Report of the Director-General of Health / Commonwealth of Australia.

ANNUAL REPORT 1965-1966

COMMONWEALTH DIRECTOR-GENERAL OF HEALTH

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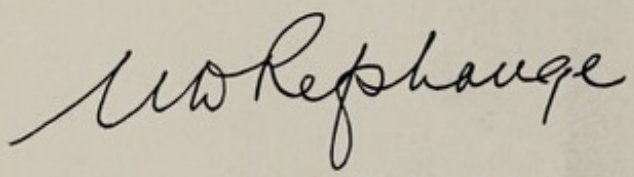
COMMONWEALTH DIRECTOR-GENERAL OF HEALTH

CONTENTS

The Honourable A. J. Forbes, M.C., M.P.,
Minister for Health,
Commonwealth of Australia.

I present herewith
my report of the activities of the
Commonwealth Department of Health
for the year ended 30th June, 1966.



W. D. Refshauge,
Director-General of Health,
31st August, 1966,
Canberra, A.C.T.

INTRODUCTION

This year has again seen development in all fields of Departmental activity. The Department's involvement in international matters increased considerably and, to cope with the additional volume of work involved, approval has been given to the creation of an International Health Section in the Central Office of the Department. The barriers against the introduction of human and animal diseases, which have proved so effective over a number of years, were strengthened further with the amendment to the Quarantine Act and an offer to the States in relation to the disposal of ships' garbage, referred to below. At the same time the protection afforded by the testing programme of the National Biological Standards Laboratory and the work of the expert committees in the field of therapeutic agents was widened with the passing of the Therapeutic Goods Act.

One of the most gratifying aspects of reporting on the year's activities is, however, to be able to report that it would appear the co-operative efforts of the Commonwealth and States in the battle against poliomyelitis have achieved a most substantial measure of success. Only two cases were confirmed for 1965-66, the lowest number ever recorded since poliomyelitis was recognized as a disease entity.

Pharmaceutical Benefits

The cost to the Commonwealth of pharmaceutical benefits in 1965-66 was $91.8 million; an increase of $9.6 million. As I have stated previously there are three main aspects to the cost of the Scheme; firstly, the level of prescribing by medical practitioners; secondly, the prices of drugs which are arrived at by negotiation between my Department and representatives of the drug companies and thirdly, the remuneration to chemists for dispensing these benefits.

The number of pharmaceutical benefit prescriptions continued to increase. The number of prescriptions in 1965-66 was 50 million compared with 47.6 million in 1964-65, an increase of 5.1 per cent. The increase in 1964-65 over 1963-64 was 7.2 per cent. The number of prescriptions per head of population was 4.36 in 1965-66 as against 4.23 in 1964-65, an increase of 3.1 per cent. The increase in the number per head of population in 1964-65 over 1963-64 was 5.2 per cent.

In relation to drug company negotiations, my Department has continued to be most active and, in the year just concluded, negotiations with manufacturers resulted in reductions which will save the Pharmaceutical Benefits Scheme $4.8 million in a full year at the present rate of prescribing. My Department will continue its determined efforts with the drug companies and I am hopeful that further successes will be achieved.

An aspect of some importance in the Pharmaceutical Benefits Scheme is the place of the medical representative or "detailer". In discussions with doctors in private practice it has often been said to me that they find it difficult and sometimes impossible to grant time from their very busy practices to interview all the medical representatives who call on them. I understand that there are about 1,200 medical representatives employed by drug companies in Australia. If this figure is correct this means one representative is employed for every five or six general practitioners in practice.

These medical representatives are the salesmen of the drug companies who promote the use of their particular products. This indirect and discreet selling is directed to the person who is in the position to increase sales of a drug by writing prescriptions for it. In contrast to the usual situation in the selling process, the person who is the target of this salesmanship is not faced with meeting the cost of these prescriptions from his own pocket; nor, except for the first 50 cents, is the cost met directly by his patients. It is the taxpayer who pays the pharmaceutical benefits bill.

I do not question that there is a place for a reasonable number of medical representatives as part of the drug distribution and information process. I believe, however, it is open to question whether the employment of one

medical representative to every five or six general practitioners greatly enhances the value of information and assistance provided to doctors for the treatment of their patients.

Following an application by the Federated Pharmaceutical Service Guild of Australia for an increase in the rates of remuneration paid for the dispensing of pharmaceutical benefits, a firm of independent management consultants was commissioned to conduct a survey into earnings, costs and profits in pharmacy, the cost of $37,780 to be shared equally by the Commonwealth and the Guild. The survey has been made possible by the co-operation of a number of chemists who have agreed to participate in the obtaining of the necessary detailed information. The promptness of their returns will greatly facilitate the completion of the survey. On its completion, the facts it reveals will be considered when the negotiations on the rate of chemists' remuneration are conducted.

Safety of Drugs

A point which must never be lost sight of is that any increase in the prescribing rate not only increases the cost of the Scheme to the Government, and consequently each individual taxpayer, but also increases the dangers inherent from the toxic nature of modern drugs.

Much valuable work is being done by the Australian Drug Evaluation Committee in the field of drug toxicity and the efforts of the Therapeutic Substances Branch, in collaboration with this Committee, the National Biological Standards Laboratory and overseas authorities, have achieved most worthwhile results. It is sobering, however, to read in an article entitled " Ill Health due to Drugs " by Dr. G. M. Wilson in the British Medical Journal of 30th April, 1966, that it has been estimated that between 5 per cent and 10 per cent of patients admitted to hospital experience some toxic reaction to a drug.

Too few people realise the dangers to health arising from the increasing consumption of drugs. There are extremely few drugs today which are completely safe and it would be disastrous if, in spite of the stringent precautions we are taking, a tragedy such as that resulting from the administration of thalidomide were ever to occur again. I refer the article I have mentioned to everyone interested in this problem as a most informative one and I quote the final paragraph which says:—

" We live in an age of therapy with potent drugs, and new weapons are coming to hand every year. These changes are to be welcomed; we cannot put back the clock, even if we should wish to do so. The problems now posed by motor-cars and drugs are in many ways similar. We must ensure that the price of advance is not too high and that accidents are reduced to a minimum by foresight and care. Both are examined, licensed and periodically reviewed. Roads and lines of communication of information are improved. The manufacturers are exhorted to introduce the latest safety devices and tests. However, in the final analysis, most depends on the driver and the prescriber ".

Quality of Drugs

The introduction of so many new drugs has been accompanied by a demand for both higher quality and greater reliability, and throughout the world governments have found it proper to establish legal standards which are minimum requirements for drugs and biological products. This is part of an international system aimed at providing a desirable uniformity in standards and ready interchangeability for these products in therapy and in commerce.

Constitutionally, the Commonwealth's powers over therapeutic substances and articles are limited. The Commonwealth can enact legislation in relation to drugs, medicines and articles of medical equipment that are imported, exported, made the subject of interstate trade, supplied to the Commonwealth or supplied as pharmaceutical benefits. Legislation concerned with the local manufacture, intrastate supply and consumption of these items is the responsibility of State Governments.

Similarly the Commonwealth does not enter into the general control of family remedies, including the bulk of proprietary lines. These remain a State interest.

Therapeutic agents of almost every type have been and are tested for compliance with standards at the National Biological Standards Laboratory. In addition to this testing programme, expert committees, comprising leading figures in a number of branches of medicine and science, have been working for some time on the provision of advice on the complex questions concerning the safety and standards for therapeutic goods.

Under the Therapeutic Goods Act, which received the Royal Assent on 24th May, 1966 and repeals the Therapeutic Substances Act, the basic standard for many drugs and medicines will continue to be the monographs in the British Pharmacopoeia and the British Pharmaceutical Codex. In addition the Minister for Health is empowered to determine,

by issue of formal orders; firstly, specific standards for individual products (under the Therapeutic Substances Act this could only be done by regulations); secondly, general standards for all therapeutic goods or for certain classes of goods, such as tablets, capsules and injections; thirdly, methods of testing for compliance with standards and fourthly, requirements with respect to labelling, packaging and containers.

International Health

In the field of international health, Australia has keenly supported the work of the World Health Organization since it was formed as an agency of the United Nations in 1948 and its contribution, when taken on a per capita basis, is among the highest of donor countries. During the year Australia also became a contributor to the International Agency for Research on Cancer. I attended the first session of its governing council held at Lyons, France on September 23rd and 24th, 1965, which marked the beginning of its work. The Agency was first proposed at the 17th Assembly of the World Health Organization and was agreed to in principle at the 18th Assembly in May, 1965. The Agency, which operates as a semi-autonomous body to the World Health Organization, will plan, promote and develop research into the causes, treatment and prevention of cancer. It will sponsor a regular programme of research and will also carry out special projects of interest to particular countries. It will work by sponsorship and co-ordination of research work in established national laboratories rather than by setting up its own laboratories. Australia's annual contribution is $134,600.

As a member of the British Commonwealth, Australia also participates in a number of schemes, notably the Colombo Plan, aimed at assisting the developing countries of the Commonwealth that have gained their independence in recent decades. Australia's aid to these countries has been not inconsiderable and, in October, 1965, an Australian delegation, led by the then Minister for Health, the Hon. R. W. C. Swartz, M.B.E., E.D., M.P., attended the first Commonwealth Medical Conference at Edinburgh.

The conference resulted from a recommendation by the Commonwealth Prime Ministers' Conference in 1964. Delegations from 22 Commonwealth countries met to consider the arrangements that existed for co-operation, consultation and planning between Commonwealth countries in the fields of public health, medical services and medical education, and to discuss what improvements were desirable and practicable.

Prior to the conference, discussions were held with the Deans of the Faculties of Medicine of Australian Universities and representatives of State health authorities and the colleges of nursing to ascertain their views on the problems of assistance to other Commonwealth countries.

The conference was a great success. In particular it provided not only an opportunity for the interchange of ideas between Ministers for Health, but also enabled specialists in different fields to discuss mutual problems in detail, both in the committees and in informal discussions outside.

The conference concluded that the main hope of progress in the medical field lies in helping the developing countries to produce their own personnel and to establish their own medical and nursing schools and other training institutions for this purpose. Every country that could do so made offers of assistance at the conference.

Australia, as an older member of the Commonwealth, recognised its special responsibility to help and pledged itself to discharge it to the best of its ability by encouraging and helping doctors and nurses who are willing to serve for a period overseas, by intensifying the secondment of medical teachers and other specialists to serve in medical schools overseas, by increasing the provisions of post-graduate training and by encouraging associations between medical schools and centres in the Commonwealth.

At the conference it was agreed that representatives of Commonwealth countries should confer together before each World Health Assembly. Prior to the commencement of the 19th Assembly on May 3rd, 1966, I met with a number of the chief health officers of other Commonwealth countries and this has proved to be a most effective means of providing continuity of discussion on health problems of particular interest to Commonwealth countries.

Quarantine

An amendment to the Quarantine Act received the Royal Assent on 13th May, 1966 and will become effective on a date to be set by proclamation. The purpose of this amendment is to provide measures of quarantine, under which new arrivals in Australia who cannot satisfy the quarantine officer that they are not suffering from active pulmonary tuberculosis may be required to undergo medical examination.

In an earlier Annual Report I commented on the fact that investigations had revealed that there was a higher percentage of tuberculin reactors in children born overseas, and that this was in accordance with the evidence that the incidence and prevalence of tuberculosis in persons born outside Australia is higher than that of the Australian born, and a large proportion of this infection is occurring in full-fare paying British-born and Irish-born migrants.

Prior to the passing of this legislation all migrants coming to Australia under Government assisted passage schemes and all non-British migrants travelling as full-fare passengers were required, under existing immigration procedures, to show by undergoing an X-ray examination that they were not suffering from pulmonary tuberculosis before embarkation. However, full-fare passengers of British nationality were not required to have a chest X-ray or medical examination.

Arrangements are being made, therefore, so that all British subjects, with a few exceptions, wishing to remain in Australia permanently or for more than twelve months, will have chest X-ray examinations and obtain certificates, indicating they are not suffering from active pulmonary tuberculosis, before embarkation.

The possibility of the introduction of exotic diseases into Australia per medium of garbage from overseas ships, due to inadequacies in the disposal of this garbage, has been a matter of concern for some time.

In May, 1966 an offer was made to the State Governments to pay the full cost of building incinerators at selected ports to dispose of overseas ships' garbage. The offer included the cost of ancillary structures including buildings, foundations and fencing and half the cost of access roads. It did not, however, include land costs. Western Australia was not included in the offer, as the present system used in that State of dumping garbage at sea adequately met quarantine requirements.

It is hoped that this offer will be quickly taken up by the State Governments so that this vexing problem will be removed.

Smallpox is a potential threat to Australia with the endemic areas in Asia so close to our shores and on the air routes to Australia. The World Health Organization has reported that 50,557 cases of smallpox were notified during 1965 with 9,735 deaths. Of vital concern to this country, is the fact that the number of cases in 1965 in Indonesia notified to W.H.O. were more than double the number in 1964. It is also a matter of concern that a number of cases of smallpox have occurred in Europe in recent years, most of them being imported by air. It will be seen that it is essential, therefore, that Australia's quarantine requirements in regard to this disease be maintained.

In spite of the fact that these requirements are notified in official publications concerning international quarantine and airline companies were kept regularly informed, 3,114 people arrived in Australia in 1965-66 with incomplete smallpox vaccination certification and had to be vaccinated at the port of arrival. The corresponding figure for the previous year was 2,010. Due to this failure to ensure correct certification it is inevitable some delay occurred on occasions, with a consequent inconvenience to passengers, but in view of the world situation any relaxation of our quarantine requirements would endanger the health of the community.

Poliomyelitis Vaccine

Since 1956 the Commonwealth has provided poliomyelitis vaccine free of charge to the States.

Until September, 1964, the vaccine used was exclusively Salk vaccine. However, at that time, a pilot vaccination programme was commenced in Tasmania using Sabin oral vaccine, when school children who had received three doses of Salk vaccine were given Sabin as a booster dose. In 1965, a full Sabin vaccination campaign was begun in Tasmania, the Sabin vaccine used being part of the supply of one million doses of each of the three poliovirus types imported on the recommendation of the National Health and Medical Research Council in 1962-63 and held at the Commonwealth Serum Laboratories.

The Commonwealth has now offered to supply Sabin vaccine for general immunization campaigns to all States who wish to use it and it is intended that this vaccine will be used in the Australian Capital Territory and the Northern Territory in the near future.

Poisons Information

In October, 1965 the first instalment of the National Poisons Register was made available and has now been distributed to all the States and Territories of the Commonwealth according to their requirements. This first instalment consists of some 2,000 cards and deals largely with pesticides and the toxicological aspects of their ingredients, as well as including notes on the diagnosis and treatment of poisoning.

Further instalments of cards will be issued from time to time and these will eventually

cover a most comprehensive range of hazardous substances and preparations. Meanwhile, in order to provide a wide range of information as soon as possible, a National Poisons Register Manual is being compiled. The first instalment was issued in April, 1966 and gives information as to the important ingredients of some 12,000 substances and preparations.

Pensioners

The third notable amendment made during 1965-66 to legislation administered by the Department of Health was an amendment to the National Health Act in relation to the operation of the Pensioner Medical Service.

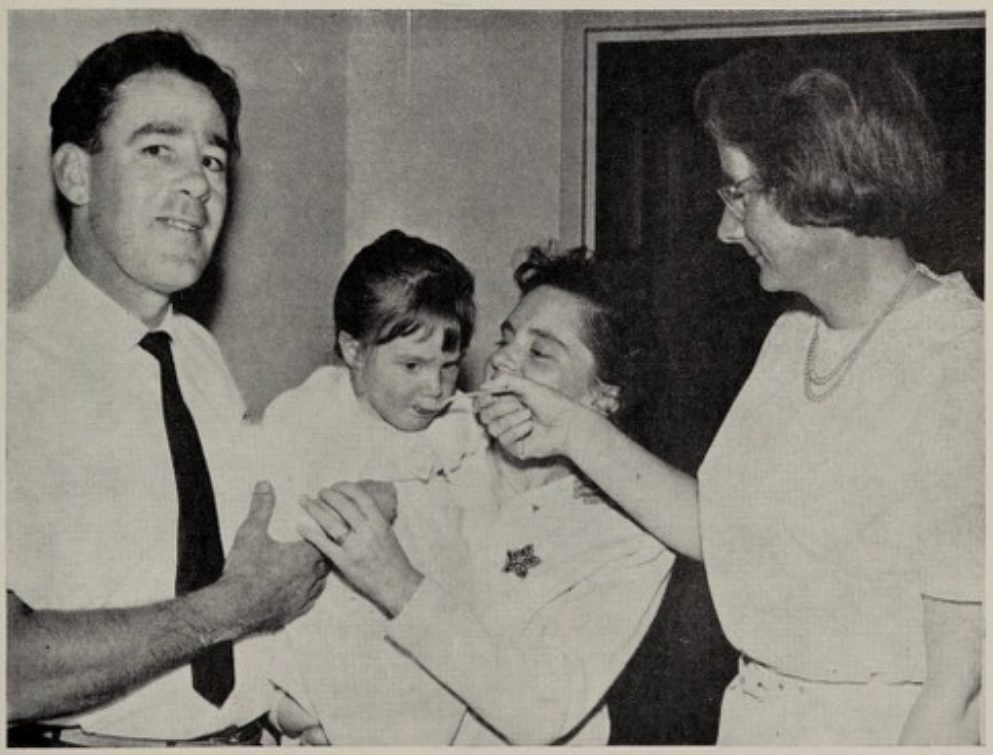
One aspect of the Pensioner Medical Service that had evoked criticism in the past concerned the restrictions placed on the eligibility for enrolment. Pensioners, whose income from sources other than their pension would have rendered them ineligible to receive a pension at the minimum rate under the pensioners' income means tests in force at 31st December, 1953, were ineligible to enrol in the Pensioner Medical Service.

The effect of the amendment to the National Health Act was to remove this restriction on the eligibility of pensioners for enrolment in the Pensioner Medical Service. From 1st January, 1966 the Service has been available to all full and part Social Service and Repatriation service pensioners and their dependants who have qualified or subsequently qualify for full or part pensions under the pensions' means tests as at 1st January, 1966.

A further relaxation was the widening of the provisions of the Act relating to the definition of dependants so that full-time student children of pensioners are now accepted up to the age of 21 years. Previously children could only be classified as dependants up to the age of 16 years.

Commonwealth Medical Officers

Little mention has been made in past Reports of the Commonwealth Medical Officers, and I feel that it is time that recognition be given to the vital work that they carry out in each State, the Northern Territory and the Australian Capital Territory. I have, therefore, included in this year's Report at page 41 a section outlining their varied activities and on page 93 will be found the first of a continuing series of statistical tables which illustrate vividly the great volume of work done by these officers.



Taking Sabin oral vaccine.

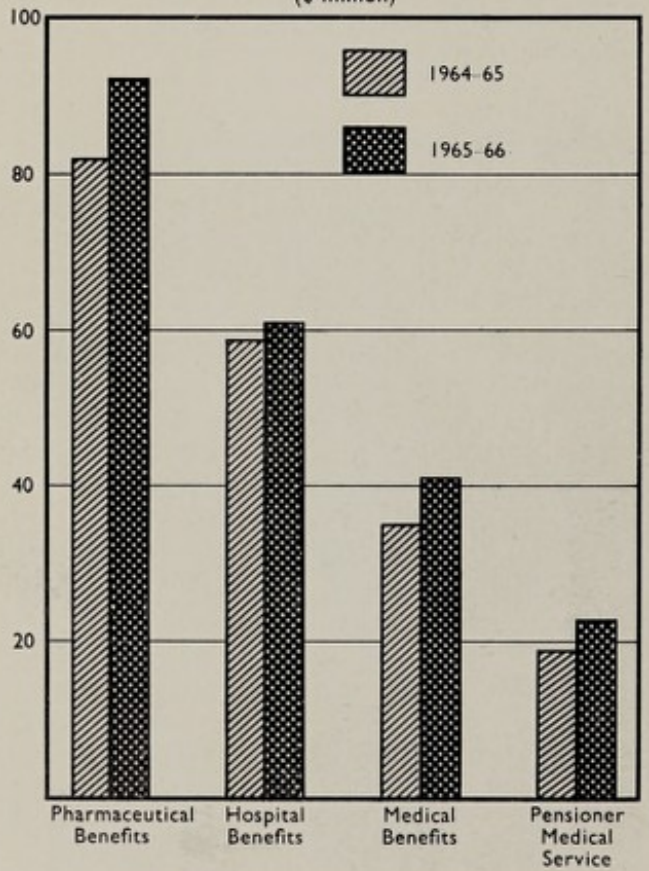
NATIONAL HEALTH BENEFITS

Expenditure on National Health Benefits, which comprise hospital benefits, medical benefits, pharmaceutical benefits and payments made under the Pensioner Medical Service, increased from $185.6 million in 1964-65 to $207.2 million in 1965-66, an increase of 11.6 per cent.

The greatest proportionate increase was in the payments made for medical services rendered under the Pensioner Medical Service, which increased by 43.4 per cent. Two main factors contributed to this increase; firstly, the increase in fees paid to participating doctors for services rendered from 1st May, 1965, the full impact of which was felt in 1965-66; and secondly, the relaxation of the Pensioner Medical Service means test from 1st January, 1966, which resulted in a substantial increase in the number of eligible pensioners and their dependants.

All components of National Health Benefits increased, pharmaceutical benefits by $9.6 million, medical benefits by $6.0 million, hospital benefits by $2.0 million and payments made under the Pensioner Medical Service, as mentioned above, by $4.0 million. A comparison of expenditure on each of these benefits is made in the accompanying graph.

Commonwealth Expenditure on National Health Benefits 1964-65 and 1965-66
($ million)



HOSPITAL BENEFITS

There was no change during the year in the rates of the benefits the Commonwealth pays for patients in approved hospitals and nursing homes. Commonwealth benefits paid towards meeting the cost of hospital and nursing home treatment totalled $60,742,842 in 1965-66, an increase of $1,952,200 over the previous year. In addition, registered organizations increased their payments of hospital fund benefits from $49,819,090 in 1964-65 to $57,562,046 in 1965-66.

Statistics relating to hospital benefits are set out in Tables 2 to 7 on pages 75 to 77.

Insured Patients in Approved Hospitals

The number of contributors and their dependants covered by registered hospital benefits organizations continued to increase during the year, with 8,915,000 persons or 78 per cent of the population covered at 30th June, 1966. The relaxation of the Pensioner Medical Service means test, outlined on page 13, had some effect on the rate of increase in membership of registered hospital benefits organizations. Some members, who became eligible for free public ward hospital treatment in public hospitals from 1st January, 1966, have allowed their hospital benefits membership to lapse, but the effect on membership is expected to be more noticeable during the forthcoming year. Membership of registered hospital benefits organizations increased by 82,000 persons dur-

ing 1965-66 compared with an increase of 121,000 persons during 1964-65.

During the year public hospital fees were increased in Victoria, South Australia, Western Australia, Tasmania and the Australian Capital Territory. In those States where organizations were not already operating tables of benefits which covered the increased charges, the organizations introduced new tables providing higher benefits.

Fund benefit payments increased by $7,742,956 over the previous year's figure. This increase was due principally to members moving to higher tables of benefits to cover increased hospital charges and to the increased volume of hospitalization arising from the growth in the number of persons covered by the Hospital Benefits Scheme.

There was only a small increase in Commonwealth expenditure on benefits for insured patients (excluding Special Account benefits) during the year—from $19,220,568 in 1964-65 to $19,616,157 in 1965-66. The relative stability of Commonwealth expenditure, despite the increase in membership of registered hospital benefits organizations, was due mainly to the decrease in the average length of stay in hospital per claim from 9.23 days in 1964-65 to 9.05 days in 1965-66. This is in accord with the modern trend of discharging patients from hospital as expeditiously as possible.

Special Accounts

The changes to the Special Account system from 1st January, 1964, outlined in the 1963-64 and 1964-65 Reports, operated smoothly during the year. Organizations made more use of the twenty-one day concession to help off-set the additional liability incurred by the Ordinary Account as a result of the transfer of contributors over 65 years of age from the Special Account to the Ordinary Account. Experience has shown that funds generally have been able to absorb this transfer of liability to their Ordinary Accounts.

Special Account membership increased from 29,839 at 30th June, 1965 to 32,143 at 30th June, 1966. It would appear that funds are making more use of their Special Accounts as a further means of reducing their Ordinary Account liability.

Pensioners in Public Hospitals

Under Section 54 of the National Health Act, the Commonwealth pays a benefit of $3.60 for each day that a pensioner or dependant enrolled in the Pensioner Medical Service receives free public ward treatment in a public hospital, provided no such pensioners are charged for public ward treatment by that hospital.

Uninsured Patients in Approved Hospitals

The Commonwealth pays direct to the hospital a benefit of 80 cents a day for each day that an uninsured patient (other than eligible pensioners who receive free public ward treatment) receives treatment in an approved public or private hospital. During 1965-66 expenditure on Commonwealth hospital benefits for uninsured patients decreased from $2,614,112 in 1964-65 to $2,371,096, a fall of 9.3 per cent. There were two contributing factors to this fall; the increase in membership of registered organizations and the increased number of pensioners and their dependants who received free public ward treatment in public hospitals as a result of the relaxation of the means test from 1st January, 1966.

Patients in Approved Nursing Homes

The steady growth in the number of approved nursing homes and beds available for nursing home patients continued during 1965-66. As a result of this increase in the availability of beds, Commonwealth nursing home benefits paid during the year totalled $21,223,267, an increase of $1,427,511 over the previous year.

Approval of Hospitals and Nursing Homes

The following are details of new premises approved by the Director-General of Health during 1965-66 as approved hospitals or approved nursing homes for the purposes of the payment of Commonwealth benefits under the National Health Act:—

	No.	Beds
Hospitals—		
Public	3	106
Private	4	155
Total	7	261
Nursing Homes—		
Public	1	70
Private	58	1,202
Total	59	1,272

After taking into consideration variations arising from revocation of approvals and adjustment of bed capacities, the number of approved premises and beds as at 30th June, 1965 and 30th June, 1966 were:—

	30.6.65	30.6.66
Approved Hospitals—		
No.	1,129	1,109
Beds	71,293	72,335
Approved Nursing Homes—		
No.	1,022	1,059
Beds	31,290	33,075

Verification of Commonwealth Benefits Payments

Although at times affected by temporary shortages of staff in some of the States, the verification of Commonwealth benefits allowed through registered hospital and medical benefits organizations, approved private hospitals and approved private nursing homes by Departmental officers was maintained during the year.

The State Auditors-General continued to carry out the verification of Commonwealth benefits paid direct to State controlled public hospitals and nursing homes on behalf of the Commonwealth.

MEDICAL BENEFITS

During the year there were no increases in the rates of Commonwealth medical benefits or in the ceiling medical benefits tables operated by the registered medical benefits organizations. The Commonwealth Medical Benefits Schedule was last revised from 1st June, 1964, while the registered organizations introduced new medical benefits tables offering higher returns for increased contributions from 1st April, 1965.

As explained in the 1964-65 Report, the new tables were introduced by the funds for two main reasons—to stabilize the financial security of the funds generally and to reduce the gap between the cost of medical services and the combined Commonwealth and fund benefits. Experience during 1965-66 proved that the new tables had achieved both these objectives. The continued movement of members to the new tables during the year confirmed the popularity of these tables which was in evidence immediately after their introduction.

The proportion of the cost of services covered by Commonwealth benefits during 1965-66 was 33.9 per cent, fund benefits covered 35.7 per cent of the cost, while the share of the cost borne by the contributor was 30.4 per cent. Comparative figures for the previous year were 32.9 per cent, 35.2 per cent and 31.9 per cent respectively.

The Medical Benefits Scheme continued to grow during 1965-66 and at 30th June, 1966, 8,679,000 persons or 76 per cent of the population were covered by 80 registered medical benefits organizations.

Commonwealth medical benefits expenditure amounted to $41,282,185, an increase of $6,005,601 over the previous year. The increase was due principally to the increase in utilization of medical services and the greater number of persons covered. Medical benefits funds increased their payments of benefits from $38,876,170 in 1964-65 to $44,502,065 in 1965-66. In addition to the factors mentioned earlier in this paragraph, a major factor in this increase was the higher fund benefits available under the new tables from 1st April, 1965.

Statistics relating to medical benefits are set out in Tables 8 to 13 on pages 77 to 79.

Special Accounts

There were no changes during 1965-66 to the Special Account arrangements which ensure that fund benefits are made available for contributors who would otherwise be excluded from benefits by organizations' pre-existing ailment and maximum benefit rules. These arrangements continued to operate satisfactorily.

Registered Organizations

Most organizations changed over to decimal currency as from 14th February, 1966. The transition was effected smoothly without any major disruption in operations.

No new applications were received during the year for registration as hospital benefits or medical benefits organizations. One hospital benefits organization, however, voluntarily applied for de-registration and this was accepted.

COMMONWEALTH HEALTH INSURANCE COUNCIL

The Commonwealth Health Insurance Council is an advisory body constituted under the National Health Act to advise the Minister for Health on matters relating to the Hospital and Medical Benefits Schemes and to recommend to him ways and means by which improvements in methods and standards may be effected. The Council met in Canberra from 19th-21st October, 1965. At this meeting the Council discussed a wide range of matters relating to the operation of the Schemes, including a report submitted by a Decimal Currency Sub-Committee appointed by the Council in March, 1965, to consider problems which might arise with the introduction of decimal currency in February, 1966.

The Council also considered the increased charges that the Australian Medical Association recommended after considering the results of an economic survey on general practice conducted throughout Australia, which revealed that practice costs had risen sufficiently to justify some increase in doctors' fees. The view of the Council was that it would be undesirable for the registered organizations to attempt to keep pace with every increase doctors might apply from time to time. Consequently neither the Commonwealth Government nor the medical benefits funds increased their benefits in an attempt to match the increased charges. The funds had provided higher tables earlier in 1965 and it would have been impossible to increase the level of their benefits without imposing higher contribution rates.

REGISTRATION COMMITTEE

The Registration Committee, which is constituted under Section 70 of the National Health Act, consists of the Commonwealth Actuary and two officers of the Department. The Committee met on 22 occasions during the year and considered 147 submissions covering 408 proposals submitted by registered medical and hospital benefits organizations. A number of these proposals related to amendments to organizations' rules consequent upon the introduction of decimal currency.

