Primary health care in the New Hebrides

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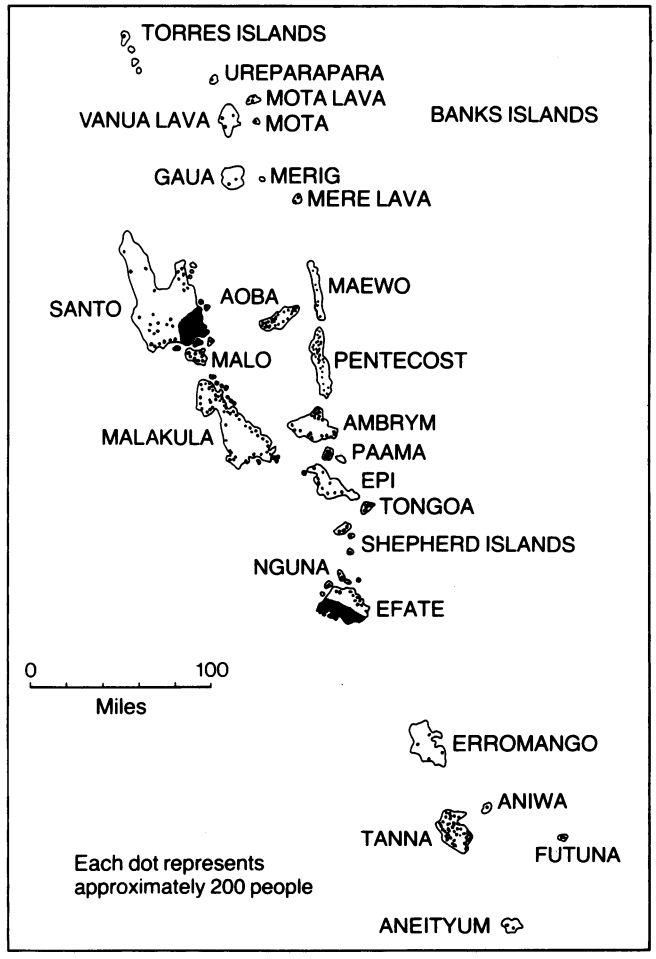
SUMMARY. The New Hebrides is a small Melanesian country in the South-West Pacific whose doctors are almost entirely recruited from France and Great Britain, the two countries which jointly administer the territory. This paper describes briefly the difficulties of providing primary health care for a fairly primitive island society.

Introduction

THE New Hebrides is a group of islands in the South-West Pacific situated between 13° and 21° south and from 166° to 171° east with a total surface area roughly the same as Northern Ireland. It comprises two larger islands, 10 medium sized ones and some 60 smaller islands and islets, most being inhabited. The land is volcanic in origin, being mountainous and thickly forrested, often with low swampy plains surrounding the central massif, and with a fringe of coral reefs.

The group has a tropical to semi-tropical climate, rainfall being highly seasonal and varying from 420 cm (165 inches) in the north to 231 cm (91 inches) per year in the south. The population of 98,500 is mostly Melanesian and 18 per cent of the people live in the two towns of Vila and Santo (Joint Office of Development Planning, 1977a). The population density varies from 1,257 to 0.6 persons per square kilometre with six per square kilometre overall (Figures 1 and 2), there being some densely populated small islands and some virtually empty larger ones. The depopulation of the islands began with closer contact with Europeans starting at the beginning of the nineteenth century and was hastened by the introduction (sometimes deliberate) of imported diseases such as measles, dysentery, and influenza. The horrors of the sandalwood traffic and 'black-birding' began about 1860 with up to 10,000 natives, mostly able-bodied men, being carried off yearly to plantations in Queensland, Fiji, Samoa, and New Caledonia, and even to the mines of western South America (Buxton, 1925/6). It was only by the mid-1930s that the population began to increase again, and many islands

Figure 1. *Distribution of population in the New Hebrides. Source: Report on the First Census of the Population 1967, Condominium of the New Hebrides.*



