**Report / Medical Department, Fiji.**

# MEDICAL DEPARTMENT

Report for the year ended 1970

PARLIAMENT OF FIJI

PARLIAMENTARY PAPER NO. 17 OF 1972

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## FIJIAN SPELLING

Two systems of spelling Fijian names and words are in use in the Dominion. The " Fijian " system was devised during the period 1835–37 by the Missionaries who first reduced the Fijian language to writing. They aimed at representing the various Fijian sounds by single letters and the system that resulted has been used ever since by the Fijian people and is in general use within the Dominion. The letters concerned are " b ", " c ", " d ", " g ", and " q " and the following examples indicate the manner in which they are pronounced.

(i) B is pronounced " MB " as in number, e.g LABASA = LAMBASA.
(ii) C is pronounced " TH " as in that, e.g. CAUTATA = THAUTATA.
(iii) D is pronounced " ND " as in end, e.g. NADI = NANDI.
(iv) G is pronounced " NG " as in sing, e.g. NASIGATOKA = NASINGATOKA.
(v) Q is pronounced " NGG " as in finger, e.g. YAQARA = YANGGARA.

In practically all words in Fijian, the accent is on the penultimate syllable.

2. The " phonetic " system is a more recent attempt to render Fijian words in English spelling. It is used in maps and in documents designed primarily for overseas reading, e.g. MBAU (BAU), THAKOMBAU (CAKOBAU), NANDI (NADI), NANDRONGA (NADROGA), MBENGGA (BEQA).

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# MEDICAL DEPARTMENT

ANNUAL REPORT FOR 1970

## PART A—PROLOGUE

### 1. GENERAL INTRODUCTION

1.1. This report represents a health inventory of Fiji during 1970, the year of its independence, gained on the 10th October, 1970.

1.2. The inventory reveals that 1970 was a year of steady progress, both in terms of achievements recorded and in the evolution of policy.

1.3. Health is of paramount importance to any country but particularly to a developing one, which can ill afford to allocate scarce resources for the non-productive treatment of preventable disease. Prevention therefore is all inportant and over the years Fiji has built up a preventive machine which has provided impressive results. In consequence, infant and general mortality rates have fallen to new low levels and little serious infectious disease remains. On the other hand, Fiji is experiencing a sharp rise in morbidity and mortality from accidents of all kinds but particularly from road accidents, which represent one of the prices the community has to pay for economic development and the rapidly increasing number of motor vehicles finding their way on the Fiji's roads.

1.4. Although the developments in preventive medicine have been considerable, the clinical services have not been neglected and the country is well served by a national network of hospitals, health centres and nursing stations. The main deficiency in this regard is a lack of urban health centres to provide neighbourhood treatment for the large number of patients who crowd the hospital out-patient departments in Suva and Lautoka, thus contributing to the long waiting times which are the cause of numerous complaints. This situation is made worse by the rapidly increasing urban populations, particularly of Suva, which results from the high rate of natural increase, aided by an ever increasing " urban rush ".

1.5. The per capita cost of the medical services which includes the medical school increased by 20 per cent. over the 1969 figure, but it is still one-tenth or less of the per capita cost of health services in Australia and New Zealand with which the Fiji services are most frequently compared.

1.6. The Family Planning Programme is completely integrated with the Maternal and Child Health Services and is a major plank in the country's preventive structure. This structure continues to be developed but the rapid fall in the birth rate experienced over the last few years has temporarily been slowed by reason of the considerable influx of young people into the reproductive age group resulting from the high birth rates of the forties and fifties. The attendance at Family Planning Clinics increased by nearly forty per cent. and the overall fertility fell from 134·9 to 133·2 births per thousand women in the 15–45 age group.

1.7. The reduction in the number of births which, in recent years, has replaced the former inexorable yearly increase has enabled detailed attention to be paid to Maternal and Child Health Services. In this context, section 15·3 of the report provides a detailed analysis of the twenty-four maternal deaths which occurred during the year. The highlighting of this problem invites its resolution and extra effort in this direction will inevitably lead to a reduction in the maternal death rate, which remains one of the few health parameters which does not compare favourably with the corresponding rates of developed countries.

1.8. Another chapter has been added to the history of filariasis control and the continued success of this campaign, encourages us to think in terms of the absolute control, if not eradication of this disease, within the next decade. The battle against tuberculosis also continues, the number of new cases having been further reduced to a rate of 0·62 per thousand of population. The problem is now largely confined to the Fijian race which has five times the incidence of Indians, while the incidence in Fiji among Indians and Europeans is much the same, as that existing in the United Kingdom.

1.9. The major problems which remain are the unsatisfactory standard of environmental sanitation particularly in rural areas and the lack of urban health centres. The former will be assisted by an order, given at the close of the year for the manufacture of 5,000 water-seal latrine bowls made in high density polythene. It is confidently expected that the new bowls which result from considerable experimentation in Fiji, will revolutionise and accelerate the whole process of the installation of water-seal latrines and provide an infinitely better and more hygienic product. Limited financial provision has been made in the present Plan to commence construction of a chain of urban health centres towards the end of the Plan period, but it will be necessary to increase this provision, if the problem of the overcrowding of out-patient facilities is to be resolved in the reasonably near future.

1.10. This report is a story of human endeavour and reflects to the credit of the medical, nursing and paramedical staff of the Department who have worked hard and for long hours in the service of a public which regretfully does not always show its appreciation for the services provided.

1.11. However, I would like to offer my sincere appreciation to all Departmental staff for the part they have played in the work of the Department during the year and to those people, present and past, who have pioneered the course the Department has followed. I would particularly like to thank my deputy, Dr. Dharam Singh, for playing the major role in the production of this report.

## PART B—FIJI AND IT'S PEOPLE

*" I fervently trust that this important step will tend to develop the great natural capabilities of these beautiful and fertile islands, and at the same time conduce largely to the contentment and happiness of all classes of the population."*

*—Sir Hercules Robinson,*
*"Deed of Cession."*

### 2.1. The Islands

2.1.1. The Dominion of Fiji comprises a group of some 300 islands in the South-West Pacific. About 100 of these islands are inhabited. They lie just within the tropics between 15° and 22° South Latitude and straddle the 180th meridian between 175° East and 177° West Longitude. (See map at back). The capital Suva, is approximately 1,200 miles North of Auckland and 2,000 North-East of Sydney.

2.1.2. Most of the islands have mountainous centres with flat arable land around the coast. There are some notable river plains, which enter into the centre of the major islands. These plains are fertile, but liable to recurrent flooding. Such catastrophies have a marked effect on the economy of the people living on these plains and indirectly on their health.

2.1.3. The islands are scattered over 164,000 square miles of the Pacific Ocean but the land area totals only 7,055 square miles or 18,272 square kilometres. The great distances of some of the smaller islands from the capital Suva, poses difficulties of administration and communication.

### 2.2. The People

*" Unity in Diversity "*

2.2.1. The population of Fiji on 31st December, 1970, was estimated to be 524,457, with an overall density of 74·2 to the square mile, but the population density varies enormously from 4,000 people to the square mile in the metropolis of Suva, to less than six to the square mile over large areas of the rugged centres of the main islands.

2.2.2. Fiji is a country of various ethnic groups, of varied beliefs, cultures and traditions, all living in a unique harmonious unity under an avowed policy of multi-racialism and personal freedom which has existed for more than a hundred years since the cessation of internecine tribal wars and the signing of the Deed of Cession in 1874

2.2.3. In 1879, five years after the Deed of Cession, indentured Indian labourers were brought to Fiji for the first time to give meaning to the promises contained in Deed of Cession of promoting civilisation and commerce. Earlier, other ethnic groups had been brought to Fiji to work in plantations but had proved to be unsatisfactory and disappointing.

2.2.4. Table XIV lists the various ethnic groups and their numbers in the traditional manner, but it is becoming increasingly difficult to identify the ethnic origin of some of the young people in the streets of Suva at first sight, the result of the various races living together for nine decades.

2.2.5. The backbone of Fiji's economy is agriculture and sugar is by far the most important item. In recent years tourism has gained increasing importance and it is now the second most important foreign exchange earner, while the mining of minerals is slowly being developed.

### 2.3. Administration

*" By the people, for the people ".*

2.3.1. Following various difficulties in the setting up of Government by King Cakobau in the latter half of nineteenth century, Fiji was ceded to Great Britain. The event and the conditions of Cession are embodied in the historic Deed of Cession signed on the 10th October, 1874. Thereafter Fiji became a Crown Colony and remained so for 96 years until the 10th October, 1970, when Fiji was granted a Dominion status within the Commonwealth and adopted a Parliamentary system of Government.

2.3.2. Parliament is made up of two Houses. The House of Representatives consisting of members elected on a mixed communal and cross-voting system and the Senate or Upper House of 22 members, eight nominated by the Fijian Council of Chiefs, seven by the Prime Minister, six by the Leader of the Opposition and one by the Rotuma Council.

2.3.3. The Queen is the Head of State and the Governor-General is appointed by the Queen to represent her in the Dominion.

## 3. THE MEDICAL DEPARTMENT

### 3.1. History

3.1.1. Before Cession, such medical staff as were present in Fiji, confined their attention to the non-indigenous population. The indigenous people had their own system of "medicine" which incorporated a considerable amount of witchcraft. A year after Cession, the outbreak of the deadly measles epidemic carried away a third of the Fijian population. The result was undoubtedly made worse by the medical advice of the " traditional healers " who were confronted by a disease of which they had no prior experience.

3.1.2. However, it was the outbreak of smallpox in 1879 on board the *Leonidas* while bringing the first group of indentured labourers from India to Fiji that worried the Government even more and presented visions of an epidemic of smallpox sweeping through Fiji with results even more catastrophic than those recently experienced from measles. With this prospect in mind some Fiji men were hurriedly trained, primarily as vaccinators but also in the elements of hygiene, to look after the local population. The results proved so satisfactory that in 1886 the Medical Administration enrolled the first group of Fijian men as medical students and started them on a three-year course of medical training. The future story of the training of doctors in Fiji is covered in the section on " Training ".

### 3.2 Organisation

3.2.1. The Medical Department falls within the portfolio of the Minister of Social Services who is also responsible for the Departments of Education, Prisons and Social Welfare. The Director of Medical Services is responsible to the Minister for the executive aspects of Government Medical policy and for advising the Ministry on matters of Health. The Director of Medical Services is assisted at Headquarters by a staff of medical, nursing, para-medical and lay personnel. The health services during the year 1970 were provided by 220 Government doctors of various grades in addition to some 25 General Practitioners, thus providing a ratio of one doctor for every 2,140 persons. However, as at any one time, a number of doctors are on leave or overseas under the In-service Training Scheme, a process to be intensified in 1971, in actual fact, the true ratio was less favourable than the figures indicate. There were also 31 dentists or one for every 16,918 persons, as well as 787 nurses, providing a ratio of one nurse for every 665 persons. These figures do not include the staff at the Fiji School of Medicine or the

Schools of Nursing. The twenty-five doctors and five dentists in private practice throughout Fiji do not receive a Government subsidy of any kind and patients pay their private practitioner directly for the service provided.

3.2.2. For Medical administrative purposes, Fiji is divided into four Divisions, each being headed by a Divisional Medical Officer. The four Divisions are of varying size (see map), and are further divided into subdivisions and these again into a number of medical areas. The "area" is the basic medical unit but is further divided into Nursing Districts, the nurses in charge of these districts being responsible directly to their Medical Officer stationed at the area health centre.

3.2.3. Because of their size and for administrative purposes, the two major Divisional Hospitals—that is the Colonial War Memorial Hospital in Suva and the Lautoka Divisional Hospital, as well as the three special hospitals of St. Giles' (Psychiatric), P. J. Twomey Memorial (Leprosy) and Tamavua (Chest) have been placed under the administrative control of senior clinicians, who act as medical superintendents. They are directly responsible to the Director of Medical Services.

3.2.4. The chain of responsibility is so arranged that not only is there the closest integration of curative and preventive medicine but also of medical, nursing and environmental health work. The subdivisional medical officer is an important middle link between the Divisional Medical Officer in the upper echelon and the Area Medical Officer at the lower end of the scale. The Subdivisional Medical Officer is also responsible for co-ordinating the work of the public health nurses and the health inspectorate at the subdivisional level. To this end, subdivisional staff meetings are held each month and information is passed both up and down the communication chain.

### 3.3. Establishment

3.3.1. The staff of the Medical Department provide, in addition to in-patient treatment at the various special, divisional, subdivisional and area hospitals, a general practitioner service through the out-patients departments of hospitals and health centres. It is the out-patient service which has been placing increasing demands on the medical and nursing staff and a number of centres were inadequately staffed during the year.

3.3.2. In the sphere of preventive medicine, the medical officer has been greatly assisted in his "follow-up" work by an augmented establishment of "district" and "zone" nurses. Although the implementation of the concept had slow beginnings, it was working generally well by the end of 1970. Under this scheme a public health nurse/midwife cares for a population of 2,000 in rural areas and 10,000 in the urban areas. However, the latter ratio was found to be too low, despite the difference in responsibilities in urban and rural areas and adjustments are now in progress to assign a nurse to every 5,000 people in the urban areas. These public health nurses visit all the villages and settlements in their district at specified times, taking stock of the general health of the population as well as visiting and advising registered cases of tuberculosis, leprosy, acute rheumatism, mental and diabetic patients on their domiciliary treatment. A documented record is kept on a "Family Record Card" of all women in the 15-44 age group. The Card provides a continuous record of their family planning status, of antenatal visits and deliveries, as well as a record of the immunisation status of their children.

3.3.3. The shortage of pharmacists in the Department has continued inspite of a number of newly qualified pharmacists returning to Fiji. These have been attracted to the private sector because of better remuneration. The Junior Pharmacy Course formerly conducted by the Fiji School of Medicine was discontinued some years ago because there was no difficulty for suitable local candidates to gain places at training institutions overseas. A number of candidates are known to be studying overseas at the moment and it is hoped that the recruitment position will improve in 1971.

3.3.4. The exodus of trained technicians in radiograph and laboratory technology noted last year continued during 1970 and steps have been taken to increase the number of students admitted to the relevant training courses in 1971.

3.3.5. To cater for the increasing public demand for health services, particularly on the curative side, the establishment of personnel shown at Table I of the Appendix, indicates an increase of 5 per cent. over the 1969 figure. (This does not include unestablished workers). However, while the recruitment of staff other than doctors has been largely satisfactory, the medical staff situation leaves much to be desired. This was partially due to the fact that only two Fiji students graduated in medicine and surgery from the Fiji School of Medicine in 1970 but also because the recruitment of doctors from the United Kingdom has become more difficult despite the allowance, over and above the Fiji salary paid by the Overseas Development Administration of the British Government. The delay in recruitment from the United Kingdom is thought to be due in no small measure to the recent introduction of the very much improved salaries and conditions of service of doctors serving in the United Kingdom Health Services. The shortage of doctors in Fiji during the year was so acute that Government approved an approach to the Indian Government for the secondment of doctors from the Indian Medical Service. Arrangements for such recruitment were completed towards the end of 1970 and it is hoped that the first secondments will take place in early 1971.

3.3.6. All four posts of Divisional Medical Officer were held by graduates of the Fiji School of Medicine, three of whom possess the Diploma in Public Health of the Otago Medical School, New Zealand. The shortage of Consultants is also acute and recruitment of these specialists from overseas is also difficult. The resultant difficulty was temporarily overcome by the temporary appointment of medical officers to these positions on an acting basis. Some of these doctors who held substantive registrar appointments are scheduled for further specialist training overseas in 1971. This situation as well as the likelihood of the retirement of additional consultants in the near future, and the poor response to overseas recruitment is likely to cause serious difficulties in 1971.

3.3.7. A number of local graduates have been given the opportunity to study overseas for higher qualifications under the in-service training scheme but even if successful, their services will not be available in Fiji for some years, and services have to be maintained in the interim period.

### 3.4. Legislation

3.4.1. There were no major additions to the present legislation other than a few minor amendments.

3.4.2. However with the adoption of Ministerial Government, legislation was appropriately amended, including a provision for the transfer of medical statutory authorities formerly vested in the Governor or Governor-in-Council to the responsibility of the Minister of Social Services.

3.4.3. The Pharmacy and Poisons Ordinance was amended to include provision for the selling of medicine for veterinary use by the holders of Poison Licences provided for by Section 60 of the principal Ordinance.

3.4.4. Considerable discussions have taken place during the year on the proposed new Medical and Dental Act which includes the statutory incorporation of the Fiji Medical and Dental Associations. At the time of writing the proposed Bill was under debate and the outcome will be discussed in the 1971 report.

3.4.5. Against the background of the world-wide concern in the misuse of drugs generally and especially the abuse of habit forming drugs, legislation is providing adequate safeguards against the problem and we are fortunate that we do not have, as yet, a serious problem in this regard. During the year there were four convictions under the Dangerous Drugs Ordinance for offences against section 12 (*b*) and four against section 8 (*b*) of the Ordinance. The latter were in relation to the possession of Indian Hemp. As signatories to the Convention on Narcotic Drugs 1961, Fiji submit annual reports on the working of the articles of the Convention, to the International Narcotic Control Board and this is provided for in the Fiji legislation.

### 3.5. Supplies

3.5.1. Other than general purpose items purchased through the Government Supplies Department, most medical stores are ordered or channelled through the Government Pharmacy and Medical Stores. The Chief Pharmacist and Controller of Medical Stores not only supervises the ordering of drugs and dressings but also a wide range of hospital equipment. The need to buy in the cheapest market consistent with a satisfactory level of quality, entails constant market research, a task which has been fulfilled with evident efficiency for many years.

3.5.2. As the finance available for supplies is of necessity limited, strict control has to be exercised over the variety and quantity of drugs used by the various institutions.

3.5.3. In so far as drugs are concerned, the policy is—

(*a*) to supply all Departmental units with an adequate quantity of routine drugs listed for general use. This is to ensure that the requirements of all patients in this regard are met without charge;

(*b*) additional supplies of listed " special drugs " are also provided. The indigent are provided with these " special drugs " without charge, a wage earner is charged a subsidised rate generally amounting to twenty cents per prescription, while those who can clearly afford the commercial price are given prescriptions to be dispensed by a private chemist;

(*c*) drug requirements for in-patients are provided in full according to a schedule which provides for a varying range of drugs for various hospital levels. Consultants are provided with whatever drugs they require.

A drug committee meets each year to discuss and modify the standard lists of drugs referred to above.

3.5.4. The cost of medical supplies per occupied bed at the various hospitals in the Dominion is set out at Table V. The ominous yearly increase in costs is evident, and in some cases demand almost doubles over a twelve-month period.

### 3.6. Transport

#### 3.6.1. Communications

The Department recognises the need to improve communications not only within areas but also between stations and islands. This is being done gradually, first by improving the Departmental transport system and secondly by the installation of radio telephones at outlying stations. It will be clear that this development must be co-ordinated with the capacity of the Posts and Telegraphs Department to maintain these radio telephone stations in working order. The transfer of the former medical ship for use by the Posts and Telegraphs Department has greatly improved the capacity of that Department to carry out maintenance work among scattered outposts. As a result there should be little reason to have non-operating radio-stations for prolonged periods in the future.

#### 3.6.2. Land Transport

3.6.2.1. As mentioned in the last year's report, the mobilisation of staff at all levels aimed at increasing staff effectiveness is Departmental policy. The zone nurses and district nurses are being provided with small cars or vans, while most area and subdivisional teams are supplied with land-rovers. The Department's motor fleet is listed below according to type and station.

TABLE 3.6.2.1.

MEDICAL DEPARTMENT TRANSPORT VEHICLES ACCORDING TO TYPES

| *Type* | *Number* |
|---|---|
| (*a*) Land-rovers | 32 |
| (*b*) Mobile clinics | 26 |
| (*c*) Ambulances | 15 |
| (*d*) Mini Mokes | 23 |
| (*e*) Buses | 6 |
| (*f*) Trucks | 6 |
| (*g*) Station wagons and vans | 12 |
| (*h*) Other | 4 |
| Total | 124 |

TABLE 3.6.2.2.

MEDICAL DEPARTMENT TRANSPORT VEHICLES AND THEIR DISTRIBUTION

| *Station* | *Number* |
|---|---|
| Western Division (includes Lautoka Hospital) | 38 |
| Central Division | 27 |
| Northern Division | 26 |
| Eastern Division | 6 |
| Colonial War Memorial Hospital | 11 |
| Other stations | 16 |
| Total | 124 |

3.6.2.2. Considerable Departmental time and effort is put into the maintenance of the fleet in an operational condition. Unfortunately, however, it is becoming obvious that though some stations are always ready to request more transport, the utilisation of the vehicles they have is unsatisfactory. In addition the mileage claims for private vehicles show an upward trend despite the increasing size of the Departmental fleet.

### 3.6.3. Sea Transport

3.6.3.1. While the use of road transport is confined mainly to the major islands, the distribution of the smaller islands and the settlement of people along portions of the coastline of the larger islands which are inaccessible by road, necessitates the maintenance of a considerable fleet of " boats " of all sizes for the use of the health services. Except in the case of punts and a few small launches run by the Medical Department, the fleet is administered and maintained by the Marine Department, who also design and build the craft concerned.

3.6.3.2. The new twin screw motor vessel *Vuniwai* (Fijian word for Doctor) of 160 tons was commissioned during the year and is a marked improvement over her two predecessors of the same name, the most recent of which has been renamed *Daunivosa* and transferred to telecommunication work. The *Vuniwai* has a small dispensary on board as well as an operating theatre and x-ray plant. In the short time since she has been commissioned, she has already answered a number of emergency calls. Her main mission is as a medical stores and personnel carrier and this work is intergrated with various medical missions and surveys. She will be extensively used in Filariasis and Tuberculosis Campaigns as well as on routine inspections by headquarters, divisional and subdivisional staff. Towards the end of the year, plans were already completed for the use of *Vuniwai* for the transport of " blitz " health teams to areas, where for one reason or another, public health administration has lagged behind and is in need of promotional activity.

3.6.3.3. The second of our larger vessels, the A.K. *Makogai* after undergoing an extensive refit, has been strategically placed at Lakeba for the use of the subdivisional team and to provide sea communications in the central and southern areas of the Lau Group.

3.6.3.4. In addition to the two medical ships, there is a fleet of nine launches, two of the 36′ class, serving the subdivisions of Northern Lau and of Kadavu, three 32′ launches, one providing medical communications within Natewa Bay, one at Savusavu and the other serving the Yasawa group of islands, while three 14′ launches are stationed at various area centres. In addition, a launch is provided for quarantine work in Suva Harbour and the *Mary Agnes*, donated by the Lepers' Trust Board of New Zealand and named after the legendary missionary nursing sister who ran the island leprosarium of Makogai for many years, is used for recreational purposes in Suva by the patients of the recently commissioned P. J. Twomey Memorial Leprosy Hospital. Finally, seven outboard powered punts are used for the transport of area medical staff around various small islands of the group.

3.6.3.5. However, all Government vessels are at the disposal of the Medical Department in an emergency and we are extremely grateful to the Marine Department for their efficient handling of these " mercy missions ". When a call for medical assistance is received by the Medical Department, the Marine Department is immediately alerted, who then locate the nearest ship, which is diverted to the emergency area. It is very much to the credit of the Marine Department that their ships have been able to assume the role formerly carried out by the flying boats of the Royal New Zealand Air Force without deterioration in the quality of the service provided.

## 3.7. Finance

3.7.1. Even in more affluent countries where money is not so much of a problem, the implementation of demands for additional medical services is still limited by the availability of funds. Of necessity, the amount of money that can be allocated to the social services must bear a relationship to Government's total resources and the level of recurrent expenditure on health usually amounts to about 10 per cent. of the Recurrent Budget. In developing countries such as Fiji, the medical services are largely confined to preventive and curative services and few resources remain to develop services aimed at rehabilitation or the care of the elderly.

3.7.2. The total Recurrent Budget provision for 1970 was $35,666,926 of which $3,335,571 or 9·35 per cent. was allocated to the Medical Department. Reference to Table II in the Appendix shows that since 1966, the percentage of total budget allocated to Health had been falling progressively year by year.

3.7.3. The revenue collected by the Department was $358,283 representing 9·50 per cent. of its total gross expenditure, so that 90·5 per cent. of all medical expenditure was met from taxes. The drop in revenue from 11·65 per cent. in 1969 was due to the increased exemption of children from medical and dental charges during the year. Table III of appendices lists the trend over the last six years.

3.7.4. An increase in health expenditure in 1970 of $625,543 over 1969, represents a 16·6 per cent. increase. However, of this increase, $427,398 was accounted for by salary and wage revisions granted during the year so that the proportion of the increase available to meet price increases and medical developments was a mere 6 per cent. An analysis of the health budget for the year reveals that 70·2 per cent. of the total relates to the payment of all grades of personnel, 24·5 per cent. refers to stores and 5·3 per cent. to other administrative charges. The financial details are provided below in Table 3.7.4.

TABLE 3.7.4.

BUDGETARY PROVISION AND EXPENDITURE ON HEALTH IN FIJIAN DOLLARS

| | 1969 | Percentage of Total | 1970 | Percentage of Total |
|---|---|---|---|---|
| | $ | | $ | |
| Budgetary provision for— | | | | |
| (*a*) Personnel .. | 2,209,335 | 70·7 | 2,358,325 | 70·2 |
| (*b*) Stores .. | 772,318 | 24·3 | 809,460 | 24·5 |
| (*c*) Administrative charges .. | 165,492 | 5·0 | 167,786 | 5·3 |
| Total Budgetary Provision .. | 3,147,145 | 100% | 3,335,571 | 100% |
| Revised Provision . | 3,166,425 | .. | 3,779,624 | |
| Actual Expenditure | 3,145,737 | .. | 3,771,280 | |
| Revenue .. .. | 366,285 | .. | 379,048 | |
| Net Expenditure .. | 2,779,452 | .. | 3,392,232 | |
| Net per capital expenditure on health | $F 5.41 | (US$) 6.18 | $F. 6.51 | (US$) 7.43 |

3.7.5. These increases in expenditure are inevitably reflected in the per capita cost of the health services, and the net expenditure per person on health rose from $5.41 in 1969 to $6.51 in 1970, an increase of just over 20 per cent. This increase is explained by inflation, by the increasing cost of personnel, by improvements to the service and by a proportionate reduction in medical revenue consequent on the introduction of free health services for children.

3.7.6. It is difficult to compare the medical expenditures of different countries because of the many factors which are concerned. These include accounting practices and other factors. For example, in Fiji, the training of doctors, nurses and para-medical staff is covered by the health budget while in smaller countries, such education may be carried out at overseas institutions and the costs involved charged to other than medical votes, while in developed countries such institutions of higher learning are more likely to be autonomous and again not a charge on the health vote. However, Fiji's health expenditure is in the middle range and it is seldom realised that the extent to which health services can be improved is dictated by the funds available. It is not possible therefore, to provide the level of services existing in developed countries where the per capita expenditure on health is more than ten times the Fiji figure.

## PART C—THE CURATIVE SERVICES

### 4. GENERAL HOSPITAL SERVICES

4.1.1. The Medical Department provides the greater part of the preventive and curative services of the country other than that provided by 25 general practitioners whose work is largely confined to a few main centres and by the Government subsidised hospitals run by the Methodist Church at Ba and by the Roman Catholic Church at Naiserelagi in the Ra Province.

4.1.2. Apart from fees charged for patients admitted to the so-called " Paying Wards ", medical charges are purely nominal. An out-patient consultation costs ten cents and maintenance in hospital twenty cents a day with a maximum charge of four dollars twenty cents for each admission, however long the stay. Private ward fees vary according to the type of accommodation provided and range from $2.50 to $6.00 per day. These charges include drugs, routine x-rays and laboratory work but do not include surgical operations for which a separate charge is made up to a maximum of $50. Neither do they include special X-ray and laboratory investigations for which modest additional charges are made. The fee structure is based on the principle that those who are able to pay should meet part of the cost of the service but that nobody should be denied treatment because of his inability to pay. A basic " means test " has therefore been devised without the drawbacks of complicated bureaucratic machinery.

4.1.3. As a matter of convenience, curative and preventive services are described in this report in separate parts but most of these services other than those provided by the specialist hospitals are closely intergrated.

### 4.2. The Basic Unit—Health Centre

4.2.1. Whereas the Health Centre was formerly regarded as the basic unit in the structure of the Medical Department's curative services, it is becoming clear that 128 nursing districts are playing an increasingly important role in this regard.

4.2.2. The whole concept of curative services is based on the principle of the referral of patients " up the line". It is understandable that in a country where a reasonable degree of control has already been established over the major diseases, the district nurse is already providing curative services for a large proportion of the minor ailments, cut and injuries. This has been made possible by the gradual improvement of the standards of the nursing stations and of the training of the staff nurses by means of group meetings at the area level, by Departmental refresher courses, which are organised as in-service type training at area, subdivisional and divisional levels and by formal courses of study provided at the main hospitals and at the Central Nursing School.

4.2.3. At the end of 1970, 44 Health Centres were operational and these are listed below in Table 4.2.3. However, during the year, a number of health centres were temporarily reduced to the status of nursing stations for varying periods because of difficulties experienced in the recruitment of medical officers.

TABLE 4.2.3.

HEALTH CENTRES

| | | |
|---|---|---|
| *Central Division* | | |
| Beqa | Naqali | |
| Korovisilou | Nausori | |
| Korovou | Navua | |
| Laselevu | Nayavu | |
| Lodoni | Nuffield Clinic | |
| Mokani | Police Barracks | |
| Naboro Prison Farm | Raiwaqa | |
| Nabua | Samabula | |
| Namosi | Suva Gaol | 18 |
| *Western Division* | | |
| Ba | Nadi Airport | |
| Keiyasi | Namaka | |
| Kese | Nanukuloa | |
| Lomawai | Tavua | |
| Nadarivatu | Vatukoula | 10 |
| *Northern Division* | | |
| Dreketi | Saqani | |
| Lekutu | Tukavesi | |
| Naduri | Visoqo | |
| Natewa | Wainunu | |
| Rabe | Wainikoro | 10 |
| *Eastern Division* | | |
| Gau | Moala | |
| Kabara | Ono-i-Lau | |
| Koro | Yaro | 6 |
| | Total Health Centres | 44 |

4.2.4. The organisation and distribution of health centres and nursing stations is under constant review and the opportunity is taken to resite these units more appropriately at the time of their reconstruction, taking into account the changing economy and population of the areas concerned, the pattern of which has altered considerably since the original network was established at the turn of the century

4.2.5. An example in this regard is the medical station at Nadarivatu which was established when the village was an important inland administrative centre and more recently the site of a large timber mill. Since then the situation has very much changed. Nadarivatu has lost a great deal of its importance as an inland centre while at the same time public transportation which was previously non-existent, now connects the area with the growing township of Tavua which is provided with a large medical complex including a modern maternity unit.

4.2.6. The programme of rebuilding and modernisation of health centres which has been followed for several years past, continued throughout the year, and a visit to rural areas such as a car drive along the northern part of Vanua Levu from Wainikoro westwards to Lekutu illustrates the amount of rebuilding which has taken place in recent years. Encouraging too, for the future, is the site planning of Government stations whereby various Government Departments are brought in close proximity to each other on the new stations, thus reducing costs while providing an overall improvement of services to the public.

### 4.3. Area and Subdivisional Hospitals

4.3.1. The former terminology of Rural and District Hospitals was changed during the year, to bring the nomenclature in line with that of the general organisational structure. Accordingly there are now twelve Subdivisional Hospitals with a total of 328 beds including the fifteen bed Subdivisional Maternity Annexes at Nausori and Tavua, and four Area Hospitals at Rotuma, Ba, Wainibokasi and Matuku, which together provide an additional 67 beds. The geographical distribution of the Subdivisional and Area Hospitals is listed below in Table 4.3.1. Nine of the subdivisional hospitals are equipped with X-ray and laboratories, operated by nurse-technicians. The two area hospitals at Rotuma and Ba are also provided with X-ray and laboratory facilities. The policy for the future is to provide additional X-ray and laboratory units at some of the major Health Centres, in an endeavour to decentralise the work that would otherwise gravitate to the already overcrowded General Out-Patient Departments of the major hospitals.

TABLE 4.3.1.

AREA AND SUBDIVISIONAL HOSPITAL

| | Beds | |
|---|---|---|
| *Subdivisional Hospitals—* | | |
| Sigatoka | 56 | |
| Savusavu | 54 | |
| Taveuni | 51 | |
| Nadi | 47 | |
| Vunisea | 20 | |
| Lomaloma | 16 | |
| Ra | 15 | |
| Nabouwalu | 15 | |
| Lakeba | 12 | |
| Vunidawa | 12 | |
| Nausori Maternity Unit | 15 | |
| Tavua Maternity Unit | 15 | |
| | — | 328 |
| *Area Hospitals—* | | |
| Ba | 27 | |
| Wainibokasi | 12 | |
| Matuku | 8 | |
| Rotuma | 20 | |
| | — | 67 |
| St. Elizabeth's Home (Leprosy) | 53 | |
| | — | 53 |
| *Subsidised Hospital—* | | |
| Ba Methodist Hospital | 51 | |
| | — | 51 |
| Total Beds | | 499 |

4.3.2. A considerable amount of operative surgery is already being undertaken at Subdivisional Hospitals either by the residential staff or by visiting surgical teams from the Divisional Hospitals. Such operative work is already undertaken at Taveuni and Savusavu and arrangements for the introduction of similar services at Sigatoka, Lomaloma and Lakeba are already well advanced. The movement of surgical teams for such work though costly, enables the local medical staff to exchange ideas and has the effect of stimulating the raising of medical standards in the peripheral centres. More importantly it provides valuable additional services for the people of the area who would otherwise have to travel long distances for routine surgical attention.

### 4.4. Maternity Units

4.4.1. Departmental records of first visits to antenatal clinics indicate that almost all expectant mothers in Fiji, receive antenatal attention at some time during their pregnancy, but the number being delivered by trained staff still leaves something to be desired. In 1970, 1,908 mothers were delivered at home by untrained traditional birth attendants—see Table 4.4.1.

TABLE 4.4.1.

| | |
|---|---|
| Deliveries in hospitals | 11,644 |
| Deliveries by District Nurses | 1,787 |
| Deliveries by untrained staff | 1,908 |
| Total Births | 15,339 |

4.4.2. With this in mind, the Department has continued its policy of expanding maternity facilities. To this end a smaller version of the 15-bed maternity units already in operation at Nausori, Nadi and Tavua has been designed. This new unit has six maternity beds and a delivery suite, together with an additional four health centre beds for general purposes. The first two of these units to be built at Navua and Korovou were well advanced by the end of the year and both should be operational in the second half of 1971. The commissioning of these two units will increase the number of maternity beds available from 168 to 180.

4.4.3. In 1970, 11,644 hospital deliveries were managed, using 168 beds which represents a ratio of 69·3 deliveries per maternity bed. The number of maternity beds is seen to be modest when this delivery/bed ratio is compared to the 21·1 births per bed existing in the United Kingdom. However, the situation will be further improved when the proposed maternity unit is built in Suva and with the completion of the

new Lautoka Hospital's 50 bed maternity department, and the provision of 26 maternity beds at the proposed new Labasa Hospital.

4.4.4. The average length of stay of obstetric patients (see Table 4.5.5.) was 3.6 days at the Colonial War Memorial Hospital in Suva and 2.4 days at the Lautoka Hospital. This situation is unsatisfactory and in practice means that a considerable proportion of mothers are sent home within 24 hours of delivery.

### 4.5. Divisional Hospitals:

4.5.1. The Divisional Hospitals at Suva and Lautoka do not come under the respective divisional medical officer as is the case with the two at Labasa and Levuka, but have been placed under the supervision of senior clinicians, who, as medical superintendents, are responsible for the administrative work, assisted by a higher executive officer and other office staff. The number of beds is given below in Table 4.5.1.

TABLE 4.5.1.

DIVISIONAL HOSPITALS

| | *Beds* |
|---|---|
| Colonial War Memorial Hospital .. | 335 |
| Lautoka .. .. .. .. | 220 |
| Labasa .. .. .. .. | 99 |
| Levuka .. .. .. .. | 40 |
| Total Beds .. .. | 694 |

The Colonial War Memorial Hospital in Suva also serves as the teaching hospital for clinical students of the Fiji School of Medicine.

4.5.2. Both the Colonial War Memorial Hospital and the Lautoka Hospital are staffed by consultants in Medicine, Surgery, Obstetrics and Gynaecology, while the Colonial War Memorial Hospital has additional consultants in Paediatrics, Radiology, Anaesthesia and Ophthalmology. Both these hospitals are recognised for internship training by the Fiji Medical and Dental Board and in addition internship at the Colonial War Memorial Hospital is recognised by the General Medical Council of the United Kingdom for registration purposes.

4.5.3. The major project of construction of the new Lautoka Hospital which was due for commencement in 1970 was actually delayed until 1971 and piling is in process at the time of writing this report. The history of this project has been protracted but the long awaited hope of the people of the Western Division will now materialise within the next few years.

4.5.4. The most urgent problem facing the two major Divisional Hospitals is the difficulty of adequately staffing the out-patient departments in the face of the rising number of attendances demonstrated in Table VIII. These include an increase over last years figures of 26,587 at the Colonial War Memorial Hospital and 27,411 at the Lautoka Hospital. It is a tribute to the staff of these hospitals that the increased attendances were serviced without an appreciable increase in staff.

4.5.5. Utilisation and average length of stay is given below in Table 4.5-5.

TABLE 4.5.5.