PENSIONER MEDICAL SERVICE

Since 31st October, 1955, a special means test was applied to determine eligibility for the Pensioner Medical Service, but during the year this special means test was relaxed. The National Health Act was amended so that all pensioners, together with their dependants, who satisfy the pensions means tests as at 1st January, 1966, for payment of a full or partial age, invalid, widow's or service pension or a tuberculosis allowance would be eligible for enrolment in the Pensioner Medical Service. It is estimated that a further 120,000 age, invalid, widow and service pensioners and 17,000 of their dependants became eligible for enrolment as a result of this relaxation of the Pensioner Medical Service means test. The decision to relax this means test was announced after consultation with the Federal Council of the Australian Medical Association.

At the same time the National Health Act was further amended so that full-time student children of pensioners could be regarded as dependants up to the age of 21. Previously children could only be classified as dependants up to the age of 16.

The number of pensioners and dependants enrolled in the Service continued to increase during the year, reaching 1,005,813 at 30th June, 1966, compared with 849,074 at 30th June, 1965. This represents 8.8 per cent of the population. The full effect of the relaxation of the Pensioner Medical Service means test is expected to be felt during 1966-67, however, when it is anticipated that enrolments will be above the average for the past few years.

Doctors participating in the Pensioner Medical Service are remunerated by the Commonwealth on a concessional fee-for-service basis, the fees payable to doctors being $1.60 for surgery attendances and $2 for home visits. The number of doctors participating in the Service showed a slight increase during the year, from 5,896 at 30th June, 1965 to 6,034 at 30th June, 1966.

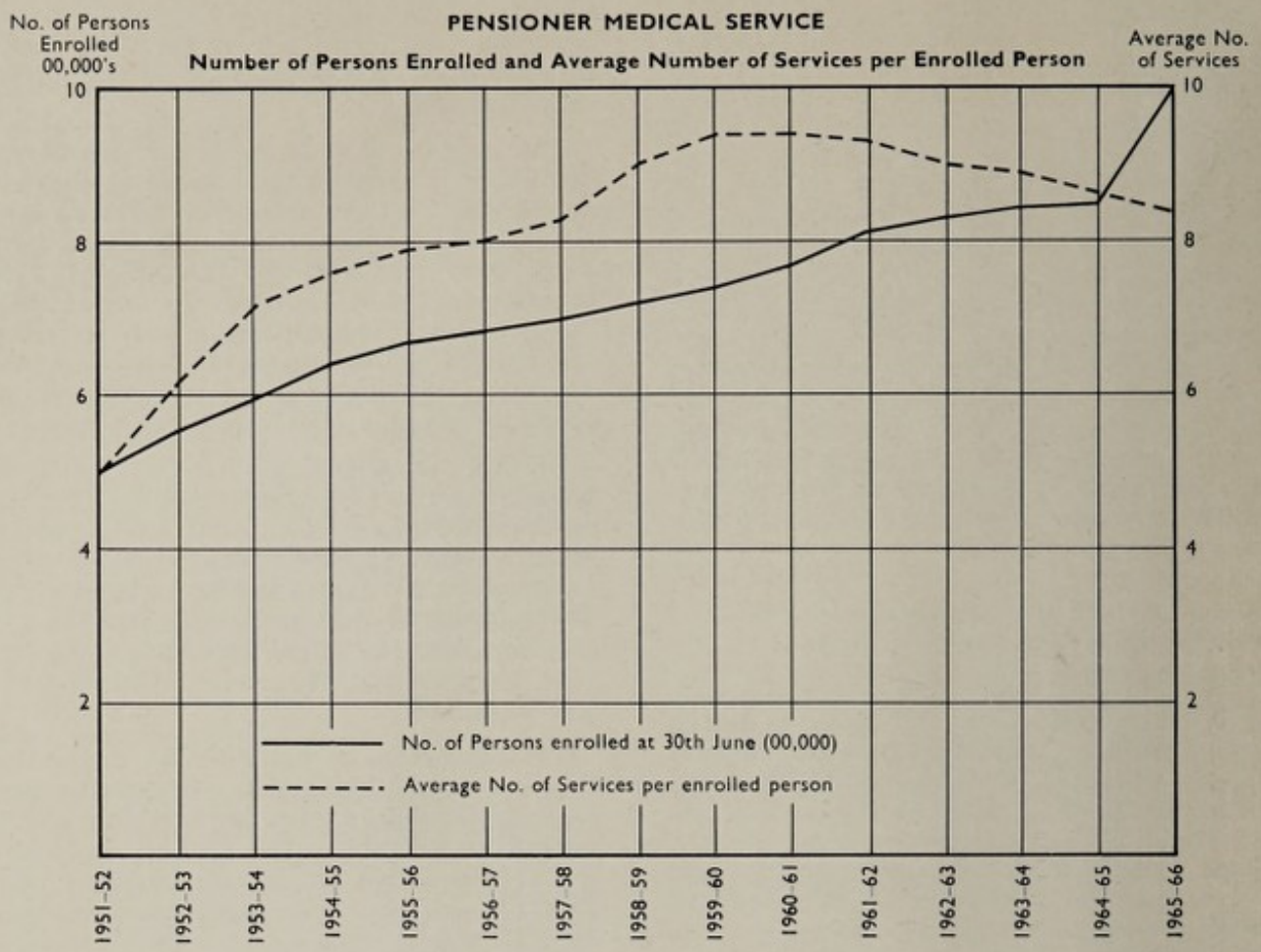
Total payments to participating doctors for the year were $13,365,393, while the average annual payment to each participating doctor during the year was $2,246, 42.3 per cent above the average of $1,578 for the previous year. This increase in the average annual payment resulted mainly from the increase in the fees payable to doctors from 1st May, 1965 and to a lesser extent from the relaxation of the means test from 1st January, 1966.

Statistics relating to the Pensioner Medical Service are set out in Tables 14 to 17 on pages 79 and 80.

Committees of Inquiry

Medical Services Committees of Inquiry, established in each State in accordance with Section 110 of the National Health Act, among other things, inquire into matters in respect of the services or conduct of medical practitioners in connection with the provision of medical services under the Pensioner Medical Service.

During 1965-66 these Committees finalised 29 inquiries into the provision by medical practitioners of medical services to pensioners. These inquiries resulted in the reduction of doctors' claims by a total of $22,503 in 20 cases and, of these medical practitioners, three were reprimanded by the Minister. In addition another medical practitioner's agreement was terminated.



Appointment of Medical Counsellor

Following discussion with the Australian Medical Association it was resolved that experienced medical practitioners should be appointed to act as counsellors to doctors enrolled in the Pensioner Medical Service.

As a result, a medical practitioner with over 12 years experience in private practice, including 11 years in the Pensioner Medical Service, was appointed to the staff of the Commonwealth Department of Health in New South Wales as a counsellor within the framework of the National Health Service.

The principal function of the counsellor is to advise and assist doctors in dealing with problems they may encounter in the National Health Service, with particular emphasis on the provision of medical services under the Pensioner Medical Service and the prescribing of pharmaceutical benefits.

It is expected that this position will be the forerunner of several other similar positions throughout the Commonwealth.

Since 4th January, 1966, the counsellor has conducted 181 interviews with medical practitioners in New South Wales.

PHARMACEUTICAL BENEFITS

The tendency for prescribing of pharmaceutical benefits prescriptions to increase at a rate greater than the rate of increase in the population continued during 1965-66. It was noticeable, however, that the rate of increase, at 5.1 per cent, was lower than that in the previous year, when a 7.2 per cent increase had been experienced.

The Annual Report for 1964-65 mentioned the marked effect which an epidemic of respiratory and associated viral type diseases had on prescribing during the early part of that year. However, there was even higher prescribing during the early months of 1965-66. The rate of increase had slackened by the end of the year. It is to be expected that, because of seasonal conditions, prescribing should be heavier in the winter months early in the financial year, but increases over an already high level cannot be completely explained on the grounds of adverse seasonal conditions, since these seasonal conditions with their associated ailments are generally experienced each year.

The principal drug groups in which increased prescribing occurred were penicillins, broad-spectrum antibiotics, drugs acting on the blood vessels, non-mercurial diuretics, hypnotics, anti-histamines and antacids. In the last Annual Report, specific mention was made of the increased prescribing of hypnotics and anti-histamines. The tendency towards increased prescribing of these drugs has continued this year, as shown by the following table:—

	No. of prescriptions (000's)		Percentage increase
	1964–65	1965–66	per cent.
Hypnotics	6,079	6,619	8.9
Anti-Histamines	2,304	2,606	13.1

The percentage increases during the previous year were 10.1 per cent and 19.1 per cent for hypnotics and anti-histamines respectively.

In the penicillin group and the drugs acting on the blood vessels, the increased prescribing was accompanied by an increase in the average price per prescription. The increased average price in each case was not because of rises in the prices of individual drugs, but because of a tendency to prescribe more expensive drugs.

Despite Departmental activity in negotiating price reductions, the average price per prescription increased from $1.83 in 1964-65 to $1.89 in 1965-66.

The overall result was that expenditure on pharmaceutical benefits prescriptions increased by 9.4 per cent over that for 1964-65. This increase is higher than can be readily accounted for by increases in the population and the addition of new drugs to the schedule of benefits.

Cost of Scheme

Expenditure by the Commonwealth for the year was $91,783,674. This included $53,078,046 for prescriptions for the general public, $14,634,501 for benefits dispensed in public hospitals and for miscellaneous services and $24,071,127 for prescriptions for pensioners.

The 1964-65 level of expenditure was exceeded by $4,148,298 or 8.5 per cent in the case of general benefits prescriptions and $2,506,707 or 11.6 per cent in the case of pensioner benefit prescriptions.

Payments for benefits supplied from public hospitals and miscellaneous services showed an increase of $2,926,059 or 25.0 per cent. This substantial increase was mainly due to a change on the part of the New South Wales hospital authorities in their method of claiming reimbursement for pharmaceutical benefits supplied. This State previously claimed annually in arrears, but has now adopted the practice followed by other States of claiming quarterly in arrears. This change involved payment to New South Wales during 1965-66 for both the 1964-65 arrears and the nine months ended 31st March, 1966. This non-recurring expenditure contributed substantially to the overall increase in expenditure of 11.7 per cent over the previous year. Patient contributions for general benefit prescriptions were $17,481,228 as compared with $16,841,354 paid in 1964-65.

Benefit prescriptions totalled 49,992,944 made up of 35,084,551 for general benefits and 14,908,393 for pensioners. This represents an increase of 1,370,122 or 4.1 per cent in prescriptions for the general public and 1,067,021 or 7.7 per cent in prescriptions for pensioners, and constitutes an overall increase of 2,437,143 or 5.1 per cent as compared with an increase of 3,198,904 or 7.2 per cent recorded in 1964-65.

The transfer of 137,000 persons from general benefits to the pensioner benefits scheme, subsequent to the easing of the Pensioner Medical Service means test on 1st January, 1966 is reflected in the proportionately greater increase in both pensioner benefits cost and prescription volume when compared with the increases recorded under these headings for general benefits.

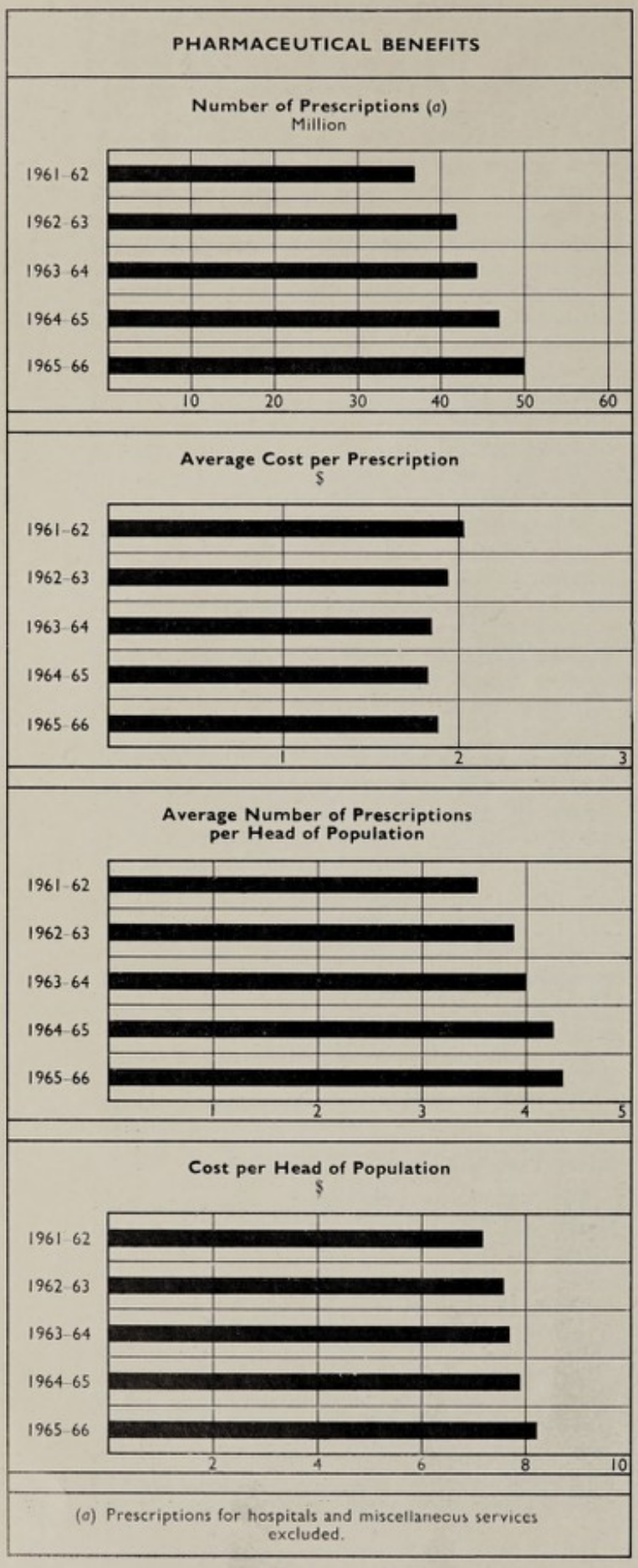
The following table sets out itemised expenditure on the more frequently prescribed therapeutic groups. The figures include the patient contribution but exclude reimbursements to approved hospitals, bush nursing centres, &c.

Therapeutic Category	Expenditure for period 1.7.65 to 30.6.66
	$000's
Broad Spectrum Antibiotics	14,760
Penicillins	11,045
Blood Vessels—drugs acting on	8,227
Hypnotics	6,914
Diuretics—non-mercurial	6,096
Analgesics	5,390
Anti-Histamines	4,707
Tranquillisers	2,036
Antacids	1,563
Sulphonamides	1,481
Expectorants and Cough Suppressants	894

The remaining expenditure was on a wide variety of drugs, the usage of which is not so common.

Changes in Listings

As a result of recommendations made by the Pharmaceutical Benefits Advisory Committee, 27 new preparations were added to the list of pharmaceutical benefits during the year. The most important additions were four antibiotics, two anti-mitotics, two anti-cholinergics, one anti-depressant, one non-mercurial diuretic and



a new combined cholera vaccine. In addition 17 new forms and strengths of existing pharmaceutical benefits, including six preparations for the treatment of eye conditions were made available during the year. The Committee also recommended that 19 preparations be deleted from the list of pharmaceutical benefits. Most of these had very little usage and had been replaced by newer and more effective preparations.

Price Negotiations

Negotiations with manufacturers resulted in reductions in price during 1965-66 which would save the Pharmaceutical Benefits Scheme approximately $4,800,000 in a full financial year if the rate of prescribing of these drugs were to remain constant. Price reductions in respect of frequently used drugs such as antibiotics, analgesics and hypnotics had the greatest financial effect of the reductions, which were effected in most therapeutic groups of drugs.

Pricing by Computer Processing

During the year pricing of chemists' claims by computer was fully implemented in Queensland and South Australia. Computer processing has also been commenced for initial groups of pharmacies in Western Australia and New South Wales. These groups will be expanded as circumstances permit until all chemists' claims in these States are covered by the scheme.

In Victoria and Tasmania, training of operators is now well in progress and implementation of computer processing of chemists' claims should begin in these two remaining States during 1966-67.

As the system of computer processing of claims is introduced in an area, chemists in that area are invited to attend a centrally-located meeting so that procedures for submitting claims may be explained. At the same time, the opportunity is taken to answer particular queries the chemists may raise in connection with the new system or on any aspect of their claims.

These meetings have proved to be most successful and useful in maintaining co-operation and understanding between chemists and the Department. The Federal Executive of the Federated Pharmaceutical Service Guild of Australia has expressed its satisfaction with computer processing of chemists' claims and in general the new system has been well received by individual chemists. Further

meetings between chemists and officers of the Department are planned as the system spreads and chemists in other areas begin to have their claims processed by computer.

Joint Committee on Pharmaceutical Benefits Pricing Arrangements

The Joint Committee on Pharmaceutical Benefits Pricing Arrangements is a Committee established by the Minister to provide advice and make recommendations on matters of principle in regard to the pricing of pharmaceutical benefits.

Activities of the Committee during 1965-66 were mainly concerned with an application by the Federated Pharmaceutical Service Guild of Australia for an increase in the remuneration paid to chemists for supplying pharmaceutical benefits. In my previous Annual Report I mentioned that this application had been referred by the Minister to the Committee for consideration.

Following discussion and recommendation by the Committee, the Government agreed to a survey of earnings, costs and profits of pharmacy being conducted by a firm of independent consultants, with the cost shared equally by the Government and the Guild. The firm of Associated Industrial Consultants (Aust.) Pty. Ltd. were engaged to conduct the survey, at a cost of $37,780. The plan submitted by the consultants proposed a survey in two phases, the first phase being preliminary examination and design and the second phase, survey and analysis. After completion of the first phase and examination of the consultants' report on this phase, the Joint Committee authorised the consultants to proceed with the survey proper.

The survey plan provided for a sample of 200 pharmacies, each of which will be asked to complete a questionnaire covering details of earnings, costs and profits. Of these, 100 were selected for on-the-spot observations to ascertain the break-up of labour time over the various categories of dispensing and retail activities. These observations, which have now been completed, were made by a team of observers provided jointly by the Department and the Guild, acting under the instructions of the consultants. The consultants are now engaged on the processing of the recorded observations.

The consultants have despatched questionnaires to a small pilot group comprising 19 of the 100 pharmacies at which observations were made. Invoices and prescriptions from these pharmacies are also being examined to enable calculation of information on cost of goods sold. The result will be a complete pilot survey of a small group of pharmacies, the information from which will be submitted to the Commonwealth Statistician for advice on the design of the sample and the suitability of the survey method.

Committees of Inquiry

The Pharmaceutical Services Committees of Inquiry considered 82 cases in the financial year.

As a result of the Committees' recommendations into these references, 47 approved pharmaceutical chemists were warned to exercise greater care in dispensing pharmaceutical benefits preparations, 24 were reprimanded, and one pharmaceutical chemist's approval to supply pharmaceutical benefits was revoked. Ten approved pharmaceutical chemists gave the Committees satisfactory explanations.

Two matters relating to the prescribing of pharmaceutical benefits were referred to the Medical Services Committees of Inquiry. Two medical practitioners had their authorities to write prescriptions suspended, and one of these was also ordered to repay to the Commonwealth the cost of the pharmaceutical benefits he had prescribed contrary to the National Health (Pharmaceutical Benefits) Regulations.

TUBERCULOSIS

The continued downward trend in the number of notifications of tuberculosis, together with a reduced mortality rate and a further fall in the number of recipients of tuberculosis allowances, demonstrate the soundness of the principles, which are under constant review, upon which the Australian campaign against tuberculosis has been, and is now, based.

Although some of the features of the Australian campaign are unique, there are many countries in which special attention is being given to the problem of tuberculosis. Despite noteworthy gains, no country has yet reached the stage at which efforts to control, and if possible to eradicate, tuberculosis, can be abandoned.

It is expected that, in the immediate future, the downward trend in Australia's tuberculosis morbidity and mortality will be maintained.

Mortality

Since the commencement of the Commonwealth and the States' campaign against tuberculosis, the rate of death from the disease has continued to decline, and in 1965, was the lowest yet recorded in this country.

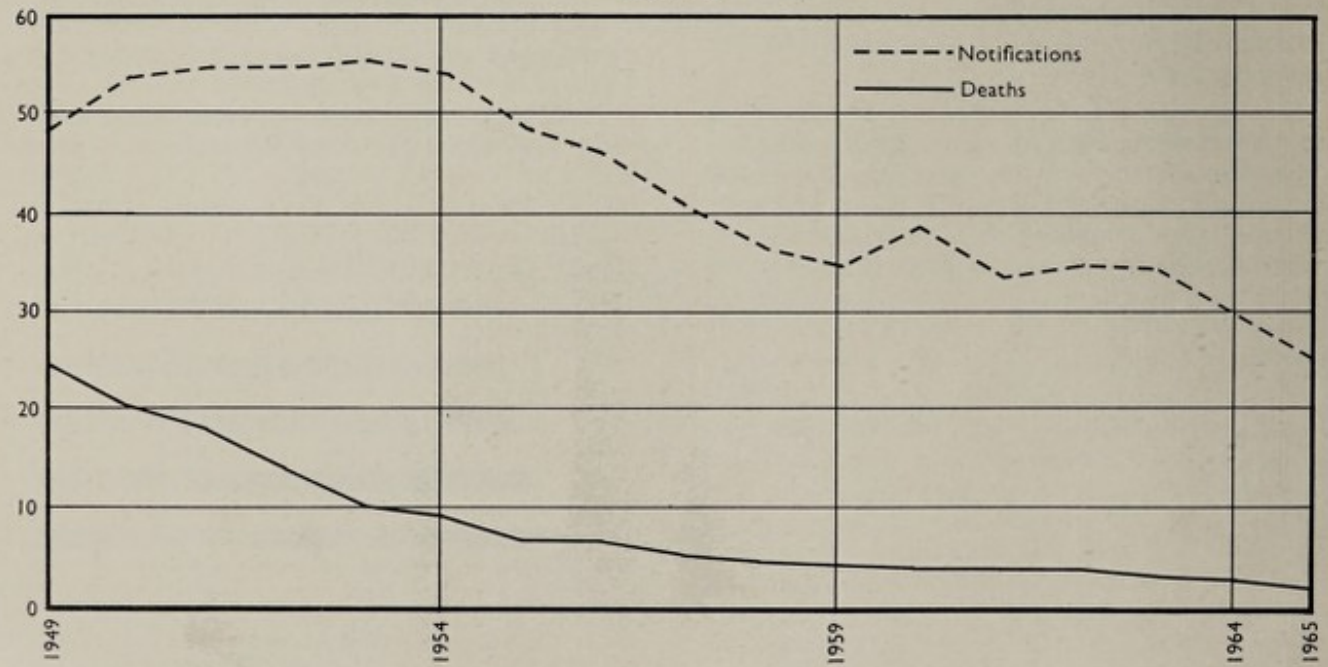
Despite the decline in the statistical importance of tuberculosis as a cause of mortality, there were 294 deaths from this disease in Australia in 1965. Tuberculosis remains by far the greatest cause of death of all infectious diseases.

Notifications

As mentioned in a previous Report, the total number of notifications of tuberculosis in any year is influenced by the number of case-finding chest X-ray surveys conducted during that year. The frequency of these surveys is decided

TUBERCULOSIS — ALL FORMS

Incidence of Notifications and Deaths per 100,000 of Population
1949-1965



in accordance with a careful assessment of the needs of each area and the total number of chest X-ray examinations in any year varies with the number of surveys found to be necessary.

Particulars of notifications are given in Tables 29 and 30 on page 85.

Mass Chest Radiography

As in past years, mass chest X-ray surveys contributed substantially during 1965 to the number of new notifications of previously unknown tuberculosis—see Table 33.

The discovery of these new patients hastens their recovery and assists in the precautionary investigation of those with whom they have been in contact, thus reducing the possibility of the spread of tuberculous infection. The steady reduction in Australia of the rate of notification of new cases of tuberculosis is due, in large measure, to the beneficial effects of repeated mass chest X-ray surveys, combined with the follow-up of suspects and the treatment and supervision of all known sufferers from the disease.

In a report dated November, 1965, presented to the Prime Minister, the National Radiation Advisory Committee recommended—

> Technical developments that would enable the dose of X radiation used in mass miniature surveys to be reduced still further should be applied as promptly as circumstances permit.
>
> The frequency of surveys in each community should be reduced and the minimum age of persons subject to them should be raised as and when warranted by decline in the indicated incidence of the disease within that community.
>
> Unless special circumstances relating to high incidence require the mass radiological examination of adolescents in a particular locality, no person under the age of 21 years should be included in a compulsory survey.
>
> Diagnostic procedures other than radiological examination should be used when this can be done effectively; for example, use of the tuberculin test in children in appropriate circumstances.

All Australian tuberculosis control authorities are well aware of, and are guided by, these principles when planning and conducting chest X-ray surveys, and it is encouraging that the National Radiation Advisory Committee should have seen fit to say—

> " With all these considerations in mind and having regard to the continued importance of tuberculosis as a public health problem, the N.R.A.C. re-affirms its full support of the policies of Commonwealth and State tuberculosis-control authorities for the use of mass miniature X-ray surveys in a form that best meets the requirements of public health, even if this entails compulsory examination ".

Tuberculosis Allowances

There was no change in 1965-66 in either the means test or in the conditions of eligibility for the tuberculosis allowance which is payable to needy sufferers from tuberculosis whose disease is at an infectious stage. The number of sufferers in receipt of the allowance as at 31st December, 1965 is the lowest so far recorded, as is the average number of persons in receipt of the allowance during the calendar year.

PUBLIC HEALTH

This year has seen the incidence of poliomyelitis in Australia reduced to an all-time low of two cases (as reported to the Poliomyelitis Sub-Committee to 30th June, 1966). The efficacy of Salk vaccination campaigns must be credited with this, but, in view of the necessity to continue the campaigns and the world-wide acceptance of Sabin oral vaccine, the Commonwealth proposes to introduce oral vaccination into the Australian Capital Territory and Northern Territory. This follows a recommendation of the National Health and Medical Research Council at its 62nd Session in May, 1966. At the present time the majority of States have signified their intention to implement oral poliomyelitis vaccination in 1967.

National Poisons Register

In October, 1965, the first instalment of the National Poisons Register was made available and has now been distributed to all States and Territories of the Commonwealth according to their requirements.

The first instalment of the Register consists of some 2000 cards. It deals largely with pesticides and the toxicological aspects of their ingredients as well as including notes on the diagnosis and treatment of poisoning. Further instalments of cards will be issued from time to time and these will eventually cover a much wider range of hazardous substances and preparations.

Meanwhile, in order to provide a wide range of information as soon as possible, a National Poisons Register Manual is being compiled. The first instalment of the Manual issued in April, 1966, includes the monographs in the Register and also gives information as to the important ingredients and possible toxicity of some 12,000 substances and preparations.

Supplements will be issued as additional information becomes available and can be processed.

During the year a medical officer from the Toxicology Branch visited a number of poisons information centres in Europe and the United States of America to study their organization. Contact will be maintained with the various national and international associations concerned with poisoning, with a view to the exchange of information on matters of mutual interest.

A well-attended and successful conference was held in Canberra on 28th April, 1966, with representatives present from each State and Territory as well as from New Zealand. Matters discussed included the use of the National Poisons Register and Manual, the organization of poison information centres, poison case reporting and a uniform basis for statistical reports. It is hoped to hold another conference next year.

Broadcasting and Television Censorship

Under the Broadcasting and Television Act the approval of the Director-General of Health is required for medical talks and advertisements of proprietary medicines on radio and television. This function is carried out by the Public Health Branch and the details of the scripts examined during 1965-66 are given in Table 39 on page 89.

As the figures show, the number of scripts rejected was small, the rejections made were usually due to the fact that the scripts were submitted by persons who have little knowledge of the standards laid down. The proportion of scripts requiring amendment was higher, but in many instances these were of a minor nature.

Following the conference of the State Health Ministers in June, 1965, a conference of State officers on the advertising of proprietary medicines and appliances was convened by the Department. This conference recommended uniformity as far as possible in each State and the code advised by it is similar to that applied to radio and television censorship.

Joint FAO/WHO Programme on Food Standards

The Department has taken an active interest in the work of the Codex Alimentarius Commission during 1965-66. Representatives of the Public Health and Toxicology Branches

attended the meetings of the Commission in Rome, October, 1965, the Pesticides Residues Committee in The Hague, January, 1966, and the Food Additives Committee in The Hague, May, 1966.

Quite a number of standards have now reached the stage of being forwarded to governments for comment and the volume of work to be undertaken in this programme is increasing very rapidly.

Committees

The Public Health Branch, the Toxicology Branch and the Nursing Section are all concerned in the field of public health and are responsible for the preparation of agenda and reports of six committees and nine sub-committees of the National Health and Medical Research Council.

The work of some of the committees is now becoming voluminous, particularly in relation to the Food Standards Committee and the Poisons Schedule Sub-Committee where, with the co-operation of the States, attempts are being made to achieve uniform legislation.

A representative from the Public Health Branch has also attended the meetings of the National Committee for the Treatment and Prevention of Alcoholism and the Federal Committee of the Australian Medical Association on Venereal Disease.

NURSING SECTION

This year, as in previous years, nurses from overseas have been placed by the Nursing Section for training under the Government sponsored schemes which comprise the Colombo Plan, Special Commonwealth African Assistance Plan, Malaysian Government Assistance Plan, and the Australian International Award Scheme. At the same time orientation programmes and specialised preparation for courses and observation have been extended.

The nursing colleges and hospital authorities have played a vital role in providing the technical training required and assisting the nurses to adjust to patterns of nursing.

Graduates

At the end of 1965, 50 overseas nurses graduated from the colleges of nursing under technical assistance programmes. Of these, 33 were under the Colombo Plan, 16 under the Special Commonwealth African Assistance Plan and one under the Australian International Award Scheme. In addition, training at hospitals or on observation tours was arranged for three nurses from the Philippines, two from Vietnam, and one each from Singapore, India and Thailand on psychiatric, orthopaedic, mental deficiency, midwifery, tuberculosis and infant welfare nursing.

All of these nurses have successfully completed their courses and returned home.

Assistance was also given in arranging midwifery training for a World Health Organization Fellow from Taiwan.

