

REPORT ON A VISIT TO STUDY HEALTH CARE DELIVERY
IN A NUMBER OF WESTERN PACIFIC ISLANDS

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I am most grateful to the World Health Organisation for the opportunity to undertake this survey and to all those in the various countries who gave me of their time and for their patient answering of all the questions I asked of them.

INTRODUCTION

The countries of the South Pacific, although small, represent among them an enormous variation in size, facilities and development. Papua New Guinea is the largest, with a population of approximately three million (greater than New Zealand). The next largest, Fiji, is approximately a fifth of the size of Papua New Guinea in terms of both population and area, while the smallest has approximately one-fifth of one per cent of the size and population of Papua New Guinea. Clearly, therefore, even though one is speaking of small nations, it is unrealistic to consider that any of the problems are susceptible to universal solutions.

Nevertheless, certain generalisations can be made. The population density of the thousands of islands involved (e.g. the state of Fiji, although thought of by most as an island, actually consists of 320 islands) is from 5 to 50 persons per square kilometre. Population growth rates are of the order of 2.5 to 3 per cent, around 40 per cent of the population is aged less than 14 years, and the dependency rates for 100 adults are 158 to 200.

Three of the countries - Papua New Guinea, the Solomon Islands, and the New Hebrides - have endemic malaria, and filariasis is endemic throughout the region. Epidemic infectious disease is usually controlled, although there have been recent outbreaks of cholera in Kiribati and of whooping cough in the New Hebrides. The major causes of morbidity and mortality are respiratory diseases and diarrhoeal diseases with in some countries tuberculosis as a specific problem. Leprosy is not a major problem in the region, nor is malnutrition except at weaning and in certain localised geographical areas, but unlike the generality of developing countries degenerative heart disease and diabetes are beginning to be a major problem and the most prevalent malnutrition syndrome is obesity.

Almost all the countries have inherited what might be described as a colonial type of health service, with either a British or a French orientation as these two countries had the major responsibility for these nations before independence.

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The health services were based on expatriate medical staff normally located in a hospital setting with a concentration of hospitals where the expatriate administration was located, with the accent on therapeutic medicine as in developed western countries and with, by and large, the tendency to wait for the sick to come to the health institutions rather than looking for health problems to solve in the community. In most cases, of course, the coverage was not complete and this is particularly so in relation to those states whose territory is subdivided into numerous islands. The majority of the population did, and still do, consult first with the local traditional healers and only later, and often as a last resort, with western-type medical services.

In some countries the preponderance of hospital-based facilities is so marked that 70 per cent of the national health budget is expended upon the hospital, which has often been built with outside aid funds. With independence, indigenous dissatisfaction with this state of affairs has resulted in several of the nations in a formal parliamentary enquiry into the national health services, recent examples being in Fiji and Western Samoa.

There has been little attempt at regionalisation of health delivery services either on a national or a supra-national scale, partly because of the relatively small differences in the level of availability of services within countries, and partly because of the natural reluctance of the population to be referred sometimes to places outside their conceptual experience even if within the country. There has been also a limited traffic of transfer of patients from these countries to the super-specialist facilities of neighbouring Australia and New Zealand, but in these instances the expenses of the transfer and treatment have usually been donated by the recipient country on a quota basis and one constant request throughout the countries I visited was for an increase in the quotas.

Some attempts at regional provision of training facilities have existed - for example the Fiji School of Medicine - and the constraints and difficulties of this programme will be discussed in a separate section.

I would now like to turn to certain specific areas which merit special consideration.

HEALTH MANPOWER

Medical manpower

The major source of doctors for the regions was and is expatriates. Most of the specialists in the hospitals and many of the hospital medical officers are still in this category. There are two local sources of doctor manpower:

- (i) the Fiji School of Medicine; and
- (ii) the medical school of the University of Papua New Guinea.

The fact that neither qualification is registrable for practice in Australia or New Zealand has great significance for postgraduate training. The Fiji School of Medicine was designed to provide on a regional basis local medical practitioners capable of providing total medical and surgical care for the community, except in urgent exceptional circumstances, and in concept was thus designed because of the extreme isolation of some of the communities served by these officers. The Papua New Guinea School of Medicine is designed to produce a medical graduate of international calibre. At this present time both institutions are in considerable disarray.