UTILISATION OF MAIN HOSPITALS BY TYPE OF BED

| Type | C.W.M. Hospital | | Lautoka | | Labasa | | Levuka | |
|---|---|---|---|---|---|---|---|---|
| | Occupancy Index | Average Length of Stay (days) | Occupancy Index | Average Length of Stay (days) | Occupancy Index | Average Length of Stay (days) | Occupancy Index | Average Length of Stay (days) |
| Medical .. .. .. .. | 0·86 | 8·5 | 0·77 | 10·2 | 0·81 | 10·9 | 0·85 | 0·89 |
| Surgical .. .. .. .. | 0·72 | 9·3 | 0·94 | 8·2 | 0·48 | 10·3 | | |
| Gynaecological .. .. .. | 0·86 | 4·1 | 0·72 | 3·3 | 0·61 | 5·9 | .. | .. |
| Obstetrics .. .. .. | 1·01 | 3·6 | 0·91 | 2·4 | 1·04 | 3·7 | 0·48 | 5·3 |
| Paediatrics .. .. .. | 0·93 | 10·6 | 0·47 | 7·2 | 1·02 | 15·2 | 0·63 | 7·7 |
| Tuberculosis .. .. .. | .. | .. | 0·88 | 97·6 | 0·51 | 139·8 | 0·06 | 92·0 |
| Ophthalmic .. .. .. | 0·78 | 12·4 | .. | .. | .. | .. | .. | .. |
| Paying .. .. .. .. | 0·61 | 6·4 | 0·48 | 6·6 | 0·26 | 5·7 | 0·34 | 5·6 |
| Recovery .. .. .. | 0·51 | 11·9 | 0·46 | .. | .. | .. | .. | .. |
| Total .. | 0·80 | 7·9 | 0·72 | 7·5 | 0·73 | 9·2 | 0·63 | 7·9 |
| All Except Tuberculosis .. | 0·80 | 7·9 | 0·68 | 6·2 | 1·08 | 7·1 | 0·62 | 7·9 |

4.5.6. The three Special Hospitals are located at Suva. These are St. Giles' Hospital, discussed later under Psychiatric Services, the Chest Hospital at Tamavua which is mainly concerned with the treatment and prevention of Tuberculosis and the P. J. Twomey Memorial Hospital and its annex the St. Elizabeth's Home, which are concerned with the diminishing problem of leprosy. The number of beds is given below in Table 4.5.6.

TABLE 4.5.6.

SPECIALISED HOSPITALS

| | *Beds* |
|---|---|
| Tamavua Tuberculosis Hospital, Suva | 150 |
| St. Giles' Mental Hospital, Suva .. | 140 |
| P. J. Twomey Memorial Leprosy Hospital, Suva .. .. .. | 83 |
| Total .. .. | 373 |

### 4.6. Hospital Utilisation

4.6.1. One thousand five hundred and sixty-six Hospital beds were available in 1970. Their clinical distribution is set out in Table 4.6.1. below. This represents an increase of 94 beds over the 1969 figure but the increase in numbers is less significant than their distribution, as the pressure is more on some units than on others. The shortage of surgical beds at the Colonial War Memorial Hospital has been felt for some years, particularly in the orthopaedic section occasioned by the sharp increase in the numbers of traffic and industrial accidents. The increase of 94 beds during 1970, which includes 52 beds at St. Giles', was largely accounted for by the opening during the year of a new surgical ward of 44 beds at the Colonial War Memorial Hospital.

TABLE 4.6.1.

GOVERNMENT HOSPITAL BEDS AVAILABLE—BY TYPE

| Type | Total | C.W.M. Hospital | Lautoka Hospital | Labasa Hospital | Levuka Hospital | Tamavua Hospital | St Giles' Hospital | P. J. Twomey Hospital | 13 Sub-divisional Hospitals | 3 Area Hospitals | St. Elizabeth's Home |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total .. .. .. | 1,515 | 335 | 220 | 99 | 40 | 150 | 140 | 83 | 348 | 47 | 53 |
| General .. .. | 620 | 184 | 97 | 35 | 18 | .... | .... | .... | 239 | 47* | .... |
| Private (General) .. | 84 | 42 | 27 | 7 | 4 | .... | .... | .... | 4 | .... | .... |
| Obstetric .. .. | 168 | 59 | 17 | 13 | 5 | .... | .... | .... | 74 | .... | .... |
| Paediatric .. .. | 143 | 50 | 45 | 12 | 9 | .... | .... | .... | 27 | .... | .... |
| Tuberculosis .. .. | 224 | .... | 34 | 32 | 4 | 150 | .... | .... | 4 | .... | .... |
| Leprosy .. .. | 136 | .... | .... | .... | .... | .... | .... | 83 | .... | .... | 53 |
| Psychiatric .. .. | 140 | .... | .... | .... | .... | .... | 140 | .... | .... | .... | .... |

* Includes beds used for specialities but not individually designated as such.

4.6.2. Although the bed/population ratio is some guide when comparing the services of various countries, it must be realised that this ratio is dependent as was mentioned earlier on a variety of traditional and social factors. The bed/population ratios during 1970 are given in Table 4.6.2.

TABLE 4.6.2.

| | *No. of Beds* | *Beds/ 1,000 Population* |
|---|---|---|
| General (and Private) .. | 704 | 1.34 |
| Tuberculosis .. .. | 224 | 0.43 |
| Obstetrics .. .. | 168 | 0·32 |
| Paediatrics .. .. | 143 | 0·27 |
| Leprosy .. .. .. | 136 | 0·26 |
| Psychiatric .. .. | 140 | 0·27 |
| Total .. | 1,515* | 2.89 |

* This figure does not include beds at the Ba Methodist Hospital (51) or at Naiserelagi (7).

4.6.3. The figures for hospital beds per thousand population vary widely from country to country, for example, the figure for Ghana is 1.10 and for New Caledonia 17·3. It will be obvious that the figure for any particular country will depend on the emphasis placed in that country on curative and preventive medicine respectively, as well as on the age structure of the population. Fiji is fortunate in this latter respect in that the population is young so that problems of the elderly do not take up more than a small proportion of the available beds.

4.6.4. Reference has already been made to the increasing demands for service at the General Out-patients Department and Table 4.6.4. contains the relevant data.

TABLE 4.6.4.

OUT-PATIENT ATTENDANCES AND IN-PATIENT ADMISSIONS 1961–1970

| Year | Mid-Year population | Out-Patient attend-ances | Out-Patient attend-ances per 1,000 population | In-Patient admissions | Admissions per 1,000 population |
|---|---|---|---|---|---|
| 1961 | 407,443 | 826,395 | 2,028 | 21,784 | 53·5 |
| 1962 | 420,869 | 697,412 | 1,657 | 27,399 | 65·1 |
| 1963 | 434,459 | 690,452 | 1,589 | 29,915 | 68·9 |
| 1964 | 449,176 | 808,630 | 1,800 | 31,388 | 69.9 |
| 1965 | 464,178 | 831,286 | 1,791 | 31,222 | 67·3 |
| 1966 | 472,000 | 822,337 | 1,742 | 31,772 | 67·3 |
| 1967 | 484,418 | 879,757 | 1,817 | 32,654 | 67·4 |
| 1968 | 494,746 | 956,107 | 1,937 | 33,948 | 68·7 |
| 1969 | 506,902 | 1,104,822 | 2,180 | 37,853 | 74·7 |
| 1970 | 520,071 | 1,230,356 | 2,366 | 39,501 | 76·0 |

NOTE.—The change in attendance and admissions per 1,000 population figures for 1966–1969 is due to a revision of the population figures for the period. The 1969 out-patient figures have also been changed due to an error discovered later in the year.

4.6.5. At first glance, 2,366 out-patient attendances for every 1,000 of population or an average of approximately 2¼ visits per person, appears unnecessarily high. However when we review the situation in a highly developed and healthy country such as England and Wales, it will be discovered that in 1969, 245·5 million prescriptions valued at £220.6 million were issued during that year. If we suppose that each visit necessitated two prescriptions, which is likely to be, if anything, on the high side, we arrive at a figure of 2¼ visit per person per year, a figure that correlates remarkably with the Fiji figure.

4.6.6. Similarly the figure for admission to hospital of 76·0 per thousand population, although an increase over 1969, merely indicates that a greater number of people are taking advantage of the services offered and patients and relatives alike are no longer prepared to accept in ignorance the " course of nature ". The corresponding figure for England and Wales in 1969 was approximately 106.

4.6.7. For many years the out-patients problem has remained unsolved as each improvement in the service merely provoked an increased demand. What the general public fails to realise is that although medical services will continue to be provided to the limits of the available finance, the " instant " services demanded will never be available nor are they available even in the developed countries of the world. Prolonged waiting at out-patient clinics in Fiji is likely to be a feature for many years to come. The problem of a long wait in the out-patient department is not peculiar to Fiji, neither is it limited to the developing countries. In a recent survey involving the Casualty Departments of eleven Australian Hospitals the waiting time of 4,125 out-patients, was analysed—see Table 4.6.7. (Volume 1, Number 12—May/June, 1971—" Hospital and Health Care "). The waiting period was divided into two parts, viz—

(i) before documentation was started, i.e. identification entries of patients;

(ii) before being seen by a doctor (after documentation).

TABLE 4.6.7.

| | Urgent Ambulant | | Non-urgent Ambulant | |
|---|---|---|---|---|
| | Mean Time Mins. | Maximum Time Mins. | Mean Time Mins. | Maximum Time Mins. |
| Waiting for documentation .. | 4 | 45 | 5 | 160 |
| Waiting for doctor . | 31 | 258 | 29 | 263 |

4.6.8. It will be clear from the figures that the average waiting time from the time of arrival in the Casualty Department to the time the patient was seen by a doctor was 35 minutes for urgent cases and 34 minutes for non-urgent cases, but the maximum waiting time for some patients was well in excess of four hours.

4.6.9. Table VII shows that the total attendances at the various health centres increased by 8·9 per cent. over last year. The figures for Suva Gaol and Naboro Health Centres have been corrected because the 1969 figure wrongly included the number of patients seen by nurses and orderlies.

4.6.10. Although the number of attendances for some inexplicable reason has actually decreased at Ba, the increase at Nausori Health Centre to 80,137 attendances is posing a serious staffing problem and steps are in hand to increase the number of doctors at this centre. Of the 44 health centres operated during 1970, not including the Nabua Health Centre which is visited part-time—less than 2,000 attendances were recorded at 8, less than 3,000 attendances were recorded at 4, and less than 4,000 attendances were recorded at 7. Despite their poor utilisation, all these stations have to be maintained because of their isolation; but as communications improve, their continuance will be reconsidered, as has already been done in the case of the Nadarivatu Health Centre, mentioned elsewhere.

4.6.11. Figure IX shows the attendances by race at the various institutions, but race is becoming less important than was the case at the turn of this century. While it is true that the incidence of such disease as tuberculosis and diabetes varies according to race, this has little to do with the attendance of the ordinary out-patient, who usually attends for some minor complaint and his attendance depends much more on weather he is prepared to wait and see by resting in bed for a day or two, or insists on visiting a health centre to put his mind at rest about the diagnosis and the treatment. Another important factor is the improving standards of living because it is inevitable that demands for medical services will rise in step with increasing affluence, so that considerable increase in demand and an expansion of the private medical sector can be confidently predicted over the next few years.

4.6.12. The average lengths of stay in the various hospitals and their occupancy indices are set out at Table 4.6.12. below. It will be seen that while the data for the Colonial War Memorial Hospital and Lautoka remain much the same as in 1969, patients at Labasa are being kept for a shorter period, i.e. 9·2 days in 1970 compared with 11·0 days in 1969, with a consequent decrease in the occupancy index. The pressure for beds other than at the major hospitals is not great, particularly when it is realised that in the main, milder and uncomplicated cases are treated at the smaller hospitals.

TABLE 4.6.12.

HOSPITAL UTILISATION

| Hospitals | Out-Patients | Admissions | Bed | Average Daily Bed State | Occupancy Index | Average Length of Stay |
|---|---|---|---|---|---|---|
| Colonial War Memorial Hospital .. | 228,685 | 12,379 | 335 | 268·7 | 0·80 | 7·9 |
| Lautoka .. .. .. .. | 159,601 | 7,713 | 220 | 158·1 | 0·72 | 7·5 |
| Labasa .. .. .. .. .. | 69,701 | 2,848 | 99 | 72·1 | 0·73 | 9·2 |
| Levuka .. .. .. .. | 17,846 | 1,151 | 40 | 25·1 | 0·63 | 7·9 |
| Tamavua .. .. .. .. | 3,997 | 503 | 150 | 151·7 | 1·01 | 110·1 |
| St. Giles' .. .. .. .. | 1,859 | 273 | 140 | 152·4 | 1·08 | 203·8 |
| P. J. Twomey .. .. .. | 787 | 37 | 83 | 79·6 | 0·96 | 785·3 |
| Sigatoka .. .. .. .. | 20,412 | 2,050 | 56 | 39·3 | 0·70 | 7·0 |
| Savusavu .. .. .. .. | 12,806 | 1,137 | 54 | 24·7 | 0·45 | 7·9 |
| Taveuni .. .. .. .. | 19,533 | 950 | 51 | 17·6 | 0·35 | 6·8 |
| Nadi .. .. .. .. .. | 61,741 | 2,378 | 47 | 26·5 | 0·56 | 4·1 |
| Vunisea .. .. .. .. | 3,567 | 534 | 20 | 14·0 | 0·70 | 9·6 |
| Rotuma .. .. .. .. | 2,730 | 534 | 20 | 8·6 | 0·43 | 5·9 |
| Lomaloma .. .. .. .. | 4,285 | 319 | 16 | 4·0 | 0·25 | 4·6 |
| Ra .. .. .. .. .. | 32,338 | 972 | 15 | 11·7 | 0·78 | 4·3 |
| Nabouwalu .. .. .. .. | 8,833 | 632 | 15 | 9·6 | 0·64 | 5·6 |
| Lakeba .. .. .. .. .. | 4,351 | 300 | 12 | 4·3 | 0·35 | 5·2 |
| Vunidawa .. .. .. .. | 3,769 | 444 | 12 | 2·5 | 0·01 | 2·1 |
| Nausori Maternity Unit .. .. | 8,058 | 1,479 | 15 | 10·9 | 0·72 | 2·7 |
| Tavua Maternity Unit .. .. | 5,177 | 1,138 | 15 | 9·9 | 0·66 | 3·2 |
| Ba .. .. .. .. .. | 18,850 | 937 | 27 | 16·2 | 0·60 | 6·3 |
| Wainibokasi .. .. .. .. | 20,381 | 634 | 12 | 7·4 | 0·62 | 4·2 |
| Matuku .. .. .. .. | 1,450 | 159 | 8 | 2·7 | 0·23 | 6·3 |
| Total .. .. | 710,757 | 39,501 | 1,566 | 1,117·6 | 0·71 | |

4.6.13. The particularly low occupancy indices recorded at Savusavu and Taveuni Subdivisional Hospitals compared to the 1968 figures, is almost certainly related to the Filariasis Campaign which has been conducted in these areas. This observation will be reviewed next year in relation to the other areas where filariasis control has since been introduced.

4.6.14. Table 4.5.5. sets out the indices as related to the four Divisional Hospitals together with clinical groupings.

## 5. PSYCHIATRIC SERVICES

*" More needs she the divine than the physician, God, God forgive us all. Look after her; Remove from her the means of all annoyance, And still keep eyes upon her".*

*—" Shakespeare (Macbeth)".*

5.1.1. It became obvious some time ago that the official figure of 98 beds quoted for St. Giles' Hospital was unrealistic and during the year the figure was revised more accurately to 140.

5.1.2. While the importance of infectious and contagious diseases is showing a steady decline, there is increasing evidence that psychiatric disorders will assume increasing importance in the future. This is a world wide trend and with an increasing participation in a "money economy" and the increasing tensions involved, the people of Fiji will have to accept this problem, undesirable as it may be, in the march of so-called social progress, with its inevitable association with urbanisation and industrialisation and with the breaking up of traditional social groupings. The problem of overcrowding at this hospital, has been met to some extent by reducing the average length of stay from 234·1 days in 1969 to 203·8 in 1970 (see Table 4·6·12) and by making greater use of domiciliary services.

5.1.3. It will be seen from Table 4.6.12. that both the number of admissions and the number attending as out-patients have been reduced in 1970. This has been done by instituting a system of "follow-up" by the zone and district nurses referred to earlier in the report, aimed at ensuring that the discharged patients continue to take their drugs regularly and that they report to clinics when required. The net result of these two measures has been encouraging but more consideration will have to be given to the need to provide more psychiatric beds as is demonstrated by the figures presented in Table 5.1.3. below.

TABLE 5.1.3.

| *Country* | *In-patients in Mental Hospitals per 500,000 Population* |
|---|---|
| Australia (Victoria 1961) .. | 3,690 |
| New Zealand (1969) .. .. | 1,940 |
| England (1969) .. .. | 1,655 |
| Fiji (1970) .. .. .. | 152 |

5.1.4. That the Department places increasing importance on psychiatric diseases, is reflected in the new syllabus for nurse training, in which mental disease occupies a longer training period than previously and by the fact that all medical officers are attached to St. Giles' Hospital for a period of time before being posted to district stations. Although the problem in Fiji has not yet reached the dimension of that experienced by "developed" countries, the dark clouds are gathering on the horizon and there is no room for complacency in the matter.

## 6. LABORATORY DIVISION

*"Yon cassius has a lean and hungry look".*
*—(Julius Caesar) "Shakespeare".*

6.1.1 The Laboratory Services have been expanded concurrently with curative and preventive services. The main centre is the Central Laboratory situated in the grounds of the Colonial War Memorial Hospital at Suva. A consultant Pathologist is in charge of the Central Laboratory as well as supervising the smaller laboratories at Lautoka, Labasa and Tamavua Hospitals. The latter and the smaller laboratories at the P. J. Twomey Memorial Leprosy Hospital in Suva, are in the charge of Laboratory Technicians trained at the Fiji School of Medicine, supplemented in most instances by additional training overseas.

6.1.2. Although most of the basic haematological biochemical and bacteriological examinations are possible at the peripheral laboratories, histology and the more complicated investigations can only be carried out in Suva. This laboratory also provides a histological service and does some reference work for other smaller Pacific countries. In periods of absence of the Pathologist, considerable help has been received from both Otago and Auckland Hospitals especially with regards to histology on a charge per item basis. Although this has served as a stop-gap, the absence of a Pathologist at the present time is noted with some concern. The situation is further worsened by the constant and increasing demands for forensic services from the Police Department. In this context, the Department is convinced that the time has now come, for the Police Department to employ their own police surgeon.

6.1.3. Meanwhile a medical officer is undergoing training in pathology at Otago but this will only contribute to the long-term solution of the "pathology problem".

6.1.4. The total amount and the nature of work being carried out at the three laboratories at Suva, Labasa and Lautoka is listed at Table XII.

6.1.5. For some years now, the Department has been training staff nurses to be nurse technicians. The course of training is for one year, six months of which is spent in laboratory work and six months in the X-Ray Department, where they are taught basic laboratory and radiography techniques. These nurse technicians have proved extremely competent and useful and provide base-line laboratory and X-ray examinations at subdivisional, area hospitals and at some health centres.

6.1.6. As in other countries, the load on the laboratories is increasing year by year with the increasing attendances at hospitals and with improving standards of the clinical services. The clinicians in this country however, are extremely conscious of the cost/benefit factor and they continually review the tests currently in use together with their usefulness in consultation with the Pathologist.

6.1.7. It is clear that the pathology services require considerable development and there is also a need for quality control of the work being done. With this in view, arrangements are being made with the World Health Organization for the provision of a consultant bacteriologist for two years in an advisory capacity, with a view to upgrading the standard and scope of the bacteriological investigations provided. In the same context the appointment of a biochemist to the Fiji School of Medicine who works part-time at the Central Laboratory should also improve the scope and standard of investigations available in this field.

6.1.8. With the development of the present Lautoka Hospital and more particularly when the new hospital is complete, the recruitment of an additional Pathologist will be necessary and the technical staff available to the Lautoka Laboratory will require to be considerably expanded.

### 6.2. The Virus Laboratory

6.2.1. The Wellcome Virus Research Laboratory is now wholly financed from Fiji funds although the overview of the Laboratory's work continues to be

carried out by the Department of Microbiology of the University of Otago. Considerable research on arboviruses and virus problems generally have already been completed by the Laboratory which is now more concerned with studies related directly to the curative and preventive services.

6.2.2. The influenza surveillance programme initiated in April, 1969, and of importance not only to Fiji but to the region as a whole, was continued throughout the year. Over 40,000 cases of influenza were notified in Fiji and the serological test performed confirmed that a major outbreak of Influenza A occurred in January-March with minor outbreaks continuing until the end of the year. There was also an outbreak of Influenza B in October and November.

6.2.3. The increased notification rates in late August of an influenza-like sickness was not serologically confirmed with the inference that this illness resulted from infection with some other respiratory virus. A case of para-influenza 1 was confirmed in mid-July.

6.2.4. Arrangements for a trial of rubella vaccine were completed during the year and vaccination is scheduled to take place in 1971.

6.2.5. As mentioned in the 1969 report, a case of Leptospirosis (Weil's disease) was identified during that year and with this in mind leptospiral investigations were instituted at the Emperor Gold Mines to elucidate localised outbreak of hepatitis. Investigations indicated the cause to be viral hepatitis and not leptospirosis.

6.2.6. The Virus Laboratory also provides baseline studies for the filariasis programme as well as acting as an independent auditor of the results. The Laboratory has also conducted a survey of the distribution and infection levels of Coelomomyces in mosquito larvae—which may provide a valuable method of mosquito control.

6.2.7. The full range of work being done in the Laboratory is to be found at Table XIII.

6.2.8. Perhaps, a matter of far more importance and relevance to the clinical services of this country is the finding of " Hepatitis Associated Antigen " (H.A.A.) in about 3 per cent. of random serum samples. This antigen is also known as the " Australian Antigen ". As the transfusion of blood containing H.A.A. leads to a viral hepatitis in susceptible patients, and as in Fiji some 5,000 pints of blood are transfused annually, the implications are obvious. Steps are in process to introduce testing of blood for H.A.A. before transfusion.

## 7. DENTAL DIVISION

7.1.1. The main aim of the Dental Division is to concentrate on the preventive aspects of dentistry and to provide a " relief of pain " service elsewhere, except in Suva where all types of dentistry are provided for the under-privileged section of the population and for teaching purposes. During the year, six dental surgeons served the private sector in the main centres, providing the whole range of services on a payment for service basis.

7.1.2. However, some patients require dentures, who are not able to meet the charges of the private dentist. For such people prosthetic services are available in Suva, Lautoka and Labasa. A prosthetics laboratory was opened during the year at Lautoka.

7.1.3. The total attendances at dental clinics was 155,279 of whom 124,056 required treatment. Of these 93,139 or 60 per cent. of all attendances were children.

7.1.4. The " extraction service " was extended to include the Korovou Health Centre at Tailevu by the weekly attendance of a dental officer from Suva.

7.1.5. The results of water fluoridation introduced to Suva in 1969 will not become apparent for several years yet. The dental hygiene awareness particularly amongst the young was continued during the year by means of school " toothbrush " exercises, in which, a total of 477 schools are now taking part. A statistical summary of the work of the Dental Division is listed at Table XIV.

## 8. NURSING DIVISION

*" There are movements in medicine to bring the attitude of doctors and nurses into line with Trades Union practice. If an eight hour day and pay are the dominant motives, rather than service to sick and reasonable remuneration, then I think your health service will be ruined. St. Paul's words were never more to be heeded, " and now abideth faith, hope and charity, these three, but the greatest of these is charity ".*

*—Sir George Pickering—Pembroke College, Oxford, " Medicine and Society—Past, Present and Future."*

8.1.1. The warning sounded in the above paragraph, brings into focus some of the problems that are being faced throughout the world, and the nursing profession should continue to place the greatest emphasis on the physical and mental well being of patients first and on conditions of service, second. Fortunately this is the way the nursing profession in Fiji is continuing to view the problem of self-interest as against the needs of society.

8.1.2. The first group of local girls to be trained as nurses started their course of study in 1908 when due to the pressing need in the country for midwives, a class was admitted to the Colonial Hospital at Suva. These nurses proved satisfactory for the type and standard of work required of them at the time, but since then the syllabus has undergone repeated and extensive modifications. The latest evolution of the scheme has resulted in the new Fiji curriculum which demands a pass in the Fiji Junior Examination as the standard of entry. These graduates are in some ways the counterpart of the " State Enrolled Nurses " of the United Kingdom and the " Community Nurses " of New Zealand. This group form the bulk of the nursing staff in the Dominion, having a strength of 598 out of a total of 810, in the Nursing Service as a whole.

8.1.3. A second nursing course was introduced, more than ten years ago. This follows the " New Zealand Curriculum " which trains nurses to the New Zealand state registration standard. The duration of study is three years and the examination papers are set and marked in New Zealand. Successful candidates are provided with the New Zealand Nursing qualification. These nurses enter the Service as Junior Sisters and together with those similarly trained overseas provide the nursing service with a cadre of nursing administrators and supervisors. A post-graduate course in midwifery following the New Zealand curriculum is also provided.

8.1.4. Fiji is fortunate in not having a shortage of nurses and during the year a large number of " older " nurses were brought back for refresher courses, trained and posted to hospitals and to district nursing. It is necessary to exercise extreme care in the selection of such nurses for re-training, and it is necessary to select those who have not been out of nursing for more than ten years and are able to benefit from a refresher course or be capable of re-training. This is necessary if nursing standards are to be maintained because nursing in Fiji in 1970 is a very different proposition to that existing one or two decades ago.

8.1.5. The work of a modern nurse in Fiji is dovetailed into the duties of the Area Medical Officer and the nurse compliments and assists the work of the Medical Officers. Other than the hospital nurses who are involved entirely in curative services, the majority of the nurses are engaged in a blend of curative and the preventive services. No attempt is made to identify with or assign nurses to purely preventive or curative nursing, and in fact the trend is resisted. The health service is regarded as an integrated whole and the staff is orientated to accept this concept. The division of this section of the report into Hospital and District Nursing is therefore arbitrary and the classification is only used here, as a matter of convenience.

## 8.2. District Nurses

8.2.1. The District Nursing Service forms the foundation of the Medical Department's organisational structure. On her, may fall the job of providing reassurance to the patient or his family, solacing bereaved relatives or dealing with an acute emergency, needing immediate transfer to hospital. It is not pretended that the nurse can replace the medical officer because of necessity her training is limited, but her training is very broad based and she is able and expected to provide a range of emergency treatment before referring the case up the line.

8.2.2. Recently the district nurses have been further classified into clinic nurses who assist the medical officer at the busier health centres and zone (urban) and district (rural) nurses who provide home visiting for the people of their respective areas. These nurses maintain a record of every woman in the 15–44 age group on " Family Record Cards "—See Figure 8.2.2. On this card is recorded the woman's antenatal visits, the names and ages of her family, the immunisation record of each child as well as the Family Planning status of the mother. In the performance of this duty, the district nurse comes into intimate contact with the people and as a result she develops a bird's eye view of the social and health problems of the people including those of old age, mental diseases, tuberculosis and other chronic illnesses as well as of witchcraft, sorcery and the other social ills of her area. This information is communicated to the Area Medical Officer who compiles a monthly consolidated report which is passed up the line with copies to his Subdivisional Medical Officer, his Divisional Medical Officer and finally to Medical Directorate.

FIGURE 8.2.2.

MEDICAL DEPARTMENT FAMILY RECORD CARD

Name:
H/N.
Koro Dina:
Year of Birth:

Village/Settlement.....

| ANTENATAL VISITS Record date of visit and Tet. Toxoid given | | | | | | DELIVERY | | CHILDREN | | | IMMUNISATIONS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preg. No. | 1 | 2 | 3 | 4 | 5 | Date | T.B.A. N. or | Sex | Birth Wt. | Name of Child | BCG | DPT | DPT | DPT | P | P | P | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |

NOTES ON COMPLICATIONS OF PREGNANCY AND DELIVERY—

One card to be completed for each women in the 15–44 age group, and one line used for each pregnancy, delivery and subsequent immunisations.

Record:
P–Pill, L–Loop, C–Condom, O–Other method, X–nil.

| Year | J | F | M | A | M | J | J | A | S | O | N | D | ADDITIONAL NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

8.2.3. The problem of increasing the mobility of nurses is under constant review and many have already been provided with small vehicles for this purpose. The original " bure style " nursing station sited in the middle of a village, is fast being replaced by well designed clinics with modern living facilities, more conveniently situated with respect to her area and the communications system, so as to provide her with the shortest lines of communications to all areas of her district.

8.2.4. Fast disappearing also, from the nursing scene is the picture of a staff nurse waiting for patients to turn up who have made a late start in the morning. This situation is being replaced by a smart, time conscious, and conscientious nurse who has a schedule of visits prepared by her Health Sister, weeks or months in advance. All this indicates that medicine in Fiji is on the march.

### 8.3. Hospital Nurses

8.3.1. Fiji's hospitals have not yet reached the stage of super-specialisation characteristic of developed countries and the number of specialised units is kept to a minimum. However, there is a degree of specialisation among nurses including midwives, theatre nurses and those working in surgical, medical and paediatric wards. The majority of these nurses become highly skilled in their work and in this they are assisted by inservice and formal training programmes whether carried out in Fiji or overseas. A reported comment made during the year by the leader of a visiting neuro-surgical team from Sydney has confirmed the view that many theatre nurses in Fiji are of international standard and would not be out of place in major theatre units overseas.

8.3.2. The Department has organised in association with the New Zealand Department of Health, certain programmes of special nurse training in New Zealand, in Hospital Nurse Administration, Operation Theatre Management, as well as in Intensive Care and Paediatric Nursing, and already a planned programme has been arranged for the next few years. The greatest problem in any overseas training programme of this sort is the maintenance of services at home during the absence of the officers concerned, and this applies equally well to the Department as a whole.

## PART D—THE PREVENTIVE SERVICES

### 9. STATISTICS

9.1.1. The Department had long realised that subjective impressions can be erroneous and that if comparisons of medical work over the years are to be meaningful, they must be objective.
The three commonest sources of statistical data are—

(i) the Department;
(ii) the Registrar-General;
(iii) the Bureau of Statistics.

9.1.2. In this country, it cannot be said that all births and deaths are registered, and this is especially the case in communities separated by long distances from the main centres. However, the percentage of registrations must be reasonably close to being complete. In any case the comparison of data from year to year is perhaps of more value than the actual figures and give sufficient guide for trends to be recognised, problems isolated and priorities determined.

9.1.3. The vital statistics are set out in Tables XV to XIX. The most striking figure is the population increase for the year of 2·1 per cent. which although encouragingly lower than before, is still too high for the good of the country's economy. Nevertheless commendable progress has been made in the control of population growth and this figure has resulted from the vigorous efforts of a large section of the Department.

9.1.4. The overall birth rate of 29·9 per thousand is still too high, but is a major improvement on the figure of a decade ago. The recorded crude death rate of 4·7 per thousand is one of the lowest in the world and reflects among other things, the young population structure, the improved health of the population and fewer deaths from preventable diseases. The net result of this general improvement in health is reflected in the increased life expectancy of all races shown below in Table 9.1.4. and obtained from data prepared by the Bureau of Statistics—

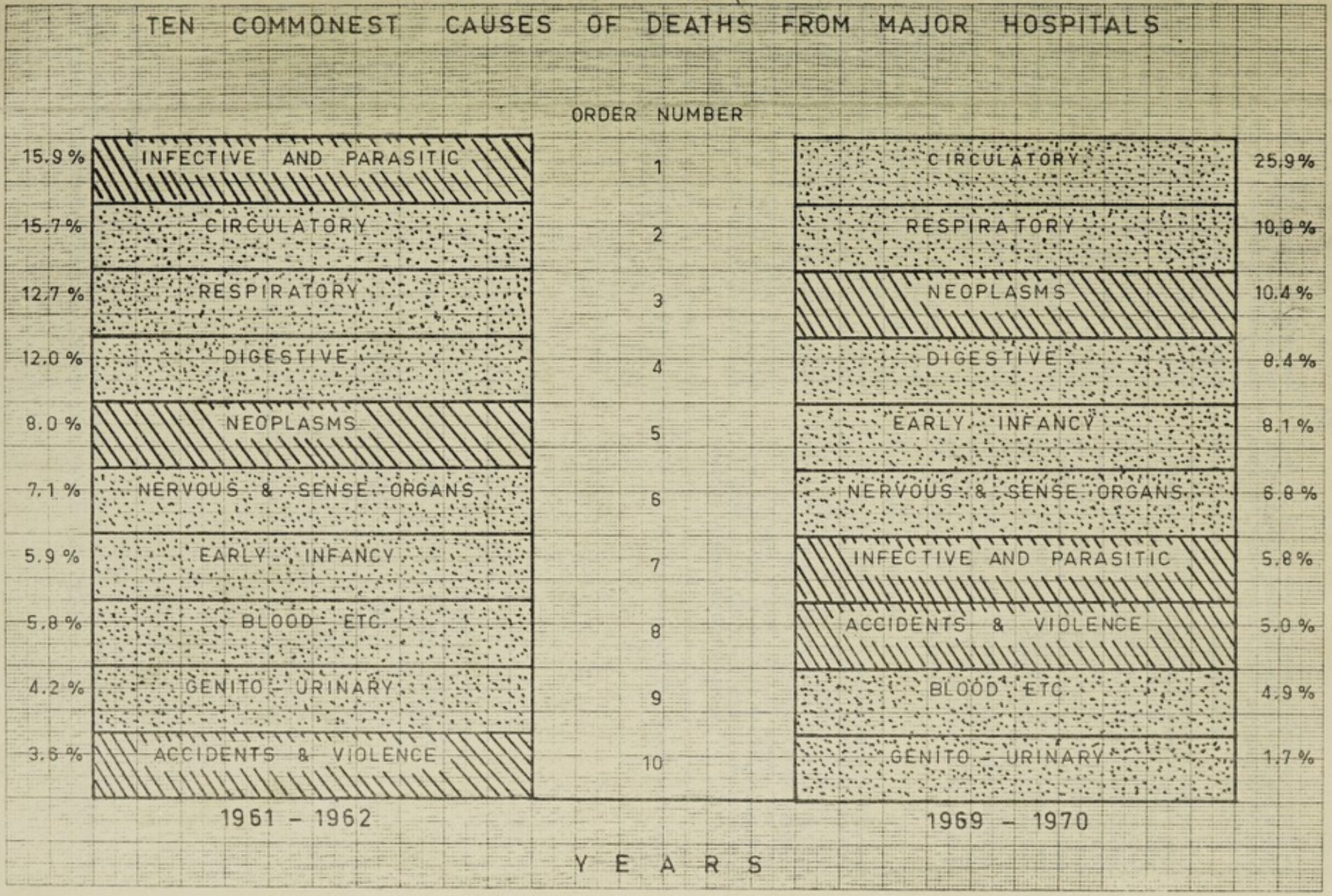
TABLE 9.1.4.

AVERAGE YEARS OF LIFE REMAINING TO SURVIVORS AT SPECIFIC AGES (1966)

| *Age* | *Fijian Male* | *Fijian Female* | *Indian Male* | *Indian Female* |
|---|---|---|---|---|
| 0 .. | 66·99 | 72·05 | 65·00 | 67·05 |
| 1 .. | 67·34 | 72·38 | 66·17 | 68·02 |
| 5— 9 .. | 64·21 | 69·25 | 62·70 | 64·47 |
| 20—24 .. | 49·98 | 55·19 | 48·40 | 50·45 |
| 50—54 .. | 23·52 | 28·37 | 22·13 | 23·69 |
| 70—74 .. | 10·88 | 14·45 | 11·82 | 10·79 |
| Over 100 .. | 6·00 | 7·67 | 2·40 | 1·64 |

9.1.5. Notifiable diseases are reported weekly, as a statutory obligation by all medical officers in the Government Service and by 25 general practitioners. The Departmental notifications are vetted up the line by progressively more senior officers, before being submitted to the medical statistics section for compilation.

FIGURE 10.2.1.


TEN COMMONEST CAUSES OF DEATHS FROM MAJOR HOSPITALS
ORDER NUMBER
15.9 %
INFECTIVE AND PARASITIC
15.7 %
CIRCULATORY
12.7 %
RESPIRATORY
12.0 %
DIGESTIVE
8.0 %
NEOPLASMS
7.1 %
NERVOUS & SENSE ORGANS
5.9 %
EARLY INFANCY
5.8 %
BLOOD ETC.
4.2 %
GENITO - URINARY
3.6 %
ACCIDENTS & VIOLENCE
1961 - 1962
1
2
3
4
5
6
7
8
9
10
CIRCULATORY
25.9%
RESPIRATORY
10.8 %
NEOPLASMS
10.4 %
DIGESTIVE
8.4 %
EARLY INFANCY
8.1 %
NERVOUS & SENSE ORGANS
6.8 %
INFECTIVE AND PARASITIC
5.8 %
ACCIDENTS & VIOLENCE
5.0 %
BLOOD ETC.
4.9 %
GENITO - URINARY
1.7 %
1969 - 1970
Y E A R S

9.1.6. The Department's own sources of statistical data are extensive. A special form is provided for preparation of monthly consolidated returns and these are received from all Area Medical Officers including those areas which are the direct responsibility of Subdivisional and Divisional Medical Officer. During the year the data received was further strengthened by the general adoption of the Family Record Card by all zone and district nurses. This card, as previously mentioned, is particularly related to the family planning and immunisation programme. The major hospitals also submit consolidated monthly reports of attendances, admissions, births and deaths. In total, these returns together with returns from the Methodist Hospital and the maternity unit at Naiserelagi provide a complete picture of vital events, as well as of morbidity and the epidemiological pattern.

