Health Care in the Pacific: Who Would Bell the Cat?

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Introduction

Health care in the Pacific is a multicultural affair if ever there is to be one anywhere. Within the Pacific Ocean proper, there are the three major races of Melanesia, Micronesia and Polynesia. Each have unique physical features and identifiable sociocultural traits and organisations, varying from the "Big Men" of Melanesia, hereditary dynasties of Polynesia to the localized hereditary hierarchy of Micronesia. At the national levels the indigenous people vary from the monolingual and monocultural countries of Polynesia and few varieties in Micronesia to over 1000 languages in Melanesia. In the urban centres, the populations are multi-racial, multi-cultural, multi-national, multi-lingual, and multi-ply.

After European contact in the early 17th century, different colonial powers took over different countries in the Pacific. Consequently, we have also a multitude of governing models and "big brother" loyalties. The most obvious is predominant allegiance of Micronesia to the United States whereas Melanesia and Polynesia look to Britain, via Australia and New Zealand, or France. Te Rapanui, the only exception, look to Chile. *Table 1* shows the different forms of governments that exist in the Pacific, varying from old fashioned colonies through compacts of free associations to constitutional monarchy, republics, dominions and military appointment without a constitution. Therefore, multiculturalism in the Pacific is a product of inherent differences of its indigenous peoples and imposed values of colonial powers, immigrants and overstayers.

Economically, the Pacific countries have different access to the colonial powers' resources and potentials for economic independence. Melanesia with their continental islands, richer natural resources and larger land mass have the best potential to be economically independent. The larger Polynesia islands (Western Samoa and Tonga) are mostly volcanic and have adequate resources to sustain their partially subsistence

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Table 1. Constitutional Status of Selected Small Island Countries of the Pacific

Country	*Status*
American Samoa	United States Unincorporated Territory
Chuuk	Self-governing in free association with New Zealand since 1965
Cook Islands	Member, Federated States of Micronesia
Fiji	Independent from Britain since 1970
French Polynesia	Overseas Territory of France represented in the French Parliament
Guam	United states Unincorporated Territory
Kiribati	Independent from Britain since 1979
Kosrae	Member, Federated States of Micronesia
Marshall Islands	Republic in free association with the United States
Nauru	Independent from Australia since 1968
New Caledonia	Overseas territory of France represented in French Parliament
Niue	Self-governing in free association with New Zealand since 1974
Northern Mariana Islands	Commonwealth state in association with the United States
Palau	Self-governing under the Trust Territory of the Pacific Islands (U.S.)
Papua New Guinea	Independent from Australia since 1975
Pohnpei	Member, Federated States of Micronesia
Solomon Islands	Independent from Britain since 1978
Tokelau	New Zealand non self-governing territory
Tonga	Independent monarchy, ceased to be a British protectorate in 1970
Truk	Member, Federated States of Micronesia
Tuvalu	Independent from Britain since 1978
Vanuatu	Independent from Britain and France since 1980
Wallis and Futuna	Overseas Territory of France
Western Samoa	Independent from New Zealand since 1962
Yap	Member, Federated States of Micronesia

life style but development is limited because of poor resources and small land areas. The rest are the small tiny islands of Polynesia (Tuvalu and Tokelau) and Micronesia (except Nauru) where the possibility of economic independence is remote. At least, these are the traditional economic views based on the economy of large scale. Historically interesting though, is the fact that all these islands were economically independent, the people inherently satisfied and relatively healthy, and the environment adequately supported sociocultural development.

With such a diversity in history, economics, loyalty, and culture, it is a wonder that populations of the Pacific Ocean proper sought the "Pacific Way", the "unity and diversity" and regionalism. Apart from a search for scale, security and well-being, there is an inherent brotherhood born of similarity of life and living values. The extended family and communalism are fundamental. *Table 2* lists these values and contrasts it to the Euro-American ones that are invading all systems in the Pacific. These imposed values are pervading the activities of the health providers and communities perception of care.

Table 2. General Features of Pacific Central Life and Living Concepts.

Pacifican	*Euro-American*
Nature will provide for us in time.	We must change our world, control nature and make it work for man.
What will be will be. Man's life is controlled by destiny.	We create our own future by what we do.
There's no use rushing away from what I'm doing now. There's always plenty of time.	I have to hurry and meet somebody now. See you later.
Worry about tomorrow when tomorrow comes.	Save for the future.
Work a little. rest a little. Whatever you do try to keep other people happy.	If I work hard enough, someday I'll make it to the top.
What I have is yours. What you have is mine.	What's mine belongs to me.
The wise man is one who knows his place in the world, respects authority and does what he is supposed to do.	The sensible man is one who strikes out on his own, learns to do things for himself and makes his own decisions.
The feelings of others are more important than an honest answer.	Always tell the truth, no matter how it hurts.
My life belongs to the family and God.	I am a God.

Modified from "Micronesia: A Changing Society" (Quoted in Pacific Daily News Vol. 20; 228: 1989)

This paper will discuss health systems in the Pacific and how each have contributed to selected health outcomes. The contributing factors to these reported statistics will be examined in the Pacific context. A *solution* will then be suggested not only to expedite the Pacific nations reaching the health status of developed countries, but to do so without the associated colossal expenditures and dehumanisation of health care services that the latter have suffered. In addition, the suggested solution is achievable now and within the realities of the Pacific communities.

National Types of Health Care Systems

Health care systems, like any social institution, are determined by a complex mixture of many different influences that interplay among one another. Therefore, the examination of the types of health care systems in the Pacific necessarily must be in the context of the above brief discussion of history, economies, culture, and political allegiance. These social factors are constantly changing, intermeshed and operating in different ways at different times and places with political allegiances and economic levels being the major determinants. Therefore national classification of health care systems here will be based on political economy.

(1) Welfare State Hybrid

In this category the responsibilities for assuring health service have been assumed by government with a variety of collectivizing financial support partly organized by government through grants or private profit-motive insurance schemes. There is a high technology orientation that does not exist locally. The very social visibility of the costs and their escalation and utilization rates create political pressures for increasing government financial responsibility without a community commitment for out-of-pocket contribution. The populations of this category are characterized by an extroverted dependency and sparseness of self-confidence in the ability of the existing health systems. The US affiliated Micronesian countries largely fit into this category.

(2) Developing Country System

In these countries the majority of the population are mainly rural, subsistent, illiterate and depending on the traditional healers and remedies for their health care. At the urban centres there are hospital staffed by salaried personnel. A high component of the health services at all levels are provided by non-government organizations or charities. There are hardly any insurance schemes and the people receive health care at minimal or not cost.

There may be a system of peripheral health stations. Many of the Melanesian countries belong to this category.

(3) Transitional and Socialist Hybrid

In these countries health care is essentially a public service with most personnel trained and employed by the government. Most facilities are owned and operated by government. There are private medical practitioners mostly for the urban elite. Health service is theoretically a right rather than a privilege. There is a high degree of community participation. The health services covers most of the population but still with an urban bias. These countries are typified by a high degree of nationalism in which the health service, and other social institutions, attempt to express local identity. The larger Polynesian countries, Nauru and Kiribati are typical of this category whereas Niue, Tokelau and Cook islands are close to the Welfare State Hybrid.

