indicators of social problems include greater extent of alcoholism and other types of substance abuse, more domestic violence, higher suicide rates, higher homicide rates, disproportionately high incarceration rates etc.

**Recent Developments Amongst Indigenous Peoples in Various Countries**

Political and social activism has made its appearance amongst formerly quiescent groups of indigenous people all over the world. Examples include: Appearance of political organizations such as the AIM (American Indian Movement) which became active in the late 1960s in USA\(^6\) Recognition by international organisations such as the United Nations

Establishment of Nunavut as a self-governing province in Canada in 1999\(^7\)

Native Americans – activism against use of Indian mascots in university sports and professional sports and against all forms of racist portrayals in the mass media

The continuing saga of the Zapatista Army of National Liberation in Chiapas, Mexico

Push for repatriation and reburial of remains of indigenous peoples in museum collections (usually displayed in the “Primitive Cultures” section) in Western countries such as the UK etc.\(^8\)

Bolivia – Evo Morales (a member of the indigenous Aymara ethnic group) was elected President of Bolivia in 2005\(^9\)

**The Maori of New Zealand and the Orang Asli of Malaysia (Peninsular Malaysia)**

Maori make up about 526,000 or 14.3% of the total New Zealand population.\(^10\) The Orang Asli make up 147,412 or 0.6% of the total Malaysian population in 2003.\(^11\) They live in Peninsular Malaysia and can be broadly divided into three main groups, i.e. the Negritos, Senoi and the Proto-Malays. In theory, both the Maori and the Orang Asli have been granted legal privileges or special status in their respective countries. The main question to be addressed in this article is “How have they been faring in recent years compared to other ethnic groups in their respective countries?”
• In the case of the New Zealand Maori, developments include:
  • The setting up of the Waitangi Tribunal in 1975
  • Compensation for unjust confiscation of Maori land carried out in the past
  • Teaching of Maori language and culture in schools
  • Maori Television established in 2004
  • Reserved seats for Maori politicians in the Parliament of New Zealand

As noted by one of Malaysia’s experts on the Orang Asli: 13

Article 8(1) of the Malaysian Constitution theoretically legitimates legislation “in favour” of Orang Asli by way of provisions in the law of their protection, well-being and advancement (including the reservation of land) or the reservation to aborigines of a reasonable proportion of suitable positions in the public service. (The word “protection” indicates the paternalistic mindset of the people who drafted this).

Article 45(2) provides for the appointment of Senators in the upper house of Parliament (the Dewan Negara or Senate) “capable of representing the interest of the aborigines”.

Article 160(2) defines an Orang Asli as being “an aborigine of the Malay Peninsula” and the Ninth Schedule, List 1 vests upon the Federal Government legislative authority to protect their welfare.

In Malaysia, the JHEOA (Jabatan Hal-Ehwal Orang Asli or the Department of Orang Asli Affairs) is supposed to take care of their welfare. The JHEOA has the legal power to regulate their settlements, appoint and remove village heads, control entry into Orang Asli abodes, and it even has control over the crops that Orang Asli grow and the usage of their lands. Nicholas and Baer (2007) have accused the JHEOA of paternalism and cultural insensitivity.13,14 The latter includes attempts to convert the Orang Asli to Islam and to promote their assimilation into the dominant Malay ethnic group.

The current situation of both groups (Maori and Orang Asli) may include any one of the following:
1. Stagnation or further deterioration of certain aspects of their health and socio-economic status
2. Improvement, but at a slower rate relative to other ethnic groups in their respective countries (thus resulting in a widening gap)
3. Improvement, with a narrowing of the gap between them and other ethnic groups in their respective countries

We can determine which of the three possibilities listed above apply to the New Zealand Maori and the Malaysian Orang Asli respectively by analysing data pertaining to these two groups of indigenous peoples.
Data Pertaining to the New Zealand Maori

Table 1: New Zealand Health Statistics (I): Male Life Expectancy, By Age

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<td>At Birth</td>
<td>Maori</td>
<td>63.34</td>
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<td>Maori</td>
<td>50.09</td>
<td>50.81</td>
<td>50.81</td>
<td>50.04</td>
</tr>
<tr>
<td></td>
<td>NMNP</td>
<td>57.17</td>
<td>57.95</td>
<td>59.44</td>
<td>61.02</td>
</tr>
<tr>
<td>45 years</td>
<td>Maori</td>
<td>23.4</td>
<td>24.27</td>
<td>24.2</td>
<td>23.49</td>
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<td></td>
<td>NMNP</td>
<td>29.18</td>
<td>30.06</td>
<td>31.43</td>
<td>32.8</td>
</tr>
<tr>
<td>65 years</td>
<td>Maori</td>
<td>10.66</td>
<td>11.6</td>
<td>11.12</td>
<td>10.41</td>
</tr>
<tr>
<td></td>
<td>NMNP</td>
<td>13.34</td>
<td>13.85</td>
<td>14.76</td>
<td>15.78</td>
</tr>
</tbody>
</table>


New Zealand health and socio-economic data are excellent and quite comprehensive. My analysis is helped greatly by the quality of the data published in a volume called "Decades of Disparity: Ethnic Mortality Trends in New Zealand 1980-1999".15

From Table 1, it can be seen that life expectancy at various ages for non-Maori, non-Pacific (NMNP) males in New Zealand has been improving steadily since the early 1980s. Unfortunately, this is not the case for Maori males. There has been a reversal of the trend of steady improvement during the 1990s.

From Table 2, the same pattern is seen, i.e. life expectancy at various ages for non-Maori, non-Pacific (NMNP) females in New Zealand has been improving steadily since the early 1980s but there has been a reversal of the trend of steady improvement for Maori females during the 1990s.

Table 2: New Zealand Health Statistics (II): Female Life Expectancy, By Age

<table>
<thead>
<tr>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>At Birth</td>
<td>Maori</td>
<td>67.95</td>
<td>69.6</td>
<td>69.15</td>
<td>68.66</td>
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<tr>
<td></td>
<td>NMNP</td>
<td>77.1</td>
<td>77.76</td>
<td>79.36</td>
<td>80.51</td>
</tr>
<tr>
<td>15 years</td>
<td>Maori</td>
<td>54.53</td>
<td>55.91</td>
<td>55.38</td>
<td>54.82</td>
</tr>
<tr>
<td></td>
<td>NMNP</td>
<td>63.17</td>
<td>63.76</td>
<td>65.02</td>
<td>66.12</td>
</tr>
<tr>
<td>45 years</td>
<td>Maori</td>
<td>26.78</td>
<td>27.92</td>
<td>27.36</td>
<td>26.75</td>
</tr>
<tr>
<td></td>
<td>NMNP</td>
<td>34.33</td>
<td>34.86</td>
<td>36.03</td>
<td>37.04</td>
</tr>
<tr>
<td>65 years</td>
<td>Maori</td>
<td>12.79</td>
<td>14.41</td>
<td>13.76</td>
<td>12.54</td>
</tr>
<tr>
<td></td>
<td>NMNP</td>
<td>17.26</td>
<td>17.59</td>
<td>18.6</td>
<td>19.33</td>
</tr>
</tbody>
</table>

### Table 3: New Zealand Health Statistics (III):
Male Age-Specific Mortality Rates, By Age Group

<table>
<thead>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-14</td>
<td>Maori NMNP</td>
<td>64</td>
<td>64.2</td>
<td>57.4</td>
<td>70.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42.1</td>
<td>39.3</td>
<td>30.1</td>
<td>24.7</td>
</tr>
<tr>
<td>15-24</td>
<td>Maori NMNP</td>
<td>217.3</td>
<td>222.7</td>
<td>239.9</td>
<td>231.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>147.1</td>
<td>161.6</td>
<td>142</td>
<td>110.4</td>
</tr>
<tr>
<td>25-44</td>
<td>Maori NMNP</td>
<td>371.6</td>
<td>379.8</td>
<td>356.4</td>
<td>378.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>164.5</td>
<td>160.7</td>
<td>150.2</td>
<td>138.3</td>
</tr>
<tr>
<td>45-64</td>
<td>Maori NMNP</td>
<td>2251.4</td>
<td>2166.1</td>
<td>2063.8</td>
<td>2164.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1019.9</td>
<td>895.5</td>
<td>742.4</td>
<td>629.7</td>
</tr>
<tr>
<td>65-74</td>
<td>Maori NMNP</td>
<td>7112.9</td>
<td>6623.8</td>
<td>6828.5</td>
<td>7165.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4274.5</td>
<td>3950.4</td>
<td>3458.3</td>
<td>2794.4</td>
</tr>
</tbody>
</table>


### Table 4: New Zealand Health Statistics (IV):
Female Age-Specific Mortality Rates, By Age Group

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-14</td>
<td>Maori NMNP</td>
<td>49</td>
<td>37.1</td>
<td>37.5</td>
<td>51.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28.7</td>
<td>29.3</td>
<td>21.5</td>
<td>19.5</td>
</tr>
<tr>
<td>15-24</td>
<td>Maori NMNP</td>
<td>101.9</td>
<td>92.3</td>
<td>77.7</td>
<td>103.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>58.8</td>
<td>54.7</td>
<td>51.0</td>
<td>46.3</td>
</tr>
<tr>
<td>25-44</td>
<td>Maori NMNP</td>
<td>251.9</td>
<td>217.1</td>
<td>226.9</td>
<td>202.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>96.2</td>
<td>89.3</td>
<td>78.2</td>
<td>69.8</td>
</tr>
<tr>
<td>45-64</td>
<td>Maori NMNP</td>
<td>1573.6</td>
<td>1583.6</td>
<td>1609.5</td>
<td>1537.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>575.4</td>
<td>526.9</td>
<td>475.1</td>
<td>409.2</td>
</tr>
<tr>
<td>65-74</td>
<td>Maori NMNP</td>
<td>5327.7</td>
<td>4690.4</td>
<td>4730.9</td>
<td>5285.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2340.6</td>
<td>2151.3</td>
<td>1884.5</td>
<td>1579.2</td>
</tr>
</tbody>
</table>


From the data in Tables 3 and 4, once again, NMNP males and NMNP females show a consistent pattern of steady improvement over time. However, the pattern for Maori males and females is uneven and fluctuating, with the data from the 1996-1999 period being worse than the 1980-1984 period for many of the age-groups.
Tables 5, 6 and 7 indicate that NMNP overall health is steadily improving but this is not the case with the Maori. Once again, there has been deterioration during the 1990s.

Table 5: New Zealand Health Statistics (V): Overall Standardised Mortality Rate (SMR), All Ages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maori</td>
<td>1118.7 (1.54)</td>
<td>903.5 (1.31)</td>
<td>911.2 (1.50)</td>
<td>1458.5 (2.87)</td>
</tr>
<tr>
<td>NMNP</td>
<td>724.4</td>
<td>688.4</td>
<td>607.1</td>
<td>508.6</td>
</tr>
</tbody>
</table>

Note: Ratio of Maori SMR to Non-Maori/Non-Pacific SMR in brackets

Table 6: New Zealand Health Statistics (VI): Male SMR, All Ages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maori</td>
<td>1294.7 (1.38)</td>
<td>1067.8 (1.22)</td>
<td>1071.6 (1.38)</td>
<td>1731.5 (2.70)</td>
</tr>
<tr>
<td>NMNP</td>
<td>936.2</td>
<td>877.3</td>
<td>773.9</td>
<td>641.2</td>
</tr>
</tbody>
</table>

Note: Ratio of Maori SMR to Non-Maori/Non-Pacific SMR in brackets

Table 7: New Zealand Health Statistics (VII): Female SMR, All Ages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maori</td>
<td>945.0 (1.68)</td>
<td>757.4 (1.40)</td>
<td>776.3 (1.62)</td>
<td>1230.6 (3.02)</td>
</tr>
<tr>
<td>NMNP</td>
<td>563.7</td>
<td>540.5</td>
<td>478.2</td>
<td>407.0</td>
</tr>
</tbody>
</table>

Note: Ratio of Maori SMR to Non-Maori/Non-Pacific SMR in brackets
When mortality is analysed for males and females by cause (Tables 8 and 9), it can be seen that mortality from cancer is a major contributor to Maori mortality. Suicide is also another important contributor (suicides have also increased amongst the NMNP population of New Zealand). Interestingly enough, for the Maori, other categories such as mortality caused by cardiovascular disease, stroke, and motor vehicle-related injuries have continued to decline although the rates remain higher than those for the NMNPs.

### Table 8: New Zealand Health Statistics (VIII):
**Male SMR, Ages 1-74, by Cause**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>Maori NMNP</td>
<td>222.9</td>
<td>221.7</td>
<td>236.4</td>
<td>262.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>137.3</td>
<td>133.0</td>
<td>129.5</td>
<td>116.9</td>
</tr>
<tr>
<td>CVD</td>
<td>Maori NMNP</td>
<td>447.5</td>
<td>406.1</td>
<td>400.0</td>
<td>398.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>241.3</td>
<td>204.3</td>
<td>159.2</td>
<td>116.4</td>
</tr>
<tr>
<td>Stroke</td>
<td>Maori NMNP</td>
<td>55.5</td>
<td>55.1</td>
<td>45.1</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>33.9</td>
<td>26.5</td>
<td>21.7</td>
<td>15.6</td>
</tr>
<tr>
<td>Motor vehicle-related injuries</td>
<td>Maori NMNP</td>
<td>58.5</td>
<td>58.0</td>
<td>53.7</td>
<td>46.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27.7</td>
<td>30.8</td>
<td>24.5</td>
<td>18.2</td>
</tr>
<tr>
<td>Suicide</td>
<td>Maori NMNP</td>
<td>12</td>
<td>17.7</td>
<td>23.5</td>
<td>37.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16.3</td>
<td>19.5</td>
<td>22.1</td>
<td>23.1</td>
</tr>
</tbody>
</table>


### Table 9: New Zealand Health Statistics (IX):
**Female SMR, Ages 1-74, by Cause**

<table>
<thead>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>Maori NMNP</td>
<td>192.1</td>
<td>191.4</td>
<td>201.5</td>
<td>233.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>105.8</td>
<td>106.2</td>
<td>105.2</td>
<td>97.8</td>
</tr>
<tr>
<td>CVD</td>
<td>Maori NMNP</td>
<td>310.1</td>
<td>274.2</td>
<td>521.7</td>
<td>228.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>109.5</td>
<td>87.4</td>
<td>68.5</td>
<td>47.0</td>
</tr>
<tr>
<td>Stroke</td>
<td>Maori NMNP</td>
<td>68.6</td>
<td>52.1</td>
<td>48.8</td>
<td>41.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27.2</td>
<td>20.5</td>
<td>16.4</td>
<td>12.1</td>
</tr>
<tr>
<td>Motor vehicle-related injuries</td>
<td>Maori NMNP</td>
<td>22.2</td>
<td>27.1</td>
<td>22.3</td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10.7</td>
<td>12.1</td>
<td>9.9</td>
<td>7.5</td>
</tr>
<tr>
<td>Suicide</td>
<td>Maori NMNP</td>
<td>3.8</td>
<td>3.4</td>
<td>5.8</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.1</td>
<td>5.7</td>
<td>5.5</td>
<td>6.6</td>
</tr>
</tbody>
</table>

From Table 10, it can be seen that the Maori are worse off compared to the rest of the New Zealand population. They are less well educated, at higher risk of unemployment, have lower personal incomes and are more likely to be receiving means-tested benefits. They are also less likely to be living in their own home and more likely to be living in a household without a telephone.16

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Maori Males</th>
<th>Maori Females</th>
<th>All Maori</th>
<th>Other Males</th>
<th>Other Females</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education: High School or beyond</td>
<td>30.4%</td>
<td>34.5%</td>
<td>32.5%</td>
<td>51.7%</td>
<td>49.9%</td>
<td>50.8%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>11.3%</td>
<td>11.4%</td>
<td>11.4%</td>
<td>4.2%</td>
<td>3.8%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Personal Income &lt; $10,000</td>
<td>27.8%</td>
<td>32.1%</td>
<td>30.1%</td>
<td>19.2%</td>
<td>28.6%</td>
<td>24.1%</td>
</tr>
<tr>
<td>Recieving means-tested benefits</td>
<td>24.8%</td>
<td>36.1%</td>
<td>30.7%</td>
<td>10.2%</td>
<td>12.8%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Living in household without telephone</td>
<td>12.2%</td>
<td>12.8%</td>
<td>12.5%</td>
<td>6.5%</td>
<td>5.7%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Not living in own home</td>
<td>64.4%</td>
<td>65.2%</td>
<td>64.8%</td>
<td>40.3%</td>
<td>38.1%</td>
<td>39.1%</td>
</tr>
</tbody>
</table>

Source: Maori Health, Ministry of Health, New Zealand

Data Pertaining to the Malaysian Orang Asli11,13, 17,18

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Orang Asli Males</th>
<th>Orang Asli Females</th>
<th>All Orang Asli</th>
<th>Malaysian Males</th>
<th>Malaysian Females</th>
<th>All M’sians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth</td>
<td>54 years</td>
<td>52 years</td>
<td>69 years</td>
<td>75 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households &lt; poverty line (RM500 per month)</td>
<td>76.9% (80% in 1997)</td>
<td>6.5% (8.5% in 1997)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Hardcore Poor&quot;</td>
<td>35.2%</td>
<td>1.4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sec school dropout rate 2006</td>
<td>&gt; 50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy rate 1991</td>
<td>43%</td>
<td>86%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households with piped water 1987</td>
<td>46.4%</td>
<td>86%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Jabatan Perangkaan Malaysia and US Department of State.
Other indicators of poor socio-economic status include: a secondary dropout rate of more than 50% in 2006. It should be kept in mind that the numbers of Orang Asli children who enter secondary school are probably small in relation to the size of the cohort that began primary school six years earlier. The literacy rate of the Orang Asli in 1991 was only 43% and the percentage of households with piped water in 1997 was 46.4%. These are unlikely to have improved significantly in the years since.

Table 12: Health of Malaysian Orang Asli (II) Some Findings from Research Conducted in Orang Asli Communities

<table>
<thead>
<tr>
<th>Research Study &amp; Year Done</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kasim, Ismail and Ibrahim</td>
<td>56% of all sampled kids are underweight. 65.7% of all sampled kids are stunted</td>
</tr>
<tr>
<td>(1987)</td>
<td></td>
</tr>
<tr>
<td>Osman &amp; Zaleha</td>
<td>35% of females in sample are malnourished Goitre: 35% males 64% females</td>
</tr>
<tr>
<td>(1995)</td>
<td></td>
</tr>
<tr>
<td>Karim et al.</td>
<td>Intestinal worms present: 48% of males in sample 73% of females</td>
</tr>
<tr>
<td>(1995)</td>
<td></td>
</tr>
</tbody>
</table>

Table 13: Health of Malaysian Orang Asli (IV) Some Findings from Research Conducted in Orang Asli Communities

<table>
<thead>
<tr>
<th>Research Study &amp; Year Done</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zalilah &amp; Tham</td>
<td>Food insecurity: 82% of households in sample Underweight: 45.3% Stunting: 51.6% Wasting: 7.8% Diet quality of children: Poor - 68.7% Fair - 31.3%</td>
</tr>
<tr>
<td>(2002)</td>
<td></td>
</tr>
<tr>
<td>Al-Mekhlafi et al.</td>
<td>61.9% of sampled kids with Ascaris 98.2% with Trichuris 37% with hookworm 56.5% significantly underweight 61.3% significantly stunted 19.5% significantly wasted</td>
</tr>
<tr>
<td>(2005)</td>
<td></td>
</tr>
</tbody>
</table>

Owing to the lack of comprehensive data on Orang Asli health, Tables 12 to 14 contain information that have been extracted from various published studies on the Orang Asli.19 to 26 Each of the eight studies cited indicate that the health of the Orang Asli is poor, e.g., Kasim et. al’s study published in 1987 (Table 12) found that 56% of all the Orang Asli children in their sample were underweight and 65.7% of them were stunted.

Al-Mekhlafi et. al’s study on a different group of Orang Asli published almost 20 years later in 2005 (Table 14) showed that 56.5% of the kids in the sample were significantly underweight, 61.3% were significantly stunted and 19.5% were significantly wasted.
In 1995, Karim et al. (Table 12) found that intestinal worms were present in 48% of the Orang Asli males and in 73% of the females in their sample. Worm infestation findings from Norhayati et al.’s study in 1997 (Table 13) are particularly bad i.e. infestation in Orang Asli kids in their study were 62.9% for Ascaris, 91.7% for Trichuris and 28.8% for hookworm. As indicated in Table 14, findings are similarly bad in Al-Mekhlafi’s 2005 study (61.9%, 98.2% and 37% respectively).

Zulkifli et al.’s study published in 1999 (Table 13) shows less alarming worm infestation rates, i.e. 47.5% for Ascaris, 33.9% for Trichuris and 6.2% for hookworm. But this is probably because the data deal with all Orang Asli in their study sample (kids as well as adults).

The data from Table 12 show that the health of female Orang Asli tends to be worse that that of males, e.g. much higher rates of goitre and worm infestations in females.

Conclusions

From the analyses and data presented above, the following conclusions can be drawn:

• New Zealand Maori: there has been widening of some aspects of the health and socio-economic gaps as compared to NMNP (non-Maori, non-Pacific peoples of New Zealand) because of slow improvement in some areas coupled with reversals in other areas
• Malaysian Orang Asli: there has been stagnation and possibly even further deterioration because of loss of access to land and other natural resources (as Malaysia “develops” as measured by conventional socio-economic indicators such as GNP per capita)
• The Orang Asli are marginalised to a higher degree (worse off in terms of health and socio-economic status) in Malaysia than the Maori in New Zealand
• Legal privileges (and the granting of special status) do not appear to work well in terms of reducing health and socio-economic gaps. Stronger action by the government is needed to close the gaps between the Maori and non-Maori in New Zealand and between Orang Asli and other ethnic groups in Malaysia.

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Does the Granting of Legal Privileges as an Indigenous People Help to Reduce Health Disparities? Evidence from New Zealand and Malaysia

References

Pasifika@Massey Strategy:
Hala ki he Tau’ataina ke Ngaue’aki e ‘Ulungaanga Fakafonua

Fakalakalaka Fakaako
- Fakatokolahi e fanau ako Pasifiki he ngaahi polokalama ako
- Fakapapau’i ‘oku lava kakato mo lava ma’olunga ‘enau ako

Fakalakalaka e komiuniti

Fakalelei e Tu’unga Faka-ngaue
- Fakatokolahi e kau ngaue Pasifiki e univesiti
- Faleave’ai ngaahi faingamalie fakangaue mo e polokalama fakaako

Fakatotolo Fakaako
- Fakatokolahi e kau Pasifiki fakatotolo lelei
- Fakatotolo ‘oku fakatotofo he ngaahi tuia, ‘efika mo e ‘ulauki fiema’u ‘a e kakai Pasifiki

Ngaahi Anga Fakafonua kehekehe
- Feunga fengau e ‘uniwesiti mo e fanau Pasifiki mo ‘enau ngaahi komiuniti
- Malu’i e he ‘uniwesiti ‘a e ngaia ‘o e ngaahi anga fakafonua

Ngaue Fetokoni’aki
- Fengau e vaofia mo e ngaahi komiuniti Pasifiki ‘i NZ
- Fengau e vaofia mo fe’aonga’aki mo e tekuí fonua Pasifiki
Nash: Genius with Schizophrenia or Vice Versa?

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Abstract
Schizophrenia has many negative impacts on the wellbeing of individuals (sufferers). I will critically analyse Nash’s experience with his illness of schizophrenia and his concept of wellness based on themes, his journey with schizophrenia and the support of this wife and friends.

Ron Howard directed the movie, *A Beautiful Mind* based on Nash’s biography about his mathematical genius and his struggle with schizophrenia. Nash only had one sister, Martha Nash who was born on November 16th, 1930. In terms of his mental health and wellness, Nash began to show signs of schizophrenia in 1958, on the threshold of his career.

After 1970, by his choice, he never took antipsychotic medication again. In 1978, Nash was awarded the John von Neumann Theory Prize for his discovery of non-cooperative equilibria, now called Nash equilibria. As a result of Nash’s illness, he adopted unhealthy practices that did not help him cope with schizophrenia. Recovery from mental illness has emphasised the importance of hope for the people experiencing mental illness. Nash’s self-determinations enabled him to overcome the stigmatisation suffering due to schizophrenia.