## 10. EPIDEMIOLOGY

10.1.1. The introduction in the last century of epidemiology as a branch of science, provided the basis for major sanitary reforms related to the growth of cities which resulted from industrialisation, while relations were established between specific diseases and the presence of particular micro-organisms which were then identified as the causative agent. More recently the scope of epidemiology has been extended to include the study of non-infective and non-communicable diseases. One of these which is exercising the mind of public health workers, is the increasing incidence of lung cancer and its causal association with cigarette smoking.

10.1.2. In the case of venereal diseases, a study of the geographical incidence confirms what was already suspected, that there is a high incidence in the overcrowded and poor urban areas, where living conditions tend to cloud the moral aspects of life.

10.1.3. At Table XXI are listed the number and percentages of all cases discharged from hospitals other than St. Giles' Psychiatric Hospital. It will be noted that 7·04 per cent. of all discharges were accounted for by cases involving accidents, poisoning and violence; compared with the 1965 and 1966 figures of 5·01 per cent. and 5·58 per cent. respectively. An increasing number of fatal motor accidents are taking place on the newer straight and tar-sealed roads, and the plan to rebuild the coastal road along the southern part of Viti Levu from Suva to Nadi, although a major economic development project, will inevitably increase the number of road accidents and raise the spectre of overcrowding in the orthopaedic wards of the Lautoka and Suva hospitals.

### 10.2 Causes of Death

10.2.1. The trend in the causes of death is influenced firstly, by the relatively young population structure and secondly, by the successful control of most infectious diseases. The decline in the latter has been replaced by an increase in accidents and of the degenerative disorders. Figure 10.2.1. shows the ten commonest causes of death at the major hospitals and demonstrates the trend towards the increasing incidence of degenerative disorders.

10.2.2. Table 10.2.2. sets out the number of deaths over the last five years and the overall crude death rate of 4·7 per 1,000 population.

TABLE 10.2.2.

DEATHS RECORDED DURING THE YEARS, 1966–1970

| Race | 1966 | 1967 | 1968 | 1969 | 1970 | Estimated Mid-Year Population 1970 | Crude Death Rate per 1,000 |
|---|---|---|---|---|---|---|---|
| Fijians .. .. .. .. | 998 | 1,072 | 1,172 | 1,011 | 943 | 222,418 | 4·2 |
| Indians .. .. .. .. | 1,294 | 1,220 | 1,283 | 1,236 | 1,345 | 263,722 | 5·1 |
| Europeans .. .. .. | 37 | 22 | 41 | 42 | 33 | 5,803 | 5·7 |
| P.M.E.N.D. .. .. .. | 43 | 50 | 32 | 38 | 46 | 9,501 | 4·8 |
| Polynesians .. .. .. | 53 | 29 | 39 | 21 | 12 | 7,276 | 1·6 |
| Rotumans .. .. .. | 22 | 40 | 33 | 32 | 26 | 6,397 | 4·1 |
| Chinese .. .. .. .. | 37 | 23 | 37 | 29 | 28 | 4,954 | 5·7 |
| Total .. | 2,484 | 2,456 | 2,637 | 2,409 | 2,433 | 520,071 | 4·7 |

### 10.3. Notifiable Diseases

10.3.1. Reference has already been made as to the method and sources of collection of data relating to Notifiable Diseases. The cases notified in the year are given below in Table 10.3.1.

TABLE 10.3.1.

NOTIFIABLE DISEASES BY RACE AND SEX—1970

| Name of Disease | Europeans | Part-Europeans | Fijians | Indians | Others | Totals | Sex | | Deaths |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Male | Female | |
| 1. Acute Poliomyelitis | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 2. Anthrax | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 3. Brucellosis (including Undulant Fever) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 4. Chickenpox (Varicella) | 2 | 2 | 322 | 65 | 19 | 410 | 252 | 158 | 1 |
| 5. Dengue Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6. Diphtheria | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7. Dysentery—(*a*) Amoebic | .. | .. | 2 | 8 | 1 | 11 | 10 | 1 | .. |
| (*b*) Bacillary | 2 | 1 | 3 | 21 | 5 | 32 | 12 | 20 | .. |
| 8. Encephalitis | .. | .. | .. | 6 | .. | 6 | 1 | 5 | 3 |
| 9. Enteric Fever (*a*) Typhoid | .. | .. | 3 | 1 | .. | 4 | 3 | 1 | .. |
| (*b*) Paratyphoid | .. | .. | 2 | .. | .. | 2 | .. | 2 | .. |
| 10. Food Poisoning | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 11. German Measles (Rubella) | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| 12. Infantile Diarrhoea | .. | 16 | 2,635 | 4,181 | 156 | 6,988 | 3,961 | 3,027 | 14 |
| 13. Infectious Hepatitis | 5 | 1 | 124 | 76 | 12 | 218 | 136 | 82 | .. |
| 14. Influenza | 29 | 72 | 19,188 | 18,694 | 2,074 | 40,057 | 23,514 | 16,543 | .. |
| 15. Leprosy | .. | 1 | 11 | 20 | 4 | 36 | 22 | 14 | |
| 16. Leptospirosis | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. |
| 17. Malaria | 1 | .. | .. | .. | 2 | 3 | 2 | 1 | .. |
| 18. Measles (Morbilli) | 1 | .. | 24 | 6 | 12 | 43 | 25 | 18 | .. |
| 19. Meningitis | .. | 1 | 59 | 20 | 3 | 83 | 44 | 39 | 11 |
| 20. Puerperal Pyrexia (including Puerperal Fever) | 1 | 3 | 63 | 116 | 4 | 187 | .. | 187 | .. |
| 21. Rheumatism (Acute) | .. | .. | 11 | 93 | 2 | 106 | 52 | 54 | .. |
| 22. Tetanus | .. | .. | 6 | 3 | 1 | 10 | 8 | 2 | 5 |
| 23. Trachoma | .. | 2 | 122 | 51 | 24 | 199 | 108 | 91 | .. |
| 24. Tuberculosis—(*a*) Pulmonary | .. | 9 | 220 | 51 | 20 | 300 | 179 | 121 | .. |
| (*b*) Other than Pulmonary | .. | .. | 17 | 6 | 3 | 26 | 16 | 10 | .. |
| 25. Venereal Diseases— | | | | | | | | | |
| (*a*) Gonorrhoea | 14 | 35 | 620 | 283 | 30 | 982 | 644 | 338 | .. |
| (*b*) Granuloma Venereum | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*c*) Ophthalmia Neonatorum and Gon. Ophthalmia | .. | .. | 5 | 10 | .. | 15 | 10 | 5 | .. |
| (*d*) Lymphogranuloma Inguinale | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Soft Chancre | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*f*) Syphilis | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*g*) Venereal Warts | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26. Whooping Cough | .. | 2 | 11 | 11 | 3 | 27 | 18 | 9 | .. |
| 27. Yaws | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | 55 | 145 | 23,450 | 23,722 | 2,375 | 49,747 | 29,018 | 20,729 | 34 |

10.3.2. Table 10.3.2. shows the incidence of these diseases over the last five years and the welcome low incidence of most of them.

TABLE 10.3.2.

INCIDENCE OF CERTAIN NOTIFIABLE DISEASES OVER THE LAST FIVE YEARS

| Disease | 1966 | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|---|
| Diphtheria | 4 | 0 | 1 | 5 | 0 |
| Dysentery | 81 | 16 | 29 | 57 | 43 |
| Infantile Diarrhoea | 4,477 | 5,677 | 5,948 | 10,886 | 6,988 |
| Infectious Hepatitis | 502 | 282 | 216 | 431 | 218 |
| Influenza | 42,937 | 24,459 | 42,288 | 63,208 | 40,057 |
| Measles | 49 | 3,856 | 676 | 40 | 43 |
| Meningitis (except tuberculous) | 58 | 53 | 61 | 73 | 83 |
| Poliomyelitis | No proven case since 1962 | | | | |
| Tetanus | 32 | 33 | 26 | 15 | 10 |
| Trachoma | 396 | 376 | 271 | 251 | 199 |
| Typhoid Fever | 5 | 3 | 5 | 1 | 6 |
| Pertussis | 97 | 227 | 244 | 41 | 27 |
| Venereal Diseases— | | | | | |
| Gonorrhoea | 714 | 962 | 947 | 999 | 982 |
| Syphilis | 13 | 10 | 4 | 9 | 0 |
| Yaws | 11 | 3 | 1 | 0 | 0 |
| Population on 31st December in tens of thousands | 46·9 | 49·1 | 50·2 | 51·4 | 52·4 |

There is a general lowering of incidence in 1970 over the 1969 figures. Table XXV sets out the monthly incidence of these diseases.

10.3.3. *Diphtheria*—No case of Diphtheria was recorded during the year. This is not surprising in view of the very extensive programme of immunisation. During the year 58,649 doses of D.P.T. were given, of which 9,386, were first doses administered to children in the first year of life. However, as there were 15,339 births, the programme fell short of the expected target, but this was largely due to an interruption in the supply of vaccine from overseas cause by the inadequate storage during shipment of a major consignment. An analysis of the immunisation programme according to age is set out in Table XXIV.

10.3.4. *Dysentery*—There were 43 cases of dysentery notified including one death. This represents a slight fall over the 57 cases recorded in 1969. This is one field where hygiene plays an important part and the incidence has been progressively falling for some years as a result of improvements in food handling and of water supplies. Table 10.3.1. indicates that of the 43 cases, 11 were of amoebic dysentery and 32 bacillary.

10.3.5. *Infantile Diarrhoea*—There was a marked drop in the notification of infantile diarrhoea (6,988) compared with 10,886 cases notified in 1969. There

were fourteen deaths. All medical stations have been supplied with equipment and fluids for intra-gastric therapy. Dehydrated babies are treated as emergencies and are transferred to a major hospital as rapidly as possible. The incidence of the disease is highest during the wet months of January and February.

10.3.6. *Infectious Hepatitis*—218 Cases of infectious hepatitis were notified during the year representing a considerable reduction over the 1969 figure, but the incidence of the disease has shown a fluctuating pattern over the last decade. The high incidence of jaundice in the gold mining area has been noted and this was investigated by the Virus Laboratory because of a suspicion that the outbreak was one of Weil's disease. One hundred and twenty-four of the cases occurred amongst Fijian against 76 in Indians; but no deaths were recorded. The largest numbers were notified during the months of March, April and May when 47 per cent. of the total cases were recorded. The problem of viral hepatitis following transfusion containing Australian Antigen has already been mentioned.

10.3.7. *Influenza*—In terms of absenteeism and economic loss of man hours, influenza is the most important single disease, with 40,057 notifications during the year. However, the virulence remained low and no deaths were attributed directly to the disease. The monitoring work being done by the Virus Laboratory has been discussed earlier.

10.3.8 *Measles (Morbilli)*—The beginning of another epidemic were evident towards the end of the year and this is confirmed at the time of writing this report. It is to be hoped that this will be the last measles epidemic in Fiji as consideration is being given to add measles immunisation to the schedule in 1971.

10.3.9. *Meningitis*—Reference to Table 10.3.2. will show the increasing incidence of meningitis over the last four years. It is likely that more cases are being diagnosed because of improved diagnostic facilities, but there also appears to be a real increase in incidence. The disease can be rapidly fatal if treatment is not instituted immediately and eleven lives were lost during the year. The weekly health bulletin gave prominence to the increased risks of the disease, the need for early treatment and the dangers of overcrowding.

10.3.10. *Poliomyelitis*—No proven case of poliomyelitis has been notified since 1962. However, the status quo has been maintained only at the cost of perpetual vigilance and as Table XXV shows a total of 15,575 doses of Sabin vaccine were given in the first year of life together with 16,247 booster doses given to school children.

10.3.11. *Tetanus*—A further improvement is seen in the control of tetanus, a killing disease which had posed a major problem for some years until routine immunisation was adopted. Ten cases were notified including a single case of tetanus neonatorum. Since the routine immunisation of pregnant mothers was started in 1967, there has been a progressive drop in the incidence of tetanus neonatorum. Of the nine cases of true tetanus reported, four cases died giving a mortality rate of 44 per cent., a figure which has not changed substantially over the years, in spite of the intensive treatment methods recently adpoted. See Table 10.3.11. In view of the high mortality of the disease the need for preventive measures cannot be overemphasised.

TABLE 10.3.11

INCIDENCE OF TETANUS, 1966–1970

| Year | *True Tetanus* | *Tetanus Neonatorum* | *Total (Deaths)* |
|---|---|---|---|
| 1966 .. .. | 16 (9) | 16 (11) | 32 (20) |
| 1967 .. .. | 16 (8) | 17 (14) | 33 (22) |
| 1968 .. .. | 20 (9) | 6 (6) | 26 (15) |
| 1969 .. .. | 12 (3) | 3 (3) | 15 (6) |
| 1970 .. .. | 9 (4) | 1 (1) | 10 (5) |

10.3.12. *Trachoma*—Although over the years, large numbers of cases of trachoma have been notified—396 in 1966, blindness due to trachoma, is rarely seen in this country. The conclusion is either, that the cases reported include other conditions or, as is believed to be the case, the condition existing in Fiji is of a mild nature and clears up without difficulty with the assistance of the usual antibiotic treatment. Be that as it may, the incidence is falling and the diagnosticians are exercising due care.

10.3.13. *Pertussis*—Twenty-seven cases were reported during the year. This represents a considerable reduction on the incidence existing before the introduction of the immunisation campaign and indeed it is doubtful whether the cases now being diagnosed are in fact pertussis. As a result hospitals have been requested to seek bacteriological confirmation of such diagnoses.

10.3.14.1. *Venereal Diseases*—No cases of syphilis were recorded during the year, which is surprising in view of the increasing incidence of this disease in other countries and of the relatively high incidence of gonorrhoea in Fiji.

10.3.14.2. Nine hundred and eighty-two of *gonorrhoea* were notified which demonstrates a stable incidence over the last four years (see Table 10.3.2.). However the assessment of the true incidence of the disease is notoriously difficult and is always higher than the number of cases reported. Although the incidence in males is given as twice that of females, it is known that if routine swabbing of the cervix is done, the true incidence in females is revealed. A proportion of miscarriages are associated with gonorrhoeal infection. No cases of gonorrhoea resistant to penicillin were recorded.

10.3.15. *Yaws*—This is the second year in which no case of yaws was recorded, indicating a successful conclusion to the campaign of 1957/1958 carried out with the assistance of the World Health Organization

## 11. TUBERCULOSIS

*" The end of the beginning."*

11.1.1. It is often dangerous to take statistical figures at their face value without taking into consideration, other associated factors. This is particularly true of the tuberculosis story in this country. Although there is no doubt about the decreasing incidence of this disease as shown in Table 11.1.2. below, the fact that the disease tends to be diagnosed earlier because of the increased awareness created by an intensive campaign, with a consequent decrease in the period of morbidity and suffering is often overlooked.

TABLE 11. 1. 2.

INCILENCE OF TUBERCULOSIS, 1960 and 1966–1970

| Year | Population on 31st December | New Cases Registered | Rate per 1,000 | No. Bacteriological Positive | Rate per 1,000 |
|---|---|---|---|---|---|
| 1960 .. | 401,018 | 648 | 1·61 | N.A. | N.A. |
| 1966 .. | 478,355 | 458 | 0·96 | 171 | 0·36 |
| 1967 .. | 490,716 | 469 | 0·96 | 197 | 0·40 |
| 1968 .. | 502,035 | 541 | 1·10 | 240 | 0·48 |
| 1969 .. | 513,717 | 358 | 0·70 | 158 | 0·31 |
| 1970 .. | 524,457 | 326 | 0·62 | 177 | 0·34 |

11.1.2. It will be seen from Table 11.1.2. that the rate of bacteriologically positive cases in 1970, i.e. 0.34 per thousand was higher than the 1969 rate of 0.31. This apparent paradox is due to the fact that the methods of examination of sputum have improved and more sophisticated methods of culture are being used. It is certain that a considerable number of cases previously regarded as bacteriologically negative, would have been proved to be sputum positive, if present day diagnostic techniques had been available.

11.1.3. Progress in the control of this disease can be better appreciated when it is stated that during 1970, of the thirty-six (36) known cases of tuberculosis who died, 25 did so from unrelated causes—see Table 11.1.3.1. In only eleven cases was tuberculosis a contributing or causal factor to the demise. (See Table 11.1.3.2.).

TABLE 11.1.3.1.

| *Number of Cases* | *Causes of Death* |
|---|---|
| 8 | Senile or Diabetic Cardiovascular accidents. |
| 9 | Malignant Diseases—<br>(*a*) 5 Cancer of Lung,<br>(*b*) 2 Cancer of Cervix,<br>(*c*) 1 Cancer of Colon,<br>(*d*) 1 Fibrosarcoma. |
| 3 | Acute haemorrhage septicaemia pneumonia (non-tuberculous) or purulent pulmonary processes. |
| 1 | Bronchopneumonia in a quadriplegic. |
| 4 | Miscellaneous. |
| 25 | |

TABLE 11.1.3.2.

TUBERCULOSIS AS CONTRIBUTING OR CAUSAL FACTOR

| *Condition* | *Number of Cases* |
|---|---|
| (*a*) Disorganised pulmonary tuberculosis with sepsis and terminal Cor pulmonale .. .. .. | 6 |
| (*b*) Torrential cavitary haemorrhage . | 1 |
| (*c*) Cases complicated by diabetes, anaemia, pyelonephritis or endocarditis .. .. .. | 4 |
| Total .. .. | 11 |

11.1.4. Tuberculosis is one of the diseases with higher incidence in Fijians (1.05 per 1,000 population) compared to the rate of 0·80/1,000 in Rotumans, 0·77 in Part-Europeans and 0.21 in Indians. The latter rate, is lower than the incidence of tuberculosis in England and Wales in 1967 (0·23 per 1,000).

11.1.5. The racial incidence is set out in Table 11.1.5.

TABLE 11.1.5.

INCIDENCE OF TUBERCULOSIS IN 1970 BY RACE

| Race | Estimated Population on 31st December, 1970 | Total Cases | Rate per 1,000 of Population | Bacteriologically Positive | Rate per 1,000 of Population | Percentage Bacteriologically Positive |
|---|---|---|---|---|---|---|
| Fijian .. .. | 225,102 | 237 | 1·05 | 120 | 0·53 | 50·63 |
| Indian .. .. | 266,189 | 57 | 0·21 | 38 | 0·14 | 66·67 |
| European .. .. | 5,286 | .. | .. | .. | .. | .. |
| Part-European .. | 9,523 | 10 | 0·05 | 6 | 0·63 | 60·00 |
| Chinese .. .. | 6,512 | 5 | 0·77 | 3 | 0·46 | 60·00 |
| Rotuman .. .. | 5,008 | 4 | 0·80 | 1 | 0·20 | 25·00 |
| Others .. .. | 6,837 | 13 | 1·90 | 9 | 0·32 | 69·23 |
| Total | 524,457 | 326 | 0·62 | 177 | 0·34 | 54·03 |

11.1.6. When the incidence of tuberculosis is analysed according to age, it is clear that in all races, tuberculosis is rapidly becoming a disease of the older age groups and of the debilitated. The incidence is high in older Indians with diabetes.

TABLE 11.1.6.

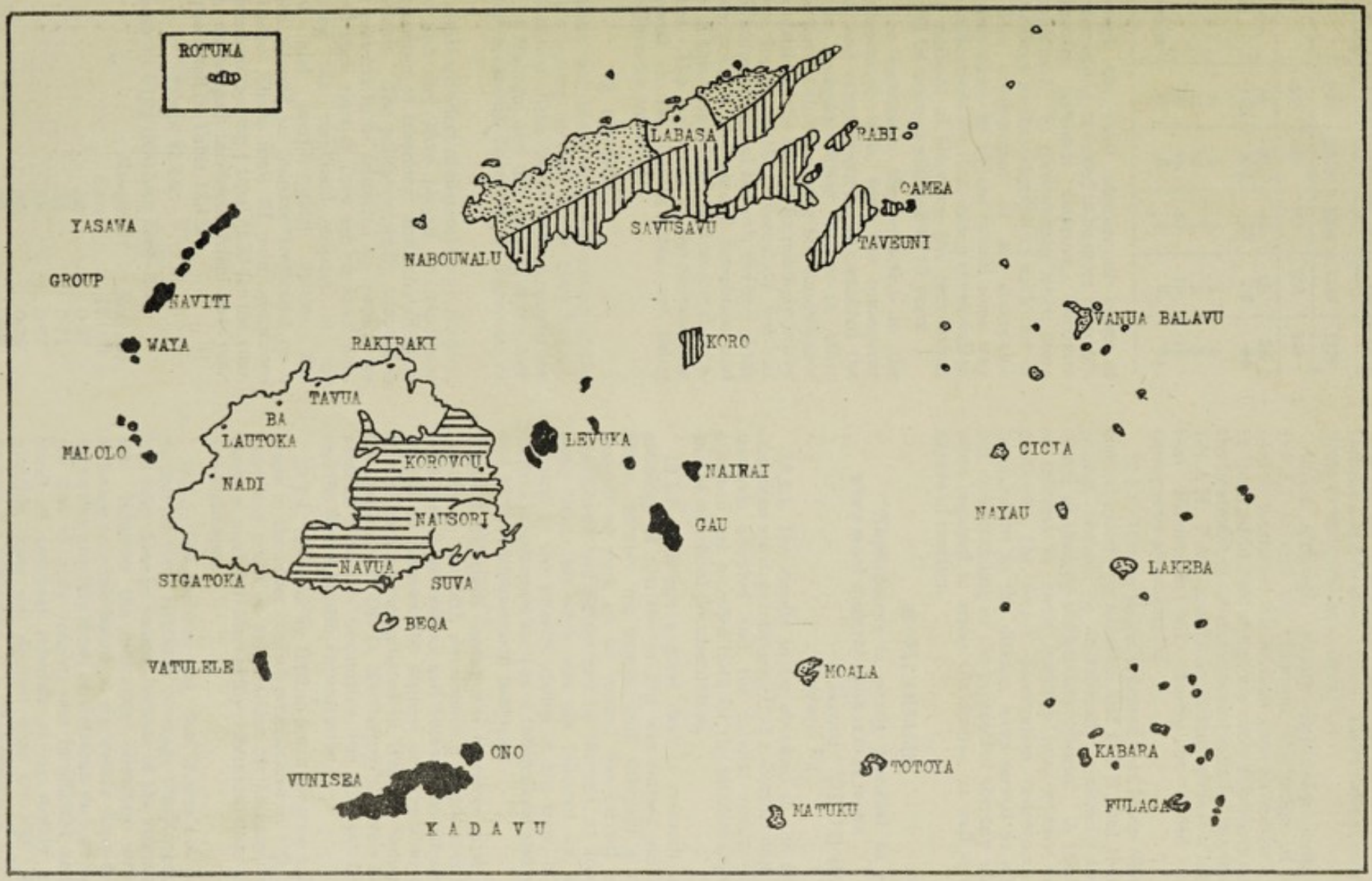
INCIDENCE OF TUBERCULOSIS IN 1970 BY AGE

| Age Group | Total Cases | Rate per 1,000 Population | Bacteriologically Positive Cases | Rate per 1,000 Population |
|---|---|---|---|---|
| 0– 4 years .. | 12 | 0·2 | 3 | 0·05 |
| 5–14 ,, .. | 16 | 0·1 | 5 | 0·03 |
| 15–24 ,, .. | 66 | 0·6 | 39 | 0·36 |
| 25–34 ,, .. | 67 | 0·9 | 31 | 0·43 |
| 35–44 ,, .. | 46 | 1·0 | 20 | 0·42 |
| 45–59 ,, .. | 73 | 1·7 | 51 | 0·15 |
| Over 60 .. | 46 | 2·1 | 28 | 1·25 |

11.1.7. The reduction of the incidence rate in those less than 45 years of age and especially the extremely low incidence in children is certainly due to the tuberculosis campaign and particularly to the adoption of routine immunisation of babies and children with B.C.G.

11.1.8. The incidence of non-pulmonary tuberculosis has again fallen. The total of these cases fell from 28 in 1969 to 26 in 1970. The non-pulmonary tuberculosis incidence is shown at Table 11.1.8. and indicates its value in the assessment of the progress of the anti-tuberculosis campaign.

# FILARIASIS TREATMENT AREAS IN FIJI




STAGE I STAGE II STAGE III STAGE IV

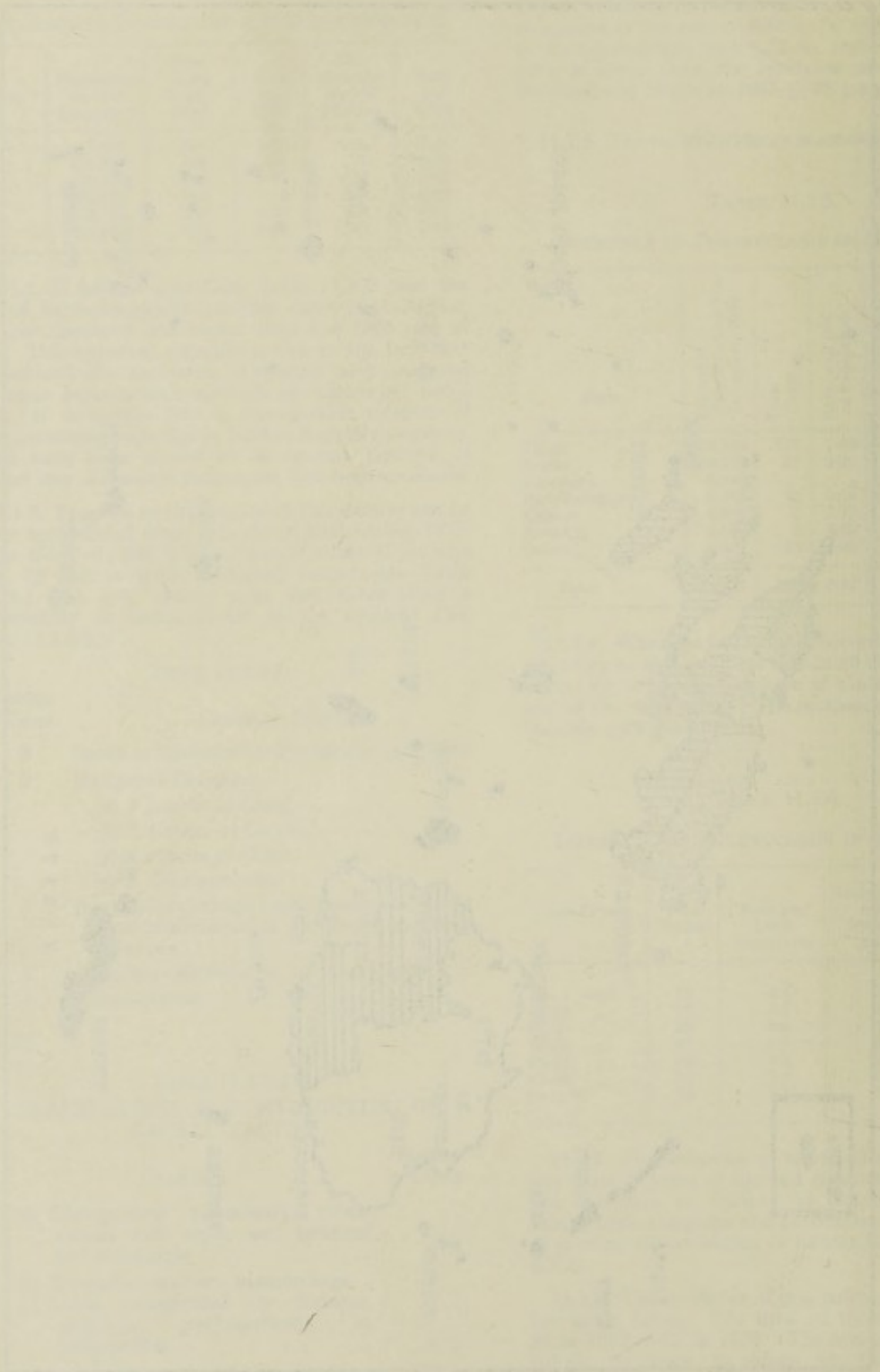


TABLE 11.1.8.

NON-PULMONARY TUBERCULOSIS IN FIJI, 1966–1970

| | 1966 | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|---|
| Total Tuberculosis .. | 458 | 469 | 541 | 358 | 326 |
| Non-pulmonary cases .. | 53 | 51 | 47 | 28 | 26 |
| Percentage of total .. | 11·3 | 10·9 | 8·7 | 7·8 | 8·0 |
| Sites— | | | | | |
| Meningitis .. .. | 3 | 0 | 3 | 1 | 4 |
| Bone .. .. .. | 11 | 12 | 1 | 3 | 5 |
| Cervical glands .. .. | 29 | 31 | 37 | 16 | 14 |
| Abdomen and elsewhere | 10 | 8 | 6 | 8 | 3 |

11.1.9. Although the total number of cases of tuberculosis is decreasing, the need to be more thorough as the diagnostic methods improve, becomes increasingly important. In consequence much more work is now involved in the diagnosis of each case of tuberculosis. The achievement of an acceptable incidence of tuberculosis in Fijians is still some way away, but the indications are that with a continuation of the present methods of detection and prevention, the objective will be reached within 5 to 10 years.

11.1.10. In the meantime, the reduction in the number of tuberculosis beds, with the consequent release of staff and other resources has enabled the Department, to re-deploy these factors in other sections of the service thus ensuring the maintenance of medical standards in the face of increasingly heavy demands. The closure of the tuberculosis ward at the Labasa Divisional Hospital towards the end of the year has made possible the phased demolition and reconstruction of this hospital, without undue dislocation of services. The few cases of the disease now being discovered in the Labasa area are being transferred to Suva for treatment.

## 12. LEPROSY

12.1.1. Readers will find a very full review of the history of Fiji's leprosy services in the 1969 Report, written in the context of the closure of the Leprosarium on the island of Makogai and the opening of the new P. J. Twomey Memorial Hospital at Tamavua in Suva.

12.1.2. The combined effect of chemotherapy, surgery, physiotherapy and diet have played an important part in the processes of treatment and rehabilitation of leprosy patients. The policy presently adopted is for infectious patients to be admitted to hospital for treatment until such time as they are rendered non-infectious using the combined criteria of the bacteriological and morphological indices. The patient is then allowed to continue treatment on a domiciliary basis. There were 21 new admissions and 15 re-admissions making a total of 37 for the year, providing an unchanged incidence from last year. This data is presented in Table 12.1.2.

TABLE 12.1.2.

LEPROSY IN FIJI, 1960 AND 1966–1970

| *Year* | *Number of Cases* | *Rate per 10,000* |
|---|---|---|
| 1960 .. .. .. | 39 | 0·97 |
| 1966 .. .. .. | 34 | 0·71 |
| 1967 .. .. .. | 33 | 0·67 |
| 1968 .. .. .. | 39 | 0·78 |
| 1969 .. .. .. | 35 | 0·68 |
| 1970 .. .. .. | 36 | 0·69 |

12.1.3. At the end of the year 79 cases of leprosy were under treatment made up of 45 Fijians, 26 Indians and 8 of other races. There were almost three times as many males as females.

12.1.4. Although diamino-diphenyl-sulphone (D.A. D.P.S.) is still the standard, the range of drugs used in treatment has become quite extensive. Many of these additional drugs are more familiarly used in the treatment of tuberculosis and include Streptomycin, I.N.A.H., P.A.S. and Thiacetazone, while it is intended that Rifampicin will shortly be added to the therapeutic armentarium.

12.1.5. It is no longer accepted that lepers should be treated merely by isolation and D.D.S., but that each patient should be individually assessed, and his course of therapy deliberately planned. A rekindling of interest in basic research into leprosy and in particular the recent observation concerning liver involvement in the disease, have served to advance our understanding of the protracted therapy which is often required to arrest the disease, as well as of the nature of reaction.

## 13. FILARIASIS

*"Elephantiasis is mostly prevalent in regions where much stagnant water is to be found".*

—*"Susruta"* (II, 12) *circa 5th Century, B.C.*

13.1.1. The results so far obtained in the filariasis campaign are so encouraging that a short account of the methods adopted and the interim results so far obtained, are included both for the interest of readers and as an official documentation.

13.1.2. Although a great deal of research on the aetiology of filariasis in Fiji was carried out in the fifties, notably by Symes, and although a certain amount of work on its control was carried out by Cruikshank and Nelson and by Burnett, at about the same time, this work was not followed up, largely because of the priority claims at the time, of other control programmes such as of tuberculosis and leprosy and of the immunisation campaign.

13.1.3. Filariasis control was therefore given a low priority in the fifth development programme (1966–1970) for these reasons and because the Department wished to observe the success or otherwise of the control programme initiated in Western Samoa with the assistance of Dr. D. MacCarthy, the New Zealand medical Research Committee, the Phillips' bequest, and the World Health Organization.

13.1.4. However by 1968 so much progress had been made in the other control programmes in Fiji, that a start was made on preparations for filariasis control, using a modified MacCarthy Hetrazan dose shedule and technique.

13.1.5. The problem was, that it was not possible to provide total Hetrazan coverage simultaneously as had been done in Samoa, because of the magnitude of job. However the indications elsewhere were that a dosage schedule based on six weekly doses followed by twelve monthly doses of Hetrazan each of 5 mgms. per kilo of body weight, was insufficient and as a result of two-year schedule of six weekly and 22 monthly doses was decided upon for Fiji. Besides having the advantage of a total dosage of 140 mgms. of Hetrazan per kilo of body weight compared with the

total of 90 mgms. used in Samoa, a two-year cycle allows the campaign to be divided into a series of areas, with dosage starting in one area in year one and in a second contiguous area in year two, thus allowing a year of over lap of treatment in the two areas. It also allows for a total blood survey to be carried out in each area, in the second year, with the object of finding defaulters and putting them on additional treatment to render them negative before the end of the treatment period of the area as a whole.

13.1.6. The country has therefore been divided into five areas as shown in the accompanying map (See page 47). Treatment commenced in Area 1 in 1969, in Area 2 in 1970 and all is set to commence control in Area 3 in 1971 and in Area 4 in 1972. Treatment of Area 5 will presumably start in 1973.

13.2. The Control Method is summarised below—

13.2.1. *Year* 1—base-line survey of microfilaria rate and density, as well as a mosquito survey and infection rate is carried out by Virus Research Laboratory.

13.2.2. A complete census of the area is taken. Preparation of dosage sheets, containing names, weights and dosage required for every inhabitant are classified by village and settlement.

13.2.3. Organisation of village committees are formed in each village and settlement to carry out the treatment; they receive assistance and supervision from Medical Department personnel.

13.2.4. Health Education plays a major role in the success of the treatment programme. Pamphlets, flipcharts, films, press and radio news are all used to explain the aims and objects of the programme.

13.2.5. The pre-survey is combined with talks on the aetiology of the disease, including explanations of the programme and the need for improvement in standards of environmental sanitation and of mosquito control.

13.2.6. *Year* 2—first year of Hetrazan dosage (5 mgms/kilo). Dosage is supervised by village committees with assistance from local medical and nursing staff who also provide treatment for cases of elephantiasis.

13.2.7. *Year* 3—dosage continues. Local medical and nursing staff carry out a hundred per cent. blood survey. All positive slides are confirmed at central filariasis laboratory as well as 10 per cent. of negative slides which are checked as a control. The names of positive cases are entered in special registers and are given additional treatment and follow-up.

13.2.8. *Year* 4—A Blood survey is conducted of everyone aged 16–60 years, while follow-up is continued of those listed on the positive register. Examination of the 16–60 age group reduces the number to be surveyed by about half.

13.2.9. A resurvey is carried out by Virus Research Laboratory staff as an audit procedure and to compare with pre-survey data.

13.2.10 *Year* 5 *et seq.*—Blood surveys are to continue but their extent will depend upon experience and particularly on the results of the resurvey.

### 13.3. The Pattern of the Disease in Fiji

13.3.1. The definitive work on transmission of filariasis in Fiji was written by Symes after extensive research. In brief, the main vectors of non-periodic filariasis are the two-day biters, *Aedes Polynesiensis* and *Pseudoscutellaris*. Two-night biters *Aedes Fijiensis* and *Culex Fatigans* were also implicated by Symes but recent work has not confirmed this.

13.3.2. It appears that the density of filaria infection depends upon the mosquito numbers which in turn are dependent upon rainfall and standards of environmental sanitation. The incidence in copra growing areas is generally high, probably due to the tremendous number of mosquito breeding places provided by half coconut shells, left scattered around by copra cutters.

13.3.3. In Vanua Levu the microfilaria levels varied according to locality and were highest in—

(*a*) the wet copra growing areas of the south coast exposed to the South East trade winds and then in descending order in—

(*b*) the offshore islands of the northern side of Vanua Levu. These are coconut fringed with generally low standards of environmental sanitation;

(*c*) the coastal villages on the northern side;

(*d*) the inland villages on the northern side—steep well drained land;

(*e*) Labasa township—where standards of environmental sanitation are highest for the area and where the microfilaria rate was extremely low.

### 13.4. Filariasis Control Work Carried Out in 1970

13.4.1. Arrangements which had begun in 1969, were completed by the beginning of the year to commence mass treatment of the Stage II area which has a population of about 36,000 persons. The area includes the Lau Province, Northern Bua and rural parts of the Macuata Province with the exclusion of Labasa town and the surrounding sugarcane areas where survey results showed filariasis infection rates to be extremely low.