Each of these principal types vary within category and change over time. It is a dynamic grouping rather than a fixed one. Although the classification may be debatable, the types of health care systems in the Pacific contributes to an overview and grouping necessary for strengthening a regional identity through collective search for a common solution, thus deriving benefit from economy of scale as well as security in numbers. These categories of health care services, are based on the health input rather than outcome indicators. Therefore it is necessary to examine the mortality, morbidity, fertility, and life expectancy.

Disease Patterns

Morbidity and mortality are unavoidable stages in the continuum of life. The acceptability, definition and management of these stages and their contributing factors are functions of our social and physical environment. Therefore the Pacific views of morbidity, mortality and contributing factors should reflect its multiculturalism, with relatively small numbers of people, geographical isolation, and the variations in economic capabilities and political forms. Underlying this diversity is a general central attitude to life and living represented by an inherent calmness and respect for relationships *(See Table 1)*. These have often been misinterpreted as fatalism, laziness and dumbness.

Health sciences have universally failed to incorporate the sociocultural into the measures of morbidity and mortality. Subsequently, these indicators reflect only the measurable physical components. For the Pacific these have been recorded and studied by researchers from developed countries, regional organizations dominated by developed countries, and national research institutes funded and staffed by career expatriates for at least half a century. Many papers, meetings, expatriates, and foreign directed efforts have tried to tackle these but the degree of success has been variable and too slow in approaching those of developed countries. *Table 3* shows the tip of the multitude of non-communicable disease activities in the Pacific as early as 1940s, yet this problem is growing.

Historically, small size and geographical isolation were natural barriers to the spread of diseases. Early contact with the Europeans have led to marked depopulation to the extent that many predicted the Pacific islanders as a

Table 3. NCD Related Studies in the Pacific Islands

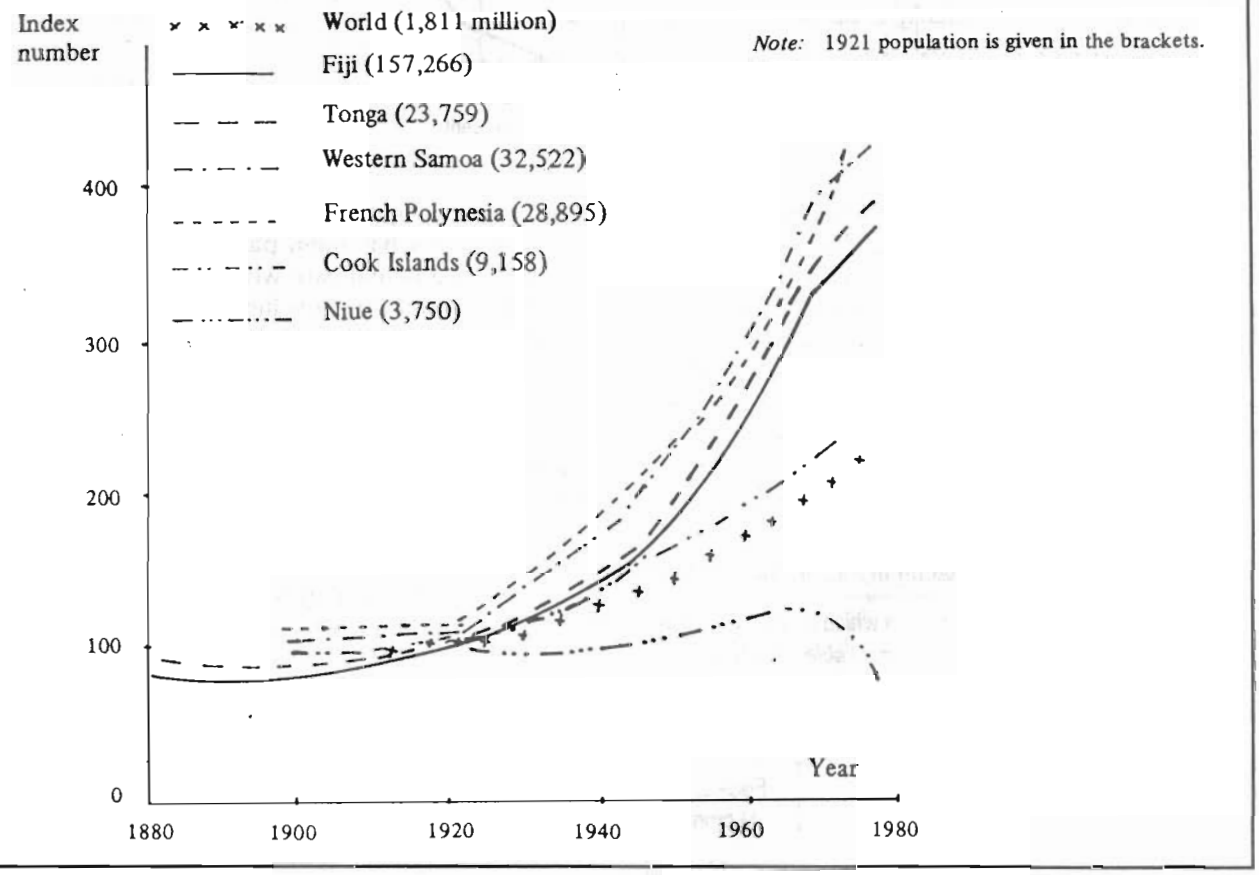
Countries	*Period From year to 1988*	*Number of Studies*
Cook Islands	1951	10
Fiji	1950	15
Kiribati	1949	7
Palua, Guam, Pohnpei	1949	14
Niue	1980	3
New Caledonia	1953	4
Nauru	1958	8
Tokelau	1963	5
Tonga	1973	3
Tuvalu	1949	4
Western Samoa	1959	5
Wallis Is.	1980	1
American Samoa	1934	4
Solomon Is.	1952	5
French Polynesia	1980	2
Easter Is.	1960	3
Vanuatu	1952	3
Marshall Is.	1960	3
Total	**39 years**	**99**

Sources:
- SPC reviewed cardiovascular disease in territories of the South Pacific. 1963.
- SPC Conference reviewed health problems of urbanization. 1965.
- Loison et al. (SPC) reviewed the health implications of urbanization. 1973.
- Coynes (SPC) reviewed nutrition and health implications of urbanization involving 450 publications. Only 13 (2.9%) involved Pacific islanders as authors. 1984.
Note: Rate of study is 2.5 times each year.

dying breed. Fortunately or unfortunately, as the case may be, this did not happen *(See Figure 1)*. The populations in these countries have since increased faster than the total world population. The leading contributing factor to this acceleration has been the declining mortality rate among infants and children.