Nash experienced the five stages of coping with mental illness. The support of Nash’s wife Alicia and the few close friends he had were paramount to his recovery and living with schizophrenia. Alicia had used cognitive coping strategies with her caring for Nash by having positive thinking in attempting to accept Nash’s illness rather than denying that it existed and to understand the life experiences of a person with schizophrenia.

Howard (2001) stated that it’s about a 25% chance, that survivors of schizophrenia can regain clarity as Nash did within a certain time period. PHD, 2009; (15) (2) pp. 129 - 137.

Introduction
Over the years, mental illnesses have gathered much attention given their prevalence in society. Schizophrenia is one such illness that has evolved from being a spiritual punishment (as defined by society) to being diagnosed as a form of mental illness where reality has been distorted. According to the World Health Organisation (WHO, 2008), Schizophrenia affects approximately 24 million people in the world with more than 50% not receiving the appropriate care. 90% of those untreated live in developing countries. This is of major concern given that schizophrenia can be treated and with treatment being more effective in the early stages.

Schizophrenia is a particular form of psychosis characterised mainly by a clear sensorium with a marked thinking disturbance (Macphee, Papadakis, & Tierney-Jr., 2007). The term “psychosis” denotes a variety of mental disorders. At present, there is no laboratory method for confirming the diagnosis of schizophrenia, that is the pathogenesis of schizophrenia is unknown (Katzung, 2001).
Schizophrenia has many negative impacts on the wellbeing of individuals (sufferers). Individuals with schizophrenia tend to smoke three times the rate of the general population, sometimes denying that they are ill, frequently treat their caregivers with hostility instead of gratitude and has been found as the most stigmatising conditions (Esterberg & Compton, 2005; Forchuk et al., 2002; Karp & Tanarugsachock, 2000; Schulze & Angermeyer, 2003).

However, “the nightmare of schizophrenia is not knowing what is true. Imagine, if you had suddenly learned that the people, the places and the moments most important to you were not gone, not dead, but worse, had never been. What kind of hell would that be?” (Howard, 2001). This is the worst effect that schizophrenics face in their daily lives which also impact on their families and friends. These effects and impacts will be discussed and critically analysed in relation to in Ron Howard’s adaptation of John Nash’s biography in the film, ‘A Beautiful Mind.’

However, due to limited information provided by the movie I have further utilised Nash’s biography by Sylvia Nasar. Finally, I will critically analyse Nash’s experience with his illness of schizophrenia and his concept of wellness based on themes, his journey with schizophrenia and the support of this wife and friends.


Ron Howard directed the movie, A Beautiful Mind based on Nash’s biography about his mathematical genius and his struggle with schizophrenia. The film was nominated for eight Oscars in the 2001 Academy Awards. Nash had few friends from Princeton, including Mr Sol, Mr Neilson, Mr Henson and his delusional friends were his Princeton roommate Charles Herman, Charlie’s niece, Margie and William Parcher (Howard, 2001). Nash was born and raised in the state of West Virginia. He was the son of an electrical engineer John Forbes Nash and Margaret Virginia Martin, an English and Latin teacher. Nash only had one sister, Martha Nash who was born on November 16th, 1930. He was an avid reader of Compton’s Pictured Encyclopaedia, Life Magazine, and Time magazine and later had a job at the Bluebird Daily Telegraph (Nasar, 1994).

When Nash was twelve, he was carrying out scientific experiments in his room. It was quite apparent at a young age that he did not like working with other people, preferring to do things alone. “ The truth is I don’t like people much and they don’t like me either” (Howard, 2001). He returned the social rejection of his classmates with practical jokes and intellectual superiority, believing their dances and sports to be a distraction from his experiments and studies (Howard, 2001; Nasar, 1994).

Nash seemed different from other children, in contrast to his sister Martha who seems to have been a normal child, Martha wrote later in life: “Johnny was always different. My parents knew he was different and they also knew he was bright. He always wanted to do things his way. Mother insisted I do things for him, that I include him in my friendships, but I was not too keen on showing off my somewhat odd brother” (Nasar, 1994).

Nash stated that it was E.T. Bell’s book, Men of Mathematics in particular, the essay of Fermat that first spurred his interest in mathematics. (Nash-Jr., 1994). He attended classes at Bluefield College while still
in high school. He later attended the Carnegie Institute of Technology (now Carnegie Melton University) in Pittsburgh, Pennsylvania on a Westinghouse scholarship, where he studied first chemical engineering and later chemistry before switching to mathematics. Nash advanced so quickly in mathematics that Carnegie Institute awarded him his Master’s degree together with his Bachelor’s degree in recognition of his contribution (Howard, 2001; Nasar, 1994). After graduation, Nash took a summer job in White Oak, Maryland, working on a Navy research project.

In 1948, while applying to Princeton’s mathematics department, Nash’s advisor and former Carnegie Institute professor, R.J. Duffin, wrote a letter of recommendation consisting of a single sentence. “This man is a genius”. Harvard University (his first choice because of his perception of the institution’s well-renowned prestige and superiority in mathematics) accepted him. However, Nash was aggressively pursued by then chairman of the mathematics department at Princeton University, Solomon Lefschetz, whose offer of the John S. Kennedy fellowship was enough to convince him that Harvard valued him less (Nasar, 1994; Nash-Jr., 1994). Thus, from White Oak he went to Princeton University, where he worked on his equilibrium theory (Nash equilibrium). Nash earned a doctorate in 1950 with a dissertation on non-cooperative games. The thesis, which was written under the supervision of Albert W, Tucker, contained the definition and properties of what would later be called the ‘Nash equilibrium’

His most famous work in pure mathematics was the Nash embedding theorem, which showed that any abstract Riemannian manifold can be isometrically realised as a submanifold of Euclidean space. He also made contributions to the theory of nonlinear parabolic partial differential equation (Nasar, 1994).

In 1951, Nash went to the Massachusetts Institute of Technology (MIT) as a C.L.E. Moore Instructor in the mathematics faculty. There, he met Alicia Lopez-Harrison de Larde, a physics student from El Salvador, who he married in February 1957. In 1959, Alicia admitted Nash to a mental hospital for schizophrenia and soon after, their son John Charles Martin Nash, was born but remained nameless for a year because Alicia felt that her husband should have a say in his naming.

Nash and Alicia divorced in 1963, but reunited in 1970, in a non-romantic relationship that resembled that of two unrelated housemates. Alicia referred to him as her “boarder” and said they lived “like two distantly related individuals under the same roof (Nasar, 1994). The couple renewed their relationship after Nash won the Nobel Prize in Economics in 1994 and remarried in June 1st, 2001 (Nasar, 1994).

In terms of his mental health and wellness, Nash began to show signs of schizophrenia in 1958, on the threshold of his career. He became paranoid and was admitted into the Mclean hospital, April-May 1959, where he was diagnosed with paranoid schizophrenia and mild depression with low self-esteem. After a problematic stay in Paris and Geneva, Nash returned to Princeton in 1960. He remained in and out of mental hospitals until 1970, and was given insulin shock therapy and antipsychotic medications, usually as a result of being committed rather that by his choice. After 1970, by his choice, he never took antipsychotic medication again (Howard, 2001; Nasar, 1994; Nash-Jr., 1994). According to Nasar, he recovered gradually with the passage of time. Encouraged by his wife, Alicia, Nash worked in a communitarian setting where his eccentricities were accepted (1994). This is seen as a positive road to recovery because the care provided at a community level, with active family and community involvement contributes significantly to helping the person regain confidence in society (WHO, 2008).
In campus legend, Nash became “The Phantom of Fine Hall” (Fine Hall is Princeton’s mathematics centre), a shadowy fi gure who would scribble arcane equations on blackboards in the middle of the night” (Howard, 2001; Nasar, 1994).

In 1978, Nash was awarded the John von Neumann Theory Prize for his discovery of non-cooperative equilibria, now called Nash equilibria. He won the Leroy P. Steele Prize in 1999 (Nasar, 1994).

In 1994, he received the Nobel Memorial Prize in Economic Sciences (along with two others), as a result of his game theory work as a Princeton graduate student. In the late 1980s, Nash had begun use electronic mail to gradually link with working mathematicians who realised that he “the” John Nash and his new work had value. They formed part of the nucleus of a group that contacted the Bank of Sweden’s Nobel award committee, and were able to vouch for Nash’s mental health ability to receive the award in recognition of his early work (Nasar, 1994).

Nash’s recent work involves ventures in advanced game theory, including partial agency, that show that, as in his early career, he prefers to select his own path and problems. Between 1945 and 1996, he published 23 scientifi c studies (Nasar, 1994). However, there was one path that had a detrimental effect on his health and wellness: his struggles with schizophrenia.

Schizophrenia is a particular form kind of psychosis characterised mainly by a clear sensorium but a marked thinking disturbance (Katzung, 2001). The term “psychosis” denotes a variety of mental disorders. The schizophrenic disorders are a group of syndromes manifested by massive disruption of thinking, mood, and overall behaviour as well as poor filtering of stimuli. The characterisation and nomenclature of the disorders are quite arbitrary and are infl uenced by sociocultural factors and schools of psychiatric thought (Macphee et al., 2007).

It is currently believed that the schizophrenic disorders are of multifactorial cause, with generic, environmental, and neurotransmitter pathophysiologic components. At present, there is no laboratory method for confi rming the diagnosis of schizophrenia, The pathogenesis of schizophrenia is unknown (Katzung, 2001). There may or may not be a history of a major disruption in the individual’s life (failure, loss, physical illness) before gross psychotic deterioration is evident (Macphee et al., 2007).

Schizophrenic symptoms have been classifi ed into positive and negative categories. Positive symptoms include hallucinations, delusions, and formal thought disorders; these symptoms appear to be related to increased dopaminergic activity in the mesolimbic region. Negative symptoms include diminished sociability, restricted affect, and poverty of speech; these symptoms appear to be related to decreased dopaminergic activity in the mesocortical system (Macphee et al., 2007).

Schizophrenia disorders are subdivided on the basis of certain prominent phenomena that are frequently present. Disorganised (hebephrenic) schizophrenia is characterised by marked incoherence and incongruous or silly affect. Catatonic schizophrenia is distinguished by a marked psychomotor disturbance of either excitement (purposeless and stereotyped) or rigidly with mutism. Infrequently, there may be rapid alternation between excitement and stupor. Paranoid schizophrenia includes marked persecutory or grandiose delusions often conconant with hallucinations of similar content and with less marked disorganisation of speech and
behaviour. Undifferentiated schizophrenia denotes a category in which symptoms are not specific enough to warrant inclusion of the illness in the other subtypes. Residual schizophrenia is a classification that includes persons who have clearly had an episode warranting a diagnosis of schizophrenia but who at the present have no overt psychotic symptoms, although they show milder signs such as social withdrawal, flat affect, and eccentric behaviours (Katzung, 2001; Macphee et al., 2007).

The disability paradox highlights the importance of personal experience with disability in defining the self, one’s view of the world, social context and social relationships (Albrecht & Devlieger, 1999). People have negative bias attitudes and expectations towards people with disability. They are often discriminated against their disability, judged that they do not have a high quality of life, view points are disregarded by researchers and loss of their social networks (e.g. friends) which ultimately have negative impacts on their motivation (Albrecht & Devlieger, 1999; Barker, Lavender, & Morant, 2001; Boydell, Gladstone, & Volpe, 2003; Connor & Wilson, 2006). Nash was always different from his peers and many referred to him as a weirdo or psycho. Nash referred to himself as a lone wolf but in fact people did not like him (Howard, 2001). Nash’s experience and people’s reactions towards him can be seen as counter-productive: Nash was a loner who wanted to mingle with society but did not know how and people were impatient with him and did not know how to be more compassionate and befriend him. Nash’s behaviour can be seen as the early stages of schizophrenia and had these people known what to do, perhaps treatment of his illness could have been more effective, a view supported earlier in this essay by the World Health Organisation (2008) (care and support by family and community at the initial stage leads to more effective treatment). Persons with disabilities have significantly more positive attitude towards persons with disabilities as they express willingness to interact and feel empathy for persons with disability (Albrecht & Devlieger, 1999).

As a result of Nash’s illness, he adopted unhealthy practices. He worked without food for a long period of time (2 days) and his smoking habits got worse (Howard, 2001). Esterberg & Compton, 2005; Forechuk et al., 2002 stated people with schizophrenia tend to smoke three times more than normal people. Also it affected his physical appearance and the way he walked.

In terms of sexuality, existing literature does not clearly articulate the role of sexuality in the lives of people with schizophrenia despite evidence that intimacy and sexual functioning are important components for individuals with schizophrenia’s social functions (Volman & Landeen, 2007). Studies indicate barriers to sexual expression as including lack of self-confidence and self-esteem associated with societal stigma, homelessness, institutionalisation and inadequate sexual education (Cook, 2000).

Nash was appreciative of the trust of his close friends and above all his wife because they listened, provided practical support, and loved him, hence he was open to encouragement and motivated to improve (Lelphart & Barnes, 2005). Nash hated being in the mental hospital because of the influence that medication and the environment which prevented him doing his work (Howard, 2001; Lelphart & Barnes, 2005). Medication had side-effects such as sleepiness and the inability to be as active or motivated as they once were (Boydell et al., 2003).

For the schizophrenic, the discovery and reconstruction of an enduring sense of self through narrative is an important part of improvement and that these narratives can outline ways in which caregivers offer the support needed (Barker et al., 2001). Nash believed that being institutionalised did not help him cope with schizophrenia. He believed that he needed time to figure out what reality was and valued being at home and
cared for by family and the people he loved (Howard, 2001). This (time, homecare and support) is something that is reflected in the mental healthcare policies of many countries which focus on encouraging patients with mental health illnesses to return to the community to live with their families after being treated in either the mental health hospitals or general hospitals with mental health departments (Huang, Sun, Yen, & Fu, 2008). The emphasis has been to reduce the need for hospital provision by developing community-oriented resources such as providing aftercare for these clients through mental health home visiting services which are delivered by public health nurses (Huang et al., 2008; Jones, 2001).

Nash’s journey from insanity to sanity was only made possible because of the unconditional support of his wife, Alicia, his determinations to be well, his rejection and hatred of being institutionalised, his passion for his work and the hope of gaining his pre-sickness social norms (Howard, 2001; Nasar, 1994; Nash-Jr., 1994). Recovery from mental illness has emphasised the importance of hope for the people experiencing mental illness (Kelly & Gamble, 2005; Resnick, Rosenheck, & Lehman, 2004). Hope is viewed as a crucial factor in reducing the impact of schizophrenia on individuals and families and enhancing more positive health and psychological outcomes (Bland & Darlington, 2002). Often an increase in the sense of hope may reduce the risk of suicide, increase the likelihood of employment, increase quality of life and reduce psychotic symptoms in people experiencing mental illness (Miller & Happell, 2006). Mental health nurses also encouraged self determination with schizophrenic clients based on moral principal of autonomy (McCann & Clark, 2004). Nash’s self-determinations enabled him to overcome the stigmatisation suffering due to schizophrenia (Howard, 2001; Schulze & Angermeyer, 2003).

Once Nash came to terms with his illness, he was embarrassed of it and because of his embarrassment he avoided taking medication in front of his peers and getting involved in community activities (Howard, 2001). Nash experienced the five stages of coping with mental illness which Jensen & Allen (1994) portray. Firstly, comprehending (strive to achieve understanding) – Nash’s wife knew that he was suffering from schizophrenia and was the influential person in telling him that he did have schizophrenia. Secondly in Managing (with the threat of change, real or perceived, the balance of living is altered) – Nash needed to time to figure out what reality was. This is crucial to achieving recovery and a sense of belonging. Belonging (struggle to belong) – Nash forced himself to be involved in community activities with the support of his family and friends. Normalising (realisation of change) – Nash accepted that he was ill and the illness’ impact on his life and his loved ones. This self-acceptance is perhaps the most important step in determining whether he would progress optimistically or relapse into the delusional world. Finally in valuing (living involves a sense of guarded optimism) – Nash became optimistic and positive with making better use of his time with research when he realised that a lot of time had been wasted on his delusional experiences (realisation of reality).

Nash can be seen as both a genius and a mad man. However, he came to terms with his illness in a way which many therapists and psychiatrists believe is crucial for an individual learning to cope with schizophrenia (Howard, 2001; Kelly & Gamble, 2005). Nash knew that he was crazy; he saw things that were not there but chose not to acknowledge them. Like diet of the mind, he chose not to indulge certain appetites such as his appetite for patterns and appetite to imagine and dream as it may trigger being delusional (Howard, 2001). As time passed, Nash began to intellectually reject some of the delusional influenced lines of thinking which had been characteristic of his orientation. They began, most recognisably, with the rejection of politically oriented thinking as essentially a hopeless waste of intellectual effort (Nash-Jr., 1994).
The support of Nash’s wife Alicia and the few close friends he had were paramount to his recovery and living with schizophrenia. However, it was only his devoted wife’s courage, passion, faith, support and love that enabled her to cope with Nash’s journey with schizophrenia. In fact without Alicia, Nash would not have survived to experience the recovery that he has (Howard, 2001). This was evident as Nash’s schizophrenia progressed, his social network got smaller and Alicia became the most important person in his life (Jungbauer, Stelling, Dietrich, & Angermeyer, 2004).

Schizophrenia is a major mental illness that has caused serious disturbances for those with the condition and for those who care for them. Schizophrenics have been identified as mentally ill because they inhabit phenomenological worlds that are inaccessible and incomprehensible to non-sufferers (Howard, 2001; Karp & Tanarugsachock, 2000). This is an extensive burden carried by the carers of people with schizophrenia (Huang et al., 2008). Alicia had used cognitive coping strategies with her caring for Nash by having positive thinking in attempting to accept Nash’s illness rather than denying that it existed and to understand the life experiences of a person with schizophrenia (Howard, 2001; Huang et al., 2008).

She also acquired knowledge and information about schizophrenia and how to best care for the patients. Alicia also used social coping strategies by keeping close relationships and friendships of Nash’s close friends who would do anything to help his recovery (Howard, 2001; Huang et al., 2008; Jensen & Allen, 1994). Much attention has been given to understanding the burdens faced by carers, with the hope of understanding how coping resources can be strengthened to sustain care-giving responsibility. Understanding the dynamics of care-giving is essential to providing effective support to individuals and families living with serious mental illness (Huang et al., 2008).

At times Alicia was frustrated with Nash’s condition and often had negative emotions of anger and resentment and communication was always a problem as the length of meaningful conversation with the mentally ill is often short circuit (Karp & Tanarugsachock, 2000). However, it is hope, guilt, obligation and love that keep her going. She commented that “I think often what I feel is obligation or guilt over wanting to leave. Rage against John, against God, but then I looked at him and forced myself to see the man I married and he becomes that man who I love and I transform to someone who loves him” (Howard, 2001).

As Huang et al., (2008); Karp & Tanarugsachock, (2000) stated, families whose member(s) suffer from schizophrenia have psychological distress and behavioural problems which are important factors that contribute to family dysfunction. Also, it’s more challenging when caring for mentally ill individuals because physically ill people (with no mental problems) are ordinarily deeply involved in getting well and getting back to their pre-sickness social roles. In contrast, mentally ill people often cannot abide by the usual rules of social settings, engaged in socially repugnant behaviours, deny they are ill and frequently treat their caregivers with hostility (Karp & Tanarugsachock, 2000). Hence, family members are significantly distressed as a result of having a family member with schizophrenia (Huang et al., 2008).

In terms of scholarship, not much research and literature outline similar experiences that Nash has had with his recovery. Howard (2001) stated that it’s about a 25% chance, that survivors of schizophrenia can regain clarity as Nash did within a certain time period. However, many people simply do not survive that period because of suicide, accidents and illnesses brought on by improper care. The support of Nash’s wife Alicia and the few close friends he had were paramount to his recovery and living with schizophrenia.
In conclusion, schizophrenia is a horrific illness which causes hallucination and paranoia in people which lead to suicide, accident and poor quality of life. It brings about challenges for medical practitioners because very little is known about its pathogenesis. Only a small number of schizophrenic sufferers survive the impact of the illness and only a smaller number of the survivors regain clarity.

Schizophrenia brought burden on both the sufferers and their carers in terms of dealing with emotions, frustrations, communication difficulties, side-effects of medication, discrimination, loss of social networks and stigmatisation, unhealthy eating habits, increase in smoking, to mention a few. However, the movie, A Beautiful Mind, biography and autobiography of Nash clearly state that self-determination, passion, courage, hope and love, help carers and sufferers understand the lives of those with schizophrenia and how to cope (sufferers) and provide support (carers). Often what is needed by people with schizophrenia is time to deal with it and to figure out what reality is.

Nash knew that he owed his wife Alicia for the unconditional love and support which only made his journey from insanity to sanity a triumph. Hence, his dedication of his achievements to Alicia in his speech at the Nobel Prize Ceremony, Stockholm, Sweden, December, 1994 said that “I’ve always believed in numbers. In the equations and logics that lead to reason. But after a lifetime of such pursuits, I asked, what truly is logic? Who decides reasons? My quest has taken me through the physical, the metaphysical, the delusional, and back. And I have made the most important discovery of my career, the most important discovery of my life. That, it is only in the mysterious equations of love, that any logical reasons can be found. I am only here tonight, because of my wife. She is the reason I am, she is all my reasons” (Howard, 2001).

In sum, Nash was self-medicated through the support of his wife Alicia, his own determination and self discovery of what is real and what is not real enabled him to successfully deal with schizophrenia.

References

“Challenges are what make life interesting; overcoming them is what makes life meaningful.”

Joshua Marine
A Tonga Health Professional’s Perspective on Midwifery Service in Aotearoa

By: Violani ‘Ilolahia (Lani) Wills

Abstract
I have highlighted the key factors in midwifery best practice that contribute to a healthy pregnancy and, currently, the best possible outcomes for both mother and baby.

The maternity services need to be delivered as an ethnic specific service and drive away from the economy of scale model. New Zealand need to recognise its multiculturalism and train ethnic specific midwives with strong cultural competency and high ethnic specific social literacy to maximise pregnancy outcomes for all New Zealanders.

Growing up in Tonga, I was privileged to be a recipient of, Kaliloa and eyewitness to, the best maternal care and baby healthcare delivery. As a nurse and midwife, I was mentored by my own mother and by a generation of wise Tongan midwives from a previous era. Their wisdom about how to nurture and deliver the best maternal and child care is their legacy. We left the islands to come to New Zealand with the expectation of better healthcare for everyone. The dream remains — the best health outcomes for the Pacific mother and child in Aotearoa and Oceania. PHD, 2009; (15) (2); pp. 139 - 141.

Introduction
I am moved to write since the recent demise of a Tongan neonate during delivery in Wellington. I believe that the midwifery services in New Zealand should be cognisant of issues about the Pacificans and ensure that the services address these important and essential features and contextual issues or the Inverse Care Law will persist indefinitely in Aotearoa (New Zealand).

Suitable midwives
For Pacific women, finding a midwife they can communicate and feel comfortable with is one of the biggest challenges. I know of only three midwives in the Wellington area who work primarily with Pacific women. In the past, I have seen Pacific women arrive at hospital in labour, without a midwife. Today, there is government funding to ensure an adequate supply of hospital midwives are always available for these cases.

Any pregnant woman has to be completely comfortable with her midwife; she wants to feel that the midwife sees her as a person, and is prepared to ‘work outside the box’. Not everyone will fit the same box! Not only is each individual different; there are also important differences between the various Pacific ethnic groups and how they think about pregnancy and childbirth. Among Tongans, for example – which is the community I know best – women do not usually go back to work until the baby is at least six months old. The babies are to stay home and not to venture out of that until baptism around three months. They will never take their baby to a crèche or childcare centre: the baby will always be looked after by a grandmother or another female relative.
Barriers to care
Language barriers affect Pacific women’s relationships with their midwives, and may be the source of misunderstandings that create unhappiness and tension. In turn, this tension may prevent the woman from sharing her concerns with her midwife, or asking questions about matters she is unsure of. The poor and low cultural competency and social literacy of the midwives are the reasons many Pacific women allegedly seem to not communicate or show their real feelings and moods. Many Pacificans are very good at hiding what they really feel. To avoid sounding critical, a Pacific woman may simply say what she thinks the midwife wants to hear. The midwife needs to be aware of that, to be alert to possible misunderstandings, to look around and to ask the right questions.