13.4.2. Treatment commenced in early March under the supervision of filariasis treatment committees. Treatment progressed well with good co-operation from the people as the teams had come to expect. Health education by area medical staff again played a most important part in the success of the treatment in the new area. Health education material of all types has been produced by the Health Education Section at Medical Headquarters and includes a filariasis film, made with the co-operation of the Public Relations Office film unit.

13.4.3. Treatment in the Stage II area will continue during 1971.

13.4.4. Preparations were under way in the latter months of the year for the treatment programme to be extended to the Stage III areas in 1971. The area includes the provinces of Lomaiviti and Kadavu, Vatulele Island, as well as the Mamanuca and Yasawa Island groups with a total population of 24,500. By this time a grand total of 102,500 people will be contained within the greater control area.

13.4.5. A pre-treatment blood survey was conducted in the Stage III area to provide base-line data on infection rates. Infection rates varied from 32 per cent. on Malolo Island in the Mamanucas to 2 per cent.

on yaqeta Island in the yasawas, the infection rate apparently decreasing from the southern towards the northern end of this island chain. A microfilaria rate of 30 per cent. was found on the island of Moturiki off Ovalau and 25 per cent. at Tavuki Village in Kadavu.

13.4.6. Treatment committees were formed in all the new areas and talks were given to explain the nature of the programme. All persons were listed on the treatment sheets in household and village groupings. The work will continue in the first quarter of 1971 and be ready for the commencement of treatment scheduled for early March.

13.4.7. The enthusiasm and co-operation of the treated population has contributed a great deal to the success of the programme and it is now clear that the disease can be reduced to insignificant levels or even eradicated by the conscientious continued application of the methods adopted, over a five to ten-year period.

13.4.8. The campaign will be considerably assisted by the drive to improve standards of environmental hygiene and particularly by the water-seal latrine programme which should be given new impetus by the introduction of the new plastic water-seal bowls.

### 13.5. The Results

13.5.1. The most remarkable result has been the overall reduction in hospital admissions and of patient days in all the areas concerned. In 1969 in the first area the number of patient days dropped by 15 per cent. and by a further 15 per cent. in 1970. The effects have been seen to be most striking at the hospitals at Savusavu and Taveuni which are now running less than half full. A similar fall of 9 per cent. was recorded during the year in the second treatment area at Labasa Hospital.

13.5.2. Thirty-four thousand, four hundred and eighty-three people living in area one were resurveyed and 452 positives discovered representing a microfilaria rate of 1·2 per cent. The rate varied from area to area and the figures reveal where mass treatment was least well supervised. A partial analysis is provided in Table 13.5.2.

TABLE 13.5.2.

RESULTS OF THE RESURVEY OF AREA 1 (1970)

| *Place* | *Examinations* | *Positives* | *Rate per cent.* |
|---|---|---|---|
| Saqani .. | 1,830 | 2 | 0·1 |
| Natewa .. | 1,212 | 6 | 0·5 |
| Wailevu .. | 951 | 2 | 0·2 |
| Taveuni .. | 6,408 | 113 | 1·8 |
| Tukavesi .. | 2,935 | 50 | 1·7 |
| Rabe .. | 1,761 | 90 | 5·1 |

## 14. RHEUMATIC FEVER

14.1.1. It was realised many years ago in relation to rheumatic fever, that the long term prospects depended upon a general improvement in living conditions but the short term answer was the prevention of recurrences to prevent further cardiac damage.

14.1.2 A liaison has been established between the hospital physicians and the public health nursing service to ensure the efficient follow-up of cases of acute rheumatism. Monthly injections of Benzathine Penicillin are provided for all registered cases and defaulters are located and prophylaxis maintained between attendances at the hospital out-patient department. The period for which this prophylaxis is maintained varies but is continued at least as long as the patient is attending school.

14.1.3. The diagnosis of the disease has posed problems in the past because not all cases could be seen by consultants in the acute stage. However subdivisional hospital staff are now *au fait* with the condition and the past violent fluctuations in the number of cases reported should now settle.

14.1.4. The incidence of cases of chronic rheumatic heart disease is listed in Table 14.1.4.

TABLE 14.1.4.

CASES OF CHRONIC RHEUMATIC HEART DISEASE ADMITTED TO HOSPITAL

| *Year* | *Fijian* | *Indian* | *Others* | *Total* |
|---|---|---|---|---|
| 1966 .. | 41 | 142 | 7 | 190 |
| 1967 .. | 29 | 134 | 8 | 171 |
| 1968 .. | 19 | 80 | 8 | 107 |
| 1969 .. | 16 | 60 | 8 | 84 |
| 1970 .. | 18 | 70 | 5 | 93 |

14.1.5. A general decline in the incidence of acute rheumatism has occurred over the last ten years and this has been reflected in the numbers of chronic rheumatic carditis being treated.

14.1.6. The radiological unit at the Colonial War Memorial Hospital is equipped to carry out cardiac catheterisation as well as bi-plane angiography. Closed cardiac surgery including mitral valvulotomy is regularly performed at the Colonial War Memorial Hospital while patients requiring open heart surgery are referred either to Green Lane Hospital in Auckland or to similar centres in Sydney or Melbourne.

## 15. MATERNAL AND CHILD HEALTH

*"We have recently felt the necessity to focus attention on the needs of the basic social unit—the Family—and to achieve a broad approach with emphasis on the quality of life."*

*—24th World Health Assembly.*

15.1.1. The history of maternity services in this country dates back to 1908 with the training of midwives for rural areas. This service later was expanded to incorporate child welfare work. Maternal and child welfare services proceeded well for a number of years under the supervision of the Health Sisters, but the service largely consisted of well baby clinics, conducted at "Health Offices" which had been constructed in the centre of towns for the convenience of the public. However as a rule they are at a distance from the hospitals.

15.1.2. With the world-wide post-war population explosion and the realisation of the need to curb the dramatic rate of population increase, assistance to mothers and couples in planning and limiting their families was introduced. As the ravages of too frequent childbirth are only too well known in this country, family planning was incorporated into the maternal and child health services and in contradistinction to the situation in many other countries, has remained part and parcel of a comprehensive maternal and child health service ever since.

## 15.2. Family Planning

*" Planned parenthood is a public health measure which aims at reducing maternal infant and child mortality and the substitution of quality for quantity."*

*—Family Planning Association, Fiji.*

15.2.1. The pros and cons of family planning are no longer at issue in this country. It is accepted as desirable by all and only the acceptability of the various methods, differ from group to group and even amongst the medical profession itself.

15.2.2. It is not intended to delve into philosophical or theological arguments about the need for the existence of man on this planet at all, although most problems would undergo resolution in the absence from the world of human beings; instead the currently accepted view is recorded that it is desirable to achieve a rate of population growth which does not negate the advances, in the broad sense, that a nation accomplishes.

15.2.3. The methods of family planning available to couples in this country are the rhythm or safe period, coitus interruptus, Lippes' intrauterine contraceptive device, " pills ", condoms and sterilisation—the latter almost wholly by tubal ligation. The Department has good statistical records of the last four methods. The use of vaginal possaries and diaphragms has gradually decreased.

15.2.4. That the people are aware of the benefits of family planning is shown by the data presented in Table 15.2.4. where the yearly number of attendances at the family planning clinics are shown.

TABLE 15.2.4.

FAMILY PLANNING ATTENDANCES

| *Year* | *Attendances* |
|---|---|
| 1963 .. .. .. .. | 2,732 |
| 1964 .. .. .. .. | 17,079 |
| 1965 .. .. .. .. | 22,817 |
| 1966 .. .. .. .. | 21,489 |
| 1967 .. .. .. .. | 28,359 |
| 1968 .. .. .. .. | 49,803 |
| 1969 .. .. .. .. | 55,661 |
| 1970 .. .. .. .. | 76,483 |

15.2.5. The popularity of the various methods has changed over the years. In the mid-sixties, the loop was the most favoured method and still accounts for the largest number of protections by any single method, but more recently the pill has gradually increased in popularity. Table 15.2.5. lists the estimated total number of women protected by the various methods as at December, 1970.

TABLE 15.2.5.

| *Contraceptive Method* | *Women users* |
|---|---|
| (1) Loops *in situ* .. .. .. | 9,828 |
| (2) Contraceptive Pills .. .. | 8,325 |
| (3) Sterilisation .. .. .. | 5,695 |
| (4) Condoms .. .. .. | 4,502 |
| Total .. .. | 28,350 |

15.2.6. Contraceptive pills are available from all medical and nursing stations, at a Government subsidised price of ten cents per cycle and the same pills are available at the same subsidised price from the private pharmacies. Condoms are sold at the subsidised price of one cent per unit and the Family Planning Association has made arrangements for these to be available from retail stores throughout the country at the same price. Current sales of condoms from these two sources exceed half a million a year.

15.2.7. The fact that the total number of births per year has been stabilised at around 15,000 for the last three years in the face of a rapidly increasing female population of reproductive age can be seen in Table XVI, and is a commendable family planning effort.

15.2.8. The crude birth rates in Fiji for the period 1961–1970 are set out in Table 15.2.8.

TABLE 15.2.8.

BIRTH RATES

| *Year* | *Indian* | *Fijian* | *Overall* |
|---|---|---|---|
| 1961 .. .. | 45·5 | 37·4 | 40·9 |
| 1962 .. .. | 42·6 | 37·8 | 39·6 |
| 1963 .. .. | 40·2 | 37·8 | 38·0 |
| 1964 .. .. | 39·8 | 37·4 | 37·8 |
| 1965 .. .. | 37·3 | 36·2 | 35·9 |
| 1966 .. .. | 33·2 | 36·0 | 34·2 |
| 1967 .. .. | 32·0 | 31·0 | 31·2 |
| 1968 .. .. | 30·0 | 32·0 | 30·8 |
| 1969 .. .. | 32·2 | 27·0 | 29·7 |
| 1970 .. .. | 30·8 | 29·0 | 29·9 |
| Medical Department Birth Rates–1970 . | 28·8 | 30·4 | 29·5 |

It will be seen that there is a progressive fall in the birth rate from a figure of 40·9 in 1961 to 29·5 in 1970 with comparatively similar decline rate of the two major races.

15.2.9. The number of births registered in the Dominion over the years 1961–1970 is seen in Table 15.2.9. It will be noted that the annual number of births has remained in the low fifteen thousands for the last three years; the highest number registered being 16,989 in 1964.

TABLE 15.2.9.

BIRTH REGISTRATIONS 1958–1970

| *Year* | *Fijian* | *Indian* | *Others* | *Total* | *Census* 1966 |
|---|---|---|---|---|---|
| 1958 .. | 5,587 | 8,196 | 1,027 | 14,810 | 15,104 |
| 1959 .. | 5,909 | 8,890 | 1,120 | 15,919 | 15,175 |
| 1960 .. | 6,164 | 8,515 | 1,074 | 15,753 | 16,102 |
| 1961 .. | 6,362 | 9,117 | 1,117 | 16,596 | 17,065 |
| 1962 .. | 6,626 | 8,905 | 1,109 | 16,644 | 16,884 |
| 1963 .. | 6,817 | 8,692 | 1,010 | 16,519 | 16,753 |
| 1964 .. | 6,966 | 8,936 | 1,087 | 16,989 | 16,563 |
| 1965 .. | 6,943 | 8,660 | 1,058 | 16,661 | 15,474* |
| 1966 .. | 7,318 | 8,292 | 1,043 | 16,653 | 16,789* |
| 1967 .. | 7,604 | 8,019 | 1,090 | 16,713 | .. |
| 1968 .. | 6,798 | 7,526 | 930 | 15,254 | .. |
| 1969 .. | 5,854 | 8,281 | 903 | 15,038 | .. |
| 1970 .. | 6,438 | 8,110 | 998 | 15,546 | .. |

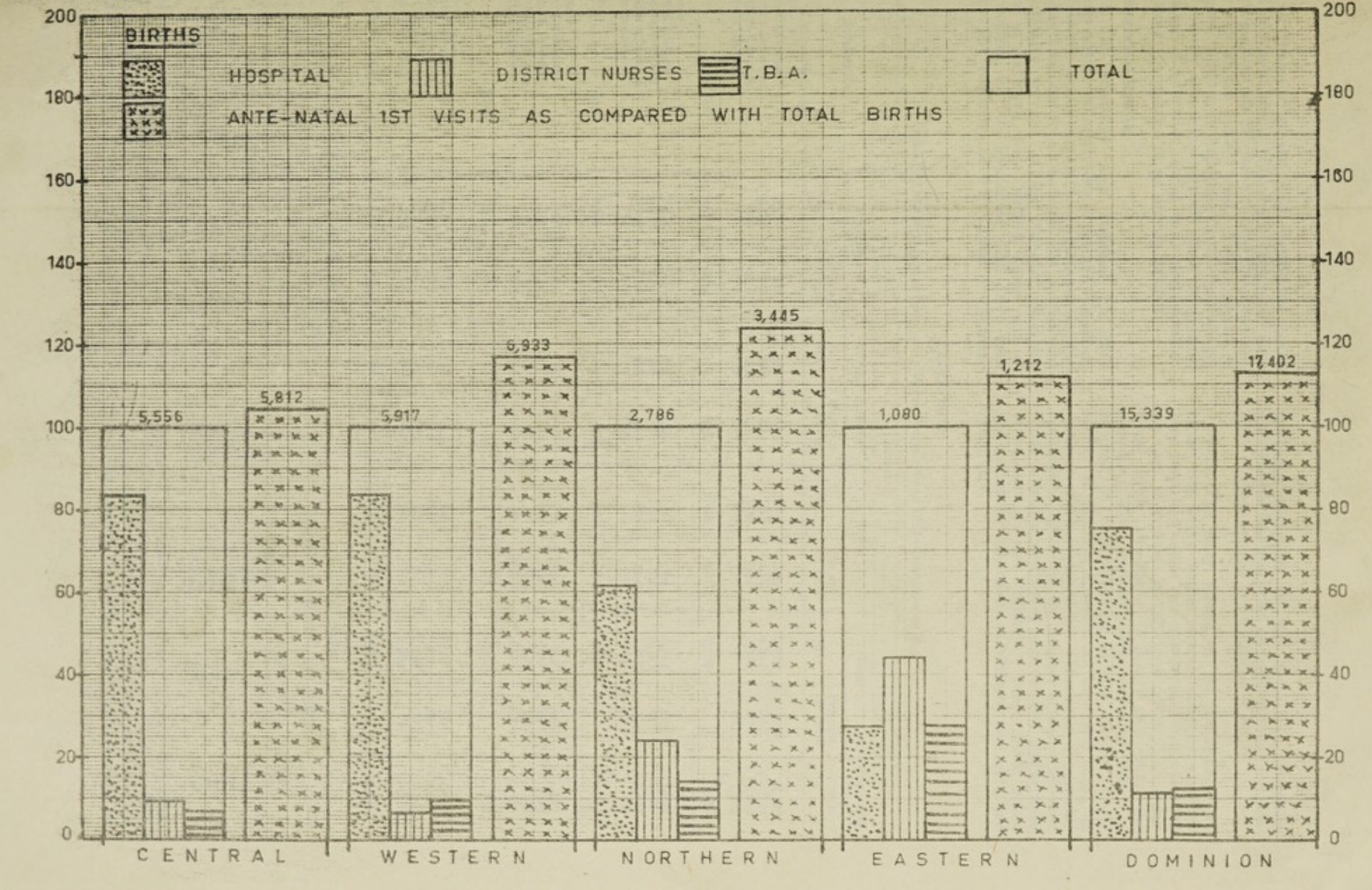
*Shows digital preference for 0 year olds.

Total Registrations 1958–1966 = 146,544

Corresponding Census Total = 145,909

FIGURE 15.3.2

# MATERNAL SERVICES - 1970



15.2.10. However as the total number of fertile women increases, family planning coverage will have to be proportionately increased to hold the population growth rate at the present level. Future success in this regard, will be most important for the development of this country as a whole and will allow the planned programme of education, social work and economic development to proceed in an orderly fashion.

### 15.3. Maternal Health

15.3.1. The relatively high standard of Fiji's maternity services is largely due to the untiring efforts of the relevant consultants and to the close relationship which has been developed between this section and the maternity services of the National Women's Hospital in Auckland, New Zealand, where most of those working in this specialised field have been trained. The eligibility of Fiji School of Medicine graduates to appear for the Diploma in Obstetrics examination, has also given an impetus to the development of these services and continues to do so.

15.3.2. The early efforts of the Department to ensure that every mother receives antenatal care has been rewarded and it can now be said that while 125 per cent. of mothers in 1970 were delivered by traditional birth attendants (T.B.As), and while the remaining 87·5 per cent. were delivered either in hospital or were attended by the district nurses, almost all mothers attended an antenatal clinic, as demonstrated in Figure 15.3.2. The excess of antenatal bookings of 2,063 over the number actually delivered is due to double bookings of referred cases, and because of miscarriages and stillbirths. Table 15.3.2. below gives a detailed breakdown of births by race and place of delivery.

TABLE 15.3.2.

SUMMARY FOR BIRTHS AND ANTENATAL VISITS FOR THE YEAR 1970—DOMINION OF FIJI

| Subdivisions | Births | | | | | | | | Antenatal first visits |
|---|---|---|---|---|---|---|---|---|---|
| | Hospital | | District Nurses | | T.B.A. | | Total | | |
| | No. | Per cent. of Total | No. | Per cent. of Total | No. | Per cent of Total | No. | Per cent. of Total | |
| 1. FIJIAN— | | | | | | | | | |
| Central Division .. .. | 2,074 | 73·8 | 436 | 15·5 | 300 | 10·7 | 2,810 | 41·6 | 3,198 |
| Western Division .. .. | 1,289 | 70·0 | 297 | 16·1 | 255 | 13·9 | 1,841 | 27·2 | 2,345 |
| Northern Division .. .. | 606 | 51·9 | 258 | 22·1 | 303 | 26·0 | 1,167 | 17·4 | 1,350 |
| Eastern Division .. .. | 254 | 27·0 | 427 | 45·4 | 260 | 27·6 | 941 | 13·9 | 1,063 |
| Total .. | 4,223 | 62·5 | 1,418 | 21·0 | 1,118 | 16·5 | 6,759 | .. | 7,956 |
| 2. INDIAN— | | | | | | | | | |
| Central Division .. .. | 2,077 | 93·6 | 50 | 2·3 | 92 | 4·1 | 2,219 | 29·3 | 2,333 |
| Western Division .. .. | 3,476 | 89·8 | 90 | 2·3 | 306 | 7·9 | 3,872 | 51·0 | 4,402 |
| Northern Division .. .. | 1,004 | 67·9 | 155 | 10·5 | 320 | 21·6 | 1,479 | 19·5 | 1,953 |
| Eastern Division .. .. | 13 | 81·3 | 2 | 12·5 | 1 | 6·2 | 16 | 0·2 | 25 |
| Total .. | 6,570 | 86·6 | 297 | 3·9 | 719 | 9·5 | 7,586 | .. | 8,713 |
| 3. OTHERS— | | | | | | | | | |
| Central Division .. .. | 506 | 96·0 | 18 | 3·4 | 3 | 0·6 | 527 | 53·0 | 281 |
| Western Division .. .. | 202 | 99·0 | 1 | 0·5 | 1 | 0·5 | 204 | 20·5 | 186 |
| Northern Division .. .. | 110 | 78·6 | 3 | 2·1 | 27 | 19·3 | 140 | 14·1 | 142 |
| Eastern Division .. .. | 33 | 26·8 | 50 | 40·6 | 40 | 32·6 | 123 | 12·4 | 124 |
| Total .. | 851 | 85·6 | 72 | 7·2 | 71 | 7·2 | 994 | .. | 733 |
| 4. TOTAL— | | | | | | | | | |
| Central Division .. .. | 4,657 | 83·8 | 504 | 9·1 | 395 | 7·1 | 5,556 | 36·2 | 5,812 |
| Western Division .. .. | 4,967 | 83·9 | 388 | 6·6 | 562 | 9·5 | 5,917 | 38·6 | 6,933 |
| Northern Division .. .. | 1,720 | 61·7 | 416 | 24·2 | 650 | 14·1 | 2,786 | 18·2 | 3,445 |
| Eastern Division .. .. | 300 | 27·8 | 479 | 44·4 | 301 | 27·8 | 1,080 | 7·0 | 1,212 |
| Grand Total .. .. | 11,644 | 75·9 | 1,787 | 11·6 | 1,908 | 12·5 | 15,339 | .. | 17,402 |

15.3.3. The collection of data relating to maternal deaths, though readily available from the hospitals, is more difficult among the 12·5 per cent. of mothers who are delivered by non-Medical Department staff. Reporting however has improved, and the apparent increase of maternal mortality in recent years shown below, is undoubtedly due to better reporting. It is now mandatory that all nurses and medical officers, submit detailed reports to Headquarters of all maternal deaths either occurring in hospital or within their medical areas, irrespective of whether the death was directly due to pregnancy and childbirth or not. There were 29 maternal deaths during 1970 of which 24 were directly due to pregnancy and childbirth.

TABLE 15.3.4.1.

MATERNAL MORTALITY, 1970

| *Year* | *Births* | *Maternal Deaths* | *Rate/ 1,000* |
|---|---|---|---|
| 1967 .. | 16,713 | 14 | 0·84 |
| 1968 .. | 15,254 | 8 | 0·52 |
| 1969 .. | 15,038 | 15 | 1·00 |
| 1970 .. | 15,339 | 24 | 1·56 |

15.3.4. The analysis provided (Table 15.3.4.2.), of the 24 maternal deaths which occurred in 1970, shows a similar incidence in the two major races, but when the number of deaths is classified according to

the administrative divisions in which they occurred, it is found that the maternal mortality rate was some four times as high in the Northern Division, compared to the Western Division and twice as high as the national average. Further details are given in Tables 15.3.4.2. and 15.3.4.3.

TABLE 15.3.4.2.

ANALYSIS OF MATERNAL DEATHS, 1970

| *Division* | *Fijians* | *Indians* | *Others* | *Total* |
|---|---|---|---|---|
| Central .. | 2 | 2 | 2 | 6 |
| Western .. | 1 | 4 | .. | 5 |
| Northern .. | 4 | 6 | 1 | 11 |
| Eastern .. | 2 | .. | .. | 2 |
| Total .. | 9 | 12 | 3 | 24 |

TABLE 15.3.4.3.

ANALYSIS BY GEOGRAPHICAL DIVISION

| Division | Live Births | I. Deaths due to complication of pregnancy, childbirth and the puerperium | | II. Deaths during pregnancy, childbirth and the puerperium from all causes | |
|---|---|---|---|---|---|
| | | No. | Rate/1,000 | No. | Rate/1,000 |
| Central .. | 5,556 | 6 | 1·08 | 9 | 1·62 |
| Western .. | 5,917 | 5 | 0·84 | 6 | 1·01 |
| Northern .. | 2,786 | 11 | 3·95 | 12 | 4·30 |
| Eastern .. | 1,080 | 2 | 1·85 | 2 | 1·85 |
| Total .. | 15,339 | 24 | 1·56 | 29 | 1·89 |

NOTE.—The Fijian and Indian death rates in the Northern Division are 3·43 and 4·06 respectively for deaths due to complication of pregnancy, childbirth and the puerperium.

15.3.5. On further analysis of the 24 mothers who died during the year as a direct result of pregnancy and childbirth by age, it is revealed that nine mothers were over 30 years of age, while two were more than 40 years of age.

TABLE 15.3.5.

MATERNAL DEATHS–1970, ANALYSIS BY AGE

| *Age Group* | *Fijian* | *Indian* | *Others* | *Total* |
|---|---|---|---|---|
| 15–19 years .. | 2 | 3 | .. | 5 |
| 20–24 ,, .. | 1 | 3 | 1 | 5 |
| 25–29 ,, .. | 3 | 1 | 1 | 5 |
| 30–34 ,, .. | 3 | 2 | 1 | 6 |
| 35–39 ,, .. | .. | .. | .. | .. |
| 40–44 ,, .. | .. | 1 | .. | 1 |
| 45–49 ,, .. | .. | 1 | .. | 1 |
| Unknown .. | .. | 1 | .. | 1 |
| Total .. | 9 | 12 | 3 | 24 |

15.3.6. An analysis of the same deaths by parity shows that while in the Fijians, only 33 per cent. of all deaths occurred in primipara, the figure for Indians was 57 per cent. This confirms what is already known clinically that eclampsia and severe toxaemia are much more common in the latter group. The figure of maternal death according to gravidity is given below (Table 15.3.6.).

TABLE 15.3.6.

MATERNAL DEATHS, 1970 ANALYSIS BY GRAVIDITY

| *Gravida* | *Fijian* | *Indian* | *Others* | *Total* |
|---|---|---|---|---|
| 1 | 3 | 7 | 1 | 11 |
| 2 | .. | .. | .. | .. |
| 3 | .. | .. | .. | .. |
| 4 | 1 | 1 | .. | 2 |
| 5 | .. | .. | 1 | 1 |
| 6 | .. | .. | 1 | 1 |
| 7 | 2 | .. | .. | 2 |
| 8 | .. | .. | .. | .. |
| 9 | 1 | .. | .. | 1 |
| 10 | .. | 1 | .. | 1 |
| 11 | .. | .. | .. | .. |
| 12 | .. | 1 | .. | 1 |
| Unknown | 2 | 2 | .. | 4 |
| Total .. | 9 | 12 | 3 | 24 |

15.3.7. It will be seen that no deaths were recorded in second and third pregnancies but 13 out of the 24 deaths (54 per cent.) occurred with the fourth or later pregnancies.

15.3.8. Multi-parity is particularly significant in Fijian women, who are known to have a postpartum haemorrhage rate of up to four times that of the Indian mothers. The cause of maternal death in the 24 cases is listed below (Table 15.3.8.).

TABLE 15.3.8.

| *Condition* | *No. of Deaths* | *Remarks* |
|---|---|---|
| Postpartum bleeding .. | 8 | Six were Fijian and two Indians. Three cases had associated retention of placenta. Five patients were gravida, four or over, one being gravida 12. |
| Eclampsia and Toxaemia .. | 5 | All the patients were Indians and all were primipara. |
| Septic Abortion | 3 | |
| Cardia Disease | 2 | |
| Ectopic Pregnancy .. | 2 | |
| Anaesthetic Death .. | 1 | Following Caesarian Section. |
| Placenta Praevia .. | 1 | In a Gravida seven, a Fijian mother who had previously been a tuberculous patient at Tamavua Hospital. |
| Prolonged Labour .. | 1 | Transverse lie in a twin pregnancy. |
| Infection .. | 1 | Anaemia complicating a severe pyelonephritis at 26 weeks pregnancy. |
| Total .. | 24 | |

15.3.9. Of the other five cases which died during pregnancy, three were due to intestinal obstruction and a fourth died at home, probably of an intestinal complication. The fifth case was said to have had renal failure.

15.3.10. Realising the above dangers, efforts were directed during the year to the vigorous treatment of all primipara showing early signs of toxaemia and tubal ligation was offered to suitable multiparous cases who showed a tendency towards postpartum haemorrhage or lived in isolated areas. As postpartum haemorrhage is the largest single cause of maternal death, arrangements were made during the year for all isolated medical stations to group, identify, and register group " O" donors in their neighbouring community who could be called upon in an emergency, not only in cases of postpartum haemorrhage, but also for those other conditions where the loss of blood endangers a patient's life. As almost all mothers attend antenatal clinics, it should be possible to isolate high risk mothers. Although the maternal mortality rate is reasonable in the case of a developing country it is still a long way off from the rate of about 0·2 to 0·5 deaths per thousand deliveries, existing in most developed countries.

## 15.4. Child Health

15.4.1. One of the most commonly used parameters for the measurement of health services is the infant mortality rate, i.e. the number of deaths in babies under one year of age per 1,000 live births and comparative data is available for a large number of countries.

15.4.2. The official figure for infant mortality for Fiji in 1970 was 18·5. This figure compares well with that existing in developed countries and rates from some selected countries are given below for purposes of comparison—

TABLE 15.4.2.

| *Country* | *Year* | *Infant Mortality Rate* |
|---|---|---|
| Australia .. .. .. | 1970 | 18·3 |
| Fiji .. .. .. .. | 1970 | 18·5 |
| Guyana .. .. .. .. | 1967 | 42·1 |
| Hong Kong .. .. .. | 1967 | 25·6 |
| Jamaica .. .. .. .. | 1967 | 30·5 |
| New Caledonia .. .. .. | 1967 | 34·4 |
| New Zealand .. .. .. | 1967 | 18·0 |
| Singapore .. .. .. | 1967 | 24·8 |
| South Africa—Coloured .. | 1967 | 133·6 |
| Asian .. .. | 1967 | 45·3 |
| White .. .. | 1967 | 23·2 |
| Trinidad and Tobago .. .. | 1967 | 35·8 |
| United Kingdom .. .. | 1967 | 18·3 |
| United States of America .. | 1967 | 22·4 |

15.4.3. It will be noted that most of the rates are 1967 figures which have been extracted from World Health Organization reports. Some allowance must be made for developments which have taken place in these countries since 1967.

15.4.4. Of the 33 European " countries " listed by the World Health Organization in 1967, only twelve had infant mortality rates lower than Fiji's while all the East European countries included in the list had infant mortality rate higher than Fiji. Although Yugoslavia had a birth rate of 19·5 per thousand, its infant mortality rate was still 62·1.

15.4.5. However, when the figures are analysed on a racial basis, it is found that the Indian rate is higher (22·81) than the Fijian (14·13), but even so it is still lower than the figure for the New Zealand Maoris of 27·4. The Fijian infant mortality rate at 14·13 is in fact better than the figure (17·4) for New Zealand European in 1968. Comparative rates are listed below in Table 15.4.5.

TABLE 15.4.5.

INFANT MORTALITY RATES OF FIJI AND NEW ZEALAND

| *Race* | *Fiji* 1970 | *Race* | *New Zealand* 1968 |
|---|---|---|---|
| Fijians .. | 14·13 | European (Pakeha) | 17·4 |
| Indians .. | 22·81 | Maoris | 27·4 |
| National Figure | 18·53 | | 18·7 |

15.4.6. The figures quoted above for Fiji are those supplied by the Registrar-General. However, the Medical Department itself runs a monthly statistical reporting from all its stations and the calculation of Fiji's infant mortality rate based on these figures is 22·6. It is likely that not all deaths are being recorded by the Registrar-General and to this end the Department has instituted a programme in 1971 of cross-checking the return of deaths reported by Medical Department staff with those from the Registrar-General. Listed below is a Table (15.4.6.) showing the infant mortality in 1970 by race as recorded by the Medical Department statistician compared with the Registrar-General's figures.

TABLE 15.4.6.

INFANT MORTALITY RATE—1970—BY RACE

| Race | Births | | Neonatal Deaths | | | | Post-Neonatal Deaths | | | | Infant Deaths | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Medical Department | Registrar-General | Medical Department | | Registrar-General | | Medical Department | | Registrar-General | | Medical Department | | Registrar-General | |
| | | | No. | Rate/1000 | No. | Rate/1000 | No. | Rate/1000 | No. | Rate/1000 | No. | Rate/1000 | No. | Rate/1000 |
| Fijian .. .. | 6,759 | 6,336 | 57 | 8·4 | 34 | 5·4 | 66 | 9·8 | 57 | 9·0 | 123 | 18·2 | 91 | 14·4 |
| Indian .. .. | 7,586 | 8,127 | 133 | 17·5 | 96 | 11·8 | 76 | 10·1 | 89 | 11·0 | 209 | 27·6 | 185 | 22·8 |
| Others .. .. | 994 | 940 | 10 | 10·1 | 8 | 8·5 | 4 | 4·0 | 4 | 4·3 | 14 | 14·1 | 12 | 12·8 |
| Total .. | 15,339 | 15,403 | 200 | 13·0 | 138 | 9·0 | 146 | 9·5 | 150 | 9·7 | 346 | 22·6 | 288 | 18·7 |

15.4.7. It will be seen that the difference lies mainly in the number of neonatal deaths, while the post-neonatal death rate of 9·5 and 9·7 from the two sources show a remarkable correlation. The immediate task is to reduce further the racial difference as far as the infant mortality is concerned. The one important factor known to influence the rates is the very high incidence of low birth weight babies in the Indian group, with a correspondingly high neonatal death rate, which is more than twice that for Fijians.

15.4.8. Of the 10,104 live births in the hospitals during the year, 1,995 or 20 per cent. were babies of low birth weight. Of this number while only 5 per cent. of all Fijian babies weighed 2,500 gms. or less, 29 per cent. of the Indian babies fell in this group. See Table XXVII.

15.4.9. When the cause of low birth weight is analysed, the problem is found to be complex. Of all the varied treatments and regimes advocated in obstetrics for the alleviation of toxaemia, " bed-rest " alone has stood the test of time and it should be noted that a recently married young Indian primipara who carries the highest risk of toxaemia is least likely to rest during the day because of economic or social demands. Reference to Table XXVII will also show that of the total of the 203 neonatal deaths, 169 or 78·3 per cent. occurred in low birth weight babies. It is therefore clear that efforts must be directed towards reducing the proportion of low birth weight births if the neonatal mortality is to be further reduced.

15.4.10. It has been felt for many years that the follow-up of babies once they left hospitals and before they enrolled at schools, was unsatisfactory. To cover this age group from the point of view of feeding and immunisation, the new Family Record Cards have been put into operation, accompanied by a very much increased level of staffing of district and zone nurses. Table XXIV lists the work done in this field.

### 15.5. School Health Service

15.5.1. The immunisation schedule started in the first year of life is augmented when children enrol at school. Some 32,492 booster doses of tetanus and 16,247 booster doses of Polio were given during the year to school children. The doses of other vaccines given are listed at Table XXIV.

15.5.2. It is felt that the time and energy spent on this age group will pay dividends by way of the control of infectious diseases in future years.

## 16. HEALTH EDUCATION

16.1.1. More emphasis has recently been placed on the education of public in health matters, now that the curative aspect of medicine is fairly well established. An enlightened public with a co-operative attitude is an added advantage to the Department in waging public health campaigns. This was reported last year in the case of the filariasis programme. The need to educate the public is even more important with respect to diseases and conditions of a non-infectious nature such as anaemia and diabetes.

16.1.2. The health education programme is conducted from headquarters by a full-time medical officer with special training in the subject. At best the effect of health education can only be of a catalytic nature, commencing as part of primary school curriculum and carried through to the secondary level by the Education Department teaching staff. The Medical Department endeavours to instil the concept of health education into all health personnel and particularly so, in the case of student nurses and doctors. Health education talks were also given to " service club " members and health lectures were given regularly at the South Pacific Commission Education Training Centre at Suva.

16.1.3. The methods of propagation were various, including the distribution of pictures and charts in the main languages and by the assistance of press and radio flashes. One of the regular features during the year was the weekly Medical Bulletin, which informs the general public of the diseases prevalent during the week and of possible preventive measures, etc. This information was well utilised by the press and was regularly broadcast over the radio.

16.1.4. Interest was focussed again on the high incidence of goitre existing amongst certain local communities, more or less confined to central Viti Levu. In fact the incidence of goitre is such that it would appear necessary to introduce measures leading to the importation of iodised salt for domestic purposes instead of the non-iodised variety imported at present. To this end the main importers of table salt have been consulted with a view to putting this into effect. As the difference in price between iodised and non-iodised salt is negligible it is hoped to introduce a voluntary scheme in the near future, with the ready co-operation of the importers.

16.1.5. The high incidence of diabetes mellitus and the consequent medical and surgical problems arising therefrom, has also exercised the mind of the Department, and a national diabetics register has been opened. The need to educate the public in the maxim " a full life, despite diabetes " is eminently desirable. To this end, the formation of a Diabetic Association with the assistance of a " service club ", has been fostered by the Department, while the Health Education Section has intensified its work in this direction, by screening films on diabetes and by the preparation of suitable " visual aids ".

16.1.6. In all, though the work being carried out by this section is slow and non-dramatic, there is no doubt that changes in the way of life of the community are being induced, as a result of the persistent and comprehensive health education approach, of all sections of the Department but particularly by the public health nurses in rural and urban areas.

## 17. ENVIRONMENTAL SANITATION

*" To promote international agreement on criteria, guides and codes of practice with respect to known environmental influences on health ".*

*—24th World Health Assembly.*

17.1.1. The world-wide significance given by the World Health Organization during the year to the problem of environmental pollution has forced all communities to reassess their own situations. However, the interpretation of pollution varies from country to country and what may be considered

undesirable in one, may be of value in another, as is the case with the use of chlorinated hydrocarbons in the United States of America, which may be essential in a less developed country, for the control of malaria.

17.1.2. In this country the laws relating to public health are administered by a dual system, consisting of the Government itself and the Fijian administration with respect to Fijian villages which operate side by side. The main Public Health Ordinance which embodies the main safeguards and lays down the minimum public health requirements, in such matters as water supply, sewerage, housing, food handling, etc., is operated by the twenty-six local authorities on behalf of the Central Government. Of these, two represent the urban areas of Suva and Lautoka and seven are concerned with the townships.

17.1.3. The Central Board of Health is a statutory body, the Chairman of which is the Director of Medical Services and is empowered by law to ensure that the local authorities enforce Public Health legislation.

17.1.4. However, at the present time the Public Health Ordinance, except as it relates to infectious diseases, cannot be enforced within the Fijian villages, where the need is greatest. The Fijian villages come under the jurisdiction of fourteen Provincial Councils. These are elected bodies and are collectively responsible to the Fijian Affairs Board. The Public Health legislation applicable to villages is covered by a separate set of By-laws produced by the Fijian Affairs Board, and named the Provincial (Public Health) (Village) By-laws. However the appropriate Government Medical Officer is the ex-officio health adviser to the Provincial Council, and ample powers are provided in the Public Health By-laws for public health purposes.