The population growth has been associated with a transition in the disease patterns from infectious to non-infectious diseases. *Figure 2* shows the evolving disease pattern. This transition from infectious diseases has been attributed to an improved living conditions, bolstered by public health programs that ensured clean water supply and sanitary systems, and less importantly by medical technologies (e.g. antibiotics and immunizations).

Figure 1. Population Growth in Fiji, Tonga, Western Samoa, French Polynesia and Cook Islands during the 20th Century Compared to the Growth of the Total World Population



The current patterns of diseases vary between the countries in the Pacific. These patterns can be roughly divided into three categories: The infectious disease pattern, the non-infectious diseases pattern and a combination of the two *(See Table 4)*.

The most important infectious diseases are: Malaria, tuberculosis, leprosy, acute respiratory infections, diarrheal diseases, intestinal parasites, filariasis, and hepatitis.

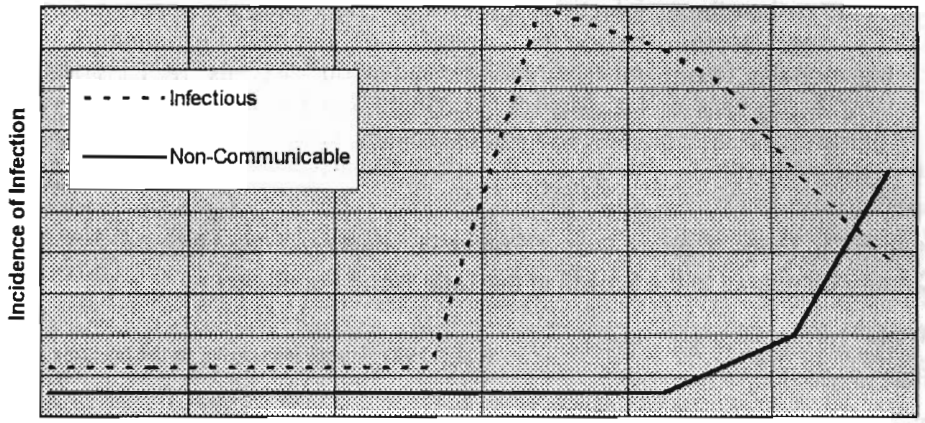
These infectious diseases are still the leading reasons for the utilization of health services. However, non-infectious diseases are becoming the most important reason for hospitalization and health expenditure. The most common non-infectious diseases are: cardiovascular diseases, accidents and injuries, complications of childbirth and pregnancy, cancer, and endocrine, nutritional and metabolic diseases.

Mortality Patterns

Death registration, like morbidity data, is deficient in most Pacific countries. There have been attempts to adjust for under- enumeration by applying indirect methods to census or survey data. However, this has not improved the identification of the cause of death. The proportion of causes of death vaguely defined or not recorded at all is estimated to be about 25% to 50% of overall mortality. *Table 4* shows the status of mortality information in the Pacific.

Hospital mortality is disproportionately represented in the existing information. These hospitals are mostly in the urban centres. Therefore, it is not surprising to find that the reported mortality and morbidity statistics reflect

Figure 2. Evolving Disease Patterns in the Pacific Islands



mostly the experience of the urban dwellers. The leading cause of death includes infectious diseases (especially respiratory diseases) and non-infectious diseases like cardiovascular diseases, cancer, accidents and injuries, endocrine, nutritional and metabolic diseases, congenital/perinatal causes, and cancer. The mortality patterns generally indicate higher rates among the malarious islands and the small atolls due mostly to infectious diseases. Lower mortality rates are generally found in the United States and New Zealand associated countries.

Table 4. Mortality Information in Pacific Island Countries

Countries in which mortality information is probably reliable	*Countries in which mortality information is unreliable or suspect*	
	Information available from census or surveys	*Information not available from surveys*
Guam	Papua New Guinea	Federated States of Micronesia (FSM)
Palau	Solomon Is.	Marshall Is.
Northern Marianas	Vanuatu	
Nauru	Fiji	
American Samoa	Tonga	
Cook Is.	Tuvalu	
Niue	Kiribati	
French Polynesia	Western Samoa	
Wallis and Futuna		
Tokelau		
New Caledonia		

Source: R. Taylor, N. Lewis & S. Levy. Mortality in Pacific Island Countries: A Review circa 1980. Noumea, New Caledonia, South Pacific Commission, 1985

However, among the latter group, the high migration makes the interpretation of mortality information extremely difficult. *Figure 3* shows the infant mortality rate and as a proportion of overall death for different Pacific countries. *Figure 4* shows the proportion of deaths due to infectious diseases and parasites, diseases of respiratory system, cardiovascular diseases, and cancer.

Estimate from census data of the minimum infant mortality, shows a decreasing trend. Childhood mortality has also been decreasing but tends to be higher than infant mortality. This has been partly explained in Niue by improved parinental care whereas later poor nutrition and environmental factors increase the risk of mortality. A similar pattern has also been observed in many African countries.

Adult mortality is increasingly difficult to estimate in the Pacific due to massive outmigration especially during the last 15 years. However, the general consensus is that adult mortality rates have largely remained unchanged in many Pacific countries. This age imbalance and changing fertility pattern are powerful agents in the alteration of population characteristics.

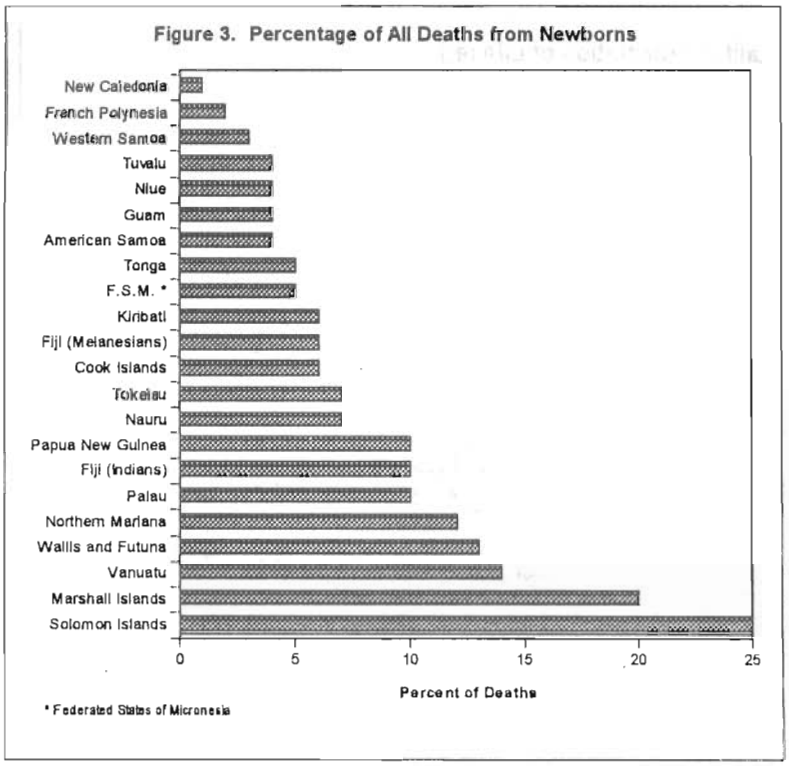
Life Expectancy

The estimation of expectation of life has varying reliability. However, there is a definite increasing trend *(See Figure 5)*. The females have higher life expectancy than males. The differences range from about two years in Papua New guinea and Fiji Melanesians to 20 years in Nauru.