The Fiji School is grossly under-staffed and under-funded to perform its function of training medical graduates, let alone provide the additional courses it is trying to provide for other health personnel, and now it has had in addition forced upon it a course for medical assistants at a lower level. It is currently under the control of the Fiji Health Department which has been subject to a recent governmental enquiry, and it has also been looked at by an international committee of Australian and New Zealand experts which has recommended that it come under the wing of the University of the South Pacific. It is clear from my discussions that many people feel that:

- (a) under present circumstances it would not be likely to be acceptable to the University of the South Pacific in terms of its standards;
- (b) although the school authorities attribute the high failure rate among non-Fijian students to inadequate educational preparation, the view is held outside Fiji that the students from other countries are being treated differently from the local students by school authorities; and
- (c) the numbers of graduates from the School are inadequate for the needs of Fiji alone, let alone the other countries concerned.

Nevertheless, it must be said that this is an absolutely vital health facility for the whole area, and this question of the regional responsibility and financing of the Fiji School of Medicine is a matter for most urgent consideration. The loss of this regional facility would be an international disaster.

The medical faculty of the University of Papua New Guinea also has major problems. Forty of the 45 staff are expatriates and the school has had difficulty in maintaining adequate levels of staffing. The student intake has never yet reached the appropriate quota level so that the school is willing to take students from other countries, but the governments of the other countries have difficulty in getting students to reach the educational levels demanded, on the one hand, and in financing them on the other. Additionally, from the local situation in Papua New Guinea there is a dearth of medical students because medicine and doctoring does not have in that country the high esteem that it has in most of the rest of the region, nor the

high pecuniary rewards that are available in most of the rest of the region (advancement in the administrative side of the Papua New Guinea Government is at this time likely to be more expeditious and more profitable for a bright young man).

So the medical school in Papua New Guinea is not yet even able to meet the demands of Papua New Guinea and is unlikely to make a substantial contribution to the needs of the area for some years; and, as 55 out of the 60 medical specialists in Papua New Guinea are expatriates, it would be at least one to two decades before the staffing of the school could be expected to be by Papua New Guineans.

With regard to nurse training, the position is somewhat better. Most countries have a nurse training school at the major hospitals and in most cases the standard of the nursing qualifications has been acceptable in New Zealand as registrable at nursing aid level, so that it is possible for the nurses from the South Pacific to obtain postgraduate training if not qualifications. The system in Fiji and Papua New Guinea is more advanced, and as well as training for general nurses specific training is available for public health and community nurses.

In all the countries that I visited, however, there was concern about the very large drop-out rate of student intakes (30 to 40 per cent) and the very large losses in terms of students who were sent abroad for postgraduate training (80 to 90 per cent in some countries). In none of these countries was a serious attempt being made to train more nurses and there is clearly a growing problem developing in many areas in relation to the respective roles of the well-trained public health nurse who had a higher educational entry level and a longer training compared with the medical assistants (New Guinea health extension officers) who, in many cases, might have a lower entry level and a shorter training and yet are being considered by the system in a more dominant role.

The ancillary medical staff position with regard to health service personnel other than medical and nursing is uniformly a disaster area. There is a medical technologists course in Fiji, but paradoxically throughout the Pacific there is a major lack of people in this area, as the general education systems have been such that those who do come to the top are capable of going forward to the higher positions such as doctors and nurses or moving rapidly on the administrative side, and there is no group of science-orientated students to move into these areas which carry no charisma of respectability in the eyes of the population concerned.

Administration

As in western countries, much of the top health administration is in the hands of medically-qualified or Fiji School of Medicine graduates or those with higher education at tertiary level. There is, however, a huge gap between those in the top-level situations and the workers at the grass-roots level which is almost a void. Again, this is a function of the

general educational system which up until recently in most areas has been devoid of significant numbers of secondary school graduates (e.g. in the Solomon Islands there is only one school taking students to university entrance level). While time will doubtless help to improve the situation, there is really at this moment urgent need for the provision of a middle-level management administrative cadre.