At the beginning of 1966, 36 nurses commenced courses at nursing colleges and should graduate at the end of the calendar year 1966. These nurses came from Nigeria, India, Malaysia, Thailand, Ceylon, Burma, Swaziland, Singapore, Philippines, Maldive Islands and Tanzania. In addition one nurse from Thailand began an observation course in nursing administration and a course in mental deficiency nursing was arranged for another nurse from Thailand.

Undergraduates

During 1965-66, six Colombo Plan scholars from Malaysia successfully completed basic nursing courses and returned home.

At present there are 26 Malaysian scholars undergoing basic nursing training under the Malaysian Government Assistance Plan and two scholars from Thailand studying basic nursing under the Colombo Plan. These students are at the Royal Children's Hospital, Royal Melbourne Hospital, St. Vincent's Hospital, Queen Victoria Memorial Hospital, and the Repatriation General Hospital in Melbourne, Austin Hospital, Heidelberg, Alfred Hospital, Prahran and Cooma District Hospital.

Nursing Conference

During March, the Royal Australian Nursing Federation held its Third Biennial Convention in Perth. The conference was attended by the First Assistant Director-General, National Health Division and the Principal of the Nursing Section. "Focus on Nursing" was the theme of the conference.

THERAPEUTIC SUBSTANCES

Recording systems in the Registry of Adverse Drug Reactions have continued to be developed throughout the year with a view to co-operation with international drug monitoring proposals under the auspices of W.H.O.

The Chairman of the Australian Drug Evaluation Committee, Dr. Edgar Thomson, was invited to form part of a scientific group convened by the W.H.O. in Geneva in November, 1965. The functions of this group were to agree on technical details such as the selection of information to be exchanged, the exact form of presentation, including problems of dictionaries and codes and procedures of intercommunication in relation to the proposed international monitoring system.

The administrative machinery established to maintain close and constant surveillance over drugs used in Australia has continued to work smoothly throughout the year; there being a noticeable increased response by the medical profession generally in the reporting of adverse reactions by means of the voluntary reporting scheme. Since the inception of the scheme in August, 1964, approximately 570 reports, 370 in 1965-66, have been received from the profession concerning adverse reactions. Of these, 165 were regarded as being of a serious nature.

As a result of the reports received 14 warning letters have been published in the Medical Journal of Australia referring to adverse reactions with specific drugs and nine warning letters have been sent out to doctors by drug firms at the suggestion of the Department. Amendments to advertising literature have been made in 10 instances; on two occasions a manufacturer has voluntarily withdrawn a drug from the market after reports of suspected drug reactions and in four instances the use of a drug has been banned.

The Australian Drug Evaluation Committee

Professor H. W. Robson, a member of the Australian Drug Evaluation Committee since its inception, resigned in September, 1965, after two years valuable service to the Committee, to take up the position of Vice-Chancellor of the University of Sheffield. Dr. I. S. de la Lande, an eminent pharmacologist, was invited to attend meetings of the Committee as a co-opted member.

The Committee which normally meets every two months has met on 16 occasions since its inception and has made 101 resolutions relating to drugs, under its terms of reference. During the year the question of the safety of oral contraceptives was kept under close study by the Committee.

The liaison established with the drug control authorities in a number of overseas countries, particularly the United Kingdom, the United States of America, Canada, Denmark and New Zealand, close scrutiny of medical literature and investigations instituted in Australia have resulted in the most reliable and up to date information being available to the Committee for consideration.

In order to strengthen the already valuable liaison established with overseas countries, the Assistant Director-General, Therapeutic Substances Branch made an overseas visit to the United Kingdom, Denmark, Holland, West Germany, Switzerland, the United States of America and Canada. In Washington, he acted as an Australian adviser at a World Health Organization conference to establish an international working system of adverse drug reactions.

Important action taken by the Department in association with the Australian Drug Evaluation Committee relates to Dimethyl Sulphoxide (D.M.S.O.). On the basis of information provided, the use of this material in Australia was confined to clinical trials only. As a result of a report of refractive eye changes in experimental animals undergoing chronic toxicity studies with D.M.S.O. in the United States of America, all human pharmacological studies in Australia were suspended. All State health authorities were notified of the adverse effects reported and a letter was forwarded for publication in the Medical Journal of Australia.

QUARANTINE

HUMAN QUARANTINE

During the period under review Australia's barriers against quarantinable diseases remained intact. The quarantine service was fully maintained during the year helping to cope with the increasing numbers of people arriving in Australia from overseas. Quarantine officers continued to inspect arriving aircraft and sea vessels to ensure that vaccination requirements were fully met, that no quarantinable disease entered Australia, and that cases of infectious diseases detected on arrival were promptly and efficiently isolated and placed under treatment. In addition these officers advised the Immigration Department of any new arrivals who, because of physical or other defect, may have become a charge on the public.

Quarantine Stations were maintained in every State in a state of preparedness and work of modernising the accommodation available was undertaken at several of these stations during the year.

Officers of the Quarantine Division at a State and Central Office level conferred with other Departments and representatives of airline companies to promote facilitation of the necessary procedures for new arrivals in Australia. Changes in sea and air travel have been kept under examination and modifications in quarantine requirements made whenever these are warranted.

An important amendment to the Quarantine Act 1908-1961 was passed during the year providing measures to prevent the spread of pulmonary tuberculosis in Australia. New arrivals in Australia who cannot satisfy the quarantine officer that they are not suffering from active pulmonary tuberculosis may be required to undergo a medical examination.

Smallpox

Smallpox still continues to be a major threat to Australia as the principal endemic areas of the disease are situated on the main sea and air routes to Australia. During the year smallpox, in the form of variola minor, has been detected in the Counties of Staffordshire and Monmouthshire in the United Kingdom, 41 cases being reported to 30th June, 1966. In addition to official reports from the World Health Organization, this Department has received reports on this matter from the Chief Medical Officer at Australia House.

Australia's quarantine requirements are notified in official publications concerning international quarantine and airline companies are kept regularly informed of the basic requirements and of any amendments which may be made to these requirements. Despite these actions people still continue to arrive in Australia in an unvaccinated state and during 1965-66 it was necessary to quarantine 43 people who had arrived by air unvaccinated and who, for various reasons, refused vaccinations. This figure compares with 19 similar cases in 1964-65 and 16 cases in 1963-64. This situation is viewed with growing concern as the increase is not in proportion to the increase in the number of arrivals by air. It is not contemplated that vaccination requirements should be relaxed and, in view of this, this particular aspect of quarantine is being watched closely. During the year 3,114 people arrived with irregularities in their certificates or without certificates and it was necessary to effect vaccination at the port of arrival.

To ensure that quarantine officers are familiar with the early signs of smallpox, a programme of training in countries where the disease exists was instituted in 1949. The most recent party of quarantine officers received this training during the period February to March, 1966, when six officers travelled to the Infectious Diseases Hospital, Tondiarpet, Madras, India. These officers have since reported that the course was most instructive and most valuable. As in past years the co-operation of the Indian authorities in arranging the course has been most gratifying. It is proposed that eventually all quarantine officers will receive this training as these officers are responsible for the diagnosis of smallpox at the ports of entry in Australia and, moreover, they may be called into consultation should a case of the disease be suspected by medical practitioners in the community.

Cholera

Concern has been expressed in authoritative circles as to the world situation in regard to this disease. The barriers of quarantine continue to remain intact as far as Australia is concerned, but epidemics of the disease occurred in India, Pakistan, Vietnam and the Philippines. The number of cases of cholera notified to W.H.O. in 1965 from these countries were 42,142, 1,027, 2,067 and 1,153 respectively. The disease also appeared in Iran and the Asiatic provinces of the U.S.S.R. In June, 1966, the disease occurred in Biak Regency in West Irian. Cholera El Tor has been mainly responsible for these outbreaks.

To ensure that new arrivals are adequately protected against this disease, requirements are that persons over the age of 12 months arriving from cholera infected areas must be validly vaccinated. During the past year it was necessary to vaccinate 1,391 travellers on account of irregularities in this respect.

As a result of the development of a vaccine affording protection against cholera El Tor by the Commonwealth Serum Laboratories, it has been possible to offer this added protection through our Divisional Offices to travellers requiring cholera vaccination before leaving for abroad. This newly developed vaccine has also been made available as a pharmaceutical benefit for the use of medical practitioners throughout Australia.

Yellow Fever

Yellow fever is a disease in which the insect vector involved is the mosquito *Aedes aegypti*. This vector is found in Australia.

Travellers entering Australia from yellow fever endemic zones must be vaccinated against this disease. Owing to the nature of this disease, vaccination on arrival is not practicable. Accordingly, those who arrive unvaccinated within six days of departure from yellow fever zones must be quarantined in a vector proofed area. During the year one person was quarantined on this account.

Plague

Preventive measures against plague are regularly carried out by quarantine inspectors and assistants. Inspections or measures of de-ratting (including fumigation) are carried out when necessary and vessels arriving in Australia must have current de-ratting certificates.

Disinsection of Aircraft

The basic reason for the disinsection of aircraft is to prevent the entry of insects which may be vectors not only of human disease but also of diseases affecting animals and plants. In accordance with regulations each aircraft is disinsected by quarantine assistants, immediately on arrival, and then after the passengers have left the cabin and the cargo has been removed. These officers are particularly careful during this process to avoid discomfort to passengers or damage to fittings in aircraft.

Foot and Mouth Disease Precautions

The General Quarantine Branch is responsible for the implementation of precautionary measures against the introduction of foot and mouth disease. Measures, such as the disinfection of footwear, are taken for those travellers who have been in contact with animals or sources of the disease in areas where the disease is endemic.

Control of Imports

The General Quarantine Branch is also responsible for the control of importations, from a quarantine aspect, of such items as bacteriological or viral cultures, pathological specimens, and any substances which may be carriers of disease. This function is carried out by liaison with the Divisional Offices and the Department of Customs and Excise.

Rabies

Dr. L. C. Rowan, Lecturer in Pathology and Bacteriology, School of Public Health and Tropical Medicine, has left to study, for a period of five months, the advanced techniques of diagnosis of this disease. Rabies is a disease which affects animals but if contracted by humans is virtually always fatal. Dr. Rowan is to study at the Communicable Diseases Centre, Atlanta, Georgia.

Disposal of Ships' Garbage

The Commonwealth Government has offered to pay the State Governments the full cost of building incinerators at selected ports for the disposal of overseas ships' garbage. This measure has been introduced in order to prevent the introduction of exotic diseases into Australia.

ANIMAL QUARANTINE

Australia is fortunate in being free of the more serious economic livestock diseases which plague many other parts of the world. The necessity to keep this country free from such serious diseases was vividly illustrated late in November, 1965, when approximately 700 head of cattle were destroyed in Queensland because of the possible introduction of the virus of Bluetongue disease, which could have been contained in cattle semen illegally imported into the country. Fortunately for Australia's livestock industries, the semen did not contain the virus.

A mild form of Newcastle disease was discovered in Brisbane in February, 1966, and was subsequently found to be present in all other States. While the disease is of low virulence and not of grave economic consequence to the Australian poultry industry, there is still a necessity to prevent the introduction of a more virulent form of the disease.

It is the task of the Animal Quarantine Service to guard against the introduction of such exotic diseases which could result in disastrous economic losses to our livestock industries.

It has been reliably estimated that where foot and mouth disease is endemic in a country, the productivity of susceptible livestock is lowered by 25 per cent. On this basis, the net value of livestock production in this country could be lowered by $400 to $500 million each year if the disease ever became established in Australia.

Imports Subject to Quarantine

With the continuation of the total prohibition on the importation of many species of animals, the most important aspects of quarantine are now perhaps the prohibitions and controls placed on products of animal origin or items associated with animals. These could be contaminated with the virus of an exotic disease and could, by direct or indirect contact, set up disease in Australian animals. A wide variety of goods subject to quarantine control were imported during the year, including among others, sausage casings, hair and wool, bones, canned meat, feathers, hides and skins, milk and other foodstuffs of animal origin.

The importation of cultures, vaccines and pathological specimens is also carefully controlled or prohibited as the case may warrant, and during the year all applications for permission to import biological products were carefully considered, to ensure that there would be no risk of introducing diseases of animals, including exotic virus diseases. In collaboration with the Therapeutic Substances Branch, quarantine control was exercised over the importation of therapeutic substances such as sera, vaccines and glandular extracts derived from animals.

Exports Subject to Quarantine

As it is the prerogative of all countries to formulate health certification requirements for animals and animal products which they import, negotiations continued with countries importing these goods from Australia to ascertain their current requirements.

These exports were accompanied by health certificates issued by officers of the Animal Quarantine Service, together with appropriate certificates of testing for disease or vaccination against disease as specified by the importing countries.

Animal Disease Survey of Norfolk Island

The carrying out of an animal disease survey of Norfolk Island with reference to the transit of livestock through the Island by aircraft to New Zealand, and vice versa, was discussed at the March, 1965 meeting of the Australian-New Zealand Technical Committee on Animal and Plant Quarantine.

The survey was carried out from 12th to 30th October, 1965 by a Senior Veterinary Officer of the Animal Quarantine Branch who investigated the location and diagnosis of the presence of animal diseases exotic to Australia and New Zealand, and estimated the incidence of the more common pathological conditions and dietary influences affecting livestock.

Departmental Newsletter

As the Animal Quarantine Service relies to a large extent on the vigilance of the veterinary profession, the Department keeps in touch with members of the profession by means of a "Newsletter" which is sent out to acquaint them with the disease position in other countries as it affects Australia, and to bring to their notice matters of quarantine interest. During the year a number of Newsletters were issued.

Biennial Conference

The Biennial Conference of the Commonwealth and States Chief Veterinary Officers was held in Canberra from 6th to 10th September, 1965. The meeting of Chief Quarantine Officers (Animals) was also held in conjunction with this Conference.

Overseas Visits

The Director of Veterinary Hygiene attended the Australian-New Zealand Technical Committee on Animal and Plant Quarantine which was held in New Zealand from 25th to 29th October, 1965. In May, 1966, he attended the annual meeting in Paris of the Office International des Epizooties as the Australian delegate. In the course of this latter visit, he also held discussions with officers of the United Kingdom Ministry of Agriculture, Fisheries and Foods, and officials of the Food and Agriculture Organization, Rome, and visited animal disease research centres in the United Kingdom.

At the request of the Department of Trade and Industry, the Director of Veterinary Hygiene visited Washington from 8th to 19th November, 1965, to discuss, with officers of the United States Department of Agriculture, the export of Australian meat to that country.

PLANT QUARANTINE

Active plant quarantine vigilance was maintained during the year against the importation of plant pests and diseases. This included inspection of any plant material arriving by sea or air and the close supervision of plants and seeds, the importation of which is restricted to small quantities to keep out unwanted disease and pests. The importation of soil and weed adulterants was also guarded against. The full and active co-operation in these activities of the State Departments of Agriculture, whose officers supervise plant quarantine activities in the States on behalf of the Commonwealth, was readily given. Where appropriate, C.S.I.R.O., universities and other institutions such as the Waite Agricultural Research Institute assisted and co-operated fully in these activities.

Staff

On 3rd January, 1966, Dr. T. H. Harrison retired from the position of Assistant Director-General (Plant Quarantine). Since 1947 he had been responsible for administering the enforcement of plant quarantine requirements throughout Australia and during this period he initiated many changes in Plant Quarantine, so that today Australia's Plant Quarantine Service is held in very high regard throughout the world. He made a significant contribution towards the successful establishment of the Plant Protection Committee for South-East Asia and the Pacific Region. This organization has helped improve the plant quarantine services of the developing countries within the region. He was succeeded by Mr. J. R. Morschel.

Three new additional professional appointments were made during the year to the Plant Quarantine Branch. These are a plant pathologist, an entomologist and a virologist.

Legislation

By proclamation, the movement of sugar cane plants into any part of North-Western Australia, which includes the Northern Territory and the northern portion of Western Australia, was prohibited from other parts of Australia. This prohibition was designed to prevent the introduction of serious virus diseases which could adversely affect any new sugar industry which may develop in that part of Australia.

Smuggling Attempts

Although the Plant Quarantine Service depends very much upon appealing to the public for its co-operation, occasions do arise where legal proceedings against offenders become necessary. Successful prosecutions included cases where two citrus plants, packed in soil, rag and straw, were found in a leather camel cushion; and when cotton seed was found in the possession of an air passenger from U.S.A. The latter case was viewed most seriously because the offender was a cotton grower in a rapidly developing cotton producing area in New South Wales. Other interceptions have included books containing dahlia tubers, prunus cuttings concealed in clay and candle wax, potatoes with strawberry plants embedded in them, discovered in the false bottom of a basket, and safflower seed carefully wrapped in a business journal.

Plant Quarantine Laboratory

Plant quarantine presents unique problems, particularly in the field of treatment for plant material of all kinds. For this reason, research organizations throughout Australia have undertaken little research in these particular fields. It was recognised that to meet the situation it was essential for the Plant Quarantine Branch to establish its own research facilities.

A small laboratory has been established at the Department of Interior's Nursery at Yarralumla, Canberra, and with the appointment of additional staff and the progressive acquisition of equipment, work is being initiated in certain fields. These include fumigation techniques, seed treatment for seed borne diseases, virus screening and devitalisation of seed.

Plant Introduction Facilities

The development of facilities for the introduction of plant material at the principal ports

of entry has been carried a stage further with the erection of a quarantine house at the Department of Agriculture, South Perth. This unit is a combination of a glasshouse and a screenhouse so that suitable conditions can be provided at all times of the year for the establishment, under quarantine, of plants introduced into Western Australia.

Potatoes

During 1965 there was a shortage of potatoes in the eastern States of Australia because of prevailing drought conditions, while New Zealand had potatoes surplus to its requirements. In accordance with a long standing agreement between the Governments of New Zealand and Australia that, when these two situations coincided, imports into Australia would be made, the Commonwealth Government agreed that certain specified importations of potatoes should be allowed.

Initially the inter-departmental committee on imported potatoes, with representatives from the Departments of Primary Industry, Trade, Customs and Excise and Health, recommended importations for processing under quarantine conditions prescribed by the Department of Health. Approvals for 10,000 tons were granted, but this total was not actually imported.

Late in July, 1965, the Commonwealth Government agreed to the importation from New Zealand of a further quantity of potatoes not in excess of 6,000 tons, for delivery before 30th September, 1965. This approval was for general distribution following quarantine treatment, and the potatoes were to be imported into the port of Sydney through one importer.

Plant quarantine requirements had to be met before the potatoes could be retailed. These included washing free of soil and treatment with a sprout inhibitor to render the potatoes non-viable. A modern washing plant with a capacity of 22 tons per hour, with chemical treatment incorporated, was set up at the Sydney Showground. A total of 3,500 tons was imported, and treated under quarantine before being distributed.

Joint Technical Committee on Animal and Plant Quarantine

In October, 1965, Dr. Harrison visited New Zealand to participate in the regular meeting of the Australian-New Zealand Joint Technical Committee on Animal and Plant Quarantine.

A valuable exchange of views took place with several official authorities. Procedures to facilitate the importation into Australia of conditioned crop seeds with adequate certification were discussed and subsequently agreed upon.

The significance of the Needle Blight disease, *Dothistroma pini*, recently found in New Zealand, was recognised when areas of pinus radiata infected with this disease were visited.

Timber

The use of certain ports outside the capital city ports for the importation of timber has been extended. Port Alma (Rockhampton) and Geraldton have been registered as ports of entry for timber.

Timber imports into Australia present a major inspection task, being of the order of 400 million super feet per year.

Sirex Wasp

The National Sirex Fund Committee continued to meet regularly throughout the year under the chairmanship of Dr. Harrison. Steady progress has been made into research on this problem and it is hoped that, with a continuation of the suppression or containment of Sirex on the mainland, research will be able to provide the means whereby forestry will be able to live with this pest.

At a meeting of State and Commonwealth Ministers in April, 1966, it was unanimously agreed to recommend to the Commonwealth and State Governments that the campaign be continued in 1966-67.

Publicity

The range of display units for use at agricultural shows has been extended, and during the year were mounted at each capital city Royal Show. The display panels consisted of enlarged transparencies and black and white pictures, with captions telling the story of plant quarantine at work and the necessity for plant quarantine vigilance in Australia.

The revision of plant quarantine literature is a continuing requirement. With the growing emphasis on the tourist traffic between the Territory of Papua and New Guinea and the mainland, particular attention has been focused on publicity aimed specifically at those people returning to Australia from the Territory.

Plant Quarantine Newsletter

Arising from a suggestion made at the 1965 Plant Quarantine Conference a Quarterly Plant Quarantine Newsletter was inaugurated in 1965. The distribution of this Newsletter is restricted to Plant Quarantine Officers.

NORTHERN TERRITORY HEALTH

The rapid growth of population in the Northern Territory is creating increasing problems in public health and in the provision of hospital and medical service facilities.

There are interesting and significant differences between the rate and manner of growth in European and Aboriginal sections of the community. At the census of 1947 the total European population of the Northern Territory was 10,868. By 1954 this had increased to 16,469 and there was a further increase by 1961 to 27,095. It is expected that the 1966 census will reveal a figure in excess of 37,000. A large portion of this increase is accounted for by immigrants to the Northern Territory from other parts of Australia and from overseas.

On the other hand the Aboriginal community in the Northern Territory gains nothing from immigration and must rely solely on natural increase. However, the traditional concept of the dying race is completely expelled by population statistics which show an increase from an estimated 16,868 in 1958 to 17,386 in 1961, and an estimated figure in excess of 19,000 is expected to result from the June, 1966 census.

The increase in European population has been more pronounced in the larger centres of Darwin and Alice Springs. The population of Darwin at the 1954 census was 8,071 and that of Alice Springs 2,785. The 1961 census showed an increase in Darwin to 12,326 and in Alice Springs to 4,648. The estimated population of these two centres at the 1966 census is Darwin 22,000 and Alice Springs 7,000. In addition to the increase in town population there has been a marked increase in the Aboriginal population at missions and settlements. The social change has meant that the way of life of the Aborigines is in the melting pot and it is a formidable task to provide the maximum possible health standards for them during this transitional period.

The provision of modern hospital facilities in what is still a remote part of Australia is costly, and the planned programme of development in the Northern Territory being implemented requires major expenditure out of proportion to population density.

The current stages of development began with the provision of a modern operating theatre, central sterilizing depot and midwifery ward, together with the necessary boiler house facilities, at Alice Springs Hospital. This was followed by the provision of a modern ward block at Tennant Creek and theatre facilities at Katherine Hospital. These two projects are overshadowed by the $4,730,000 development programme at Darwin Hospital, where a modern nurses home, administrative, casualty and outpatients block and 90-bed ward block, together with the necessary auxiliary services, are well on the way to completion. A theatre block, central sterilizing depot and X-ray department had already been completed.

In parallel with development in the major towns, advances are being made in the development of improved medical standards in regional areas. In February, 1966, a hospital was opened at the site of the Broken Hill Proprietary Company's manganese mining project on Groote Eylandt. Plans are in hand to build a hospital at the Nabalco bauxite mining development project at Gove, in Arnhem Land, and discussions have been held concerning the building of a hospital at the Mt. Isa Mines Limited silver-lead mining project at McArthur River in the Northern Barclay Tablelands. Of these three projects, Gove will develop in the near future and a population of 3,000 is expected there within three to four years. McArthur River could develop to a population of from 7,000 to 10,000, but this is a much longer-range project and may take from 10 to 15 years to reach this stage of development.

In view, however, of this pending development in regional areas, plans for advancement for these regions are progressing. One stage of this advancement has been the purchase of an additional Dove aircraft for the Aerial Medical Service. This will bring the total of

Dove aircraft in the Northern Territory Aerial Medical Service to four, and of these, three aircraft will be based on Darwin and will allow for more frequent visits to the quickly developing areas.

AERIAL MEDICAL SERVICE

The work of the Aerial Medical Service in the Northern Territory continues to increase. This is to be expected in view of the increase in population and also the development of remote areas which has taken place. A further and most important factor, however, is the increasing coverage being achieved by the use, not only of mobile rural health teams, but also of visiting specialists.

Of the 593 staff trips made from Darwin, for example, during the year, 14 were by specialists, 25 by the anti-tuberculosis team, 23 by dentists, 18 by hospital staff, 38 by health inspectors and 141 by Aerial Medical doctors.

Miles and hours flown increased significantly during the year as did patients carried. The figures in Table 45 on page 91 show the extent to which patients were brought from isolated areas to the main centres for the complex care and attention which modern medical practice entails.

It is interesting to speculate whether the slight drop in radio medical calls in Darwin this year, in spite of the occurrence of widespread measles epidemics during the year, was due to the increasing rural health activities. In view of the continuing rapid growth of population and activity in the bush, however, it is expected that the number of radio medical calls handled will increase.

Joint operations with the Royal Flying Doctor Service in Alice Springs functioned with the usual smoothness during the year. Because of the absence of a telephone link, difficulty exists in liaison with the Wyndham base of the Royal Flying Doctor Service, with which communication is quite inadequate. Two trips were made to Wyndham by staff to establish contact with the base and for discussion on mutual problems. It is apparent that until the telephone link between Wyndham and Darwin can be established, effective co-ordination will be difficult.

RURAL PUBLIC HEALTH

The problems experienced in past years in providing an efficient Rural Public Health Service are still with us.

As has been the experience in other countries with social development problems, the Northern Territory is also faced with sudden development in rural areas. The movement of the Aboriginal population from a nomadic existence into the more closely populated missions and settlements has created problems of hygiene with resultant outbreaks of infectious diseases. These people find it difficult to adjust themselves to the European way of life, particularly in adapting themselves to European sanitation, and it is necessary to pay unceasing attention to the problems of community hygiene.

The problem of nutrition is being subjected to an extensive survey. Firstly a team from the Northern Territory Medical Service carried out a pilot study in the Arnhem Land district. This was followed by further studies conducted with the assistance of the Department of Child Health, University of Adelaide, and the Institute of Child Health. As a result of these surveys, clinical trials have been commenced at Alice Springs Hospital to determine the optimum therapy on cases which need inpatient treatment. An applied trial at the settlement level will be carried out in the northern section of the Territory using a locally produced high protein product.

Rural sanitation presents many problems and the rapid growth of missions and settlements is resulting in present facilities being taxed beyond economic usage. At the same time hygiene is often overlooked in the haste to develop industry in rural areas to provide employment for the increasing number of residents.

RURAL HEALTH NURSES

Major outbreaks of measles during the year placed a heavy demand on the Rural Health Nurses Section and, as a consequence of the assistance they rendered in various communities hard hit by the epidemics, much of the routine follow-up work had to be re-scheduled or cancelled. In spite of this, however, the sisters still travelled 14,582 road miles, carried out 351 audiograms, saw 6,645 Aborigines during leprosy follow-up work and gave 1,635 immunizations.

The value of the sisters in rural health has been conclusively demonstrated since the Section was re-organized in 1963, and further expansion is now proposed to provide increased coverage to rural communities.

URBAN PUBLIC HEALTH

The work involved in carrying out health inspections in the larger centres of the Territory continued to increase this year, due principally to the increasing populations in those centres.

The operations of both the Darwin and Katherine abattoirs were satisfactory, except for the methods of waste disposal, but the increase in the use of buffalo and kangaroo meat for pet food has created a problem. As most of this meat is slaughtered in the open and not inspected, its sale must be carefully policed.

The transport of foodstuffs generally continues to be satisfactory, although careless handling, mainly in transit, accounts for a certain amount of spoilage of goods which have to be certified as unfit for use.

Mosquito Control

Mosquitoes have been at a minimum throughout the year. Isolated breeding areas still occur, but are quickly located and controlled. There was no plague outbreak of the salt water *Aedes vigilax* again this year, perhaps due to the absence of suitable climatic conditions. The activities of the mosquito control gang from the General Services Branch of Northern Territory Administration helped considerably with permanent control works of drain clearance and removal of undergrowth to eliminate adult harbourage, while insecticidal control with the Tifa fogging machine was maintained throughout the wet season by the Corporation of the City of Darwin.

COMMUNICABLE AND TROPICAL DISEASES

Communicable diseases continue to be a major public health problem in the Northern Territory. In common with the rest of Australia, infective hepatitis causes concern; infective bowel diseases continue to be a problem; ancylostomiasis, whilst to some extent amenable to control measures, shows no signs of diminishing, and sporadic cases of typhoid fever are still occurring.

Ancylostomiasis

Control measures based on individual and mass treatments have been effective in reducing the worm counts in individuals and communities. However, the experience in the Northern Territory parallels that in other areas of the world, and eradication must wait on social change and the attainment of a satisfactory standard of sanitation throughout the affected areas.

Infective Hepatitis

This year showed marked increase in notifications of infective hepatitis. The cases came from all parts of the Territory, both urban and rural, and the disease continues, as in the rest of Australia, to be a major cause of sickness and loss of working hours.

Malaria

Four cases, all imported, were diagnosed during the year. In 1962-63 an eradication campaign based on chloroquine and primaquine treatment of all available individuals in the endemic area was undertaken. Since then numerous blood films have been taken from cases of fever occurring in the area, all of which have been negative. This year blood films were taken from a total of 601 people in the area and these were thoroughly examined by the staff of the Parasitology Department of the School of Public Health and Tropical Medicine. No evidence of parasitaemia was found.

The Northern Territory remains highly vulnerable to the re-introduction of the disease, both because of the increasing traffic with Portuguese Timor, where malaria is highly endemic, and also by reason of the mining development occurring in formerly malarious areas. Not only do mining operations commonly create potential breeding sites for mosquitoes, but those engaged in the industry have very often worked in malarious areas at some former time and may be unwitting sources of infection.

Typhoid Fever

Four cases, one fatal, of typhoid fever were reported during the year. In the search for sources of infection, 602 blood specimens were screened. One carrier was detected as a result of the investigation. He was an immigrant from Europe.

Tuberculosis

Because of its distinctive population and geographic characteristics, the Northern Territory demands an Anti-Tuberculosis Service which is highly mobile and geared for field service rather than static clinics.

With the acquisition of the Barrazetti equipment, which went into operation in 1964-65, it became possible for mass miniature radiography, using the Odelca camera, to be extended to remoter areas. This combined unit has amply proved its worth during the two years in which it has been employed.

The year 1965-66 saw further developments in this regard. The need for a smaller more portable unit having become apparent, a modified 3T unit was developed for smaller areas where full 17 x 14 films could be used for survey purposes. Following experience with this unit, it was decided to move further in the direction of portability, and pulse emission equipment was decided upon to handle this type of situation. This equipment will be going into operation in 1966-67 and is expected to further advance the mobility and flexibility of the field units.