Overall, the life expectancy at birth seems to follow the mortality patterns, as indicated by three categories of disease experiences in the Pacific *(See Figure 6)*. Again, this association may be applicable only to the urban population because of the hospital bias of the recorded data. *Figure 6* indicates an inverse relationship between life expectancy and the proportion of infectious diseases and a positive one with cardiovascular diseases. The latter pattern persists with the other non-infectious diseases.

Fertility and Family Planning

As with the data mentioned above, fertility rate estimates are also quite variable. This is because of



incomplete registration and sex - selective migration. The general fertility trend in the Pacific is downwards except in Papua New Guinea, Vanuatu and Solomon Is. *Table 5* shows estimates of the total fertility rates in some Pacific countries. The most important contributing factor is modern contraception. Other factors include high age at marriage, sex - selective emigration and some traditional methods (e.g. sexual abstinence, and breast feeding).

The decreasing birth rate has been embraced by many Pacific countries as an alternative strategy to raise per capita impact of development. However, there is an increasing global concern and debate on the inadvertent decrease in population intelligence quotient and increase per capita cost of developing infrastructures. The Pacific should be mindful of these cautions because development strategy within the limited resource of the Pacific Islands needs intellectual resourcefulness and physical strength.

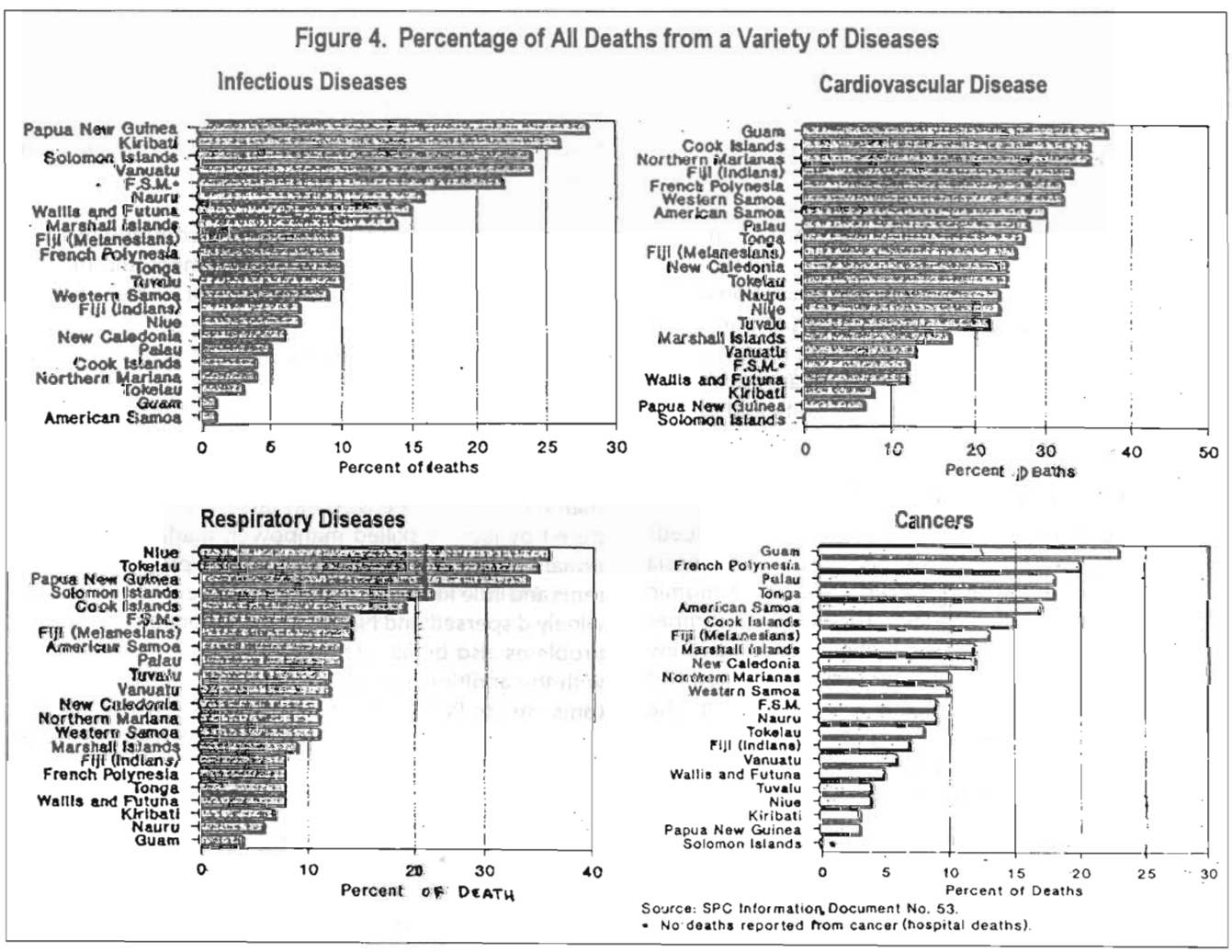
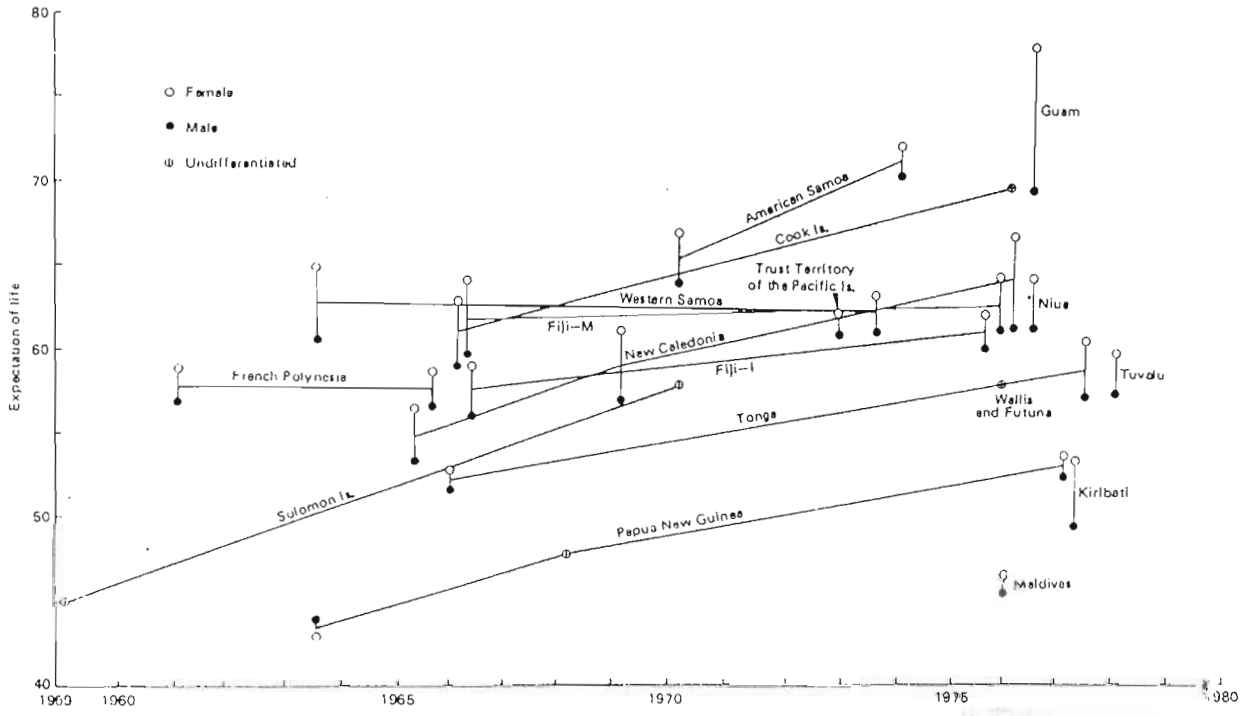


