1. Transnationalism and Health in the Pacific
A Health Research Council-funded project led from the
Anthropology Department, The University of Auckland

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(you are welcome to contact any of the team)

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3. Summary of Research
2. Summary of Research

Background

Pacific people live transnationally, routinely journeying and transferring resources and ideas between two or more nations. This has implications for community health, health care and health interventions. We propose to examine this via tuberculosis (TB). Despite low national rates (c11/100 000), rates of TB among elderly Pacific peoples in NZ are high (c185-190/100 000) and significant TB disease is found among Pacific children, a sentinel event marking active transmission.

Our recent HRC-funded project identified significant barriers to effective treatment and prevention of TB but also found that the reality of transnational lives meant that in order to identify what underlies these persistently high rates and other health inequalities research needs to address the lived experience of Pacific peoples as they move between the island Pacific and New Zealand. TB is a historical residue of previous exposure occurring within a new disease environment which includes movement of populations, new and increasing comorbidities (such as diabetes), and diverse living experiences. Its chronic nature tied to its communicability make it an effective lens into what underlies persistent inequalities as well as what can be effective strategies of redress.

Aims

- To understand how TB occurs in the context of transnational, gendered life courses and comorbidities, and the implications of this transnational perspective for population health and disease prevention.
- To identify conditions promoting TB reactivation and transmission in two Pacific populations in NZ and countries of origin and the interactions between these locales.
- To identify historical and contemporary barriers to, and plan for, effective interventions.
- 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.

In addition the project has a specific objective of developing new Pacific health researchers and research models in a supportive and collaborative environment. This research maps to the communicable diseases and health of specific populations portfolios of the HRC.

Design

The project will have an advisory network including community representatives and health experts. The design includes year long ethnographic research in two contrasting Pacific groups (high and low TB incidence), interviews with stakeholders in NZ and the Pacific, analysis of existing epidemiological and demographic data examining spatial correlations, life history effects and socioeconomic determinants, historical research on TB and health services in the relevant Pacific nations identifying what have been and continue to be barriers to effective interventions and the legacy of TB infection for current populations, and, based on these data, the development of pilot interventions. Each component will employ Pacific (preferably ethnic-specific) researchers, and others who will be supported to learn the relevant language if necessary. The researchers will be studying for Masters or PhD degrees. Pacific students at more junior levels will be incorporated wherever possible as research assistants.
Participants
Health leaders and experts, Pacific community leaders and members, people with personal experience of TB, people with TB and diabetes.

Main Outcome Measures
- Development of new perspectives regarding Pacific health incorporating understanding of links between Pacific and NZ.
- New understandings of the contribution of inequality and migration to the clustering of disease among Pacific people.
- Based on this evidence pilot interventions aimed at reducing the burden of TB and associated conditions.

3. Rationale

How can understanding transnationalism contribute to reducing health inequalities?

Pacific peoples in NZ are truly transnational, linked in communication and by travel with the Pacific Islands. By transnational we emphasise the ‘ongoing interconnection or flow of people, ideas, objects and capital across the borders of nation states, in contexts in which the state shapes but does not contain such linkages and movements’. Transnationalism represents a significant challenge to traditional approaches to research and the health of populations. Effective strategies to reduce health inequalities among transnational populations require an understanding of: the relationships between migration status and health, life course in the context of transnational fields, multiple health services, and conditions at both homes.

The situation of Pacific people in New Zealand is unique: most are locally born but maintain close ties with the countries of their origin. New Zealand remains dependent upon labour from Pacific people, yet many Pacific people do not enjoy access to and control over the basic material and nonmaterial resources that sustain and promote life at a high level of satisfaction. Parallels to the pattern of TB among Pacific people in New Zealand can be seen among Mexicans in the US. In both places, these are the only groups with significant transmission of TB from locally born people to the foreign born, both live in disadvantaged economic conditions, and both maintain a fluid relationship with countries of origin.

The findings of the Political ecology of TB project (HRC 02/133) and recent epidemiological studies in Auckland and in New Zealand confirm that one area that urgently requires interdisciplinary research attention is that of transnational TB involving Polynesian residents in New Zealand. The reasons for urgency are practical and service-related as well as academic. Pacific communities in NZ are not experiencing a decline in TB notification rates and some cohorts have increasing incidence. In some cases, reported rates in NZ are higher than reported rates in the home islands. There is evidence of active transmission of TB among some Pacific groups in NZ despite its preventable nature. Public health bodies have faced significant barriers to contact tracing and ensuring effective treatment, with people’s mobility being cited as a difficulty. Stigma continues to be a major barrier in almost all groups.