A final point worth emphasising in this area is the total lack, because of size, in most of these countries of any possible career structure. For example, most of the middle-size countries (that is, those with populations of the order of one hundred to one hundred and fifty thousand) require perhaps two or three surgeons, and since it is possible to be a fully trained general surgeon by the age of 35 then it is clear that one such career post may arise about every 10 to 15 years, which scarcely gives a young local graduate much grounds for pursuing a career in such an area. This applies across the board in health services, whether we be talking of surgeons, medical officers of health, ophthalmologists, physicians, pharmacists, malariologists, epidemiologists, or whatever.

Additionally, despite the obvious inadequacies in the availability of staff in many areas, there is often a mismatching between existing staff and the work that they are required to do, so that quite often personnel are over-trained for their work location and what is required of them. Examples are a doctor in Samoa with surgical expertise working as a district medical officer but using a substantial part of his time to perform cold hernia surgery in primitive surroundings within 12 kms of the national base hospital; or a qualified medical officer trained at the University of Papua New Guinea running a district clinic 15 kms from the base hospital on a bus route and resident on site, when clearly the type of work being done by the clinic would be more appropriate for a well-trained nurse plus a daily or twice-weekly visit from a medical officer.

Again, the problem of supervision and direction also is important. For example, in E'ua (Tonga) the medical officer on an island with approximately 5,600 people within 10 km, with a daily boat (2 hours) and a twice-daily plane (7 minutes) to Nuku'alofa, was involved in nothing but therapeutic medicine. He saw one or two patients a day at one clinic and 20 to 30 patients at his own clinic where he saw every patient, but by comparison with the other clinic most of those did not require to be seen by a medical practitioner. He had an obstetric workload of approximately two cases per month. He had a brand new, as yet unopened, 16-bedded hospital and spent much of his time in his garden. He appeared to have no instruction or training in relation to preventive medicine, public health, health promotion and prophylactic maternal and child health care.

The point I am making here is that the scarce resources available were being used in very traditional ways and in none of the countries that we visited was there any evidence of attempts to break away from the inherited system other than in Papua New Guinea.

COMMUNICATIONS

Communications are a serious problem in the Pacific Islands. There are certain areas, such as in the large island of Espirito Santo in the New Hebrides, where ground communication is limited and difficult and there are many isolated coastal hamlets. In other cases such as in E'ua (Tonga) although the island has 15 kms of road this is extremely rough and unmetalled and such transport as is available is not necessarily available to health services personnel. But in the whole geographical area the major form of transport is by sea and in terms of medical emergency this can be slow and unreliable. For instance, while we were in Fiji the Assistant Secretary of Health spent eight hours in a boat trying to reach a neighbouring island and had to return due to weather conditions without reaching his destination, and some more remote islands have no air connections and only two or three boat connections per annum.

In many cases also there is no radio, telephonic or telegraphic communication between isolated communities and the centre so that, for instance, again in the New Hebrides, in Espirito Santo to obtain help for a case of obstructed labour meant a two-day walk for the husband, a 12-hour wait for the availability of a boat and an 8-hour sea trip by the boat to the patient's location - by which time, of course, the problem had resolved, in this case fortunately with survival of both mother and child. As a result, the evacuation of even major casualties (often due to accidents) is frequently not possible. Health services planning has got to take this problem into account either by providing a standard of service which can cope with every emergency in every locality or making radical changes in the system in order to develop medical services associated with a suitable communications strategy to enable rapid evacuation of serious problems.

In the wider field of communication for learning, the co-operation with the University of the South Pacific in relation to its satellite stations could very well be used as a regional health services educational system and thought should be given to the ways in which this can be developed over the next few years.

PUBLIC HEALTH

The main problems of these countries are still those which are related to basic public health concerns and which have to a large extent been overcome in western countries. The major diseases are still infectious diseases: malaria, filariasis, the diarrhoeal diseases and respiratory diseases including tuberculosis. The methods of control of these diseases are well known but the application of the solutions is beyond the purse of most of the countries concerned. In addition, since these countries have inherited a colonial health service based upon central hospital facilities they find themselves in the situation where they have more than adequate hospital accommodation and the continued servicing of this takes approximately the same amount of the total

health service budget as it does in westernised countries - that is, around 60 to 70 per cent. At the time when the western countries were overcoming their public health problems they were able to devote a larger proportion of their health budgets to the public health as against the hospital system.