Figure 5. Mortality: Expectation of Life (e_0)



Other Important Health Care Issues

The preceding discussions on mortality and morbidity raise many issues related to the health care systems and political economy of the Pacific countries. The recorded mortality and morbidity statistics are a function of the actual incidence and prevalence as much as that of the system through which these are detected, managed and recorded. Therefore, the following issues are considered significant contributing factors to morbidity and mortality:

1. Physical Environment

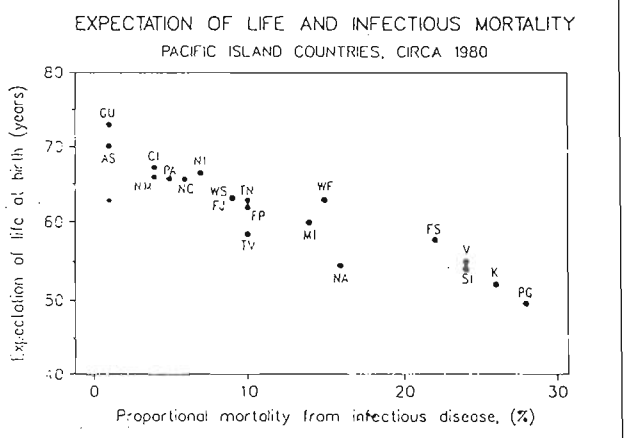
Throughout the Pacific environmental sanitation needs improvement, more so in Melanesia than Polynesia because of size, terrain and long term effect of economic development, e.g. pollution and erosion due to lumber industry in the Solomon Islands and mining in Papua New Guinea. Waste disposal for the growing population and industrialization is a real problem. In addition, the developed countries are dumping their toxic and nuclear wastes into the Pacific environment. The regularity of natural disasters (e.g. cyclones) also undermines developmental efforts and worsens the biological environment. The hazards of rising sea levels (1 meter per 40 years) provides disincentive to long range developmental planning for many low lying atolls. Therefore, most development in the Pacific looks to Migration Remittance Aid and Bureaucracy (MIRAB) economy for salvation.

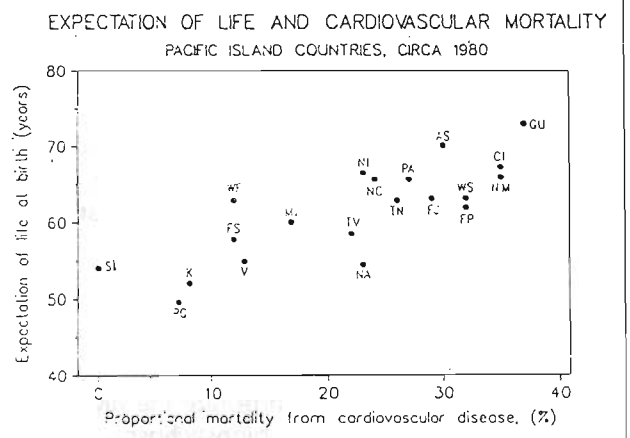
The geographical distance between communities and their small population makes development and maintenance of an infrastructure very difficult and expensive. Under these conditions, there is a need for a special approach to be developed within the local realities.

2. Management and Information Systems

There is a consensus that appropriate management is needed for all sectors. Data collection and analysis for management (e.g. census, mortality, births, etc.) is hampered by lack of skilled manpower, inadequate educational background for existing training programs, deterrents and little incentive to register vital events, and small, widely dispersed and highly mobile populations. Similar problems also befall attempts to improve management with the additional complications of the traditional customs. In the Pacific health services this has contributed to top heavy, unresponsive and bureaucratic organizations that provide services which do not coincide with the needs of the communities. That is, there is a need for socioculturally sensitive managers competent in getting things done in the Pacific context, perhaps through appropriate use of communications technology and information retrieval systems.

Figure 6. Expectation of Life. Pacific Island Countries circa 1980





3. Small Economies and Size

In a global economy based on scale, it is very difficult for small Pacific islands to achieve and sustain relative economic independence. This dilemma has been recognized and a possible solution may lie in maintaining neo-subsistence community ties through access to appropriate technologies that will dissolve the constraints of smallness, fragmentation and remoteness. Thus bypassing the long process taken by the developed countries to realize relative economic independence with massive social and environmental costs. In order to take such a leap, innovative and entrepreneurial leaders must be available. These leaders must have multiple skills and work in more professional isolation than their large country counterparts. The health services need to at least keep peace with such developments to minimize adverse health impacts.

4. Food and Nutrition

Food related problems have been identified as important contributing factors to morbidity and mortality. Most of the problems lie in the system of food production, distribution and cost rather than at the level of digestion, absorption and excretion. The issues of food availability and affordability overshadows acceptability. The food exporters to the Pacific are only interested in profit and have not orientated their products for the health of islanders. This takes food and nutrition into the political and economic arena. Therefore, health care leaders need to understand the process and be able to make healthful political advise or decisions.

5. Ethnic Pluralism

In some Pacific countries contemporary populations are quite diverse ethnically. The ethnic plurality may be due to immigrants (e.g. Fiji) or diversity of the indigenous population (e.g. Papua New Guinea with 700 languages). This pluralism has led to political instability and ethnic inequality. Throughout the Pacific, different levels of living, opportunities for economic advancement, social status and privilege are widening. In general, Europeans assumed privileged political and economic positions while Asians became dependent on the urban industrial market economy. Examples of these include Fiji and Guam where indigenous people are dominated by immigrants.