During 1965-66, 16 surveys were carried out in the Territory ranging from staff of Government Departments in Darwin, servicemen and mining workers, to the inhabitants of remote missions and settlements. In all, a total of 5,408 persons were X-rayed. The Barrazetti Odelca equipment was used on nine occasions and the 3T on seven occasions.

SCHOOL MEDICAL SERVICE

During the year 19 schools were visited. All children at these schools and pre-schools were examined with the exception of Alice Springs High School, where " new entry " and school leavers only were examined, and Hermannsburg Primary School, where ears and hearing only were examined. A total of 2,525 children were seen. Ear and eye defects were the most common to be found at examinations of the children.

In August, 1965, Dr. A. E. Khan, Consultant Otologist, Commonwealth Acoustic Laboratory, Sydney, and Mr. D. J. Byrne, O.I.C., Commonwealth Acoustic Laboratory, Adelaide, visited Alice Springs and Darwin to hold clinics. While in Darwin, one day was spent visiting Snake Bay, Garden Point (Melville Island) and Delissaville. Mr. Byrne visited Alice Springs and Darwin again at the end of March, 1966. Following the visit of Dr. Khan, arrangements were made for Mr. Byrne, the audiologist, to visit once per school term and the consultant otologist to visit twice per year.

During 1965-66 hearing aids were issued to 26 children and young adults under 21 years, the great majority of these being Aboriginal children. This reflects the greater case finding as a result of the audiometric screening surveys of pre-school and school children carried out by Survey Sisters on settlements, missions and cattle stations. There still remain several large settlements in the centre to be covered in this survey.

The Immunization Clinic at Darwin has been removed from the Outpatients Department at the Hospital and two clinics are now in operation at Darwin (Peel Street) and Rapid Creek Infant Health Centres—this is appreciated both by the mothers and the hospital. New simplified immunization record cards have been designed and will come into use shortly. These should obviate much of the clerical work and speed the processing through the clinics.

INFANT HEALTH SERVICE

The 9.3 per cent rise in the number of births in Northern Territory Hospitals, from 1,077 in 1964-65 to 1,177 in 1965-66, is indicative of the increasing importance of the Infant Health Service. The number of births increased in Darwin, Alice Springs and Tennant Creek, only Katherine failing to conform with the general increase.

It is pleasing to note the improvement in the general health of children formerly living in the Winnellie housing area. Most of these children now live in the newly erected Rapid Creek subdivision and the improvement in the general social conditions has reflected in the better health of the children.

DENTAL SERVICE

With the success in the recruiting campaign, a full staff was able to carry out much more dental work in the Territory this year. There were large increases in the examinations and treatments at all clinics, and the operation of the new Nightcliff Clinic has improved the service to this area. A particularly noteworthy feature was the increase in the work performed by the Aerial Mobile Clinics, who carried out 13,472 examinations and treatments in 1965-66 compared with 1,146 in 1964-65. The School Dental Service operating in Darwin from the mobile caravan also had a busy year.

This year also saw the introduction of an orthodontic service utilizing the services of visiting specialists from Adelaide. At the present time one of the Northern Territory staff is undertaking a two-year course in orthodontics in Sydney, so that a full-time specialist orthodontist will be available some time in 1967-1968.

HOSPITALS

The hospitals in the Northern Territory continued to operate efficiently during the year in spite of the difficulties encountered in recruiting and retaining adequately trained nursing staff, due to the adverse climatic conditions in the Territory, particularly in the hot summer months. The efficiency with which the hospitals have operated is due in no small measure to the assistance given by the Advisory Boards of the Darwin and Alice Springs Hospitals. The members of these Boards have devoted considerable time to hospital activities and have materially assisted with the planning of the building programmes.

Darwin Hospital

It is readily understandable that Darwin Hospital is passing through a difficult time with a major building and reconstruction programme being carried out. In spite of the noise disturbance and dust nuisance which inevitably accompany major building works, staff and patient morale has been extremely high, and it says much for the capability and adaptability of the staff that the Hospital continues to function efficiently. Regular meetings between the Project Officer, Matron and the Secretary are held to enable the building programme and efficient functioning of the Hospital to continue without one unduly affecting the other.

Buildings completed during the year were the Medical Officers Quarters in September, 1965, and the laundry in November, 1965. Other improvements include repainting and renovation of the older wards and hospital buildings, provision of additional toilets, and the installation of additional ceiling fans in one of the nurses homes and the store. There were many other minor improvements.

Work has commenced on enlarging the X-ray room. This involved the demolition of change cubicles and re-arranging the accommodation in this area. A central store has been established for the storage of beds and other ward equipment and a compactus unit has been installed in the X-ray Department for film storage.

Construction of a new 90-bed ward block at the Darwin Hospital.

Extensive water reticulation, sewerage and drainage works are in progress in the hospital grounds. Excavation works have destroyed almost all the lawn areas, and there will be no development of gardens and lawns until all these services are completed.

Alice Springs Hospital

During the year, no large building projects were undertaken at the Alice Springs Hospital and the works programme has been mainly confined to repair and maintenance and additions to existing buildings.

The mortuary was extended by an additional nine refrigerated units, to a total of 11 units, which is considered adequate for present needs. Additions were made to the Children's Ward, consisting of a new toilet and ablutions room and a linen room allowing for more space for beds and cots. Although it is considered that the space in this ward is inadequate, the alterations have made a vast improvement. The ward has been painted externally and vinyl tiles laid throughout, extra lighting and heating have been installed and cupboard units built in where necessary.

Air-conditioning units have been installed in several sections and in living quarters to improve working and living conditions. A new brick fence has been erected on the Todd Street frontage of the Hospital and this has greatly enhanced the appearance of the grounds from the main street.

New X-ray equipment has been installed in the Radiology Department and the interior of the building renovated, repainted and vinyl tiles laid. Some of the electrically operated equipment in the main kitchen has been converted to steam, and the catering officer has reported on their greater efficiency since the changeover.

Tennant Creek Hospital

The construction of a new laundry and boiler-house at the Tennant Creek Hospital was commenced at the beginning of the year but has progressed rather slowly and is four months overdue to date. The main cause for delay has been lack of materials and, because of this factor it is estimated that a further four months will be required for completion. Funds have recently been approved for the addition of workshop and toilet facilities to the laundry project, and these additions will be undertaken concurrently with the completion of the main building. A 30 H.P. boiler and 40 KVA emergency generating plant are to be installed.

Fencing of the hitherto open western and southern aspects of the Hospital proper is now near completion and these newly defined boundaries will enable the work of properly established grounds to proceed. Such work could not previously be undertaken because of the undefined boundaries.

A new portable X-ray machine, Philips-Stanford Stabil X-50, was installed in November, 1965, complete with automatic photo-timing device. The machine is one of the most modern of this type and the photo-timer produces a greatly improved chest X-ray. A total of 1,429 exposures of 818 patients were taken, 444 of the exposures being chest X-rays. All patients requiring further investigations or treatment for pulmonary tuberculosis were then transferred to Alice Springs Hospital.

Katherine Hospital

With the transfer of the 5 Aircraft Construction Squadron, R.A.A.F., to the Tindall Air Base near Katherine, activity at the Katherine Hospital increased considerably during the year. The number of admissions in 1965-66 was 1,220 compared with 957 in 1964-65, an increase of 27.5 per cent.

The extensions to the Sisters Home, providing more bedrooms, were completed during the year and a contract has been let to renovate the old ward to provide more hospital accommodation.

East Arm Leprosy Hospital

The figures for 1965-66 reflect a continuing change in the pattern of treatment of leprosy, accelerated recently by the introduction of reconstructive surgery. As at 30th June, 1966, there were 101 inpatients at the East Arm Settlement and Hospital, and 679 outpatients, most of whom were under treatment on missions and settlements throughout the northern section of the Territory. There are thus 780 known diagnosed cases in the Territory at the present time, and 1,106 cases appear on the Register, which includes all those diagnosed since records were first kept.

The changing pattern in the leprosarium, where the majority of patients are now undergoing reconstructive surgery and repair of deformities, is creating a need for further staff, as assistance from able-bodied patients is no longer available. An indication of the extent to which reconstructive surgery has been carried out, is the fact that there were 179 procedures during the year including tendon transplants, sequestrectomies, skin grafts and other plastic procedures.

The introduction of data processing of information gathered over the years concerning this disease is currently being investigated.

Batchelor Hospital

A Departmental medical officer has continued to make weekly visits throughout the year, and the Batchelor Hospital is still staffed by two nursing sisters.

In addition to the Batchelor Clinic, the nursing staff commenced a weekly clinic at Adelaide River in October, 1965. Attendances at this clinic have proved its worth.

QUARANTINE

This year has again seen a reduction in the number of aircraft requiring clearance at Darwin, and an increase in the number of ships, thus continuing the trend shown in recent years. It is interesting to note, however, that the numbers of persons vaccinated against smallpox and cholera both showed an increase over 1964-65. There were marked increases also in the amount of plant material and timber fumigated, and in the number of persons detained at the Quarantine Station.

Continual pressure is applied by airline companies to speed up quarantine clearance of aircraft, and with the larger numbers of passengers being carried on each aircraft, it is likely that this pressure will increase. Following a pilot study carried out in collaboration with the Department of Customs and Excise, a detailed analysis of clearance times has been instituted. The amount of delay caused by irregularities in company and passenger documentation is being brought to the attention of the airlines concerned, as the reduction in this time is entirely in their hands.

DIATETIC AND NUTRITION SECTION

Surveys were carried out on a number of missions and settlements, emphasis being paid particularly to practical measures to improve existing situations, especially in the feeding arrangements for infants and pre-school children. Lists of foods recommended as suitable for inclusion among foods sold in canteens and controlled retail stores have been given to superintendents; cookery lessons organized in the camp situation where possible; and simple talks on nutrition given to Aboriginal women's clubs.

Dietary advice was requested by and given to various individuals and groups. A questionnaire on food habits has been prepared, and this is being used to gain an insight into current practices, opinions, and day to day dietary habits of groups of Aborigines. It is hoped that this information will be of use in formulating educational programmes in the future.

HEALTH LABORATORIES

The amount of work carried out by the Darwin Laboratory continues to increase gradually, but steadily, as the population of Darwin increases.

A steadily increasing variety of special tests have become an essential part of the routine work of the Alice Springs Laboratory. In addition to the routine hospital work, the Laboratory provided valuable support to the Trachoma Survey and to the continuous T.B. Survey among the native population. Further steps have also been taken to lay the foundations for paediatric systematic investigations of the pancreatic diseases of the children of the Centre. With this view in mind, the Technologist visited the laboratories of the Adelaide Children's Hospital and took an experimental course in their micro-techniques and modern equipment.

A permanent additional function is the entire Blood Transfusion Service for the district. Although in nature it is an "emergency" service, it involves a growing volume of technical and clerical work. It appears that adequate storage facilities are necessary to avoid delays or night-calls on voluntary blood donors and now the installation of a special blood-bank refrigerator is in sight. The Rotary Club and the Red Cross also gave support this year in recruiting new blood donors for the Laboratory.

HOME NURSING

As expected, the number of services given by the Home Nursing Service increased for 1965-66. This is particularly true of the Darwin area where there was the greater population expansion. Services rose from 13,883 in 1964-65 to 15,587 in 1965-66.

AUSTRALIAN CAPITAL TERRITORY HEALTH

With the continued rapid expansion in the population of Canberra, the volume of work carried out by the various sections of the Department providing health services to the people of the Australian Capital Territory increased considerably. It was therefore necessary to increase the number of staff in a number of sections, particularly the School Dental Service and the District Nursing Service.

Health Inspection, Infectious and Notifiable Diseases

The health inspection staff in the A.C.T. at present consists of a Medical Officer of Health, a Chief Inspector and five health inspectors.

The health inspectors' activities are primarily concerned with the inspection and supervision of the manufacture, storage and distribution of food supplies in accordance with the Public Health Ordinance, but also included in their duties are the inspection of sanitary arrangements on construction sites and the examination of building plans to ensure that buildings comply with certain standards of hygiene.

The establishment of satellite tracking stations at Tidbinbilla, Ororral and Honeysuckle, together with the commencement of work on the Corin Dam, have increased the scope of the inspection service in the rural areas of the A.C.T.

The Medical Officer of Health for the A.C.T. receives reports of infectious and notifiable diseases and where necessary follow-up investigations are carried out. Details of diseases notified in the A.C.T. in 1965-66 are given in Table 34 on page 87.

Quarantine

Canberra Airport is not a proclaimed quarantine first port of entry for overseas aircraft. However, as Canberra's status as the National Capital has risen and the city has become a venue for conferences of an international nature, the number of overseas aircraft permitted to arrive at Canberra as a first port has increased significantly. The total of aircraft receiving quarantine clearances at the Canberra Airport in 1964-65 was 12 and in 1965-66 was 19.

The quarantine inspection of parcels arriving under bond at the Canberra Post Office continued to be carried out by health inspectors.

School Medical Service

A major change in the system of medical examinations of school children was made in 1966. School children are now examined as soon as practicable after the beginning of their school career and follow-up examinations are carried out only for those children in whom abnormalities are discovered. When necessary, children who require medical examination later in their school life will be examined.

The number of children enrolled in the A.C.T. continues to grow annually. There were 23,084 children enrolled in first term, 1966. This was an increase of 1,662 over the same time last year.

Medical examinations were carried out by medical officers of the School Medical Service at public and private schools within the Territory. The number of school children examined was 6,243, while personal interviews with parents numbered 493. The Service is staffed by three medical officers and three nursing sisters.

Immunization

The immunization campaign against diphtheria, whooping cough and tetanus in the A.C.T. continued through 1965-66, when a total of 9,690 triple antigen injections were given by the School Medical Service at Mothercraft Centres throughout the Territory.

Immunization against poliomyelitis was also continued using Salk vaccine. During 1965-66 8,164 infants, 1,206 school children and 747 adults were immunized.

The campaigns have had considerable success and are making a significant contribution to public health in the Territory.

Child Dental Service

Free dental treatment from the Child Dental Service is available to children attending infants' and primary schools in the Australian Capital Territory. During 1965-66, 11,259 children were examined.

Two additional positions of dental officer were created during the year, bringing the total number to thirteen. However, it has been difficult to recruit suitable dentists for these two new positions.

The National Health and Medical Research Council, at its 60th Session in October, 1965, recommended that, to relieve the shortage of dentists in Australia, Commonwealth and State clinics and school dental services should consider the employment of adequately trained female dental nurses as auxiliary personnel, to undertake limited procedures under the supervision of qualified dentists. It was also in October, 1965 that the Australian Dental Association adopted a policy supporting the employment of school dental nurses in Australia.

At present the Australian Capital Territory and three States, New South Wales, Tasmania and South Australia, are moving forward quickly with plans to expand their school dental services by utilizing these auxiliary personnel. It is anticipated that in the A.C.T. the first will be employed in 1967.

Fluoridation of Canberra's water supply has been followed by a slight improvement in the dental condition of children. The statistical data for 1965, that is one year after the commencement of fluoridation, shows that there has been a reduction of eight per cent in the incidence of dental decay.

Two new clinics were established at Hughes and Curtin. As in previous years, visits were made to Jervis Bay School, Wreck Bay Aboriginal Settlement, Cocos (Keeling) Islands, and to the rural schools at Hall, Tharwa and Uriarra.

Child Guidance Clinic

The Child Guidance Clinic, established in 1965 to assist children with psychiatric disorders, was moved in February, 1966 to more spacious quarters in the premises formerly occupied by the South African Embassy at Green Square, Kingston. The Clinic is conducted by Professor Julian Katz, Associate Professor of Child Psychiatry at the Institute of Child Health, who makes regular visits to Canberra to see children who have been referred to the Clinic.

In February, 1966, Mr. D. J. McKenzie was appointed as a full time clinical psychologist and this enabled a more intensive development of the Clinic. By June, 1966, a full time social worker, Mrs. P. Wilson, had been appointed to the Clinic and in addition two psychiatrists attended the Clinic on a sessional basis. This additional staff has allowed the Clinic to offer psychotherapeutic treatment to suitable cases and, more recently, to develop towards a family guidance unit. As such, it will focus more attention on the family interactions than on the individual child.

Consultative services were provided for other bodies, such as the Child Welfare Department, the Educational Clinic and private doctors. A total of 56 cases were examined during the past year.

One of the original concepts of the Clinic was that it should attempt to educate the community in means of preventing mental breakdown in children. The Clinical Psychologist has given several talks, followed by discussions, to various groups of mothers on problem behaviour in children. The broadening and developing of this aspect of the Clinic's function must, of course, be dependent on the public need.

Canberra Mothercraft Society

There are 18 Mothercraft Centres operating in the A.C.T. These Centres, administered by the Canberra Mothercraft Society, a voluntary organization subsidized by the Commonwealth Department of Health, are staffed by a total of 10 triple-certificated nursing sisters employed by the Society. Advice is given to mothers on the care of their babies and the Society's nursing sisters also make an initial home visit to mothers following their discharge from hospital.

The Queen Elizabeth II Home for Mothers and Babies operated by the Canberra Mothercraft Society provides post-natal care for mothers and/or babies following their discharge from hospital. During the year 131 mothers and 218 babies were admitted to the home.

District Nursing Service

The A.C.T. District Nursing Service continued to expand. The staff was increased during the year from 12 full-time and three part-time sisters to 17 full-time sisters.

Good liaison continues to be maintained with the agencies engaged in social welfare work in the A.C.T. and with the Rehabilitation Centre at the Canberra Community Hospital.

More than 60 per cent of the patients seen by district nurses are over 60 years of age. When caring for these geriatric patients, the district nurse has a great opportunity to act in the capacity of a health visitor. The extent

to which geriatric patients in the A.C.T. have been helped to cope with their disabilities and to adjust daily living to the best possible level, while remaining in the familiar atmosphere of the home, has been most satisfying.

The monthly average number of visits has risen from 2,826 for the twelve months ending June, 1965, to 3,909 for the twelve months ending June, 1966.

Health Laboratory

In October, 1965, the Laboratory was transferred from the Institute of Anatomy, from which it had operated since early 1952, into its new quarters within the Canberra Hospital.

The physical integration of the Laboratory within the organization of the Hospital has favoured a notable improvement in the Laboratory's facilities and extension of its fields of competence to meet the exacting requirements of a large hospital, and to keep abreast of the increasing sophistication of modern scientific methods. The continued expansion of facilities now awaits the completion of an additional working area, which, it is hoped, will be able to accommodate the immediately predictable rate of development for a number of years.

In the Public Health Section of the Laboratory bacteriological tests were carried out on 1,467 samples from the Canberra water supply, 997 samples were examined for fluoride content and regular bacteriological and chemical tests were made on the Canberra milk supply, 565 samples of milk being tested for residual penicillin content. The bacteriological study of Lake Burley Griffin was continued, while air pollution studies commenced. The smoke density of Canberra's air is being continuously recorded at several sampling stations.

During the year, 72 cases were referred for toxicological investigation.

An innovation at the Laboratory during the year was the systematic testing of babies for phenylketonuria. The Guthrie Test for the early detection of phenylketonuria is now performed as a routine on all babies born in the Canberra Community Hospital.

The overall statistics of the Laboratory's activities show an increase of about eight per cent over the previous twelve month period, despite an enforced reduction in work volume during the period of change-over into the new quarters.

Registration Boards

During September, 1965, the secretariat of the A.C.T. Professional Boards was transferred from the Department's Central Office in the Administrative Building, Parkes, to the offices of the A.C.T. Health Services Section at Green Square, Kingston, where a conference room is available for board meetings.

The details of registrations granted by the several boards during 1964-65 and 1965-66, given below, reflect the growth in Canberra's population and its increasing attraction for members of the professions:—

	1964-65.	1965-66.
Medical Practitioners	26	41
Dental Practitioners	6	12
Nurses	69	163
Pharmacists	9	22
Optometrists	2	....
Veterinary Surgeons	7	3

Veterinary Services

In general, conditions in the A.C.T. during the year lessened the incidence of animal diseases, but metabolic disorders such as pregnancy toxaemia can be expected to occur prior to the general September lambing. No lice infestations were detected in the A.C.T. or at saleyards and the incidence of ked infestation was low during the year.

Advice was given to stock owners on disease problems, and autopsies and specimen examinations were performed in the field or in the laboratory at the Australian Institute of Anatomy. Surveillance was kept over stock moving into the Australian Capital Territory to guard against the introduction of disease and health certificates were issued following examination of animals leaving the Australian Capital Territory, both for overseas and to other Australian States.

A total of 2,110 dairy stock were subjected to an intradermal tuberculin test. Negative reactions were given to these tests. Throughout the year 465 heifer calves were vaccinated with Brucella abortus Strain 19 vaccine. Stock sales were attended and examination made for the presence of notifiable diseases, particularly lice and ked infestation and footrot of sheep. A number of cases of eye cancer and actinomycosis of cattle were forwarded for slaughter to abattoirs on an order for movement.

The overall number of animals slaughtered at the Canberra Abattoir was less this year than in the previous year due largely to the prolonged drought and the difficulty in obtaining and processing only higher quality stock at the Canberra Abattoir. The lack of export facilities reduced the potential number of stock to those suitable only for local consumption.

During the year the future of the Canberra Abattoir was the subject of an interdepartmental committee of inquiry.

NATIONAL FITNESS MOVEMENT

National Fitness Councils in each State increased their services to the community during the year and are now recognised as the authoritative bodies in the general field of recreation.

National fitness headquarters and centres in each State have been used by an increasing number of youth and sporting organizations for training courses and meetings. Many of the national fitness camps, which now total twenty-three throughout Australia, have had extensive alterations and additions carried out during the year in order to provide the increased accommodation required for school, youth and community camping programmes.

Certain Councils have developed family camping programmes which have proved extremely popular, and all States have developed adventure training in which young people are given the opportunity of taking part in activities such as rock climbing, canoeing or bush walking, which are designed to develop confidence and initiative.

Field officers have been active in conducting sports coaching and leadership training courses in country as well as in city areas, and in each State, Associated Youth Committees or Youth Councils have been the co-ordinating bodies of organizations engaged in youth work.

The youth hostel movement has received the active support of national fitness in several States, and national fitness staff have also been engaged in the running of swimming schools and holiday play centres.

State Education Departments

A total of $34,000 was made available during the year to State Education Departments to assist in the training of teachers in physical education and to provide publications and films for libraries. In addition, useful literature and material was provided for teachers in the field.

In certain cases the grant assisted in the provision of bursaries for selected teachers.

Universities

The Commonwealth grant of $24,800 during the year to Universities, assisted in the training of physical education specialists and also in the provision of recreation programmes for the general student bodies.

The Universities of Sydney and Tasmania each received $4,000 whilst the Universities of Melbourne, Queensland, Adelaide and Western Australia each received $4,200.

Commonwealth Council for National Fitness

The Commonwealth Council for National Fitness met once during the period under review. The Eighteenth Session was held on 9th and 10th September, 1965, in Melbourne. This meeting was called to discuss, in particular, developments associated with the Australian Recreation Leadership Course. During the meeting Council members were the guests of the Victorian National Fitness Council at the Mount Evelyn National Fitness Centre.

Australian Recreation Leadership Course

Following the initial course conducted at the Narrabeen National Fitness Centre, Sydney, during March-April, 1965, four additional courses were held during 1965. A total of five courses have been planned for 1966.

There has been representation from five Australian States at the course and students appreciated the opportunity of gaining further training while still engaged in their employment in the recreation field. Training periods are conducted as monthly units which include training in foundation, elective theory, practical subjects and field work. One hundred and fifty students received training in residential courses during 1965-66 and many more received training as part-time evening students at lectures provided by the New South Wales Council in Sydney.

Recreation Areas Survey

As a result of a resolution of the Seventeenth Session of the Commonwealth Council, State Councils compiled details of provisions being

made by State Governments for current and future recreation needs.

It is the Council's intention to regard this field as one of high priority, as sufficient space must be provided for the substantial increase in leisure time activities which will flow from the reduction in working hours, predicted as a result of increased automation.

Duke of Edinburgh's Award Scheme

All State Councils have been active in promoting the Scheme throughout Australia, as it has been the means of presenting a personal challenge to young people to develop a spirit of service in the community and, at the same time, developing proficiency in a wide range of recreational activities.

The film of the Scheme's activities in Australia has been completed by the Commonwealth Film Unit and will be premiered during the latter part of 1966. The film will be a further means of creating interest in the Scheme throughout Australia.

Australian Physical Education Association

Immediately prior to the Sixth National Conference of the Australian Physical Education Association, held in Adelaide during January, 1966, the executive officers of State National Fitness Councils met in order to discuss national fitness developments within Australia.

During the conference the subject " National Fitness and Community Recreation " was considered, and the importance of the link between the national fitness movement and the physical education profession was stressed as having an important part to play in the development of the health of the community.

Skiing party from Howman's Gap National Fitness Camp.

COMMONWEALTH HEALTH LABORATORIES

During the year the Health Laboratory Service suffered a severe loss in the death of Dr. A. M. McArthur, First Assistant Director-General, Laboratory Services and Quarantine Division. It was Dr. McArthur who introduced the Nuffield Points Unit Scheme to the Health Laboratories for assessing the work load performed at the various working levels and as an aid in assessing future staff requirements. Dr. R. W. Greville, formerly Director of the Commonwealth Serum Laboratories, was appointed to fill the vacancy.

Following a joint Public Service Board-Departmental Working Party review of the professional and technical requirements of the Commonwealth Health Laboratories, the Public Service Board created positions of 12 Medical Laboratory Technologists Grade 1 and five Medical Laboratory Technologists Grade 2. These positions are attached to Central Office. As suitable applicants become available, a course of training is undertaken before the technologists are transferred to the Laboratories in the States. Additionally three positions of Biochemist Class 1 have been created, one each at the Townsville, Cairns and Toowoomba Health Laboratories.

Extensions at the Lismore Laboratory covering an area of 4,600 square feet with a basement plant room of 700 square feet have been completed. The new laboratory building is fully air-conditioned and contains a main laboratory, separate bacteriological facilities, a sterilising unit, balance room, training laboratory and a biochemical room. Stage 2 of the work, the modernisation of the old laboratory, is being undertaken and, when completed, the Lismore Laboratory will be one of the most modern of its kind in Australia.

The Laboratory at Canberra which provides a full pathological service to the Canberra Community Hospital and the people of the Australian Capital Territory and surrounding districts, moved into new premises at the Hospital. Sections of the Laboratory operating at present are the Haematology, Serology, Microbiology, Biochemistry, Histo-Pathology and Cytology Sections. The General Bacteriology, Virology and T.B. Sections will not be operating until Stage 2 of the present hospital expansion programme is completed.

The Health Laboratories at Toowoomba and Canberra are co-operating with the Australian College of General Practitioners and the State Department of Public Health, in liaison with the Preventive Medicine in General Practice Sub-Committee of the National Health and Medical Research Council, in surveys of diabetic prevalence in the cities of Toowoomba, Queensland, and Goulburn, New South Wales. At Toowoomba 32,000 test kits were distributed to residents over the age of 21, while at Goulburn 18,000 kits were distributed. The Toowoomba Health Laboratory is conducting glucose tolerance tests on those persons who produce a positive reaction to the test. Blood samples collected at Goulburn are being forwarded to the Canberra Health Laboratory, under refrigeration, for processing. Approximately 750 abbreviated glucose tolerance tests have been carried out in the Toowoomba Laboratory and approximately 450 in the Canberra Laboratory.

The pathological service provided by the Commonwealth Health Laboratories is in constant demand and the volume of work and range of tests performed is continually expanding. Statistics of the number of tests performed and the number of patients who attended the Laboratories are given in Table 53 on page 94.

COMMONWEALTH MEDICAL OFFICERS

This brief account will try to give some indication of the work carried out by the "average Commonwealth Medical Officer" attached to a capital city Divisional Office.

At some time in his career every permanent public servant, no matter what his classification or how senior he may be, has been examined by a Commonwealth Medical Officer. The Public Service Act states that every permanent public servant must contribute to either the Superannuation Fund or the Provident Account and, before anyone can contribute, there must be a medical examination to determine fitness. With these examinations, the Commonwealth Medical Officer is basically responsible for ensuring that the Service accepts only applicants who are physically fit to perform the work involved in the specific occupations which they have chosen, without risk to themselves or others, and that their health should enable them to carry out these duties efficiently and continuously to the normal retiring age in the case of those accepted for superannuation. Great care must be taken to see that there is no pre-existing condition present, as early retirements lead to a heavy financial strain on the Superannuation Fund.

The Commonwealth Medical Officer may find that while an entrant is physically capable of carrying out clerical duties and could work in this capacity to the age of 60 to 65 years, he may be unfit to carry out the more arduous duties of perhaps a preventive officer in the Department of Customs and Excise. With the above in mind, the Commonwealth Medical Officer must be aware of the type of work likely to be involved in the many classes carried out by public servants, including police, drivers, technicians, linesmen, airport fire officers and air traffic control officers. In many instances, the safety of others may be dependent on the mental and physical fitness of the employee.

The Commonwealth Medical Officer also medically examines employees for Commonwealth Commissions and other authorities such as the Australian Broadcasting Commission and C.S.I.R.O.

Another function of the Commonwealth Medical Officer is to carry out periodic medical examinations to determine that there has been no deterioration in health which may hinder the person in the performance of his duties. Examinations are also carried out to determine fitness to return to duty after a prolonged illness and, in other cases, to determine whether a public servant should be retired on grounds of invalidity. The Commonwealth Medical Officer also makes the decision whether a public servant is fit for overseas travel and duty.

Compensation work involves quite a considerable proportion of the Commonwealth Medical Officer's time in assessing the extent of a disability and advising whether further treatment is indicated. In reporting on a compensation case, the Commonwealth Medical Officer must state whether, in his opinion, on the balance of probabilities, the incapacity was due to the stated cause.

Another duty, while strictly of a maritime nature though not carried out under the provisions of the Quarantine Act, is the function as a Medical Inspector of Seamen under the Navigation Act. Under the provisions of this Act, all entrants to the Australian mercantile marine as well as seamen who have suffered from some illness or disability must be medically examined. The basis of the examination of seamen is to show that there will be no likelihood of a seaman being a danger to himself or others by reason of any disability while at sea. If by some misfortune a seaman on an Australian or overseas vessel becomes ill or suffers an injury at sea, the Medical Officers of the Department provide a radio medical service where advice is given to the ship's captain as to the course of action to be taken, whether it be the prescribing of drugs or heading with all speed to the closest port. In the event of death at sea, the Commonwealth Medical Officers assist the Marine Superintendent in a Court of Inquiry.