Safe choices
There are other issues affecting Pacific women in pregnancy. Some migrants do not know how the maternal healthcare system works and what sort of care is available to them. Many midwives now require patients to visit them at their clinics, rather than seeing them in their own homes. But this does not suit most Pacific women, especially if they are reliant on public transport; do not know their way around; or have small children to care for as well. These are all reasons why not so many Pacific babies are seen by Plunket nurses, too. Financial opportunity costs and timing as well and the inability to navigate the Pakeha system are real additional issues for Pacificans.

Hospital or home?
As in the wider community, there are many different views among Pacific women about whether to give birth at home or in hospital. Unfortunately, when they are considering where to have their babies, the issue of safety is not always adequately discussed. Because of language difficulties, some midwives find it hard to hold meaningful conversations with Pacific women about the options and the safety implications of each. For the same reason, women may find it hard to ask questions that elicit the information they need to make their choice. Similarly the issue of informed consent is questionable under this circumstance of variable comprehensions.

Some Pacific women find home birth convenient, because there is no need to travel across town or make arrangements for older children to be looked after. But some women may feel that their home is not good enough; perhaps the facilities are not suitable, or the house is overcrowded and there is no privacy. Others choose to give birth in hospital because they think it is better to have all the medical back-up if they need it. Considerably more Pacific women living in New Zealand give birth in hospital than at home. Either way a comprehensive dialogue in an appropriate language needs to take place before reaching a satisfactory decision.

It is not uncommon for many people to be present at the birth itself. Usually the husband or partner attends, and perhaps the grandmother or another female relative to help the midwife. The health professionals need to be aware of any language barriers, and recognise that the woman may be reluctant to ask for pain relief or other intervention; they should be prepared to take the initiative if they think intervention is the right thing to do. Pacific women are sometimes seen as “bad” patients. We may be seen as too obliging, or else not obliging enough!
**Placenta/ fonua**
After the baby is born, different families will have different wishes about what to do with the placenta. Even though burying the placenta and umbilical cord is part of traditional Pacific cultures, Pacific people living here in New Zealand will not necessarily want to. If they do not own their house, they would not want to bury it and then leave it behind, unattended, when they move. That would never happen in the Islands.

**Postnatal and maternal care**
Traditionally, a woman who has just given birth will be nurtured both by her family and by her community – they will bring her food, and look after her in many ways. That nurturing attitude continues among Pacific communities in New Zealand, but there are important differences. New mothers may miss out on the support and shared knowledge that other women can offer, especially if the local Pacific Islands community is small. For these isolated mothers, there is only the midwife to fulfil that role; therefore, it is even more critical that they have a good relationship based on mutual understanding. The level of Pacific community support available to new mothers is also different in New Zealand because older relatives are usually still in the workforce, meaning they are unable to help out as much as they might like.

**Breastfeeding**
The rate of breastfeeding in the first six months is reasonably low among Pacific women. There are many reasons. When the mother has to go back to work soon after her baby is born (which happens in most cases), it is simply not possible. Alternatively, she may not have the support and resources she needs to breastfeed, especially if she has older children. Again, these points to the need for good communication in the appropriate language with the midwife, so they really understand what is going on in the home and can make suggestions. As long as the mother and the midwife have tried as best they can, a mother who cannot breastfeed should never feel like a failure.

**Bed-sharing**
It is still very common among Pacific families for babies to share a bed with their parents. In traditional village life, the whole family often sleeps in the same area on mats and without heavy bedding so there is no risk of suffocation or smothering. Mothers often find breastfeeding is much easier to manage. But the situation here, where mattresses and blankets and cots are fashionable is very different. It is sometimes necessary to make people aware that there are real risks associated with bed-sharing in these conditions, especially for smoking and alcohol imbibing parents care givers.

**A settled baby, a happy family**
Another issue that midwives need to appreciate is that Pacific mothers do not like to hear their baby cry. In the first few days, before her milk comes in, a mother may prefer to give her baby a complementary bottle feed rather than having him cry from hunger. But she will still want to breastfeed once her milk supply is well-established. I feel that this Pacific cultural attitude to breastfeeding does not always meet the expectations of western midwives. In our culture, when the baby is happy and settled, the whole family is at peace.

**Acknowledgement**
*Violani ‘Ilolahia (Lani) Wills* was a midwife in Tonga and New Zealand before becoming charge nurse of the neonatal unit at Wellington Hospital, a role she held for twenty-six years. She was a founding member of the New Zealand Council of Tongan Women, and the national President (now Patron) of the Tongan Nurses’ Association. In 1999, she was awarded the MNZM, for services to nursing and the Pacific Islands community. She is now a community nurse for Pacific Health Services Wellington.
Talanoa Oceania 2010

Talanoa Oceania are gatherings for persons who are interested in the dynamic ways and diverse peoples of Oceania (or Pacific Islanders, abbreviated as PIs) who have migrated overseas (as did our ancestors, who crossed the paths of Oceania). These gatherings are in response to:

1. PIs being torn between where we live and our home islands, partly because we have not been fully understood (in our new locations) and released (from our island homes)
2. PIs continuing to look for directions from our home islands, partly because a sea of talanoa* has not been gathered to root us in our current locations
3. PIs searching for meaningful ways of staying connected to our island cultures, churches and homes
4. PIs misunderstanding other cultures, partly because we are confused with who we are, in our current locations, and we are consequently easily misunderstood
5. PIs not being homogenous, so we need to name and come to terms with our diversity, complexity, richness, ambiguity, and more ... as we seek to kindle cross cultural creativity
Talanoa Oceania 2008 Conference: Mana, Vanua Talanoa

From Jione Havea, Parramata Sydney Australia
(Jioneh@NSW.uca.org.au)

Abstracts

‘Epeli Taungapeau (epeli.taungapeau@paradise.net.nz), “How can I be Tongan in a strange/promised land? Cultural and theological diversity in the MCNZ”

This paper outlines the social and religious issues of a “TALANOA” that most Pacific Islanders, especially Tongans, face when they migrate overseas and make their home in a foreign land. Although the talanoa are not new, it is important to revisit these experiences to identify key reference points that impact on the lives of the individual in the context of their family and how these factors will ultimately shape and inform how Pacific Island migrants fit in their new society. Several factors influence an individual’s talanoa including social location, identity, dreams and aspirations and the integral place of faith, tradition and custom, life experience and the bible. This Talanoa outlines the journey to Aotearoa of a young nineteen year old Tongan male accompanied only by the talents, gifts and identity, and the discovery of the means to fulfill a dream by pursuing education success in NZ.

This talanoa explores the “call” to ministry in the Methodist Church of New Zealand and the importance of faith and tradition in the process of migration to the land of the Long White Cloud – Aotearoa New Zealand. It discusses several issues and some of the solutions that Tongan members of the MCNZ encounter within the Church. The commonalities within the talanoa provide useful tools for the church’s people to explore the development of durable options/solutions and illustrate a possible way forward when working with Tongan families in the Methodist Church of New Zealand.

Eseta Meneilly (e.meneilly@yahoo.com.au), “Lacadrau Masi -- Weaving/Stitching the old roots with the new identity: A quilt in masi design”

Definitions:
laca = sail; drau = a hundred; masi = Fijian name for tapa cloth;
lacadrau = a patchwork of scraps of material, of any size, used as blanket or throw-over.

When ‘home’ is far away there is a sense of exile, of not wanting to be in this place, of not wanting to understand. What I experienced most was a feeling of cultural exile. When I first came across cassava and tinned tuna, six months after leaving Fiji with my Australian husband and three young Fiji-born children, I boiled the cassava, opened the tinned tuna and threw in with it onion, lemon juice and chilly. Then I ate the lot with my fingers. Suddenly I found myself crying. This ‘food of the poor’ critically became for me the link between everything that is past and present. And also that which is future.

So I made a ‘lacadrau masi’ a patchwork quilt of stitched together squares of calico, hand-painted with masi designs. The lacadrau is an expression of the resources that are abundant in this new place. The masi

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designs are an expression of that which will always be a part of me. The colours are an expression of the links between my old roots and the new. The work is an expression of the things I have come to appreciate about life.

Katalina Tahaafe-Williams (katalinat@nsw.uca.org.au), “Multicultural Ministry as Tool for Racial Justice: A Reflection on the Roles and Responsibilities of Customs and Traditions”

Abstract not available

Litiana Qiosese (lqiosese@adventist.org.au), “The Deuteronomy Model in a Changing World”

I am a second generation Fijian woman currently residing in Sydney and am really interested in exploring the dissonance that is happening and continues to happen between our Island born and raised parents with their Aussie born and bred children. I am primarily interested in the challenges faced by our parents and their children due to the lack of mentoring that is occurring in our homes. I’m looking at this through the eyes of Christianity, focusing on the passage in Deuteronomy that talk about parents as the primary spiritual mentors for their children. I would apply this further to our cultural heritage and address perhaps the perceived loss of connection (in the young people) not just to the land but to its people, the language and na i tovo vaka Viti (attitudes and what make us Fijian).

For Pasifika parents whose children grow up within urban contexts, there is often a tension of being islanders living in Australia. Can parents successfully transfer spiritual and cultural values to their children? The Deuteronomy Model may offer some insights. God has a Dream, We have a Problem, God has a Model, We have an Opportunity!

Apelu Tielu (apelu.tielu@internode.on.net), “Thy Kingdom Come: God’s Kingdom on earth and implications for Church and culture”

The purpose of this paper is to explore the issues implied by the kingdom of God that Jesus proclaimed. Did Jesus mean for it to be established on earth, in this life, or was he talking about a kingdom in “heaven” where the “saved” would go after they die? If Jesus meant for it to be founded on earth, what type of kingdom would it be like, and what are the implications for church and culture?

It is our contention that Jesus intended for the kingdom of God to be established on earth, in this life. And based on his teaching and life ministry, the kingdom would have no systems of power; that is, there would be no dominating element in it. In politics, no one would have more power than anyone else. In economics, no economic agent would exercise any influence on markets, and even charity would be incompatible with it. This would have implications for church and culture. For the church, it would need to apply these kingdom-principles to the way it does things within the church. Further, it can bring about kingdom-like practices to the wider community through its resources and its members, and therefore promoting egalitarian communities that Jesus envisioned.

The implications for culture would, also, be profound, and in particular for the Pacific cultures with their traditional hierarchical power structures. Pacific cultures have managed to survive in diaspora for decades,
but if they are to be faithful to the call of the kingdom of God, then the traditional power structures would have to come down at all levels of diasporic Pacific Island communities.

*Lynne Frith (pittst.presbyter@methodistcentral.org.nz), “A view from the top table”*

Seating arrangements at the “top table” are significant indicators of hospitality and respect in the traditions of many Pacific nations. For a feminist palagi/pakeha ordained woman in Aotearoa, working in a multi-ethnic setting, this and other traditional customs present significant challenges and opportunities.

While there is a growing body of literature arising from the experiences of ethnic diversity in Christian community, much of it emerges from the migrant communities within the church. It can be dangerous ground for a palagi to reflect upon the traditional practices of such communities. The risks of causing offence and thereby damaging respectful and trusting relationships are inherent in the discourse. This may explain the relative silence of palagi women in cross-cultural theological discussion.

This paper examines my experience as a feminist palangi ordained woman, over 10 years as Parish Superintendent in Wesley Wellington Parish, which comprises English speaking, Fijian, Samoan, and Tongan congregations. The intersections and contradictions of culture, theology, differing expressions and expectations of what it is to be Christian in Aotearoa, power and status, and pastoral relationships are some of the issues to be addressed daily in this context. The paper is offered as a gift both to the parish and to the community of women theologians in the Pacific.

*Sylvia ‘Akau’ola Tongotongo (sylviaa@wesley.school.nz) & Ali’itasi Aoina Toleafoa (aliitasit@wesley.school.nz), “We are what we eat: A Wesley College Perspective”*

The title alludes to a gastronomy (the art of good eating) praxis of ministry. The context of this presentation is Wesley College, the oldest secondary school in Aotearoa New Zealand and the only Methodist Church School.

- What theological treats are offered at the banquet table?
- What culturally is on the bill of fare?
- Does it make for good eating?

**The following is presented for consideration:**

1. That the ‘needs’ as outlined in the Talanoa Oceania 2008 brief (TOb’08) are specific to a migrant population.
2. That many New Zealand born Pacific Islanders (NZ PIs) celebrate living out from ‘under the shadow’ (TOb’08) of said ‘needs.’
3. That many NZ PIs rejoice in the oceanic depth and breadth of talanoa already shared and experienced, personal and communal, past and present. This is what grounds us.
4. Further talanoa and deeper grounding continues but from a different sea and by new fishermen - ‘fishers of people’.
   a. The ripple effect - an identity - vanua, fenua, fanua, whenua is re-shelled anew, courage is re-cast afresh, deep sea traditions and a new found direction is re-navigated by the Christ star of hope as well as compass. A direction no longer cast by the ‘shadows’ of a net that serves to keep us caught up, but to point us onwards.
b. The reference to stars and compass is a coming together of the old with the new. We cannot know where we are going if we do not know where we have come from. It is the old - traditions, culture, family upbringing and so on that enable us to be where we are, in ways that are life giving.

c. Inherent in the continuing talanoa is the collective mana of faith, belief, tradition, culture and ancestry, at the waters edge respecting all who break upon New Zealand shores - tapu, transforming, re-creating, healing and all in the name of the one Creator.

5. So what theologically is gastronomically served up at Wesley? What is on the cultural fare?

6. Positive/practical examples. Recognition of Talents – Adults and Students.

7. **The Challenge**:
   - How do we grasp the opportunities that present themselves?
   - The best recipe is what you create!
   - The ingredients: Creativity, Vision, Commitment, Determination, Sustainability, Leading the way (taking people on board, and not leading the way going alone).

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**Winston Halapua (winstonh@stjohns.auckland.ac.nz), “Moana Methodology of Leadership”**

How can the Oceanic people express the immense love of God in a dynamic way which will honour the integrity of Creation? The Moana Methodology uses talanoa to address this question.

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**Sela Mafi Taufa (Sela.Taufa@anu.edu.au), “The Research Model of Talanoa: A lesson in being a Tamaitai Samoa living in the Diaspora in Australia”**

This paper came out of many “talanoa” sessions between Tuimavave Katie (a matai and a decision maker of village life in Samoa even though she is living outside Samoa) and Pafuti Sera (the western trained academic). I once asked Tuimavave why she wanted a matai title in our village when she is based in Australia and her response left quite an impression on me as a child nurtured in the diaspora: “Being a matai is not about mana (prestige), but rather it is about ensuring the voice of social conscience, promoting social justice and
ensuring a female representation within the local governance of our village fono.” This paper came out of many conversations with Tuimavave Kathleen Fruean between August-October 2004, when I was carrying out a component of my PhD fieldwork in Samoa. I am indebted to Tuimavave for this body of knowledge. I would like to dedicate this piece of work to the memory of my late aunty Rosie Mulipola and my aiga potopoto who wholeheartedly embraced the returning home of a daughter of the Maota of Amaile, Aleipata.

In this paper I will discuss the following issues:

a. The practice of “talanoa” and how it can be used as a research methodology when studying and carrying out research fieldwork amongst people of the “Moana”.

b. The role of a researcher and research participant as informers, agents and participants in telling their own history and genealogy.

c. Contextualizing the contributions of our great ancestors in order to move forward and define ourselves by our own contributions to our cultural world.

d. The notions of inherited mana versus contemporary mana and the use of ‘talanoa’ as a research tool to inform the thinking behind these notions.

e. The formation of new formed consciousness (service) and transformed nuances (dignity and mamalu) amongst contemporary Samoan youth living in the diaspora.

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Sela Mafi Taufa (Sela.Taufa@anu.edu.au) & Sioana H. Faupula, “Molumalu mo e Ngeia ‘a Fafine Tonga”

The main issues to be discussed in our paper are:

a. Explaining the etymology of Molumalu and Ngeia

b. Acknowledging the kudos of Tongan knowledge and epistemology

c. Explaining the practices of these two values within the country of origin

d. Tracing examples of women who exemplify the “Molumalu moe Ngeia a Fafine Tonga” over time

e. Examining traditional frameworks versus western frameworks where cultural values must be contextualized in order to develop a more appropriate methodology in studying and researching the Tongan Diaspora

f. The issues for Tongan women in practicing and implementing the values of ‘Molumalu’ and ‘Ngeia’ with their Australian-born children

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Ilaitia Tuwere (ilaitiat@stjohns.auckland.ac.nz), “Sa Meke Tiko Na Vanua [The Vanua {land} is now dancing]”

This paper seeks to explore the nature and function of the Fijian meke or dance. This meke or dance has nothing in common with the dance of the White races. It is a language in itself that speaks about differing subjects that are related to the Vanua. There are mekes on war, the fields, the woods, storms, calms, rains, the heavens, gods, devils, travels by land or sea, men and women etc. The approach used will be a doxological approach that seeks to describe the Fijian mekes as songs of God’s creation – here understood as Vanua. It is an exploratory paper that hopefully will have implications for Christian worship in general. Meke essentially is movement in different ways and rhythm. Through this language of meke, this paper will move on to explore the idea that God the Creator is “Movement” par excellence.
Nasili Vaka’uta (nvakauta@gmail.com), “Talanga: theorizing a Tongan mode of interpretation”

This paper reconsiders the task of (biblical) interpretation from a Tongan standpoint, and thus focuses on the concept of talanga. Talanga (tā-langa/tala’anga) is one form of talanoa that involves critical engagement between two or more parties. Its basic goal is to offer alternative perspectives on any subject of interest. Talanga is about morality, multi-voicedness, and dialogue. It presumes community and otherness, and endorses openness and freedom of expression. These and many other aspects of the concept will be discussed alongside interrogating the claims and assumptions that shaped Western/colonial approaches.

Tevita Finau (tfinau@gmail.com), “A perfect match: Church and State in Tonga” [Ongo ‘olive ‘e ua kae mālohi ha fonua]

This talanoa engages the fact that history is written by the winners and heroes, that is, the “big and mighty.” In the case of Tonga, the Church and the State are the big and mighty. It is for their interests that the history of Tonga is written and constructed. This talanoa will take a different approach. I will explore what the history of Tonga looks like from the perspectives of what the “big and mighty” like to think of as the heathens, pagans, primitives and uncivilized.

This talanoa will look especially at the mutual ambitions of King George Tupou I and the Rev John Thomas, through the eyes of the victims of the processes of evangelization and the unification of Tonga during the 19th Century.

Angie Elia (angie@asdah.school.nz), “P.I. stands for Performing Informatively”

This paper comes out of a wider project funded through the Teaching and Learning Research Initiative (TLRI) which focused on identifying successful literacy teaching approaches for struggling adolescents. Our own inquiry has been concerned with the extent to which the scope and sequence of literacy skills (McDonald & Thornley, 2005) can positively impact on the learning of Pasifika students in secondary schools. The fluidity of the model helped teachers to practice elements in incremental steps until confident enough to add other elements of the model to their “kete of knowledge”. The hooks that saw our adolescent Pasifika learners shift in their literacy practice was instrumental in helping us to become adept at assisting our Pasifika learners to confidently navigate the ‘oceans of texts,’ they encounter in a high school setting.

Talanoa Panels

Roots and Routes: Who are we?!

1st General panel: Liva Tukutama, Filimone Olivetti, Alisa Peacock, Seini Afeaki, Ruta Tonumaipae, Manongi Tavelia

This panel explored the challenges that Pacific Islanders face when they migrate overseas. Once they settle and interact with the new environment, they are torn between their commitments to the homes from where they came and the necessities of settling into new homes. They come from predominantly village based cultures to the bright lights of urban living. Their desire to maintain their island cultures and identities create tensions with the new way of life. The expectation that they are moving to land of milk and honey proves
to be a myth. PIs continue to struggle to find adequate housing, good employment, maintain healthy living, understand the education system, make church practices relevant to the new context and sustain healthy relationships amongst family members and others.

Most PIs don’t give top priority to educating their children which directly affects their opportunities for further education and finding good jobs. Parents find it hard to understand the education system. Domestic violence, and violence in general, have become synonymous with PIs; many families are adversely affected because of domestic violence. When children are brought up in violent situations, their lives are scarred for life. They become perpetrators of violence themselves hence one of the reasons of the high statistics of PIs in juvenile centres and prisons in NSW.

The panel will also explore issues that PIs face as they try to understand the Christian faith in their new context in Australia and New Zealand, and health concerns amongst PIs as they take on new lifestyles. The members of the panel and their areas of focus:

a. Liva Tukutama (Convener) will give a brief overview (Niuean)
b. Filimone Olivetti will address the challenges for PI churches in Australia (Tongan)
c. Alisa Peacock will address the health issues in Western Sydney (Samoan)
d. Seini Afeaki will address issues related to education in Sydney (Tongan)
e. Ruta Tonumaipea will address Domestic Violence in Australia & Western Sydney (Samoan)
f. Manogi Tavelia will discuss these issues from the Aotearoa/New Zealand perspective (Niuean)

Roots and Routes: Who are we?!

2nd General Panel: Ma’ata Havea, Raymond Joso, Nicole Fleming, Salesi Faupula, Dorothy Reid

This panel will also explore the challenges that Pacific Islanders face overseas, focusing on the experiences of second generation PIs. What issues attract, energize and/or trouble our young people? What issues draw together and/or distance the second gens from the first gens? Dare we talk about alcohol, love, body and sex in public for the sake of second gens? Where and what is our future? How may we connect second gens with our home islands? Should we? Why? The panel will address some of these and other questions.

Vanua panel: Home in Diaspora

Panel members: Peleti Lima, Seforosa Carroll

Home (vanua, fenua, whenua) is embodied experience and memory. Home is a recurring theme for PI migrants manifested in questions such as; where is home? What does it mean to be at home? How does one feel at home in diaspora and in the homeland? How does one settle on foreign soil and/or re-inhabit the vanua on return? How are belonging and identity negotiated in the homeland and diaspora? The panelists will explore these questions from their own experiences highlighting different understandings and experiences of the notion of home as well as strategies of negotiating identity and belonging.
**Talanoa: Language and identity**  
**Panel members: Uani Havea, Tevita Finau**

Many islanders who live overseas see themselves as Pacific Islanders because they speak one of the native languages of the Pacific Islands. We live in foreign lands, and one of the things that connect us with our native homes is our languages. In this regard, our languages shape who we are. At the same time, it feels as if we are 1 or 2 generation(s) away from losing our native languages. What will this ‘loss of language’ mean with regard to our identity? Do we need to preserve our native languages when we are in foreign settings? 

These are some of the concerns that this panel will address, with the awareness that languages have the capacity to develop, grow and/or die away.

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**anahine Pasifika: “Out of the womb: reflections on women and theology from the Pacific and Pacific Diaspora”**  
**Panel members: Seforosa Carroll, 'Iakati Hui, Meleane Pouvalu**

In the early 1990’s Tongan theologian, Sr Keiti Ann Kanongata’a articulated a revolutionary theology from the perspective of Pacific Island women using the metaphor of birthing. Keiti Ann observed way back then that Pacific women’s theology was in the process of birthing. She also warned “to stay forever in the womb would be fatal”. Oceanian women’s theology is well and truly past the process of birthing – or is it? A decade later following the establishment of Weavers in Suva, another vision was born, Manahine Pasefika. Its primary objective was to “make Oceanian women’s voices heard through publications’. Manahine also widened the circle to include Oceanian women in diaspora. This panel will explore through story and experience to test whether Pacific women and theology are actually out of the womb (or is their tendency to crawl back into the womb for safety) and if they are how well are we faring in the Pacific and Pacific diaspora. Are there gaps in our experience or tales untold? This panel comprises Oceanian women from the Pacific and the diaspora, with varying backgrounds, experience and age.

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**Pasifika~Oceanic models of leadership**  
**Moderated by Veiongo Mafi**

This session will be a chance for participants to talanoa, informally, about different methods of leadership in Pasifika, in response to the presentations thus far in the Talanoa Gathering. This talanoa session will be an open forum, and will be moderated by Veiongo Mafi.