There are also major contrasts within and between different Pacific groups that need further investigation. These include differing TB rates, differing history of migration to NZ and different residency status, all of which relate to variable burdens of ill health. Furthermore there is the potential for significant interactions between TB and other health problems (e.g. diabetes) and social and life course conditions, with important implications for the health of Pacific peoples, particularly elders, and for effective health interventions. Restrepo et al write of Mexico: ‘The impact of type 2 diabetes on TB is underappreciated, and in the light of its epidemic status in many countries, it should be
actively considered by TB control programmes, particularly in older patients xvii.

For these reasons, an expanded research team, including new colleagues, Underhill-Sem, Herda, Friesen, Hand and Neuwel, guided by community and health expert advisors, has been drawn together to lead a new study focussing on two highly contrasting transnational Polynesian populations resident in New Zealand.

Our concern is the clustering of TB in the Pacific population of NZ and in the Pacific and its possible relationship to other health problems, as well as noxious living conditions (e.g., household crowding xviii and diminished life chances (e.g., discrimination, stigma) xix. We see elucidation of why the pattern of TB is so unevenly distributed among different Pacific groups and how TB clusters with other conditions as essential preconditions for effective interventions. This work builds upon the developing interest in public health in a syndemic orientation which explicitly emphasises the connections between health related problems xx and between those problems and the micro to macro-level conditions that create them.

Why TB?

As a chronic and communicable condition TB is a particularly effective lens into the working of the health sector and the pathways by which ill health clusters in particular groups. The temporal span of TB allows examination of how policy, history and socioeconomic conditions interact to create disease burden. This risk-focussing /risk buffering approach xxi, highly compatible with the ‘Intervention framework to improve health and reduce inequalities’ xxii, allows TB to act as an indicator for risk concentration from macro to intra-household and individual level and works particularly well with the syndemic concept. TB itself remains a significant international health threat accounting for 1.6 million deaths worldwide in 2005. xiii Multidrug resistant (MDRTB) and extreme drug resistant forms (XDRTB) are ‘looming threats’ xiv. While rates of tuberculosis disease (TBD) in New Zealand remain low at around 11 per 100,000 and MDRTB and XDRTB insignificant, national rates are still approximately twice the rate in Australia, the US and Canada xv. Our own research and that of Das et al xvi indicate that these national rates hide marked disparities.

TB Among Pacific Peoples

Rates by ethnicity suggest the ‘Other’ category is most affected by TB, however, one of the specific cohorts with high TB rates is older Pacific people living in NZ xvii. This high priority group is one where TB prevention and control could be improved. In addition, while many of these elderly cases of TBD represent reactivation of an older TB infection, unlike in most other groups there is significant intergenerational transmission. Pacific children in New Zealand are also at higher risk of developing TB xviii.

TB in the Pacific and New Zealand

While TBD among the young (children and young adults) is probably the result of recent infection, reactivation of TBI among the elderly is usually the result of historical infection. Hence high rates of TBD among Pacific elders today is a reflection of the historical pattern of tuberculosis in the Pacific and also among those who migrated to New Zealand in the 1960s and 1970s. Active transmission to children is a marker of current living conditions and life situations that promote reactivation of infection among older individuals and consequent transmission to the young.

There is not a clear relationship between the rates of TBD among those populations resident in NZ and their counterparts in the Islands xix. Among some groups higher rates of TBD are recorded in NZ than at home, at times there may isolated cases at home but a significant cluster in NZ xx. One possibility is a failure to diagnose or record TBD in the islands (although a recent report for the South Pacific Commission throws doubt on this as a major cause xxi). Another is that those with TBD are travelling to NZ in
order to seek medical attention prior to a definitive diagnosis. A third, however, is that living conditions in NZ promote the conversion of TBI to TBD among some Pacific populations. This is not the first time that this possibility has been recognised. In the 1970s Mackay wrote in the *NZ Med J* about the probability that living conditions in NZ, in particular stressful conditions with employment and housing, serve to promote reactivation of prior TBI among resident Pacific populations.

**Transnationalism and Transmission**

In contrast to other foreign born populations in NZ, there is significant transmission among Pacific peoples from overseas born to locally born and vice versa. This is contrary to most migrant groups around the world and the closest comparison is with Mexican people resident in the US. In both groups TBD tends to cluster and both are affected by outbreaks where there is active transmission beyond the bounds of the immediate household. Whether exposure occurs and whether it results in disease depends on a range of individual life chances, lifestyle, cultural, social and temporal factors.

The Mexican comparison is telling since it points to the importance of labour relations, alienation, patterns of migration and immigration status as well as local living conditions in creating a situation in which TB and other health related problems can flourish. Given that drug-resistant forms of tuberculosis are increasing worldwide, conditions that promote the persistence of an active reservoir for TB disease and its transmission are of concern since they have implications for the health of New Zealanders and people resident in the Pacific Islands. An approach to effective control and prevention requires attention being paid to both locales which may be conceptualised as a single social field comprising overlapping social networks.