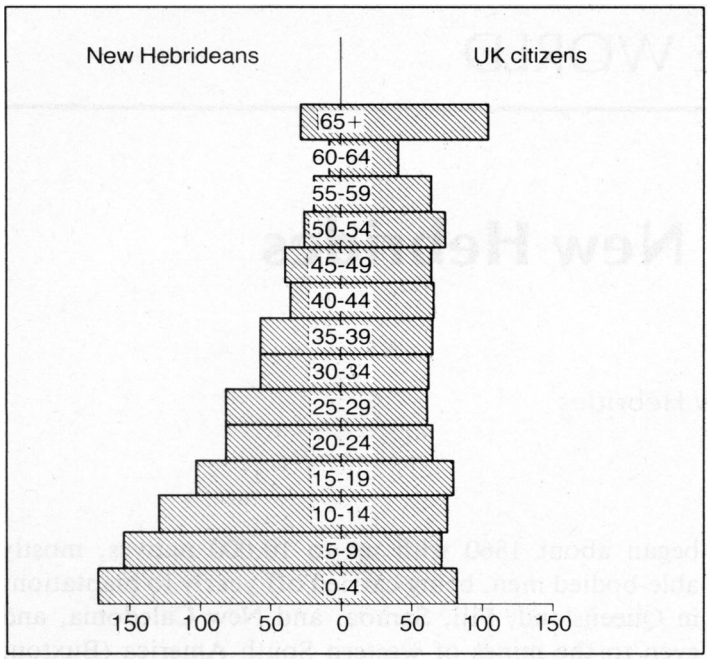


Figure 2. *Proportions per 1,000 people of New Hebrideans and UK citizens contained in each five-year age group. Sources: UNO Demographic Yearbook 1963; and Report on the First Census of the Population 1967, Condominium of the New Hebrides.*

have still not reached the population they attained 130 years before (New Hebrides, 1967).

The administrative structure is interesting, since the New Hebrides is a Condominium set up in 1906 and jointly administered by France and the UK, whose powers are delegated to their respective resident commissioners. The joint administration consists of the British and French National Services and the Condominium Service all based at Vila, the capital, but with French and British district agents in each of the four districts of the New Hebrides. Such a government is by nature both cumbersome and inefficient and this is reflected in all departments, including the medical department.

There are eight bodies providing medical services in the group. The Condominium Rural Health Service is responsible for disease supervision and control and runs a national training centre. The British and French National Services operate referral hospitals (each having a large base hospital in Vila), community hospitals, medical centres, dispensaries, and aid posts. The Church of Christ Mission, the Diocese of the New Hebrides (Anglican), Seventh Day Adventist Church, and the Presbyterian Church all provide community hospitals and dispensaries. One island council operates its own dispensary and several councils in one district employ a total of 10 village sanitarians. Over and above this, the World Health Organization staffs a district office in Vila.

This fragmentation and lack of co-ordination has been, and still is, a major constraint on the development of an effective system of primary health care, although progress is now being made on inter-service co-ordination centrally and in the field. It is hoped that there will be some amalgamation of the services before internal self-government and independence, which will take place within the next two or three years.

The New Hebrides is fertile and comparatively wealthy because it receives large amounts of overseas aid. Copra, fish, cocoa, beef, and manganese are the main exports, with tourism becoming increasingly important. The two metropolitan governments provide 67 per cent of the total public finance revenue, 10 per cent of which is spent on health (US $42 per person) (Joint Office of Development Planning, 1977b). There are 4,750 people per doctor, 100 per hospital bed, and nowhere is there less than one nurse for every 500 people (Joint Office of Development Planning, 1977c).

The villages vary in size from 25 to 200 people, the total number of villages being estimated at 2,000. Most of the housing is of bamboo and thatch. In 1976 only 81 villages (containing 17 per cent of the rural population) had piped water; elsewhere people often have to spend many hours fetching and carrying water in buckets, bottles, and hollow bamboo pipes from springs and rivers. Water supplies are therefore probably the most frequently demanded form of social development at the rural level. The Condominium, financed by voluntary and international agencies (most notably the Australian government), are introducing piped water supplies and it is hoped that by 1979 41 per cent of the rural population will have access to fresh water in their village (Joint Office of Development Planning, 1977a).

Subsistence and village agriculture involve 74 per cent of the total active population producing copra from coconuts, vegetables (principally taro, sweet potato, manioc, and yam), fruit, and livestock. Coastal villages are involved in fishing, mostly by spear or line from dug-out canoes. The islands are largely self-sufficient in the production of traditional food crops and currently export them to neighbouring New Caledonia.