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**Pasifika~oceanic modes of thinking and theologizing,**  
**Moderated by Sisilia Tupou-Thomas**

This session will be a chance for participants to talanoa, informally, about different modes of thinking and theologizing in Pasifika. This talanoa session will be an open forum, and will be moderated by Sisilia Tupou-Thomas.
Talanoa Oceania 2009 Conference:
Lotu Tapu Tikaga

Centre of Pacific Studies, Auckland University September 2009
From Nasili Vaka’uta, St Johns Theological college University of Auckland.
nvakauta@gmail.com

Abstracts

KEYNOTE SPEAKERS

DR JENNY PLANE-TE PAA, PhD (GTU, Berkeley, CA), D.Div (EDS Cambridge, MA – Honoris Causa), D.Div (VTS Virginia – Honoris Causa), M.Ed (Hons) (Auckland), BTh (Auckland), Dip Soc Serv (Hons).

Title: “E anga ana te Hähi ki te hähou i te rongo ki nga wähine o Te Moana nui a Kiwa?”
(no abstract)

MISATAUVEVE DR MELANI ANAE, PhD (Auckland), MA (Auckland)

Title: Why are our young people leaving our Churches?: Pacific NZ-born youth and the search for spirituality

Abstract: This paper raises some issues of great and timely importance to the Pacific diaspora specifically and to the Pacific generally, and offers a view of Pacific church, religion and spirituality that is new and optimistic. In New Zealand there are two levels of operation that are relevant to the purposes of this paper. The first is that of Pacific leadership within the Pacific mainstream Churches, namely the PIPC - the first Pacific ethnic church to be established in New Zealand in 1947; the other level is that of ordinary Pacific people who are still going to these Churches, the PIPC ekalesia - parents, grandparents and their (grand) children who attend Church services, Bible Class, Sunday School, and who serve the Minister and the Church. In the course of this paper we will see how theological views of Pacific church leadership often differ markedly from those from the level of Church adherents and needs of the church ekalesia, especially Pacific youth. This paper is a reflection of my thoughts about western and Pacific church and religion, based on the literature, and my own experience as a NZ-born Samoan and member of the PIPC, and is offered in hope of a more fulfilling future for our Pacific NZ-born youth.

DR MELENAITE TAUMOEFOLAU, BA GCE (USP), MA in ESFL (Wales), PhD (Auckland)
Email: m.taumoefolau@auckland.ac.nz

Title: De-colonizing Pacific Studies: Privileging Pacific languages and indigenous knowledges.

This paper contemplates the history of Pacific Studies as an interdisciplinary academic subject and makes suggestions about shedding the yoke of colonial agendas and giving a central place in its curriculum to indigenous Pacific languages and knowledges.
PRESENTERS

FAKASI’I’EIKI, IKANI: “The Biblical Calendar from the Ecological Perspective”
Email: ikanifi@hotmail.com
In this presentation, I will look at the Priestly Calendar at the bible and in the Qumran Calendar and then the Mahina FakaTonga, attempting to answer the questions: How many calendars were kept in Jerusalem? Who else might have kept a calendar? How does the Mahina FakaTonga helps us read the biblical calendar? In the Bible, the main (and only) calendar was the Priestly calendar. There should have been more than one calendar. This presentation claims that the second calendar that might have been kept in Jerusalem was the farmer’s (fisherman and local) calendar, was basically a lunar (and experience of daily life) calendar used to help form the priestly calendar to remind the priests of their sacred duties during the Sabbath and seasonal festivals, directing them to perform certain obligatory sacrificial acts at specific times of the year. It became a check and balance for the priestly calendar and was kept for religious, ecological and agricultural use. It is open for addition and discussion.

FINAU, SITALEKI ‘ATA’ATA (PROF): Pacificans and Cultural Democracy: United we stand divided we fall (s.a.finau@massey.ac.nz) Directorate Pasifika@Massey Massey University, Auckland, New Zealand.
Email: s.a.finau@massey.ac.nz
Cultural Democracy provides an overarching philosophical frame work for particularism in multicultural New Zealand and maintaining “the unity in diversity” of the Pacificans. There are some misplaced concerns over a collective Pacific label but such a label is an essential political reality of diasporas that needs to be covered and managed without homogenising Pacific heterogeneity. This is of paramount importance to ethnic survival in a torrent discriminative mainstream. This paper promotes Pacificans as the collective term for the Pacific Islanders and how to monitor its heterogeneity through ethnic specific approaches in order to nullify the effects of the dominant economy of scale mind set and the political numbers game currently affecting Pacific migrants. Ultimately the use of tapu derivatives provides an instrument for “united we stand and divided we fall” and thus gains Pacification through particularistic rather than universalistic approaches. We are who, what, when and how we are and must not be traded for political correctness and convenience. Pacific means Peace!

HALAPUA, WINSTON (DR): “Towards a Tikanga Theology: the story of the Three Tikanga Church, The Anglican Church in Aotearoa, New Zealand and Polynesia.”
Email: winstonh@stjohns.auckland.ac.nz
In 1992 The Church of the Province of New Zealand changed its Constitution and became The Church of Aotearoa New Zealand and Polynesia. The change of identity is a realization of a transformative commitment to changing unjust structures enshrined by the old Constitution. The Three Tikanga Church has now been in place for over a decade. This paper is an attempt to present a theological reflection on this Tikanga journey.

HALL-SMITH, BEVERLY MOANA: Ko au te whenua/ I am the land: A Maori woman’s ecological reading of Judges 19
Email: bmoanasmith@gmail.com
This paper is exploratory. As part of a larger research paper, I am looking to explore a paradigm for reading the sacred scriptures and in particular the Book of Judges using Maori eco-feminist lens. By drawing on the issues of land exploitation, gender, patriarchy and colonial dominance I first argue that a Maori eco-feminism is integral to postcolonial thinking. By using a Maori woman’s postcolonial optic
the study will use imagination by reading Judges 19 as a metaphor portraying the effects of colonisation on Maori society; the dominance of male over female; and humanity over non-human; animals; land; and sacred text. The reading will provide space to interpret the text in such a way as to further the liberation of Mäori women in postcolonial Aotearoa, New Zealand. For the reason that the reader needs to avoid the parameters of colonizing and decolonizing practices and work towards inspiration and imagination. Within the confines of this paper a detailed reading is not possible but simply the proposing of directions for more independent interpretation. My analysis is not formed out of women’s alleged affinity with nature. Rather it will be drawn mainly from a planetary level in which social policies give men power over women.

HAVEA, PALATASA (Dr): Food in Pacific cultures: the implications on diasporic life and wellbeing
Email: Palatasa.havea@fonterra.com

Most Pacific peoples leave their native homelands with strong intertwined cultural and moral values that are often biblically based. In diaspora they settle into cultures with values that are often predominantly materialistic and scientifically based. The influence of adoptive homeland cultures often challenges the traditional ways of displaying Pacific values. Pacific cultures have close association with food and within the more favourable economic environment of the respective adoptive homelands it is often easier to display Pacific cultural traditions by way of feastings and celebrations. These, however, often lead to abuse of food and privileges that are provided by the economic environment and criticisms by the adoptive homeland cultures. The biblical text teaches that our body is sacred and that food is provided for health and sustenance of life. It is proposed that when feasting in our cultural traditions, certain biblical taboos associated with food are often overlooked. This is a contributing factor to the increasing number of people suffering from many food related diseases (such as diabetes and heart diseases) and high mortality rates among the diasporic Pacifi c communities. In the light of both biblical text and current scientifi c knowledge, this presentation discusses the associations of Pacific cultures with food and their impact on life and wellbeing of Pacifi c peoples in diaspora.

HAVEA, ROSALINE UANIVÄ: “Tikanga-Pasifi ka” (Pacific ways) and workplace implications: a mismatch between aspiration and reality?
Email: r.havea@bigpond.net.au

The advent of globalisation presented crucial changes that challenged leading economies, including Australia and New Zealand. The importance of cultural diversity has been hailed by many as a positive contribution to gaining the competitive edge. Given our “pasifiki” ways, how do Pacific Islanders fi t in to this aspiration? Employment is an integral part of our settlement process and for many the workplace provides opportunities for advancement and self-determination. However, a majority of Pacifi c islanders are employed in labour intensive and low paid jobs. This presentation will explore dominant world-views of “Tikanga Pasifika” as part of our cultural identifi cation and how these relate to workplace activities and regulations. To what extent can our Pacific ways take advantage of our workplace situations and contribute to our advancement in the society in which we live?

LÄTÄ, PAULA ONOAFE: Tongan Methodists Divisions: An insider’s view.
Email: onoafel@gmail.com

‘Tongans transformed Methodism’ seems ambiguous and awkward a statement to imagine, considering they were sent to transform Tongans. In over a hundred years, no one endeavour to explore the depth and circumstances of this state of affairs. As a Tongan Methodist minister, Church historian and an
individual with ancestors in the midst of this history web, (the great grandson of two brother Methodist ministers, Rev. Sione Latu I and Sione Latu II agreed to break their familial relationship as brothers, to have the elder (Jione Latu I) take side with Moulton’s Methodism Siasi FakaOngo, while his younger brother (Jione Latu II) took side with Baker’s Methodism Siasi Tau’ataina in the first division of the Tongan Methodists in 1885); I have a particular interest in studying the depth of the influence matter further. I believe that my ancestral past and experiences within the church to date, allows and facilitates a balance exploration from an insider’s view point, as to how the Tongans’ ways of life impacted the Tongan Methodist development, in the context of kainga to form five consecutive forms of Tongan Methodism – 1885-1985.

LELEIVAI, HAPAKUKE PIERRE: Lotu and Custom in Uvea Is (Wallis & Futuna Is.): The Uvean and Futunan Catholic Church after 2005 Crisis, Implementations, Consequences and Prospects
Email: leleivai hp@hotmail.com

This paper addresses the situation of the Uvean and Futunan Roman Catholic Church in 2009, more than three years after the 2005 crisis that had involved the French state and the Uvean great chieftainship. My aim attempts to depict the implementation of the Catholic Church to the crisis so far. The analysis will not deal with Futuna since it was not directly concerned with the quandary. The arrival of the French Catholic missionaries in Uvea in 1837 but particularly in 1842 when the entire island turn into Catholicism, Church and traditional chieftainship worked hand in hand until 2005 when the crisis blown up this “entente cordiale”. During the period of upheavals, a greater part of the local clergy appeared to contest the Great chieftainship, representing the traditionalists, in being sometimes actively involved in the faction of anti-royalist also known as the renovators. I will begin with a short history of the Catholic Church in the archipelagos from 1837 up today. I will continue by analyzing the position of the Catholic clergy all along the 2005 crisis, especially the relationships between the Catholic clergy and Sagato Soane Place - Saint John Place – where stands the Royal Palace of the Lavelua, the King of Uvea. I will wrap up by drawing a general conclusion going through the crisis’ stakes and prospects for the Catholic clergy.

MANU’ATU, LINITÄ (DR): Talanoamälie: Good Tidings in the Academy
Email: Linita.manuatu@aut.ac.nz

In the university, academic work is driven by the mind only. Drawing on the Tongan language and culture, I would argue that the academic work should include the heart, soul and the mind for Tongan academics, at least. I call for a broader approach to explain the concepts of lotu, tapu and fakaTonga. In this paper, I shall refer to the biblical concept, TalanoaMälie, Good tidings, to discuss three aspects of TalanoaMälie: lotu, tapu and faka-Tonga with examples from my practical work in the School of Education. In related terms, I will discuss the loto, heart as the site where the goodness of lotu, tapu and faka-Tonga are contemplated.

MOYLE, RICHARD (A/PROF): Holier than thou? The language of culture meets the language of Christianity on Takuu
Email: r.moyle@auckland.ac.nz

Takuu, a small and remote Polynesian-speaking atoll community located within the political boundaries of Papua New Guinea, continues to practise its traditional religion despite more than a century of Christian missionising in the south-west Pacific region. By banning missionaries and churches, and by exercising tight control on foreign visitors, the community has largely retained its secular and religious
power structures, and also its own language. But a forthcoming translation of the New Testament into Takuu seems likely to exert a subtle new form of outside influence on both the culture and language.

**NëMANI, IANI:** The Role of Remittances in Community Economic Development in Tonga

Email: iani.nemani@dol.govt.nz

This presentation will engage the audience in the potential role of migrant remittances in community economic development with a specific focus on Tonga. Migrant remittances is not a new phenomenon. But, the topic has captured a resurgence of heightened academic and policy interest among the international Diaspora community, researchers, economists, policy makers, development practitioners and politicians. Remittances have skyrocketed and have become a major source of income for individuals, families and communities in developing countries. Data from the World Bank suggests that in 1995 remittances to developing countries totalled US$57.8 billion and reached US$96.4 billion by 2001 and in 2006, the World Bank reported that remittances to developing countries had reached US$206 billion (others suggest US$298 billion). By 2008, the figure had reached US$305 billion. Of this, the biggest remittances receiving countries include India (US$45b); China (US$34.5b) and Mexico (US$26.2b). However, as a contribution to the Gross Domestic Product (GDP) of developing countries, smaller countries were leading the way, including Tajikistan (45%); Moldova (38.3%) and Tonga (35.5%).

While much of remittances literature focus on the increasing level of remittances; its nature and how it is consumed by recipients, much lesser attention is given the potential role of remittances in community economic development in poorer and developing islands including Tonga. This presentation will focus on the role of the international Tongan Diaspora community in social and economic development in Tonga through remittances. The presentation argues that while remittances has a positive role in poverty alleviation (for example it covers education and tuition fees, household groceries, power bills and so forth) a more proactive, well planned, deliberate and strategic engagement between the Tongan Diaspora, their adoptive countries and remittance receiving communities could lead to a more effective use of remittances as an enabling tool for social and economic development in Tonga. The presentation will further highlight some potential and practical community economic development project ideas for consideration by the audience.

**‘OTUNUKU, MO’ALE:** Tongan parents’ conceptions of schooling

Email: otunuku@orcon.net.nz

This quantitative study was to identify and established the conceptions of the Tongan parents towards schooling (teaching, learning, assessment, aims, responsibilities, school choices, obstacles) in the context of New Zealand education. Conceptions of assessment, teaching, learning and other aspects of schooling have been found to have impacts on students’ achievement. The research sought to extend our understanding of Tongan parents’ conceptions of schooling in the hope that understanding of these conceptions by school administrators, teachers and students alike would help in elevating the issues of Pasifika and Tongan students not achieving in the classrooms. The data was collected from a questionnaire survey of nearly 400 Tongan parents. The questionnaire items were analysed using exploratory factor analysis (EFA) to determine whether responses to statements indicate a relationship of statements to a common factor. These factors were used to draw models where the next step was to test these measurement models using maximum likelihood confirmatory analysis (CFA) to validate the factor structure of these measurement models and to see if reasonable fit characteristics were
obtained. Eventually, models of Tongan parents’ conceptions of schooling for each of these aspects (teaching, learning, assessment, aims of schooling, their responsibilities, their school choices and obstacles for achieving) with good fit statistics were established.

POLE, SIOSIFA: Kāinga as a Hermeneutical Metaphor
Email: sifapole@xtra.co.nz
This presentation will seek to define the Tongan concept of kainga vis-à-vis the notions of tapu and lotu, and draw out some implications for reading the Bible as a Tongan migrant in Aotearoa.

SMITH, FRANK: Tapu, Fa’aSamoa and the Environment
Email: vaotogo@xtra.co.nz
Tapu and fa’aSamoa are important concepts which impact on Samoan cultural constructs. Tapu refers to what is sacred. Fa’aSamoa refers to what may be described as the “Samoan way”. Contrary to popular belief, I will argue that the “Samoan way” is not totalistic, neither is it “traditional” but should be seen as “opportunity” and as such, is searching and contextual. In this paper, I will explore how these two concepts are related and their utility in creation of an environmentally friendly consciousness, and the role of indigenous practices that support such a frame of reference.

TOLUTA’U, TÄLITA: Talanoa: Matala ‘o e Fonua
Email: lita3tau@yahoo.co.nz
This presentation will be introduced with a screening of the documentary film Talanoa: Matala ‘o e Fonua. This work is the presenter’s creative synthesis of the talanoa of three Tongan women and was designed to capture the cultural and emotional resonance of their stories. The work orchestrates photography, animation, sound design, filmed footage and extensive postproduction research into a unique text that seeks to move the parameters of documentary beyond face-to-face interview. In doing so, the research draws heavily on Tongan paradigms of narrative and representation. The realities of dispersion experienced by the women in the film are carefully woven into three garlands that exist as a related unit. The stories become a manifestation of kakala. The relationship between talanoa and kakala is made manifest as the viewer experiences the weaving (tui) of a garland, that is gifted (luva), and by this process, helps to strengthen the talanoa of future Pasifika women. The work considers talanoa as something beyond Palangi paradigms of the told story. It considers a more nebulous form of relating that engages memory, loss, desire, rhythm, accent and beauty, woven into a dignified process of self-declaration.

TU’ITAHI, SIONE, Tufunga Fonua: Contributing to the collective material and spiritual prosperity of Tongans in Aotearoa Email: s.tuitahi@massey.ac.nz
This paper will attempt to assess the current socio-economic and cultural status of the Tongan community in Aotearoa – in terms of factors such as governance, leadership, social capital and economic capital building. It will explore some broad goals and a strategic direction that might contribute to a collective endeavour towards improving our material and spiritual health and wellbeing.

TUPOU-THOMAS, SISILIA: The Call to Follow Jesus in Diaspora: A Theological Reflection of a Tongan Female Faifekau Email: ttupous@yahoo.com.au
This paper begins at the ‘womb’ where the seed-of-faith was conceived: Tokamoelolo; a name that highlights the fact that water and oil do not mix! It reveals a TABOO that history has dictated and
nature has blessed! What might be the kind of faith-seedling grew out of such an environment? An unusually diversifying kind! This paper explores the dilemma faced with such faith raised and nourished in religious beliefs & teachings (LOTU), mixed with cultural traditions & values, the Tongan ways (TIKANGA); a mixture that’s been inseparable through many years of drifting journey across the seas; a mixture that produced challenges, causing constant struggles to separate what is LOTU from what is TIKANGA (Tongan ways); what may be relevant or/and what may be irrelevant to the journey. The call to follow Jesus in Diaspora was heard in the midst of the ‘storm’! A call that led the ‘called’ to the UCA’s vahanoa, before landing on the river-valley pathway! The struggles to ‘separate’ often made the called felt haunted by the original TABOO (Tokamoelolo); the desire to break away from the TIKANGA (Tongan ways) became so strong; and at the same time, the desire to block the ‘one-size-fits-all’ mono-cultural expectations of the LOTU became so overbearing; and at times, the called hide in the hyphen (-), the in betweenness and its jungle, and try to resist all! A theological reflection weaves in.

VAMARASI, MARIT (DR), Keeping the Rotu in Rotuma (and Elsewhere): An Agenda for Maintaining Pacific Island Cultures Email: m-vamarasi@neiu.edu

The small islands of the South Pacific, once the object of Western romantic dreams, now find their very way of life threatened by a host of factors, including climate change, the world economy, and mass migration. In each of their dispersed communities, Pacific islanders (PIs) are trying to find their identity while, at the same time, trying to preserve their traditional ways of life. This paper offers an agenda, based on the centrality of language to a culture, which involves the combined efforts of community members, linguists, specialists, and other PI groups. PI’s are urged to a) accept the fact that the languages are changing and will continue to change in their overseas versions; b) find domains, such as church worship, traditional celebrations, or funerals, where the indigenous language will be used exclusively; c) be willing to teach their languages, formally or informally, to children for whom English is their first language; and d) work together to document the languages as they are currently used, as a resource for current and future group members. There are available Pacific models to follow—for instance, Vanuatu has recruited and trained 100 volunteers to work on documenting its indigenous languages. And Maori has developed a large number of new words, based on Maori roots, to make the language better able to deal with modern needs. Special emphasis is placed here on how Rotuma and Rotumans are progressing along this path, but with wider application to the other PI languages.

WILKINSON, MARLENE: Help me read the Bible! Reading the Bible from a Multi-cultural Perspective Email: marlenewilkinson2003@yahoo.com

Scripture can never be read ‘in a vacuum’. It comes from a specific context, and is read by people who live in a particular context now. To read Bible passages in a multi-cultural group is to share insights which might never be seen if the passages are read mono-culturally. This presentation will look at specific Bible texts and consider how they are read and understood in different ways by people from different cultural contexts.

TAHAAFE-WILLIAMS, KATALINA: Feminist epistemology, power relations, and knowledge productions Email: katalinat@nsw.uca.org.au
(no abstract)

TUWERE, ILAITIA SEVATI (DR): Na Vanua, Kei Lotu Na Matanitu: Then, Now and Where? Email: ilaitiat@stjohns.auckland.ac.nz
This paper is an attempt to identify and briefly describe what constitutes each of the three strands that make up the Fijian social organization, namely: Vanua (Land), Lotu (Church), and Matanitu (State). It seeks to capture the origin of these ‘three pillars’ of Fijian identity; state where they are in the present difficult political situation in Fiji and suggests ways of moving on into the future. For this movement into the future, it is proposed that their unity as well as differentiation should be maintained as they have always been from the beginning. But the contextual or historical realities they have gone through by way of outside contacts and the socio-political and religious changes over the past years in the country must be accounted for and allowed to redefine their roles in the present. The need for all of them – Vanua, Lotu kei na Matanitu to critically enrich each other and be actively engaged in the building for a better and happier Fiji cannot be over-emphasized.

**PANEL ABSTRACTS**

**Panel 1: Diaspora/Home/2nd Gens/Overseas-born Group**

**TAITO, ITU: ‘2nd Gen-ers and 2nd Gen-res’ : Beyond the Mono-culture, an Australian Perspective**

This presentation will examine the cultural identity issues facing 2nd Geners and the pressures placed on them by society and their ‘own’ ethnic groups to remain within mono-cultural and stereotypical confines. It will demonstrate how this tension can have a limiting effect on their sense of identity, artistic pursuits into wider ‘genres’, theological and educational development and general interaction with society. It will also examine the role Mono-Cultural Churches and Multi-Mono Cultural groups (Palagis and PIs) play in perpetuating this limiting effect, and will emphasise the importance of moving beyond the mono-culture into a more diverse cultural perspective.

**Panel 2: “Self/Body”**

**GROUP: MOLUMALU ‘O E MO’UI**

In this Talanoa Oceania conference we will be presenting a session on the second part of our Theology of the Body mantra: Theology of the Self. We will discuss our own images and the transformation of those images in terms of our faith and the courses of our life experiences through our personal and professional journeys. We will synchronise the different school of thoughts on human nature, environment, faith and the God given ‘free will’ in shaping the image of a person. We will discern four biblical texts: Number 30: 3-16; Proverbs 31:10-31; Titus 2:3-5 and 1 Peter 3:3-4, as points of reference for our session discussion with our participants in gauging an understanding of what influences and shapes people’s images. The theme from the conference that we have chosen to focus our discussion on is the tenet of Tabu.

**Panelists:** Sela Mafi Taufa, Sioana Faupula, Sitela Naimet, Nicole Alexander

**Panel 3: Manahine Group: The Pacific Patriarchy**

How accommodating are our men (in reality) towards the equality and acceptance of women as theologians, ordained ministers of the word and sacrament, leaders of our churches? Women get lots of lip service from male colleagues in one on one dialogue but why men are mostly silent in group conversations and women also silent. Is the excuse: It’s cultural, it’s tradition, we all know our place. Is this a cop out?

**Panelists:** Fei Taualealeausumai, Seforosa Carroll, Linda Hope, Charissa Suli
Pasifika Medical Association
Conference “Kaveinga Ora”

Held in the Cook Islands in the Cook Is - July 2009

From ‘Oloka Vaha’I, Administrator Pasifika Medical Association, Papatoetoe Auckland
pma@pacifichealth.org.nz

Abstracts

WEDNESDAY, 1ST JULY 2009 – PLENARY SESSION “STRENGTHENING HEALTH SYSTEMS”

“Health Information Systems for the Pacific- A vital part of strong health systems”

Mrs Vicki Bennett, Project Manager Information Systems Knowledge Hub, School of Population Health, University of Queensland, Australia and Miriam Lum On

The presentation will include an overview of the new AusAID funded Knowledge Hub’s, outlining their combined focus on the building blocks of health systems strengthening.