**Defying Categories**

Obtaining an accurate picture of the extent of TB and its transmission among Pacific people in NZ is difficult since they do not necessarily fit simply within standard epidemiological categories (e.g. foreign vs. local born, NZer vs. foreign resident). For example, locally born Pacific people have a lower combined rate in NZ than island born but the rates in some Pacific island nations are no higher and sometimes considerably lower than they are in NZ. In addition, living conditions (multiple families within one household, multiple households containing the one family) defy the standard definitions of an outbreak (transmission beyond the immediate household). In the case of the small group of Pacific people who participated in our earlier project, household composition was fluid and frequently included people beyond the immediate nuclear family, an observation repeated in epidemiological accounts of Pacific TB in NZ. As a result standard epidemiology can underestimate the rate of transmission or suggest an outbreak when in fact only a single family is involved. In addition such work is situated in only one place while one individual’s TB status is the result of contributions from multiple stages and places of the life course.

**Transnational Populations**

The seminal work of Ian Prior and the Tokelau Island Migrant Study team demonstrates the value of paying attention to both here and there in understanding health and social change. Their research demonstrated that that migration sets up a pattern of long term mobility among both ‘stay at homes’ and ‘migrants’. Pacific peoples retain strong physical, economic and emotional links with the home islands and NZ. Indeed, they are linked to many other countries as well, particularly Australia and the US, but this study concentrates its primary research only on NZ-island nation linkages, while being cognisant of broader network. In these circumstances routine responses to TB such as border screening attempts have limited efficacy. Trips back to country of personal or of
family origin and visits to overseas kin are often frequent and as well as providing social, cultural and economic resources, are an opportunity for transmission of infection in both directions.

Attempts to reduce inequalities in health by controlling TB need to focus beyond the notion of borders since borders are highly permeable. This however is only part of the reason for our focus on transnationalism. Transnationalism creates particular dynamics in terms of the relationships of individuals with health services. Transmigrants in NZ bring their life experiences of society and of health and health services. As Siem’s review indicated, this requires health services and professions to be able to orient themselves to different paradigms, and it is a key process in ensuring for Pacific peoples, ‘accessible and appropriate services’ (Objective 8 in the NZ Health Strategy).

One reason for choice of Tuvalu and Cook Islands is their contrasting rights of entry, citizenship and health care in NZ. Another is their contrasting colonial and migration histories. A third is the differential success of TB control. Working with two contrasting transnational groups within ‘Pacific Peoples’, is part of a strategy to recognise and tease apart the transnational dynamics of specific differences within that broad category.

The need for a syndemic orientation

While rates of TB among Pacific elders are partially a result of historical experience, they appear to be disproportionately high (e.g. in 2004 the rate peaked at 248.8 per 100 000). One possibility is that TBD is occurring as the result of clustering of causal factors among Pacific peoples (and in particular Pacific communities and households) and that TBD is significantly tied to other health related conditions.

‘Syndemic’ describes a set of linked health problems, in particular, ‘two or more afflictions interacting synergistically, contributing to excess burden of disease in a population’. The relationship between TB and HIV for instance is indicative of a syndemic. In New York the collapse of health infrastructure allowed these two infections to come into contact in hospital waiting rooms, the resultant interaction between the two conditions led to faster conversion of TBI to TBD among those infected with TB and to more rapid conversion of HIV to AIDS. Historically, TB and influenza have interacted syndemically, which helps to explain the differential cohort mortality from ‘flu.

The reason for using a syndemic orientation to examine TB among Pacific peoples (apart from the apparently disproportionate rates) is that two preconditions for clustering are observable:

1. TB is significantly associated with household crowding as are other infectious conditions (i.e. there is evidence of mutual causality between TB and other conditions).
2. There is biomedical evidence of reciprocal and interdependent effects between TBD and other conditions, in particular diabetes. Pre-existing diabetes affects TB treatment outcomes, the onset of diabetes serves to promote reactivation of TBI into TBD and both TB and diabetes seem to be facilitated by disorders in Vitamin D metabolism.

In NZ, TB and other health-related conditions such as diabetes are managed by the same or similar organisations. They are part of the responsibility of the Ministry of Health and delegated to District Health Boards and other providers. As such they are both affected by the organisation and priorities of the public health sector. They are also affected by the policies of many other ministries, local governments, NGOs and communities. In this transnational field, the Cook Islands and Tuvaluan polities also have an impact. A syndemic approach to TB is a prime way of assessing and developing intersectoral approaches to health which recognise the transnational social fields in
which participants live their lives as well as the way risks are concentrated or buffered over time. Intersectoral approaches which develop community ownership and participation are principles of the NZ Health Strategy and the NZ Primary Health Care Strategy.