There are three main inter-related areas of concern. The first is the environment, particularly in relation to water supplies and sanitation. The water supply problem is compounded by the often small isolated communities on the one hand, and by the fact that in many of the islands there are no running streams and water has to be obtained from shallow wells with increased risk of sewage contamination. Sewage disposal is, of course, very primitive and often directly contaminates the lagoon or beach area.

The second problem is the question of educating the population. Many of the present adults have never been to school, or have at most been to primary school, and are illiterate. In public health matters this problem is compounded again by the isolation and by poor communications, with poor distribution of leaflets and pamphlets to a somewhat illiterate population and with large areas where the population are unable to afford or maintain means of tapping in to the national broadcasting networks where they exist. Even dry-cell batteries and small transistor radios are beyond the means of peasants in a subsistence economy. In addition, there has been a failure of the health administrations to date to give sufficient emphasis to the educational aspects of public health problems to any, far less all, of the ranks of the health personnel apart from isolated exceptional examples such as the public health nurses in Fiji.

The third problem is the application of standard preventive medicine. Nutrition is apparently not a major problem except at weaning and except for obesity, but maternal and child care services are mainly primitive, family planning is mainly unaccepted, and dental care is almost totally lacking. Prophylactic immunisation is often offered in central locations but is not part of a programme and in any case often breaks down peripherally because of the 'cold chain' problem. The prophylactic treatment of, for example, filariasis has nowhere had adequate mass coverage and acceptability, while malaria prophylaxis is out of the question on cost grounds. Finally, the central administrative planning of what is worthwhile or possible and what is not has often not been of the highest standard.

Mental health services are, by and large, still in the era of punitive sequestration of those who are too difficult to manage in the community.

In the more general terms of relating health development to general development, there is little evidence of inter-departmental cooperation between health, education, and agriculture, in the forward planning. Where any attempt has been done to assess the view of the population, as in a survey in Tonga, the first three priorities came out as water supplies, roads and - only third - local health facilities.

EXISTING HEALTH FACILITIES AND ADMINISTRATION

Apart from the often stated need for the ability to transfer individual patients with special problems abroad and the seeking of funds for this purpose, by and large the hospital facilities in each country are more than adequate in terms of the physical structure and in terms of nurse staffing, but there is a lack of specialist medical care in many of the countries. This is mainly due to the fairly recent departure of expatriates, on the one hand, and the clear lack of educational facilities to produce local people of educational standard to specialise at an international level, on the other, combined with the absence of any possible career structure.

At the other end of the scale, the current expectations of the indigenous populations can clearly be met by the provision of such health workers as the aid post orderly in Papua New Guinea, working up through the nursing aid or similar to the more sophisticated public health nurse of Fiji. The areas of gravest concern are those of middle management. This applies both to health personnel and to allied professions such as health inspectors, malaria control teams, etc. Throughout the Pacific there is almost a complete absence of persons acting in this middle level supervisory role. The reasons, of course, are fairly clear, in that those who were in this role in the expatriate colonial systems now find themselves in charge of the systems in the higher administrative positions, and there has as yet been no time to train replacements due to the forever-present 'lack of career structure' bogey. In some cases this has resulted in examples of the Peter principle - i.e. persons being promoted till they get to a job they can't handle - and this again is a factor in the difficulties the countries are experiencing in the period of change.

There are several other areas of concern within the present structures which merit individual mention.

Technical Services

There is not only a lack of technical manpower but also a considerable lack of technical equipment. The latter is due partly to lack of funds to supply this but more particularly to the lack of technical maintenance. In this regard it is clearly impossible to justify the provision of a maintenance technician in each area of expertise in each country. The two possible solutions, regionalisation and multi-purpose technical staff, will be discussed later.

Drugs are a major problem also. The cost of drugs, their distribution, the storage of drugs and the provision of drugs on a long-term basis are all major problems. A recent meeting sponsored by the World Health Organisation to discuss a regional solution to this problem has taken place in the Pacific.

Finance

Most of the countries have a subsistence economy and within that the health services have a relatively low priority

in relation to general development. So for many years to come it is unlikely that health budgets will grow at anything more than the current inflationary rate. This means that the distribution of health money within the budget will have to be altered from the present distributions, which are heavily loaded on the therapeutic side, if the general standard of health and health care in these countries is to be improved.