As a part of this initiative, the School of Population Health (SPH) at the University of Queensland (UQ) has been funded to established a Health Information Systems (HIS) Knowledge Hub, which has developed a program of work for the next two years to help build capacity and create new knowledge regarding HIS in the Asia-Pacific region. The work of the HIS Hub specific to the Pacific will be discussed, including a mapping of past and current HIS developments in the region, an analysis of their strengths and weaknesses, and the establishment of a regional network for building the capacity of the health information workforce.

HIS are a vital part of all strong health systems. In the Pacific Islands, however, HIS have often been a neglected area of research and attention by the health community and donor agencies. A HIS should be an integrated effort to collect, process, analysis, report and use reliable and timely health information and knowledge. They exist to provide the evidence and knowledge base for all levels of the health care system: from clinical patient care in the form of medical records; day-to-day facility and resource management information for better resource allocation; to information to supporting national health reforms, policy development and measurement of national health outcomes.

Information systems need to be simple, sustainable and affordable, and the collection of information should not overburden already stretched health care delivery staff. The components of a well-functioning HIS, as outlined in the Health Metrics Network (HMN) Framework and Standards for Country Health Information Systems, will be explored and examples from a number of Pacific Island will be given.
“Growing Frangipani in a cold climate - A Pacific workforce innovation”

Ms Anne Fitisemanu, Counties Manukau District Health Board, Auckland, New Zealand; Elizabeth Powell and Esther Faitala

2006 NZIER report confirmed that Pacific in Counties needed to grow four fold by 2021 in order to be truly represented in the workforce. Pacific Health at Counties is leading an innovative training initiative aimed at achieving NZNC registration for Pacific trained and registered nurses.

Currently, there is no transferable nursing registration between NZ and the Pacific. Many of these nurses are highly qualified with years and depth of experience. Most on arrival to NZ commence work as Health Care Assistants; many remain there for the rest of their career.

Registration rules require these nurses to successfully pass the International English Testing System (IELTS) at level 7 across 4 bands within one year in order to then apply for consideration to enroll into and approved Clinical Competency programme.

Method: Two cohorts of over 60 students were put through a tailor made IELTS programme. Addressing all the barriers to learning for this group were factored into the design and development of the pilot. A combination pastoral and academic support was also implemented in order to maximize successful completion. Regular monitoring, tracking and contact with each cohort was maintained via txt, email and phone.

Findings: After attending Saturday class for 13 weeks each student sat an IELTS exam. Results were pleasing. Despite no-one passing all four bands on first attempt, there was a spread across a pass in 1 to a pass in 3. More important was the self belief of the students that they could pass and understanding of what was required to do so. They could see the light at the end of the tunnel.

Conclusions: Pacific trained and registered nurses face many obstacles in order to attain NZNC registration. The issue is not whether they can succeed it is about what they need to succeed.

For each of the students on this programme a solution has been identified that either supports their quest for NZNC registration or the transition of their skill set into other areas of the health workforce. For most what they desire most is to return to what they love ‘NURSING’ and if they can’t do this then a job that has more meaning and opportunity for them to utilize their nursing skills and cultural expertise.

“Strengthening health providers”

Mr Hamish Crooks, Director, PM Consulting Auckland, New Zealand.
Stream 1: Workforce

*Chair: Mrs. Elizabeth Powell, Director, Regional Pacific Health, CMDHB, New Zealand*

“Health Systems and Workforce”

**Dina Hippolite, Clinical Nurse Manager, Raukura Hauora O Tainui, Nawton Medical Clinic, Waikato**

Kia Ora my name is Dina Hippolite I am the clinical nurse manager for Raukura Hauora O Tainui. ki Waikato. The nursing services has a group of 12 staff, 10 nurses and two Kaiawhina. We are interested in the possibility of presenting at the Cook Island Health Conference.

**Motivation:** We are passionate about the existence of a strong Maori Health System and the delivery of health services.

**Problem:** Colonisation was the deliberate invasion of Maori Society resulting in;
- Introduction of foreign diseases; Bad diet; Addictions, smoking, alcohol, cigarettes; Mistrust in pakeha medicines; Legislation enacted to prevent Maori from healing their own;

**Approach:** A universal, far reaching, health service inclusive to all people: A framework of nursing practice that incorporates indigenous knowledge, symbols and processes. The framework is grounded in Iwi specific Toanga from Ngati Koata, Ngati Kuia.
1. Waaka Represents Maori Health Providers. (Raukura Hauora O Tainui) CEO stands at the stern to guide and direct paddles, necessary to move the waaka.
2. Paddlers, need to work in unison. Funders
3. Kaikaiawaro Dolphins DSM Nurse, Practice Nurses, Tamariki Ora Well child Checks Navigates between Maori and Pakeha systems, who practice from a Maori paradigm.
4. Kaiawhina support whanau
5. Te Kawau a Toru (Shag) Systems that do not listen to the needs of the local people.
6. Whanau of Raukura Hauora O Tainui

**Results:** Research reveals not only people in remote areas have limited access to health services some Maori who live in Urban areas are not comfortable with non-Maori Health Services.

**Recommendations:** Strong viable working relationships between MOH, DHB, and community organizations.

**Conclusions:** Incorporating the best elements of each culture to provide and promote a universal health service to reach all people.

“Developing Excellence in the Training of Pacific Health Professionals at the University of Otago”

**Dr Tai Sopoaga Ventura, University of Otago, Dunedin, New Zealand**

The University of Otago is increasingly becoming a place which attracts Pacific students from New Zealand and the region for both undergraduate and postgraduate study. Some research have provided evidence about the positive experience of Pacific students studying at the University of Otago. The University has put in place a number of systems to ensure the environment is suitable and supportive for Pacific students and staff from New Zealand and the region.
This paper discusses a number of initiatives within the University of Otago, to support, mentor and develop students and staff within the University. It will also outline a number of issues that needs further development, and ways in which the Pacific community in New Zealand and the region can contribute to the development of excellent Pacific health professionals in our institution. Most Pacific people in New Zealand will be treated by non-Pacific health professionals. This also has implications for the appropriate education of non-Pacific health professionals within New Zealand institutions.

“The Role of Human Resources for Health (HRH) in Strengthening Health Systems”

Angela Dawson, Human Resources for Health Knowledge Hub, School of Public Health and Community medicine, University of new South Wales, Sydney, Australia.

Limited human resources for health (HRH) are widely recognized as an impediment to strengthening health systems and to achieving the health-related Millennium Development Goals (MDGs). AusAID’s 2006 Helping Health Systems Deliver paper emphasizes the importance of health systems strengthening and identifies HRH as a key priority. Within this context the AuSAID has established four Knowledge Hubs to provide improved health knowledge and expertise to inform policy dialogue at national, regional and international levels. The Human Resources for Health Knowledge Hub (HRH Hub) at the University of New South Wales provides a focal point for the generation, management, and dissemination of state of the art knowledge on HRH for all its partners and potential beneficiaries.

Aim: This presentation will provide a brief overview of the HRH Hub as well as a more focused analysis of its role in synthesizing and translating existing and emerging knowledge by presenting some early results from two current projects.

Methods: The first project involves mapping HRH resources in AusAID priority countries in the Asia-Pacific region. These maps aim to assist countries to review and plan their HRH needs and information systems. The second project is a review of HR practices in maternal, newborn and reproductive care at community level in ten countries. This will include the development of a tool to help practitioners and communities to assess the effectiveness of the community health workforce in these settings.

Results: The early results from these projects highlight some practical applications Hub activities can have for Pacific nations in relation to HRH development, planning and evaluation. These activities are high on the agenda of all Pacific nations and essential components of building stronger health systems.

Workforce Development – The value of the Pacific non- regulated health workforce in Aotearoa New Zealand.”

Analosa Ulugia-Veukiso, Counties Manukau District Health Board.

In a time of worldwide health workforce shortages, the non-regulated health workforce1 is a valuable group, playing a significant role in providing quality service delivery and improving health outcomes. This workforce encompasses a plethora of roles and titles, as well as cultural, personal and professional attributes. The unique attribute of this workforce is their ability to effectively engage with traditionally hard-to-reach communities. The perceived cost effectiveness of this workforce is another notable trait.
Aim: The purpose of this study was to expand the knowledge base on the Pacific non-regulated workforce (PNR) in Aotearoa given the lack of information available. The findings from this study are intended to assist communities to inform strategic planning and policy development.

Method: The information for this study was drawn from five sources over a three year period (2007-2009): A comprehensive literature review; The Pacific Non-Regulated Workforce Survey completed by 70 Pacific managers; In-depth interviews undertaken with 18 Pacific non-regulated health workers; In-depth interviews undertaken with 10 Pacific non-regulated managers; Interviews with 176 Pacific non-regulated health workers; The Survey and interviews were conducted with staff within the Counties Manukau District Health Board (CMDHB) region, Auckland.

Results/Conclusion: The research draws attention to the crucial role of the Pacific non-regulated workforce in the delivery of health care services and in improving the health outcomes of Pacific peoples and their communities. This study provides a snapshot of the Pacific non-regulated health workforce at this point in time and identifies influences on recruiting and retaining this workforce. This study explores the areas that can be improved in relation to training and professional development and highlight fields of work that are beneficial to PNR workers productivity and wellbeing. This study highlights the implications for health workforce managers and policy agents.

"Evidence Shows we Are Looking At our Toes"

Mali Erick, The Werry Center for Child and Adolescent Mental Health, Auckland, New Zealand

It is often quoted amongst pacific people that our children are our future. Our children’s health wellbeing and needs are paramount to ensure that we have a healthy future generation. This also includes mental health. In this arena there is huge potential for improved well-being for our Pacific children. The Werry Centre (Child and Adolescent Workforce Centre) firmly believes that infants, children, young people and their families/whanau should have access to a highly skilled, well supported and effective mental health and addictions workforce. Because of this belief, The Werry Centre endeavors to find out what is the current situation for Pacific people nationally in the area of Child and Adolescent Mental Health.

The Werry Centre conducts a National Stocktake of the child and adolescent mental health workforce every two years since 2004 – 2008 in New Zealand with all Child and Adolescent Mental Health services in mainstream and NGO services. The data collected shows statistics for the pacific workforce and access that indicates concern for us Pacific people.

The key findings: Increasing Pacific Child and Adolescent population in New Zealand Low Pacific clinical child and adolescent mental health workforce. Low numbers of Pacific child and adolescent mental health services. Low Pacific children access to clinical mental health services.

Recommendation: To address these gaps we must Think and Plan for an increase of our Pacific Child and Adolescent workforce, our Pacific services and support the growth of robust Pacific leadership. In this presentation we will explore strategies for looking ahead.
**Stream 2: Planning Quality and Partnerships**

*Chair: Mrs Eseta Finau, Tongan Nurses Association, NZ*

**“Towards MDG 5: Strengthening Health Systems for Maternal and Reproductive Health in the Pacific”**

**Natalie Gray, Wendy Holmes, Women’s and Children’s Health Knowledge Hub Center for International Health, Burnet Institute Melbourne Victoria, Australia.**

**Background:** The Women’s and Children’s Health (WCH) Knowledge Hub is part of a new AusAID funded initiative that aims to generate knowledge to assist countries in Asia and the Pacific to strengthen their health systems in order to accelerate equitable progress towards the Millennium Development Goals in maternal and child health. The WCH Hub comprises the Centre for International Health at the Burnet Institute, Melbourne University’s Centre for International Child Health, and the Menzies School of Health Research.

**Aim:** Millennium Development Goal 5 (MDG 5) aims to reduce maternal mortality by 75% and ensure universal access to reproductive health by 2015. Achieving this goal will require skilled birth attendants, well equipped health facilities able to provide emergency obstetric care, community-based antenatal and postnatal care services, and access to family planning; all of which are dependent on strong health systems. MDG 5 remains a challenge for many Pacific Island Countries. The WCH Hub aims to contribute to the evidence these countries require to support the scale-up of effective maternal and reproductive health interventions.

**Method:** The WCH Hub’s current program of work includes reviewing and synthesising evidence and experience relevant to four aspects of maternal and reproductive health systems in the Pacific: strengthening human resource management, utilising new technologies to enable women to reach emergency obstetric care, assessing the feasibility and cost-effectiveness of community delivery of maternal health services, and improving access to reproductive and maternal health care for adolescents. The progress of these reviews will be explored using examples from the Pacific, policy options will be presented, and the potential contribution of the WCH Hub will be highlighted.

**Conclusions:** The WCH Hub’s work will provide guidance of practical value to governments and development partners in the Pacific as they seek to develop policy and facilitate improvements in maternal and reproductive health.

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**“The quality Imperative in Pacific Health”**

**Philip Beilby and Peter Fitzsimmons, Vaka Tautua, Auckland, New Zealand**

**Chief Executive**

Vaka Tautua (Pacific SHARED MANAGEMENT, Health and Disability Services)

Philip is a graduate of Auckland University of Technology and Charles Sturt University, NSW. He has a Diploma in Adult & Tertiary Education, undergraduate degree in Education, Masters Degree in Management, and is a registered nurse.
Phil’s health background includes significant roles both in the mental health/disabilities sector, and in education and health management. As a private consultant he has a particular interest in quality management, having been engaged in accreditation, change management, training and development and organisational development projects over a number of years.

His previous roles have included, senior lecturer, AUT Health Studies and Professional Education), National Manager, Health and Disability Commissioner, and Northern Regional Manager for Pathways Trust (national mental health provider). He is currently Chief Executive of Vaka Tautua, a National Pacific Health & Disability Provider with offices in Auckland, Wellington and Christchurch.

This presentation explores some of the tensions and difficulties inherent in applying an essentially managerial European model of quality control to an organisation, informed and underpinned by Pacific cultural traditions. Starting with a brief genealogy of quality management, the paper examines national and international economic imperatives for governments to ensure the quality of health provision, and the resulting demands on health service providers for compliance and accountability. These imperatives include the impact of OECD reports on government policy direction, and the responsiveness of governments to the need for measurable social and economic outcomes.

Using the Popao model of Pacific health service delivery, the presentation attempts to reconcile Western political and economic necessities with traditional approaches to Pacific health.

The paper concludes by sharing some experiences of a leading New Zealand Pacific Health provider, working in partnership with Telarc/QHNZ, to strengthen organisational capacity and capability within the context of an internationally recognised programme of Accreditation. This program (EQuIP4) emphasises the use of research and evidence based information to support the development and refinement of health services and the ongoing improvement of quality in health provision.

“Planning Health Services for Pacific peoples in Hawkes Bay, New Zealand.”

Jane Poa, Olive Tanielu, PoePoa, Pacific Health Services, Hawkes Bay

The vision for Pacific Health in Hawke’s Bay is to address the key issues of access, equity to services, improved local health gains, effective collaboration, cooperation, innovation and partnerships between Government, community and providers. The service is the only Pacific provider, delivering primary health care and social services in the Hawke’s Bay.

**Aim:** The Pacific Health and Disability Action Plan provides a strategic framework which includes: The needs to ensure Pacific involvement in decision-making; The need to work directly with fanau, anau, aiga and Pacific communities; The need for all services (not just the health sector) working to address Pacific health outcomes.

**Method:** The key benefits of the service aims to address current inequalities within the Pacific community. The Service will address issues of equity by: Being a culturally competent service; Improve Access, quality of care and utilization of services: Improve health outcomes for Pacific peoples; Ensure Pacific involvement
in decision making; Work directly with fanau, aiga, anau, and Pacific communities and congruence of following their health plans.

Integrated access to public health and primary health care services is one of the six key directions of the Primary Health Care Strategy 2001. This will aid in: Reducing delays in seeking care; Increasing health service utilisation; Enhancing the compatibility between Western health practices and traditional cultural practices; Facilitating the development of treatment plans that are followed by the patient and supported by fanau, anau, aiga.

The overall aim of the Pacific Health and Disability Action Plan 2002 – is “Healthy Pacific peoples achieving their full potential throughout their lives”.

**Results:** It is the right of an individual to receive a culturally appropriate assessment, care and service. The benefits of applying cultural assessment process include accurate identification and needs assessment based on Pacific thinking and behaviour, appropriate care and rehabilitation plans, opportunity for holistic care and healing, tailored services for Pacific ways of healing, care, rehabilitation and the restoration of mana.

**“Leanings from Primary health care experimentation in New Zealand: Effective resource management”**

**Dr Douglas Baird, Auckland New Zealand**

From the early 1990’s onward New Zealand, through successive governments and ministers of health, has experimented with multiple changes in the delivery of primary health care to its citizens. Much of the innovation has been made by the primary health care sector and much of the successful change has been driven by organised general practice.

Effective resource management (sometimes called “budget-holding” or “commissioning”) has led to exciting and cost-effective improvements in the coal-face delivery of comprehensive care to the people Aotearoa. These have also galvanised those involved in organised general practice teams of doctors, nurses and community health workers to get greater fulfilment out of their work.

I intend to present some of the learnings from my time in general practice, Independent Practitioner Association and Primary Health Organisation management, and Health Insurance governance; in the hope that this will create discussion as to the delivery of health care under tight resource constraint in the Pacific Region.
**“Pharmacists – The failed med students?”**

Ms Kasey Brown, Final year Pharmacy Student, University of Otago, Dunedin, New Zealand

An increasing number of Pacific students are taking health professional courses at the University of Otago. Most of these are studying medicine. The numbers studying medicine represent a successful story for the University and for Pacific families and communities. However, health systems in the Pacific and in Pacific communities in New Zealand require a wide range of different health professionals, including pharmacists, nurses, physiotherapists, dentists, and medical laboratory scientists.

In this presentation, I will present information about the numbers of students in each health professional school at the University of Otago, the admissions criteria and processes, and reflect on my personal experience as an undergraduate pharmacy student at the University of Otago.

I will argue that more respect is needed for the whole range of health professionals, and that Pacific people, training providers, and policy makers need to understand the importance of the contribution other health professions make to the health system. It is time to remove the stigma of pharmacists and others being seen as “failed doctors” and to start developing a more well-rounded Pacific health workforce.

**Stream 3: Information, Communication and networks**

Chair: Mr Michael Chan, CEO, Pacific Trust Canterbury, NZ

**Electronic medical records to improve health service delivery**

Dr Kuiniletia Chang Wai, West Fono Health Trust, New Zealand

**Aim:** To assess use of Electronic Medical Records (EMRs) to identify patient cases for potential quality improvement in use of blood pressure-lowering medications in general practice.

**Background:** There are ~36,500 Pacific people in the Waitemata DHB (WDHB) region and this is expected to double during the next 30 years. Pacific people have an overall avoidable mortality rate over twice that of the total WDHB population. Major contributors to this statistic (compared with total WDHB population) are a two times higher rate of diabetes, seven times for renal failure, 2.5 times for ischaemic heart disease and two times higher stroke mortality. There is an urgent need to identify successful strategies to improve these health statistics.

**Setting:** One metropolitan general practice in Auckland with a large majority of Pacific patients.

Patients registered as regular patients with the practice; classified within the previous 5 years as having hypertension; with at least one prescription for antihypertensive medication in the year prior to the evaluation period of 9 May to 8 November 2007.

**Intervention:** Discussion of quality improvement opportunities and review of EMRs with a panel of practice clinicians to identify agreed quality indicators based on EMR data, took place in prior to collection of the data.
This resulted in a set of eight evidence-based criteria for patients classified with hypertension, implemented as database queries, which identify cases for potential quality improvement. The panel conducted blind assessment of antihypertensive therapy on a sample of 20 cases matching at least one criterion and 20 cases that met no criterion; the case classifications based on the database queries were then revealed for direct comment and consideration by the panel.

**Results:** Of 517 eligible patients, 209 (40.4%) met one or more of the eight criteria. Of these 209, 110 (21.3%) met only criteria related to persistence of medication possession and/or blood pressure recording. After assessment of the 40-patient sample by the practice GPs, the eight criteria taken as a whole had a Positive Predictive Value of 70% (95% CI 46-88%) and Negative Predictive Value of 70% for clinician assessment of suboptimal therapy and/or process.

**Conclusion:** EMRs can provide moderately reliable identification of patients with suboptimal management of blood pressure in general practice. It should be noted, however, that the complexity of required query formulation is substantial with current tools. Identification of patients with poor persistence of antihypertensive therapy is the most promising outcome for follow-up investigation. The study needs to be replicated in a range of different practice settings.

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**“Mortality and Cause of Death Surveillance in the Pacific Islands”**

Karen Carter, School of Population health, University of Queensland.

Mortality indicators are critical for population health assessment, and are best measured using data from national registration systems. Quality data relies on systems that are accessible, appropriate to the setting, and have appropriate human resources. Many systems in the Pacific struggle to provide reliable information in the face of regional challenges including an increase in chronic diseases and meeting MDG targets.

**Aim:** This project aims to identify key strengths and weaknesses of mortality data collection and analysis common to systems throughout the Pacific Islands. Countries included are Fiji, Kiribati, Nauru, Palau, Solomon Islands, Tonga and Vanuatu.

**Method:** A system review was carried out for each country using key informant interviews, observation (workflow and tasks), and document review. The review was guided by an assessment tool adapted for this context, covering system issues including legislation, administration, technical, political and social influences, and data issues including quality, coverage, accessibility and use in decision making.

**Results:** Civil registration, although present, was effective only when data was obtained directly from the health systems. Health services therefore had primary responsibility for mortality surveillance. All countries collect data through hospital inpatient records, and monthly reports from clinic nurses (except Nauru). Medical certificates of death are completed for all hospital based deaths, while Fiji, Palau and Nauru also require medical certificates for deaths outside hospital. Death certificate data is routinely collated only in Fiji, Palau, and Tonga.

A major system strength was the close interaction between health staff and local communities which should
support reporting. Weaknesses included poor data verification and cleaning, and duplication of work. In many instances collected data was neither analysed nor used. Although the need to improve analytical skills was identified in most countries, this appeared to be less of a limiting factor than under-resourcing, and a lack of confidence in the importance of this role.

“Pacific Peoples on Air – Strengthening ethnic specific radio programmes”

Ms Stephanie Erick-Peleti and Maine Andrew

Barriers to Pacific peoples’ utilisation of health care services available through the New Zealand healthcare system have been attributed to lack of knowledge and access to timely, culturally appropriate information. Correct communication can be crucial in helping to prevent or alleviate the effects of poor health.

For 25 years the PHW Network have endeavored to fulfill a vital role within the Pacific community by promoting, encouraging and supporting improved health outcomes for Pacific peoples of all ages throughout the Auckland area. Since 1991, the PHW Radio Programme has been delivered by PHW community leaders and networks. These radio programmes are primarily produced through the voluntary efforts of the radio presenters, radio coordinator, and most other people associated with the radio project.

In respect to the communities which the PHW Network represent, an evaluation of the radio programme was conducted late last year to gain a better understanding of whether it is achieving the overall objectives, and how things could potentially be improved. A total of 47 participants completed a survey and participated in ethnic specific focus groups conducted in English and their respective language (Samoan, Cook Islands, Tongan, Niuean and Fijian).

The evaluation findings show that the PHW radio programme is effective in informing Pacific people of issues which can affect their health, and not only encourages them to seek a healthier lifestyle but indicates that the radio programme directly influences healthy changes in their lifestyle and behaviour.

Recommendations included increasing the length of airtime, having more advertising and promotion of the radio shows amongst the wider Pacific community, and increasing funding to strengthen administrative support. On the basis of this report the Ministry of Health provided new funding for administration and radio promotion.

“Fostering Pacific Health Through Partnership”

Ms Kim Buchanan, Pro Care Limited

Limited resource often inhibits the ability of a single organization to derive improved health outcomes within a population.

A community health programme focusing on the Pacific village concept in urban Auckland describes how the partnership between the community and the health sector not only encourages development of the
community but also the development of partnering between members of the health sector.

**Aim:** To demonstrate how the sharing of people, funding, community assets, skills and knowledge, services and issues can generate greater health benefit to Pacific populations.

**Method:** Discussions between the key stakeholders and benefactors of the programme lead to the formation of a steering group, leadership group, management team and clinical peer support team. Involvement from others in the health sector and from other sectors both commercial and social ensued. Sharing of resources and the transfer of ideas lead to activities within the community that has generated and assisted in providing health benefits within the community setting.