17.1.5. All medical officers, are also medical officers of health, but the greater part of the load of environmental sanitation works, falls on the Health Inspectorate staff of the Department, who are under the control of the Chief Health Inspector stationed at Medical Headquarters. Except in the case of the Suva, Lautoka and Nadi local authorities, which have their own health inspectors, the Departmental health staff, assist local authorities in carrying out their public health responsibilities under the Public Health Ordinance.

17.1.6. The functions of the Health Inspectorate staff and the work carried out during the year is summarised in Table XXVIII, which amply illustrates the varied nature of the health inspector's work. A large number of high density settlements are proposed as a result of the tourist boom and this is reflected in the rising value of buildings for which permits are issued. This amounted to $18,595 in 1970. Although the provision of a pure water supply for each settlement is taken for granted, this is not always the case in so far as sewage disposal is concerned. However the concept of a combined water and sewage authority is gaining ground and the importance of modern sewage disposal is gradually being accepted.

17.1.7. The construction of the Vitogo/Drasa sewarage in Lautoka was commenced during the year and has progressed satisfactorily except for a few minor delays. A similar plan is envisaged for the Lautoka Area. Consequent upon the extension at the air terminus improvements were also made to the Nadi Airport treatment plant together with its reticulation, while preliminary investigations were carried out to determine the siting of the regional sewage treatment plant at Nadi. In the Suva area a major work was completed in connection with the Vatuwaqa Industrial Area, while preliminary surveys were carried out in respect to a scheme in the Nasinu area outside of Suva.

17.1.8. All these schemes involve considerable expenditure quite apart from the need of the country to keep up with other developments of an economic nature.

### 17.2. Water Supplies

17.2.1. The Department is legitimately proud of the part it has played in close association with the Public Works Department in recent years in the establishment of rural water supplies. This scheme was originally launched with the assistance of United Nations Children's Fund but when the programme was firmly established, the United Nations Agency retired from active participation and the scheme is now based on a straight partnership of the villagers on the one hand and Government on the other.

17.2.2. The design of these water supplies, the skilled labour, the supervision and two-thirds of the materials are provided free by Government, while the rural people provide unskilled labour and the remainder of costs of material. The scheme has been an unparallelled success and a large number of villages are on the " waiting list " for the service which has provided a total of 233 village water supplies since its inception in 1966.

### 17.3. The School Sanitation Scheme

17.3.1. In recent years the Medical Department has had an increasing interest in health education in schools and a few years ago agreement was reached with the World Health Organization for the training of two health educators. A teacher from the Education Department and a doctor from Medical Department were given World Health Organization fellowships to enable them to study, at overseas centres, health education generally and school health education in particular. A successful liaison has since been established and it was soon discovered that the standard of environmental hygiene in many of our rural schools, was such that urgent priority should be given to the establishment of a programme directed at the better provision of their environmental hygiene.

17.3.2. A scheme was prepared very much on the lines of the successful village water supply scheme mentioned earlier in this section, and this was accepted by the World Health Organization and the United Nations Children's Fund. The agreement provides for a partnership between the Government, the schools and the United Nations Children's Fund, whereby the cost of materials required for the installation of water supplies, latrines and washing facilities, are split three ways between the parties; skilled labour and supervision being supplied by Government and unskilled labour being provided by the schools.

17.3.3. Standard designs for ablution blocks have been drawn up and plans were completed in 1970 for the construction of sixteen such school water supplies and ablution blocks in 1971.

### 17.4. Water-Seal Latrines

17.4.1. A total of 2,202 water-seal latrines were constructed during the year bringing the total installed over the last six years to 16,798. Efforts are being directed to the final stages of the design and mass production of a plastic water-seal insert to replace the concrete ones now in use and a prototype has already been approved, for manufacture early next year.

### 17.5. The Work of the Health Inspectorate

17.5.1. The Work of the Health Inspectorate staff entails a considerable amount of simple environmental sanitation but with rapid economic progress particularly related to the tourist industry the problems are becoming more and more sophisticated.

## 18. QUARANTINE

*"The new approach (by International Health Regulations) places its main emphasis on epidemiological intelligence or international disease Surveillance . . . Health control measures should be based on epidemiological knowledge and not imposed as political placebos."*

*—British Medical Journal*, 1971. *Vol.* 1, 415.

18.1.1. The Quarantine Regulations are principally designed to prevent the introduction of the four major quarantinable diseases of cholera, smallpox, plaque and yellow fever, as well as to take all possibe precaution against the introduction of Anophelilne mosquitoes from across the 170th meridian (W.)

18.1.2. The tourist industry has continued to show phenomenal growth, bringing in its train a host of associated problems. This has meant that Fiji's three ports of entry at Suva, Lautoka and Levuka, as well as the busy international airport at Nadi required increased staff to man Fiji's health frontiers, without causing inconvenience to our visitors. The expansion of the regional air services has added to the problem, particularly with regard to the chances of the introduction of Anopheline mosquitoes from the New Hebrides, the British Solomon Islands Protectorate and New Guinea. All ports of entry are manned and maintained to the standard required by the International Health Regulations.

18.1.3. In addition to its other hazards, Fiji is a yellow fever receptive area and control measures against *Aedes aegypti* are maintained at ports and airports in accordance with international agreement.

18.1.4. The World Health Organization's first Regional Training Course in Epidemiological Surveillance and International Quarantine was held in Suva from 24th to 30th July, which provided an ideal opportunity for the interchange of information about quarantine measures adopted by countries in the area, particularly with respect to vaccination requirements.

18.1.5. Statistical information concerning the work of the quarantine staff is provided in Table XXVIII.

## PART E—TRAINING

## 19. FIJI SCHOOL OF MEDICINE

*"The true aim of the teacher should be to impart an appreciation of method rather than a knowledge of facts."*

*—Karl Pearson, Grammar of Science.*

19.1.1. The history of Fiji's Medical Department goes hand in hand with the history of its training establishments for health workers. The training dates back to 1878 when a group of young men were trained as vaccinators. This decision to provide medical training could well have been related to the proposed arrangements to bring indentured labourers from India, where smallpox was endemic. The length of training was increased in 1886, when a three-year course in medicine was introduced to train Native Medical Practitioners. This was subsequently increased to four years and more recently to five, to its present length.

19.1.2. The history of the Fiji School of Medicine is too well known to be recapitulated here but suffice it to say that the present five-year course produces medical officers of a standard not too far removed from the product of established University Medical Schools of the Commonwealth.

19.1.3. What is sometimes overlooked is that from its early days the Fiji School of Medicine in Suva has fulfilled a regional role and has identified itself with the needs of the area as a whole. Students from some twelve other Pacific Island Territories attend the School, and these make up more than half of the total roll. Courses offered at the Fiji School of Medicine other than in Medicine, include Dentistry, Physiotherapy, Radiography, Laboratory technology, Dietetics, Dental hygiene, Dental mechanics and Health inspection.

19.1.4. Two hundred and seven students were enrolled during the year of which 40 first year Medical and Dietetics students attended the University of the South Pacific. Medical students numbered 112 and dental students 19. Table 19.1.4. sets out a detailed analysis of enrolments by territory and course of study.

TABLE 19.1.4.

FIJI SCHOOL OF MEDICINE STUDENTS COMPLETING COURSES BY TERRITORY AND SUBJECTS, 1970

| Territory | Medical | Dental | | Laboratory Technology | Radiography | Physiotherapy | Dietetics | Assistant Health Inspectors | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | Mechanic | Hygienists | | | | | | |
| Fiji | 4 | 1 | 4 | .. | 2 | 1 | 4 | .. | 16 |
| British Solomon Islands Protectorate | .. | 1 | 1 | 2 | .. | .. | .. | 5 | 9 |
| Cook Islands | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| American Samoa | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Tonga | 4 | .. | .. | 1 | 1 | 1 | .. | .. | 7 |
| Gilbert and Ellice Islands Colony | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| United States Trust Territories | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Total | 9 | 2 | 6 | 4 | 4 | 2 | 4 | 5 | 36 |

## 20. CENTRAL NURSING SCHOOL

20.1.1. The training of nurses began at the old Suva Hospital in 1894, the intake being confined to Europeans. In the Medical Department Report of 1908 it is reported—

> " In spite of the large number of young unmarried women in the Colony, there is a great and increasing difficulty in filling vacancies for probationship, and the difficulty is likely to be a grave one . . . as soon as one of these candidates becomes a qualified nurse, she leaves the hospital for her home.".

20.1.2. Although the first problem has undergone self-resolution with time and advancement of womenhood in this country, the second problem " the toll of marriage ", still exists. However with time married nurses have become a normal feature of the service and conditions of employment are gradually being modified to allow nurses to pursue their vocation after marriage.

20.1.3. In view of the difficulties related above, a start was made on the training of Fijian women as midwives at the Suva Hospital in 1908 and a maternity ward was set aside for their training. The first six girls completed a six months course of training without much difficulty and were posted to the districts to look after obstetric cases. The object in the words of the Chief Medical Officer of the time was, " in order to put a stop, if possible, to some of the deplorable occurrences that are from time to time reported, of women dying in childbirth ".

20.1.4. From these humble beginnings the Central Nursing School, which since then has been moved to Tamavua at Suva with a branch at Lautoka, has evolved. In 1944 a 39-month Fiji curriculum was introduced and the bulk of nurses in this country are the product of this training and represent the Fiji equivalent of " State Enrolled " nurses of the United Kingdom.

## 21. NURSES

21.1.1. In 1955, a " New Zealand Class " was introduced to the Nursing School. This class follows the New Zealand curriculum of three years syllabus and requires a higher educational standard of entry. As mentioned earlier, graduates of this class join the Department as junior sisters.

21.1.2. The annual intake and output from the two Schools over the last few years is shown below in Table 21.1.2.—

TABLE 21.1.2.

| Basic Programme | Years | | | | | |
|---|---|---|---|---|---|---|
| | 1966 | 1967 | 1968 | 1969 | 1970 | Total |
| Intake New Zealand Classes .. .. | 17 | 20 | 17 | 9 | 22 | 85 |
| Output New Zealand Classes .. .. | 13 | 10 | 13 | 12 | 7 | 55 |
| Intake Fiji Classes .. | 33 | 35 | 34 | 36 | 47 | 185 |
| Output Fiji Classes .. | 14 | 27 | 18 | 16 | 16 | 91 |

21.1.3. The post-basic nursing education has received commendable assistance from the New Zealand Health Department's Nursing Division at all times, and has enabled the School, to introduce a midwifery course of six months duration to the New Zealand standard. The Nursing School also conducts a post-graduate course in public health nursing geared to the requirements of the South Pacific area. Both echelons of the Fiji Nursing Service are catered for in this public health course. Staff nurses take a basic course of ten weeks duration while the New Zealand Class nurses, continue for a further six weeks of more intensive training.

21.1.4. During 1970, sixteen nurses entered the post-basic classes and fourteen were successful. This number helps to swell the numbers of more highly trained nurses, who are expected to accept the nursing responsibilities demanded at more sophisticated levels, resulting from the ever improving standards of medical care provided by the various specialised units and institutions.

## 22. POST-GRADUATE TRAINING

22.1.1. Post-basic training and the provision of the continuous education of health personnel in Fiji has always been a feature of the Medical Department programme but its pace has been quickened recently with the programme of localisation.

22.1.2. Basically two methods of overseas training are available for the Medical Department staff—

(*a*) In-service Training Programme sponsored by the Department. These arrangements are made on a Government to Government basis.

(*b*) " Attachments " of staff to overseas units during the officers' overseas leave.

22.1.3. Commendable results have been derived from the training of the Fiji School of Medicine graduates in Public Health at the University of Otago. Twelve medical officers have taken the course leading to the diploma and all have been successful. These doctors are currently filling posts of Divisional and Subdivisional Medical Officers, while a further three are scheduled to take the public health diploma course in 1971.

22.1.4. The early start made in the post-graduate training of medical officers in obstetrics at the National Women's Hospital, Auckland, has resulted in seven doctors being successful in the Diploma in Obstetrics examination of the University of Auckland.

22.1.5. Although both the Australasian Colleges of Surgeons and Physicians have accepted graduates from the Fiji School of Medicine to appear for their qualifying examination, the results so far have been somewhat disappointing.

22.1.6. The chances of the future recruitment of overseas consultants are likely to worsen and of three vacancies advertised during the year, none so far, have been filled. To combat the difficulty and to maintain standards, local doctors are undergoing training in psychiatry, pathology, radiology and anaesthesia in New Zealand and arrangements have been completed to send medical officers to Australia to prepare them for higher examinations in paediatrics as well as in obstetrics and Gynaecology.

22.1.7. Mention should also be made of the Indian Government's offer to take a limited number of Fiji

School of Medicine graduates for a two-year condensed M.B., B.S. Course in India. Five medical officers are taking such courses at present, on Fiji or Indian Government Scholarships, while three have already completed their degree.

22.1.8. Post-basic training is not confined to medical officers but is also extended to personnel in all sections of the Department. However, it should be appreciated that overseas training is only arranged, if suitable training facilities are not available in Fiji.

22.1.9. In the Nursing Division, the need to strengthen the staff of the teaching institutions and to develop a higher cadre of sisters for hospital administration in the future, has resulted in several senior nursing staff taking the twelve-month course provided by the New Zealand School of Advanced Nursing.

22.1.10. Overseas training courses in administration and personnel management for Higher Executive Officers have been arranged during the year with the object of maintaining and improving standards in these fields. All these arrangements, as well as the reshuffling of staff, and the filling of posts by acting appointments during the absence of the substantive holders, have resulted in considerable Government expenditure, and it is hoped that a new era of professional competency will be opened with the return of these people who have been fortunate to acquire knowledge overseas. The need to pass on the acquired experience to junior and up and coming members of the Department is most essential.

22.1.11. Table 22.1.11. below analyses the courses of study undertaken by medical officers during 1970.

TABLE 22.1.11.

| *No.* | *Course and Country of Study* | *Awards* |
|---|---|---|
| 5 | Condensed M.B., B.S. India .. .. | In-Service Training Scheme and Commonwealth Scholarships. Government of India. |
| 2 | Diploma in Public Health, University of Otago, New Zealand . | World Health Organization and In-Service Training Scheme. |
| 1 | Anaesthesia — New Zealand .. .. | Attachment. |
| 1 | M.R.A.C.P., Australia | Carreras Scholarship and In-Service Training. |
| 2 | Paediatrics—Australia | World Health Organization Fellowship. |
| 2 | Paediatrics — New Zealand .. .. | Attachment. |
| 1 | Radiology — New Zealand .. .. | New Zealand Commonwealth Medical Aid Award. |
| 1 | Radiography — New Zealand .. .. | Attachment. |
| 1 | Surgery—New Zealand | Carreras Scholarship and In-Service Training. |
| 1 | Surgery—New Zealand | Attachment. |
| 1 | Obstetric and Gynaecology—New Zealand | In-Service Training and Attachment. |

22.1.12. This list provides some idea of the coverage of overseas courses provided but does not include the number of local training courses provided or those who attended overseas seminars and conferences.

## PART F—EPILOGUE

### 23. SUMMARY AND CONCLUSION

23.1.1. The Department chronicles in the foregoing pages another year of steady progress and records with gratitude the considerable assistance given it by other Government Departments notably the Marine Department, the Public Works Department, the Government Printer and by innumerable non-Government organisations.

23.1.2. Among these we would like to thank the news media who have assisted us greatly with the propagation of health education material and who have through their reports served to keep the Department on its toes.

23.1.3. A mention must also be made of the remarkable efforts being made by the Crippled Children's Society and in their particular fields, of the assistance provided by the St. John Ambulance Brigade, the British Red Cross Society and the many service clubs.

23.1.4. Finally the Department would like to express its appreciation to the New Zealand Health Department for its assistance in the post-graduate training of medical and nursing staff, to the Lepers' Trust Board and War Memorial Anti-Tuberculosis Trust Fund Board, to the New Zealand Post-graduate Medical Federation and to the neuro-surgical team led by Professor Richard Gye of Prince Alfred Hospital, Sydney, who made three visits to Fiji during the year.

C. H. GURD,
Secretary for Health.

# TABLE I

## ESTABLISHMENT 1970

| | | |
|---|---|---|
| **1. Medical and Administrative Section—** | | |
| Director of Medical Services | 1 | |
| Deputy Director of Medical Services | 1 | |
| Assistant Director of Medical Services (Health) | 1 | |
| Assistant Director of Medical Services (Dental) | 1 | |
| Secretary | 1 | |
| Consultants | 16 | |
| Senior Medical Officers | 6 | |
| Medical Officers (Special Grade) | 8 | |
| Medical Officers Class I | 68 | |
| Medical Officers Class II | 98 | |
| Medical Officers (Intern) | 8 | |
| Senior Dental Officer | 1 | |
| Dental Officers Class I | 4 | |
| Dental Officers Class II | 24 | |
| Dental Officer (Intern) | 1 | |
| Medical Statistics Officer | 1 | |
| Senior Physiotherapist | 1 | |
| Physiotherapists | 2 | |
| Junior Physiotherapists | 4 | |
| | — | 247 |
| **2. Nursing Section—** | | |
| Nursing Superintendent | 1 | |
| Matrons and Assistant Matrons | 6 | |
| Senior Sisters | 10 | |
| Sisters-in-Charge | 6 | |
| Sisters (66 and Junior Sisters (64), Nursing Sisters (14) | 144 | |
| Senior Health Sisters (5), Health Sisters (14), and Junior Health Sisters (10) | 29 | |
| Nurses | 566 | |
| | — | 762 |
| **3. Nursing School Section—** | | |
| Principal | 1 | |
| Senior Tutor Sisters | 3 | |
| Tutor Sisters | 7 | |
| Housekeeper | 1 | |
| Head Seamstress | 1 | |
| | — | 13 |
| **4. Technical Section—** | | |
| Laboratory Superintendent | 1 | |
| Chief Health Inspector (1), Senior Health Inspectors (4), and Health Inspectors (11), Public Health Building Supervisor (1) | 17 | |
| Assistant Inspectors (Health and Mosquito) | 77 | |
| Laboratory Technicians | 23 | |
| Chief Pharmacist and Controller of Medical Stores | 1 | |
| Pharmacists (4), Pharmacists Class II and Junior Pharmacists (8) | 12 | |
| Superintendent Radiographer (1), Radiographers (6) and Junior Radiographers (11) | 18 | |
| Senior Dental Mechanic (1) and Dental Mechanics (2) | 3 | |
| Senior Dental Hygienists (3) and Dental Hygienists (15) | 18 | |
| | — | 170 |
| **5. Clerical Section—** | | |
| Accountants I/II | 2 | |
| Assistant Accountant | 1 | |
| Higher Executive Officers | 6 | |
| Executive Officers | 10 | |
| Clerical Officers I/II | 63 | |
| Personal Assistant | 1 | |
| Stenographer/Typists | 27 | |
| | — | 110 |

| | | |
|---|---|---|
| 6. Supervisory Section— | | |
| Head Attendant, St. Giles Hospital | 1 | |
| Assistant Head Attendants (2) and Orderlies (72) | 74 | |
| Housekeepers, Dietitians and Junior Dietitians | 13 | |
| Chief Cooks (5), Laundry Supervisors (6) and Head Seamstresses (4) | 15 | |
| Storekeepers and Storemen | 13 | |
| Receptionist | 1 | |
| Splintmakers | 2 | |
| | — | 119 |
| 7. Fiji School of Medicine— | | |
| Principal | 1 | |
| Senior Medical Officer | 1 | |
| Senior Clinical Tutors (2) and Clinical Tutors (4) | 6 | |
| Clinical Tutors (Dental) | 2 | |
| Lecturer Grade A | 2 | |
| Medical Officers | 2 | |
| Senior Health Instructor (1) and Health Instructor (1) | 2 | |
| Higher Executive Officer (1), Clerical Officers (2) and Stenographer/Typists (2) | 5 | |
| Chief Cook (1), Housekeepers (2), Junior Dietitian (1), Part-time Nutritionists (2) | 6 | |
| Laboratory Attendants | 2 | |
| | — | 29 |
| 8. Central Medical Research Library— | | |
| Assistant Librarian | 1 | |
| | — | 1 |
| 9 Family Planning— | | |
| Medical Officer Class I | 1 | |
| Medical Officers Class II | 3 | |
| Sisters (3) and Nurses (30) | 33 | |
| Storeman | 1 | |
| | — | 38 |
| Total Establishment | | 1,489 |

TABLE II

Analysis of Recurrent Expenditure for the Years, 1961–1970

| Year | Approved Expenditure on Medical Services | Approved Total Recurrent Budget | Medical Expenditure Expressed as Percentage of Total Budget |
|---|---|---|---|
| | $ | $ | |
| 1961 | 1,951,106 | 14,825,388 | 13·15 |
| 1962 | 2,049,514 | 16,086,334 | 12·74 |
| 1963 | 2,139,698 | 17,223,226 | 12·42 |
| 1964 | 2,329,954 | 20,052,992 | 11·62 |
| 1965 | 2,454,854 | 23,311,126 | 10·53 |
| 1966 | 2,701,548 | 25,169,610 | 10·73 |
| 1967 | 2,774,752 | 29,065,388 | 9·55 |
| 1968 | 2,957,154 | 30,731,191 | 9·62 |
| 1969 | 3,145,737 | 34,422,917 | 9·14 |
| 1970 | 3,335,571 | 35,666,926 | 9·35 |

TABLE III

Medical Department Expenditure and Revenue

| Year | Gross Medical Department Recurrent Expenditure | Total Medical Department Revenue | Net Medical Department Recurrent Expenditure | Revenue Expressed as % of Gross Expenditure | Total Population | Net Expenditure per head |
|---|---|---|---|---|---|---|
| | $ | $ | $ | | | $ |
| 1965 | 2,454,854 | 326,048 | 2,128,806 | 13·28 | 469,934 | 4·53 |
| 1966 | 2,701,548 | 308,080 | 2,393,468 | 11·13 | 478,355 | 5·00 |
| 1967 | 2,774,752 | 340,796 | 2,433,956 | 12·28 | 490.716 | 4·96 |
| 1968 | 2,957,154 | 366,975 | 2,590,179 | 12·41 | 502 035 | 5·15 |
| 1969 | 3,145,737 | 366,635 | 2,779,102 | 11·65 | 513,717 | 5·41 |
| 1970 | 3,771,280 | 358,283 | 3,412,997 | 9·50 | 524,457 | 6·51 |

TABLE IV

DETAILS OF MEDICAL DEPARTMENT REVENUE

| Description | 1966 | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ |
| Licences | 1,361.00 | 1,169.75 | 717.75 | 1,012.00 | 1,064.00 |
| Fumigation | 8,433.23 | 12,481.58 | 11,742.23 | 14,573.00 | 13,473.00 |
| Hire of Plant and Vehicles | ..... | 2.00 | ..... | 26.00 | 12·00 |
| Hospitals | 200,370.34 | 205,370.34 | 209,953.99 | 245,237.00 | 235,972.00 |
| Rest House and Quarantine Stations | ..... | ..... | ..... | ..... | ..... |
| Publication and Printing | 20.82 | ..... | 858.06 | ..... | ..... |
| Stores Allocated | 2,432.48 | 2,990.09 | 2,269.07 | 3,230.00 | 4,144.00 |
| Family Planning Materials | 5,274.62 | 6,124.87 | 6,648.32 | 8,550.00 | 11,125.00 |
| Unclaimed and Unserviceable Property | ..... | 188.05 | ..... | 324.00 | 457.00 |
| Fiji Leprosy Hospital | 3,510.32 | ..... | 5,274.45 | 3,040.00 | 2,459.00 |
| Fiji School of Medicine | 63,608.00 | 90,726.00 | 105,262.59 | 63,710.00 | 90,196.00 |
| South Pacific Health Service | 8,007.94 | 7,713.46 | 5,915.30 | 10,918.00 | 10,089.09 |
| Medical Services—Nadi Airport | 4,707.06 | 4,413.37 | 4,160.77 | 916.00 | 645.00 |
| Gold Mining Company on account of Medical Services | 400.00 | 400.00 | 400.00 | 405.00 | 400.00 |
| Central Nursing School | 4,533.33 | 2,972.00 | 5,984.00 | 3,367.00 | 3,177.00 |
| Board and Lodging (Island Students) | 501.08 | 806.01 | ..... | ..... | ..... |
| Miscellaneous | 562.17 | 1,038.58 | 2,107.40 | 2,416.00 | 284.00 |
| Recoveries of Overpayments | 86.83 | 214.95 | 1,029.32 | 2,477.00 | 482.00 |
| Produce Makogai | 3,150.25 | 3,167.38 | 2,657.98 | 2,776.00 | ..... |
| Vessels and Punt Hire | 20.00 | ..... | ..... | ..... | 5.00 |
| Payment on Account of Services of Government Officers | ..... | ..... | ..... | ..... | ..... |
| Meat Inspection | 126.20 | 68.35 | 89.80 | ..... | ..... |
| British Empire Cancer Research | 888.00 | 888.00 | 836.00 | 836.00 | 836.00 |
| Income Tax | 6·30 | 11,232.77 | 11,637.19 | 12,689.00 | 14,631.00 |
| Fiji National Provident Fund | 80.90 | 20,613.75 | 21,601.05 | 23,825.00 | 26,205.00 |
| Land and Buildings | ..... | 33.50 | 69.00 | 52.00 | ..... |
| Official Quarters | ..... | ..... | ..... | 975.00 | 1,312.00 |
| Sundries | ..... | ..... | ..... | 4,195.00 | 1,498.00 |
| Total | $308,080.87 | $372,643.20 | $400,212.87 | $403,149.00 | $418,466.00 |
| *Less :* Fiji National Provident Fund and Income Tax | 87.20 | 31,846.52 | 33,238.24 | 36,514.00 | 40,836.00 |
| | $307,993.67 | $340,796.68 | $366,974.63 | $366,635.00 | $377,630.00 |

TABLE V

HOSPITALS: COST OF MEDICAL SUPPLIES PER OCCUPIED BED

| Hospital | Average Occupied Beds | Drugs and Dressings | X-Ray Instruments and Appliances | Linen, Furniture and Equipment | Miscellaneous | 1970 Total | 1969 Total | 1968 Total |
|---|---|---|---|---|---|---|---|---|
| | | $ | $ | $ | $ | $ | $ | $ |
| Colonial War Memorial | 268·7 | 174.46 | 88.40 | 61.50 | 23.55 | 347.91 | 324.80 | 324.18 |
| Lautoka | 158·1 | 154.56 | 82.49 | 64.18 | 23.24 | 324.47 | 254.55 | 260.45 |
| Labasa | 72·1 | 109.34 | 37.25 | 63.62 | 19.16 | 229.37 | 187.92 | 164.07 |
| Levuka | 25·1 | 146.28 | 46.88 | 45.33 | 9.58 | 248.07 | 233.92 | 287.24 |
| Tamavua | 151·7 | 48.53 | 20.96 | 13.98 | 3.58 | 87.05 | 55.85 | 62.08 |
| St. Giles' | 152·4 | 54.35 | 0.33 | 34.97 | 6.13 | 95.78 | 63.08 | 102.22 |
| P. J. Twomey Memorial | 79·6 | 9.20 | 3.35 | 12.88 | 22.26 | 47.69 | 30.53 | 19.42 |
| Sigatoka | 39·3 | 32.82 | 15.69 | 41.38 | 8.77 | 98.66 | 159.68 | 82.73 |
| Nadi | 26·5 | 130.70 | 45.75 | 24.12 | 5.46 | 206.03 | 176.40 | 199.29 |
| Ba | 16·2 | 80.75 | 26.72 | 19.60 | 1·89 | 128.96 | 89.37 | 111.20 |
| Ra | 11·7 | 161.49 | 56.96 | 120.84 | 13.80 | 353.09 | 279.96 | 117.84 |
| Savusavu | 24·7 | 120.19 | 43.01 | 17.51 | 5·27 | 185.98 | 273.60 | 89.18 |
| Taveuni | 17·6 | 71.53 | 15.54 | 19.55 | 5.10 | 111.72 | 150.03 | 80.46 |
| Nabouwalu | 9·6 | 89.98 | 7.57 | 54.52 | 7.94 | 160.01 | 140.15 | 100.01 |
| Wainibokasi | 7·4 | 154.64 | 5.27 | 77.11 | 4.86 | 241.88 | 103.93 | 95.28 |
| Vunidawa | 2·5 | 241.00 | 12.26 | 167.02 | 3·23 | 423.51 | 283.74 | 250.00 |
| Lomaloma | 4·0 | 398.58 | 41.80 | 174.52 | 3.67 | 618.57 | 98.89 | 100.77 |
| Lakeba | 4·3 | 213.18 | 87.70 | 85.61 | 14.04 | 400.53 | 337.48 | 170.00 |
| Matuku | 2·7 | 106.93 | 26.61 | 7.17 | 0·86 | 141.57 | 85.54 | 94.55 |
| Vunisea | 14·0 | 59.22 | 18.79 | 47.52 | 0·59 | 126.12 | 246.45 | 96.55 |
| Rotuma | 8·6 | 79.92 | 8.92 | 21.32 | 4.91 | 115.07 | 203.00 | 130.01 |
| Nausori Maternity Unit | 10·9 | 314.96 | 68.49 | 9.21 | 14·54 | 407.20 | 213.70 | 86.54 |
| Tavua Maternity Unit | 9·9 | 210.13 | 45.73 | 59.63 | 15·44 | 330.93 | 163.54 | 160.64 |
| Total | 1,117·6 | Mean cost per occupied bed | | | | $215.37 | $173.94 | $161.23 |

## TABLE VI

COST OF MEDICAL SUPPLIES PER OUT-PATIENT ATTENDANCE IN HEALTH CENTRES

| *Health Centres* | *In* 1970 *Attendances* | *Cost as Expressed in Cents* | | |
|---|---|---|---|---|
| | | 1970 | 1969 | 1968 |
| Suva Gaol and Naboro Prison Farm .. .. | 49,686 | 1.3 | 0.4 | .. |
| Ba .. .. .. .. .. .. | 68,384 | 4.7 | 2.8 | 3.5 |
| Nausori .. .. .. .. .. .. | 80,137 | N.A. | 1.4 | 2.3 |
| Vatukoula .. .. .. .. .. .. | 43,825 | 2.8 | 2.9 | 4.1 |
| Tavua .. .. .. .. .. .. | 31,213 | N.A. | 2.2 | 3.3 |
| Namaka .. .. .. .. .. .. | 25,502 | 4.8 | 3.4 | 4.5 |
| Navua .. .. .. .. .. .. | 21,184 | 4.8 | 4.3 | 4.2 |
| Samabula .. .. .. .. .. .. | 21,969 | 2.2 | 1.4 | 1.9 |
| Nuffield Clinic .. .. .. .. .. | 14,639 | 11.4 | 4.9 | 6.2 |
| Nanukuloa .. .. .. .. .. .. | 15,957 | 4.7 | 4.1 | 6.7 |
| Korovou .. .. .. .. .. .. | 13,426 | 8.7 | 6.2 | 5.5 |
| Wainikoro .. .. .. .. .. .. | 17,663 | 5.1 | 4.1 | .. |
| Tau .. .. .. .. .. .. .. | 14,500 | 5.2 | 3.9 | 4.1 |
| Nayavu .. .. .. .. .. .. | 6,767 | 8.0 | 7.9 | 5.1 |
| Dreketi .. .. .. .. .. .. | 4,635 | 13.3 | 8.6 | 6.8 |
| Naduri .. .. .. .. .. .. | 3,743 | 12.9 | 6.6 | 6.4 |
| Nadi Airport .. .. .. .. .. | 3,100 | 10.0 | 5.1 | N.A. |
| Lodoni .. .. .. .. .. .. | 4,808 | 9.5 | 8.2 | 9.9 |
| Moala .. .. .. .. .. .. | 4,899 | 9.1 | 8.9 | 6.6 |
| Rabe .. .. .. .. .. .. | 3,386 | 13.7 | 11.4 | 9.6 |
| Tukavesi .. .. .. .. .. .. | 2,710 | 10.4 | 11.2 | 8 1 |
| Police Barracks .. .. .. .. .. | 3,966 | 2.8 | 2.1 | 2.5 |
| Keiyasi .. .. .. .. .. .. | 5,514 | 6.5 | 11.1 | 8.0 |
| Koro .. .. .. .. .. .. | 5,397 | 7.9 | 10.5 | 8.6 |
| Lekutu .. .. .. .. .. .. | 2,617 | 22.6 | 14.6 | 13.0 |
| Mokani .. .. .. .. .. .. | 6,231 | 3.2 | 5.0 | 4.7 |
| Naqali .. .. .. .. .. .. | 6,534 | 5.9 | 10.7 | 8.8 |
| Korovi ilou .. .. .. .. .. .. | 5,620 | 6.0 | 12.1 | 7.8 |
| Raiwaqa .. .. .. .. .. .. | 3,848 | 13.5 | 12.6 | 11.7 |
| Visoqo .. .. .. .. .. .. | 2,678 | 5.2 | 8.9 | 7.4 |
| Yaro .. .. .. .. .. .. | 2,409 | 7.8 | 7.2 | 11.8 |
| Nadarivatu .. .. .. .. .. .. | 1,759 | 11.1 | 7.0 | 9.1 |
| Gau .. .. .. .. .. .. .. | 3,187 | 10.9 | 14.3 | 19.9 |
| Saqani .. .. .. .. .. .. | 3,055 | 5.4 | 11.4 | 11.3 |
| Wainunu .. .. .. .. .. .. | 1,939 | 12.6 | 12.6 | 11.5 |
| Beqa .. .. .. .. .. .. | 1,785 | 17.7 | 16.5 | 8.0 |
| Kabara .. .. .. .. .. .. | 1,241 | 20.3 | 8.3 | 21.8 |
| Natewa .. .. .. .. .. .. | 1,599 | 18.3 | 17.0 | 16.0 |
| Korotasere .. .. .. .. .. .. | closed | .. | 14.4 | 15.0 |
| Namosi .. .. .. .. .. .. | 1,058 | 20·7 | 14.3 | 14.4 |
| Ono-i-Lau .. .. .. .. .. .. | 1,826 | 14.6 | 8.7 | 11.6 |
| Kese .. .. .. .. .. .. .. | 2,526 | 23.2 | 24.4 | 11.8 |
| Nasau .. .. .. .. .. .. | closed | .. | 11.7 | 10.9 |
| Nabua .. .. .. .. .. .. | 931 | 48.1 | 27.1 | 17.4 |
| Laselevu .. .. .. .. .. .. | 1,736 | 9.6 | 12.9 | 10.2 |
| Lomanikoro (closed 1968) .. .. .. | closed | .. | .. | 19.4 |
| Namarai (closed 1969) .. .. .. .. | closed | .. | .. | 12.5 |
| Mean Attendances .. .. .. | .. | 12,084 | 11,810 | 8,583 |
| Mean Cost .. .. .. .. | .. | 4.8c | 4.8c | 5.3c |