Given the high rates of diabetes among Pacific populations and the high rates of transmission of TBI and conversion to TBD in certain circumstances, we hypothesise that TB and diabetes are part of a syndemic affecting particular Pacific groups. The advantage of recognising syndemic interactions is the possibility of developing prevention strategies that go beyond the focus on the proximate cause of a single condition and address some of the broader multilevel processes and pathways that create the burden of ill health. The research objectives therefore are:

1. To analyse the implications of transnationalism for the persistence and transmission of TB in NZ and the home islands and why that varies (Aim 1);
2. To determine the macro-socioeconomic and life course determinants of TB among the same populations (Aim 2);
3. To identify whether and how the high rates of TB among some Pacific people cluster with other health related conditions by person, place or time (syndemics) and the implications of that for effective interventions and policy aimed at social disparities in health (Aim 1);
4. To identify historical barriers to effective intervention through documenting the history of public health and specifically TB services in the two island nations and the history of Pacific TB in NZ since 1950 (Aim 3);
5. To identify the contemporary factors that create barriers or facilitate successful TB prevention, diagnosis, contact tracing and treatment among Pacific peoples (Aim 3);
6. To work alongside the communities participating in this research from inception to completion and design of pilot interventions that are effective and culturally appropriate and to seek funding in support of these interventions (Aim 3 & 4);
7. To support emerging Pacific health researchers in undertaking social science of health research and advancing Pacific research models in a collegial environment (Aim 5).

Relevance to the HRC Research Criteria

The current research maps to the following HRC portfolios:

- **communicable diseases** - reducing the impact of TB as a re-emerging disease is a priority as is understanding the contribution of socioeconomic deprivation to differences in the rates of infectious disease and how its effects are mediated;
- **health and independence of population groups** – the research focuses upon innovative research theory and design taking into account the diverse realities, perspectives and knowledge of the two Pacific populations we will be working with;
- **determinants of health** – this is multidisciplinary research leading to interventions aimed at social disparities in health leading to evidence-based interventions that reduce the impact of harmful conditions;
- there is a small contribution to **non-communicable diseases** portfolio priorities;

It is planned following HRC Guidelines for research with Pacific peoples utilising a Pacific partnership model being led by a mixed group of Pacific and non-Pacific people focussed upon the development of long term relationships between established and
emerging researchers and between researchers and communities and policy makers. It
has a focus through TB on two priority groups: children and youth and older adults. Our
research will contribute to the HRC realising the goals of its strategic plan for Pacific
health and directly addresses the principles of the strategy and the objectives relating to
Goal 2 of that plan\textsuperscript{iii}.

Reducing the burden of inequality is part of the NZ Health Strategy and we aim to
do this through focussing on intersectoral approaches with an explicit transnational and
syndemic orientation and a focus upon the development of community led initiatives.

The research design is aimed around the explicit goal of development of a Pacific
health research workforce in New Zealander and the wider Pacific through a well
supported and collaborative process bringing students and others in at multiple levels for
the project. The research is aimed at the direct translation of the knowledge gained from
observation based research into policy and practice, through long term collaboration with
the communities and organisations involved.

**Current or Previous Research Contracts Relevant to this Application**

A research group, comprising Kearns, Bryder, Littleton, Park and students recently
completed a transdisciplinary study of TB in Auckland, working closely with the Auckland
Regional Public Health Service, especially Craig Thornley and Jill Miller and, more
recently, Cathy Pikholz. This project investigated and described the multi-dimensional
issues that facilitate or create barriers to seeking medical advice, obtaining a diagnosis,
and adhering to treatment or control regimens for tuberculosis.

The research included: analysing these social, cultural, political and economic
dimensions in five groups (Pakeha, Maori, Pacific, two recent migrants/refugees) in
greater Auckland and combining these five separate but parallel studies with historical
research on TB since 1945, and analysis of contemporary media attention to TB and to
the ethnic groups involved, especially more recent migrant groups, and analysis of
stakeholder attitudes.

The final report was accepted early 2007. We identified some factors shared by
all groups. In particular, the flexible personal relationship between patients and the
public health nurses was a major facilitator of treatment adherence and completion\textsuperscript{lv}.
Major barriers to TB diagnosis, contact tracing and successful treatment were:
multi-level stigma and stressful living conditions including language difficulties,
difficulties accessing NZ’s health system, fragmented primary care and uncertain
immigration status\textsuperscript{lv}. These common factors played out differently in each community we
worked with. The historical research revealed that these issues surrounding TB had
their roots in the post World War II period in NZ when TB was associated with particular
groups of people, especially immigrants.