The ethnic disparities create differential morbidity and mortality expressions. The health providers must be able to meet needs in the appropriate ethnic background as well as addressing the ethnic disparities in an appropriate context, that is a need for creative adaptation.

6. Pacific Colonial Powers

Many Pacific countries have achieved political independence. However, the presence of different forms of colonialism (e.g. nuclear, educational, trade, and cultural) have created satellite states in the Pacific. The present use of tied aid and charities perpetuate political control in the Pacific because of the relatively low input required to maintain dependency. The different forms of colonialism makes it increasingly difficult for the Pacific islanders to shed the expectations of high material and status reward from a Western academic qualification, and the perception that Western goods are essential to a good life in the Pacific.

If there is political will among the colonial powers they can increase independence in the Pacific and improve the economies simultaneously. However, this is unlikely to be forthcoming, therefore, the Pacific needs specially prepared leaders to deal with international colonialism at their own front door.

Table 5. Estimates of Total Fertility Rates for Selected Small Island Pacific Countries - around 1966, 1970 and 1978

Country	Total fertility rates (per woman)		
	Around 1966	Around 1970	Around 1978
American Samoa	5.9	5.8	5
Cook Is.		6.1	4.2
Fiji	4.8	3.5	3.1
French Polynesia	6.3	5.6	
Guam	4.8	4.7	3.5
Kiribati		4.5	4.7
Nauru	7.1		
New Caledonia	5.6	4.3	
Niue		6.2	4.2
Papua New Guinea	6.5	7.1	
Solomon Is.		6.6	7.4
Tokelau		5.1	
Tonga	7.1	5.1	
Trust Territory of the Pacific Islands	6.2	6.3	4.8
Tuvalu		2.5	2.8
Vanuatu	6.6		
Western Samoa	7.4	6.7	5.1

Main Sources:
- US Department of Commerce. A Compilation of Age-Specific Fertility Rates for Developing Countries. Bureau of The Census, Washington, D.C. 1979
- United Nations Economics and Social Commission for Asia and the Pacific. Demographic Trends and Policies in ESCAP Countries, 1978. Bangkok, United Nations. 1979

The Health Challenge

The examination of existing information indicates that the health care systems in the Pacific can no longer meet the old and the new issues. From the above discussion it is obvious that the constraints have been identified for a long time and that if health care is to keep up with changes and developments in the Pacific, there is a need for adjustment of the health care systems by special types of leaders. That is, we need a socioculturally sensitive and competent health worker that can hang the bell on the cat.

Even though there has been improved morbidity and mortality, there is transition to non-infectious chronic degenerative diseases, new formidable infections, and a lingering backlog of old infectious diseases which will hinder the change of Pacific health indicators towards those of developed countries. The many new health problems like urbanization, militarism and nuclear power, rising seal level, ethnic pluralism, and economic stagnation calls for health workers with understanding of these issues. Therefore, the challenge is that a new type of health leader must emerge to handle the multifactorial and multi-disciplinary nature of the causes of morbidity and mortality within the life concepts of the Pacific islanders.

Being trained as a clinical doctor or nurse in the traditional medical school curriculum is no longer sufficient. The nature of the challenge demands a clinician with proficiency in the roles of a manager, educator, and an agent of socioeconomic development. *(See Table 6)* The curriculum to train and educate such a health worker must be directed towards the biopsychosocial model which recognizes the influence of sociocultural, economic, political, educational and medical factors on morbidity and mortality. The biopsychosocially orientated clinician identifies and evaluates the stabilizing and destabilizing potential of events and relationships in the patients' environment. *Figures 7* and *8* show the components of the biopsychosocial model. The biomedical factors include insults (injury, infection and congenital defects) and resources like immune status, nutrition, age, physical fitness, health services, and other lifestyle factors. The psychosocial factors include life change events, chronic stress, culture, economics, social support, and personal hardiness.

In addition to a change in content emphasis, the approach to learning must incorporate the diversity of the skills needed to practice the biopsychosocial model. That is teaching must be student centered, community based, integrated, and practice orientated and training clinicians to be life long self learners. The clinician must be trained in medicine and educated in community health and social science. In other words, we must rain a cat to bell a cat.

Training and Educating the Cat

The training and educating of clinicians in the biopsychosocial model may sound cumbersome, idealistic and impractical. However, there exist training institutions which are undertaking to produce such clinicians. *Figure 9* shows traditional medical schools in relation to those institutions employing the biopsychosocial approach to producing physicians. One of these is the five year old Pacific Basin Medical Officers Training Program (PBMOTP) at Pohnpei, Federated States of Micronesia.

This program has a goal to produce a new generation of doctors in the Pacific after 5 years. These doctors will be medical officers trained as community health physicians.

On graduation the competency outcomes will be in the

Table 6. Functions of a Medical Officer Trained as a Community Physician

Functions	*Activities*
Medical Officer	treatment of patients (secondary prevention)
	promotion of health at community, family and individual levels
	prevention of disease and accidents
	rationalize the use of technology and referral
	rehabilitation
Educator	continuing education of collegues
	train lower level health workers
	health education if families and communities
Manager	leader of primary healthcare team
	monitoring and controlling the health system
	organize and co-ordinate preventative, treatment and referral services
	help data analysis research and information dissemination
	development of community participation
	liason with public, politicians and other sectors
	help plan, supervise and evaluate the health activities
Agent of Socio-economic Development	participate in community meeting and development
	participate in intersectorial projects eg. food and water
	advocacy of HFA/PHC
	critical analysis of intersectional plans for health impact
	influence politicians to make healthful decisions

following areas with these respective weightings:

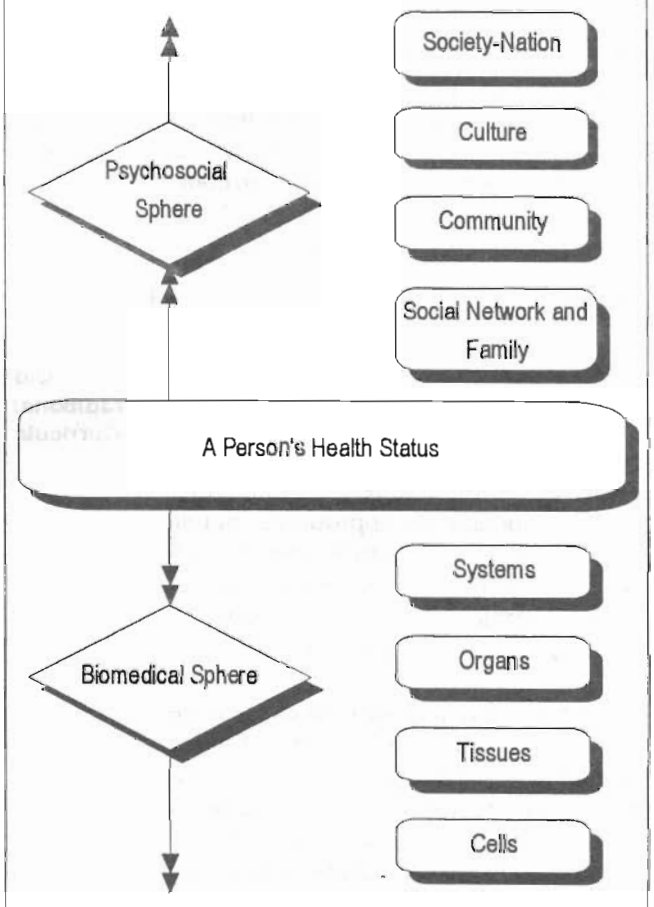
Clinical Skills	*49%*
Epidemiology and health information	*14%*
Management and health economics	*13%*
Environmental and public health	*10%*
Health education (teaching & learning)	*9%*
Behavioral and social science	*5%*