## TABLE VII

HEALTH CENTRES—OUT-PATIENTS, 1968–1970

| *Centres* | 1970 | | | | 1969 | 1968 |
|---|---|---|---|---|---|---|
| | *Fijian* | *Indian* | *Others* | *Total* | *Total* | *Total* |
| CENTRAL DIVISION— | | | | | | |
| Beqa | 1,785 | .. | .. | 1,785 | 1,793 | 1,874 |
| Korovisilou | 4,391 | 1,186 | 43 | 5,620 | 2,974 | 3,175 |
| Korovou | 8,159 | 3,837 | 420 | 13,426 | 11,206 | 10,631 |
| Laselevu | 1,736 | .. | .. | 1,736 | 1,023 | 1,387 |
| Lodoni | 3,556 | 1,081 | 171 | 4,808 | 3,920 | 2,532 |
| Mokani | 4,482 | 1,734 | 15 | 6,231 | 3,228 | 3,296 |
| Nabua | 474 | 445 | 12 | 931 | 1,115 | 1,713 |
| Namosi | 1,058 | .. | .. | 1,058 | 1,493 | 1,238 |
| Naqali | 4,520 | 1,860 | 154 | 6,534 | 3,163 | 3,263 |
| Nausori | 26,483 | 52,281 | 1,373 | 80,137 | 64,179 | 53,668 |
| Navua | 7,633 | 12,986 | 565 | 21,184 | 21,734 | 21,117 |
| Nayavu | 6,521 | 217 | 29 | 6,767 | 6,293 | 8,205 |
| Nuffield Clinic | 5,814 | 7,922 | 903 | 14,639 | 15,823 | 14,414 |
| Police Barracks | 3,305 | 537 | 124 | 3,966 | 3,381 | 2,654 |
| Raiwaqa | 1,241 | 2,220 | 387 | 3,848 | 2,686 | 2,947 |
| Samabula | 10,870 | 9,687 | 1,412 | 21,969 | 20,055 | 18,576 |
| Suva Gaol and Naboro | 33,250 | 14,866 | 1,570 | 49,686 | 46,231 | 42,321 |
| Lomanikoro | closed | | | | closed | 789 |
| Total | 125,278 | 111,869 | 7,188 | 224,335 | 210,297 | 193,800 |
| WESTERN DIVISION— | | | | | | |
| Ba | 5,109 | 62,595 | 680 | 68,384 | 82,345 | 42,054 |
| Keiyasi | 4,406 | 1,099 | 9 | 5,514 | 3,365 | 2,815 |
| Kese | 2,526 | .. | .. | 2,526 | 1,428 | 1,355 |
| Lomawai | 2,596 | 11,873 | 31 | 14,500 | 9,139 | 11,935 |
| Nadarivatu | 1,711 | 42 | 6 | 1,759 | 1,965 | 1,896 |
| Nadi Airport | 954 | 558 | 1,588 | 3,100 | 4,529 | 4,996 |
| Namaka | 5,274 | 19,862 | 366 | 25,502 | 24,939 | 22,827 |
| Nanukuloa | 7,334 | 8,617 | 6 | 15,957 | 11,299 | 24,915 |
| Tavua | 4,888 | 26,602 | 223 | 31,213 | 28,364 | 7,569 |
| Vatukoula | 25,513 | 10,991 | 7,321 | 43,825 | 42,733 | 34,579 |
| Nasau | closed | | | | 1,158 | 1,028 |
| Namarai | closed | | | | closed | 1,057 |
| Total | 60,311 | 141,739 | 10,230 | 212,280 | 211,256 | 157,026 |
| NORTHERN DIVISION— | | | | | | |
| Dreketi | 1,439 | 3,125 | 71 | 4,635 | 6,604 | 8,078 |
| Lekutu | 629 | 1,973 | 15 | 2,617 | 3,299 | 3,293 |
| Naduri | 1,785 | 1,904 | 54 | 3,743 | 5,986 | 5,838 |
| Natewa | 1,539 | 28 | 32 | 1,599 | 1,670 | 2,092 |
| Rabe | 153 | .. | 3,233 | 3,386 | 3,564 | 3,062 |
| Saqani | 2,833 | 55 | 117 | 3,055 | 1,855 | 2,485 |
| Tukavesi | 1,847 | 684 | 179 | 2,710 | 3,535 | 4,671 |
| Visoqo | 2,528 | 110 | 40 | 2,678 | 2,376 | 2,995 |
| Wainunu | 1,419 | 194 | 326 | 1,939 | 1,833 | 2,331 |
| Wainikoro | 1,157 | 16,501 | 5 | 17,663 | 9,414 | not open |
| Korotasere | closed | | | | 1,513 | 1,611 |
| Total | 15,379 | 24,574 | 4,072 | 44,025 | 41,649 | 36,456 |
| EASTERN DIVISION— | | | | | | |
| Gau | 3,185 | .. | 5 | 3,187 | 1,926 | 1,436 |
| Kabara | 1,241 | .. | .. | 1,241 | 1,738 | 1,052 |
| Koro | 5,359 | 32 | 6 | 5,397 | 3,351 | 3,211 |
| Moala | 4,898 | .. | 1 | 4,899 | 3,577 | 3,984 |
| Ono-i-Lau | 1,826 | .. | .. | 1,826 | 1,453 | 1,522 |
| Yaro | 2,399 | 1 | 9 | 2,409 | 2,021 | 1,315 |
| Total | 18,908 | 33 | 18 | 18,959 | 14,066 | 12,520 |
| Dominion Total | 219,876 | 278,215 | 21,508 | 519,599 | 477,268 | 399,802 |
| Percentage increase over previous year's Total | 16·8 | 4·3 | —3·9 | 8·9 | 19·4 | 13·7 |

TABLE VIII

OUT-PATIENT ATTENDANCES BY RACE

| Hospital | 1970 | | | | 1969 | 1968 |
|---|---|---|---|---|---|---|
| | Fijians | Indians | Others | Total | Total | Total |
| Colonial War Memorial .. .. | 85,804 | 131,627 | 11,254 | 228,685 | 202,098 | 185,131 |
| Lautoka .. .. .. .. | 33,384 | 121,645 | 4,572 | 159,601 | 132,190 | 102,798 |
| Labasa .. .. .. .. .. | 6,827 | 61,420 | 1,454 | 69,701 | 65,200 | 54,494 |
| Levuka .. .. .. .. | 12,129 | 2,829 | 2,888 | 17,846 | 19,538 | 18,507 |
| Tamavua .. .. .. .. | 3,000 | 673 | 324 | 3,997 | 6,377 | 8,733 |
| St. Giles' .. .. .. .. | 419 | 1,185 | 255 | 1,859 | 2,309 | 2,256 |
| P. J. Twomey Memorial .. .. | 448 | 278 | 61 | 787 | nil | nil |
| 16 Subdivisional and Area Hospitals . | 81,449 | 138,685 | 8,147 | 228,281 | 199 842 | 184,386 |
| 44 Health Centres .. .. .. | 219,876 | 278,215 | 21,508 | 519,599 | 477,268 | 399,802 |
| Total .. | 443,336 | 736,557 | 50,463 | 1,230,356 | 1,104,822 | 956,107 |
| Percentage increase over previous year's total .. .. .. .. | 12·8 | 12·3 | —9·3 | 11·4 | 15·6 | 8·7 |

TABLE IX

HOSPITAL ADMISSIONS BY RACE

| *Hospital* | 1970 | | | | 1969 | 1968 |
|---|---|---|---|---|---|---|
| | *Fijian* | *Indian* | *Others* | *Total* | *Total* | *Total* |
| DIVISIONAL HOSPITALS— | | | | | | |
| 1. C.W.M. .. .. | 4,854 | 5,852 | 1,673 | 12,379 | 11,532 | 10,363 |
| 2. Lautoka .. .. | 1,709 | 5,618 | 386 | 7,713 | 7,675 | 6,808 |
| 3. Labasa .. .. | 569 | 2,198 | 81 | 2,848 | 3,114 | 3,223 |
| 4. Levuka .. .. | 836 | 125 | 190 | 1,151 | 1,089 | 966 |
| Total .. | 7,958 | 13,793 | 2,330 | 24,091 | 23,410 | 21,360 |
| SPECIALISED HOSPITALS— | | | | | | |
| 5. Tamavua .. .. | 367 | 83 | 53 | 503 | 480 | 599 |
| 6. St. Giles' .. .. | 91 | 162 | 20 | 273 | 307 | 313 |
| 7. P. J. Twomey Memorial | 17 | 16 | 4 | 37 | 52 | 31 |
| Total .. | 475 | 261 | 77 | 813 | 839 | 943 |
| SUBDIVISIONAL HOSPITALS | | | | | | |
| 8. Sigatoka .. .. | 894 | 1,112 | 44 | 2,050 | 1,588 | 1,604 |
| 9. Savusavu .. .. | 785 | 199 | 153 | 1,137 | 1,203 | 1,158 |
| 10. Taveuni .. .. | 681 | 204 | 65 | 950 | 1,374 | 1,254 |
| 11. Nadi .. .. .. | 754 | 1,580 | 44 | 2,378 | 2,053 | 2,098 |
| 12. Vunisea .. .. | 534 | .. | .. | 534 | 379 | 187 |
| 13. Lomaloma .. .. | 312 | 5 | 2 | 319 | 324 | 302 |
| 14. Ra .. .. .. | 354 | 605 | 13 | 972 | 768 | 706 |
| 15. Nabouwalu .. .. | 466 | 159 | 7 | 632 | 532 | 326 |
| 16. Lakeba .. .. | 300 | .. | .. | 300 | 165 | 183 |
| 17. Vunidawa .. .. | 406 | 37 | 1 | 444 | 377 | 248 |
| 18. Nausori M. Unit .. | 663 | 776 | 40 | 1,479 | 1,407 | 1,237 |
| 19. Tavua M. Unit .. | 399 | 667 | 72 | 1,138 | 1,049 | 898 |
| Total .. | 6,548 | 5,344 | 441 | 12,333 | 11,219 | 10,201 |
| AREA HOSPITALS— | | | | | | |
| 20. Ba .. .. .. | 286 | 644 | 7 | 937 | 872 | 460 |
| 21. Wainibokasi .. .. | 386 | 244 | 4 | 634 | 902 | 805 |
| 22. Matuku .. .. | 159 | .. | .. | 159 | 110 | 125 |
| 23. Rotuma .. .. | 4 | .. | 530 | 534 | 501 | 469 |
| Total .. | 835 | 888 | 541 | 2,264 | 2,385 | 1,859 |
| Grand Total .. | 15,816 | 20,286 | 3,389 | 39,501 | 37,853 | 34,363 |
| Percentage increase over previous year's Total | 2·5 | 5·6 | 3·4 | 4·4 | 10·2 | 5·2 |

## TABLE X

HOSPITAL—OUT-PATIENT ATTENDANCES BY RACE

| *Hospital* | 1970 | | | | 1969 | 1968 |
|---|---|---|---|---|---|---|
| | *Fijian* | *Indian* | *Others* | *Total* | *Total* | *Total* |
| DIVISIONAL HOSPITALS— | | | | | | |
| 1. C.W.M. .. .. | 85,804 | 131,627 | 11,254 | 228,685 | 202,098 | 185,131 |
| 2. Lautoka .. .. | 33,384 | 121,645 | 4,572 | 159,601 | 132,190 | 102,798 |
| 3. Labasa .. .. | 6,827 | 61,420 | 1,454 | 69,701 | 65,200 | 54,494 |
| 4. Levuka .. .. | 12,129 | 2,829 | 2,888 | 17,846 | 19,538 | 18,507 |
| Total .. | 138,144 | 317,521 | 20,168 | 475,833 | 419,026 | 360,930 |
| SPECIALISED HOSPITALS— | | | | | | |
| 5. Tamavua .. .. | 3,000 | 673 | 324 | 3,997 | 6,377 | 8,733 |
| 6. St. Giles' .. .. | 419 | 1,185 | 255 | 1,859 | 2,309 | 2,256 |
| 7. P. J. Twomey .. | 448 | 278 | 61 | 7,871 | .. | .. |
| Total .. | 3,867 | 2,136 | 640 | 6,643 | 8,686 | 10,989 |
| SUBDIVISIONAL HOSPITAL— | | | | | | |
| 8. Sigatoka .. .. | 6,945 | 13,032 | 435 | 20,412 | 20,654 | 18,552 |
| 9. Savusavu .. .. | 7,674 | 3,751 | 1,381 | 12,806 | 15,307 | 14,620 |
| 10. Taveuni .. .. | 12,363 | 5,913 | 1,257 | 19,533 | 17,174 | 19,804 |
| 11. Nadi .. .. .. | 11,641 | 49,252 | 848 | 61,741 | 53,042 | 52,228 |
| 12. Vunisea .. .. | 3,524 | 1 | 42 | 3,567 | 4,182 | 3,836 |
| 13. Lomaloma .. .. | 4,149 | 94 | 42 | 4,285 | 5,334 | 6,210 |
| 14. Ra .. .. .. | 5,200 | 26,696 | 442 | 32,338 | 24,534 | 19,337 |
| 15. Nabouwalu .. .. | 4,860 | 3,828 | 145 | 8,833 | 5,936 | 3,266 |
| 16. Lakeba .. .. | 4,328 | 17 | 6 | 4,351 | 3,622 | 3,641 |
| 17. Vunidawa .. .. | 3,151 | 597 | 21 | 3,769 | 2,183 | 3,830 |
| 18. Nausori M. Unit .. | 3,674 | 4,192 | 192 | 8,058 | 7,953 | 7,376 |
| 19. Tavua M. Unit .. | 1,952 | 2,867 | 368 | 5,177 | 4,339 | 4,231 |
| Total .. | 69,451 | 110,240 | 5,179 | 184,870 | 164,260 | 156,931 |
| AREA HOSPITALS— | | | | | | |
| 20. Ba .. .. .. | 3,108 | 15,553 | 189 | 18,850 | 16,742 | 15,920 |
| 21. Wainibokasi .. .. | 7,393 | 12,875 | 113 | 20,381 | 13,537 | 13,088 |
| 22. Matuku .. .. | 1,450 | .. | .. | 1,450 | 918 | 1,058 |
| 23. Rotuma .. .. | 47 | 17 | 2,666 | 2,730 | 4,385 | 4,811 |
| Total .. | 11,998 | 28,445 | 2,968 | 43,411 | 35,582 | 34,877 |
| Grand Total .. | 223,460 | 458,342 | 28,955 | 710,757 | 627,554 | 563,727 |
| Percentage increase over previous year's total .. | 8·9 | 17·7 | — 13·0 | 13·3 | 10·2 | 7·3 |

TABLE XI

ST. GILES' HOSPITAL—NEW ADMISSIONS, 1970

| | Fijians | | Indians | | Others | | Total | Total 1969 |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | | |
| I—PSYCHOSES | | | | | | | | |
| A. Schizophrenia— | | | | | | | | |
| Hebephrenic | .. | .. | .. | .. | .. | .. | | 5 |
| Catatonic | 2 | 1 | 6 | 8 | 1 | .. | 18 | 14 |
| Paranoid | .. | 1 | 7 | 2 | 3 | .. | 13 | 14 |
| Acute Episodic | 7 | 6 | 14 | 5 | 1 | 1 | 34 | 24 |
| Schizo-Affective | .. | .. | .. | .. | .. | .. | .. | 9 |
| Chronic Undifferentiated | .. | .. | 5 | 1 | 1 | .. | 7 | 2 |
| Unspecified | 1 | .. | .. | 4 | .. | .. | 5 | 3 |
| | 10 | 8 | 32 | 20 | 6 | 1 | 77 | 71 |
| B. Affective— | | | | | | | | |
| Manic-Depressive— | | | | | | | | |
| Manic type | 1 | .. | .. | .. | 2 | .. | 3 | 3 |
| Depressive type | .. | .. | .. | .. | .. | .. | .. | .. |
| Circular type | .. | .. | .. | .. | .. | .. | .. | 1 |
| Involutional Melancholia | 1 | .. | .. | .. | .. | .. | 1 | 1 |
| Endogenous Depression | .. | .. | .. | .. | .. | .. | .. | 1 |
| | 2 | .. | .. | .. | 2 | .. | 4 | 6 |
| C. Organic— | | | | | | | | |
| With Cerebral Arterio-sclerosis | .. | 1 | 1 | 1 | 1 | .. | 4 | 3 |
| With Epilepsy | 2 | 2 | 1 | 4 | .. | .. | 9 | 2 |
| Degenerative | .. | .. | .. | .. | .. | .. | .. | 2 |
| With Brain Trauma | .. | .. | .. | .. | .. | .. | .. | 1 |
| Other Organic | 1 | .. | 1 | 1 | .. | .. | 4 | 1 |
| | 3 | 3 | 3 | 6 | 1 | .. | 17 | 9 |
| D. Toxic and Metabolic | 3 | .. | .. | .. | .. | .. | 3 | 4 |
| E. Others— | | | | | | .. | | |
| Acute Paranoid Reaction | 2 | .. | .. | .. | .. | .. | 2 | 9 |
| Acute Frenzy | .. | .. | 1 | .. | .. | .. | 1 | 2 |
| | 2 | .. | 1 | .. | .. | .. | 3 | 11 |
| II—NEUROSES | | | | | | | | |
| A. Reactive Depression | .. | 1 | 2 | 1 | .. | .. | 4 | 6 |
| III—PERSONALITY DISORDERS | | | | | | | | |
| A. Schizoid | 1 | .. | .. | 1 | .. | .. | 2 | 1 |
| B. Hysterical | 1 | .. | 1 | 1 | 1 | .. | 4 | 2 |
| C. Anti-Social | .. | .. | 1 | 1 | .. | .. | 2 | 9 |
| D. Asthenic | 1 | .. | 1 | .. | 1 | .. | 3 | 6 |
| | 3 | .. | 3 | 3 | 2 | .. | 11 | 18 |
| IV—MENTAL RETARDATION | | | | | | | | |
| A. Borderline Mental Retardation | .. | .. | .. | 2 | .. | .. | 2 | 3 |
| B. Mild Mental Retardation | .. | .. | 1 | .. | 1 | .. | 2 | 1 |
| C. Profound Mental Retardation | .. | .. | .. | .. | .. | .. | .. | 2 |
| | .. | .. | 1 | 2 | 1 | .. | 4 | 6 |

TABLE XII

EXAMINATIONS PERFORMED BY LABORATORIES, 1970

| | 1970 | | | | Total 1969 | Total 1968 |
|---|---|---|---|---|---|---|
| | Central | Lautoka | Labasa | Total | | |
| 1. HISTOLOGY: | | | | | | |
| Material from biopsies, etc. .. | 1,873 | 570 | 132 | 2,575 | 2,763 | 2,697 |
| Papanicalou smear .. .. | 145 | .. | .. | 145 | 151 | 85 |
| | 2,018 | 570 | 132 | 2,720 | 2,914 | 2,782 |
| 2. HAEMATOLOGY: | | | | | | |
| Routine Blood Count .. .. | 23,806 | 12,987 | 5,670 | 42,463 | 47,786 | 39,758 |
| Blood Grouping .. .. | 9,353 | 3,890 | 1,150 | 14,393 | 12,812 | 13,409 |
| Pre-Transfusion Cross-Matching | 4,005 | 2,712 | 689 | 7,406 | 5,484 | 5,828 |
| Donors bled .. .. .. | 3,948 | 1,580 | 434 | 5,962 | 3,921 | 3,756 |
| Marrow smear .. .. .. | .. | 57 | 5 | 62 | 93 | 68 |
| Microfilariae and Malaria .. | .. | .. | 42 | 42 | 220 | 162 |
| | 41,112 | 21,226 | 7,990 | 70,328 | 70,316 | 62,981 |
| 3. SEMINAL FLUID: | | | | | | |
| Examination for fertility .. | 139 | 54 | 28 | 221 | 191 | 101 |
| 4. PARASITOLOGY: | | | | | | |
| Faeces—Microscopic .. .. | 7,419 | 1,776 | 792 | 9,987 | 8,887 | 12,098 |
| 5. BACTERIOLOGY: | | | | | | |
| Routine, Microscopic and Culture | 13,417 | 5,365 | 2,125 | 20,907 | 21,208 | 17,341 |
| Drinking water supplies .. | 960 | .. | .. | 960 | 954 | 941 |
| Sea water Bath .. .. .. | 26 | .. | .. | 26 | 48 | 50 |
| Ice Cream and other foodstuffs | 53 | .. | .. | 53 | 79 | 32 |
| | 14,456 | 5,365 | 2,125 | 21,946 | 22,289 | 18,364 |
| 6. SEROLOGY: | | | | | | |
| Kahn Reactions .. .. .. | 2,749 | 407 | .. | 3,156 | 2,736 | 2,333 |
| Agglutination tests .. .. | 66 | 14 | .. | 80 | 60 | 87 |
| | 2,815 | 421 | .. | 3,236 | 2,796 | 2,420 |
| 7. BIOCHEMICAL: | | | | | | |
| Routine Examinations .. .. | 17,334 | 2,718 | 573 | 20,625 | 15,441 | 11,053 |
| 8. ANIMAL INOCULATIONS: | | | | | | |
| Toads for pregnancy tests .. | 278 | 136 | 10 | 424 | 246 | 189 |
| 9. VACCINE PREPARED: | | | | | | |
| T.A.B. 50cc. bottles and P.P.D.23 prepared .. .. .. .. | 1,076 | .. | .. | 1,076 | 1,302 | 1,060 |
| 10. POST MORTEM EXAMINATIONS .. | 255 | 54 | .. | 309 | 319 | 262 |
| 11. FORENSIC MEDICINE OF EXHIBITS: | 733 | .. | .. | 733 | 645 | 1,021 |
| Grand Total .. | 87,635 | 32,320 | 11,650 | 131,605 | 125,346 | 112,331 |

## TABLE XIII

EXAMINATIONS PERFORMED BY THE WELLCOME VIRUS RESEARCH LABORATORY

| | No. of Tests 1970 | 1969 |
|---|---|---|
| 1. *Diagnostic Serology* | | |
| Virus— | | |
| Respiratory | 1,368 | 1,094 |
| Enteroviruses | 380 | 99 |
| Arboviruses | 6 | 6 |
| Miyagawanella | 171 | 77 |
| Mycoplasma | 342 | 214 |
| Rubella | 7 | 4 |
| Smallpox | 2 | .. |
| Toxoplasma | 1 | .. |
| | 2,277 | 1,449 |
| 2. *Influenza Surveillance Serology*— | | |
| Number of tests | 8,538 | 4,186 |
| 3. *Virus Survey*— | | |
| Virus— | | |
| Respiratory | 8,944 | 5,662 |
| Mycoplasma | 1,280 | 1,670 |
| Miyagawanella | 1,280 | 1,670 |
| Rubella | 1,032 | 503 |
| Arbovirus (Otago University) | .. | 2,075 |
| Leptospiroses | 20 | .. |
| | 12 556 | 11,580 |
| 4. *Diagnostic Animal Inoculations*— | | |
| Eggs | 553 | 426 |
| Suckling Mice | 1,864 | 2,552 |
| | 2,417 | 2,980 |
| 5. *Tissue Diagnostic Inoculations in Vitro*— | | |
| Tissue Culture | 25 | 91 |
| Mycoplasma media | .. | 71 |
| | 25 | 162 |
| 6. *Arbovirus Surveillance*— | | |
| Mosquitoes— | | |
| Total Number of Males Captured | .. | 790 |
| Total Number of Females Captured | .. | 13,800 |
| | .. | 14,590 |
| Mosquito lots inoculated in suckling Mice | .. | .. |
| 7. *Filariasis Survey and Slides* | 6,359 | 2,577 |

TABLE XVI

# POPULATION AND BIRTHS 1960 - 1970

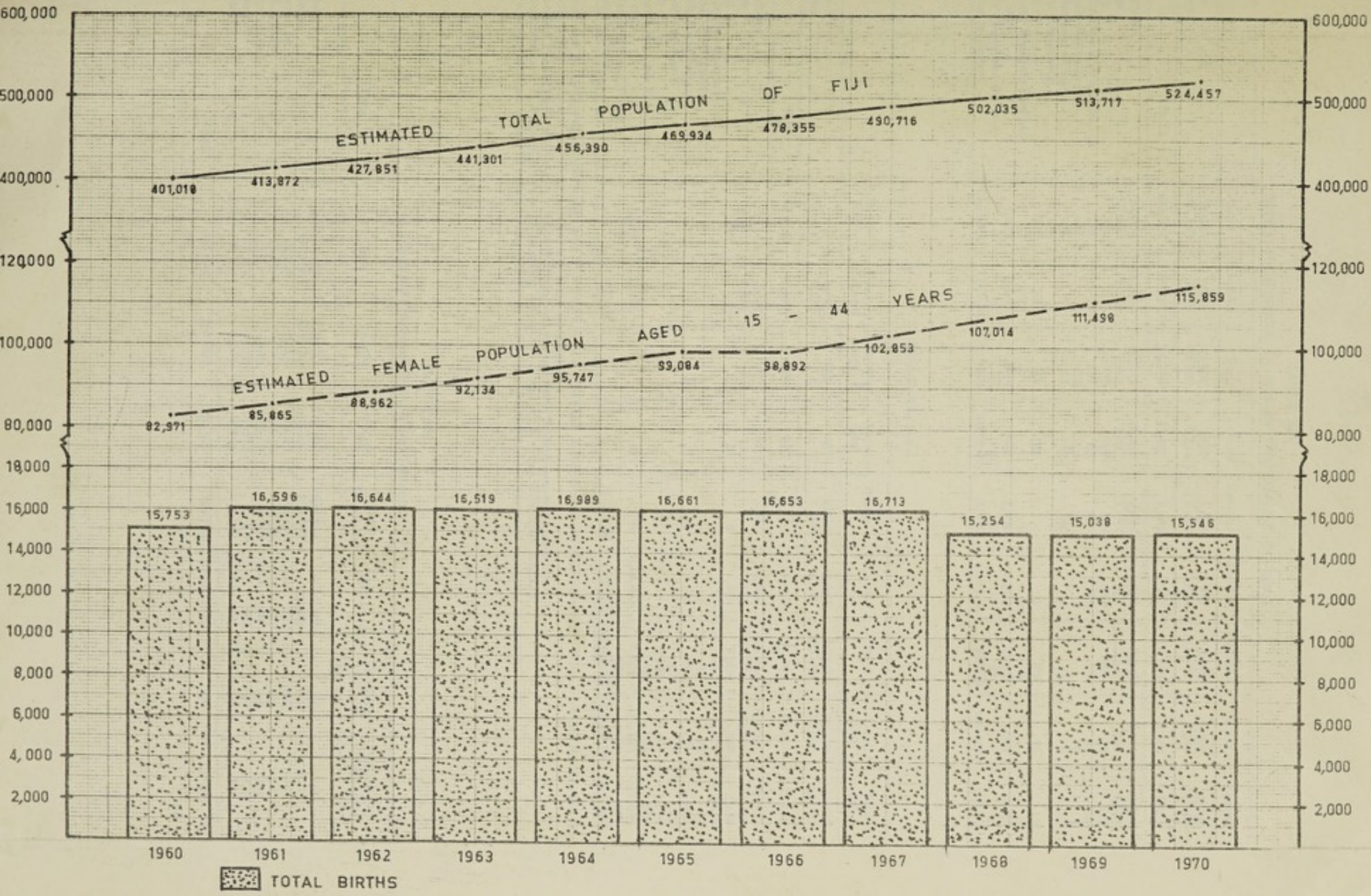


TABLE XIV

WORK PERFORMED IN 1970 BY THE DENTAL DIVISION

| | Suva | Lautoka | Ba | Labasa | Savusavu | Rakiraki | Sigatoka | Nadi | Levuka |
|---|---|---|---|---|---|---|---|---|---|
| Adults | 23,053 | 7,539 | 5,502 | 7,907 | 1,538 | 2,117 | 2,998 | 2,655 | 1,048 |
| Children | 15,749 | 8,692 | 10,708 | 9,814 | 7,124 | 3,920 | 9,782 | 3,087 | 4,968 |
| Total | 38,802 | 16,231 | 16,210 | 17,721 | 8,662 | 6,037 | 12,780 | 5,742 | 6,016 |
| Extractions | 24,734 | 12,661 | 12,019 | 14,658 | 6,044 | 4,882 | 9,365 | 5,245 | 3,217 |
| Fillings | 7,658 | 5,260 | 1,502 | 2,919 | 1,282 | 667 | 2,345 | 299 | 1,522 |
| Scaling | 814 | 381 | 379 | 199 | 168 | 265 | 506 | 86 | 118 |
| Toothbrush—Instructions | 39 | 16 | 215 | 54 | 136 | 56 | 74 | 32 | 26 |
| Surgical—Extractions | 43 | 6 | 16 | 14 | .. | .. | .. | 9 | 2 |
| Miscellaneous—Surgery | 185 | 84 | 18 | 55 | 32 | 3 | 27 | 9 | 2 |
| General Anaesthetic | 36 | 6 | .. | .. | .. | .. | .. | .. | .. |
| X-rays | 370 | 373 | 93 | 100 | .. | 2 | 37 | 20 | 6 |
| Fractured Mandible Fixations | 50 | 32 | .. | 4 | 5 | 1 | 3 | .. | 2 |
| Exam only | 1,076 | 2,047 | 4,696 | 901 | 4,302 | 1,360 | 3,878 | 684 | 2,803 |
| Schools visited and Treated | 6 | 15 | 25 | 48 | 47 | 15 | 51 | 2 | 41 |
| Revenue in Dollars | 13,118.60 | 3,918.70 | 3,142.80 | 5,539.00 | 877.00 | 1,151.00 | 1,490.50 | 1,419.90 | 523.30 |

TABLE XIV (*cont.*)

| | Mobile B240 | Tours Ex-Suva | Tamavua Hospital | Suva Gaol | Nausori | Tavua | Total | Total 1969 | Total 1968 |
|---|---|---|---|---|---|---|---|---|---|
| Adults | .. | 1,489 | 382 | 637 | 2,910 | 2,365 | 62,140 | 53,748 | 47,075 |
| Children | 8,414 | 3,458 | 6 | .. | 1,866 | 5,547 | 93,139 | 102,696 | 86,482 |
| Total | 8,414 | 4,947 | 388 | 637 | 4,776 | 7,912 | 155,279 | 156,444 | 133,557 |
| Extractions | 6,209 | 4,954 | 409 | 412 | 5,759 | 4,636 | 115,204 | 119,792 | 99,915 |
| Fillings | 6,850 | 1,255 | 49 | 143 | .. | 939 | 32,620 | 32,833 | 31,266 |
| Scaling | 120 | 49 | 12 | 53 | 3 | 455 | 3,608 | 3,766 | 3,339 |
| Toothbrush—Instructions | .. | .. | .. | 2 | .. | 81 | 731 | 6,836 | 2,412 |
| Surgical—Extractions | .. | .. | .. | .. | .. | 5 | 95 | 98 | 94 |
| Miscellaneous—Surgery | .. | 3 | 5 | 1 | 3 | 33 | 460 | 429 | 829 |
| General Anaesthetic | .. | 1 | .. | .. | .. | .. | 43 | 18 | 28 |
| X-rays | .. | .. | .. | .. | .. | .. | 1,001 | 1,126 | 1,076 |
| Fractured Mandible Fixations | .. | .. | .. | .. | .. | .. | 97 | 109 | 107 |
| Exam only | 4,083 | 2,226 | .. | 60 | 101 | 3,053 | 31,223 | 31,233 | 27,398 |
| Schools visited and Treated | 85 | 5 | .. | .. | .. | 16 | 356 | 454 | 370 |
| Revenue in Dollars | .. | 27.00 | .. | .. | 1,424.20 | 1,426.00 | 34,058.30 | 32,955.74 | 26,413.35 |

In addition, in Suva 441 complete dentures, 129 dentures were provided and 139 dentures were repaired. There were 438 attendances for orthodontic treatment and 68 orthodontic appliance were fitted.
In Labasa 107 complete dentures, 107 other dentures were provided and 38 dentures were repaired.
A prosthetic tour to Rotuma provided 25 complete dentures, 9 other dentures and 5 dentures repaired.
447 schools took part in the "Toothbrushing in Schools" Scheme. 8 999 dozen toothbrushes being sold to schools.

TABLE XV

ESTIMATED POPULATION AS AT 31ST DECEMBER, 1970

| Race | Male | Female | Total | 1969 Population | Difference | Percentage Increase | Persons per square mile |
|---|---|---|---|---|---|---|---|
| Fijians | 114,409 | 110,693 | 225,102 | 219,784 | + 5,318 | 2·4 | 31·9 |
| Indians | 134,756 | 131,433 | 266,189 | 260,567 | + 5,622 | 2·2 | 37·7 |
| Europeans | 2,503 | 2,783 | 5,286 | 5,600 | — 314 | — 5·6 | 0·7 |
| P.M.E.N.D. | 4,727 | 4,796 | 9,523 | 9,346 | + 177 | 1·9 | 1·3 |
| Polynesians | 3,707 | 3,130 | 6,837 | 7,160 | — 323 | — 4·5 | 1·0 |
| Rotumans | 3,314 | 3,198 | 6,512 | 6,313 | + 199 | 3·2 | 0·9 |
| Chinese | 2,734 | 2,274 | 5,008 | 4,947 | + 61 | 1·2 | 0·7 |
| Total | 266,150 | 258,307 | 524,457 | 513,717 | + 10,740 | 2·1 | 74·3 |

## TABLE XVII

BIRTHS RECORDED DURING YEARS 1966–1970

| Race | 1966 | 1967 | 1968 | 1969 | 1970 | Estimated Mid-year Population | Crude Birth Rate per 1,000 |
|---|---|---|---|---|---|---|---|
| Fijians .. .. .. .. .. | 7,318 | 7,604 | 6,798 | 5,854 | 6,438 | 222,418 | 29·0 |
| Indians .. .. .. .. | 8,292 | 8,019 | 7,526 | 8,281 | 8,110 | 263,722 | 30·8 |
| Europeans .. .. .. .. | 151 | 116 | 165 | 185 | 192 | 5,803 | 33·1 |
| P.M.E.N.D. .. .. .. .. | 265 | 270 | 227 | 251 | 297 | 9,501 | 31·3 |
| Polynesians .. .. .. .. | 231 | 400 | 206 | 173 | 150 | 7,276 | 21·3 |
| Rotumans .. .. .. .. | 238 | 194 | 194 | 180 | 225 | 6,397 | 35·2 |
| Chinese .. .. .. .. | 158 | 110 | 138 | 114 | 134 | 4,954 | 27·1 |
| Total .. | 16,653 | 16,713 | 15,254 | 15,038 | 15,446 | 520,071 | 29.9 |

## TABLE XIX

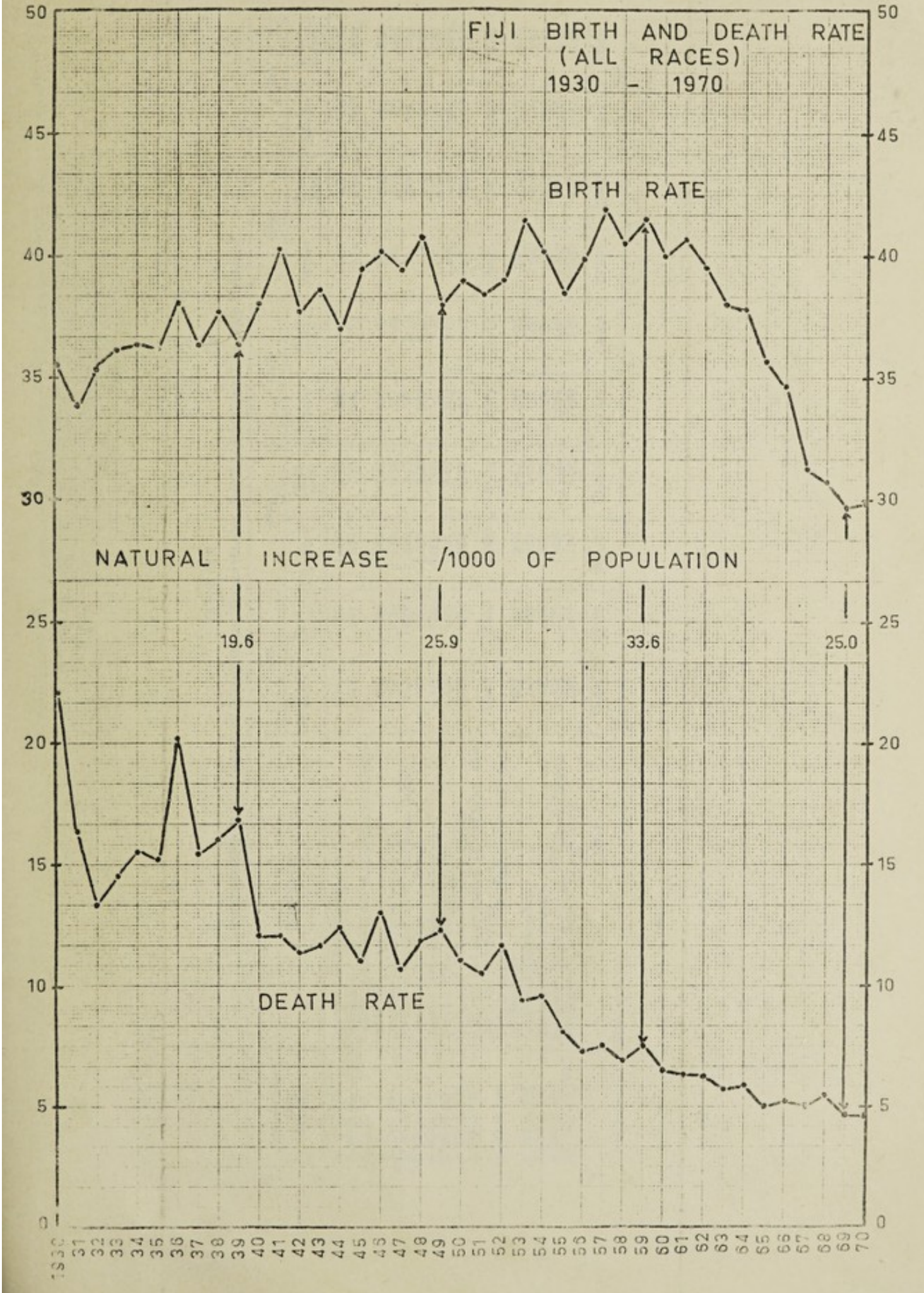
INFANT AND CHILD MORTALITY

| | Births | Deaths under five years | | | | | | Infant Mortality Rate per 1,000 |
|---|---|---|---|---|---|---|---|---|
| | | Under 1 | 1–2 | 2–3 | 3–4 | 4–5 | Total | |
| 1966— | | | | | | | | |
| Fijians .. .. .. | 7,318 | 120 | 46 | 16 | 10 | 9 | 195 | 16 |
| Indians .. .. .. | 8,292 | 329 | 31 | 21 | 15 | 18 | 370 | 40 |
| 1967— | | | | | | | | |
| Fijians .. .. .. | 7,951 | 165 | 63 | 25 | 35 | 24 | 312 | 22 |
| Indians .. .. .. | 8,029 | 221 | 24 | 13 | 12 | 11 | 281 | 28 |
| 1968— | | | | | | | | |
| Fijians .. .. .. | 6,798 | 141 | 52 | 35 | 25 | 21 | 274 | 21 |
| Indians .. .. .. | 7,526 | 219 | 32 | 17 | 11 | 7 | 286 | 29 |
| 1969— | | | | | | | | |
| Fijians .. .. .. | 5,854 | 126 | 34 | 24 | 8 | 9 | 201 | 22 |
| Indians .. .. .. | 8,281 | 185 | 26 | 9 | 9 | 5 | 234 | 22 |
| 1970— | | | | | | | | |
| Fijians .. .. .. | 6,438 | 91 | 32 | 21 | 7 | 9 | 160 | 14 |
| Indians .. .. .. | 8,110 | 185 | 20 | 13 | 9 | 11 | 238 | 23 |

RATE PER 1000

TABLE XVIII.