Further to this a community youth representative group was formed to ensure that their needs as part of the community were being addressed.

**Results:** This programme has gained a great deal of momentum and has provided a vision of shared responsibility towards improving the health outcomes within a community.

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"**Strengthening Provider Relationships through Continuity of Care/Support, The Pacific Approach**"

Ms Dahlia Naepi, PICH, Auckland, NZ

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**PLENARY SESSION**

"**Mental Health, Drugs and Alcohol and Well Being**"

*Chair: Fuimaono Karl Pulotu-Endemann, NZRPN, Wellington, NZ*

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"**Mental Health Cook Island Style**"

Dr Rangi Fariu, Clinical Director Mental Health Services, Ministry of Health Cook Islands

"Leaving on a jet plane…"

Dr Francis Agnew, Clinical Director Drug and Alcohol Services
Waitemata District Health Board, Auckland, New Zealand

"The Nui Pasifika Person in mental health"

Dr Siale Foliaki, Consultant Psychiatrist, Vaka Tautua
Auckland, New Zealand

"Bad boys and Girls….."

Professor Richie Poulton, Director Dunedin Multidisciplinary health and Development Research Unit, Dept of Preventative and Social Medicine, Dunedin School of Medicine, University of Otago.
“Alcohol the drug of choice” Papa’ali‘i Dr Kim Ma‘ia‘i, Board member ALAC, New Zealand

Dr Kim Ma‘ia‘i is a Council member of the Alcohol Advisory Council of NZ. He is a registered medical practitioner and a Fellow of the Royal New Zealand College of General Practitioners. He is the Director of Student Health Services at the University of Otago, a large multidisciplinary primary health organisation with a focus on key areas of youth health, including education and harm mitigation in the use of drugs and alcohol. He is Chair of the Dunedin Urgent Doctors & Accident Centre and has had a leadership role in the development of afterhours primary care services to metropolitan Dunedin.

“Nothing about us without us” Papa’ali‘i Seiuli Johnny Siaosi, Consumer Representative, New Zealand

I am of German Samoan descent, born in Wanganui, New Zealand. I am a Matai, raised 9 children and a professional musician (39 years). My background is in Adult Education, auditing and youth work I work for Takanga A Fohe Pacific Services, Waitemata District Health Board New Zealand as a consumer advisor/trainer/Matua. My wife Tish is from the Chatham Islands. She is a registered Psychiatric nurse of 30 years currently working as business support manager for Raukura Hauora O Tainui, an indigenous Maori Iwi Trust. Our 2 youngest girls aged 14 and 16 presented a paper in Edmonton Canada in 2006 “Where are the children, let the children validate their own experience”. I coach juniors for Squash and represented Samoa in 2 Touch rugby world cups. My dad lives with me. I am my family, my family are me. One day I will be in control of the TV remote. One day!!

Different Services, Different Perspectives Chair: Dr Rangi Fariu

Mrs Lupe Fotu, Psychiatric Officer, Mental Health Services, Kingdom of Tonga

“Tonga -the friendly islands....”

Dr Odille Chang, Clinical Director, St Giles Hospital, Fiji

“The Fiji Challenge”

Dr Ian Parkin, Mental Health Services, National Health Service, Samoa

“Samoa – A new experience”

Dr Monique Nuimata – Faleafa. DClinPsy, Le Va, New Zealand

“Aru i te ara o te era – follow the pathway to the sun”
Concurrent Session 2
Stream One: Families and Mental Health
Chair: Mrs Netti Herman, PhD Student, Auckland

Pacific Islands Families Study - Future Directions

Gerhard Sundborn, Pacific Islands Family Study, AUT, Auckland

Gerhard Sundborn (Tongan) – Gerhard is Co-Director / Senior Research Fellow to the Pacific Island Families Study. Gerhard has submitted his doctoral thesis with the University of Auckland into cardiovascular risk profiles and diabetes status of the major Pacific ethnic groups in Auckland - as part of the Diabetes Heart and Heal Survey.

He has a background in Sport and Exercise Science (BSc) and Pacific/Public Health (MPH). Gerhard is eager to ensure that findings from the Pacific Islands Families Study make real changes to the health and wellbeing of Pacific youth and families. He has practical experience as a specialist youth worker (Youth Horizons Trust, Westbridge Residential School, PHAB Association) and has also worked on the Green Prescription programme (Sport Auckland) used to increase exercise participation to treat illness.

A very brief description (5mins) and update of recent activity of the Pacific Islands Families study will be presented as well as future directions. Ideally this will precede the presentation of papers that further expand on PIF findings.

Parenting Practices Among Fathers of a Cohort of Pacific Infants in New Zealand

Leon Iusitini, Researcher, Pacific Islands Family Study AUT Auckland
Wanzhen Gao, Janis Paterson, Gerhard Sundborn

James Heimuli (Tongan) - James has an undergraduate degree in Science which has led him to also enrol in the Masters in Public Health as part of the PIF team. His thesis will assess body composition of 6 year-old Pacific children and parental perceptions of their child’s weight.

Leon Iusitini (Samoan) is completing the coursework for a Masters of Arts (Social Sciences) and would like to investigate the political engagement of Pacific peoples in New Zealand and related health outcomes. Leon has a conjoint BA/BCom from University of Auckland. Leon has been an active part of the PIF study since 2006.
This study examined the nurturing and harsh disciplinary parenting practices of fathers of a cohort of Pacific children born in New Zealand. At the 12 month measurement point, 823 fathers completed a modified version of the Parent Behavior Checklist comprised of 15 items, 10 forming a nurturing subscale and 5 a harsh discipline subscale. Findings revealed that a majority of Pacific fathers never or rarely used harsh discipline with their 12-month-old child, and hitting with an object was extremely rare. Levels of nurturance were more mixed, with playing and praise common but provision and reading of books relatively uncommon. Multivariable logistic regression showed that relatively low nurturance scores were associated with cultural separation, lower formal education, and non-partnered marital status. Relatively high harsh discipline scores were associated with partnered marital status, gambling, and harmful alcohol consumption. Relatively low harsh discipline scores were associated with Tongan ethnicity and cultural maintenance.

Mental Health and Wellbeing amongst fathers within the Pacific Island Families Study

El-Shadan Tautolo, Researcher, Pacific Islands Family Study, AUT Auckland
Philip J. Schluter, Gerhard Sundborn

El-Shadan Tautolo (Cook Island/Samoan) - El-Shadan is the first Pacific PhD candidate enrolled as part of the PIF study. He has an Undergraduate degree in Science, a Postgraduate Diploma in Forensic Science and a Masters degree in Public Health.

His doctoral research will examine health amongst Pacific fathers, with specific focus on how factors such as cultural alignment, mental health, smoking, and other lifestyle issues impact on their well-being. Alongside this, his research will also investigate fathering roles and behaviours amongst Pacific fathers, and how these practices can influence positive outcomes for our Pacific children.

He is of both Cook Islands and Samoan descent, with a mother from the village of Omoka on the island of Penrhyn/Tongareva, and a father from the village of Tanugamanono on the island of Upolu, Samoa.

This article investigates the prevalence of potential psychological mental health disorder amongst a cohort of primarily Pacific fathers in New Zealand over their child’s first 6-years of life. The analysis is based on data collected at 12-months, 2-years and 6-years postpartum during the Pacific Islands Families Study, and uses the 12-item General Health Questionnaire (GHQ12) to assess the prevalence of psychological distress amongst participant fathers at each measurement wave. Various sociodemographic and potentially confounding variables were also investigated to determine their effect on the risk of developing potential mental health disorder. The majority of fathers within the study reported good overall health and well-being and their prevalence of ‘symptomatic’ mental health disorder was initially low at 12-months (3.9%) but increased significantly at 2-years (6.6%) and at 6-years (9.8%) in crude and adjusted analyses (both P-values<0.001). In the adjusted analysis, the odds of symptomatic cases at 2-years was 1.7 (95% confidence interval: 1.1, 2.8) times that observed at 12-months postpartum and at 6-years the odds was 3.2 (95% confidence interval: 1.9, 5.2) times that observed at 12-months. Moreover, in the adjusted analysis, smoking status, marital status, employment status, and ethnicity, were all significantly associated with the risk of developing symptomatic mental health disorder.
Child discipline and nurturing practices among a cohort of Pacific mothers living in New Zealand

Esther Tumama Cowley-Malcom, Researcher. PIF Study AUT
Associate Professor Tagaloa Peggy Fairbairn-Dunlop, Professor Janis Paterson, Wanzhen Gao, Maynard Williams.

Esther Cowley-Malcolm was born in Samoa, grew up in Tokoroa, New Zealand, has two children and one grandchild, so far. She has over twenty years experience in the tertiary education sector as an ESOL lecturer, inaugural Manager of Pacific Development at AUT University and Manager of Pacific Research Workforce Development in the Pacific Islands Families (PIF) longitudinal study. Esther was responsible for the consultation phase of the study with Pacific peoples and actively involved in the training of recruiter for the cohort, interviewers and dissemination of findings at local, national and international conferences. She was involved with the study until December, 2006, when the family moved to Ohope Beach where her husband took up a new appointment at Whakatane Hospital in the Eastern Bay of Plenty and Esther started her PhD in May 2007.

Esther served for six years as the Chair of The Pacific Development and Conservation Trust (former Rainbow Warrior Trust), is currently the Chair of The HRC Pacific Research committee, one of three Lay Representatives on The Board of The Health Research Council (HRC), Medical Laboratory Science Board and member of the Parenting Council of New Zealand. She has been an active member of the national organisation of Pacific women (PACIFICA) for thirty years and served for 5 years as the President of The Auckland Central Branch and 2 years as National Secretary. She has recently completed a commissioned report for The Parenting Council of New Zealand and The Families Commission on “Parenting programmes; Are they effective for Pacific parents? Esther is passionate about equity and social justice issues and as a Quaker is committed to non-violent resolutions to conflict.

Her research topics are an indication of Esther’s passion for children, non-violence and effective parenting. She is in the last 12 months of her HRC funded PhD at Victoria University. Her topic is a qualitative study of a Samoan community in Tokoroa, their perceptions of childhood aggression, views about its origins and how they manage it.

The Pacific Islands Families (PIF) study is a longitudinal investigation of a cohort (N=1376) of Pacific infants born in New Zealand (NZ), and their mothers and fathers. The PIF study aimed to determine: (1) the prevalence of disciplinary and nurturing parenting practices used with children at 12 months of age, and (2) the demographic, maternal and lifestyle factors associated with parenting practices. At the 12-month measurement point, mothers (N=1207) were interviewed about their parenting practices using a modified version of the Parent Behaviour Checklist. High nurturance was significantly associated with Samoan ethnicity and post school qualifications, and low nurturance was significantly associated with post-natal depression, alcohol consumption and gambling. At the univariate level, high discipline scores were significantly associated with gambling, postnatal depression and lack of alignment to either Pacific or to European traditions. However the strongest association with discipline was the ethnicity variable with Tongan mothers reporting significantly higher disciplinary behaviours that all other ethnicities.
It is clear that there are a number of common underlying lifestyle issues that need to be considered when dealing with parenting problems in families with young children. However, specific to Pacific families, is Tongan ethnicity accounting for a strong cultural effect on parenting style, in particular high discipline scores relative to other Pacific groups. This important finding may be used to guide social policy and prevention programmes that are focused on the wellbeing of Pacific mothers and their children.

Stream Two: Child and Youth Mental Health

Chair: Dr Toakase Fakakovikaetau, Consultant Pediatrician and Clinical Director, Tonga

Samoan Mothers Attitudes to the collection of non invasive biological samples

Falegau Silulu, Masters in Public Health Student

Falegau Melanie Silulu (Samoan) - Melanie is a Masters in Public Health Science student. Mel is a psychology graduate with an interest in youth health. Her Masters thesis will look further into determining whether there is a need for a catered low birth weight threshold for Pacific infants.

Would you allow your son or daughter to give a minor body samples for health research?

Pacific Islands Families Study (PIF) – Samoan mothers’ attitudes to the collection of minor body samples. Research studies specific to ‘parental consent to the use of non-invasive biological studies from their children’ are limited particularly in New Zealand and the Pacific. And while we have gained some insight into parent’s perceptions of research within clinical settings, there is a genuine need for more research into non-clinical settings (such as population based settings) to be done, a view shared and expressed throughout the literature cited. This research investigated attitudes that Samoan mothers that are part of the Pacific Islands Families study have towards allowing their children to give minor body samples collected.

Pacific Child and Adolescent Mental Health

Joanne Roberts, Vaka Toa, Child and Adolescent Mental Health Service, Counties Manukau District Health Board, Auckland, New Zealand.

Pacific child & adolescent mental health is often an overlooked area. In the 2006 census it highlights that close to 60% of our pacific population was New Zealand Born, that close to 40% of this population is under 15 years of age and that Counties Manukau has the largest Pacific youth population in Aotearoa. It is foreseen that with these demographics there are huge challenges for having a youthful population.

Vaka Toa is a newly launched Pacific for Pacific Adolescent Mental Health Team working within a mainstream Child & Adolescent Mental Health Service (CAMHS) for Counties Manukau District Health Board (CMDHB). The primary aim of Vaka Toa is to ensure that culturally appropriate and effective clinical mental health services are accessible to our pacific adolescents and families. Vaka Toa works with adolescents aged between 13 – 19 years, and their families, who’re experiencing moderate to severe mental health concerns.
Relevance to the Pacific

Vaka Toa has the potential to identify and provide culturally appropriate interventions and support to our Pacific families and community with mental health concerns. We aim to reduce barriers that prevent Pacific adolescents and their families from accessing culturally appropriate mental health services and we aim to provide education to our communities on the challenges of our Pacific youth in the area of Mental Health.

A brief description of methods

A presentation highlighting common concerns, type of diagnosis and treatment of Pacific adolescents referred to child & adolescent mental health service in the last 6 months.

A statement of conclusions

To promote and educate our Pacific communities on Pacific Child & Adolescent Mental Health by providing a summary of services provided by Vaka Toa. We hope to make our Pacific communities aware of the current mental health challenges that face our Pacific youth and families in the

The acceptability of the Incredible Years Parent Management Training Program for Pasifika parents

Mercy Drummond, Health Pasifika Child and Adolescent Mental Health Services, Capital Coast District Health Board.

The Incredible Years Parent management Training Programme is an evidence based prevention and treatment programme, which has been shown over the last twenty years, to be effective for child and adolescent mental health conditions, such as conduct disorder, attention deficit hyperactivity disorder, and a range of other disruptive behaviour problems.

The programme has been supported by the New Zealand Ministry of Health, as a preferred intervention, and adopted by many mainstream child and adolescent mental health services in Aotearoa/New Zealand. This presentation will describe the development of an adaptation of this programme for Samoan, and other Pasifika parents, resulting from a collaboration between a Pasifika Child and Adolescent Mental Health Service based in Porirua, and a local Samoan Church and A’oga Amata (Samoan language pre-school).

Evaluation results will be presented from the first group of Pasifika parents who completed this programme.

A Pacific led group for children of parents with mental illness

Mercy Drummond, Health Pasifika Child and Adolescent Mental Health Services, Capital Coast District Health Board.

Children of parents with a mental illness are at risk of a range of adverse mental health outcomes including anxiety disorders and depression. However this vulnerable group is frequently overlooked in the adult mental health services who provide care for their parents. Pacific families are even more likely to miss out
on support as they tend not to present to mainstream (Palagi) mental health services.

This group is a collaboration between an NGO (Skylight Trust) and Capital Coast District Health Board (Health Pasifika Child Adolescent Family Service (CAFS)) and is a half day programme run in school holidays for 6 to 12 year old Pacific and other children and their caregivers. Both presenters are Samoan and the programme is designed to provide an environment that will feel safe and friendly to pacific families and other families who attend.

The children’s group runs concurrently with the parents and caregivers group. For the children there is a strong focus on building rapport through play, painting, stories, and craft activities as well as anxiety and stress management and understanding of emotions and sharing some experiences about life with a parent with a mental health problem.

The parent’s group focuses on sharing of their stories about their families and challenges of life with a mental health problem. There is a focus on education on the developmental and emotional needs of their children as well as relaxation and self care.

“Acculturation: The association of infant health risk indicators and acculturation of Pacific Island mothers living in New Zealand”

Mr Gerhard Sundborn, Lecturer, Pacific Islands Family Study, AUT, Auckland

Problem Gambling

Seini, Taufa

**Background:** Problem gambling has been identified as a ‘disorder of impulse control’ (American Psychiatric Association, 1980; Tischler, 1987; American Psychiatric Association, 1994). In 2001 the prevalence of problem gamblers in New Zealand was six times higher among Pacific people than for European/Pakeha and two times higher than Maori people. In NZ, Pacific people spend large amounts of time and money on gambling related activities with the implications discerning negative gambling related harms, which impacts on the physical, mental, social and spiritual wellbeing of the population (Abott & Volberg, 2000; Guttenbeil-Po’uhiila, 2004). This paper acknowledges the need for ethnic specific research on gambling due to the paucity of research or empirical information regarding young Pacific peoples in New Zealand.

**Aim:** To explore what New Zealand-born Tongans living in Auckland New Zealand, between the ages of 20 – 25 years perceive gambling to be; To identify their motives for gambling; To discuss the effects of gambling on their social and cultural belonging; To provide recommendations as to how public health providers could minimise the harm of problem gambling for these young people.
Methods: Semi-structured face-to-face interviews were conducted with eight New Zealand-born Tongans between 20-25 years living in Auckland using thematic analysis. From the interviews common themes based on participants gambling behaviours were analyzed.

Results: The findings from this study show that gambling not only hinders an individual’s economic conditions, but also has the potential to harm an individual’s social and cultural connectedness to their family and extended community. For the participants involved in the study, social and cultural disconnection is more detrimental than economic loss. Key findings from the analysis include gender differences in gambling behaviour, relationship between gambling and stress, adverse social/cultural effects on Tongan families as a result of gambling.

Tobacco Control in Niue

Dr Vili Nosa, Dr Judith McCool, Pacific health, School of Population Health, Faculty of Medical and Health Sciences, University of Auckland, New Zealand

An estimated 3000 people die each day from tobacco use in the Western Pacific. New and innovative strategies are required to reverse this trend. Niue, a small self-governing isolated island state in the Western Pacific region (resident population 1600), is no exception. Tobacco smoking in Niue remains a persistent public health issue. The Niue 2006 Population Census showed that 31% of males and 16% of females were current cigarette smokers; smoking initiation is still occurring at high levels among young people; and between 2002-2003 smoking prevalence increased by 4%. A high level of political support for stronger tobacco control exists in Niue, with ratification of the Framework Convention on Tobacco Control in 2005 and the Tobacco Control Bill 2007 currently in discussion. In 2007 the Premier publicly floated the idea of financial incentives for smokers to quit as part of moving towards a vision of a ‘Smokefree Niue’. While this bold and imaginative support is encouraging, little is known of public and other key stakeholder views regarding the implementation of these and other tobacco control measures in Niue, in particular the order, pace and the resource implications of such steps.

Aim: The aim of this research was to explore public, professional and political perspectives on tobacco control priorities in Niue.

Method: Twelve in-depth interviews were conducted with a range of Pacific health, tobacco control and public health professionals from both Niue and New Zealand. A qualitative semi-structured interview format was utilised to guide the interviews and qualitative thematic analysis undertaken to explore common and divergent viewpoints.

Results: The results identified that to make significant progress in tobacco control there should be active work to engender wide political support, extensive community engagement and participation in each step of policy development and further research in specific areas, the development of a stepwise tobacco control plan for Niue, and the commitment of sufficient people and financial resources are the most promising pathway for progress.
**Everybody’s Business**

**Stephanie Erick-Peleti**, National Pacific Tobacco Control Service, Heart Foundation, New Zealand

A plethora of research indicates the adverse health effects of cigarette smoking and it has been well documented as a leading cause of preventative deaths for Pacific people. In addition, strengthening health systems is paramount in ensuring that Pacific people have better health outcomes.

The Tobacco Control arena may hold the highest potential for improved well-being amongst our Pacific people. NPTCS acknowledge that all Pacific people should have access to a skilled, well-supported, and effect Tobacco Control Workforce. In recognition of this, NPTCS endeavors to discover the current nationwide situation for Pacific people in the area of Pacific Tobacco Control.

In recognition of this, NPTCS endeavors to discover the current nationwide situation for Pacific people in the area of Pacific Tobacco Control.

To date, the NPTCS have reviewed research documents and conducted a National Stocktake of all Pacific Tobacco Control Services currently available. The information gathered from both the research documents and stocktake indicate areas of concern amongst Pacific smokers, the Pacific tobacco control workforce, and the wider Pacific community.

**The key findings:** Inequalities in smoking rates exist; Higher rates for Pacific subpopulation groups; Cook Islands females more likely to smoke than any other Pacific ethnic group; Low numbers of Pacific Tobacco Control Services.

**Recommendations:** To address these gaps we must improve service data collection, support our workforce, and support the growth of robust Pacific leadership. In this presentation we will explore strategies for looking ahead.

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**Two years on: Gambling among Pacific mothers living in New Zealand**

**Lana Perese, Researcher**, Pacific Islands Family Study, AUT Auckland

Research investigating the prevalence and correlates of Pacific peoples gambling within a New Zealand context is limited. This paper provides data about gambling activity from a two-year data collection point for a cohort of mothers within the longitudinal Pacific Islands Families study. The results indicate a number of consistencies and discrepancies between data collection at this time point and two years previously (six-week baseline data collection point). For example, at baseline, Samoans were least likely to gamble and spent less money on gambling activities. Two year later, Samoans remained the least likely to gamble, but those that did gamble, were more likely to spend more money than other ethnicities. This article highlights the importance of this type of prospective study in examining the development of the risk and protective factors in relation to the development of problem gambling.
Plenary Session:  
“Traditional healing – can we work together”  
Chair: Mrs Ngapoko Short, former Director of Public Health, Cook Islands

“Traditional medicine-A global Overview”

Dr Joseph Williams, Mt Wellington Accident and Family Healthcare

Traditional Medicine (TM) has been used since ancient times, in all human societies and cultures long before the era of modern medicine. Most forms of traditional medicine utilize extracts from plants, trees and animal products and are often linked with superstition and sorcery.

Knowledge accumulated through the ages were incorporated into traditional medicine systems such as Ayurveda and Siddha in India, Traditional Chinese Medicine (TCM) and Acupuncture in China, Muti medicine in Africa, Maori medicine in Polynesia, Herbology, etc. In recent times complimentary or alternative medicine such as Chiropractic, Osteopathy, Naturopathic medicine, homeopathy etc were added to the body of traditional medicine.

It’s wide usage throughout the ages, no doubt ensured the survival of mankind.

Today, traditional medicine is practiced by 70 – 80% of populations in many developed and developing countries. The World Health Organisation has called for Traditional Medicine to be incorporated as part of primary care in modern health care systems. But there are challenges to be addressed in the use of some traditional medicine.

This presentation gives a broad overview of traditional medicine as used on a global scale together with contemporary views of their usage and the challenges facing its use in modern medical practices.

“An academic perspective” Professor Sitaleki Ata’ata Finau, Massey University, s.a.finau@massey.ac.nz

“Cook Island traditional medicine”

Mr Ngarimu George, Traditional Healer & Mrs Rauraki Rongo, Traditional Healther, Cook Islands
Concurrent Session:
Traditional healing and Conventional Therapies
Stream 1: Integrating with communities
Chair: Mr Manu Sione, GM, CMDHB, New Zealand

Traditional Healing and Mental health

Pepe Sinclair and Philip Hull Faleola
Pacific Island Mental Health Services, Counties Manukau District Health Board

Clinicians have often viewed traditional and/or religious beliefs (such as the belief that mental illness results from a curse of the patient’s ancestors) as an obstacle to healing or wellness when utilizing western treatment methods. Through the use of rich case material from several studies, we demonstrate that such view on the part of clinicians may be quite erroneous. Indeed, we demonstrate that such beliefs may facilitate, rather than inhibit effective utilization of western treatment methods. Case material includes a Cook Island female diagnosed in the NZ health system with Schizophrenia (Maki Manako). She was successfully persuaded to restart her anti-psychotic medication and comply with its prescription through harnessing the patient’s beliefs in evil spirits haunting her house and causing her illness. A Niuean male, also diagnosed in the NZ health system with Panic Disorder (Ulu maliu, Ulu Goagoa) believed that his failure to properly attend to his dying grandfather’s needs led to the latter’s spirit haunting him, provoking his anxiety. A Native Hawaiian female diagnosed in the U.S. health system with Schizophrenia (Pupule) was transformed into full medication anti-psychotic compliance by utilizing her Christian beliefs towards this end, rather than towards the end of non-compliance. DVD footage of the latter will be presented.