Such capital development as is available is usually dependent upon foreign aid of one sort or another. One of the problems that faces these countries is that most often the donor of foreign aid wishes it to be used for a specific project, and although such a project may have a relatively low priority in the country's health development plan needs, it is often deemed politically unwise to refuse the offer. This further distorts the progressive re-ordering of the system towards local needs.

SUMMARY

The problems, therefore, are those of small, isolated, geographically fragmented, poorly-educated communities with subsistence economies and a shortage of secondary and tertiary educational facilities, who have inherited a therapeutically-oriented hospital-based health care system conceived on conventional lines but with incomplete coverage. They have to attempt to alter this through an administration which is thin in top management, completely lacking in middle management and chronically short of personnel at all levels of sophistication.

In such newly-emergent nations there is a strong political pressure to internalise the solutions and remain totally independent in a situation in which in reality the solutions are external, both in terms of financial help (both for capital development and current expenditure) and for the facilities for the provision of the necessary manpower.

In addition, in the existing situation a large percentage of those who are selected for external training do not return because of lack of career opportunities and other social reasons from countries in which in any case the provision of appropriate training facilities is at best a marginal addition to those countries' own programmes.

SOME SUGGESTIONS TOWARDS SOLUTIONS

Administration

A striking consistency was noted in the conventionality of the thinking of the health administrations which, in most cases, was clearly inappropriate but not unexpected, as the top administrators in most of the countries had, in fact, grown up with a conventional system. Some way of breaking this cycle must be found so that each country can look at itself and propose its own rational solution or solutions to its own problems.

I believe that in each case the provision of a national health advisory council with representatives from health, education, agriculture, finance and the community could be useful in guiding health administrations out of their present conceptual ruts.

In addition, I believe that it is appropriate to develop shortish-term secondments (3 - 6 months) between aid-giving countries and the countries of the Western Pacific at top administrative level in the health services. The major object of this would be to give practical developmental experience to the top-level management of the countries concerned, while the persons seconded from the aid-giving country would mainly concern themselves, apart from the routine administration, with thinking towards new types of health planning for the country concerned. I would place this as a top priority to be considered.

The second area in which this is relevant is in the question of manpower planning: looking at the maladaptions in the present systems, developing some primitive type of statistical work to aid manpower planning and assessing the potential and curricula needs of multi-potential technologists. If it is possible, for example, for primary health care to be the responsibility of an aid post orderly, it is possible to train someone to be a practical radiographer plus laboratory technician plus even perhaps maintenance technician where the work in a particular unit does not justify the employment of all three.

Specialist training

Similar considerations would be relevant in relation to specialist training. Preliminary soundings of colleagues at the Royal North Shore Hospital in Sydney would indicate significant numbers of specialist prepared to spend two to three months in these countries while the appropriate specialists from there could undertake practical refresher courses in Australia or New Zealand or the United Kingdom.

Health promotion and preventive medicine

The published statistics suggest that in most countries almost 100 per cent of the children are now at primary school. Clearly, therefore, appropriate health education and health promotion activities ought to be part of the primary school curriculum and certainly of all teacher training. There is good evidence now throughout the world to suggest that this approach is:

- (a) effective as the children grow up; and
- (b) passed on to and adopted by the parents provided enough emphasis is put upon it in the schools.

Regional cooperation

Through the auspices of the World Health Organisation or the South Pacific Commission, with specific aid to nations from appropriate countries, it should be possible to work towards:

- (a) a regional pharmacopoeia and a regional supply and distribution of drugs;
- (b) a regional technology service with preventive maintenance for microbiological, virological, biochemical, cardiological and radiological, etc, apparatus;
- (c) regional cooperation in the management of exceptional cases either by the provision of visiting specialist teams, as in the current cases of the visiting teams of ophthalmologists in the Solomons or the cardiologists and cardiac surgeons to Papua New Guinea, or by increased quotas of referrals to aid-country facilities;
- (d) regional cooperation would also be important in medical information systems.