Health statistics

Until the beginning of 1977, there was little attempt to collect data from the medical stations for analysis. Collection of data is still variable, birth and death rate and causes of mortality being mostly guess-work. For what they are worth, some comparisons are shown in Table 1.

Surveys have been done on some major endemic diseases. From these we know that malaria exists in falciparum, vivax, and malariae form, and is spread throughout the group except the island east of 170° east. At present some 43 per cent of the population live in areas under some degree of malaria control.

Table 1. Comparison of health statistics.

Country	Birth rate (per 1,000)	Death rate (per 1,000)	Infant mortality (per 1,000)	Median age (years)	Life expectancy at birth (years)
New Hebrides	45	20	100	16	51
Oceania	25	9	50	25	66
Australia	21	8	17	28	72
Fiji	25	4	26	20	70
Papua New Guinea	41	17	159	19	48

Filariasis surveys have been made in several islands, with mass drug administration over a one-year or two-year period being carried out in selected islands with a high microfilaria carrier rate. Even where the treatment was not properly done (in some islands about 45 per cent of the prescribed dose coverage), the fall in carrier rate was excellent.

The incidence of new cases of tuberculosis and leprosy is about two per 1,000 and 0.2 per 1,000 respectively, figures which have recently been dropping satisfactorily. There is considerable variation in incidence around the group, some small islands having a prevalence of leprosy as high as 22 per 1,000 population, whereas others are free of the disease.

There was an epidemic of over 2,000 cases of dengue fever in 1975 to 1976, and an epidemic of viral gastroenteritis in Port Vila, the capital, in 1976 which caused the death of eight children, and there are still persistent small foci of whooping cough, tetanus, yaws, and typhoid in several islands (British Medical Department, 1976; WHO, 1977). There is a steady increase in gonorrhoea being notified, principally in the two towns. Recently we have seen the appearance of eosinophilic meningitis, a condition caused by the migration to the brain and meninges of a parasitic nematode worm introduced possibly by the consumption of unwashed lettuce or cabbage contaminated by the host, a local snail (Alicata, 1963).

Morbidity

The greatest morbidity is caused by the conditions directly attributable to poor hygiene such as scabies, sores, head lice, and intestinal parasites, especially hookworm. Malaria and respiratory infections are very common, but the traditional scourges, tuberculosis, leprosy, and filariasis are considerably less prevalent. One is immediately led to ask why a country with such comparative wealth and an abundance of medical staff and facilities should have a lower standard of health than so many of its neighbours? With 678 people working in 112 institutions and the country spending four times more per person on health than the Solomon Islands, seven times more than Tonga, and 20 to 40 times more than many countries in Africa and south-eastern Asia (Joint Office of Development Planning, 1977c) there must be good reasons for this discrepancy. If we can identify the weaknesses in the present health care system we can begin to make the necessary changes and hence improve the level of primary health care.

Training

The three church training schools and the two nurse training schools run by the National Administration have been producing trained nurses in the traditional western mould initially geared towards curative medicine in hospitals and clinics. Slowly the importance of rural experience has been realized and students now spend some of their time at a rural training centre; gradually emphasis is being placed on community health and the necessity of working in the villages and not just in the dispensary. It is certainly just as tempting for a New Hebridean 'dresser' to dispense chloroquine and 'Triplopen' (the local cure-alls) to keep the patient happy as it is for his counterpart, the British general practitioner, to bury his head in his prescription pad. In many ways the dresser must work as a doctor, taking a history, examining the patient, and diagnosing and treating rationally. He often has to do all this in very difficult and remote circumstances. Above all, he must rapidly develop the knack of being able to spot the case which must be referred, a business where costly mistakes resulting from chartering or diverting aircraft unnecessarily are not greeted gladly.