Table 7 shows a summary of the scheduled training and education program. The pertinent features are the use of peer learning, early introduction to clinical and community health activities, a survival study skill program, and a career ladder training with a spiral approach to learning of knowledge and skills. The admission criteria are two years of college or an equivalent work experience., e.g. nursing, teaching, etc. The emphasis of the curriculum is on the Pacific, especially the students' home communities, guided by the edict of thinking globally but acting locally.

The PBMOTP is costing the US Federal Government about one million dollars per year. The cost includes staffing, administration, full dormitory and learning facilities, student fees and stipends, student return air travel home each semester, textbooks, vehicles, and school projects. There are eight full time and one part time faculty members. There are three classes with a total of 55 students of which 33% are females. There is a 28% dropout rate. The present students come from US affiliated territories only but there have been requests to join the program from Fiji, Papua New Guinea, Nauru, Kiribati, Cook Islands and Western Samoa. These applicants were not accepted because of the strings on the funding.

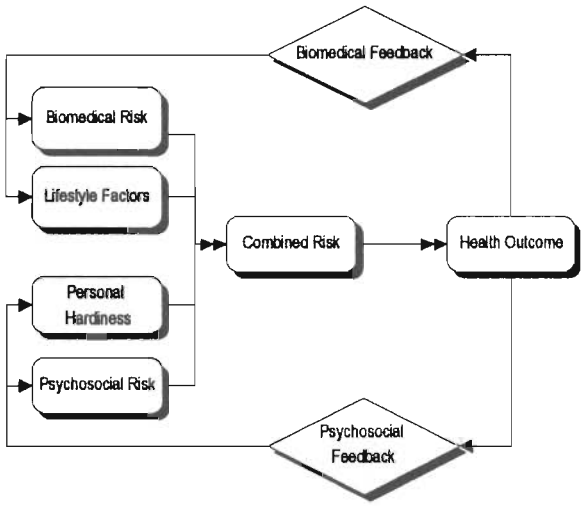
At present the staff workload is about 80 hours a week

Figure 7. A Biopsychosocial Model to Demonstrate the Variables that Influence a Person's Health Status



Modified from Engel, GL: Science, 196:1977

Figure 8. Biopsychological Model for Predicting Health Outcomes



with at least 30 student contact hours. The compensation is that the hours are flexible, the mood is camaraderie and the staff-student relationship informal. The collective experience from this program is assisting to adjust the curriculum of the Fiji School of Medicine. This model can be applied in an on-campus or extension mode and give all health workers an alternative career choice that did not exist before. It can also be implemented less extensively and integrated with existing structures. Therefore medical officers can be trained throughout the Pacific by a mobile faculty that follows the demand from country to country. This approach addresses multiculturalism and smallness simultaneously.

Conclusion

History, economics, culture, and politics have created health care systems that can no longer meet the health issues in the Pacific. Therefore, there is a need to reorientate the health services to another more socioculturally appropriate model. This, however, needs a new type of health leader. The doctors being the most socially acceptable and politically powerful should be trained for this leadership role.

The morbidity and mortality experience in the Pacific is decreasing slowly towards the rates of developed countries. The contributing factors to diseases and death have been changing but other health issues like environmental sanitation, management, health information, food and nutrition, ethnic pluralism, colonialism, and technological arrogance may exacerbate morbidity and mortality. To appropriately meet these health constraints, the production of Pacific doctors must be guided by the biopsychosocial model to graduate a medical officer trained and educated as a community health physician. This is undertaken by many institutions, including the PBMOTP which is characterized by an integrated, community based, student centered, career ladder approach. It is envisaged that the graduates will automatically provide incentive for the cat to bell itself.

References

1. Bellwood P. Man. Conquest of the Pacific: The Prehistory of South-East Asia and Oceania. *Oxford University Press, New York: 1979.*

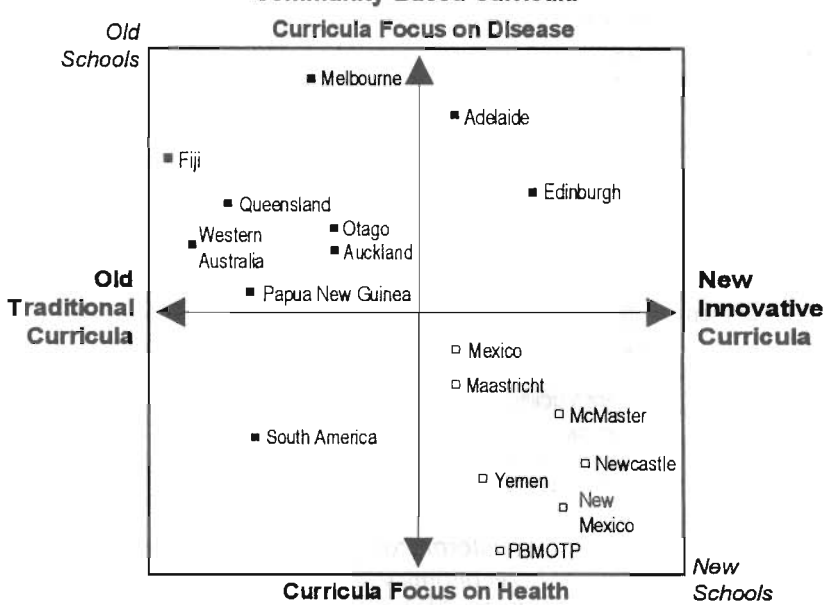
2. Pacific Social Science Association. South East Asia and the Pacific Islands. *Pacific Perspective, 1989; 14(1).*

3. Tupouniua S. *et al. The Pacific Way. Institute of Pacific Studies, Suva Fiji: 1980.*

4. Hezel F. Micronesia: A Changing Society. *Quoted in the "Pacific Daily Mirror", Vol 20(228): Sept 16 1989.*

5. Kleckowski BM, Roemer MI & Der Werff AV. National Health Systems and Their Reorientation Towards Health for All. *Public Health Paper 77, WHO: 1984.*

Figure 9. The Relationship of Traditional Medical Curricula to Community-Based Curricula