“Te ‘Are Turama O Mao’a – The Inspiring Home of Mao’a”

Sam Samuel, Vakaola
Pacific Community Health Incorporated, Kenepuru, Wellington, New Zealand.

Objective: To investigate how our Cook Islands Maori people approach health issues and construct an appropriate traditionally based model as an alternative to the Western Illness Model(s) being used by clinicians to assess our people. I aspire toward a model, rooted in the Cook Islands Maori ethos, workable, relatable to my vocation in mental health which will assist my people and encompass their worldview thus fitting our targeted ethnic specific service.

Method: In pursuing this approach, I considered my own upbringing in Rarotonga and how we were cared for when we got sick. This rich experience began from my birth in 1946 to 1964 when I migrated to Aotearoa and, continued to the present day. I now fully recognize that whilst growing up in Rarotonga I learned many lessons directly derived from my culture, religion, traditional practices, and customs. I incorporated some of these concepts toward the development of a holistic approach method in mental health.

I used diagrams to illustrate those relative factors in life that are important to us and our way of life.

My Aotearoa born children and other nuclear and extended families helped me focus more on health issues at two different levels: That: of a Cook Islands Maori born in Rarotonga, and the other, born in Aotearoa.
When it comes to many health concerns, both levels have a shared future in our hands.

**Result:** I successfully developed an effective assessment and recovery model, called “Te ‘Are Tūrama O Mao’a – The Inspiring Home of Mao’a” based on the fundamental essentials in the home that I grew up in Matavera, Rarotonga. It incorporates elements and approaches of considerable importance to us but apparently absent in existing Western models.

The published book with the same name is the first of its kind specifically compiled for our people.

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**Connection and Hope – An invitation to a Maori conversation Hononga me te tumanako**

Gay Puketapu – Andrews, Marie Wharepapa-Donaldson and Maria Davey, Kohi Marama Enterprises Ltd

Gay is of Te Atiawa, Taranaki descent and currently is working as a counsellor, supervisor and trainer with 25 years experience in the field. She is currently in private practice providing ACC Sexual Abuse counselling, youth counselling and both clinical and cross cultural supervision.

Marie is of Te Arawa descent and a counsellor, supervisor and educator currently working with individuals, young people and families. Marie has worked extensively throughout the Wellington region providing services in Alcohol and Drug assessment, grief work, family therapy and more recently adolescence.

Maria is of Ngati Maniapoto and Kahungunu descent and is a counsellor and supervisor. She is experienced in facilitating parenting and youth groups. Maria’s work history includes Child and adolescent mental health services and working in the Kohi domestic violence field. Marama is a collaboration of three indigenous Maori counsellors from Aotearoa (New Zealand) who are dedicated to improving health and well being for whanau and their community. Through participation with other indigenous peoples, we look forward to the reciprocal experience in presenting and attending this conference.

*Hutia te rito o te harakeke*

*Kei hea ra te komako e ko*

*He aha te mea nui o te ao,*

*He tangata, he tangata, he tangata*

Western counseling theory teaches us to maintain professional boundaries, observe transference/countertransference that reinforces roles in the therapeutic context.

This interactive workshop aims to offer an indigenous experience of the counselling relationship, where the essential core of our work is about connection with each other. It is our belief that when this connection is honoured, the potential for hope is created, both in the room and in the community, improving wellbeing for the whanau.
Innovation in delivery of a well-being service – Kahui Pakeke Program

Debra Weinert, Te Kupenga Hauora-Ahuriri, Napier, New Zealand.

Part of Te Kupenga Hauora tikanga is to make accessible traditional curative and wellness services that are not currently acknowledged in the health sector. One of the strategies to implement this was the formation of the Kahui Pakeke programme.

Kahui Pakeke are made up of a group of Kaumatua (elders) who attend a monthly Hui at Te Kupenga Hauora-Ahuriri. The group is made up of diverse ethnicities such as Maori, Pacific Islanders and Europeans.

The delivery of the programme is based on the Whare Tapa Wha Maori Health Model incorporating Taha Tinana -physical, Taha Wairua –spiritual, Taha Whanau -family Hinengaro -mental wellbeing, (Durie, M., 1998).

**Focus:**
1. Increase Kaumatua awareness of personal and Whanau health issues.
2. Encourage participation in opportunities which lead to an improvement in their health status.
3. Increase activity levels of participating Kaumatua.
4. Create a culturally appropriate, safe and social learning environment.
5. Provide an environment where Kaumatua can socially interact.

**Method:**
1. Make available a venue at Te Kupenga Hauora.
2. Complete monthly health checks (blood pressure, blood sugar levels, cholesterol levels, weights etc).
3. Have Kaumatua direct their learning requirements.
4. Deliver health education covering topics such as heart health, diabetes, Rongoa (traditional Maori healing), respiratory disease, nutrition and mental health and wellbeing.
5. Attend a 1 hour physical activity regime in the Hauora gym.
6. Supply a healthy lunch.
8. Waiata.

**Results:**
1. Promote health and wellbeing to the Kaumatua.
2. Increase Kaumatua awareness of personal and Whanau health issues.
3. Encourage Kaumatua to actively participate in opportunities which lead to an improvement in their health status.
4. Create a culturally appropriate, safe and social learning environment.
5. Enhancement and practice of different cultures.
6. Strong partnership formed between Kahui Pakeke and Te Kupenga Hauora staff.
Stream 2:
“Clinical Presentations – Best Practice”
Chair: Mrs Esther Tumama Cowley-Malcolm, Board member, HRC, New Zealand

Pacific people in Dunedin: Perception and health

Prehna Seghal, Otago University, Dunedin.

Principle Investigators: Ball Lewis, GIBSON Justine, KANG Angela, MACKAY Jasmine, OOI Sze Chen, SEHGAL Prerna, WAAKA Arihia, WILLIS David, YANG Oscar

Background
Pacific people make up 6.9% of New Zealand’s population with a projected increase of 2.4% yearly. However, pacific people have a poorer health status in comparison to other ethnic groups. There is disparity in the access to health care services by the pacific population, and research has shown that public health promotion campaigns do not adequately cater to their needs. Differences in the western and pacific concepts of health and perception of body image may account for this disparity.

Objectives
1. To gauge perception of health status and health behaviours of people in the Dunedin Pacific Island community
2. To determine the perception of risk of developing disease within this population
3. To compare these subjective findings to objective health measures obtained from screening data

Method
During the 2-day Pacific Sports Tournament organised by OPPHT, the investigators distributed a survey constructed from Short Form (SF)-12 with additional questions about weight, smoking, alcohol, and exercise, amongst the study participants via consecutive sampling. Their corresponding basic health parameters such as blood pressure, blood sugar level, and body mass index were also recorded, using a screening form. This data were analysed and correlated using the statistical programme Stata v10.

Results
1. 139 surveys were completed and 62 participants completed the screening.
2. 90% of the participants screened had a Body Mass Index (BMI) in the overweight or obese category.
3. Participants with a high BMI were more likely to perceive themselves as being overweight (p<0.001) however did not express a higher level of concern regarding their weight.
4. Women were three times more likely to be current smokers than men and most participants were aware of how smoking affects their health.
5. Men were twice as likely to drink heavily in comparison to women.
6. 35% of participants had BP recordings of greater than 140/90mmHg at screening and one third of these individuals were concerned about their blood pressure.
7. The mean Blood Sugar Level (BSL) was 6.4mmol/ and 44% of participants had a BSL>6.1mmol/L, high enough to warrant further follow-up. One third of these individuals were concerned about developing diabetes.
8. SF-12 scores for both Physical and Mental Components showed a narrow range from 20 – 65 with most participants obtaining scores close to the mean of 50.

Conclusion
Pacific people at the Sports Tournament had a poorer health perception according to the SF-12, and had suboptimal health parameters. These two variables generally did not correlate, but weight perception and BMI were significantly congruent. This study highlights a number of target areas for health promotion within the pacific community. Existing programmes may not cater to the specific needs of the pacific population due to differing culture and beliefs regarding health. The scope for the development of a more pacific approach to health promotion in consultation with community leaders may empower the pacific community to improve their own health status.

Who needs a gym anyway? – A wellbeing innovation

Stephanie Erick-Peleti and Anne Fitisemanu

Research indicates the adverse health effects of obesity. In NZ we know that 63% of all Pacific adults are obese. Pacific children are two and a half times more likely to suffer from obesity than non-Pacific children. It’s an epidemic.

Access to services, limited workforce and resources, dearth of solutions based research suppress the improvement of Pacific health in NZ. Pacific women suffer un proportionately to other women in NZ re the harms of obesity. In NZ Pacific women groups such as PACIFICA Inc are known for identifying important issues and their ability to mobilize Pacific women and their communities. This is done nationally via its 19 registered branches.

Auckland Central Branch of PACIFICA Chair initiated a pilot programme aimed at fighting obesity community level. We seek to investigate the impact of this community based initiative in tackling the problem of obesity.

Method: A baseline 12 women were weighed, measured and underwent fitness and strength tests. Since January the women have meet with their trainers to exercise for an hour twice weekly. The sessions also covered discussion on good food choices, staying focused, and influencing others. Regular contact with each other and their trainer was maintained via txt or email

Findings: By week 8 all women lost inches and an average of 6 kilos. Fitness had doubled and strength increased. The women thrive on the group thing, and working as a whole team together.

Many tried green prescriptions and going to the gym but they are individual approaches. “This is preventative; it’s keeping them active and it’s helping.”

The women continue to meet. Other positive results include completing a duathlon, running round the bays. Currently they are training towards completing a half marathon
Conclusions: PACIFICA women are doing something practical to alleviate the problem. The programme is designed to actively tackle the problem of obesity at the grassroots. Wider cultural & health needs of Pacific people and Pacific populations are reflected.

Pacific need to work in teams because we often won’t do it for ourselves. This model is cost effective and can be delivered into suburbs, villages, any places where like minds, friends or family wish to meet.

Sexual Health Knowledge of year 10 Students in low socioeconomic South Auckland Schools

Fionna Bell, Family Life Education Pasefika, Auckland, New Zealand.

Background: South Auckland is a youthful, ethnically diverse urban area of New Zealand with double the national population growth rate, mostly attributable to a higher birth rate. Young people of Maori and Pacific ethnicities are overrepresented in socioeconomic disadvantage, depressive symptoms, as victims of violence, Sexually Transmitted Infection (STI) complications, and pregnancy. Resiliency to adversity is dependent on the wellbeing of family relationships. Sexual health behaviours are influenced by the power relationship with the partner, and each person’s intentions are influenced by their sociocultural context, in particular parental knowledge and beliefs. Condom and contraceptive use by Pacific females is significantly lower than Pacific males and other ethnic groups.

Aim: To assess the pre-intervention sexual health knowledge of year10 students (14-15year olds) in low decile South Auckland schools engaged with an external sexuality education provider in the three years from 2005, and to assess for variation by school, year, socioeconomic decile and sex.

Method: The study was designed as an observational study of prospectively collected data. Anonymous, voluntary pre-intervention multiple-choice ‘Safer Sex’ questionnaires were completed individually by 315 year10 students at five of the thirteen lowest socioeconomic quintile South Auckland secondary schools. School students were predominantly of Pacific and Maori ethnicities. Standard analytical methods were used.

Results: Responding year10 students had some knowledge pre-intervention that was not normally distributed and had a median score of 57% (40%,70%). Some respondents demonstrated high specific knowledge as would be expected for sexually experienced adolescents. Males had significantly better core reproductive knowledge, condom manufacture knowledge, and understanding of the word ‘contraception’ than females. Significantly fewer decile1 than decile2 respondents knew that condoms were the best contraceptive for STI prevention. STI prevention knowledge with condoms did not vary across the sexes. Half of respondents knew the legal consenting age.

Conclusions: The better male knowledge of condom manufacture reflects the socialised male control of condoms. Compared with decile2 students, lower socioeconomic status students have higher specific knowledge suggestive of sexual experience but relatively lower STI prevention knowledge, attributable to neighbourhood-level effects. The literature review and study results support the expansion of traditional
Pacific ethno-cultural abstinence-only strategies in the communication with adolescents, to include more culturally appropriate abstinence-plus techniques and strategies for parents, community leaders and schools alike. Further investigation is recommended.

**Perspectives on adherence to Antihypertensive medications**

*Kuinileti Chang-Wai*, West Fono Health Trust, Auckland.

**Aim:** The aim of this research was to ascertain, from Samoan patients at West Fono Health trust, factors that contribute to being good or poor adherers to their blood pressure medications.

**Methods:** Twenty Samoan participants from a West Auckland medical practice were identified and interviewed about their views on adherence or non adherence to blood pressure medications. There were nine males and eleven females. Semi-structured, open ended questions were part of the qualitative method of research for this study. Interviews were conducted in Samoan, recorded, translated to English and transcribed. A thematic analysis was used to identify key themes.

**Results:** The interviews among the good adherers identified the following themes: health was a priority and important to them; they were good at time management and knew exactly when their medications were due, they had very supportive family members who reminded them of the need to continue medications, and the importance of language was highly valued by these participants as a factor in contributing to their understanding of their blood pressure problem and thereby encouraging adherence to their medications.

The interviews amongst the poor adherers generated the following themes such as a lack of transport; too many family commitments; forgetfulness; increased church activities and feeling well were identified as factors that contributed to them being poor adherers to their medications.

Reasons for adherence and non-adherence to blood pressure medications among the Samoan participants of West Fono are multi-factorial and encompass personal, social, cultural and environmental factors. The results of this study will inform the next stage of this research to assess whether a simple intervention strategy can improve adherence to blood pressure medication for the Pacific people of West Auckland, thereby improving health outcomes.

This research was carried out in mid 2008 and submitted in January 2009 as partial fulfillment of a Masters in Medical Science degree at Auckland University.
Stream 3: “Clinical presentations-Best Practice”
Chair: Tofialu Alaistair Papali’i-Curtin, Medical Student, and Ms Lorna Williams, Medical Student, Auckland, New Zealand

Our Children, Our Future – The Way Forward

Temukisa Alao-Snyder, Mary Roberts and Salumalo Seve, Well Child team, South Seas Healthcare Ltd

Development, Implementation and Evaluation of a health promotion model to promote the health of young people in the Cook Islands, using a school and community empowerment approach.

Mrs Nettie Herman, PHD Student.

Traditionally, the health of young people has not been a priority concern because they are generally less vulnerable to diseases than children and older populations. However, young people are highly vulnerable to fundamental changes in social, economic, cultural and political situations, which can have a profound effect on their health. As a result, certain types of morbidity and mortality affect them more than any other groups. In many societies including the Cook Islands, these changes have contributed to at-risk behaviors such as substance abuse (alcohol, tobacco and drug), resulting in motor vehicle crashes, unprotected sex leading to teenage pregnancy and sexually transmitted infections (STIs); unhealthy eating with little physical activity resulting in obesity; truancy and academic failures, depression and suicides; and juvenile delinquency and crimes. Many intervention programs introduced to counter these problems have led to some success. However, exclusive focus on problems narrows their vision, thus a broader holistic view to help young people realize their full potential and promotes positive outcomes is now the preferred paradigm. Such programs involve a new direction in public policies that focus on strength based community and school empowerment and partnership approach, and within a Cook Islands context.

Methodology: The research will have a Qualitative design, and will be conducted in the Vaka Takitumu. It will be carried out in 3 phases.

1. A community The information obtained (from phase 1) will be used by the Takitumu young people, with support from adult members in the community, to develop a Health Promotion model using community and school empowerment and partnership approach, and with a Cook Islands perspective. The philosophy here is to create a wider framework that promotes positive outcomes for young people as they move into a healthy and productive adulthood.

2. The implementation, process and formative evaluation of the program activities within the assessment will be carried out to identify the main health problems faced by young people 13 – 24 years in the Vaka Takitumu. Focus group interviews will be carried out with young people in, and outside the Secondary School in the Vaka Takitumu. Similarly, Individual interviews will be carried out with representatives...
from key stakeholder groups in the Vaka Takitumu, and key informants from Government and NGOs outside the Vaka Takitumu.

3. model.

It is hoped that the model will be transferable to other schools and communities in Rarotonga, Outer Islands and in New Zealand.

Transnational Pacific Health Through the lens of a Tuberculosis Project

Debbie Futter-Puati, STI/HIV Coordinator Cook Islands Ministry of Health

Pacific peoples in New Zealand and the Pacific are interconnected and travel frequently between their multiple homes. This study analyses the health implications of these interconnections and travel. It is based on a study of TB, and other connected diseases, as a means to examine socio-economic, gender and life course effects on health over time and space. We are asking how and how well do New Zealand and island nations’ health services cope with this mobility? What helps produce effective TB control and treatment? Using historical, ethnographic, demographic and health promotion methodologies, and engaging local communities and Pacific research students, the project will work in two island nations as well as New Zealand. The aim is to produce new knowledge and work in partnership with specific communities to plan interventions to help reduce TB, improve health and reduce health inequalities. The focus is on Tuvalu and the Cook Islands because of shared and contrasting health challenges and achievements in these two island groups and in their relationships with New Zealand.

Aims:

1. To understand how TB occurs in the context of transnational gendered life courses and co-morbidities, and the implications of this transnational perspective for population health and disease prevention.
2. To identify conditions promoting TB reactivation and transmission in two Pacific populations in NZ and countries of origin and the interactions between these locales.
3. To identify historical and contemporary barriers to, and plan for, effective interventions.
4. To produce culturally specific information on the pathways to prevention, diagnosis and adherence to treatment of TB and interacting conditions, that can contribute to services and policy directed at TB control and treatment in New Zealand and the Pacific.

Research design: The project is based on a holistic view of health in which TB is a lens into the dynamics of health in transnational populations. Using a ‘syndemic’ framework will allow us to examine, along with TB, the clustering of health conditions, particularly diabetes, in the context of history and culture. By selecting these two conditions as our sentinels our study will necessarily take a comprehensive approach to health ecology incorporating historical political economy, culture and biological interactions, in line with the MoH Intervention framework.

Closing remarks: Ms Kim Buchanan, General Manager, Pacific Division, Procate Ltd, New Zealand
Day 3 Friday 3rd July

Plenary Session: “The Applications of Research”
Chair: Dr Teuila Percival, Paediatrician, Director of Pacific Unit, University of Auckland, New Zealand

Tofilau Dr Alistair Papa’ali’i Curtin, Medical Student, Auckland, New Zealand

“Pacific Health Research Council” Dr Roro Daniel email: r.daniel@health.gov.ck

“Ethnic specific research” Professor Sitaleki Finau email: s.a.finau@massey.ac.nz

The Good, the bad and the Ugly of research” Professor Richie Poulton

Teu le Va: mental health research that could make a difference to Pacific well-being in New Zealand”

Dr Melani Anae, Director, Center for Pacific Studies, University of Auckland

Much of the development of Pacific paradigms, concepts, metaphors, models of ‘well-being’, research methodologies and cultural competencies, has occurred in the health sector. Indeed there is a sense of urgency in the way Pacific health researchers are heeding the call to “…disrupt hegemonic research forms and their power relations and to alleviate and reinvent new research methodologies and perspectives”.

With current government demands for ‘evidence-based’ and ‘culturally appropriate’ research and Pacific communities’ calls for research which is “for Pacific by Pacific”, the drive to develop new ways about thinking about research and the need to build Pacific research capability and capacity has become more and more apparent, especially in the areas of health and education. I contend that much of this development appears to be ad hoc, piecemeal and fragmented and highlights the necessity for more coordination and focus. This can be traced to the need for a more comprehensive conceptual framework for research with Pacific communities which offers holistic theoretical foundations upon which we can think about doing Pacific research in New Zealand and which will improve and enhance the quality and quantity of evidence informing various governmental policies, in this context Pacific mental health policy.

I contend that we need to clear a path through the ‘clutter’ around mainstream research and the proliferation of Pacific paradigms, approaches, and cultural competencies which have developed in New Zealand over the last 10 years or so. In order to make some sense of them in a holistic way, we need to develop a framework which could incorporate their main elements and signal their uses in practical ways.

In this paper I argue that much Pacific research in New Zealand has glossed over and ignored the cultural complexities of not only the multi-ethnic nature of Pacific communities, but also the intra-ethnic nuances of the diverse groupings and identities of the Pacific cohort. Until this is addressed, Pacific research in New Zealand will be ineffective and lack ability for transformative change for a component of its population which remains marginalised and at risk. Moreover the translation of research into policy will remain a dream. I argue that this can be addressed by guidelines for research that will expose and provide pathways through
these complexities which will lead to more robust research processes and more effective outcomes. I propose to do this by re-introducing the Ethnic interface model (Tanya Samu 1998), the Cube model (Sasao & Sue 1993), woven into a Pacific indigenous philosophical ‘teu le va’ methodology which focuses on the centrality of reciprocal ‘sacred and secular relationships’ with which to offer a conceptual point of reference and methodology for future Pacific mental health research in New Zealand.

WORKSHOPS

Session One: Primary Trauma Courses
Dr Mike Sheppard, Mr James Hamil, Mr Rangi Tairi, Mr Charlie Numanga, Dr Sarah Jamison

Session Two: Mental Health, Drug and Alcohol and Well Being
Stream 1; “Nothing about us without us”
Chair: Mr Alfred Ngaro

Consumer team in partnership with Forensic Services

Mary Campbell and Lydia Thoumine, Consumer team,
Te korowai Whariki, Mental Health Services, Capital Coast DHB

Mary Campbell of Cook Island descent and Lynda Thoumine form the Consumer Team at Te Korowai Whariki, mental health service.

They play a unique role in Te Korowai Whariki because of the consumer perspective they bring to the Forensic and Rehabilitation Service and also because of their determination to make a positive difference in the lives of the people they support. Living with mental illness themselves, they are well aware of the issues one can face particularly around institutional stigma and self stigma.

The recovery journey is seen by the Consumer Team as unique to each individual and cultural needs are recognized and valued as part of this journey.

Mary and Lynda believe working in partnership with well trained staff can play a pivotal role in the recovery journey. They are available to consumers and staff for professional support and advice.

Lynda and Mary attend a variety of regional and national consumer driven forums as well as internal senior management meetings.

Making connections from around the Pacific will be a priority for Lynda and Mary in terms of networking, information sharing and also promoting Te Korowai Service as a positive place to work.
**Whaiora Advocacy**

Kura Kura and Linh Dong Wellington Mental Health Consumers Union

New Zealanders Kura Kaikura, Cook Island born, and Linh Duong, of Vietnamese/Chinese descent, form the Tangata Whaiora Advocacy, peer and Social support team at the Wellington Mental Health Consumers Union. They play a unique and vital role as Tangata Whaiora Advocates because they know first-hand what it is like to live with a Mental Illness and are acutely aware of the issues one can face in Health services and the community. Kura and Linh advocate for individuals and groups of Tangata Whaiora to assist, support and empower them to ensure their legal and Human rights are upheld and to seek solutions to problems they may be facing. Their work involves Tangata Whaiora from diverse backgrounds. They value each person’s Cultural needs as they believe that each individual’s Recovery journey is unique. Linh and Kura actively network and liaise with organizations, groups and individuals related to Mental Health and personal Social Development in order to increase the opportunities they can provide for Tangata Whaiora to have information and access to a range of Community resources and services.

It is important for Tangata Whaiora and Health Professions to understand both the role of an Advocate, and why there is a need for Advocacy. Kura and Linh’s experience and insights will be of value to all those associated with Mental Health.

This forum presents Kura and Linh with a significant opportunity to contribute to the conference’s objective of building links and supports throughout the Pacific. Equally their attendance will greatly enhance their roles as via the exposure to networking, information gathering, and sharing of resources ultimately improving the quality of services they can provide to Tangata Whaiora and Family.