The Department provides a vaccination service for overseas travellers, and great use has been made of this facility at the Divisional

Offices and up to 15 per cent of the Commonwealth Medical Officer's time may be spent in performing these vaccinations and offering advice. All Medical Officers of the Department also carry out inoculations as requested by various Departments, for example tetanus inoculations to employees of the Department of Supply.

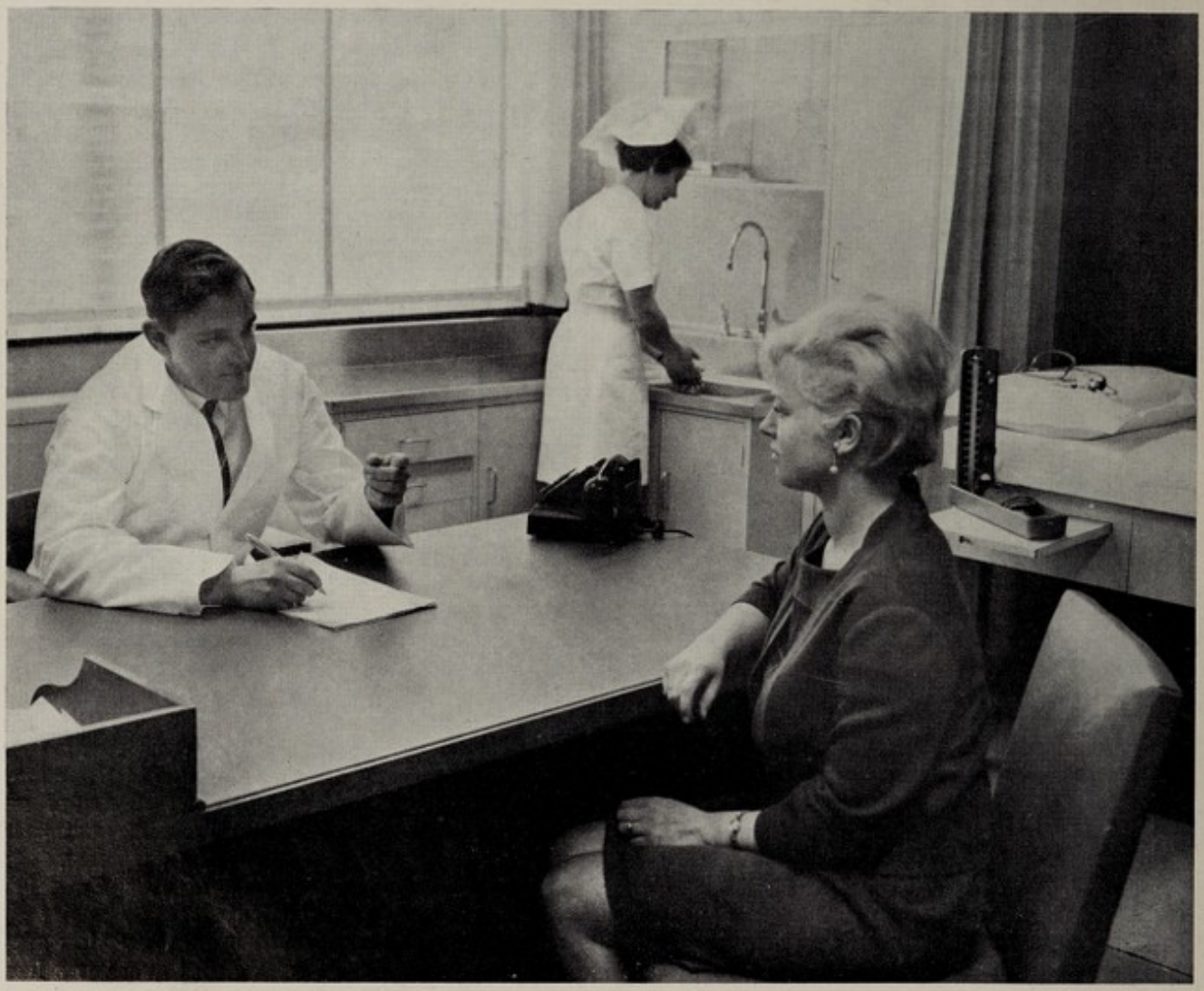
Another major duty for a Medical Officer is the task of acting as Medical Referee under the Social Services Act in assessing whether applicants for the invalid pension are permanently 85 per cent incapacitated and generally advising the Social Services Department regarding invalid pensioners and applicants for the pension. Numerous examinations at the request of this Department are also made of persons in receipt of unemployment and sickness benefits to determine their capacity or otherwise for work.

Apart from the functions already described, some Commonwealth Medical Officers assist in the administration of various aspects of the National Health Act, especially in regard to pharmaceutical and hospital benefits.

In the Northern Territory, besides carrying out routine Commonwealth Medical Officer work, some Medical Officers staff hospitals, provide a general practitioner service and perform duties in the Aerial Medical Service.

Commonwealth Medical Officers in specialist grades also staff the Commonwealth Health Laboratories which are scattered in country areas throughout Australia. Many full time Medical Officers attached to the Divisional Offices spend all their time as industrial medical officers attached to the P.M.G.'s Department and munitions factories.

Mention must also be made of the "part-time" Commonwealth Medical Officers, the private practitioners who are appointed in most country towns to carry out work which would normally be carried out by the Department in the capital cities.



Commonwealth Medical Officer at work.

SCHOOL OF PUBLIC HEALTH AND TROPICAL MEDICINE

Courses of instruction at the School of Public Health and Tropical Medicine at graduate, undergraduate and extra-mural levels were maintained during 1965-66. During the year arrangements were made to participate in the teaching programme of a newly established Diploma of Nutrition and Dietetics at the University of Sydney.

RESEARCH AND INVESTIGATION

Bacteriology

In recent years *Mycoplasma pneumoniae* has been shown in the United States and Europe to be an important cause of human respiratory infection. Material from acute cases of respiratory infection is now being examined, with a view to assaying the importance of the organism as a cause of epidemic acute respiratory infection in the community and to provide a means for early diagnosis of the infection by isolation in culture.

Over the last few years nine strains of *Pseudomonas pseudomallei*, the cause of melioidosis, have been received for confirmatory identification from fatal human cases in tropical Australia. The biochemical reactions of the organism have been stated to be variable and slow, sometimes making identification unsatisfactory. The conditions of test have been defined so that the results for the nine strains are constant and in agreement with those of the type reference culture. An agar-gel diffusion test has also been developed, which gives promise of providing a simple and rapid means of identification.

Biochemistry

Serum protein studies of natives of Papua and New Guinea, conducted as part of a survey associated with the malaria eradication scheme of the Department of Public Health for the Territory of Papua and New Guinea, were completed. The object of this work was to establish the changes in serum protein pattern occurring in controlled and uncontrolled areas of endemic malaria. The results have shown a definite evolution in pattern over the survey period. The significance of these will be estimated by consideration of the clinical assessment of subjects and statistical analysis of the whole.

An enquiry into the correlation of electrophoretogram quantitation methods, to relate reproducibility and comparability of various systems in use, has been extended. The significant factors in these methods have been evaluated and limitations are apparent in certain of these in wide use.

Cholesterinase levels have been established for the adult population using various methods, and the effect of storage on assay reproducibility studied. The project has been undertaken to establish information of value in occupational health work, and further data is necessary for workers exposed to organophosphorous compounds.

An investigation of the role of biological amines in adaptation to conditions of extreme cold is continuing. Specimens are received from personnel in Antarctica, who are the subjects of study.

An investigation of the interpretive value of the cortisone provocative test is proceeding. The object is to determine whether a single abnormal result in the test is a fixed value. Interim results indicate that in over 50 per cent of cases the response remains unchanged, in 20 per cent it becomes worse, and in 30 per cent it returns either to normal or near-normal values.

Environmental Health

The work begun in conjunction with Dr. F. Ofner at the Lidcombe State Hospital and Home in 1963 on the effects of climate on the aged and chronically ill has continued. A further paper on "The effect of the prevailing air temperature on mortality" has been submitted for publication, in which it is shown that, from the age of 70 years onward, daily mortality is directly influenced by the prevailing air temperature. The optimum temperature interval, by which is meant the temperature at which the fewest deaths occurred, was shown to be between 70° and 80° F. Other results

which have emerged show that the deep body temperature of the aged is strongly influenced by the prevailing air temperature and that the blood pressure follows an annual cycle, apparently temperature dependent, which displays an interesting hysteresis effect.

Another investigation, conducted in conjunction with Dr. Ofner, on the relation between ambient air temperature and the skin and deep body temperature of elderly men in bed, has provided much interesting physiological information.

Work done on blood pressure, body weight, skinfold thickness, pulse rate, oral temperature, thermal comfort, clothing and activity at several Antarctic stations over a number of years, is, at present, being analysed in collaboration with Mr. J. Robinson of the Department of Biometry, University of Sydney.

An examination of data collected from men wintering in Antarctica is being made by Dr. K. E. Hicks, who recently returned from a further year with A.N.A.R.E. The work includes study of variations in body weight, skinfold thickness, basal blood pressure, temperature, pulse rate and oxygen consumption; blood clotting time and serum total cholesterol; and total body fat and total body water using a deuterium oxide dilution technique.

Measurements of human thermal radiation exchange by means of the Funk Scanning Radiometer is proceeding. In addition to using the Radiometer to measure total radiation exchange, numerous pilot studies designed to determine the suitability of the device as an indicator of surface temperatures have been made.

A study of the association between motor traffic accidents and weather conditions is proceeding. It involves the analysis of accident records in a Sydney area and meteorological records for the same area. The work has required the development of statistical techniques suitable for the treatment of this type of information.

Entomology

Since 1950 mosquito studies on the Australian mainland have been mainly directed towards the ecology of virus disease transmission. In this context Murray Valley encephalitis, fowlpox, dengue fever and myxomatosis have all been investigated. Out of these studies, it early became apparent that an understanding of transmission required detailed knowledge of the behaviour in the field of a variety of different mosquito species, much of which could be gained in the absence of active disease transmission. The type of information resulting from mosquito studies in recent years, together with the fact that a considerable number of new species have been described, has emphasised the need for a comprehensive statement of existing knowledge. To this end a Check List of Australian Culicidae, designed to include biological as well as taxonomic data, is in course of preparation.

The investigation of possible disease transmission by biting midges (sandflies) was initially hindered by completely inadequate systematic and distributional knowledge. During the year much of the accumulated collections provided from a scattering of significant areas throughout Australia has been prepared for critical examination, the breeding habitats of *Culicoides molestus* have been discovered, and a revision of the genera *Leptoconops* and *Styloconops* submitted for publication.

The initiation of filth-fly investigations resulted from an appreciation of the inadequacy of existing knowledge and advice concerning fly control in urban areas. An initial adult survey carried out in 1963-64 continues to provide information leading to further observations on particular aspects of this problem, but because of the inadequacy of means of identification of immature stages of the flies concerned, attention during the current year has been given to establishing criteria for identification of maggots found in any situations of public health or medical significance.

The number of cases of suspected mite attacks on man referred by doctors in practice has been significantly larger than usual in the past 18 months. This has involved greater excursions into mite taxonomy than has been necessary in the past.

Occupational Health

A survey of the health and working conditions of telegraphists, commenced in 1963, was continued this year. The work involves comprehensive clinical and environmental studies.

A survey, undertaken to determine the amount of ink and paper dust in the air of rotary printing departments and whether such dust is injurious to the health of operatives, is proceeding.

Investigative work was undertaken on the exhaust emissions of internal combustion engines and, particularly in view of their increasing use in confined spaces, of engines fuelled with propane. A system for sampling exhaust emissions without water condensation

and loss of water-soluble constituents was designed and constructed. Possible health effects of nitrogen dioxide from propane fuelled trucks is under investigation.

A survey has been initiated into the health of asbestos workers in various industries. Long-term employees will be examined medically, the examinations including chest radiographs, tests of lung function and examination of sputum. Studies of the environmental dust concentration in asbestos mining and processing industries are also being planned.

Parasitology

A long-term study of the epidemiology and control of filariasis in New Guinea, which has been pursued in association with the Department of Public Health for the Territory of Papua and New Guinea over an eight-year period, is now in its final phases. The purpose of this study is to delineate the distribution and incidence of filariasis under differing epidemiological conditions and to indicate the best means of achieving control of the disease. The drug control area was visited in September, 1965, and check blood films indicated that microfilarial indices were still well below those associated with the transmission of clinical filariasis in the area. Data are now available on the effect of different regimens of the drug on microfilaraemia over a period of six years. New Ireland was visited in October, 1965 and two villages were re-surveyed following the use of residual insecticides for 6½ years.

The Australian Government was notified in April, 1965, that trichinosis had been detected in pigs, rats and cats in the North Island of New Zealand. This resulted in the imposition of a quarantine ban on pork products from New Zealand. A survey of rats and cats for trichinosis was commenced in December, 1965. Live rodents have been obtained locally and diaphragms received in preservative from all States. Fifty rodents and nine cats have been examined to date, with negative results.

Preventive Medicine

The long-term investigation of the efficacy of BCG vaccination in the prevention of leprosy, conducted in the Karamui district of New Guinea in association with the Department of Public Health for the Territory of Papua and New Guinea, has now entered its sixth year. A follow-up survey in 1964 gave encouraging but not significant results. A re-survey of the entire Karamui population will be made in October, 1966, when an evaluation will be made of BCG as a prophylactic in leprosy, and the relationship between goitre and susceptibility to leprosy investigated.

A survey of the prevalence of smallpox vaccination in New South Wales has been completed by Dr. G. C. Scott and a paper is in preparation. This survey revealed that in some metropolitan hospitals, the proportion of nursing staff which had received protection is less than 30 per cent, a figure which must be increased for the safety of the population from the spread of smallpox due to imported modified cases, which may be unrecognised on admission to hospital. The estimated prevalence of smallpox vaccination among the Australian-born female population of New South Wales ranges from slightly less than 50 per cent in the northern and eastern suburbs of Sydney to less than 8 per cent in some rural areas.

A study of the certified cause of death of cancer patients is in progress. The aim of this is to determine to what extent mortality statistics are representative of the prevalence of tumours of the lung and female genital organs.

An epidemiological study of gynaecological cancer, based on information provided by the New South Wales Gynaecological Cancer Registry, is nearing completion.

A study is being carried out in the Fairfield (New South Wales) area, in association with Dr. S. J. Krister of the New South Wales Health Department, to determine the immunization experience of infants born in 1964, and the social and educational characteristics of their mothers. In addition, an attempt is being made to evaluate the relative effectiveness of two separate educational campaigns conducted in Fairfield by the New South Wales Health Department in 1964 and 1965. Over 400 mothers have been interviewed to date.

Records of the inquests into all cases of drowning which occurred in the Sydney metropolitan area over a three-year period were examined to determine the descriptive epidemiology of such accidents and to gain greater knowledge relating to their prevention. A report of this study has been submitted for publication.

A survey of traffic accidents in country areas of four Australian States is being conducted by the Traffic Injury Committee of the National Health and Medical Research Council. Information on over 250 accidents has now been obtained, and the survey will continue until mid-1967. A medical officer of the School of Public Health and Tropical Medicine has

been appointed to act as central receiving officer for these reports, and will design code sheets and supervise the analysis of the data, which will be performed with the assistance of the C.S.I.R.O. Computing Section.

A study, based on a mailed questionnaire to all practising doctors in the Sydney metropolitan area, has been designed to assess the incidence of venereal diseases during the calendar year 1965. Information regarding numbers of cases by diagnosis, sex, age groups, &c., were requested and doctors were asked their opinion regarding the acceptance of contact-tracing facilities. Analysis will be made with the assistance of the C.S.I.R.O. Computing Section.

An account of the disabilities and emergencies associated with their ailment and the comprehensive medical and social care of haemophilia patients, involving, apart from organized medical treatment, problems of family indoctrination, education and employment, is beset with many difficulties. In 1961 a medical and social study of patients in New South Wales was published by Dr. C. B. Kerr and Miss E. M. Davidson of the Department of Medicine, University of Sydney, with the aim of providing information on which the long-term care of patients could be based. A survey by the same workers is now being undertaken to follow-up the progress of the patients throughout the State who were previously studied, in order to judge the effectiveness of various remedial measures over the past five years.

The analysis and recording of previous genetical researches for a monograph on human X-linked disease is being undertaken.

Radiation Biology

Investigations into restoration of immune response following whole body irradiation, cytogenetic repopulation studies of irradiated mice and prevention of radiation-induced leukaemia were carried out during the year.

In the field of human leukaemia an extra small acrocentric chromosome was observed in a case of acute monocytic leukaemia. This unusual finding was published, since it is possible the leukaemia was radiation induced. Leukaemic cases continue to be referred for chromosome analysis, especially to aid in the differential diagnosis of chronic myeloid leukaemia.

Tropical Medicine

Studies on new depot antimalarial drugs, noted in the 1964-65 Report, have been completed. A single intramuscular injection of the substance CI-564 was found to give much the same protection as CI-501. The results of these studies on depot antimalarials are being prepared for publication.

An annotated bibliography of publications on the health of Australian Aborigines has been issued to interested workers. This has already resulted in the access of a number of new references and it is hoped that the bibliography will be published as a book.

A statistical study is in progress on the mortality, morbidity and other aspects of the health of Australian Aborigines. This work is being carried out in association with the Social Science Research Council Project on Aborigines, one medical officer being engaged in this full-time.

A study of a rural Aboriginal community in New South Wales has been commenced. The first stage of this is well advanced and consists of identification of the Aborigines and interviews to obtain relevant information. This work has been done by an anthropologist. Later it is proposed to examine the health of these people and relate it to economic and social status.

Consultative and Advisory Services

The School continued to provide consultative services in its special subjects to various Commonwealth and State Departments, health authorities and institutions. Staff members served on a wide range of official bodies devoted to health or science and as honorary consultants to hospitals and other institutions.

INSTITUTE OF CHILD HEALTH

The work of the Institute of Child Health is developing in three general directions: an increasing involvement in national and international advisory services related to child health and disease; a demonstration of the ways in which psychological adjustment to modern life can be assisted both individually by the medical profession and generally by society; and attention to problems of certain specific illnesses in childhood.

Detailed plans have been prepared with the authority of the Australian Universities Commission for a laboratory and office block at the Institute. Although there has been some delay in granting permission for sending out the tenders, it is anticipated that construction could be completed in 1967.

Advisory Services

The Director and officers of the Institute are members of a number of national and international bodies concerned with child health. In addition, a number of lectures and addresses on this subject were given during the year.

The Director was unanimously elected to succeed Professor G. Fanconi of Zurich as Secretary-General of the International Paediatric Association, the professional body to which paediatricians throughout the major part of the world belong through their national paediatric societies. He was also unanimously elected to succeed Mr. Justice le Gay Brereton as Chairman of the Child Welfare Advisory Council of New South Wales. This is a statutory body which advises the State Government on matters pertaining to child welfare.

Child Psychiatry

The Psychiatric Section has continued to concern itself with the teaching of child psychiatry to the paediatric students at the Royal Alexandra Hospital for Children. This consists of the demonstration of individual cases to students, regular weekly tutorials, and fortnightly clinico-social discussions.

Although the year started off with high expectations with the appointment of a full-time psychiatric social worker, some difficulties resulted from inadequate and inconvenient accommodation. This work has been further hindered, unfortunately, by the retirement of the psychiatric social worker in March, 1966.

At the post-graduate level, the Psychiatric Section has held regular weekly tutorials for D.P.M. students and the Associate Professor of Child Psychiatry has supervised the work of two psychiatric post-graduates at the Children's Hospital.

Apart from lectures to medical students, he has also given lectures in child psychiatry to students in the Social Work Department.

Illnesses in Childhood

A study of vitamin D refractory rickets was carried out during the year. Twenty-eight individuals with this disease have been extensively reviewed, with attention particularly directed to the natural history of the disease and the value of surgery and high dosage of vitamin D. The results are at present under analysis in preparation for publication.

The association of chronic urinary infections with vesico-ureteric reflux has been known for some time and its presence confirmed in a large number of the patients under study. Follow-up radiological examinations of children with this abnormality demonstrated originally have shown its disappearance two or three years later in a number of patients whose infection has been completely controlled during this time.

Dr. Dawson has continued to assist Dr. C. W. G. Lee in the controlled trial of treatment of leukaemia, which commenced in May, 1963 on a nation-wide basis, under the auspices of the Australian Cancer Society. The work entails co-operation with Dr. Lee at bi-weekly clinics, where currently 17 patients are seen, the keeping of written and graphical records in the required format, discussion of treatment with special references to avoiding loss of patients from the survey by inadvertent departure from protocol, and the guidance of relieving physicians during any absence of the principal investigator.

During July, 1965, a final visit was made to Tasmania to make a final review of the effects of iodised prophylaxis in school children over a period of 15 years. The full account of the goitre research in Tasmania is now being prepared for publication.

The progress of twenty-two children with the nephrotic syndrome is being studied in conjunction with their long-term supervision. The value of corticosteroids in control of this disease and their side effects, particularly in regard to growth suppression, are being evaluated.

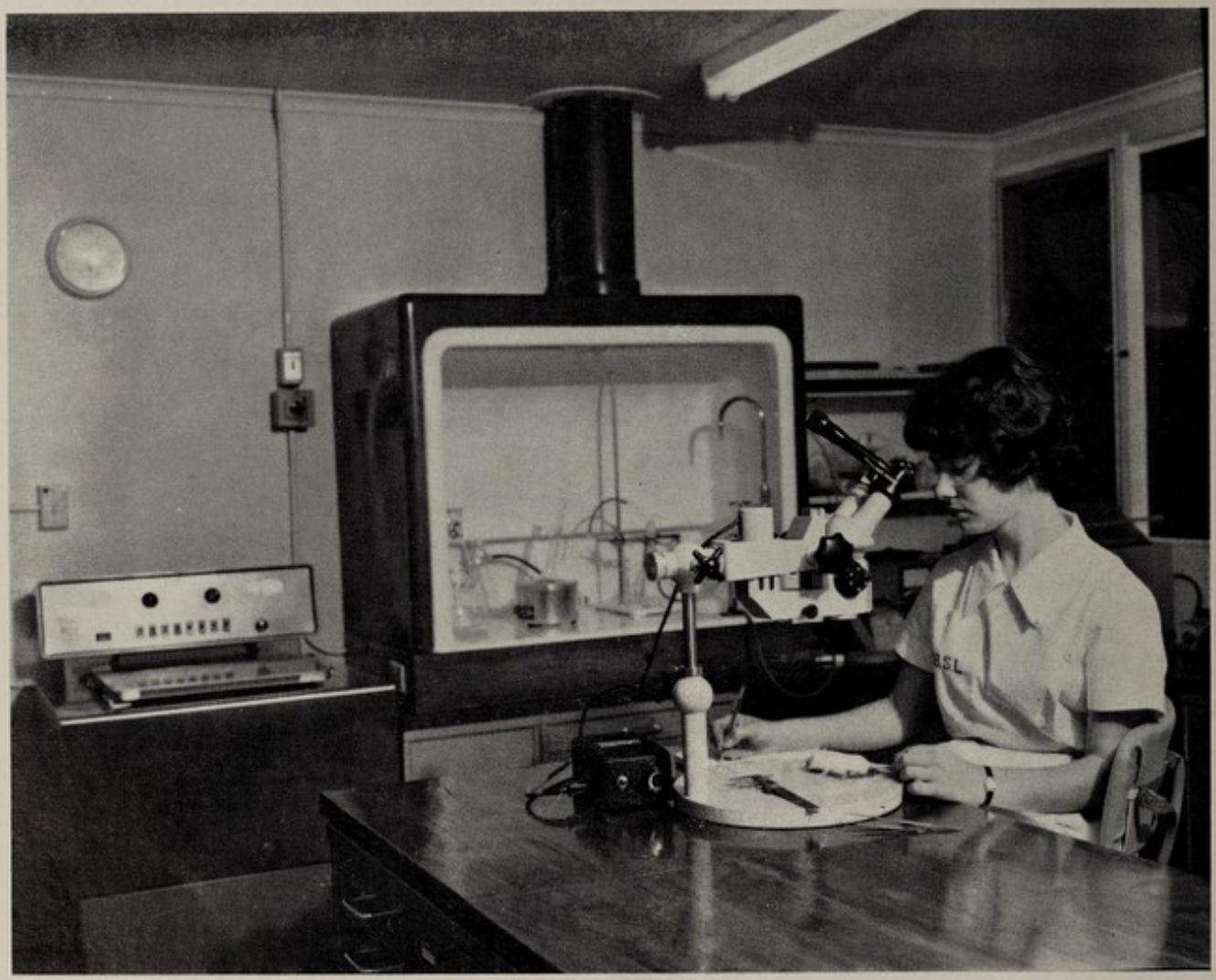
The study of chronic urinary tract infections in childhood was followed, with emphasis on the effect of prolonged chemotherapy on the incidence of clinical recurrences.

Children in N.T. and A.C.T.

Associate Professor Katz visited Darwin from 5th to 12th February, 1966, to advise on child psychiatric cases to the Darwin Hospital Social Welfare Department and general practitioners in the town. He also lectured to various public bodies in Darwin.

During November, 1965, the Northern Territory was visited by Dr. F. W. Clements to conduct an In-Service Training Course in Maternal and Child Health for nurses. The opportunity was taken to follow up the studies made at Oenpelli Mission Station of the factors affecting the growth and nutritional status of Aboriginal children.

Regular visits were made to Canberra by Associate Professor J. Katz in connection with the establishment of a Canberra Child Guidance Clinic. At the beginning of this year suitable premises were obtained for the Clinic and a full-time clinical psychologist appointed. A social worker was appointed in June, 1966 and it is expected that the work of the Clinic will proceed satisfactorily.



Testing at National Biological Standards Laboratory.

NATIONAL BIOLOGICAL STANDARDS LABORATORY

The Therapeutic Goods Act, which repeals the Therapeutic Substances Act, received the Royal Assent on 24th May, 1966, and will come into operation on a date to be fixed by proclamation. This new Act, while substantially the same as the Therapeutic Substances Act, will enable the Minister to prescribe standards for containers in cases where these can affect the efficacy of the product. The Minister may also change, *in toto*, standards set down in the British Pharmacopoeia or the British Pharmaceutical Codex where they are found to be inadequate. In the previous Act, these monographs could only be modified. The new Act will also provide standards for veterinary products, by specifying the British Veterinary Codex as the normal standard, in the same manner as the British Pharmacopoeia and British Pharmaceutical Codex are recognised as providing standards for human use. As in the past, no standard will be introduced or varied without prior consultation with the pharmaceutical manufacturing industry.

Plans for the new laboratory in West Deakin, Canberra, have now been developed to a stage where they are almost ready for consideration by the Parliamentary Works Committee. In the meantime, to meet existing demands, particularly in relation to the testing of Sabin vaccine, extensions have been carried out for the Viral Products Section, which is located in the Commonwealth Serum Laboratories' grounds in Parkville, Victoria. Rented premises have been obtained in Dickson, Canberra, to house the workshop and stores sections which were operating under extremely crowded conditions in the Australian National University building at Acton. Lack of suitable accommodation is still a major problem which will not be overcome until the proposed building at West Deakin has been erected.

The Therapeutic Substances Standards Committee met once during the year and sub-committees, set up to consider specific problems relating to radioactive isotopes with a medical use and the use of bactericides in eye preparations, also each met on one occasion. The parent Committee considered matters relating to labelling, general requirements for capsules and tablets, particulate matter in intravenous fluids, requirements for radioactive isotopes, colouring of tablets, twelve draft monographs for pharmaceutical preparations, over-age in vitamin preparations and general requirements for plastic containers for pharmaceuticals. Most of the matters considered were dealt with to finality, including the draft monographs. The two sub-committees will probably require one more meeting each before the parent Committee can finalize the matters under consideration.

The National Biological Standards Laboratory is now in a position to test surgical dressings, sutures, &c. A laboratory has been set up in the Australian Institute of Anatomy to carry out the necessary chemical and physical tests on these products and a chemist, well experienced in the field of textile testing, has been recruited to carry out this work.

Research has continued to be an integral part of the Laboratory's activities, as has the preclinical evaluation of new drugs.

Sampling under the Therapeutic Substances Act and the National Health Act continued at approximately the same rate as last year, but sampling for Commonwealth and State Departments and instrumentalities has increased. The Public Service Board has recently approved an increase in staff positions for this work.

The more important activities of the various sections of the Laboratory are given below and relevant statistics in relation to tests undertaken appear in Tables 54 and 55 on page 94.

Antibiotics

The Antibiotics Section is now working to optimum capacity and is in the process of testing at least once annually each antibiotic listed as a pharmaceutical benefit. This has been possible because computer techniques are being used to process biological assay data. Sterility testing for other sections of the Laboratory increased by some 100 tests and a

systematic examination of all eye preparations on the pharmaceutical benefits list has been carried out.

Bacterial Products

The Bacterial Products Section is now in a position to carry out sampling and testing of bacterial vaccines. Two new laboratories have been provided for its use and necessary equipment has been received. Work was held up earlier in the year because three of the five graduate positions in the section were vacant. However, this situation has recently been remedied.

During the year, investigations were completed on the use of spore strips to check the sterilization of radioactive material and a method was developed for testing the efficacy of antibacterial preservatives used in eye drops and parenteral preparations.

Endocrine Products

An investigation into a wasting syndrome in experimental animals was carried out and it was established that the disease was due to excessively high levels of fluorine in the pelleted diet given to these animals. This section has been invited to take part in an international collaborative assay of heparin for W.H.O.

Good progress was made during the year in sampling and analysis of insulin preparations, but infections in laboratory animals created a problem in obtaining accurate results from corticotrophin assays.

Viral Products

Improved techniques for assaying the potency of oral attenuated (Sabin) poliomyelitis vaccines were perfected during the year. Modifications of these techniques will enable the potencies of the individual components of trivalent vaccines to be determined. A project is also being undertaken to improve methods of safety testing of this vaccine. Improved methods for testing some veterinary vaccines have been developed and the section has also collaborated with State veterinary authorities on a project connected with infectious laryngotracheitis virus.