The project has had a significant output in terms of researcher development with
four Masters theses (including one Maori and one Pacific student) and one Masters
dissertation\textsuperscript{lvii}. Two PhD theses have been submitted\textsuperscript{lviii} and one will be completed by
December 2007\textsuperscript{lix}. An 18-chapter edited volume based on this project and the team’s
collaboration with Canadian counterparts is in the final stages of publication and other
papers have been published, are in press or under review\textsuperscript{lxx}. In addition a full day
workshop was held involving public health nurses and other professionals from across
the North Island and information sessions have been held with the community groups
who participated in the project\textsuperscript{lxxi}. Papers on the project have been given at numerous
international and national conferences\textsuperscript{lxxii}. We also met with staff from the Ministry of
Health to discuss the project’s results and policy implications.

The work with Pacific peoples undertaken by Ng Shiu highlighted that the
situation regarding TB in this group requires further analysis taking into account
transnational conditions and the history of the relevant Pacific Islands as well as of that
community in NZ.

A crucial consultation period of one year has been funded by the University of
Auckland Research Development Fund. This work is underway in Auckland with in-person communication with health professionals and community members and will incorporate meetings in Wellington with the Ministry of Health and Ministry of Pacific Affairs, community leaders elsewhere in NZ and meetings in Tuvalu and Rarotonga. Further support has been gained through Faculty of Arts summer scholarships. This work will identify and assess archival resources in NZ, the Cook Islands, Tuvalu and elsewhere, for the historical phases of the planned study, and complete a systematic review of the theory and practice of syndemic approaches, in line with CDC initiatives.

4. Research Design and Methods

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, cultural and biological interactions, in line with the MoH Intervention framework.

The research team is based in anthropology, and draws in colleagues, students and perspectives from population health, history, geography, development studies and policy disciplines. The project employs a ‘Pacific Partnership’ model. It is led by a multidisciplinary research group of Pacific heritage and non-Pacific scholars who will nurture the development of emerging Pacific-focussed researchers (several of whom will be of Pacific heritage), working in respectful and reciprocal relationships with the participating communities. This will allow the research to be shaped ‘by Pacific, for Pacific’ as the students will be encouraged to further develop Pacific research methodologies in conjunction with their advisors, appropriate to the communities in which they work, and to contribute to understandings of Pacific models of health and wellbeing. This flexible approach takes account of the range of knowledges and perspectives that can contribute to good science and on-going input from advisors and communities.

The team has international linkages that will benefit the emerging researchers including strong links with Canadian colleagues working on TB and related conditions. The team has members with academic and cultural knowledge relevant to the two island groups including a Cook Islands scholar (Underhill-Sem) and two colleagues based in the US (Chambers) who have worked in Tuvalu for several decades. The team includes a wide range of health research capabilities in relation to the Pacific as well as NZ and expertise in health promotion and development. We will continue our collaboration with public health physicians, epidemiologists and nurses. We have planned the project in accordance with the Strategic Plan and Guidelines on Pacific Health research. A full year of collaborative work has been funded prior to the start date of this HRC application.

Theoretical framework.

In her magisterial paper exploring the reasons for the failure of TB treatment world wide, despite the availability of effective medication, Sumartojo of the CDC, called for a theory-based approach. The value of a theoretical approach is that it guides systematic and programmatic research as opposed to studies that describe behaviour in very specific situations but provide no basis for generalization to other situations.

This project will continue to employ the framework of political ecology successfully used in our last project. Political ecology combines analysis of the production of inequality through the operation of world systems in local contexts, with a bio-social approach which focuses on the interaction of societal forces, biology and environment in the persons of human beings in communities at different times and places, and a meanings-centered approach based on cultural anthropology’s insistence
that humans impose their realities on the world, although, as Marx observed, not always in circumstances of their own choosing. A gendered life course analysis with a focus on social justice is integrated with analysis of the exercise of power and the operation of structural forces at all levels. A focus on syndemics integrates easily into this transdisciplinary ecological framework, directing attention to interactions between individual disease categories and the common social, environmental, behavioural and biological determinants. We have confidence that our research design which has developed from our previous work to include syndemic and transnational dimensions will provide the basis for meeting the specified objectives particularly the development of effective interventions.

**Research Goal**

Working in partnership with communities, we aim to identify from a transnational perspective the historical, political economic, biological and cultural conditions that promote the continued burden of ill health in Pacific populations. We will use TB as a lens onto the processes by which macro-level determinants interact with individual life courses to create very differing experiences of health, wellbeing and illness in particular island nations and in their NZ communities. We will explore how TB interacts with other health related conditions and the extent to which there is mutual causation underlying comorbidities. This will allow us to identify multi-sectoral barriers to effective interventions and to produce culturally specific and community driven information on the pathways to prevention, diagnosis and adherence to treatment of TB and related conditions. Our goal is that such knowledge be useful to our community partners and be directed to improvements in services and policy relating to health, and specifically to TB control and treatment in NZ and the relevant island nations.