RATE PER 1000



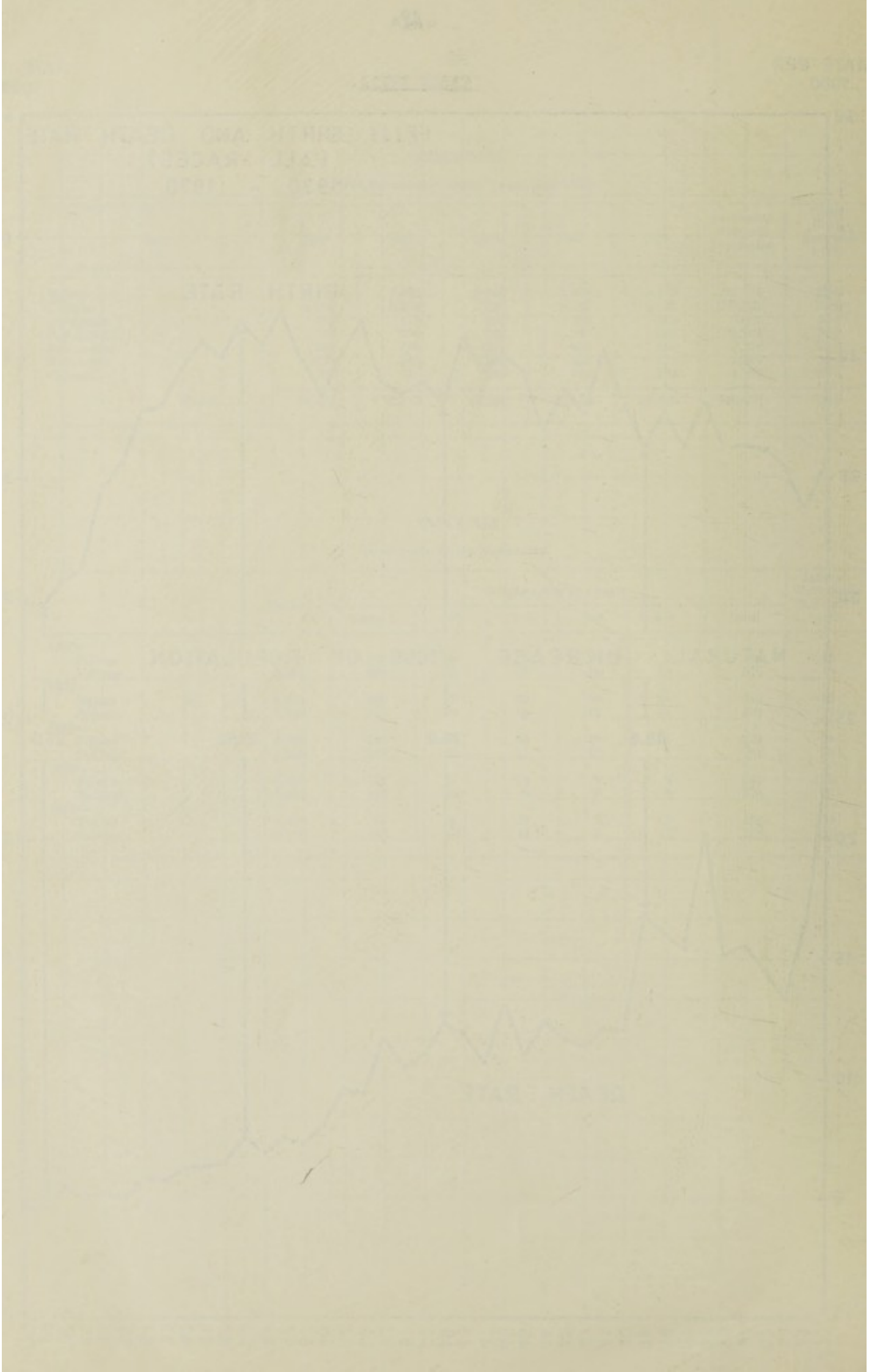


TABLE XX

DISCHARGES FROM MAJOR HOSPITALS CLASSIFIED BY WORLD HEALTH ORGANIZATION CAUSE LIST (1955 REVISION)

| Intermediate List Number | Cause Groups | 1965 | | 1966 | | 1967 | | 1968 | | 1969 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | % of Total | Number | % of Total | Number | % of Total | Number | % of Total | Number | % of Total |
| A 1–A 43 .. | Infective and Parasitic Disease .. .. .. | 1,000 | 5·57 | 1,066 | 5·28 | 893 | 4·59 | 1,023 | 4·80 | 938 | 3·82 |
| A 44–A 60 .. | Neoplasms .. .. .. .. .. .. | 306 | 1·71 | 353 | 1·75 | 342 | 1·75 | 514 | 2·41 | 549 | 2·24 |
| A 61–A 66 .. | Endocrine, Metabolic and Nutritional; and Diseases of Blood .. .. .. .. .. .. | 861 | 4·80 | 892 | 4·42 | 901 | 4·63 | 955 | 4·49 | 940 | 3·83 |
| A 67–A 69 .. | Psychoses and Psychoneuroses, etc. .. .. | 107 | 0·59 | 78 | 0·39 | 161 | 0·83 | 150 | 0·70 | 156 | 0·64 |
| A 70–A 78 .. | Diseases of Nervous System and Sense Organs .. | 579 | 3·23 | 639 | 3·17 | 677 | 3·48 | 651 | 3·06 | 760 | 3·09 |
| A 79–A 86 .. | Diseases of the Circulatory System .. .. .. | 859 | 4·79 | 1,009 | 5·00 | 991 | 5·09 | 1,211 | 5·69 | 1,313 | 5·35 |
| A 87–A 97 .. | Diseases of the Respiratory System .. .. .. | 1,321 | 7·36 | 1,600 | 7·93 | 1,381 | 7·10 | 1,642 | 7·71 | 2,154 | 8·77 |
| A 98–A 107 .. | Diseases of the Digestive System .. .. .. | 1,434 | 7·99 | 1,741 | 8·62 | 1,929 | 9·92 | 1,990 | 9·35 | 2,455 | 9·99 |
| A 108–A 114 .. | Diseases of the Genito-Urinary System .. .. | 1,226 | 6·83 | 1,683 | 8·34 | 1,601 | 8·23 | 1,624 | 7·63 | 1,943 | 7·91 |
| A 115–A 120 .. | Deliveries and Complications of Pregnancy, Childbirth and Puerperium .. .. .. .. | 6,655 | 37·09 | 6,886 | 34·10 | 6,656 | 34·23 | 6,974 | 32·75 | 8,324 | 33·88 |
| A 121–A 126 .. | Diseases of Skin, Cellular Tissue, Bones and Organs of Movement .. .. .. .. .. .. | 829 | 4·62 | 930 | 4·61 | 938 | 4·82 | 900 | 4·23 | 913 | 3·72 |
| A 127–A 129 .. | Congenital Malformations .. .. .. .. | 158 | 0·88 | 214 | 1·06 | 167 | 0·86 | 180 | 0·85 | 149 | 0·61 |
| A 130–A 135 .. | Diseases of Early Infancy .. .. .. .. | 405 | 2·26 | 373 | 1·85 | 344 | 1·77 | 280 | 1·31 | 275 | 1·12 |
| A 136–A 137 .. | Symptoms, Senility and Ill-defined Conditions .. | 1,304 | 7·27 | 1,598 | 7·92 | 1,274 | 6·55 | 1,642 | 7·71 | 2,150 | 8·75 |
| AE 138–A E150 .. | Accidents and Violence (External Cause) .. .. | 899 | 5·01 | 1,126 | 5·58 | 1,196 | 6·15 | 1,557 | 7·31 | 1,544 | 6·29 |
| | Total .. .. | 17,943 | 100·00 | 20,188 | 100·00 | 19,451 | 100·00 | 21,293 | 100·00 | 24,563 | 100·01 |

## TABLE XXI

DISCHARGES FROM ALL HOSPITAL (EXCEPT ST. GILES') CLASSIFIED BY WORLD HEALTH ORGANIZATION CAUSE LIST

| Intermediate List Number | Cause Groups | 1970 | |
|---|---|---|---|
| | | Number | % of Total |
| A 1–A 44 .. | Infective and Parasitic Disease .. .. .. .. .. .. | 2,003 | 5·12 |
| A 45–A 61 .. | Neoplasms .. .. .. .. .. .. .. .. | 589 | 1·50 |
| A 62–A 66 .. | Endocrine, Nutritional and Metabolic Diseases .. .. .. .. | 723 | 1·84 |
| A 67–A 68 .. | Diseases of Blood and Blood Forming Organs .. .. .. .. | 305 | 0·78 |
| A 69–A 71 .. | Mental Disorders .. .. .. .. .. .. .. .. | 251 | 0·64 |
| A 72–A 79 .. | Diseases of the Nervous System and Sense Organs .. .. .. .. | 863 | 2·20 |
| A 80–A 88 .. | Diseases of the Circulatory System .. .. .. .. .. .. | 2,024 | 5·15 |
| A 89–A 96 .. | Diseases of the Respiratory System .. .. .. .. .. .. | 4,969 | 12·66 |
| A 97–A 104 .. | Diseases of the Digestive System .. .. .. .. .. .. | 2,391 | 6·09 |
| A 105–A 111 .. | Diseases of Genito-Urinary System .. .. .. .. .. .. | 2,264 | 5·77 |
| A 112–A 118 .. | Complications of Pregnancy, Childbirth and the Puerperium .. .. | 14,142 | 36·02 |
| A 119–A 120 .. | Diseases of the Skin and Subcutaneous Tissue .. .. .. .. | 1,102 | 2·81 |
| A 121–A 125 .. | Diseases of the Musculoskeletal System and Connective Tissue .. .. | 692 | 1·76 |
| A 126–A 130 .. | Congenital Anomalies .. .. .. .. .. .. .. .. | 231 | 0·59 |
| A 131–A 135 .. | Certain Causes of Perinatal Morbidity and Mortality .. .. .. | 584 | 1·49 |
| A 136–A 137 .. | Symptoms and Ill-defined Conditions .. .. .. .. .. | 3,354 | 8·54 |
| AE 138–AE 150 .. | Accidents, Poisonings and Violence (External Cause) .. .. .. | 2,765 | 7·04 |
| | Total .. .. | 39,257 | 100·00 |

TABLE XXII

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1970 AT ALL HOSPITALS

| Intermediate List No. | | Detailed List Numbers | Cause Groups | Eur. | Fij. | Ind. | Oth. | Totals | Deaths |
|---|---|---|---|---|---|---|---|---|---|
| A | 1 | 000 | Cholera | .. | .. | .. | .. | .. | .. |
| A | 2 | 001 | Typhoid Fever | .. | 5 | 2 | .. | 7 | .. |
| A | 3 | 002, 003 | Paratyphoid Fever and other Salmonella Infections | .. | 2 | 1 | .. | 3 | .. |
| A | 4 | 004, 006 | Bacillary Dysentery and Amoebiasis | .. | 26 | 14 | 4 | 44 | 1 |
| A | 5 | 008, 009 | Enteritis and other diarrhoeal diseases | 20 | 392 | 316 | 78 | 806 | 30 |
| A | 6 | 010–012 | Tuberculosis of respiratory system | 2 | 380 | 90 | 40 | 512 | 16 |
| A | 7 | 013 | Tuberculosis of meninges and central nervous system | .. | 4 | 1 | 1 | 6 | .. |
| A | 8 | 014 | Tuberculosis of intestines, peritoneum and mesenteric glands | .. | .. | .. | .. | .. | .. |
| A | 9 | 015 | Tuberculosis of bones and joints | .. | 17 | 2 | .. | 19 | .. |
| A | 10 | 016–019 | Other tuberculosis, including late effects | .. | 16 | 6 | 2 | 24 | 1 |
| A | 11 | 020 | Plague | .. | .. | .. | .. | .. | .. |
| A | 12 | 022 | Anthrax | .. | .. | .. | .. | .. | .. |
| A | 13 | 023 | Brucellosis | .. | .. | .. | .. | .. | .. |
| A | 14 | 030 | Leprosy | .. | 18 | 21 | 8 | 47 | 2 |
| A | 15 | 032 | Diphtheria | .. | .. | .. | .. | .. | .. |
| A | 16 | 033 | Whooping Cough | .. | 2 | .. | 1 | 3 | .. |
| A | 17 | 034 | Streptococcal Sore Throat and scarlet fever | .. | 1 | 2 | .. | 3 | .. |
| A | 18 | 035 | Erysipelas | .. | 1 | .. | .. | 1 | .. |
| A | 19 | 036 | Meningococcal infection | .. | 4 | 2 | .. | 6 | 1 |
| A | 20 | 037 | Tetanus | .. | 4 | 6 | 2 | 12 | 4 |
| A | 21 | 005, 007, 021, 024–027, 031, 038, 039 | Other bacterial diseases | .. | 32 | 10 | 6 | 48 | 12 |
| A | 22 | 040–043 | Actue poliomyelitis | .. | .. | .. | .. | .. | .. |
| A | 23 | 044 | Late effects of acute poliomyelitis | .. | 1 | 1 | .. | 2 | .. |
| A | 24 | 050 | Smallpox | .. | .. | .. | .. | .. | .. |
| A | 25 | 055 | Measles | .. | 1 | .. | .. | 1 | .. |
| A | 26 | 060 | Yellow fever | .. | .. | .. | .. | .. | .. |
| A | 27 | 062–065 | Viral encephalitis | .. | .. | 1 | .. | 1 | .. |
| A | 28 | 070 | Infectious hepatitis | 6 | 76 | 44 | 7 | 133 | 3 |
| A | 29 | 045, 046, 051–054 056, 057, 061, 066–068, 071–079 | Other viral diseases | 4 | 29 | 24 | 7 | 64 | 2 |
| A | 30 | 080–083 | Typhus and other rickettsioses | .. | .. | .. | .. | .. | .. |
| A | 31 | 084 | Malaria | 4 | .. | .. | 1 | 5 | .. |
| A | 32 | 086, 087 | Trypanosomiasis | .. | .. | .. | .. | .. | .. |
| A | 33 | 088 | Relapsing fever | .. | .. | .. | .. | .. | .. |
| A | 34 | 090 | Congenital syphilis | .. | .. | .. | .. | .. | .. |
| A | 35 | 091 | Early syphilis, symptomatic | .. | .. | .. | .. | .. | .. |
| A | 36 | 094 | Syphilis of central nervous system | .. | 1 | .. | .. | 1 | .. |
| A | 37 | 092, 093, 095–097 | Other syphilis | .. | 1 | 1 | .. | 2 | .. |
| A | 38 | 098 | Gonococcal infections | .. | 26 | 7 | 11 | 44 | .. |
| A | 39 | 120 | Schistosomiasis | .. | .. | .. | .. | .. | .. |
| A | 40 | 122 | Hydatidosis | .. | .. | .. | .. | .. | .. |
| A | 41 | 125 | Filarial infection | .. | 54 | .. | 3 | 57 | 1 |
| A | 42 | 126 | Ankylostomiasis | 1 | 30 | 19 | 2 | 52 | 1 |
| A | 43 | 121, 123, 124 127–129 | Other helminthiases | .. | 18 | 10 | 3 | 31 | .. |
| A | 44 | 085, 089, 099, 100–117, 130–136 | All other infective and parasitic diseases | 1 | 45 | 21 | 7 | 74 | .. |
| A | 45 | 140–149 | Malignant neoplasm of buccal cavity and pharynx | .. | 1 | 9 | 1 | 11 | 1 |
| A | 46 | 150 | Malignant neoplasm of oesophagus | .. | 2 | 11 | .. | 13 | 3 |
| A | 47 | 151 | Malignant neoplasm of stomach | .. | 4 | 8 | 1 | 13 | 5 |
| A | 48 | 152, 153 | Malignant neoplasm of intestine, except rectum | 3 | 2 | 4 | .. | 9 | 3 |
| A | 49 | 154 | Malignant neoplasm of rectum and rectosigmoid junction | .. | 5 | 5 | 3 | 13 | 2 |
| A | 50 | 161 | Malignant neoplasm of larynx | .. | 1 | 7 | .. | 8 | 2 |
| A | 51 | 162 | Malignant neoplasm of trachea, bronchus and lung | .. | 12 | 2 | 3 | 17 | 9 |
| A | 52 | 170 | Malignant neoplasm of bone | .. | 3 | 3 | 3 | 9 | 3 |
| A | 53 | 172, 173 | Malignant neoplasm of skin | 2 | .. | 2 | .. | 4 | .. |
| A | 54 | 174 | Malignant neoplasm of breast | .. | 12 | 9 | 1 | 22 | 3 |
| A | 55 | 180 | Malignant neoplasm of cervix uteri | 1 | 41 | 30 | 5 | 77 | 6 |
| A | 56 | 181, 182 | Other malignant neoplasm of uterus | .. | 4 | 2 | .. 2 | 6 | .. |
| A | 57 | 185 | Malignant neoplasm of prostate | .. | 4 | 1 | 3 | 7 | 1 |
| A | 58 | 155–160, 163, 171, 183, 184, 186–199 | Malignant neoplasm of other and unspecified sites | 2 | 55 | 32 | | 92 | 27 |
| A | 59 | 204–207 | Leukaemia | .. | 9 | 12 | 4 | 25 | 10 |
| A | 60 | 200–203, 208, 209 | Other neoplasms of lymphatic and haemotopoietic tissue | .. | 11 | 8 | .. | 19 | 6 |
| A | 61 | 210–239 | Benign neoplasms and neoplasms of unspecified nature | 8 | 98 | 116 | 19 | 241 | 7 |
| A | 62 | 240, 241 | Non-toxic goitre | .. | 14 | 34 | 1 | 49 | .. |
| A | 63 | 242 | Thyrotoxicosis with or without goitre | .. | 8 | 20 | 1 | 29 | .. |
| A | 64 | 250 | Diabetes mellitus | 6 | 150 | 380 | 18 | 554 | 22 |
| A | 65 | 260–269 | Avitaminoses and other nutritional deficiency | 1 | 20 | 28 | 2 | 51 | 4 |
| A | 66 | 243–246, 251–258 270–279 | Other endocrine and metabolic diseases | 2 | 13 | 24 | 1 | 40 | .. |
| A | 67 | 280–285 | Anaemias | 2 | 45 | 178 | 6 | 231 | 6 |
| A | 68 | 286–289 | Other diseases of blood and blood-forming organs | 1 | 44 | 27 | 2 | 74 | 1 |
| A | 69 | 290–299 | Psychoses | 5 | 49 | 72 | 3 | 129 | .. |
| A | 70 | 300–309 | Neuroses, personality disorders and other non-psychotic mental disorders | 7 | 25 | 74 | 9 | 115 | .. |

| Intermediate List No. | Detailed List No. | Cause Groups | Euro. | Fijian | Ind. | Other | Total | Deaths |
|---|---|---|---|---|---|---|---|---|
| A 71 | 310–315 | Mental retardation | .. | 4 | 2 | 1 | 7 | .. |
| A 72 | 320 | Meningitis | .. | 50 | 23 | 3 | 76 | 13 |
| A 73 | 340 | Multiple sclerosis | .. | .. | 4 | .. | 4 | .. |
| A 74 | 345 | Epilepsy | 2 | 52 | 58 | 2 | 114 | .. |
| A 75 | 360–369 | Inflammatory diseases of eye | .. | 33 | 39 | 5 | 77 | .. |
| A 76 | 374 | Cataract | .. | 33 | 171 | 3 | 207 | .. |
| A 77 | 375 | Glaucoma | 1 | 4 | 8 | 4 | 17 | .. |
| A 78 | 381–383 | Otitis media and mastoiditis | 1 | 49 | 27 | 11 | 88 | .. |
| A 79 | 321–333, 341–344, 346–358, 370–373, 376–380, 384–389 | Other diseases of nervous system and sense organs | 6 | 110 | 135 | 29 | 280 | 13 |
| A 80 | 390–392 | Active rheumatic fever | .. | 16 | 124 | 4 | 144 | 1 |
| A 81 | 393–398 | Chronic rheumatic heart disease | .. | 18 | 70 | 5 | 93 | 7 |
| A 82 | 400–404 | Hypertensive disease | 4 | 64 | 190 | 11 | 269 | 9 |
| A 83 | 410–414 | Ischaemic heart disease | 13 | 25 | 387 | 15 | 440 | 62 |
| A 84 | 420–429 | Other forms of heart disease | 6 | 157 | 369 | 34 | 566 | 112 |
| A 85 | 430–439 | Cerebrovascular disease | 12 | 57 | 146 | 11 | 226 | 73 |
| A 86 | 440–448 | Diseases of arteries, arterioles and capillaries | 1 | 9 | 19 | 3 | 32 | 4 |
| A 87 | 450–453 | Venous thrombosis and embolism | 3 | 13 | 13 | 4 | 33 | 3 |
| A 88 | 454–458 | Other diseases of circulatory system | 13 | 51 | 142 | 15 | 221 | 3 |
| A 89 | 460–466 | Acute respiratory infections | 4 | 471 | 377 | 152 | 1,004 | 6 |
| A 90 | 470–474 | Influenza | 2 | 409 | 243 | 30 | 684 | .. |
| A 91 | 480 | Viral pneumonia | .. | 3 | 6 | .. | 9 | 1 |
| A 92 | 481–486 | Other pneumonia | 17 | 1,090 | 651 | 209 | 1,967 | 93 |
| A 93 | 490–493 | Bronchitis, emphysema and asthma | 6 | 281 | 468 | 49 | 804 | 5 |
| A 94 | 500 | Hypertrophy of tonsils and adenoid | 8 | 10 | 226 | 6 | 250 | .. |
| A 95 | 510, 513 | Empyema and abscess of lung | .. | 20 | 14 | 1 | 35 | 6 |
| A 96 | 501–508, 511, 512 514–519 | Other diseases of respiratory system | 7 | 111 | 70 | 28 | 216 | 10 |
| A 97 | 520–525 | Diseases of teeth and supporting structure | 3 | 30 | 23 | 3 | 59 | 2 |
| A 98 | 531–533 | Peptic ulcer | 8 | 108 | 158 | 26 | 300 | 8 |
| A 99 | 535 | Gastritis and duodenitis | 4 | 61 | 150 | 35 | 250 | 2 |
| A 100 | 540–543 | Appendicitis | 39 | 178 | 470 | 53 | 740 | 3 |
| A 101 | 550–553, 560 | Intestinal obstruction and hernia | 14 | 160 | 216 | 45 | 435 | 15 |
| A 102 | 571 | Cirrhosis of liver | .. | 15 | 14 | 3 | 32 | 8 |
| A 103 | 574, 575 | Cholelithiasis and cholecystitis | 4 | 11 | 84 | 8 | 107 | 3 |
| A 104 | 526–530, 534, 536, 537, 561–570, 572, 573, 576, 577 | Other diseases of digestive system | 16 | 164 | 267 | 21 | 468 | 2 |
| A 105 | 580 | Acute nephritis | .. | 6 | 25 | 1 | 32 | 1 |
| A 106 | 581–584 | Other nephritis and nephrosis | .. | 41 | 95 | 4 | 140 | 6 |
| A 107 | 590 | Infections of kidney | 3 | 20 | 36 | 7 | 66 | 6 |
| A 108 | 592, 594 | Calculus of urinary system | 6 | 5 | 77 | 6 | 94 | 2 |
| A 109 | 600 | Hyperplasia of prostate | 2 | 16 | 22 | 9 | 49 | 2 |
| A 110 | 610, 611 | Diseases of breast | 3 | 40 | 10 | 3 | 56 | .. |
| A 111 | 591, 593, 595–599 601–607, 612–629 | Other diseases of genito-urinary system | 60 | 591 | 1,052 | 124 | 1,827 | 17 |
| A 112 | 636–639 | Toxaemia of pregnancy and the puerperium | 2 | 172 | 448 | 31 | 653 | 1 |
| A 113 | 632, 651–653 | Haemorrhage of pregnancy and childbirth | 3 | 272 | 441 | 53 | 769 | 2 |
| A 114 | 640, 641 | Abortion induced for legal indications | .. | 5 | 7 | .. | 12 | .. |
| A 115 | 642–645 | Other and unspecified abortion | 10 | 346 | 724 | 61 | 1,141 | .. |
| A 116 | 670, 671, 673 | Sepsis of childbirth and the puerperium | 1 | 19 | 14 | 2 | 36 | .. |
| A 117 | 630, 631, 633–635 654–662, 672, 674–678 | Other complications of pregnancy, childbirth and the puerperium | 34 | 661 | 1,583 | 135 | 2,413 | 1 |
| A 118 | 650 | Delivery without mention of complication | 95 | 3,750 | 4,668 | 605 | 9,118 | .. |
| A 119 | 680–686 | Infections of skin and subcutaneous tissue | 15 | 569 | 198 | 65 | 847 | 2 |
| A 120 | 690–709 | Other diseases of skin and subcutaneous tissue | 13 | 125 | 97 | 20 | 255 | 2 |
| A 121 | 710–715 | Arthritis and spondylitis | 6 | 128 | 126 | 8 | 268 | 3 |
| A 122 | 716–718 | Non-articular rheumatism and rheumatism unspecified | .. | 44 | 35 | 11 | 90 | .. |
| A 123 | 720 | Osteomyelitis and periostitis | 1 | 89 | 36 | 3 | 129 | .. |
| A 124 | 727, 735–738 | Ankylosis and acquired musculoskeletal deformities | 1 | 5 | 6 | 1 | 13 | .. |
| A 125 | 721–726, 728–734 | Other diseases of musculoskeletal system and connective tissue | 7 | 108 | 55 | 14 | 184 | 2 |
| A 126 | 741 | Spina bifida | .. | 1 | 6 | 1 | 8 | .. |
| A 127 | 746 | Congenital anomalies of heart | .. | 6 | 14 | 4 | 24 | 3 |
| A 128 | 747 | Other congenital anomalies of circulatory system | .. | 3 | 7 | .. | 10 | .. |
| A 129 | 749 | Cleft palate and cleft lip | .. | 7 | 23 | 2 | 32 | .. |
| A 130 | 740, 742–745, 748 750–759 | All other congenital anomalies | 1 | 58 | 90 | 16 | 165 | 14 |
| A 131 | 764–768, 772 | Birth injury and difficult labour | 2 | 11 | 21 | 4 | 38 | 2 |
| A 132 | 770, 771 | Conditions of placenta and cord | .. | 2 | 2 | .. | 4 | 1 |
| A 133 | 774, 775 | Haemolytic disease of newborn | .. | 1 | 2 | 1 | 4 | .. |
| A 134 | 776 | Anoxic and hypoxic conditions not elsewhere classified | 1 | 2 | 1 | .. | 4 | 1 |
| A 135 | 760–763, 769, 773, 777–779 | Other causes of perinatal morbidity and mortality | 3 | 97 | 408 | 26 | 534 | 68 |
| A 136 | 794 | Senility without mention of psychosis | .. | 2 | 7 | .. | 9 | 2 |
| A 137 | 780–793, 795, 796 | Symptoms and other ill-defined conditions | 104 | 1,076 | 1,967 | 198 | 3,345 | 43 |

| Intermediate List No. | Detailed List No. | Cause Groups | Euro. | Fijian | Ind. | Other | Total | Deaths |
|---|---|---|---|---|---|---|---|---|
| | | **EXTERNAL CAUSE OF INJURY** | | | | | | |
| AE 138 | E810–E823 | Motor vehicle accidents | 19 | 112 | 173 | 42 | 346 | 6 |
| AE 139 | E800–E807<br>E825–E845 | Other transport accidents | .. | 21 | 26 | 4 | 51 | 1 |
| AE 140 | E850–E877 | Accidental poisoning | 4 | 73 | 122 | 14 | 213 | 3 |
| AE 141 | E880–E887 | Accidental falls | 25 | 183 | 211 | 25 | 444 | 10 |
| AE 142 | E890–E899 | Accidents caused by fire | 1 | 56 | 57 | 11 | 125 | 6 |
| AE 143 | E910 | Accidental drowning and submersion | .. | 4 | .. | .. | 4 | .. |
| AE 144 | E922 | Accident caused by firearm missiles | .. | .. | .. | 1 | 1 | .. |
| AE 145 | E916–E921<br>E923–E928 | Accidents mainly of industrial type | 7 | 338 | 176 | 60 | 581 | 1 |
| AE 146 | E900–E909<br>E911–E915<br>E929–E949 | All other accidents | 8 | 370 | 227 | 42 | 647 | 6 |
| AE 147 | E950–E959 | Suicide and self-injury | 2 | 6 | 17 | 1 | 26 | .. |
| AE 148 | E960–E978 | Homicide and injury purposely inflicted by other persons; legal intervention | 2 | 160 | 94 | 14 | 270 | 1 |
| AE 149 | E980–E989 | Injury undetermined whether accidentally or purposely inflicted | 1 | 22 | 28 | 5 | 56 | 1 |
| AE 150 | E990–E999 | Injury resulting from operations of war | .. | 1 | .. | .. | 1 | .. |
| | | **NATURE OF INJURY** | | | | | | |
| AN 138 | N800–N804 | Fracture of Skull | 2 | 120 | 61 | 14 | 197 | 6 |
| AN 139 | N805–N809 | Fracture of spine and trunk | 2 | 28 | 40 | 4 | 74 | .. |
| AN 140 | N810–N829 | Fracture of limbs | 23 | 179 | 210 | 34 | 446 | 12 |
| AN 141 | N830–N839 | Dislocation without fracture | 2 | 21 | 21 | 4 | 48 | .. |
| AN 142 | N840–N848 | Sprains and strains of joint adjacent muscles | .. | 18 | 6 | 7 | 31 | .. |
| AN 143 | N850–N854 | Intracranial injury (excluding skull fracture) | 15 | 114 | 86 | 22 | 237 | 2 |
| AN 144 | N860–N869 | Internal injury of chest, abdomen and pelvis | .. | 13 | 3 | .. | 16 | .. |
| AN 145 | N870–N908 | Laceration and open wound | 11 | 393 | 226 | 68 | 698 | 3 |
| AN 146 | N910–N929 | Superficial injury, contusion and crushing with intact skin surface | 3 | 115 | 80 | 7 | 205 | 1 |
| AN 147 | N930–N939 | Foreign body entering through orifice | .. | 19 | 23 | 1 | 43 | 1 |
| AN 148 | N940–N949 | Burn | 2 | 98 | 122 | 22 | 244 | 6 |
| AN 149 | N960–N989 | Adverse effects of chemical substances | 8 | 102 | 161 | 21 | 292 | 3 |
| AN 150 | N950–N959<br>N990–N999 | All other and unspecified effects of external causes | 1 | 126 | 92 | 15 | 234 | 1 |

TABLE XXIII

NOTIFIABLE DISEASES BY MONTH (1970)

| Name of Disease | Jan. | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Acute Poliomyelitis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 2. Anthrax | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 3. Brucellosis (including Undulant Fever) | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 4. Chickenpox (Varicella) | 51 | 16 | 17 | 27 | 28 | 32 | 36 | 53 | 44 | 32 | 44 | 30 | 410 |
| 5. Dengue Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6. Diphtheria | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7. Dysentery—(*a*) Amoebic | 2 | .. | 2 | 1 | 3 | 1 | 1 | 1 | .. | .. | .. | .. | 11 |
| (*b*) Bacillary | 2 | 2 | 2 | 4 | 3 | 6 | 5 | 2 | 2 | 1 | 1 | 2 | 32 |
| 8. Encephalitis | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | 3 | 6 |
| 9. Enteric Fever—(*a*) Typhoid | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | 1 | .. | 4 |
| (*b*) Paratyphoid | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 |
| 10. Food Poisoning | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 11. German Measles (Rubella) | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| 12. Infantile Diarrhoea | 1,025 | 826 | 667 | 603 | 557 | 396 | 477 | 506 | 275 | 501 | 708 | 447 | 6,988 |
| 13. Infectious Hepatitis | 10 | 18 | 30 | 27 | 43 | 18 | 14 | 16 | 11 | 12 | 9 | 10 | 218 |
| 14. Influenza | 5,124 | 2,321 | 3,551 | 2,497 | 2,606 | 1,412 | 2,405 | 5,449 | 3,950 | 4,741 | 3,604 | 2,397 | 40,057 |
| 15. Leprosy | 4 | 3 | 2 | 5 | .. | 7 | 4 | 3 | .. | 5 | 2 | 1 | 36 |
| 16. Leptospirosis | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| 17. Malaria | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| 18. Measles (Morbilli) | 7 | 2 | 6 | 2 | 2 | .. | 1 | 4 | .. | 2 | 14 | 3 | 43 |
| 19. Meningitis | 8 | 8 | 5 | 8 | 13 | 3 | 2 | 9 | 7 | 8 | 8 | 4 | 83 |
| 20. Puerperal Pyrexia (including Puerperal Fever) | 24 | 25 | 19 | 28 | 20 | 10 | 11 | 26 | 10 | 6 | 5 | 3 | 187 |
| 21. Rheumatism (Acute) | 9 | 8 | 9 | 11 | 12 | 3 | 5 | 6 | 6 | 11 | 10 | 16 | 106 |
| 22. Tetanus | 2 | 2 | .. | .. | 1 | .. | 1 | 1 | 1 | .. | 1 | 1 | 10 |
| 23. Trachoma | 15 | 10 | 12 | 11 | 9 | 11 | 3 | 16 | 11 | 47 | 33 | 21 | 199 |
| 24. Tuberculosis—(*a*) Pulmonary | 22 | 11 | 28 | 26 | 27 | 16 | 25 | 22 | 34 | 13 | 43 | 33 | 300 |
| (*b*) Other than Pulmonary | 2 | 2 | 4 | .. | 3 | 1 | 1 | 2 | 5 | 1 | 3 | 2 | 26 |
| 25. Venereal Diseases— | | | | | | | | | | | | | |
| (*a*) Gonorrhoea | 105 | 125 | 103 | 69 | 86 | 64 | 92 | 81 | 51 | 72 | 73 | 61 | 982 |
| (*b*) Granuloma Venereum | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*c*) Ophthalmia Neonatorum and Gon. Ophthalmia | .. | 1 | .. | 1 | 4 | 1 | 3 | 2 | 1 | 2 | .. | .. | 15 |
| (*d*) Lymphogranuloma Inguinale | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Soft Chancre | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*f*) Syphilis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*g*) Venereal Warts | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26. Whooping Cough (Pertussis) | 3 | 2 | 4 | 3 | .. | 3 | .. | 2 | .. | 1 | 2 | 7 | 27 |
| 27. Yaws | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | 6,416 | 3,383 | 4,463 | 3,325 | 3,418 | 1,986 | 3,087 | 6,201 | 4,410 | 5,455 | 4,562 | 3,041 | 49,747 |

TABLE XXIV

IMMUNISATION 1970—1ST YEAR OF LIFE

| Immunisation | 1st Year of Life | | | | | Pre-School Children | | | | | School Children | | | | | Adult | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | W | N | E | T | C | W | N | E | T | C | W | N | E | T | C | W | N | E | T |
| Mantoux .. .. | 28 | 7 | 5 | 2 | 42 | 82 | 130 | 17 | 19 | 248 | 1,497 | 4,319 | 492 | 1,061 | 7,369 | 184 | 946 | 116 | 564 | 1,810 |
| BCG .. .. | 5,660 | 5,816 | 2,643 | 1,104 | 15,223 | 343 | 1,326 | 578 | 402 | 2,649 | 8,458 | 3,881 | 448 | 630 | 13,417 | 57 | 156 | 22 | 238 | 473 |
| Polio 1 .. .. | 4,455 | 1,985 | 2,306 | 768 | 9,514 | 1,611 | 2,048 | 922 | 434 | 5,015 | 2,655 | 668 | 332 | 115 | 3,770 | 3 | .. | .. | .. | 3 |
| Polio 2 .. .. | 3,221 | 1,025 | 1,427 | 388 | 6,061 | 1,477 | 1,219 | 617 | 498 | 3,811 | 385 | 456 | 84 | 23 | 948 | 1 | .. | .. | .. | 1 |
| Polio 3 .. .. | .. | .. | .. | .. | .. | 2,848 | 1,710 | 1,328 | 945 | 6,831 | 475 | 463 | 242 | 124 | 1,304 | 1 | .. | .. | .. | 1 |
| Polio Booster .. | .. | 7 | 18 | 3 | 39 | 104 | 137 | 30 | 129 | 389 | 9,479 | 3,495 | 2,570 | 703 | 16,247 | 3 | .. | .. | .. | 3 |
| DPT 1 .. .. | 3,596 | 2,673 | 2,443 | 674 | 9,386 | 1,306 | 2,370 | 911 | 366 | 4,953 | 41 | 65 | 6 | .. | 112 | .. | 2 | 7 | .. | 9 |
| DPT 2 .. .. | 2,778 | 1,655 | 1,619 | 520 | 6,572 | 946 | 1,699 | 800 | 419 | 3,864 | .. | 40 | 2 | .. | 42 | .. | .. | 5 | .. | 5 |
| DPT 3 .. .. | 2,342 | 1,365 | 1,260 | 400 | 5,367 | 893 | 1,854 | 802 | 373 | 3,922 | 21 | 55 | 7 | .. | 83 | .. | 5 | 6 | 2 | 13 |
| DPT 4 .. .. | .. | .. | .. | .. | .. | 2,688 | 3,024 | 1,502 | 884 | 8,098 | 6 | 39 | 2 | 2 | 49 | .. | .. | 3 | .. | 3 |
| Tetanus 1 .. .. | .. | .. | .. | .. | .. | 47 | 219 | 12 | 6 | 284 | 1,043 | 1,505 | 1,210 | 464 | 4,222 | 2,433 | 8,213 | 3,314 | 837 | 14,797 |
| Tetanus 2 .. .. | .. | .. | .. | .. | .. | 6 | 122 | 7 | 8 | 143 | 548 | 720 | 437 | 504 | 2,209 | 2180 | 7,624 | 2,394 | 1,166 | 13,364 |
| Tetanus 3 .. .. | .. | .. | .. | .. | .. | .. | 29 | 13 | .. | 42 | 850 | 649 | 567 | 191 | 2,257 | 1,978 | 8,419 | 5,076 | 908 | 16,381 |
| Tetanus Booster .. | .. | .. | .. | .. | .. | 236 | 459 | 32 | 34 | 761 | 13,375 | 12,579 | 5,186 | 1,352 | 32,492 | 2,763 | 5,095 | 914 | 1,995 | 10,767 |
| Smallpox .. .. | .. | .. | .. | .. | .. | 218 | 119 | 30 | 1 | 368 | 310 | 205 | 7 | 4 | 526 | 1,674 | 1,305 | 47 | 60 | 3,086 |
| Tab. 1 .. .. | .. | .. | .. | .. | .. | 83 | 41 | .. | 55 | 179 | 266 | 509 | .. | 899 | 1,674 | 237 | 228 | 22 | 1,705 | 2,192 |
| Tab. 2 .. .. | .. | .. | .. | .. | .. | 63 | 32 | .. | .. | 95 | 209 | 235 | .. | 745 | 1,189 | 350 | 137 | 21 | 859 | 1,367 |
| Tab. Booster .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 7 | .. | 2 | 13 | 50 | 2 | .. | 2 | 54 |
| Cholera 1 .. .. | .. | 12 | .. | .. | 12 | 31 | 25 | .. | .. | 56 | 9 | 55 | .. | 2 | 66 | 569 | 318 | 36 | 60 | 983 |
| Cholera 2 .. .. | .. | .. | .. | .. | .. | 22 | 1 | .. | .. | 23 | 31 | 4 | .. | .. | 35 | 307 | 18 | .. | .. | 325 |
| Cholera Booster .. | .. | 14 | .. | .. | 14 | 10 | 14 | .. | .. | 24 | 16 | 52 | .. | 2 | 70 | 200 | 347 | 21 | 36 | 604 |
| Yellow Fever .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | .. | 5 | 131 | 26 | .. | .. | 157 |