Pharmaceutical Chemistry

Draft monographs for particulate matter in intravenous fluids were prepared and circulated to the pharmaceutical industry. Work is continuing on the preparation of specifications for plastic containers used for pharmaceuticals. Draft standards for a number of steroids were prepared and approved by the Therapeutic Substances Standards Committee.

Pharmacology

Preclinical evaluation of new drugs, which is undertaken by the Pharmacology Section, has increased considerably over the past 12 months and steps are being taken to streamline procedures in an effort to meet the increased volume of work.

Routine testing has been carried out over the year and all commitments were met in relation to testing for other sections.

COMMONWEALTH ACOUSTIC LABORATORIES

The most notable development at the Commonwealth Acoustic Laboratories during 1965-66 was the extension of the research sections of the Central Laboratories. The creation of a Physiological Section, senior positions in the Ultrasonic and Acoustic and Electroacoustic Sections and three additional positions in the Audiology and Psychoacoustic Sections will considerably broaden the scope of the research activities.

Clinical audiological services were extended with the completion of laboratories at Newcastle and Lismore, and the commencement of construction of a new laboratory at Launceston. Additional psychologists were obtained to staff these laboratories and to handle the steadily increasing numbers of hearing tests and hearing aid fittings.

From the commencement of the new financial year a growing proportion of hearing aids fitted will comprise the new Calaid " E " ear level hearing aid which will be issued to those children and repatriation patients who are able to use it. Production of this hearing aid was commenced in June, 1966.

Clinical Audiology and Psychology

Audiological services now extend to 12 country centres throughout Australia in all States except South Australia and Western Australia. Periodic visits are also made to the Territory of Papua and New Guinea by the Officer-in-Charge of the Queensland Laboratory. The Officer-in-Charge of the South Australian Laboratory visits Darwin and Alice Springs three times a year and co-operates with the school medical service in the Northern Territory in conducting tests among children and adolescents.

During the year the staff structure of psychologists within the Laboratories was determined. This meant a considerable increase in psychological staff, and an intensive in-service training for the new psychological staff was carried out.

Hearing Aids and Hearing Conservation

Development of the Calaid " E " has continued throughout this year and modifications to the design will lead to a greater acceptance of the instrument by a larger range of people than was hitherto thought likely. Field trials with this aid have shown its many advantages over the conventional aid, which was worn on the body.

Continued progress in bringing more hearing conservation schemes into existence has been made throughout 1965-66. Work with the Armed Services is well developed, and each Service has an extensive hearing conservation scheme in operation, using audiometers supplied on loan and maintained and calibrated by the Laboratories.

School health services and school medical services in the various States continued to expand their screening facilities and were assisted by the Laboratories in the provision and maintenance of suitable screening audiometers. There are now 231 audiometers on loan for screening purposes and approximately 300,000 tests were carried out during the year using this equipment.

Engineering

During 1965-66 the Engineering Section supervised the completion of laboratories at Newcastle and Lismore. Construction began on new laboratories at Melbourne, Hobart and Launceston while sites were selected and preliminary planning done for proposed new laboratories in Adelaide and Wollongong. As each of these laboratories presents its own unique problems, close co-operation with the Department of Works was needed to ensure a satisfactory result.

Equipment for use in these laboratories has been designed and manufactured or purchased to take full advantage of the improved facilities.

Although construction and supply problems associated with the production of the Calaid " E " hearing aid have dominated the resources of this section, production of the existing Calaid " T " continues unabated.

Advice has been given to many branches of the Armed Services, Departments and instrumentalities on noise reduction and planning of facilities to avoid annoyance or preserve hearing.

The Commonwealth Department of Works obtained advice on acoustical aspects of many buildings it is constructing for other Departments and facilities which the Department operates. Visits were made to Department of Supply establishments at Lithgow, Footscray and Maribyrnong to assist with problems caused by increased production and to design test facilities for new and much noisier weapons.

A noise survey was undertaken at the Ford plant at Bendigo to serve as a model for programmes of noise reduction for hearing conservation in the automobile manufacturing industry.

RESEARCH

Acoustics and Electroacoustics

The mechanism causing instability and consequent reduction in performance of in-the-ear hearing aids has been studied. The minimum acoustic and mechanical isolations between the earpiece and microphone of in-the-ear hearing aids have been quantified for optimum operating conditions. Methods by which these isolations can be achieved in practical hearing aids are being investigated.

The real-ear response of subminiature earpieces and the acoustical characteristics of microphones mounted in a hearing aid on the ear have been investigated. The results are being used in an effort to improve the efficiency of in-the-ear hearing aids.

Investigations of noise levels expected from the operation of F111 aircraft have been completed for R.A.A.F. airbases. These investigations were used to determine suitable sites for ground running installations, and training and operational facilities required by this aircraft.

Equipment previously developed for the measurement of shock waves in air has been used to measure blast levels from seismic surveys carried out by the New South Wales Department of Mines. The possibility of community annoyance from these surveys near residential areas was estimated from the measurements and found to be negligible.

A study of methods of monitoring foetal heart rate commenced in conjunction with the School of Obstetrics and Gynaecology at the University of New South Wales. This work forms part of an investigation of auscultation techniques, including methods of calibration of instrumentation.

Audiology

Research has continued in the application of the encephalograph to audiological testing. In particular, the relationship between intensity of the sound stimulus and the time pattern of the evoked cortical response has been investigated in preparation for the projected use of this technique in testing babies' hearing.

Other methods of testing babies' hearing were also the subject of investigation in collaboration with the Psychoacoustics Section. The aim of this study, which is continuing, is to find the most appropriate sounds for use in testing six-month old babies. Traditionally, noise-making toys have been used, but it was found that certain electronically-produced sounds are much more effective in eliciting responses in babies. These sounds have been recorded on tape and form the basis of what is hoped to be an effective screening procedure to identify deafness in young babies.

Studies of the effects on hearing of ultrasonic therapy for Meniere's disease are continuing. A comprehensive battery of audiological tests is being used on each patient prior to the operation and at follow-up.

Another important area of research concerns diagnostic audiological testing for certain retrocochlear disorders. One test developed, measures the ability of the central nervous system to put together speech material which has been filtered so that some frequency components are presented to one ear, some to the other. Such a binaural synthesis test may be used to diagnose lesions of the auditory tract in the lower brain stem.

Medical Ultrasonics

A new ultrasonic irradiation technique has been developed for the treatment of Meniere's disease. In this technique a miniature transducer is inserted into the middle ear and the irradiation applied to the inner ear via the round window. This technique greatly simplifies the surgical procedure, eliminates a number of risks associated with the old technique and is expected to produce better results. A number of patients have been treated using this technique and further clinical trials are being carried out. The Chief Physicist (Ultrasonics) has been invited to describe this technique at an International Symposium on the Surgical Applications of Ultrasound to be held in September, 1966 at Lyon, France.

The CAL abdominal echoscope is being regularly used in clinical diagnostic applications at the Royal Hospital for Women. The equipment is being used in applications such as identification of twins, diagnosis by hydatidiform mole, examination of tumours, determination of presentation and the localization of the placenta. The CAL ophthalmological echoscope at the Royal Prince Alfred Hospital is also being used regularly for the examination of various conditions, such as retinal detachment, retrobulbar investigations and foreign body localization.

Clinical trials to determine the application of ultrasound in cardiology are being carried out at the Prince Henry Hospital. At present the equipment is being used mostly in the study of the mitral valve and the diagnosis of pericardial effusion.

An echoscope for the examination of the breast has now been constructed and will be shortly installed at the Royal North Shore Hospital. Research is also being carried out on the design of a very high intensity transducer, on the evaluation of the union of fractures in weight bearing bones and on the diagnosis of degeneration pulpitis in dentistry.

At the invitation of the New Zealand Otolarynogological Society, the Chief Physicist (Ultrasonics) attended a conference in Christchurch and presented a paper on the ultrasonic treatment of Meniere's disease.

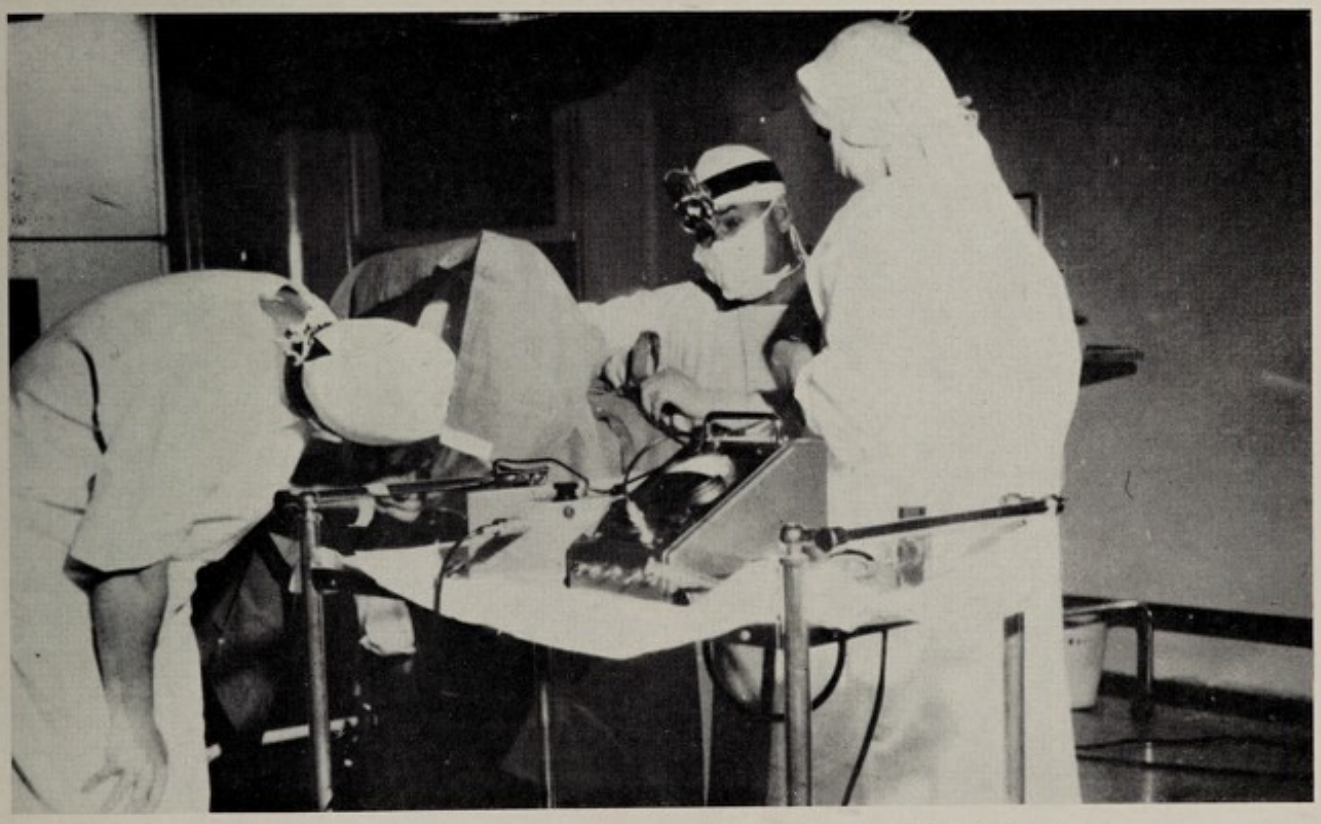
A new project has been started with the School of Veterinary Science, University of Queensland, on the ultrasonic estimation of lean and fat in cattle. This application is of great value in the grading and breeding of animals.

Psychoacoustics

Investigations have continued on the physical parameters determining the loudness and audibility of explosive sounds. New apparatus developed for this purpose is now in use and two major experiments will be concluded in the next few months.

An unexpected possible application of this apparatus was found to be as a testing device in the detection of deafness in six-month old babies.

Controlled experimental investigations have been done on the effects on troops of the noise from armoured personnel carriers. This work was done in conjunction with the Army Design Establishment.



An ultrasonic irradiation of the inner ear for treatment of Meniere's disease.

COMMONWEALTH X-RAY AND RADIUM LABORATORY

An important development during the year was the appointment of the Director of the Commonwealth X-Ray and Radium Laboratory under the Weights and Measures (National Standards) Act as an agent authorized to establish and maintain national standards for the measurement, in terms of curies, of the "activity" of radioactive substances and for the measurement, in terms of roentgen, of exposure to X-rays.

With this authorization, the provision of new equipment became urgently necessary. A new X-ray generator, which will operate at voltages up to 300,000 volts with a tube current of 15 milliamps was installed. This generator replaces one of much lower capacity which has been used for the past 30 years.

Commonwealth Radium

The Laboratory continued to discharge its responsibility with respect to the care and maintenance of the Commonwealth radium issued on loan to approved hospitals and research centres. The re-mounting of some of this radium in containers more appropriate to modern treatment techniques has continued. In addition, radium containers previously issued on loan have been progressively recalled for inspection and testing to ensure that they meet relevant standards.

The Laboratory provides radon for use in all States except New South Wales and Queensland; in those States radon services are maintained by State-financed establishments using radium made available on loan from the Commonwealth without charge. The demand for radon continues despite some "competition" from certain radioactive isotopes which could be used as substitutes.

The Laboratory manufactures all the gold tubing used for radon in Australia and also supplies it to the radon service in New Zealand. During the year 1,355 feet of gold tubing were constructed.

Diagnostic Radiology

The Laboratory has continued to provide an advisory service to hospital authorities and to other Government Departments with respect to the technical aspects of diagnostic X-ray equipment including that used by the States under the Tuberculosis Arrangement between the Commonwealth and the States.

Under a continuing arrangement, the Laboratory provides a service to orthodontists by maintaining specially-designed equipment for taking skull radiographs of a particular type. The same equipment is made available also to the Growth Unit of the Anatomy Department, University of Melbourne, in a co-operative, long-term investigation on the sequential developments of skull growth.

Radiation Dosimetry

As part of the programme relating to the provision of national radiation standards, the existing free-air chamber at the Laboratory is to be certified as the Commonwealth standard of exposure in the intermediate range of X-ray energy. A smaller free-air chamber has been designed and built in the Laboratory to permit investigation of problems arising in the measurement of X-rays of low energy, with a view to extending the range of accurate measurement to X-rays of this type, and ultimately to establishing a corresponding national standard. Work is also proceeding on the measurement of X-rays of very high energy, again with a view to establishing a suitable national standard of measurement. As part of this work, consideration is being given to the installation of a small cobalt-60 unit to provide a source of one million volt X-rays.

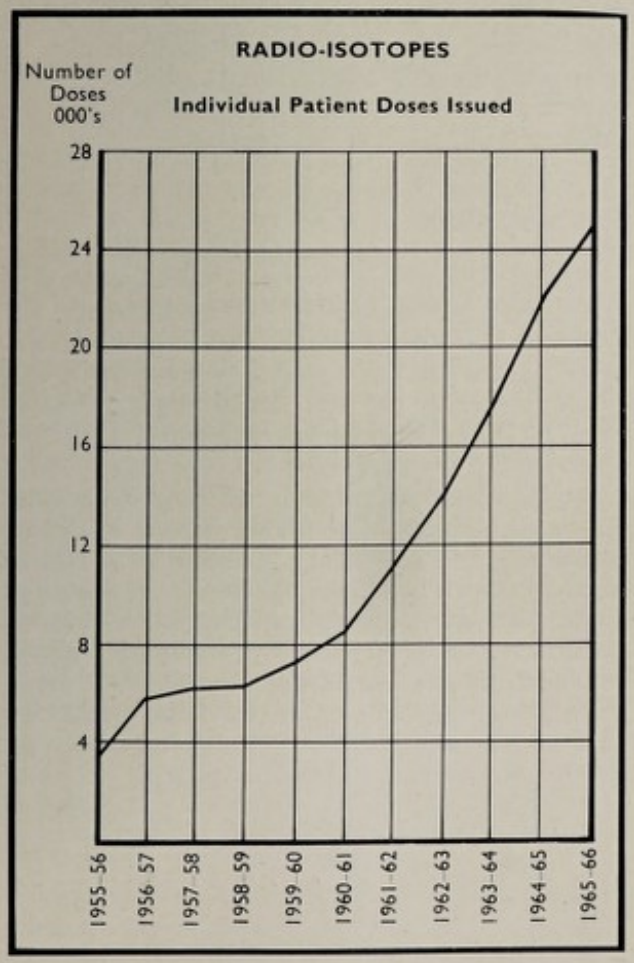
Concurrently with these new developments, the routine services relating to measurement of radiation output and associated characteristics of X-ray equipment, used for therapeutic purposes in hospitals and in private medical practices, have been maintained.

Radio-isotopes

The Laboratory provides an advisory service on physical aspects, including radiation safety, of the use of radio-isotopes in medical diagnosis and treatment and medical research. It also acts as the central procurement agency for purchasing and distributing all radio-isotopes used in Australia for these purposes.

During the year, 2,151 shipments of radio-isotopes were procured by the Laboratory for medical use. This represents an increase of 26 per cent over the number of shipments for the previous twelve months. Of the total, 156 shipments were procured from the Australian Atomic Energy Commission, compared with 83 shipments in the previous twelve months. The remainder of the shipments were procured from overseas sources, which included the United Kingdom, United States of America, Holland, India and France. The total shipments included 44 different radio-isotopes in many different forms.

In 1965-66, 24,727 individual patient doses of radio-isotopes were issued, an increase of 10 per cent over the corresponding number for the previous year. The accompanying graph shows the growth in the demand for this service in recent years. These doses are made available without charge to all classes of patient through the National Welfare Fund.



To meet the responsibilities of the Laboratory arising from its commitments under the National Standards legislation, work will proceed on the setting-up of equipment for the precise measurement of radio-isotopes in terms of the curie, with a view to establishing suitable national standards of measurement.

Protection Against Ionizing Radiation

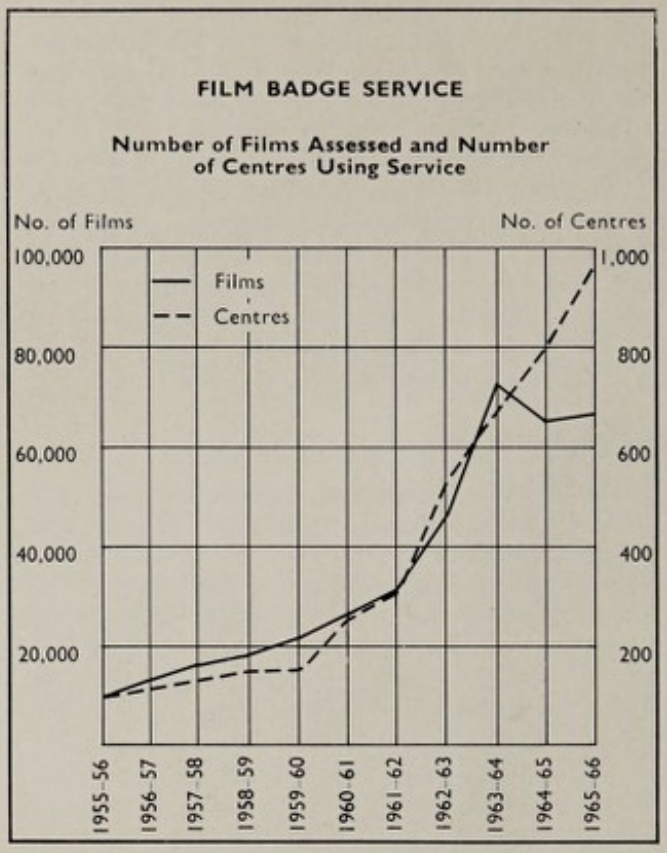
Although the legislative control in Australia of the use of ionizing radiations from irradiating apparatus and radioactive substances is mainly the responsibility of the States, the Laboratory co-operates with State authorities and also maintains its own advisory function in this field. Technical assistance available from the Laboratory ranges from the detailed design of radiation protective shielding in X-ray departments and radio-isotope laboratories to the monitoring of radiation levels and the assessment of proposed safety procedures.

During the year assistance was given to the Department of Shipping and Transport with respect to the carriage by ship of large amounts of radioactive material, and to the Postmaster-General's Department in drafting suitable regulations governing the transit of radioactive materials through the post.

Developments during the year included investigations into the technique and possible applications of thermoluminescent dosimetry and into the measurement of the power density of the intense beams of "microwave" radiation emitted by radar installations; such beams may present a health hazard to those exposed to them.

Film Badge Service

The film badge service continues to expand. During the year 1965-66, 66,528 individual monitoring films were assessed and reported on, compared with 65,299 for the previous year. The number of centres (hospitals, private medical and dental practitioners, research departments, industrial organizations, &c.) registered with the service rose from 815 at the beginning of the year to 956 at the end. The accompanying graph shows the growth both in the number of films assessed and in the number of centres registered in the service in recent years.



The increasing demand for the film badge service has made necessary a review of its operation. As space and staff are limited, it has become necessary to examine the possibility of introducing automatic methods of handling and processing the films, of employing modern computer techniques to their assessment, and to the recording of the results obtained.

Radiochemistry and "Low-Level" Measurements

As part of a continuing programme of monitoring global fall-out from past nuclear weapon tests, radio-assays were made during the year of public water supplies for strontium-90 and caesium-137, of liquid milk for caesium-137, of ion-exchange fall-out collectors for caesium-137, strontium-89 and strontium-90, and of air filter samples for strontium-89, strontium-90, caesium-137 and cerium-144. In addition, naturally occurring radium D (lead-210) has been determined in relevant samples. In the twelve months ended 30th June, 1966, 1,251 samples have been chemically prepared and subjected to radio-assay.

The continuing programme of monitoring outlined above is supplemented during periods of actual nuclear weapon testing in the atmosphere. To this end the Laboratory has undertaken the detailed planning of the measurements it will carry out for the Atomic Weapons Tests Safety Committee, and through it, for the National Radiation Advisory Committee, during French nuclear weapon tests in the South Pacific Ocean.

A programme of investigations is being undertaken in the field of assay of radioactive substances in environmental samples and, during the year, these have included the assay of plutonium in air, rainwater, and biological material, the assay of radium D in human bone and of caesium-137 in meat. A series of computer programmes has been put into effect to facilitate the complex calculation of results and to ensure their reliability.

Technical Services

In fulfilling its many functions the Laboratory has need of a wide range of mechanical and electronic equipment. Much of the specialized scientific equipment is constructed and maintained by the Technical Services Section of the Laboratory. The design and development of new equipment is usually made a joint project between this Section of the Laboratory and the officers requiring the equipment.

Overseas Visits

The Director of the Laboratory was the Australian representative at the 15th and 16th Sessions in Geneva and New York, respectively, of the United Nations Scientific Committee on the Effects of Atomic Radiation. He was Chairman of the Committee for its 14th and 15th Sessions.

At the invitation of the Department of External Affairs, Mr. D. J. Grant, a Senior Technical Officer of the Laboratory, visited Kuala Lumpur. The purpose of the visit was to give on-site technical advice to the Dean of the Faculty of Medicine, University of Malaya, in deciding the best disposition of the large quantity of X-ray equipment being presented to the University's teaching hospital by Australia, under the Colombo Plan.

COMMONWEALTH BUREAU OF DENTAL STANDARDS

The Commonwealth Bureau of Dental Standards has continued to carry out the functions appointed to it under the terms of the National Health Act. These include teaching, research and advisory services in the field of dental materials and instruments and the concomitant testing programme that is necessary to fulfil these functions adequately. The work of the Bureau may be considered under four major headings—standards, research, testing and consultation.

Standards for Dental Materials

The Bureau has played the major role in the development of recognized Australian standards, now covering some 30 groups of dental materials, instruments and accessories. Assistance has also been given in the allied fields involving medical syringes and surgical implants. When completed and accepted, the standards are published by the Standards Association of Australia, which has set up the appropriate committees for the purpose, and which provides the secretarial assistance.

One of the major uses of the standards is connected with the Australian Dental Association programme of certified dental products co-ordinated by its Dental Materials Board. The numerous accredited materials grouped according to the appropriate Australian standard are published in the official List of Certified Products, which represents a convenient and reliable buying guide for dentists, dental laboratories and the purchasing departments of public instrumentalities.

The Australian dental standards are used overseas in considering other national and international specifications. The New Zealand Dental Association has now undertaken a certified materials programme and any products accredited in Australia and available in New Zealand are automatically accepted there. The Bureau has been of direct assistance in this programme as well as in the development of international dental standards through the Fédération Dentaire Internationale and the International Organization for Standardization.

Proposals for amendments to the local specifications for modelling wax, alginate impression material, and cobalt-chromium casting alloy have been submitted to the Standards Association of Australia.

Research

In the preparation of various dental appliances it is important to have a hard model, cast or die which is an exact reproduction of the tooth and/or surrounding tissues. This is often obtained by pouring a calcined gypsum mixture into an impression taken in the mouth with an alginate material. Some combinations of the various gypsum and alginate products on the market give soft or furry surfaces and investigations have established, in part, the reasons for this disability and how it may be overcome.

The work on the properties of dental X-ray films has been completed, except for the problem of resolution, and recommendations are being made in regard to amending Australian Standard T21 which applies to this item. It is of general interest that the Fédération Dentaire Internationale Commission on Dental Materials, Instruments, Equipment and Therapeutics, which includes a member from the Bureau, has been preparing a comprehensive set of "Rules for Radiation Hygiene". At each drafting stage improvements have been suggested from Australia and adopted. The advice from the Commonwealth X-ray and Radium Laboratory has been particularly helpful in this regard.

Over the past decade there has been a fresh interest in dental porcelain, whether it is processed alone or directly to precious metal alloys. In England, a new type of aluminous porcelain has been developed through the combined research of dentists and ceramists. The laboratory assessment of the quality and performance of porcelains presents many difficulties and testing methods are being investigated and developed by the Bureau for this purpose.

The search for a safe substance that will permanently adhere to the enamel and dentine

of a tooth under oral conditions has still not produced the ideal material, but it has resulted in what appears to be an improvement over the materials in use at present for direct fillings in anterior teeth, namely silicate cement and acrylic resin. The overseas resin has been evaluated at the Bureau as a very promising material, in spite of its lack of adhesion in the presence of moisture, but clinical studies are still required before its place in dentistry can be decided. Following the laboratory investigation, the new product has been released to Australian practitioners.

The efficacy of various cavity liners against the penetration of ions harmful to the tooth is under examination. Casting and testing problems associated with cobalt-chromium alloys still occupy a considerable part of the time devoted to research work. Investigations have also been carried out on the impact strength of cranial prostheses compared with that of equivalent portions of the human skull, a method of producing harder gypsum casts, the reliability of cement shade guides and the transverse strength of denture base resin.

Testing

Many tests have been carried out for distributors of dental products, manufacturers here and abroad, the Australian Dental Association and others, the majority of these being on a testing fee basis. Several series of multiple tests concerned the comparative quality of steel burrs of European manufacture.

An analysis of the samples tested and reported upon is given according to the nature of the dental or surgical product:—

Mineral products	22
Cements	20
Waxes and impression materials	28
Synthetic resins	26
Metals and alloys	48
Instruments and X-ray films	43
Surgical and therapeutic materials	25
Total	212

Testing techniques are under continual scrutiny in order to improve objectivity, reproducibility and clinical significance.

Consultative and Advisory Service

Teaching and demonstrating the properties and use of dental materials at undergraduate, graduate and auxiliary personnel levels has continued. The series of eight "Practical Guides" published by the Bureau has been particularly useful, and these have been translated into Spanish and Japanese for the benefit of practising dentists in other countries.

Lectures have been given by members of the staff to societies and groups, including meetings in Brisbane, Mildura and Yallourn, and exhibits prepared for conferences in Hobart, Brisbane and Melbourne. Various groups of dentists, dental nurses, laboratory owners and dental students have been conducted through the Bureau.

As usual, numerous requests for information and advice have been handled and visitors have been welcomed from New Zealand, Singapore, Philippines, Norway, Leichtenstein, Japan and the United States of America. In addition dental graduates from various States have studied dental materials research and testing methods at the Bureau.

INSTITUTE OF ANATOMY

The most important new work undertaken at the Institute of Anatomy in 1965-66 was the compilation of a comprehensive review of the present status of coronary heart disease as a cause of death in Australia, and of the current theories and practices relating to its causation and prevention. This review which was undertaken in co-operation with Dr. B. Furnass, Consulting Physician, Canberra Community Hospital, was published in the Medical Journal of Australia (see Appendix 2).

An integrative hypothesis was proposed, whereby coronary heart disease may be regarded as a disorder of energy metabolism, in which rates of energy income exceed rates of energy expenditure, under the influence of multiple environmental factors. In terms of the prevention of coronary heart disease, an increase in physical activity, the adoption of more tranquil attitudes of mind, and a decrease of cigarette smoking may prove beneficial. In so far as diet may be involved in the genesis of coronary heart disease, it is maintained that the consumption of smaller meals and the replacement of refined by unrefined carbohydrate may prove to be of greater protective value to the community than any large-scale substitution of animal fat by vegetable oils.

Members of the staff continued to serve on committees and councils requiring expert nutrition contributions. One of these, the Nutrition Committee of the National Health and Medical Research Council, has now completed its revision of the Dietary Allowances for Australians. These have been published by the Council, and an abbreviated version appeared in the Medical Journal of Australia.

The publication every two months of "Food and Nutrition Notes and Reviews" has been continued. The pamphlets "Eat Better for Less" and "Notes on Special Diets for Hospital Purposes" have been revised and reprinted, while "Keep Fit with Food" has been revised.

Museum

Most of the museum activities have been confined to maintaining and cataloguing the various collections held, but work is in progress on a new exhibit illustrating the principles of healthy living.

An illustrated brochure, outlining the collections and displays of the Institute, has been prepared for distribution to visitors.

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL

During the year three sessions of the National Health and Medical Research Council were held. In addition, there were over 80 meetings of the various committees and sub-committees reporting to Council. The 60th Session of Council, which took place at University House, Canberra, on the 29th October, 1965 and the 62nd Session at Parliament House, Adelaide, on 27th May, 1966, were ordinary meetings of the Council. The 61st Session was a special meeting held at the Chancelry of the Australian National University, Canberra on 18th February, 1966 to consider the question of national medical research policy.

Medical Research

The Council has successfully fostered and supported medical research in Australia during the past thirty years and this contribution to national health is considered to be of utmost importance. Medical research has become more extensive and complex and the Council considered the time opportune for a review, not only of the Council arrangements for administering research grants, but also of national medical research policy.