**Research Design.**

To achieve these objectives the project will work with its community and health advisors, including two paid liaison workers, in three interlinked sub-projects, carried out in parallel with the two transnational populations of Cook Islands and Tuvaluan people. They are:

1. Multi-sited, transnational ethnographies of health
2. Historical studies from 1950 to 2008 of public health, health services and TB with reference to these specific populations in the two island groups and in NZ
3. Health development plans or pilot projects and evaluations

The advisor network consists of community leaders (as identified through consultation processes), community-based health professionals, public health advisors and others with expert knowledge that will benefit the team in helping to make the research situationally appropriate and professionally well informed, help promote community ownership and assist the effective community dissemination and implementation of the research findings. This consultative phase of the research was funded by the University of Auckland research development fund in September 2007 and will be completed by July 2008.

The two Pacific groups have been chosen on the basis of commonalities and contrasts. Both have distinctive but shared Polynesian cultural heritages and substantial TB notifications in NZ. In the home islands, Tuvalu has high TB rates (over 300 per 100,000), while the Cook Islands is officially low (less than 20 per 100,000). As noted above, they contrast in their historic and current relationship to NZ, and in many other ways. In addition, the research team has a history of connectedness with both populations. The point of the comparison is that this will elucidate what creates barriers to and what facilitates TB prevention, diagnosis and treatment as well as allowing us to
analyse the dynamics of TB transmission and reactivation under varying circumstances. In line with the Pacific Health Research Strategy we will explore intra community differences based on status, gender, generation etc, as well as inter-population comparisons. This will provide a firm basis for successful interventions.

The sub-projects – methods and analysis

I. Multi-sited, transnational ethnographic studies (Objectives 1-2, 5)

These two studies will commence in year one and continue throughout the project. One PhD student will work with Cook Islands peoples and the other with Tuvaluan peoples, under the leadership and with the active participation of Littleton, Park, Underhill-Sem, Chambers and Kearns. The studies are conceptualised as taking place in a transnational social field, and will be organised around a multi-level, multi-sited ethnographic study. Ethnography involves learning from people rather than studying people. Participant observation will be adapted to the highly varied situations in which this project will be carried out, studying events in their context to gain a more complete sense of the processes and practices of everyday life and health. In our previous TB project this method was particularly important in gaining a sense of the embodied experiences which are frequently not verbally articulated, as well as the interactions surrounding health care and the operation of stigma.

Students and Investigators will work with government officials and elected representatives, health professionals, community leaders and members in several different locations in each nation. Characterised by approaches from the anthropology and geography of health, these projects will be based on sound preliminary preparation, a least a year’s field work, and a similar period of analysis, during which time the emerging results will be discussed with the participating communities before being publicly available. Ethnographic methods of participant observation, semi-structured and other interviews, and group discussions will be the foundation of these studies. The interviews will include:

- **stakeholder interviews**, e.g. MOH, SPC, other ministries, policy makers, health providers and community workers involved in the control and treatment of TB in NZ and the Pacific (10-20/study). These will seek perspectives on health issues, barriers and facilitating factors to patients’ presentation to health services, issues around diagnosis, successful adherence to TB treatment, and inter-agency communication ensuring that the study is relevant to the needs of key persons.

- **in depth interviews on health topics** (c40-50 participants per study) with community members (both with and without TB) using explanatory models and ‘cultures of health’ frameworks will investigate health knowledges, experiences and practices in general, and specifically about TB and comorbidities.

- **transnational life story interviews** (with c. 25 people per study) in which individual and family experiences of transnational interconnections are explored.

- **formal group discussions** (c. 10 per study) will be particularly used to obtain input as themes are being developed and to feed back developing findings.

- **participant–observation** of everyday life and in health contexts and settings.

The building of descriptions of living with TB and its treatment in multi-layered contexts will be a vital part of the analysis. Specific questions, developed out of NZ and overseas studies which analysis will illuminate are:
• Pathways to illness: Which demographic and socio-economic factors characterise TB patients and their families? What is the role played by transnationalism and mobility in the life course of the participant? How do these features influence patients’ health seeking and adherence?

• Clustering of health-related conditions: How are risks focused? Which comorbidities are highlighted in the interviews with TB patients and their families? What is the impact of that clustering in the lives of the individuals affected, for service providers, for clinicians? Recognition of infection and ideas about TB, diabetes and other conditions: recognizing that these are biomedical categories which may not map onto people’s perceptions, how are the symptoms and treatments for these conditions perceived, experienced and acted upon?

• Experience of treatment: Which feelings, thoughts, situations lead to more or less self-efficacy among patients in relation to the requirements of TB treatment? When and why are these beliefs of self-efficacy constrained or raised among TB patients?