▪ Old Curricula	▫ New Curricula
Teacher oriented	Student centred
Information gathering	Problem based
Discipline based	Integrated
Hospital based	Community based
Standard program	Elective
Apprenticeship/opportunistic	Systematic

Source: The various handbooks of the schools that were available 1986-1988

Table 7. A Brief Summary of the Training Schedule at PBMOTP.		
	Semester 1	*Semester 2*
Year 1	Study Skills Outpatient Medicine Environmental Health MCH	Outpatient Medicine Health Education & Peer Learning Food & Nutrition
Clinics	6 hrs/week	12 hrs/week
	On successfully completing this course, student becomes a Health Assistant	
Year 2	Pacific Health Care Systems Food & Nutrition Outpatient Medicine Gastrointestinal Diseases Renal Diseases Parasitolgy/Infectious Diseases	Epidemiology & Health Information Obsetrics & Gynecology Paediatrics
Clinics	12 hrs/week. On call once/ fortnight.	12 hrs/week. On call once/ fortnight.
	On successfully completing this course, student becomes a Medical Assistant (Medex)	
Year 3	Obstetrics & Gynecology Paediatrics Management of Pacific Health Services Dermatolgy/Infectious Diseases	Pathology, Psychiatry Laboratory Work Environmental Determinants of Health Haematology & Oncology Opthamology
Clinics	12 hrs/week	12 hrs/week
Year 4	Surgery & Anesthetics, Pediatrics & MCB, Medicine & X-Ray, Obstetrics & Gynecology, Practical Health Management	
Clinics	Hospital-based rotations	
Year 5	Community Health, Program Management, Surgery & Anesthetic, Medicine & Opthamology, Obstetric & Gynecology	
Clinics	Supervised work at their own jurisdictions	
	On successfully completing this course, student becomes a Medical Officer trained as a community health physician	

6. Finau, SA. Prevention and Control of Non-Communicable Diseases: A Pacific Perspective. *Proceeding of Regional conference on Diabetes Prevention and Control Program for the Pacific, Western Samoa: 1988.*

7. Shand ST. Island States of the Pacific. Australian National University. *Monograph No 23: 1982.*

8. Coyne T. The Effect of Urbanization and Western diet on Health of Pacific Island Populations. *Technical Paper No. 186, South Pacific Commission, Noumea: 1984.*

9. Taylor R. Lewis ND and Levy S. Societies in Transition: Mortality in Pacific Island Populations. *Int J. Epid. (in press).*

10. South Pacific Commission. Patterns in diseases and causes of death in the Pacific islands. *Secretariat presentation Tonga CHADU Health Seminar, Tonga, 12-16 December 1988.*

11. ESCAP/SPC Report of The ESCAP/SPC Conference Seminar on Population Problems of Small Island countries of ESCAP./SPC Region. *New Caledonia: Asian Population Studies Series: 1982.*

12. Finau SA. Epidemiology and Health Information. *Univesity of the South Pacific, Fiji: 1987.*

13. *Solomons Islands National Development Plan 1980-1984 Volume 1, Central Planning Office, Honiara: 1980.*

14. Finau SA, Fungalei S. Isamau O *et al.* Environmental and Sanitary conditions after Cyclone in Tonga. *Community Health Studies, 1986; 10(3); 336-343.*

15. Finau SA. Management of Pacific Health Services. *University of the South Pacific, Fiji: 1988.*

16. Finau SA. Major international threats and problems in the South Pacific. *Proceedings of the Menzies Symposium "Nutrition and Health in the Tropics, Townsville: 1987.*

17. Hearn TJ. (ed) New Zealand and the South Pacific: *The Papers of the Fifteenth Foreign Policy School. University of Otago, Dunedin: 1981.*

18. Finau SA. Bureaucracy and the South pacific Health Services. *Journal of Pacific Studies, 1988; 14:131-144.*

19. Flahault D. Towards a new generation of doctors. *World Health; April 1988:1-2.*

20. Engel GL. The clinical application of the biopsycosocial model. *American Journal of Psychiatry, 1980; 137:535-544.*

21. Smilkstein G. Health benefits of helping patients cope. *Consultant, Jan. 1988; 38:56-63.*

22. Guilbert J-J, Riccard EAP & Ritson R. The Road to Relevance. *WHO: 1987.*

23. Katz FM & Fulop T. Personnel for Health Care: Case Studies of Education Programs. *Public Health Papers No 72, WHO:1980.*

24. Guilbert J-J. Educational Handbook for Health Personnel. *WHO Offset Publication No 35. Geneva: 1981.*

25. Bertram IG and Watters RF. The MIRAB economy in the South Pacific Microstates. *Pacific Viewpoint, 1985; 27(1) 47-59.*

26. Hernstein RJ. IQ and falling birth rates. *The Atlantic, 1989; 263(3); 72-79.*

27. Finau SA. Primary health care and the South Pacific. *New Zealand Medical Journal, 1988; 101:536-7.* □

UNDERSTANDING AIDS IN ALL PACIFIC ISLAND LANGUAGES

In March 1992, PIASPP* called on South Pacific Commission staff, partners and friends to join in the race to spread the word about the AIDS virus by translating **Understanding AIDS** booklet into as many Pacific Island languages as possible. This was inspired by the World Health Organisation 1991 World AIDS Day theme of **Sharing the Challenge.**

By December1992, with **A Community Commitment** as the World AIDS Day theme, PIASPP was able to call on communities around the Pacific to test some of the translations, then covering 20 Pacific Island languages.

Today translations of the booklet are available in:

1. FRENCH
2. TONGAN
3. KIRIBATI
4. KUNIE (NEW CALEDONIA)
5. PIJIN (SOLOMON ISLANDS)
6. BISLAMA (VANUATU)
7. COOK ISLAND MAORI
8. TUVALUAN
9. MOTU (PAPUA NEW GUINEA)
10. FIJIAN
11. HINDI
12. NIUEAN
13. TAHITIAN
14. PIDGIN (PAPUA NEW GUINEA)
15. WALLISTAN
16. YAP (FEDERATED STATES OF MICRONESIA)
17. CHUUK (FEDERATED STATES OF MICRONESIA)]
18. TOKELAU
19. FAGA UVEA - POLYNESIA LANGUAGE OF OUVEA (NEW CALEDONIA)
20. SAMOAN
21. ELIMBARI
22. MORTLOCKESE (FEDERATED STATES OF MIOCRONESIA)
23. IOUAGA (NEW CALEDONIA)
24. FUTUNA
25. TOK GAMOZE (PAPUA NEW GUINEA)
26. HWEN IAAI (NEW CALEDONIA)
27. HULI (PAPUA NEW GUINEA)
28. KUMAN (PAPUA NEW GUINEA)
29. DREHU (NEW CALEDONIA)

Love with Care

***PIASPP** is the Pacific Islands AIDS and STD Prevention Project - **a project of the South Pacific Commission with funding from AIDAB, USAID and WHO.**

Anyone who would like to help, either by translating the booklet into a Pacific Island language or by providing comments about the draft translations, please contact:

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