A detailed consideration of the matter by the special 61st Session of Council resulted in the re-forming of the Medical Research Advisory Committee as a smaller committee with a membership including more members of the Council. At the same time three Standing Grants Committees were created to assist with the assessment of research grant applications. This re-organisation will allow both the Council and the Committee to take a wider interest in research and already several substantial investigations on medical research matters have been initiated.

The Commonwealth appropriation to the Medical Research Endowment Fund in 1965-66 was $878,000 and during the year some 110 projects received grants, made in response to applications for financial support for a wide group of research units, ranging from $170,000 for the Walter and Eliza Hall Institute for Medical Research to grants for individual research projects. Other regular activities included the training of research workers, the provision of University scholarships, overseas travel fellowships, and grants to meet publication expenses of scientific work which, unless subsidised in this way, may have gone unrecorded.

A detailed report of the work done with the assistance of grants made under the Medical Research Endowment Act is presented to Parliament annually. Details of grants made from the Medical Research Endowment Fund during 1965-66 are given in Table 59 on page 96.

Postgraduate Medical Education

During the past two years, the Council has assisted the Australian Postgraduate Federation in Medicine and its affiliated committees in the States, in the distribution of a grant from the Wolfson Foundation of the United Kingdom. This grant, totalling $100,000, has been used to improve the facilities available for education, at a postgraduate level, for general practitioners and specialists throughout Australia. It has also been used to assist in meeting the travelling expenses of overseas lecturers, to increase library facilities, to hold a medical conference via international cable between doctors at an Australian hospital and at a hospital in the United States of America, and to begin a survey of the postgraduate educational needs of the country general practitioners.

Additions to Committees

During the year it was found necessary to introduce new sub-committees to provide expert advice on a number of matters being considered by the Council. These new committees will be concerned with the control of experiments in animals, hospital morbidity statistics, food microbiology, international classification of diseases (toxicology) and therapeutic methods.

Dental Health

The Council has for several years recommended the fluoridation of water supplies to reduce dental caries. In order to assist public

authorities in the assessment of the benefits of fluoridation, the Council has drawn up a guide for dental surveys which contains information concerning the design and conduct of surveys, indices for measurement and standard recording methods. The guide also discusses the general principles involved in reaching conclusions from the results obtained.

The Council, recognizing the need for increased dental services in Australia and the fact that there are not enough fully qualified dentists to provide all the dental care and treatment required, considered that a more adequate dental service could be provided by increasing the use of auxiliary personnel. It set out the principles to be followed in training and employing such personnel, including school dental nurses.

Diagnosis of Brucellosis

The Council has drawn attention to the need for uniformity in laboratory methods for the diagnosis of brucellosis. With this end in view recommendations, which conform with those of the World Health Organization, have been made concerning standard reagents, test methods and interpretation. It is expected that, with the establishment of uniformity, the results of tests from different laboratories in Australia will be comparable.

Epidemiology

The Council considered the use of human antitetanus globulin as a prophylactic following injury and gave advice concerning the circumstances under which it should be used. Recommendations were also made concerning the appropriate uses of measles vaccine and influenza vaccine.

For some time past, the Council has been studying the experience of health departments, both in Tasmania and overseas, in the use of the Sabin oral vaccine against poliomyelitis. After careful consideration of the evidence, the Council has recommended that Sabin vaccine is as safe and effective as Salk vaccine and may be used in poliomyelitis immunization campaigns in Australia.

Ethics in Clinical Research

Council has prepared a " Statement on Human Experimentation " for the guidance of the investigator in the clinical field, emphasizing his duty towards the patient. The views of the various professional medical associations and colleges were obtained and, following general agreement, the statement is being published as an appendix to the Report of the 62nd Session.

Food Additives and Food Standards

Further recommendations directed towards uniform food standards have been made by the Council. New standards have been published for canned meat products, coffee preparations, cream and cream products, including ice cream, dried milk products, honey, jam, marmalades and pastry cooks' fillings, spices and condiments, and yoghurt. A number of prescribed methods of analysis of foodstuffs were approved. The Council was also concerned about health risks created by the enclosure of toys in food packages and recommended a standard for such toys.

A full list of food additives approved by the Council is being published as an appendix to the Report of the 62nd Session.

Maternal and Child Health

The Council has carefully considered the model Bill on the Adoption of Children prepared by the Attorney-General's Department, and has made suggestions for complementary regulations concerning the physical and mental fitness of the child for adoption. A recommendation was also made concerning the use of the Guthrie method as a screening test for phenylketonuria. The importance of early detection of phenylketonuria in infants, to ensure proper management and prevent the development of mental retardation, was emphasized. Inquiry has been made into the allocation of space in nurseries for new-born babies and a recommendation adopted.

Medical Research in Aborigines

A conference of Ministers responsible for Aboriginal welfare was held in Adelaide in July, 1965 and resolved unanimously that the medical aspects of research in Aborigines, undertaken as part of the International Biological Programme of the World Health Organization, should be referred to the N.H. & M.R.C Sub-Committee on Medical Research in Aborigines before permission is granted by any of the States for this research.

Medical Statistics

The Eighth Revision of the International Classification of Diseases was adopted by the World Health Assembly in May, 1966. The Council, through its Medical Statistics Committee, has been largely responsible for preparing Australia's comments during the revision conferences prior to the adoption of the Eighth Revision.

With a view to the efficient operation of statistical reporting between Poisons Information Centres and the National Poisons Service, the Council has made recommendations concerning the use and extension of the coding system contained in the Eighth Revision of the International Classification of Diseases. The recommendation will ensure a uniform method of coding for poisons notifications. Council also recommended the adoption of a model recording card for the recording and coding of data in cancer registries. Further progress has been made in the analysis of data obtained in a national morbidity survey and an exhibit will be presented at the Annual Conference of the Australian College of General Practitioners in Adelaide in October, 1966, embodying the more important results of this survey.

A conference on mental health statistics, held in Hobart in October, 1965, adopted recommendations of the N.H. & M.R.C. concerning the classification and coding of mental diseases.

Nutrition

As an appendix to the report of the 60th Session, the Council published a revision of the recommended dietary allowances for Australians, incorporating amendments to the previous allowances published in 1961. These amendments arose from changing conditions and additional information relating to the diet and dietary requirements in Australia. This appendix has now been published as a booklet entitled " Dietary Allowances for Australians."

Occupational Health

The Council recommended standards for the production and sale of paints, and on the lead content of metals used in toy manufacture. Recommendations were also made concerning the relative value of miniature and large X-ray films in the detection of pneumoconiosis. A " Guide to the Safe Handling of Hazardous Materials in the Stevedoring Industry " and a suggested outline of action in " Poisoning by Organophosphorus Compounds " have been adopted and are being issued as booklets.

Radiation Health

The Council reviewed the evidence regarding the question of supplementing the dietary intake of calcium of the Australian population as a measure of prophylaxis against strontium-90 in radioactive fall-out, and recommended that no action was necessary in Australia. A recommendation was also made to conduct an investigation into the apparent shortage of radio-therapists in Australia. The Council approved a " Code of Practice for the Safe Handling of Corpses Containing Radioactive Substances " and an interim statement on the radiological hazards to patients arising from the diagnostic use of X-rays.

Scheduling and Labelling of Poisons

As an appendix to the Report of the 60th Session, the Council published uniform poisons schedules for the guidance of persons drawing up legislation. Further additions have been made to these schedules and recommendations have been made regarding the need for inclusion of simple emergency treatment directions in the labelling of poisonous substances.

Traffic Injury

A report on " Traffic Injury in Brisbane " has been completed and the Council has arranged for its publication. The question of the need for resuscitation apparatus in all ambulances was discussed and it was recommended that the Royal Australian College of Surgeons and its Faculty of Anaesthetists should be consulted on the equipment which is required.

It was noted by the Council that the annual number of deaths from motor vehicle accidents is now nearly three times that from all infectious and parasitic diseases and that such accidents cause half of all cases of paraplegia. The need for a special fund for road safety research was emphasized.

WORLD HEALTH ORGANIZATION

The Nineteenth World Health Assembly was held at Geneva from 3rd to 20th May, 1966. One hundred and fourteen member states and two associate members were represented at the Assembly, in most cases by the Director-General of Health or his equivalent.

The Australian Delegation consisted of Sir William Refshauge, Director-General of Health, as Chief Delegate, and other delegates were Dr. A. Johnson, Chief Medical Officer, Australia House, London and Mr. B. C. Hill, Permanent Representative of Australia to the European Office of the United Nations, Geneva. The alternate delegates were Dr. S. G. Preston, Medical Director, Australian Migration Mission, The Hague, Dr. M. Ryan, Medical Director, Australian Migration Mission, Cologne, and Miss June Barnett, First Secretary, Australian Consulate-General, Geneva. Sir William Refshauge was elected as Chairman of the Committee on Administration, Finance and Legal Matters.

Some of the more important programme matters discussed at the Assembly were the malaria eradication programme, the smallpox eradication programme, the medical research programme, international monitoring of adverse reactions to drugs, and the Eighth Revision of the International Classification of Diseases.

Malaria

By the end of 1965 a total of 885 million people, or 56 per cent of the original malarious population, had entered the maintenance and consolidation phases. A number of countries where malaria exists, many of these being in Africa, had not yet planned for malaria eradication. Some set-backs had occurred in consolidation phase areas, such as Ceylon, Jordan, Iraq, Mexico, Honduras and Guatemala, the main causes being the adoption of less stringent criteria for termination of spraying and the provision of inadequate staff. The Director-General of the World Health Organization indicated that it is necessary to continue research into insecticides and new drugs and to combat malaria parasites resistance to chloroquine and allied drugs.

Australia fully supports the malaria eradication programme, although there is negligible malaria in Australia and most of the cases which have occurred in recent years have been imported. An intensive control programme is in progress in the Territory of Papua and New Guinea.

Smallpox

At the previous World Health Assembly, smallpox eradication was declared to be one of the main objectives of the Organization. The annual notifications of smallpox over the past decade have varied from 47,000 to 80,000 and the annual deaths from 9,800 to 24,500. The greatest number of notifications occur in India, Africa, Pakistan and Indonesia. The Director-General of the World Health Organization reported to the Nineteenth Assembly that global eradication of smallpox is not a realizable goal without a " greatly intensified, well co-ordinated global effort with substantial additional resources ".

The results of successful programmes in Central and South America, South-East Asia, the Middle Eastern countries and North Africa indicate that intensified systematic vaccination programmes using potent vaccines can rapidly eradicate the disease. Technical problems can be overcome, but the main difficulties have resulted from the lack of funds for personnel, vaccine and supplies. Sufficient voluntary contributions have not been made to finance the programme and the Nineteenth Assembly approved the proposal that the costs of a ten-year smallpox eradication programme be included in the regular budget of the Organization. The cost for the first year of operations in 1967 was estimated at US$2,415,000.

Medical Research

The Eighteenth Assembly decided that, as a step for the extension of W.H.O. activities in medical research, the Organization should take action to develop research activities and services in epidemiology, the application of communications science and a system of reference centres. A new Division of Research in Epidemiology and Communications Science

was established by the Nineteenth Assembly to carry out these research functions.

The International Agency for Research in Cancer was set up in 1965 with Australian support. Any member of W.H.O. may become a member of the Agency, provided they are able to contribute scientifically and financially to the work of the Agency. The Agency serves as a means through which participating states and W.H.O., in liaison with the International Union against Cancer and other interested organizations, may collaborate in all phases of cancer research.

International Monitoring of Adverse Reactions to Drugs

The Director-General of W.H.O. reported to the Nineteenth Assembly on a study of the requirements of an international system for collection, analysis and dissemination of information on adverse drug reactions. An offer by the United States of America of data processing facilities was accepted and approval was given for a pilot research project for developing an international system of monitoring adverse drug reactions to be initiated.

In Australia a system of reporting adverse reactions to drugs to a central registry, located in the Therapeutic Substances Branch of this Department in Canberra, has been in operation since August, 1964. Reports received in the registry are evaluated in co-operation with the Australian Drug Evaluation Committee. Recording systems are being developed for participation in the proposed pilot research project under the auspices of W.H.O.

Eighth Revision of the International Classification of Diseases

The International Conference for the Eighth Revision of the International Classification of Diseases was held in Geneva in July, 1965. The Eighth Revision was approved by the Nineteenth Assembly.

General

Other matters considered by the Nineteenth Assembly included the programme and budget estimates for 1967, improved methods for international narcotic drug control, quality control of pharmaceutical preparations and the health aspects of world population problems.

REGIONAL COMMITTEE FOR WESTERN PACIFIC

The Sixteenth Session of the World Health Organization Regional Committee for the Western Pacific was held at Seoul, Korea from 16th to 21st September, 1965.

The Australian delegation was headed by Dr. H. E. Downes, Deputy Director-General of Health, with, as alternate representatives, Dr. Ako Toua, Assistant Medical Officer, Department of Public Health, Territory of Papua and New Guinea, Mr. N. C. K. Evers, Second Secretary, Australian Embassy, Seoul, and Dr. C. J. Ross-Smith, General Secretary, Australian Medical Association.

Fifteen member countries and one non-member country were represented at the meeting, with delegates present also from the United Nations and its specialized agencies and other inter-governmental and non-governmental organizations. The Committee elected Dr. Downes as Vice-Chairman for the Session.

The meeting dealt with the programme and budget for 1967, the annual report of the Regional Director and administrative and health problems relating to the Western Pacific Region. Some of the health matters discussed included the third general programme of work for the Western Pacific Region, covering the period 1967-1971, health in relation to demographic questions, material support of the programme for global eradication of smallpox by countries in the Western Pacific Region, poliomyelitis, and the present position with regard to El Tor cholera in the Region. In addition technical discussions took place under the heading " The Use of Health Education Services in National Health Programmes ".

The Committee paid tribute to Dr. I. C. Fang, who retired from the position of Regional Director on 30th June, 1966. Dr. Fang was replaced by Dr. F. J. Dy.

Health in Relation to Demographic Questions

The Committee considered this matter in relation to a resolution approved by the Eighteenth World Health Assembly on the subject of health aspects of world population. The Committee adopted a resolution, which endorsed that passed by the World Health Assembly, which provided the opportunity for W.H.O. and all the Member States to consider the medical aspects of human reproduction and to carry out research in this field.

Smallpox Eradication

The question of material support of the programme for global eradication of smallpox by countries in the Western Pacific Region was discussed.

The Committee considered a proposal that each country should consider fighting the disease where it existed and that it was in the interest of every country, including smallpox-free countries, to support the world-wide eradication programme. Australia supported the proposal that global eradication of smallpox should be undertaken at the earliest possible date.

Poliomyelitis

The Committee noted that the lack of adequate virus diagnostic facilities in many areas hindered the study of the prevalent virus infections, including poliomyelitis. It was hoped, however, that visits of a W.H.O. consultant virologist to selected countries in 1966 would improve this situation. The Australian representative presented information on the poliomyelitis situation in Australia.

El Tor Cholera

A report on the present position with regard to El Tor cholera in the Region was reviewed by the Committee. It was considered that sufficient information was not available to permit a concerted attack on the infection. The Committee recommended that the necessary arrangements should be made to collect information on the cholera situation in the Region and keep this information up-to-date. It was also recommended that the assistance of personnel from some of the interested countries be obtained so that plans might be developed which would provide a sound base for future budgetary requests connected with activities in this field.

The Australian delegation at the Nineteenth World Health Assembly.

COMMONWEALTH GRANTS

The Commonwealth Government, through the Department of Health, makes available grants to State Governments and non-profit-making organizations to subsidize various schemes for the promotion and maintenance of health services for the community.

AUSTRALIAN RED CROSS SOCIETY—BLOOD TRANSFUSION SERVICE

The Blood Transfusion Service operated by the Australian Red Cross Society is possibly the most important of the services it renders in Australia and its Territories.

Since 1954 the Commonwealth has made an annual grant, to each State Government, equal to 30 per cent of the operating costs of the Blood Transfusion Service incurred by the Society in each State, provided that 60 per cent of the operating costs are met by the State concerned, leaving 10 per cent to be met by the Society.

Grants made by the Commonwealth during the 1965-66 financial year are shown below:—

State	$
New South Wales	117,208
Victoria	144,124
Queensland	103,113
South Australia	61,283
Western Australia	44,003
Tasmania	12,682
	482,414

ROYAL FLYING DOCTOR SERVICE

The Royal Flying Doctor Service of Australia provides medical and dental services to the population of isolated areas throughout Australia.

It is controlled by a Federal Council comprised of representatives of six sections, namely—Queensland, Victoria, New South Wales, South Australia, Western Australia and the Eastern Goldfields (W.A.). The Service is not conducted for profit.

The Royal Flying Doctor Service operates from 14 bases and, in addition to providing medical services, wireless communications are maintained and utilized for social, private and business uses. From time to time special purpose work is undertaken in connection with flood relief, searching for lost parties and co-ordinating cattle movements.

Charges are made in some sections of the service on a fixed basis, while other sections do not make any fixed scale of charges, but seek contributions from those who use their services, according to ability to pay.

Since 1936 the Commonwealth has been making grants available towards the cost of conducting the Royal Flying Doctor Service. The grant in 1965-66 was $280,000. This provided $150,000 towards the cost of operational expenses and $130,000 towards capital expenses. The Commonwealth also continued to meet the cost of contents of standard medicine chests, supplied for use in the various centres serviced by the Royal Flying Doctor Service when doctors give medical advice by radio.

HOME NURSING SUBSIDY SCHEME

The Home Nursing Subsidy Scheme, which came into operation on 1st January, 1957, was designed to assist in the extension of home nursing activities, either by the expansion of existing home nursing organizations or the formation of new ones. To be eligible for a subsidy, an organization must provide a home nursing service, be a non-profit-making organization, employ registered nurses and be in receipt of assistance from a State Government or a local governing body established under a State Act.

Subsidy payments are based on the number of nurses employed over and above the number employed during September, 1956, in the case of existing organizations, and on the total number of registered nurses employed by organizations formed after that date. As from 1st July, 1966, the subsidy rate of $2,000 per annum paid in respect of each additional nurse employed in the first instance was increased to $2,200 and the rate of $1,000 per annum in respect of nurses employed by organizations which commenced after September, 1956 was increased to $1,100.

The annual subsidy paid by the Commonwealth since the inception of the Home Nursing Subsidy Scheme has been:—

	$
1956-57	3,614
1957-58	36,270
1958-59	69,076
1959-60	107,232
1960-61	156,028
1961-62	215,336
1962-63	288,774
1963-64	371,876
1964-65	464,678
1965-66	546,358

FREE MILK FOR SCHOOL CHILDREN

Under the State Grants (Milk for School Children) Act 1950, the Commonwealth provides through the States free milk to school children. The State Governments administer this scheme and the Commonwealth reimburses the cost of the milk supplied and half the cost of any incidental expenditure.

The grant for 1965-66 was $8,493,363 which permitted the free distribution of one-third of a pint of milk on each school day to approximately 1,561,000 school children attending public and private primary schools, kindergartens, creches and Aboriginal missions throughout Australia.

Expenditure by the Commonwealth on the Free Milk Scheme since its commencement is shown in Table 60 on page 96. However, these figures do not include amounts reimbursed to the States in respect of half the cost of capital, administrative and incidental expenditure, which was $27,558 for 1965-66.

MENTAL HEALTH INSTITUTIONS

The States Grants (Mental Health Institutions) Act 1964 came into operation on the 1st July, 1964, and concludes on the 30th June, 1967. In broad terms the legislation provides that the Commonwealth will reimburse the States one-third of the amounts expended by them on the buildings and equipment of mental health institutions.

Whereas under the States Grants (Mental Institutions) Act 1955 a limit was placed on expenditure by the States, the 1964 Act provides no limits during the three years of its operation, either in total or for individual States.

Details of the total expenditure each year since the inception of the Scheme in 1955, together with amounts contributed by the Commonwealth and the States, are shown in Table 62 on page 97.

LADY GOWRIE CHILD CENTRES

The Commonwealth has always had a very close interest in the Lady Gowrie Child Centres, having established in 1940 a Centre in each State capital and having provided since then a major part of the finance for their operation.

The Centres were primarily created for the study of problems of physical growth, nutrition and development and to test and demonstrate methods for the care and instruction of the young child. In more recent years the activities have included the mental development of children. The Centres are specialised demonstration and research centres which disseminate knowledge gained in this important field, and are making a valuable contribution to the community.

For some years the Commonwealth has also subsidised the activities of the Australian Pre-School Association which, in administering the Centres, has been of considerable assistance in developing these activities on a national basis.

The total grant for 1965-66 was $120,000 comprising $107,700 paid to the six Centres in equal proportions and $12,300 to the Australian Pre-School Association.

APPENDICES

STATISTICS AND PUBLICATIONS

CONTENTS

APPENDIX 1—STATISTICS

CONTENTS—Appendix 1—continued.

APPENDIX 2—PUBLICATIONS

APPENDIX 1 — STATISTICS

TABLE 1

DEPARTMENTAL EXPENDITURE 1961-62 to 1965-66

	YEAR ENDED 30th JUNE				
	1962	1963	1964	1965	1966
	$	$	$	$	$
NATIONAL WELFARE FUND—					
Hospital Benefits	44,404,306	47,326,098	56,215,942	58,790,642	60,742,842
Medical Benefits	21,822,966	23,474,322	24,848,286	35,276,584	41,282,185
Pharmaceutical Benefits	70,379,766	76,910,158	78,838,672	82,202,610	91,783,674
Pensioner Medical Service	8,795,876	9,145,796	9,531,250	9,320,408	13,365,393
Free Milk for School Children	7,483,276	7,454,308	7,775,210	8,059,292	8,493,363
Tuberculosis*	8,665,794	9,747,814	10,472,802	10,145,838	13,378,810
Miscellaneous	1,695,956	1,529,056	1,784,782	2,859,478	3,453,290
TOTAL NATIONAL WELFARE FUND	163,247,940	175,587,552	189,466,944	206,654,852	232,499,557
CONSOLIDATED REVENUE FUND—					
Tuberculosis Capital Reimbursement	773,158	983,986	598,484	695,750	695,000
Administration	1,526,860	1,596,082	1,761,534	2,086,826	
Quarantine	762,452	838,312	908,226	1,078,390	8,835,520†
Health Services	3,088,154	4,842,666	4,943,060	4,816,784	
Subsidies and Grants	1,908,146	1,851,872	1,989,418	2,151,528	2,255,847
Northern Territory	2,451,878	2,499,760	2,731,934	3,135,802	3,681,949‡
Australian Capital Territory	1,151,376	1,350,304	1,450,986	1,916,100	2,388,481
Capital Works and Services	1,261,944	1,248,444	241,764	869,338	1,104,697
TOTAL CONSOLIDATED REVENUE FUND	12,923,968	15,211,426	14,625,406	16,750,518	18,962,494
SPECIAL CAPITAL GRANTS TO STATES FOR MENTAL HEALTH INSTITUTIONS	1,648,432	1,590,324	1,594,514	2,503,570	4,538,990
TOTAL EXPENDITURE	177,820,346	192,389,303	205,686,862	225,908,940	256,001,041

Apparent minor errors in totals are due to "rounding off".

*In addition to the amounts shown, allowances are paid by the Department of Social Services—see Table 29 on page 82.

†Under the new division of expenditure introduced by the Department of the Treasury it is not now possible to derive separate figures for these three items.

‡Certain expenditure previously included in Administration is now included in this item.

TABLE 2

HOSPITAL BENEFITS

NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE—1952-53 to 1965-66

As at 30th June	No. of Registered Organizations	Membership *	Estimated Coverage	Percentage of Population Covered
		000's	000's	Per cent
1953	139	1,500	3,413	39
1954	127	1,865	4,601	51
1955	128	2,111	5,121	56
1956	124	2,247	5,499	59
1957	122	2,373	5,878	61
1958	119	2,514	6,195	63
1959	116	2,749	6,774	68
1960	115	2,908	7,208	72
1961	115	3,044	7,500	72
1962	113	3,130	7,738	73
1963	110	3,176	7,895	73
1964	112	3,286	8,194	74
1965	111	3,407	8,732	77
1966	111	3,489	8,915	78

*As advised by the organizations.

TABLE 3

HOSPITAL BENEFITS

NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE—BY STATES—30th JUNE, 1966

State	No. of Registered Organizations	Membership *	Estimated Coverage	Percentage of Population Covered
		000's	000's	Per cent
New South Wales ..	32	1,366	3,419	79
Victoria	44	1,024	2,753	85
Queensland	3	313	825	51
South Australia ..	13	387	932	85
Western Australia ..	9	279	689	84
Tasmania	10	120	297	78
Commonwealth ..	111	3,489	8,915	78

*As advised by the organizations.

TABLE 4

HOSPITAL BENEFITS

BENEFITS PAID TO CONTRIBUTORS BY REGISTERED ORGANIZATIONS—1952-53 to 1965-66

Year Ended 30th June	No. of Days Fund Benefit Paid	Average Daily Benefit	No. of Claims Per 100 Members	Average Stay in Hospital Per Claim
	000's	$		Days
1953	1,874	1.03	13.4	10.98
1954	3,413	1.40	19.9	10.17
1955	4,642	1.58	23.5	9.92
1956	4,808	1.81	20.8	10.60
1957	5,492	2.32	23.3	10.30
1958	6,215	2.62	25.6	9.96
1959	7,049	2.75	26.9	9.74
1960	8,937	2.68	29.4	10.81
1961	9,740	2.88	29.7	11.02
1962	10,341	3.17	30.9	10.78
1963	10,419	3.43	32.1	10.29
1964	9,576	4.40	30.7	9.39
1965	9,988	4.83	32.5	9.23
1966	10,252	5.40	32.8	9.05

TABLE 5

HOSPITAL BENEFITS

BENEFITS PAID TO CONTRIBUTORS BY REGISTERED ORGANIZATIONS—BY STATES—1965-66

State	No. of Days Fund Benefit Paid	Average Daily Benefit	No. of Claims Per 100 Members	Average Stay in Hospital Per Claim
	000's	$		Days
New South Wales ..	4,440	5.91	35.0	9.34
Victoria	2,498	5.29	26.8	9.20
Queensland	1,117	3.73	39.1	9.36
South Australia ..	1,086	5.10	33.3	8.55
Western Australia ..	788	5.28	37.9	7.65
Tasmania	323	6.28	31.4	8.80
Commonwealth ..	10,252	5.40	32.8	9.05

TABLE 6

HOSPITAL BENEFITS

AMOUNT OF COMMONWEALTH AND FUND BENEFITS PAID—BY STATES—1965-66

State	COMMONWEALTH				FUND			Total
	Uninsured Patients	Insured Patients	Pensioner Patients	Total	Excluding Ancillary	Ancillary	Total	
	$ †	$ *	$ ‡	$	$	$	$	$
New South Wales ..§	746,846	10,122,372	5,701,132	16,570,350	26,221,155	805,586	27,026,741	43,597,091
Victoria	451,597	5,296,559	3,060,583	8,808,739	13,216,679	560,120	13,776,799	22,585,538
Queensland ..	944,404	2,363,628	2,754,324	6,062,356	4,162,574	182,194	4,344,768	10,407,124
South Australia ..	118,502	2,243,278	1,191,179	3,552,959	5,533,447	407,684	5,941,131	9,494,090
Western Australia..	152,436	1,794,009	1,442,890	3,389,335	4,165,667	220,297	4,385,964	7,775,299
Tasmania	50,493	669,656	514,837	1,234,986	2,030,418	56,225	2,086,643	3,321,629
Commonwealth	2,464,278	22,489,502	14,664,945	39,618,725	55,329,940	2,232,106	57,562,046	97,180,771

*Includes payment of Special Account deficits of $2,873,345.
†Refunds of $93,182 have not been deducted.
‡Refund of $5,943 has not been deducted.
§Includes A.C.T. and N.T.

TABLE 7

HOSPITAL BENEFITS

AMOUNT OF COMMONWEALTH NURSING HOME BENEFIT PAID—BY STATES—1965-66

State	State Nursing Homes	Private Nursing Homes	Total
	$	$	$
New South Wales	1,624,561	7,086,269	8,710,830
Victoria	2,269,508	2,370,314	4,639,822
Queensland	1,646,244	1,669,262	3,315,506
South Australia	364,266	1,540,327	1,904,593
Western Australia	722,208	1,174,568	1,896,776
Tasmania	343,124	412,616	755,740
Commonwealth	6,969,911	14,253,356	21,223,267

TABLE 8

MEDICAL BENEFITS

NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE—
1953-54 to 1965-66

As at 30th June	No. of Registered Organizations	Membership *	Estimated Coverage	Percentage of Population Covered
		000's	000's	Per cent
1954	79	1,358	3,502	39
1955	80	1,666	4,154	45
1956	82	1,901	4,806	51
1957	81	2,229	5,715	60
1958	81	2,422	6,148	63
1959	82	2,667	6,713	67
1960	83	2,908	7,311	72
1961	83	†2,850	†7,173	†68
1962	82	2,846	7,275	68
1963	78	2,952	7,686	71
1964	81	3,095	8,058	73
1965	80	3,217	8,462	75
1966	80	3,313	8,679	76

* As advised by the organizations.
† Variation as compared with 30th June, 1960, results from revision of membership figures in one of the major organizations.

TABLE 9

MEDICAL BENEFITS

NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE—BY STATES—30th JUNE, 1966

State	No. of Registered Organizations	Membership *	Estimated Coverage	Percentage of Population Covered
		000's	000's	Per Cent
New South Wales ..	28	1,330	3,414	79
Victoria	20	930	2,583	80
Queensland	6	314	839	52
South Australia ..	8	356	886	81
Western Australia ..	8	269	673	82
Tasmania	10	114	284	75
Commonwealth ..	80	3,313	8,679	76

* As advised by the organizations.

TABLE 10

MEDICAL BENEFITS

MEDICAL SERVICES RECEIVED BY CONTRIBUTORS TO REGISTERED ORGANIZATIONS—FEE-FOR-SERVICE ONLY—1953-54 to 1965-66

Year Ended 30th June	No. of Services Received *	Percentage of G.P. to Total *	Average No. of Services Per Contributor *	Average Cost per Service *
	000's	Per cent		$
1954	3,284	74	3.4	2.85
1955	9,453	70	6.2	2.91
1956	12,259	71	6.8	2.91
1957	13,668	75	6.6	3.10
1958	15,582	75	6.7	3.24
1959	16,819	75	6.5	3.28
1960	19,625	75	7.1	3.30
1961	20,123	73	7.3	3.56
1962	21,669	72	7.7	3.64
1963	23,431	72	8.0	3.69
1964	24,308	71	7.8	3.85
1965	25,847	70	8.3	4.02
1966	28,210	69	8.7	4.20

* Subject to revision.