• Community issues: Are there cultural or social norms that can be linked to a shared set of ideas and explanations of health and disease, and specifically TB, by the community. What fears are present regarding TB, now and in social memories? What are the effects of policy?

• Relationship with healers: How is the cultural knowledge of TB patients, their family and community dealt with by local health workers and healers? What knowledge do patients, their families, households and communities need in order to seek medical help and to stay in treatment and to increase health awareness and health finding? Who are key health-keepers? What are useful metaphors to convey concepts of TB infection and treatment?

• Access to support: Which sources of social and health support are available to patients and in what ways do they influence the health behaviour of patients? What barriers exist in people’s lives that prevent access to health care and social support? What are the long term effects of TBD for individuals and their families and caregivers?

Interviews with stakeholders will be analysed as above and for information about services and policies, their perceptions of issues and problems relating to TB and related conditions and their ideas about any improvements, including in inter-agency cooperation.

Analysis of qualitative data will be assisted by NVIVO7. The interviews will be analysed for their content and as texts, the construction of which carries information in its own right. The language, imagery, and structure of the interview transcripts will be attended to closely. The analytic approach described by Anderson and Jack as ‘listening for meaning’ will be used. This includes listening for ‘moral language’ or evaluative statements, listening for ‘meta-statements’ or spontaneous reflections, and listening to the ‘logic of the narrative’ or the consistencies and contradictions in themes and relationships between them.

II. Historical studies 1950-2008 (Objectives 3-4)
These will commence in Yr 1 and extend into Yr 2. Two Masters research students will work under the leadership of Bryder, Herda, Hand, Friesen, and with the other team members, examining the development of public health services, including health promotion, and the changing patterns of health, in particular TB, among Pacific people in the Cook Islands, Tuvalu, and from those nations, in NZ. These studies will analyse and synthesise published or available studies, available demographic and epidemiological data, and add to this the results of original archival research, oral history research, and media analysis. They will assess changes over time in the way the problem of TB has been framed and approached. A particular focus of the quantitative data analysis
(using SPSS and EpiInfo for statistical work and GIS to present spatial results) will be the clustering of health conditions among particular groups and places, and the underlying demographic and socioeconomic patterns. These studies will ensure that the ethnographic and intervention projects learn from the past, and are fully informed by the historical context in which they are taking place. In particular, the qualitative historical evidence will be analysed to assess the underlying reasons for current prevalences of TBI and TBD and the historical barriers to effective intervention. These studies will also contribute to culturally specific health knowledge in their own right and as such will lead to publications, in addition to the students’ Masters theses.

III. Health development plans or pilot projects and evaluation.
These studies will commence in year three. Two Masters research students with backgrounds in public health, health promotion, development or policy, will develop, in consultation with communities and relevant officials, one or more of the following: health development plans, pilot intervention projects, or evaluations (if communities have already developed initiatives as a result of this project). This sub-project will be led by Hand and Neuwelt, working closely with those involved in the ethnographic projects, and will be informed by the historical projects. Littleton and Park will work with communities to seek support from stakeholders and make funding applications for actualizing the plans in the following years. The nature of these plans or interventions will depend on the findings of the research and the results of community consultations. Likely funders are NZAID, EU, Government Ministries in all three countries, local bodies and DHBs in NZ, PHOs and NGOs.

All fieldwork methods will be piloted at the beginning of each study and tailored to the specific group. We will work with Cook Islands and Tuvaluan liaison staff, research students, advisors and research assistants in order to maximize the quality and acceptability of the studies as well as to transfer research skills, where appropriate. We will offer research workshops through educational institutions, e.g., Campuses of USP. Data from each group will be analysed in its own terms. The independent lines of evidence will provide the basis for an overview. Separate lines of evidence add strength and validity to the analysis. The analysis will be guided by the research objectives, but also be open to new and developing themes and input which will allow participants’ perceptions to shape the research.

Relevance to Health
Our previous work on TB demonstrated TB’s value as a barometer of social inequality, which can indicate the processes by which inequality is made manifest. In this work through the perspectives of transnationalism and syndemics we aim to analyse health inequalities taking into account the realities of people’s lived experience. From this broader perspective NZ is part of the wider Pacific region and uniquely placed for effective transnational studies of health. The potential exists for significant new insights on health through understanding this important feature of Pacific communities, the associated challenges of employment, income (etc), and the benefits of cultural and social enrichment over the life course. In an international context this is significant work theoretically and substantively.

The theory-based research methodology adds to our successful use of political ecology additional foci on syndemics, transnationalism and life courses. These allow us to map the pathways by which historical political-economic forces, social and cultural practices, individual and biological factors affect health in interconnected Pacific communities.