Table XXIV—(*Continued*).

| Immunisation | Total Immunisation | | | | |
|---|---|---|---|---|---|
| | Central | Western | Northern | Eastern | Total |
| Mantoux .. .. .. .. .. | 1,791 | 5,402 | 630 | 1,646 | 9,469 |
| BCG .. .. .. .. .. .. | 11,817 | 9,489 | 3,691 | 2,374 | 27,371 |
| Polio 1 .. .. .. .. .. | 8,726 | 4,689 | 3,560 | 1,317 | 18,292 |
| Polio 2 .. .. .. .. .. | 5,088 | 2,698 | 2,128 | 909 | 10,823 |
| Polio 3 .. .. .. .. .. | 3,324 | 2,173 | 1,570 | 1,069 | 8,136 |
| Polio Booster .. .. .. .. | 9,586 | 3,639 | 2,618 | 835 | 16,678 |
| DPT 1 .. .. .. .. .. | 4,944 | 5,231 | 3,067 | 1,110 | 14,352 |
| DPT 2 .. .. .. .. .. | 3,737 | 3,548 | 2,426 | 944 | 10,655 |
| DPT 3 .. .. .. .. .. | 3,264 | 3,378 | 2,075 | 775 | 9,492 |
| DPT 4 .. .. .. .. .. | 2,694 | 3,063 | 1,507 | 886 | 8,150 |
| Tetanus 1 .. .. .. .. .. | 3,523 | 9,937 | 4,536 | 1,307 | 19,303 |
| Tetanus 2 .. .. .. .. .. | 2,734 | 8,466 | 2,838 | 1,678 | 15,716 |
| Tetanus 3 .. .. .. .. .. | 2,828 | 9,097 | 5,656 | 1,099 | 18,680 |
| Tetanus Booster .. .. .. .. | 16,374 | 18,133 | 6,132 | 3,381 | 44,020 |
| Smallpox .. .. .. .. .. | 2,202 | 1,629 | 84 | 65 | 3,980 |
| TAB. 1 .. .. .. .. .. | 586 | 778 | 22 | 2,659 | 4,045 |
| TAB. 2 .. .. .. .. .. | 622 | 404 | 21 | 1,604 | 2,651 |
| TAB. Booster .. .. .. .. | 54 | 9 | .. | 4 | 67 |
| Cholera 1 .. .. .. .. .. | 609 | 410 | 36 | 62 | 1,117 |
| Cholera 2 .. .. .. .. .. | 360 | 23 | .. | .. | 383 |
| Cholera Booster .. .. .. .. | 226 | 427 | 21 | 38 | 712 |
| Yell w Fever .. .. .. .. | 131 | 31 | .. | .. | 162 |

## TABLE XXV

### Return of Notifiable Diseases by Province for the Year—1970

| Name of Disease | Total | Suva | | | | Central | | | | Western | | | | | | | | | Eastern | | | | Northern | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Urban | Rural | Aircraft | Ships | Tailevu | Rewa | Naitasiri | Serua | Nadroga | Nadi | Lautoka | Ba | Tavua | Nadarivatu | Ra | Aircraft | Ships | Nadi Airport | Lomaiviti | Kadavu | Lau | Rotuma | Macuata | Bua | Taveuni | Savusavu | Rabi |
| 1. Acute Poliomyelitis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 2. Anthrax | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 3. Brucellosis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 4. Chickenpox (Varicella) | 410 | 63 | 3 | .. | .. | 37 | 10 | 9 | 37 | 44 | 24 | 25 | 18 | 35 | .. | 51 | .. | .. | 3 | 9 | .. | 10 | .. | 7 | 1 | 16 | 7 | 1 |
| 5. Dengue Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6. Diphtheria | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7. Dysentery— | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) Amoebic | 11 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| (b) Bacillary | 32 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 4 |
| 8. Encephalitis | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 9. Enteric Fever— | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) Typhoid | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (b) Paratyphoid | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 10. Food Poisoning | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 11. German Measles (Rubella) | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 12. Infantile Diarrhoea | 6,988 | 1,404 | 21 | .. | .. | 438 | 407 | 68 | 202 | 257 | 440 | 828 | 747 | 845 | 1 | 375 | .. | .. | 162 | 51 | 39 | 112 | 1 | 35 | 30 | 87 | 101 | 15 |
| 13. Infectious Hepatitis | 218 | 26 | .. | .. | .. | 14 | 1 | .. | 5 | 15 | 23 | 29 | 11 | 22 | .. | 4 | .. | .. | 5 | 5 | 2 | 8 | .. | 6 | 9 | 21 | 9 | 3 |
| 14. Influenza | 40,057 | 3,869 | 327 | .. | .. | 4,445 | 1,529 | 569 | 2,189 | 2,717 | 547 | 3,267 | 4,275 | 4,197 | 56 | 2,705 | .. | .. | 1,072 | 1,730 | 428 | 1,235 | 400 | 1,367 | 746 | 939 | 1,420 | 28 |
| 15. Leprosy | 36 | 6 | 5 | .. | .. | .. | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | .. | 3 | .. | .. | .. | .. | 1 | 3 | .. | 3 | .. | 1 | .. | .. |
| 16. Leptospirosis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 17. Malaria | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| 18. Measles (Morbilli) | 43 | 15 | .. | .. | .. | 7 | .. | .. | 2 | .. | .. | 2 | .. | 11 | .. | .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| 19. Meningitis | 83 | 36 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 16 | 3 | .. | .. | .. | .. | .. | 1 | 7 | .. | 1 | .. | 12 | .. | 2 | 3 | 1 |
| 20. Puerperal Pyrexia (including Puerperal Fever) | 187 | 104 | .. | .. | .. | 5 | 3 | .. | .. | 2 | .. | 49 | 12 | .. | .. | .. | .. | .. | .. | 2 | 1 | 5 | .. | 3 | 1 | .. | .. | .. |
| 21. Rheumatism (Acute) | 106 | 11 | .. | .. | .. | 2 | .. | 1 | .. | 7 | 9 | 28 | 13 | 1 | .. | 9 | .. | .. | .. | 8 | .. | .. | .. | 15 | 1 | .. | 1 | .. |
| 22. Tetanus | 10 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. |
| 23. Trachoma | 199 | 102 | .. | .. | .. | 1 | .. | .. | .. | 3 | 5 | 1 | .. | 62 | .. | .. | .. | .. | 19 | 1 | .. | 3 | .. | .. | .. | .. | 2 | .. |
| 24. Tuberculosis— | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) Pulmonary | 300 | 32 | 36 | .. | .. | 18 | 12 | 9 | 9 | 34 | 35 | 17 | 15 | 13 | .. | 25 | .. | .. | 1 | 3 | 5 | 5 | .. | 12 | 1 | 3 | 9 | 6 |
| (b) Other than Pulmonary | 25 | 5 | 1 | .. | .. | 1 | 2 | .. | .. | 3 | 2 | .. | 2 | .. | .. | 2 | .. | .. | .. | 1 | 2 | .. | .. | 2 | .. | .. | 3 | .. |
| 25. Venereal Diseases— | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) Gonorrhoea | 982 | 385 | 2 | .. | .. | 35 | 17 | 3 | 5 | 21 | 38 | 232 | 11 | 33 | .. | 15 | .. | .. | 20 | 78 | 6 | 16 | 3 | 20 | 2 | 5 | 35 | .. |
| (b) Granuloma Venereum | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (c) Oph. Neon. Gon. Ophthalmia | 15 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| (d) Lymphogranuloma Inguinale | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (e) Soft Chancre | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (f) Syphilis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (g) Venereal Warts | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26. Whooping Cough (Pertussis) | 27 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | .. | .. | 2 | .. | .. | .. | 14 | .. | .. | .. | 4 | .. | .. | 1 | .. |
| 27. Yaws | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | 49747 | 6082 | 395 | .. | .. | 5004 | 1983 | 661 | 2451 | 3104 | 1129 | 4516 | 5134 | 5221 | 57 | 3191 | . | . | 1289 | 1913 | 484 | 1398 | 404 | 1811 | 791 | 1075 | 1596 | 58 |

TABLE XXVI

AN ANALYSIS OF AETIOLOGY OF LOW BIRTH WEIGHT IN 1,995 BABIES BORN DURING THE YEAR 1970 AT THE SEVEN MAIN MATERNITY UNITS IN FIJI

| Associated Factors | Total | INDIANS | | | | FIJIANS | | | | OTHERS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Less than 1000G | —1500G | —2000G | —2500G | Less than 1000G | —1500G | —2000G | —2500G | Less than 1000G | —1500G | —2000G | —2500G |
| Not known | 1069 (51) | 13 (11) | 36 (16) | 95 (8) | 826 (2) | 3 (3) | 6 (3) | 9 (4) | 65 (2) | .. | 1 (1) | 2 (1) | 13 |
| Hypertension | 173 (10) | 2 (1) | 16 (2) | 51 (5) | 89 (1) | .. | 1 | 4 | 7 | .. | 1 (1) | .. | 2 |
| Anaemia (7G or less) | 110 (4) | 2 (2) | 4 (1) | 17 (1) | 87 | .. | .. | .. | .. | .. | .. | .. | .. |
| Antepartum haemorrhage | 85 (28) | 7 (7) | 6 (5) | 23 (4) | 23 (4) | 2 (2) | 3 (2) | 6 (2) | 8 | 1 (1) | .. | 3 (1) | 3 |
| Bad obstetrical history | 42 (6) | 1 (1) | 2 (1) | 9 (3) | 28 (1) | .. | .. | .. | 2 | .. | .. | .. | .. |
| Cardiac disease | 15 (1) | .. | 1 (1) | 1 | 13 | .. | .. | .. | .. | .. | .. | .. | .. |
| Prolonged Pregnancy | 24 | .. | .. | 5 | 16 | .. | .. | .. | 2 | .. | .. | .. | 1 |
| Placental insufficiency | 132 (9) | 3 (2) | 11 (6) | 27 | 78 (1) | .. | .. | 2 | 8 | .. | .. | 1 | 2 |
| Premature rupture of membrane | 147 (18) | 2 (2) | 19 (10) | 28 (2) | 82 (1) | .. | 1 (1) | 4 (1) | 7 (1) | .. | .. | 1 | 3 |
| Multiple pregnancy | 101 (21) | 6 (5) | 14 (6) | 29 (3) | 18 | .. | 4 (3) | 9 | 13 (2) | 2 (2) | .. | 2 | 4 |
| Maternal death | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Diabetes | 6 (2) | .. | 1 (1) | .. | 4 (1) | .. | .. | 1 | .. | .. | .. | .. | .. |
| Congenital malformations | 11 (4) | 1 | .. | 1 | 7 (3) | .. | 1 (1) | .. | 1 | .. | .. | .. | .. |
| Other causes—specify | 80 (15) | 5 (5) | 9 (5) | 16 (2) | 41 (1) | .. | 1 | 1 (1) | 2 | 1 (1) | .. | .. | 4 |
| Total | 1,995 (169) | 42 (36) | 119 (54) | 302 (28) | 1,312 (15) | 5 (5) | 17 (10) | 36 (8) | 115 (5) | 4 (4) | 2 (2) | 9 (2) | 32 |
| Death Rate/1,000 | 85 | 857 | 454 | 93 | 11 | 1,000 | 588 | 222 | 44 | 1,000 | 1000 | 222 | .. |

## TABLE XXVII

## LOW BIRTH WEIGHT BABIES, 1970

### INDIANS

| Station | Total L.B.W. | Deaths L.B.W. | Total Live Births | L.B.W. per cent. | Total N.N.D. | L.B.W. Deaths/ 1,000 Live Births | N.N.D./ 1,000 |
|---|---|---|---|---|---|---|---|
| C.W.M. Hospital .. .. .. | 400 | 26 | 1,651 | 24 | 32 | 16 | 19 |
| Lautoka .. .. .. .. .. | 459 | 33 | 1,388 | 33 | 38 | 24 | 27 |
| Labasa .. .. .. .. .. | 268 | 28 | 902 | 30 | 33 | 31 | 37 |
| Nadi .. .. .. .. .. | 147 | 10 | 507 | 29 | 10 | 20 | 20 |
| Nausori .. .. .. .. .. | 150 | 9 | 464 | 32 | 9 | 19 | 19 |
| Tavua .. .. .. .. .. | 95 | 13 | 378 | 25 | 14 | 34 | 37 |
| Ba Methodist Hospital .. .. .. | 256 | 14 | 931 | 27 | 14 | 15 | 15 |
| Total .. .. | 1,775 | 133 | 6,221 | 29 | 150 | 21 | 24 |

### FIJIANS

| Station | Total L.B.W. | Deaths L.B.W. | Total Live Births | L.B.W. per cent. | Total N.N.D. | L.B.W. Deaths/ 1,000 Live Births | N.N.D./ 1,000 |
|---|---|---|---|---|---|---|---|
| C.W.M. Hospital .. .. .. | 77 | 11 | 1,501 | 5 | 16 | 7 | 11 |
| Lautoka .. .. .. .. .. | 34 | 7 | 451 | 8 | 11 | 16 | 24 |
| Labasa .. .. .. .. .. | 6 | 4 | 153 | 4 | 4 | 26 | 26 |
| Nadi .. .. .. .. .. | 16 | 2 | 221 | 7 | 4 | 9 | 18 |
| Nausori .. .. .. .. .. | 32 | 3 | 514 | 6 | 4 | 6 | 8 |
| Tavua .. .. .. .. .. | 7 | .. | 312 | 2 | .. | .. | .. |
| Ba Methodist Hospital .. .. .. | 1 | 1 | 24 | 4 | 1 | 42 | 42 |
| Total .. .. | 173 | 28 | 3,176 | 5 | 40 | 9 | 13 |

### OTHERS

| Station | Total L.B.W. | Deaths L.B.W. | Total Live Births | L.B.W. per cent. | Total N.N.D. | L.B.W. Deaths/ 1,000 Live Births | N.N.D./ 1,000 |
|---|---|---|---|---|---|---|---|
| C.W.M. Hospital .. .. .. | 28 | 5 | 478 | 6 | 9 | 10 | 19 |
| Lautoka .. .. .. .. .. | 10 | 2 | 88 | 11 | 2 | 23 | 23 |
| Labasa .. .. .. .. .. | 2 | .. | 30 | 7 | .. | .. | .. |
| Nadi .. .. .. .. .. | 3 | 1 | 20 | 15 | 1 | 50 | 50 |
| Nausori .. .. .. .. .. | 1 | .. | 27 | 4 | .. | .. | .. |
| Tavua .. .. .. .. .. | 3 | .. | 53 | 6 | 1 | .. | 19 |
| Ba Methodist Hospital .. .. .. | .. | .. | 11 | .. | .. | .. | .. |
| Total .. .. | 47 | 8 | 707 | 7 | 13 | 11 | 18 |
| All Births .. .. .. .. | 1,995 | 169 | 10,104 | 20 | 203 | 17 | 20 |

# TABLE XXVIII

URBAN/TOWNSHIP/RURAL SANITARY DISTRICTS OF THE DOMINION OF FIJI

## I. Summary of Inspections

| *Type of Premises, etc.* | *Inspections* | *Re-Inspections* | *Total* |
|---|---|---|---|
| House-to-house inspection of district | 75,579 | 25,693 | 101,272 |
| Investigation of complaints, nuisances, etc. | 1,730 | 958 | 2,688 |
| New Building Sites—before approval | 2,565 | 336 | 2,901 |
| New Buildings—Works in progress | 3,639 | 1,320 | 4,959 |
| Investigation of Infectious Disease and Disinfection | 1,775 | 841 | 2,616 |
| Shipping Sanitary Surveys | 270 | 47 | 317 |
| House-let-as-lodgings and Lodging Houses | 507 | 263 | 770 |
| Factories and Workshops | 1,062 | 459 | 1,521 |
| Cemeteries | 202 | 108 | 310 |
| Schools | 920 | 341 | 1,261 |
| Checking Sanitary Services (A/Cs, etc.) | 6,305 | 2,248 | 8,553 |
| Laundries | 284 | 148 | 432 |
| Hairdressers, Chiropodists, etc. | 995 | 514 | 1,509 |
| Foodshops, Foodstores, Markets, etc. | 4,558 | 2,006 | 6,564 |
| Eating houses and Ice Cream Premises | 3,202 | 1,285 | 4,487 |
| Aerated Water and Ice Factories | 162 | 223 | 385 |
| Kava Saloons | 1,146 | 82 | 1,228 |
| Bakehouses | 275 | 201 | 476 |
| Slaughterhouses | 84 | 47 | 131 |
| Butcher Shops | 478 | 168 | 646 |
| Food Vehicles | 1,327 | 638 | 1,965 |
| Inspection of Premises for Rat Infestation | 310 | 267 | 577 |
| Aircraft Inspections | 2,129 | 20 | 2,149 |
| Miscellaneous—Subdivision, Reservoir, Dairies, Refuse Dump, Villages, Catering Kitchen, etc. | 4,506 | 1,076 | 5,582 |
| Total | 114,010 | 39,289 | 153,299 |

## 2. Written Notices, etc. Issued

| *Type of Notice, etc.* | *Number* |
|---|---|
| International notices served | 4,206 |
| Buildings surveyed for closure or demolition | 61 |
| Closing orders served | 48 |
| Buildings demolished after service of orders by owners | 14 |
| Statutory notices served | 174 |
| Demolition orders served | 12 |
| Buildings demolished by Local Authority | 1 |

## 3A. Building Permits Issued

| | *Number* | *Value* $ |
|---|---|---|
| New Commercial Buildings | 269 | 2,750,909 |
| New Dwellings | 1,621 | 5,183,429 |
| Alterations and Repairs | 549 | 802,808 |
| Miscellaneous Works— | | |
| (*a*) Bulk Stores | 405 | 386,849 |
| (*b*) Industrial Buildings, Factories, etc. | 51 | 429,841 |
| (*c*) Schools, Churches, etc. | 222 | 8,746,696 |
| New Septic Tanks | 161 | 63,063 |
| Total | 3,278 | $18,363,595 |

### 3B. Completion Certificates Issued

| | *Number* | *Value* $ |
|---|---|---|
| New Commercial Buildings | 172 | 1,927,631 |
| New Dwellings | 7,263 | 3,421,742 |
| Alterations and Repairs | 190 | 291,255 |
| Miscellaneous Works— | | |
| (*a*) Bulk Stores | 113 | 108,836 |
| (*b*) Industrial Buildings, Factories, etc. | 22 | 246,306 |
| (*c*) Schools, Churches, etc. | 106 | 696,896 |
| New Septic Tanks | 69 | 30,214 |
| Total | 7,935 | $6,722,880 |

### 4. Summary of Sanitary Improvements, etc.

| *Items* | *Ordered* | *Completed* |
|---|---|---|
| Repairing of Buildings | 706 | 320 |
| Improvements to lighting and ventilation of buildings | 340 | 109 |
| Removal of Unauthorised Erections | 238 | 80 |
| Abatement of Overcrowding | 249 | 64 |
| New Privies (all types) | 3,176 | 1,291 |
| Repairing, Cleansing or Flyproofing of Privies | 3,338 | 1,657 |
| Filling of Insanitary Privies | 809 | 454 |
| New Bathrooms or Washing Places | 384 | 100 |
| Repairing or cleansing of Bathrooms or Washing Places | 1,022 | 540 |
| New Kitchens | 349 | 139 |
| Repairing or cleansing of Kitchens | 1,235 | 514 |
| Provision of New Drains | 827 | 403 |
| Repairing or cleansing of Existing Drains | 3,590 | 2,028 |
| New Wells | 249 | 117 |
| Repairing or Improvement of Wells | 480 | 159 |
| New Water Tanks | 231 | 79 |
| Repairing, Screening or Cleansing of Water Tanks | 603 | 250 |
| Removal of Accumulation of Refuse, etc. | 10,753 | 6,097 |
| Cleaning of overgrowth or long grass | 5,812 | 3,832 |
| Provision of garbage tins | 2,893 | 1,763 |
| Abatement of nuisances from animal or poultry | 1,707 | 831 |
| Abatement of mosquito breeding | 7,634 | 5,379 |
| Cleansing of Food Premises | 1,259 | 1,726 |
| Structural Improvement to Food Premises | 395 | 295 |
| Cleansing of Food Vehicles | 455 | 292 |
| Improvement to Food Vehicles | 84 | 105 |
| Cleansing or Improvement of Hairdressers premises | 349 | 237 |
| Cleansing or improvement of Laundries | 117 | 73 |
| Cleansing or improvement of Schools | 243 | 101 |
| Cleansing or improvement of Shipping | 40 | 38 |
| Compounding of Straying Cattle | 13 | 13 |
| Cleansing of Catering Kitchen | 94 | 28 |
| Miscellaneous | 504 | 390 |
| Total | 50,178 | 29,504 |

### 5. Mosquito Control

| | |
|---|---|
| Premises Inspected for Mosquito Control | 122,085 |
| Premises at which Larvae found | 6,738 |
| Larvae Index | 5·05% |

### 6. Shipping Arrivals

| | *Number* |
|---|---|
| (*a*) Pratique and Boarded | 114 |
| (*b*) Radio Pratique | 330 |
| (*c*) Pratique and Malarial Inspection | 201 |
| (*d*) Pratique and Malarial Spraying | 100 |
| Total | 745 |

### Aircraft Arrivals

| | *Number* |
|---|---|
| (*a*) Malarial Spraying | 1,824 |
| (*b*) Other Spraying | 410 |
| (*c*) Not Sprayed | 1,642 |
| Total | 3,876 |

### 7. Disinfection, Disinfestation and Fumigation, etc.

| *Type of Premises, Vessels or Aircraft* | *Method* | *Number* |
|---|---|---|
| Local Vessels | H.C.N. | 75 |
| Overseas Vessels | H.C.N. | 72 |
| Local Vessels | Insecticidal Aerosol (W.H.O. Standard) | 6 |
| Aircraft (Overseas) | Insecticidal Aerosol (W.H.O. Standard) | 1,935 |
| Offices, Dwellings, Pit Latrines, Hospitals, etc. | Formalin, Dieldrin, Diazinon, Cyllin | 1,272 |
| Secondhand Clothing | Liq. Formaldehyde | 12* |
| Wells and Water Tanks | Chloride of Lime | 21 |
| International Deratization Certificates Issued | | 72 |
| International Deratization Exemption Certificates Issued | | 10 |
| Local Vessels—Fumigation Exemption Certificates Issued | | 29 |
| Local Vessels—Fumigation Certificates Issued | | 60 |

* Bales.

### 8. Anti-Rat Measures

| | |
|---|---|
| Traps Set | 18,500 |
| Prival Baits Laid | 13,523 |

| | *Rattus Rattus* | *Rattus Norvegicus* | *Mice* | *Total* |
|---|---|---|---|---|
| Rats Destroyed by Trapping | 1,384 | 416 | 2,145 | 3,945 |
| Rats Destroyed by Poisoning | 653 | 574 | 473 | 1,700 |
| Rats Destroyed by Fumigation— | | | | |
| Overseas Shipping | 533 | .. | .. | 533 |
| Local Shipping | 187 | .. | .. | 187 |
| Rats Submitted for Laboratory Examination | 32 | 4 | 1 | 37 |
| Rats Found Infected | nil | nil | nil | nil |

### 9. Supervision of Labour Gang, etc.

| | |
|---|---|
| Number of Men employed, clearing and Drainage Work done, Loads of Refuse removed, etc.— | |
| Number of Men employed | 17 |
| Vacant Crown Land cleared of Overgrowth | 1,825 acres |
| Drains cleared and graded | 4,021 chains |
| Number of Loads of Refuse Removed | 15,587 loads |
| Clearing of Septic Tanks | 1,321 |
| Concrete Invert Drains Laid | 108 chains |
| Number of Gallons of Sludge Oil used | 1,112 gallons |

### 10. Food Inspection and Sampling

| | |
|---|---|
| Unsound Foodstuffs Condemned and Destroyed (General) | 556,747 lb. 8 oz. |
| Unsound Fish Condemned and Destroyed | 1,708 lb. 5 oz. |
| Unsound Meat Condemned and Destroyed | 1,652 lb. 8 oz. |
| Unsound (Canned and Bottled) Foodstuffs Condemned and Destroyed | 50 gal. 1 qt. 13 pt. 12 oz. |

Food and Water Samples Taken—

| | *Type* | *Number* |
|---|---|---|
| Fresh Water | Bacteriological | 849 |
| Fresh Water | Chemical | 106 |
| Milk | Bacteriological | 8 |
| Milk | Chemical | 107 |
| Sharps and Flour | Chemical | 15 |
| Kava or Yaqona | Chemical | 16 |
| Other Foodstuffs | Chemical and Bacteriological | 144 |
| | Total | 1,245 |

### 11. Meat Inspection

| *Carcasses Inspected* | *Number* |
|---|---|
| Cattle | 153 |
| Pigs | 41 |
| Total | 194 |
| Carcasses Condemned | 12 |
| Organs and Parts Condemned | 52 |
| Total | 64 |

## 12. Legal Proceedings

| | *Public Health Ordinance and Regulations* | *Pure Food Ordinance and Regulations* | *Town Planning Ordinance* |
|---|---|---|---|
| Number of Cases Taken | 77 | 4 | 73 |
| Convictions Obtained | 74 | 3 | 70 |
| Convicted and Discharged | 2 | .. | 2 |
| Cases Acquitted | 1 | .. | 1 |
| Cases Withdrawn | .. | 1 | .. |
| Revenue from Fines and Costs | $721.50 | $204.00 | $1,005.70 |

## 13. Remarks and Details of any special works carried out during the year under review

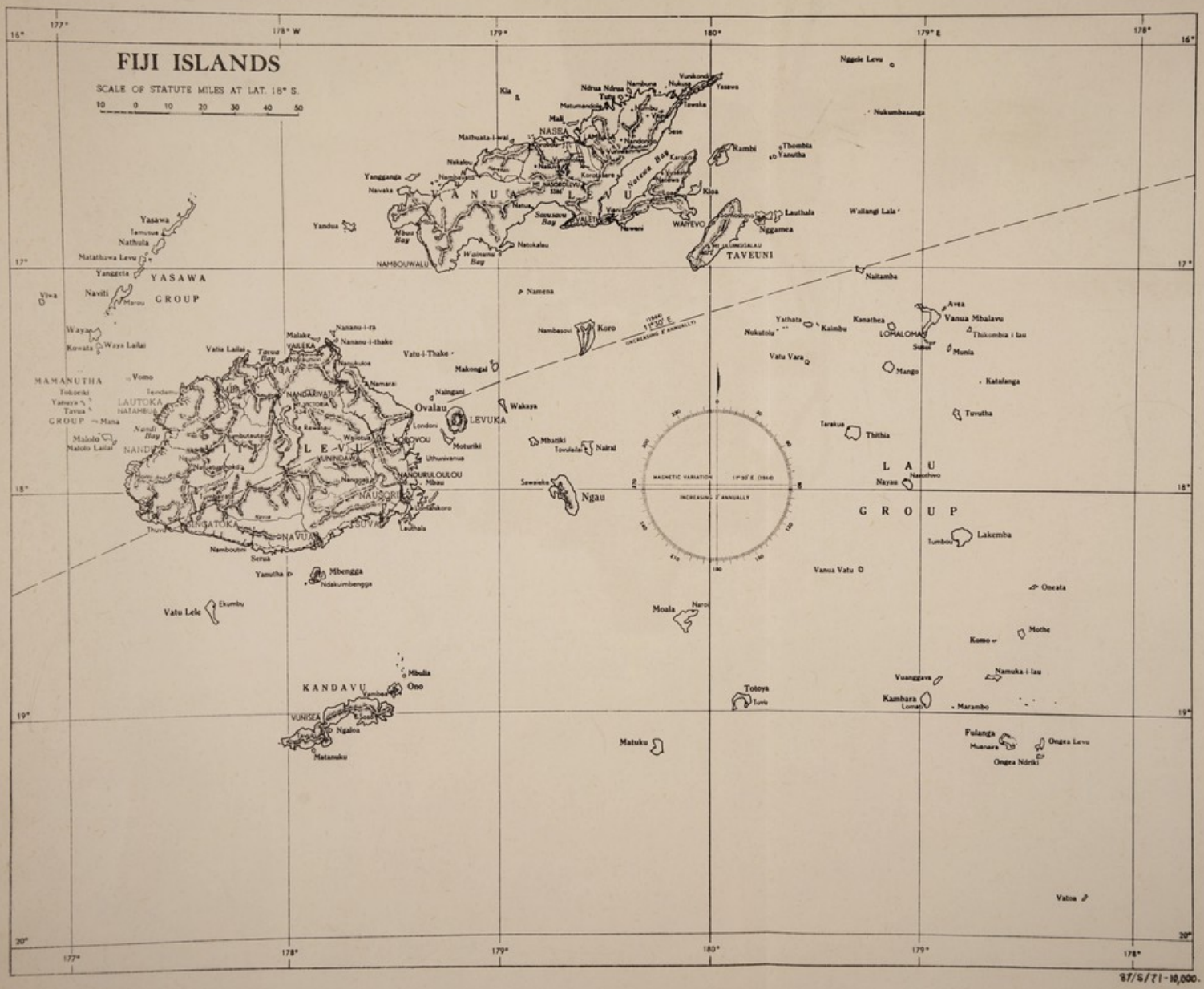
1. A total of 2,202 water-seal latrines were installed within the Rural Areas.
2. 1,147 dead animals were disposed by Local Authorities.
3. An Anti-Mosquito Campaign was waged throughout the Dominion.
4. Clean-up Campaigns were organised in all urban and township areas.
5. Surveys were carried out in all divisions—to ascertain the water supply and privy problem.

## 14. Seaport and Airport Health Quarantine

| | |
|---|---|
| Ships given Pratique | 745 |
| Aircraft given Pratique | 3,876 |
| Local Vessels Fumigated | 75 |
| Overse s Vessels Fumigated | 72 |
| Aircraft and Vessels treated with Insecticidal Aerosols | 1,941 |
| International Deratization Certificates Issued | 72 |
| International Deratization Exemption Certificates Issued | 10 |

*Passenger Arrivals–*

| | | |
|---|---|---|
| 1. Sea Arrivals— | | |
| (*a*) Through Passengers | | 44,600 |
| (*b*) Visitors | | 3,724 |
| (*c*) Cruise Passengers | | 41,851 |
| 2. Air Arrivals— | | |
| (*a*) Through Passengers (changing Plane) | | 8,288 |
| (*b*) Through Passengers on same Aircraft | | 131,600 |
| (*c*) Vistors | | 110,042 |
| 3. (*a*) Total Visitors | 110,042 | |
| (*b*) Total Tourist Arrivals | 336,381 | |
| 4. Aircraft Arrivals— | | |
| Number of Landing Passengers without valid Vaccination Certificates— | | |
| (*a*) Smallpox | 508 | |
| (*b*) Cholera | 2 | |
| Number of Passengers vaccinated on arrival— | | |
| (*a*) Smallpox | 330 | |
| (*b*) Cholera | 2 | |
| Number of Passengers released under surveillance | | 80 |
| Number of Passengers released after medical examination | | 90 |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LAUTOKA
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NANDRONGA
SUVA
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NASEA
NATEWA BAY
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WAINUNU BAY
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MOTURIKI
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VATU-I-THAKE
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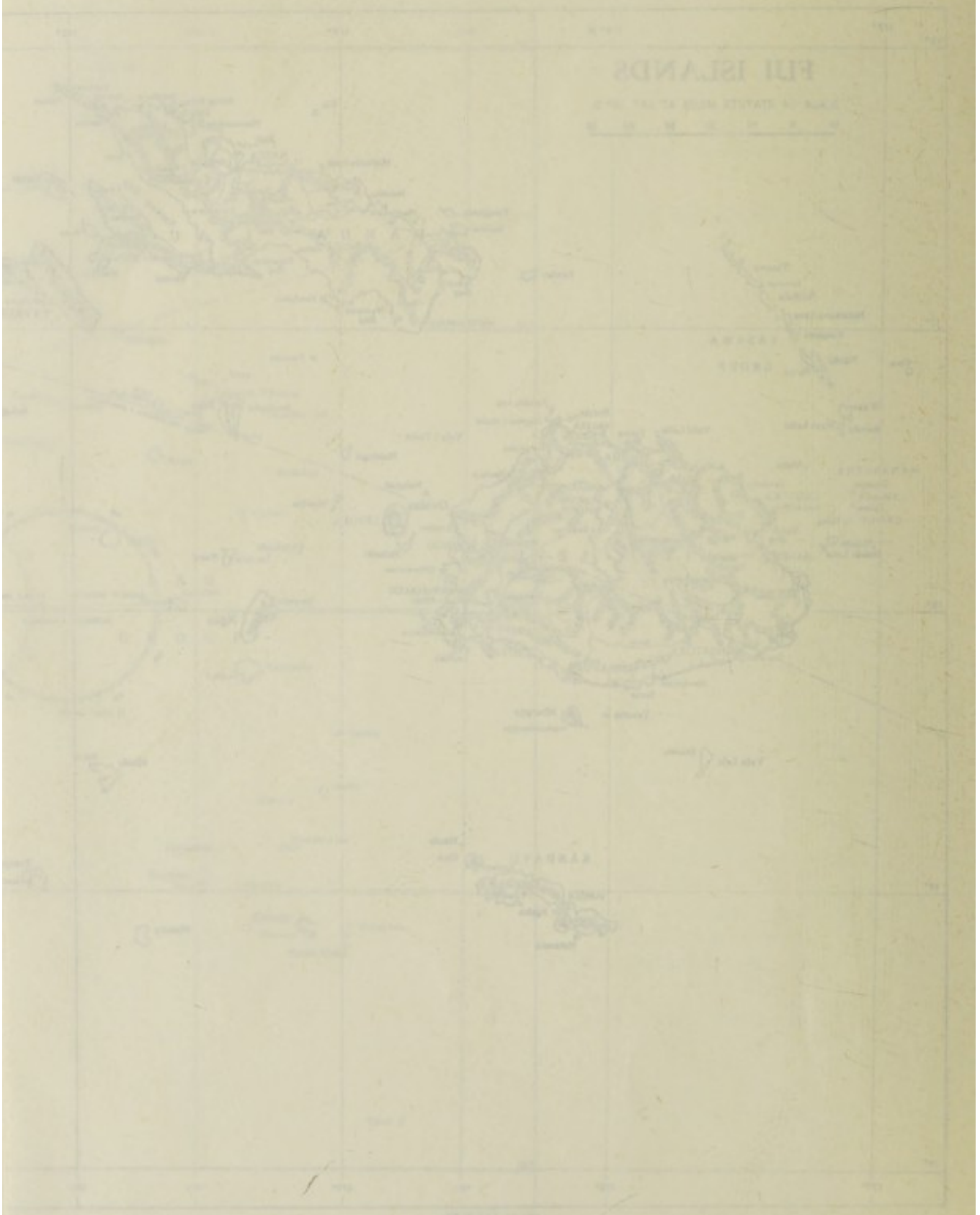
MAGNETIC VARIATION 17° 30' E (1940)
INCREASING 5' ANNUALLY
87/5/71-10,000.



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