Culture

Difficulties in the field often reflect the deep-rooted conservatism of New Hebridean islanders and their suspicion, in the past often well founded, of new ideas enthusiastically argued by strangers, whether black or white. Allied to this conservatism is a continuing and ever increasing adherence to the 'custom' way of life, by which is meant reverence for and adherence to traditional village organizations and behaviour—dress, dance, religious, and all other socio-economic activities, including leaf medicine practice. Although custom medicine is often seen as an obstacle to improving primary health care and is held to have no purely medical benefit, it is a sociological entity and as such must be recognized. New Hebridean Melanesians generally do not opt for one or the other form of medical treatment alone, but will try both, sometimes separately but often at the same time. Understanding and accepting this practice may be of more value in furthering aims in development than denigrating it loudly.

Environmental health

Environmental health has recently been boosted by the appearance of the village sanitarian, a health care worker at village level who has an adequate knowledge

of preventive medicine, especially water supplies, waste disposal, village planning, vector control, food inspection, health education, and the establishment of village health committees. This worker is sponsored and employed by the local council, if there is one, but supervised and guided by central Government staff. Since water supplies to the villages are a priority, the sanitarian will first try to produce a source of clean fresh water before going on to the more difficult tasks of persuading people to dig latrines instead of going into the bush to defaecate, building larger and airier houses, digging pits to dispose of their rubbish, penning up the pigs and cattle instead of letting them wander freely through the village, and giving nutritional advice, particularly to mothers of young babies whose feeding is often adversely affected by strict taboos on certain foods such as eggs or chicken meat (WHO, 1977).

By the beginning of 1978 there were only 11 sanitarians working in one of the four districts, often in liaison with the dresser or the clinic nurse. Elsewhere it is the dressers who usually form the first line of contact in the provision of health care. The enthusiastic and more knowledgeable will tour the island or area giving advice on environmental health and hygiene, but many remain in their dispensaries waiting for the patients to be brought and then referring the problems to the community hospital, clinic, or district medical officer for advice.

In some areas touring teams, sometimes with motorized transport, sometimes by canoe, but often on foot will regularly visit villages, doing mainly maternal and child health work, immunizing and advising but also seeing any other cases presented to them. Regular tours are made by district medical officers and medical assistants in areas where there is a lot of tuberculosis and leprosy, but some islands are difficult to reach and it may be several months between visits. To make a week's tour of one such island in my district I had to use ship, foot, small boat with outboard, canoe with outrigger, and plane.

Small dispensaries are liberally scattered throughout the group. There is at least one in each island of any size or with a population of 200 or more and they are manned by full-time employees paid centrally. No attempts have been made to recruit traditional birth attendants or custom medicine practitioners and incorporate them into the system, although many other countries in the Pacific region have done so successfully. It may be that with independence an attempt will be made to use this largely untapped resource to the benefit of the village people.

Conclusions

The New Hebrides is often frustrating but always fascinating as a place for a doctor to work. With such a small population and so few medical undergraduates currently in training, it will require expatriate staff for many years, in medicine as in other disciplines. There is great diversity in the work, for there are many isolated island communities, some large empty islands, and some small crowded ones. The range of illness comes straight from a textbook of tropical medicine and the importance of hygiene is paramount. Yet despite all this, there are seldom the horrors of Africa. There are no wards full of malnourished babies, civil war casualties, or obstetric catastrophies. The people are friendly in a rather pleasant, shy fashion, usually well nourished and fit.

Many of the present difficulties, mostly administrative, have been imposed upon the islanders by their short-sighted colonial masters, and the present tangle is one which Dean Swift would have had difficulty in inventing.

Self-government is coming soon and full independence not long after; it is to be hoped that one result will be a more flexible and less cumbersome medical administration that will give increased satisfaction to everyone.

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Relation of cigarette smoking to myocardial infarction in young women

To examine the relation between myocardial infarction and cigarette smoking in young women, we investigated the smoking habits of women under the age of 50 who had survived a recent myocardial infarction. They had not been using oral contraceptives, and other identifiable risk factors were excluded. Among 55 such women and 220 controls matched for age and area of residence, the proportions of cigarette smokers were 89 per cent and 55 per cent respectively ($p<0\cdot001$). A dose-response relation was evident; among women smoking 35 or more cigarettes per day the rate of myocardial infarction was estimated to be some 20-fold higher than among those who had never smoked. This study demonstrates that cigarette smoking is a risk factor for myocardial infarction in young women who are otherwise apparently healthy.

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