**Cook Island Consumer Network Mental Health Services**

Ms Anna Paniani, Ms Mereana Taikoko, Mental Health Services, New Zealand

Cook Island Consumer Network Group

**Stream 2: Mental health innovation**

*Chair: Dr Monique Niumata-Faleafa, CEO, Le Va, Auckland, New Zealand*

**Age of onset of disorder and first mental health service treatment contact among Cook Islanders in New Zealand**

Jesse Koukaua, Research Analyst, Ministry of Health, Dunedin, New Zealand;
J Elizabeth Wells, Patrick Graham and Richie Poulton
**Pacific Mental Health Care Innovation**

**Dr Fionna Bell, Ta Pasefi ka Health Trust, Auckland New Zealand**

**Background:** TaPasefi ka is a Pacific Primary Health Organisation (PHO). Member providers are South Seas Healthcare, Bader Drive Healthcare, Health Star Pacific, Mangere Family Doctors and The Airport Doctors. Ta Pasefi ka providers serve over 20,000 socioeconomically disadvantaged people. Most are of Pacific ethnicities. The prevalence of mental health conditions is uncertain and is believed to be under-detected. Mental health conditions are known to be more likely in people who are experiencing loss, substance misuse, heart disease, and diabetes. Ta Pasefi ka has higher than the national average prevalence of diabetes and smoking.

Ta Pasefi ka providers have been leaders in the utilisation of the local Chronic Care Management (CCM) integrated primary-secondary programme for the evidence-based management of diabetes, congestive heart failure and chronic respiratory disease. However, the CCM module to detect and manage moderate severity depression has been unsuccessful. Ta Pasefi ka and providers believe the designed module of care does not fit how people of Pacific ethnicities express illness or how they prefer to be managed.

**Aim:** To improve the detection of mental health conditions in Pacific patients, and to improve patient access to culturally tailored best-practice mental healthcare using available resources.

**Method:** Nurses and General Practitioners (GPs) were surveyed to assess the challenges experienced when faced with a potential mental health condition. A multidisciplinary team of primary and secondary care professionals, of whom most are of a Pacific identity, was formed. The integration of specialised mental health workers into the provider services has been tailored to provider preference. The step-wise development of primary mental healthcare knowledge and skills has begun. Evaluation is underway.

The survey results, integration model and preliminary evaluation findings will be presented.

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**Fola e Fala Katau Potalanoa: Roll out the mat and let us talk**

**Mua’autofia Clarke, Niu Development, Auckland, New Zealand.**

Gambling is an industry fuelled by promotion of fun filled adventure and the prospects of quick easy money. Unfortunately advertisers fail to show the devastating effects of gambling and problem gambling. Presently our Pacific people are one of the greatest groups affected by gambling and are at risk of the related harms of problem gambling.

Pacific people are six times more likely at risk than Palagi, three times more at risk than Maori and two times more than Asians (Abbott, 2003). They are often overlooked as a major stakeholder group and this can have a serious impact on the development and quality of life for Pacific people and the generations after them. Our Pacific youth are growing up in a generation where gambling is highly visible and easily accessible. Our youth (12 years-25 years) is the first generation ever to be surrounded by gambling in all aspects of their lives.
However, it still remains as a hidden and taboo problem surrounded by shame and embarrassment. Some Pacific people’s wellbeing is severely affected where Pacific youth are enticed by the range and intensity of the promotion of gambling on internet as well as the TAB and mobile phones. Young people today are affected by witnessing the gambling of their parents at a very young age.

This presentation focuses on gambling and the impacts that affect our Pacific people’s holistic wellbeing. When the older generation normalises gambling behaviours, it is a negative legacy for our Pacific youth. This presentation will discuss the trends of gambling for young people, the effects and some of the strategies that the Pacific Gambling Service have in place to try and reach out and get the message across and help to maintain a healthy pacific youth population because they are tomorrow’s future.

Everyone loses. Our families, Our communities, Our problem.  
So let us Fola e Fala o tau po Talanoa.  
Soifua.

Stream 3: Forensic Mental Health, Youth and Mental Health  
Chair: Dr Tekaai Neelsone, Medical Officer, Ministry of Health, Cook Islands

**Bad, Mad or Sad? Assessing mental health in Maori and Pacific Island Youth Offenders**

Evangalene Daniela, Forensic Services

**Background:** The under-utilisation of specialist mental health services by Pacific Peoples is well documented, yet approximately 1/3rd of New Zealand born Pacific peoples experience mental illness. Pacific youth in New Zealand also have twice the rate of offending and presentation in youth courts, compared to Pakeha counterparts, and approximately half those of Maori. Few of these young people have ever been assessed or actually treated, for mental health problems, yet many have longstanding symptomology consistent with ADHD, Conduct Disorder, intellectual and learning difficulties, couple with high levels of alcohol and drug use, attempted suicide and self harm, depression, grief, and family dysfunction. Identity issues are pronounced, and the expression of emotional distress is frequently misinterpreted. The use of forensic services to assess and provide treatment for mental health issues to this population calls for high levels of cultural sensitivity and safety.

I will discuss issues pertaining to assessment –
- Use of mainstream models and assessment tools,
- Engagement and discussions with family,
- Use of cultural models,
- Limitations of ‘the system’
- Entertaining multiple perspectives

I will also discuss the need for evidence based treatments that have multi-faceted treatment goals, using a local treatment program as an example, and the importance of collaborative, holistic treatment responses.
Pacific youth mental health, drugs and alcohol and well being in New Zealand

Longitoto S Helu, Adolescent Health Research Group, School of Population Health, School of Population Health

The Pacific population is growing extremely rapidly. Currently, one in every ten children in New Zealand (NZ) is Pacific. By 2051 it is predicted that this will rise to one in every five (Statistics NZ 1996). Despite this growing population, there is a lack of information on the health status of Pacific young people and the health issues that they face.

Pacific youth in NZ have a high incidence of risk factors for premature illness in later life (NZ Ministry of Health 2001, 2005). Health areas are of greatest disparity for Pacific youth in NZ (NZ Ministry of Health 2006). The following came from Mila-Schaaf et al 2008:

• Pacific youth had higher rates of depression than NZ European (NZE) (based on RADS score criteria)
• Pacific females were more likely to report having suicidal thoughts than males
• Pacific youth were more likely to report trying to commit suicide in the previous year than NZE
• NZE students were less likely to report having ever drunk alcohol, compared to Pacific students
• Pacific students were more likely to be weekly marijuana smokers compared to NZE

This presentation aims to provide accurate and timely information on Pacific youth health and wellbeing in NZ from two Youth2000 surveys that can be used to protect and improve the health status of the Pacific youth in NZ.

The implications of this presentation are that the health of Pacific youth in NZ is protected and improved and a reference document is provided to stimulate interest in the health of Pacific youth in NZ and promote further research.

Mental Health Assessment Workshops

Introduction: Dr Francis Agnew, Clinical Director, WDHB, New Zealand

Workshop 1: Assessing Risk including Suicide

Prof Roger Mulder, MBChb, PhD, FRANZCP
Department of Psychological Medicine
University of Otago, Christchurch

Dr Odile Chang, Chief Medical Officer,
Community Mental Health Services,
St Giles Hospital,
Suva, Fiji.

Papa ali‘i Dr Kim Ma‘ia‘i
ALAC Board Member
Dunedin, New Zealand
Workshop 2
Assessing Drug and Alcohol issues

Dr Francis Agnew Clinical Director
Alcohol and Drug Service, Waitemata District Health Board, New Zealand

Dr Siale Foliaki, Consultant Psychiatrist,
Vakatautua, Auckland, New Zealand

Mrs Metuakore Bates-Faasisila
ALAC Pacific Programme Manager
Wellington, New Zealand

Workshop 3
Mental Status Assessment

Prof Poulton, Director,
Dunedin Multidisciplinary Health and Development Research Unit,
Department of Preventative and Social Medicine, Dunedin School of Medicine,
University of Otago, Dunedin, New Zealand

Mrs Lupe Fohe, Psychiatric Officer,
Mental Health Services, Vaiola Hospital,
Kingdom of Tonga

Dr Ian Parkin, Consultant Psychiatrist,
National Health Service,
Apia, Samoa

Mrs. Pepe Sinclair, Psychiatric Nurse,
Faleola Mental Health Services,
Counties Manukau District Health Board,
New Zealand
From the Editorial Assistant – Azima Mazid

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Kia Ora, Bula Vinaka, Malo, Namaste, Talofa and Pacific Greetings to all Pacific Health Dialog friends and readers!

It is with much pleasure that we introduce you to this issue of Pacific Health Dialog: Health Systems Research – Fiji, et al. an issue dedicated to promoting Health Research in the Pacific. Late last year, the editorial team faced a major setback when the printing company in Fiji declared bankruptcy. This meant that the editorial team’s workload was doubled to accommodate two issues of the Pacific Health Dialog.

However, we are pleased to advise that the Pacific Health Dialog work has now moved to the Directorate of Pasifika@Massey, Massey University in New Zealand where the team will ensure that all issues remain current to prevent future backlogs. The home of PHD have also transferred to the Pasifika Medical Association in Auckland, New Zealand.

A Pacific Health Dialog website http://pacifichealthdialog.org.fj has also been created and is hosted and updated by the Fiji School of Medicine to support access for those wanting to subscribe to past and future issues. A problem constantly faced by Pacific Health Dialog is distribution and we hope that by having all related information on the website will increase the marketability of the Journal to achieve its goals.

We would like to thank all the Authors for their input and contribution towards making this issue an invaluable resource.

Our special thanks goes out to the Assistant-Vice Chancellor (Maori and Pasifika) Sir Mason Durie for all his support and enabling the Directorate to continue publishing the Pacific Health Dialog Journal.

We want to sincerely thank the following people for reviewing Papers and helping with this issue.

Hien Cuboni – FSM Community College of Pohnpei  
Dr. Giuseppe Cuboni – FSM Community College of Pohnpei  
Eseta Finau – Tongan Nurses Association of New Zealand, Auckland  
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‘Etika ‘Akaoula – Ministry of Health, Tonga  
Manueli Kavika – Fiji School of Medicine  
Berlin Kafoa – Fiji School of Medicine  
Jorama – Fiji School of Medicine  
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Kiki Moate – Pasifika Medical Association – Auckland  
Jione Havea – Parramata Sydney, Australia  

Nasili Vaka ‘uta – St John College, University of Auckland  
Oloka Vaha’i – Pasifika Medical Association – Auckland  
Siata Tavite – Massey University, Albany Campus – Auckland  
Manase Lua – Le Va, Auckland  
Siale ‘Alo Foliaki – Middlemore Hospital – Auckland  
Sia Uili – Tongan Nurses Association New Zealand – Auckland  
Shareen Ali – Ministry of Health, Suva, Fiji  
Dr Graham Roberts – Fiji School of Medicine, Suva, Fiji  
Make Koloi – Suva, Fiji  
Dr. Salanieta Saketa – Ministry of Health, Suva, Fiji.

~ Thank you ~
From the editor: Sitaleki A. Finau

It’s been 15 years and 30 issues since Pacific Health Dialog started in 1994. The journal is about to exit childhood and perhaps cease to be delinquent. The home of the Health Research Council of the Pacific changed and the location of PHD production has moved to the Directorate Pasifika@Massey, Massey University, Albany, Auckland.

This issue has been led from The Ministry of Health Fiji. Thanks to Dr. Shareen Ali for allowing Pacific Health Dialog to publish some of the papers from the Fiji workshop on Health research she led. The last issue we most sincerely thank Le Va for all the works on the entirety of the last issue.

The development of human resources for health in the Pacific is the buzz. As Dr Gregory Dever would say, “Without human resources there is no health”. Many concur with this sentiment and are frantically planning in an environment of little to no resources during a period of economic down turn. The PHD 2007; Volume 14 No. 1 has examples of successful efforts in the face of such adversity. Basically the papers said, “Micronesia is lucky it has JABSOM.”

However may I suggest that, “JABSOM is lucky it has Micronesia and Uncle Sam”.

“Mike who?” A son of Uncle Sam allegedly asked sometimes not so long ago.

It makes the rest of the Pacific salivates in anticipation of better days. Perhaps when the Fiji School of Medicine psyche becomes localized again and the Northern Community Colleges swings into gear with the help of JABSOM.

After 2007 we hoped to catch up with production and produce the 2009 issues on time! This we are doing and feel good about it. We are still catching up with the Medline database listings and abstracts and the PHD webpage: www.pacifichealthdialog.org.fj now managed by Fiji School of Medicine.

As for the future of PHD its being discussed among supporters to have a formal collaborative parentage to ensure sustainability and growth for all the future. IT IS THE HOPE TO ELIMINATE THE Claims Mr Biggs has been making about intellectual property of Pacific Health Dialog after 7 volumes of paid assistance! The next issue is Health in the Federated States of Micronesia. It will be ushering in the New Year 2010.

The PHD editorial team is updating the Board of Advisors’ list. If you are interested please write to us with curriculum vitae. This is your opportunity to receive PHD regularly with a little bit of labour of love! PHD is especially developing Pacificans in all aspects of professional publication and building of personal profiles or curriculum vitae. This is such an opportunity for that eventualty. So please help PHD to help yourself and other Pacificans!.

We take this opportunity to thank all those who have been with PHD to date. We farewell with gratitude many stalwart souls who have advised supported and encouraged PHD over the years. Amongst them is Dr Jim Samisoni who was with us at birth, infancy and childhood of PHD. Jim was a parent, mentor, colleague and friend. PHD toasts you:

“To old friends, new friends, and no more friends! God Speed Sir!”
PHD APOLOGIES

The Editor and staff of Pacific Health Dialog wish to apologise unreservedly to Dr Andre Renzaho for an error which resulted in his manuscript “Food Insecurity, malnutrition and mortality in Maewo and Ambae islands, Vanuatu” being published in Pacific Health Dialog 11, No.1, pages 12-21 (2004) after he requested it be withdrawn. Both Dr Renzaho and Pacific Health Dialog wish to assure readers that the reason for the request to withdraw the manuscript was not related in any way to the design of the study, the analysis of the results or their interpretation rather it reflected the author’s wish to publish the manuscript in another journal because of the delays in publication of Pacific Health Dialog.

We wish to also address the printing error for the same issue in Original Papers titled “Haemophilus Influenzae Type B Infection in Children in Pacific Countries” whereby the leading authors name was placed second in the actual article.

Any inconvenience caused to the 2 authors is highly regretted.

Sitaleki ‘Ata’ata Finau

(Editor of Pacific Health Dialog)

“You don’t have to see the whole staircase, just take the first step.”

Martin Luther King, Jr.
If you would like to receive a copy please contact:
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REMEmBERING Dr. Terence A. Rogers

by: Ben Young, M.D.
former Associate Dean, Student Affairs John A. Burns School of Medicine

"IF I SHOULD DIE, THINK ONLY THIS OF ME, THAT THERE'S SOME CORNER IN A FOREIGN FIELD, THAT IS FOREVER ENGLAND."

Rupert Brook

The death of Dr. Terence A. Rogers will be mourned by many. It is a privilege to review that rich and remarkable life.

Arriving in Hawai‘i in 1964, he was crucially involved in the establishment of the Pacific Biomedical Research Center, the precursor of JABSOM. In 1967 the first students were accepted into a two year medical school and in 1972, Dr. Rogers took over the helm as Dean guiding the medical school to receive substantial funding through Congress, Hawaii’s legislature, and through private foundations. The conversion to a four year medical school was extremely complicated and involved. In 1975, Rogers stood on the podium and proudly announced the names of the first JABSOM graduates at the UH commencement ceremonies who then stepped forward to receive their MD degrees.

Born into an English family of modest means, (his paternal grandfather was a harness maker and his maternal grandfather was a furniture polisher) his parents came from Highgate in the north of London. His Irish lineage was descended from the O’Callaghans of County Donegal. He had a prodigious memory and possessed an extraordinary grasp and depth in multiple fields of human knowledge. Although his training was in science, in particular nutrition and physiology, he was quite at ease discussing subjects from Shakespeare to the King James Version of the Bible, from Mozart to Wagner, and from Newton to Kant. He received his early schooling in the traditional British style of education immersed in Latin, German, French and the classics. Few realized that he was also proficient in Japanese.

Born into a school that produced two British prime ministers and the famous neurologist and first person to break the 4 minute mile, Dr. Roger Bannister.

In World War II, he was a youthful naval officer and an aide to the Prime Minister, Winston Churchill, helping to analyze critical data to guide British, Canadian, New Zealand, and Australian forces in the extremely complex troop landings at Gold, Sword and Juno beaches during the Normandy Invasion.

One of his many scientific experiments investigated the physical and psychological costs of survival which took him on challenging and demanding treks. During NASA’s fledgling days, he was the chief researcher studying the effects of gravitational forces and space travel on humans and was part of an experimental team with America’s first astronauts, John Glenn, Alan Shepherd and Virgil Grissom.

His concerns for the under represented led to the beginnings of the Imi Ho‘ola program which saw the numbers of Hawaiian, Filipino, Micronesian, and Samoan M.D. graduates increase to logarithmic proportions. In 1972 he astutely observed that there were less than 10 licensed Hawaiian physicians in the State of
Hawai`i. As a direct result of his efforts, today, there are well over 300 Native Hawaiians in medicine, the vast majority of them having graduated from JABSOM.

Thus, our medical school became an instrument not only for training physicians but also for social change.

Rogers’ extraordinary leadership guided the establishment of a medical officer’s school in Micronesia where doctors were trained to care for the health needs of islanders living throughout the former Trust Territory of the Pacific.

During a sabbatical period, he was the scientific person on President Jimmy Carter’s Commission on World Hunger.

His middle name was Arthur, christened after that legendary king from Camelot’s mythical past. Among the intellectual giants of medical academia occupying chairs at Terry Rogers’ departmental round table were: Dr. Tom Whelan and Dr. Charles Judd (Surgery), Dr. Ozzy Bushnell (Medical History), Dr. John Hardman (Pathology), Dr. John McDermott (Psychiatry), Dr. Sherryl Hammar (Pediatrics), Dr. Kekuni Blaisdell (Internal Medicine), Dr. Hampton Carson (Genetics), Dr. Ralph Hale (Ob-Gyn) and Dr. Ram Bhagavan (Biochemistry). Former JABSOM Dean, Dr. Chris Gulbrandsen, was also a department chair (Internal Medicine) under Rogers.

Dr. Rogers was a keen visionary who realized that young people with island ties could play significant roles in numerous capacities to help improve the health and well being of Hawaii’s people.

He beamed with unreserved pride as he watched many of his JABSOM graduates assume chairmanship positions at JABSOM: Dr. Neal Palafox (Family Medicine), Dr. Naleen Andrade (Psychiatry), Dr. Pat Blanchette (Geriatrics), Dr. Danny Takanishi (Surgery), and Dr. Richard Kasuya (Office of Medical Education).

Scores of other JABSOM graduates during Dr. Rogers’ tenure now hold key leadership roles at the very top of the pillars of our communities including: Dr. Chiyome Fukino (State of Hawai`i Director of Health), Dr. Emmett Aluli (Moloka`i General Hospital), Dr. Elliot Kalauawa (Waikiki Health Clinic), Dr. Phillip Reyes (Hale Ola-Kamehameha Schools), Dr. Gerard Akaka (Queen’s Health Systems), Dr. Rick Custodio (Waianae Coast Comprehensive Health Center), Dr. Nathan Wong (Kaiser), Dr. Iotamo Saleapaga (LBJ Medical Center-American Samoa), Dr. Greg Dever (Republic of Palau) and Dr. Brian Isaac (Kosrae).

During JABSOM’s early years, Dr. Rogers often expressed enthusiastic gratitude and appreciation in his speeches for the unflinching support from such stalwart leaders as, the late Governor John A. Burns, for whom our medical school is named, from former senate president the late David McClung, from former UH Vice President of Academic Affairs, the late Robert Hiatt, and from U.S. Senator Daniel K. Inouye.

He was also noted for his quick humor. Once, a legislator, who had a separate hidden agenda while trying to deliberately block the funding for the medical school, had numerous open conflicts with Dr. Rogers. When that legislator was caught with embarrassing incidents related to finances and abuse, Rogers comment was “It couldn’t have happened to a nicer guy!”
Obituary

Several years ago at Rogers’ retirement dinner, Senator Inouye said to an overflow audience that “When any of us depart this planet, we would all hope to leave behind a legacy like Terry Rogers which would show that our lives made a difference.”

In 2007, Dr. Terence A. Rogers was named by the Honpa Hongwanji as a “Living Treasure of Hawai‘i.” His life has indeed made an indelible difference for all the peoples of Hawai‘i and the Pacific.

Admiration for individuals responsible for making significant accomplishments often fade with the passage of time, eroded by declining memories and misty recollections. It is our hope that any person in future years reading this article would be able to recapture the many contributions of Terence A. Rogers who adroitly designed and built the elaborate foundations essential for community alliances, hospital contracts, funding pathways, faculty kinships, national accreditations, and university relationships, upon which JABSOM was established.

And, in future years, should an itinerant stumble across his “corner in a foreign field”, he would realize that in that rich earth “lies a richer dust concealed.”

His passing is deeply felt by his beloved companion of many years, Tomi Satake Haehnlen, his children, Keith, Clare and Valerie of Canada, and Patrick of France, his two grandchildren, Gus and Renee, longtime friend and former JABSOM administrative assistant, Gayle Gilbert, medical school colleague from England Geoffrey Ashton, fellow associate from UH, Deane Neubauer, and protege friend, Ben Young.

Gathering Places: Medical School dean’s legacy spreads across the Pacific

Gregory J. Dever, M.D., is director of the Bureau of Hospital & Clinical Services, Ministry of Health, in the Republic of Palau, and a clinical professor of pediatrics at the John A. Burns School of Medicine.

As a resident of Micronesia and Hawaii, I congratulate all the honored recipients of the Living Treasures of Hawaii award (“Keepers of culture named,” Star-Bulletin, Jan. 13). As a graduate and faculty member of the John A. Burns School of Medicine, I was particularly pleased to see former JABSOM Dean Terence A. Rogers, Ph.D., so honored. Rogers’ impact on educating Pacific islanders is spread far wider than the excellent JABSOM Imi Hoola program mentioned in your article. Through his efforts, scores of Micronesian and American Samoan students have become physicians and are the backbone of health care services in the Republic of Palau, the Federated States of Micronesia (Yap, Chuuk, Pohnpei and Kosrae states), the Republic of the Marshall Islands and American Samoa.

This was Rogers’ other mission at JABSOM: to upgrade health care services by training the physician workforce among the isolated islands of the former U.S. Trust Territory of the Pacific Islands.

In Palau, where I work, 17 of the 18 Palauan physicians were trained at JABSOM programs either at the Manoa campus or at the Pacific Basin Medical Officers Training Program in Pohnpei state, FSM. The PBMOTP was an emergency physician training program conducted from 1986 to 1996 to re-establish the indigenous physician workforce in Micronesia. JABSOM graduates in Palau include the current minister
of health and the directors of the Bureau of Public Health and the Bureau of Hospital and Clinical Services. Other JABSOM graduates are in prominent positions throughout the Pacific islands.

Rogers’ legacy also has influenced other JABSOM training programs in the Pacific, which include the Hawaii/Pacific Basin Area Health Education Center, which is now coordinating in-country public health training for 300 physicians, nurses, environmental health workers, health administrators and nutrition workers in the Republic of Palau, Federated States of Micronesia and the Marshall Islands, which spread across four time zones of Pacific expanse. In a May 2006 graduation, the Palau Area Health Education Center, part of JABSOM Hawaii/Pacific Basin AHEC, presented the Dean Terence A. Rogers Excellence in Public Health Award to one of its postgraduate recipients, a 1992 PBMOTP physician graduate. When she came to the stage at Palau Community College to receive her award, I told her that she was the kind of physician that Rogers was thinking of when he established JABSOM’s medical officer training program.

At the last PBMOTP graduation in Pohnpei state in 1996, keynote speaker Rogers reminded the graduating physicians from Micronesia and American Samoa of the importance of “the quiet satisfaction of a job well done.” Over the years, Rogers has so positively influenced many of us in the Pacific. His being named a Living Treasure of Hawaii only strengthens our admiration for his job well done.