The evidence-based information produced by the team, which will include knowledge of who in communities and families are most effective to work with in dissemination and health promotion, along with the partnership approach, will provide a basis for interventions that have the potential to overcome some of the well-attested
access and relevance barriers to health promotion and health services experienced by the Pacific communities.

Reducing the impact and incidence of TB as a re-emerging disease is a priority given the threats of MDRTB and XDRTB. This project speaks directly to the related priority of understanding how the higher rates in Pacific populations in NZ (12x average) are mediated by socio-economic and other conditions. The same is true for diabetes. A consideration of these two sentinel diseases in a syndemic framework has the potential to make a major contribution to understanding both and with appropriate interventions to reducing health disparities, in line with the NZ Health Strategy.

Relevance to Maori Health Outcomes

Our research concerns two specific Pacific populations both in NZ and in the relevant islands so it is not directly relevant to the health needs of Maori. However, our research approach, the specific sentinel diseases on which we focus (Tuberculosis and diabetes) are of high relevance to Maori health and Maori are rapidly becoming transnationalised so that the approach and methods used in this research has the potential to inform further research specifically aimed at Maori carried out by other research groups.

Dissemination of Results

Dissemination will be in a range of forms:

- Workshops in NZ and the island nations following completion of the specific analyses to present the main findings, and seminars for health professionals and policy and service stakeholders in the area of TB control and treatment
- Fact sheets outlining the main research findings will be produced for wide dissemination among providers of services, community groups, and support organisations
- Theses, dissertations and reports on specific aspects of the research
- Research monographs for each group and summaries in English and mother-tongue
- Papers in refereed journals dealing with all aspects of the studies
- Presentation at health-related and academic conferences
- Website built upon existing TB project website, use of newspaper, TV, radio

5. References Cited

3. ESR, National Archives in Rarotonga, Funafuti, and New Zealand (Auckland and Wellington), Statistics New Zealand, Secretariat of the Pacific Community, and Western Pacific Commission archives (in the University of Auckland and in Tuvalu).

Tuvalu is an exception: only 37% of the NZ population is locally born according to StatisticsNZ (2006) *Tuvaluan People in New Zealand*. Wellington, Statistics NZ.


See endnotes 1 and 2.


xxvi See endnotes 1 and 12.

xxvii See endnote 12.

xxviii See endnote 2.

xxix Rates in many Pacific nations with small populations are difficult to calculate and need to be interpreted with caution, particularly those where a population of a few thousand has, for example, one case and/or there are difficulties of enumeration both in the population and for cases. The most recent WHO (2007:254) incidence figures per 100,000 for 2005 for those nations who have contributed most to the New Zealand population are: Samoa: 20, Tonga: 25, Cook Islands: 16, Niue: 44 (one case), Tokelau: 56 (one case), Fiji: 23, Tuvalu: 305 (Ng Shiu et al., forthcoming (see endnote 13). These compare with a Pacific Islands-born incidence rate in New Zealand of 48.7 and a New Zealand-born Pacific peoples’ incidence rate of 23.2 for the years 2000-2004 (Das, Baker, Venugopal and McAllister 2006: Table 2).

xxx The Cook Islands provides a possible example here for several reported years, comparing WHO and ESR records

xxxi Thornley Pers. Com.


See endnote 10.

See endnote 6.

See endnote 29


See endnote 12.


See endnote 5.

While recent developments in screening methods such as the Interferon Gold test mean that it will be possible in the future to determine at the time of test whether someone has active TB or a recent infection such screening is focussed on the moment of border crossing -migration into New Zealand for six months or longer.

This is by no means confined to Pacific peoples. It is a characteristic of modernity


See endnote 42


www.cdc.gov/syndemics/overview-definition.htm


Alisjahbana et al, 2007, see endnote 16

See endnote 16 and 17.


See endnote 48.


Similar difficulties have been reported in many other studies, e.g., Farmer, P. (1999). Infections and Inequalities: The Modern Plagues. Berkley: University of California Press


Dunsford, D. (forthcoming). A Social History of Tuberculosis in New Zealand from World War 2 to the 1970s. PhD in History, University of Auckland, Auckland; Dunsford, D. The bright

**PUBLICATIONS to date from “Political Ecology of TB” Project.**

**Articles in peer reviewed journals**


Patterns of tuberculosis epidemiology in Auckland, 1995-2006; Littleton, J and R. King. The political ecology of tuberculosis in Auckland: an interdisciplinary focus; Park, J and J. Littleton. Sorting out TB and immigration: politics and statistics, a view from New Zealand; Miller, J. An empowerment approach to raise awareness about and reduce stigma around tuberculosis among the Indian community in the Auckland Region

A workshop has been provided through The Asian Network Inc. to Asian communities, and one is in the pipeline for the Somali community. The Maori and Pacific researchers also disseminated their research results back to groups and individuals in their communities.


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