In connection with (d), the library facilities of both the Papua New Guinea School of Medicine and the Fiji School of Medicine are as yet in the development stage, and in most of the other countries the library facilities, if existent, are primitive. An important regional initiative would be the development of adequate medical information systems. This might be envisaged developing through the University of the South Pacific in association with its satellite communication network. Even the donation of a number of standard journals to the base hospitals in any of these countries would be a welcome addition to their library facilities.

Communications

One of the major problems in the area is that of communications. These are mainly by sea. The solution to their problems in each of the island nations may very well be different and dependent upon total thinking about the health services. For instance, in Samoa it might well be appropriate for all major health services to be concentrated on the national hospital and an ambulance service provided to bring suitable patients from the rural clinics, with the withdrawal of most medical officers except for the two major hospitals in the two islands. On the other hand, the needs of Papua New Guinea will be most clearly met by the further development of its present system on more traditional lines, including specialist hospitals, district medical officers, health extension officers, and aid post orderlies.

Many of the countries have fallen into the conventional colonial pattern in the past and are now thinking in terms of the standard World Health Organisation family care system, whereas neither may be entirely appropriate.

The Fiji School of Medicine

For all the countries I visited except Papua New Guinea, the Fiji School of Medicine must be the major source of medical manpower for the foreseeable future. It is currently in a crisis situation. I believe that either the Commonwealth, the South Pacific Commission or the World Health Organisation must take major initiatives in a regional conference to consider the problems of the school and their solution. Australia and New Zealand should certainly be invited to participate as it is clear that the major source of supportive manpower, technical help and perhaps aid money will come from these two countries.

Foreign aid

Although the ex-colonial powers, Britain and France, still have a significant input into the area, for the future the countries most concerned will be those geographically adjacent, particularly Australia and New Zealand (and perhaps Japan but there, there is a major language barrier). Past contributions from Australia have mainly been major building projects, but from New Zealand there have been a whole host of health-related activities, including providing facilities for training in New Zealand. Australia has only relatively recently entered the health field.

However, in neither country is there a serious attempt to provide the type of courses or the sort of training which the Western Pacific needs - e.g. short, one- to three-month courses in epidemiology or health services management particularly slanted to Pacific needs, a course to produce a multi-potential medical technologists, postgraduate training in appropriate fields for nurses.

The problems are partly a question of the registrability and academic levels of the people coming into Australia and New Zealand for such training and partly the lack of interest in the aid-giving countries in providing such courses from their institutions of higher education. It would seem:

- (a) appropriate that secondments from Australia and New Zealand towards institutional strengthening on a short-term basis would help to induce interest in the donor countries;
- (b) that geographical linkages between particular institutions and particular countries might be helpful;
- (c) that Australia at least should consider sending a health mission to the Western Pacific specifically to look at what it can do in terms of institutional strengthening;
- (d) that there is also urgent need for a specific small grants scheme as well as institutional strengthening and secondment schemes. A Health Coordinating Authority to help the

Australian Development Assistance Bureau with the administration planning, and the making of appropriate contacts within the Australian system for support from Australian health experts is also required. The Commonwealth Institute of Health (formerly the School of Public Health and Tropical Medicine) could provide such a liaison facility.

ENVOI

The opportunity to visit these several countries, all with similar but different problems, was most educational and I hope that the information I gained can be turned to effective use in encouraging and developing cooperation between Australia and this fascinating area of the world.

ADDENDUM

Telephone conversation with Dr. Ross-Smith, WHO, Suva

- (1) Fiji School of Medicine, The University of the South Pacific and the Fiji Government have set up a joint committee to consider its future, with Dr. Ross-Smith as an observer from WHO. The main problem is the long term budgetary one for the Fiji Government.
- (2) Nutrition. A WHO consultant recently visited the area and found pockets of under-nutrition of considerable severity in the Solomon Islands and in Kiribati as well as the weaning problem and the over-nutrition in Tonga, Samoa, etc.
- (3) A regional pharmacopoeia and the WHO-recommended list produced after the regional conference is now in use as "the 200 essential drugs list".
- (4) A special course for medical technologists with 30 students from the South Pacific is being run by the Upper Hutt College in New Zealand.
- (5) The WHO regional office had a consultant working on the satellite problem and this concept is going ahead in relation to health now. The equipment has been upgraded but there are still problems in linking Australia.