TABLE 11

MEDICAL BENEFITS

MEDICAL SERVICES RECEIVED BY CONTRIBUTORS TO REGISTERED ORGANIZATIONS—FEE-FOR-SERVICE ONLY—BY STATES—1965-66

State	No. of Services Received *	Percentage of G.P. to Total *	Average No. of Services Per Contributor *	Average Cost per Service *
	000's	Per cent		$
New South Wales ..	11,125	67	8.5	4.49
Victoria	7,929	71	8.7	4.08
Queensland	3,112	71	10.1	3.89
South Australia ..	3,132	70	8.9	3.99
Western Australia ..	2,110	65	8.4	3.84
Tasmania	802	64	7.5	4.10
Commonwealth ..	28,210	69	8.7	4.20

* Subject to revision.

TABLE 12

MEDICAL BENEFITS

COST OF MEDICAL SERVICES TO CONTRIBUTORS TO REGISTERED ORGANIZATIONS—1953-54 to 1965-66

Year Ended 30th June	Total Cost of Services (fee-for-service and contract)	Percentage of Total Cost Met by—(fee-for-service only)		
		Fund	Commonwealth	Contributor
	$000's	Per cent	Per cent	Per cent
1954	9,112	31.7	31.4	36.9
1955	27,169	33.9	30.9	35.2
1956	35,276	35.0	30.6	34.4
1957	42,003	34.1	29.3	36.6
1958	49,625	33.9	28.3	37.8
1959	54,619	34.4	28.5	37.1
1960	64,203	35.4	28.2	36.4
1961	71,242	36.0	27.4	36.6
1962	78,499	36.9	27.0	36.1
1963	86,213	37.1	26.6	36.3
1964	93,313	36.8	25.9	37.3
1965	104,624	35.2	32.9	31.9
1966	119,021	35.7	33.9	30.4

TABLE 13

MEDICAL BENEFITS

COST OF MEDICAL SERVICES TO CONTRIBUTORS TO REGISTERED ORGANIZATIONS—BY STATES—1965-66

State	Total Cost of Services (fee-for-service and contract)	Percentage of Total Cost Met by—(fee-for-service only)			Fund Benefit Paid	
		Fund	Commonwealth	Contributor	Excluding Ancillary	Ancillary
	$000's	Per cent	Per cent	Per cent	$	$
New South Wales	50,104	36.6	31.8	31.6	18,393,403	1,081,016
Victoria	32,520	32.3	33.9	33.8	10,539,108	274,429
Queensland	12,098	36.3	34.3	29.4	4,390,373	191,039
South Australia	12,514	37.7	38.3	24.0	4,712,228	222,643
Western Australia ..	8,425	38.6	39.5	21.9	3,269,477	99,744
Tasmania	3,360	37.0	33.9	29.1	1,255,854	72,751
Commonwealth ..	119,021	35.7	33.9	30.4	42,560,443	1,941,622

TABLE 14

PENSIONER MEDICAL SERVICE

NUMBER ENROLLED, NUMBER OF SERVICES RECEIVED AND AVERAGE ATTENDANCES PER ENROLLED PERSON PER ANNUM—1951-52 to 1965-66

Year Ended 30th June	No. of Pensioners and Dependants Enrolled at 30th June	No. of Services Received			Average Number of Services per Enrolled Person
		Surgery	Domiciliary	Total	
	000's	000's	000's	000's	
1952	501	1,228	1,105	2,334	5.0
1953	558	1,671	1,651	3,322	6.2
1954	597	2,076	2,092	4,168	7.2
1955	640	2,375	2,346	4,721	7.6
1956	668	2,669	2,514	5,183	7.9
1957	684	2,778	2,603	5,381	8.0
1958	697	2,992	2,774	5,766	8.3
1959	720	3,462	2,980	6,441	9.0
1960	740	3,763	3,076	6,839	9.4
1961	766	3,866	3,131	6,996	9.4
1962	810	4,139	3,223	7,363	9.3
1963	831	4,278	3,111	7,389	9.0
1964	844	4,406	3,020	7,426	8.9
1965	849	4,389	2,859	7,248	8.6
1966	1,006	4,670	2,824	7,494	8.4

TABLE 15

PENSIONER MEDICAL SERVICE

NUMBER ENROLLED, NUMBER OF SERVICES RECEIVED AND AVERAGE ATTENDANCES PER ENROLLED PERSON PER ANNUM—BY STATES—1965-66

State	No. of Pensioners and Dependants Enrolled at 30th June 1966	No. of Services Received			Average Number of Services per Enrolled Person
		Surgery	Domiciliary	Total	
	000's	000's	000's	000's	
New South Wales ..	390	1,929	1,122	3,051	9.1
Victoria	252	1,074	818	1,892	8.2
Queensland ..	164	757	328	1,085	7.3
South Australia ..	92	389	317	706	8.5
Western Australia ..	75	379	168	547	8.3
Tasmania	33	142	71	213	6.9
Commonwealth	1,006	4,670	2,824	7,494	8.4

TABLE 16

PENSIONER MEDICAL SERVICE

NUMBER OF PARTICIPATING DOCTORS, PAYMENTS RECEIVED AND AVERAGE ANNUAL PAYMENT PER DOCTOR—1951-52 to 1965-66

Year Ended 30th June	No. of Participating Doctors at 30th June	Payments to Doctors	Average Receipts Per Annum
		$000's	$
1952	3,502	2,070	620
1953	3,898	3,480	928
1954	4,239	4,231	1,024
1955	4,567	5,032	1,132
1956	4,730	5,749	1,236
1957	4,990	5,998	1,234
1958	5,243	6,398	1,250
1959	5,531	7,613	1,376
1960	5,685	8,225	1,466
1961	5,861	8,401	1,456
1962	6,012	8,796	1,476
1963	6,025	9,146	1,520
1964	5,899	9,531	1,598
1965	5,896	9,320	1,578
1966	6,034	13,365	2,246

TABLE 17

PENSIONER MEDICAL SERVICE

NUMBER OF PARTICIPATING DOCTORS, PAYMENTS RECEIVED AND AVERAGE ANNUAL PAYMENT PER DOCTOR—BY STATES—1965-66

State	No. of Participating Doctors at 30th June 1966	Payments to Doctors	Average Receipts Per Annum
		$000's	$
New South Wales ..	2,374	5,425	2,308
Victoria	1,661	3,404	2,058
Queensland	807	1,907	2,420
South Australia ..	569	1,285	2,319
Western Australia ..	440	958	2,223
Tasmania	183	386	2,221
Commonwealth ..	6,034	13,365	2,246

TABLE 18

PHARMACEUTICAL BENEFITS

COST OF PRESCRIPTIONS—1960-61 to 1965-66

Year Ended 30th June	Payments by Commonwealth			Patient Contribution	Total Cost
	Excluding Pensioners	Pensioners	Total		
	$	$	$	$	$
1961	34,282,496	14,676,698	48,959,194	10,324,740	59,283,934
1962	44,632,488	18,194,996	62,827,484	13,007,776	75,835,260
1963	47,093,026	19,830,750	66,923,776	14,742,448	81,666,224
1964	46,460,998	20,601,714	67,062,712	15,573,804	82,636,516
1965	48,929,748	21,564,420	70,494,168	16,841,354	87,335,522
1966	53,078,046	24,071,127	77,149,173	17,481,228	94,630,401

TABLE 19

PHARMACEUTICAL BENEFITS

COST OF PRESCRIPTIONS—BY STATES—1965-66

State	Payments by Commonwealth			Patient Contribution	Total Cost
	Excluding Pensioners	Pensioners	Total		
	$	$	$	$	$
New South Wales ..	20,942,643	10,033,723	30,976,366	6,911,643	37,888,009
Victoria	14,872,297	5,673,749	20,546,046	4,766,623	25,312,669
Queensland ..	7,343,951	3,772,342	11,116,293	2,554,838	13,671,131
South Australia ..	5,051,570	2,289,493	7,341,063	1,678,894	9,019,957
Western Australia ..	3,488,907	1,664,821	5,153,728	1,118,175	6,271,903
Tasmania	1,378,678	636,999	2,015,677	451,055	2,466,732
Commonwealth	53,078,046	24,071,127	77,149,173	17,481,228	94,630,401

TABLE 20

PHARMACEUTICAL BENEFITS

DISSECTION OF BENEFIT PRESCRIPTION COSTS INTO INGREDIENT COST AND CHEMISTS' REMUNERATION—1960-61 to 1965-66

Year Ended 30th June	Cost of Ingredients and Containers	Chemists' Remuneration	Total Cost
	$	$	$
1961	35,628,562	23,655,372	59,283,934
1962	46,714,490	29,120,770	75,835,260
1963	49,112,896	32,553,328	81,666,224
1964	49,397,772	33,238,744	82,636,516
1965	52,138,774	35,196,748	87,335,522
1966	57,293,012	37,337,389	94,630,401

TABLE 21

PHARMACEUTICAL BENEFITS

DISSECTION OF BENEFIT PRESCRIPTION COSTS INTO INGREDIENT COST AND CHEMISTS' REMUNERATION—BY STATES—1965-66

State	Cost of Ingredients and Containers	Chemists' Remuneration	Total Cost
	$	$	$
New South Wales ..	22,888,955	14,999,054	37,888,009
Victoria	15,479,822	9,832,847	25,312,669
Queensland	8,150,912	5,520,219	13,671,131
South Australia ..	5,454,926	3,565,031	9,019,957
Western Australia ..	3,815,800	2,456,103	6,271,903
Tasmania	1,502,597	964,135	2,466,732
Commonwealth ..	57,293,012	37,337,389	94,630,401

Cost of ingredients and containers includes payments to chemists for wastages on broken quantities of ready-prepared items.

Chemists' remuneration includes mark up on wholesale price and professional fees, but does not include discount allowed to chemists by wholesalers and manufacturers.

TABLE 22

PHARMACEUTICAL BENEFITS

NUMBER OF PRESCRIPTIONS AND AVERAGE COST PER PRESCRIPTION—1960-61 to 1965-66

Year Ended 30th June	Number of Benefit Prescriptions			Average Cost per Benefit Prescription*		
	Total Population	Population Excluding Pensioners	Pensioners	Total Population	Population Excluding Pensioners	Pensioners
	000's	000's	000's	$	$	$
1961	31,217	20,489	10,728	1.90	2.18	1.37
1962	37,714	26,050	11,664	2.01	2.22	1.56
1963	42,192	29,518	12,674	1.93	2.09	1.57
1964	44,357	31,040	13,317	1.86	2.00	1.55
1965	47,556	33,715	13,841	1.83	1.95	1.56
1966	49,993	35,085	14,908	1.89	2.01	1.61

*Includes patient contribution where applicable.

TABLE 23

PHARMACEUTICAL BENEFITS

NUMBER OF PRESCRIPTIONS AND AVERAGE COST PER PRESCRIPTION—BY STATES—1965-66

State	Number of Benefit Prescriptions			Average Cost Per Benefit Prescription*		
	Total Population	Population Excluding Pensioners	Pensioners	Total Population	Population Excluding Pensioners	Pensioners
	000's	000's	000's	$	$	$
New South Wales.. ..	20,178	13,922	6,256	1.88	2.00	1.60
Victoria	12,947	9,546	3,401	1.96	2.06	1.67
Queensland	7,582	5,111	2,471	1.80	1.94	1.53
South Australia	4,752	3,362	1,390	1.90	2.00	1.65
Western Australia ..	3,254	2,240	1,014	1.93	2.06	1.64
Tasmania	1,280	904	376	1.93	2.03	1.69
Commonwealth ..	49,993	35,085	14,908	1.89	2.01	1.61

*Includes patient contribution where applicable.

TABLE 24

PHARMACEUTICAL BENEFITS

NUMBER OF PRESCRIPTIONS PER HEAD OF POPULATION AND AVERAGE COST PER HEAD OF POPULATION—1960-61 to 1965-66

Year Ended 30th June	Number of Prescriptions per Head of Population			Average Cost per Head of Population*		
	Total Population	Population Excluding Pensioners	Pensioner Population	Total Population	Population Excluding Pensioners	Pensioner Population
				$	$	$
1961	3.00	2.13	14.25	5.70	4.62	19.86
1962	3.56	2.65	14.80	7.20	5.92	23.08
1963	3.90	2.95	15.45	7.48	6.12	23.95
1964	4.02	3.05	15.91	7.51	6.10	24.38
1965	4.23	3.24	16.35	7.93	6.47	25.88
1966	4.36	3.32	16.38	8.25	6.68	26.45

*Includes patient contribution where applicable.

TABLE 25

PHARMACEUTICAL BENEFITS

NUMBER OF PRESCRIPTIONS PER HEAD OF POPULATION AND AVERAGE COST PER HEAD OF POPULATION—BY STATES—1965-66

State	Number of Prescriptions per Head of Population			Average Cost per Head of Population*		
	Total Population	Population Excluding Pensioners	Pensioner Population	Total Population	Population Excluding Pensioners	Pensioner Population
				$	$	$
New South Wales.. ..	4.66	3.49	18.59	8.75	6.98	29.81
Victoria	4.00	3.18	14.31	7.82	6.55	23.87
Queensland	4.69	3.49	16.12	8.45	6.76	24.62
South Australia	4.33	3.32	16.53	8.21	6.64	27.23
Western Australia ..	3.99	2.98	15.37	7.68	6.14	25.23
Tasmania	3.38	2.61	11.63	6.52	5.29	19.69
Commonwealth ..	4.36	3.32	16.38	8.25	6.68	26.45

*Includes patient contribution where applicable.

TABLE 26

PHARMACEUTICAL BENEFITS

PAYMENTS TO HOSPITALS AND MISCELLANEOUS SERVICES—1965-66

Hospitals						Miscellaneous Services*	Commonwealth
New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania		
$	$	$	$	$	$	$	$
6,692,993	4,000,000	1,612,670	606,838	700,026	712,608	309,366	14,634,501

*Miscellaneous Services Expenditure consisted of—

	$
Biological Products and Prophylactic Materials	179,332
Commonwealth Medical Officers and Immigration Medical Service	12,880
Miscellaneous (Including Bush Nursing and Testing Expenses)	117,154
	309,366

TABLE 27

PHARMACEUTICAL BENEFITS

NUMBER OF PHARMACEUTICAL CHEMISTS AND MEDICAL PRACTITIONERS DISPENSING PHARMACEUTICAL BENEFITS PRESCRIPTIONS—1949-50 to 1965-66

A. *Pharmaceutical Chemists* approved under Section 90 of the *National Health Act* 1953-1965 for the purpose of supplying pharmaceutical benefits.

B. *Medical Practitioners* approved under Section 92 of the *National Health Act* 1953-1965 for the purpose of supplying pharmaceutical benefits in areas in which there are no other pharmaceutical services available.

As at 30th June	New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania		Commonwealth	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1950 ..	1,200	2	1,038	6	285	3	265	27	202	12	90	..	3,080	50
1951 ..	1,252	25	1,054	6	332	4	292	30	208	12	93	7	3,231	84
1952 ..	1,323	26	1,070	7	348	5	305	29	212	12	95	8	3,353	87
1953 ..	1,368	29	1,102	8	388	5	329	24	221	10	94	10	3,502	86
1954 ..	1,452	31	1,170	8	437	6	368	25	232	11	95	11	3,754	92
1955 ..	1,519	32	1,206	5	476	7	384	20	243	12	95	12	3,923	88
1956 ..	1,574	31	1,245	6	520	8	396	20	261	11	97	11	4,093	87
1957 ..	1,615	27	1,284	7	554	8	403	19	270	12	101	11	4,227	84
1958 ..	1,681	28	1,299	7	571	8	424	18	282	12	111	11	4,368	84
1959 ..	1,763	30	1,348	6	603	9	433	16	292	11	113	12	4,552	84
1960 ..	1,818	29	1,383	6	645	9	436	17	296	10	118	12	4,696	83
1961 ..	1,877	34	1,402	6	676	7	449	14	311	7	123	12	4,838	80
1962 ..	1,933	36	1,414	6	696	6	459	13	312	6	127	11	4,941	78
1963 ..	2,008	32	1,445	6	721	7	470	14	325	7	131	10	5,100	76
1964 ..	2,065	31	1,482	7	750	6	474	12	338	8	134	12	5,243	76
1965 ..	2,101	32	1,520	7	775	5	487	10	354	8	138	12	5,375	74
1966 ..	2,140	33	1,545	6	805	6	507	9	363	5	141	12	5,501	71

TABLE 28

PHARMACEUTICAL BENEFITS

DRUGS DISPENSED BY CHEMISTS—1965-66

(Benefits dispensed in hospitals are excluded)

Therapeutic Category	Percentage of Total Expenditure	Percentage of Total Prescriptions
	Per cent	Per cent
Broad Spectrum Antibiotics	15.6	8.3
Penicillins	11.7	8.8
Blood vessels—drugs acting on	8.7	5.3
Hypnotics	7.3	13.2
Diuretics—non-mercurial	6.4	3.9
Analgesics	5.7	7.4
Anti-Histamines	5.0	5.2
Tranquillisers	2.2	1.4
Antacids	1.7	2.7
Sulphonamides	1.6	2.1
Expectorants and Cough Suppressants	0.9	2.1
Other Drugs	33.2	39.6

TABLE 29

TUBERCULOSIS

NUMBER OF ALLOWANCES, NOTIFICATIONS AND MORTALITY—1952 to 1965

Year Ended 31st December	Number of Allowances Current	Notifications			Deaths		
		Number Pulmonary	Number All Forms	Incidence per 100,000 All Forms	Number Pulmonary	Number All Forms	Per 100,000 All Forms
1952	6,127	4,761	4,786	54.8	1,165	1,290	14.8
1953	5,696	4,787	4,979	55.9	879	974	10.9
1954	5,742	4,650	4,952	54.5	823	897	9.9
1955	5,029	4,360	4,602	49.4	672	729	7.8
1956	4,182	4,169	4,419	46.4	663	724	7.6
1957	3,326	3,762	4,035	41.4	543	585	6.0
1958	2,750	3,632	3,708	37.2	501	538	5.4
1959	2,503	3,160	3,582	35.2	509	549	5.4
1960	2,235	3,556	4,084	39.2	447	489	4.7
1961	2,017	3,239	3,570	34.0	412	447	4.3
1962	1,845	3,503	3,825	35.3	448	475	4.4
1963	1,796	3,574	3,883	35.2	410	440	4.0
1964	1,573	3,113	3,446	30.6	388	413	3.7
1965	1,378	2,624	2,903	25.3	259	294	2.6

TABLE 30

TUBERCULOSIS

NUMBER OF ALLOWANCES, NOTIFICATIONS AND MORTALITY—BY STATES—
YEAR ENDED 31st DECEMBER, 1965

State	Number of Allowances Current	Notifications			Deaths		
		Number Pulmonary	Number All Forms	Incidence per 100,000 All Forms	Number Pulmonary	Number All Forms	Per 100,000 All Forms
New South Wales ..	472	954	1,027	24.2	77	89	2.1
Victoria	292	674	790	24.4	94	106	3.3
Queensland	387	620	639	39.5	39	42	2.6
South Australia	104	126	156	14.7	25	30	2.8
Western Australia ..	63	126	148	18.0	13	14	1.7
Tasmania	60	65	71	18.7	8	9	2.0
Aust. Capital Territory ..	*	9	11	11.7	1	1	1.1
Northern Territory ..	†	50	61	119.0	2	3	5.9
Commonwealth ..	1,378	2,624	2,903	25.3	259	294	2.6

*Included in New South Wales figures.

†Included in South Australia figures.

TABLE 31

TUBERCULOSIS

EXPENDITURE UNDER THE TUBERCULOSIS ACT—1949-50 to 1965-66

Year Ended 30th June	Capital Reimbursements to States	Maintenance Reimbursements to States	Allowances Paid to Sufferers	Total
	$	$	$	$
1950	472,358	692,284	..	1,164,642
1951	809,200	1,887,108	2,689,782	5,386,090
1952	1,290,262	4,228,582	3,555,240	9,074,084
1953	2,326,878	5,964,642	3,815,890	12,107,410
1954	2,590,952	7,477,770	3,753,164	13,821,886
1955	3,421,624	7,601,156	3,808,934	14,831,714
1956	3,495,444	8,101,162	3,379,548	14,976,154
1957	4,757,294	9,610,006	2,921,300	17,288,600
1958	4,256,924	9,138,430	2,509,386	15,904,740
1959	2,822,124	9,688,212	2,125,218	14,635,554
1960	1,458,472	8,752,512	2,050,946	12,261,930
1961	776,036	8,473,374	1,892,892	11,142,302
1962	756,190	8,800,068	1,745,706	11,301,964
1963	983,986	9,931,820	1,607,032	12,522,838
1964	598,484	10,669,450	1,593,334	12,861,268
1965	702,842	10,336,534	1,457,822	12,497,198
1966	688,908	13,577,089	1,285,762	15,551,759
Total	32,207,978	134,930,199	40,191,956	207,330,133

TABLE 32

TUBERCULOSIS

EXPENDITURE UNDER THE TUBERCULOSIS ACT—BY STATES—1965-66

State	Capital	Maintenance	Allowances	Total
	$	$	$	$
New South Wales	383,039	6,635,478	438,987	7,457,504
Victoria	168,559	3,084,303	291,463	3,544,325
Queensland	110,097	2,074,186	344,044	2,528,327
South Australia	13,597	689,628	100,595	803,820
Western Australia	2,034	733,494	60,710	796,238
Tasmania	11,582	360,000	49,963	421,545
Commonwealth	688,908	13,577,089	1,285,762	15,551,759

TABLE 33

TUBERCULOSIS

RESULTS OF MASS X-RAY SURVEYS—BY STATES—
YEAR ENDED 31st DECEMBER, 1965

State	Number Examined	Number Active T.B.	Rate per 1,000	Number Inactive T.B.	Rate per 1,000	Suspect Active T.B. at 31.12.65	Rate per 1,000
New South Wales	742,633	179	0.24	3,487	4.70	71	0.10
Victoria	596,994	236	0.39	2,084	3.49	88	0.15
Queensland	345,530	185	0.54	2,105	6.09	801	2.32
South Australia	145,780	35	0.24	681	4.67	26	0.18
Western Australia	64,025	19	0.29	49	0.76	4	0.06
Tasmania	94,374	35	0.37	24	0.25	33	0.34
Aust. Capital Territory	40,446	2	0.05	43	1.06	3	0.08
Northern Territory	3,946	12	3.04	68	17.23	..	..
Commonwealth	2,033,728	703	0.35	8,541	4.20	1,026	0.50

TABLE 34

PUBLIC HEALTH

NOTIFIABLE DISEASES IN THE STATES OF AUSTRALIA—1965-66†

Disease	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	N.T.	Aust.
Acute Encephalitis	..	..	..	..	..	..	..	..	..
Acute Rheumatism	69	21	103	4	*	27	2	10	236
Amoebiasis	*	3	10	..	2	..	1	2	18
Ancylostomiasis	24	..	16	..	..	..	..	324	364
Anthrax	*	..	..	..	..	..	..	..	..
Bilharziasis	*	..	..	..	..	..	..	..	..
Breast Abscess	..	12	23	*	*	*	..	*	35
Brucellosis	7	52	8	1	5	23	..	..	96
Chorea (St. Vitus Dance)	2	..	..	..	*	*	1	..	3
Dengue	..	..	..	..	*	*	..	..	..
Diarrhoea, Infantile	544	536	302	5	*	..	7	127	1,521
Diphtheria	12	11	..	1	3	..	..	1	28
Dysentery, Bacillary	*	166	82	200	197	1	4	113	763
Erythema Nodosum	*	6	..	2	*	*	..	3	11
Encephalitis	97	29	18	10	..	..	..	3	157
Filariasis	*	..	..	..	..	..	..	..	..
Homologous S. Jaundice	*	..	*	..	..	*	..	..	..
Hydatid	*	12	4	1	2	8	..	1	28
Infective Hepatitis	3,588	1,615	553	405	38	173	103	140	6,615
Lead Poisoning	*	*	..	..	1	*	..	..	1
Leprosy	..	1	..	..	16	..	..	27	44
Leptospirosis	7	2	60	1	12	*	..	..	82
Leukaemia	*	9	*	*	*	*	..	..	9
Malaria	*	18	32	1	3	3	..	6	63
Meningococcal Infection	33	32	123	4	3	1	..	4	200
Neonatal Infection‡	751	17	9	*	*	*	*	*	777
Ophthalmia	*	*	*	2	*	..	..	..	2
Ornithosis	1	1	1	..	..	*	..	..	3
Paratyphoid	..	3	..	3	3	..	..	..	9
Puerperal Fever	39	13	20	3	2	..	..	5	82
Q Fever	*	*	288	*	*	*	*	*	288
Rubella	*	1,462	124	497	*	449	11	5	2,548
Salmonella Infection	*	*	*	89	72	*	7	27	195
Scarlet Fever	719	637	173	86	47	1,199	10	2	2,873
Tetanus	*	17	17	..	1	..	..	..	35
Trachoma	*	..	*	..	*	*	..	..	..
Trichinosis	*	*	*	..	..	*	..	..	..
Tuberculosis	1,001	857	622	173	203	68	8	65	2,997
Typhoid Fever	5	7	4	1	1	..	..	4	22
Typhus—(flea, mite or tick borne)	2	2	2	..	..	..	..	..	6

*Not Notifiable ..No Cases

†The figures shown in this table are the number of cases notified by individual medical practitioners to State Health Departments.

‡In N.S.W. notified as Staph Diseases (Infantile), in Victoria as Acute Infection in the Newborn and in Queensland as Neonatal Infections.

Details of the cases of poliomyelitis confirmed are given in tables 35 to 37.

No case of Cholera, Plague, Smallpox, Epidemic Typhus or Yellow Fever.

TABLE 35

PUBLIC HEALTH

POLIOMYELITIS—NUMBER OF CONFIRMED CASES—BY AGE GROUP—1965-66

Age Group	Number
0– 1	..
1– 4	..
5– 9	1
10–14	..
15–19	..
20–24	..
25–29	1
30–34	..
35–39	..
40–49	..
50–59	..
60 and over	..
Not Stated	..
Total	2

TABLE 36

PUBLIC HEALTH

POLIOMYELITIS—NUMBER OF CONFIRMED CASES—BY SEX AND MONTH OF OCCURRENCE—1965-66

Month	Male	Female	Total
July	..	..	..
August	..	..	..
September	..	..	..
October	..	..	..
November	1	..	1
December	..	..	..
January	..	..	..
February	1	..	1
March	..	..	..
April	..	..	..
May	..	..	..
June	..	..	..
TOTAL	2	..	2

TABLE 37

PUBLIC HEALTH

POLIOMYELITIS—NUMBER OF CONFIRMED CASES—BY STATES—1957-58 to 1965-66

State	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
New South Wales	21	18	17	8	367	5	2	4	..
Victoria	3	78	10	80	21	11	19	..	..
Queensland	3	3	4	19	157	..	..	..	1
South Australia	5	1	7	22	19	17	2	..	..
Western Australia	2	1	6	..	6	2	2	..	..
Tasmania	3	1	2	46	..	..	..	..	1
Australian Capital Territory	..	..	..	..	..	..	..	..	..
Northern Territory	..	..	14	3	2	..	..	..	..
Commonwealth	37	102	60	178	572	35	25	4	2

TABLE 38

PUBLIC HEALTH

INFECTIOUS HEPATITIS—CASES NOTIFIED—BY STATES—1961 to 1965

State	1961	1962	1963	1964	1965*
New South Wales	6,025	3,358	2,822	2,667	3,299
Victoria	3,515	3,533	3,840	2,705	1,988
Queensland	1,022	885	1,433	1,148	511
South Australia	1,406	504	293	277	413
Western Australia	262	117	145	101	86
Tasmania	304	630	856	638	199
Australian Capital Territory	281	88	20	12	51
Northern Territory	61	100	104	57	128
Commonwealth	12,876	9,215	9,513	7,605	6,675

*Figures in this column are subject to confirmation.

TABLE 39

PUBLIC HEALTH

RADIO AND TELEVISION SCRIPTS ON MEDICAL MATTERS EXAMINED—1965-66

Type of Script	Number Examined	Approved		Approved as Amended		Rejected	
		Number	Per cent	Number	Per cent	Number	Per cent
Radio	993	674	67.9	288	29.0	31	3.1
Television	383	265	69.2	117	30.5	1	0.3
Total	1,376	939	68.3	405	29.4	32	2.3

TABLE 40

QUARANTINE

VESSELS BOARDED AND CLEARED—BY STATES—1965-66

State	Surface			Air		
	Vessels	Crew	Passengers	Vessels	Crew	Passengers
New South Wales	985	66,269	56,564	1,874	20,256	124,983
Victoria	399	27,241	35,432	35	267	180
Queensland	796	37,496	8,924	269	2,143	10,221
South Australia	300	14,996	7,516	1	10	25
Western Australia	852	75,781	137,558	403	4,359	29,564
Tasmania	98	5,043	1,185	..	..	..
Northern Territory	58	2,622	131	715	6,653	58,396
Commonwealth	3,488	229,448	247,310	3,297	33,688	223,369

TABLE 41

QUARANTINE

INFECTIOUS DISEASES ON OVERSEAS VESSELS ARRIVING IN AUSTRALIA—1965-66

Disease	No. of Cases
Chickenpox	83
Gastro-enteritis	1
Glandular Fever	1
Infectious Hepatitis	4
Measles	239
Meningitis	1
Mumps	31
Pyrexia of Undetermined Origin	1
Rubella	2
Scarlet Fever	1
Typhoid Fever	2
Venereal Disease	115
Whooping Cough	1
Total	482

TABLE 42

QUARANTINE

ANIMAL IMPORTATIONS SUBJECT TO QUARANTINE—1965-66

Type	Number
Horses—from the United Kingdom	78
" New Zealand	512
Dogs and Cats—from the United Kingdom	777
" New Zealand	360
Small laboratory animals for scientific institutions	1,331
Monkeys from Malaysia and the United States of America for Commonwealth Serum Laboratories	953
Animals for permanent quarantine in registered zoological gardens and circuses	304
Total	4,315

TABLE 43

NORTHERN TERRITORY HEALTH

HEALTH SERVICES PROVIDED AT MAIN NORTHERN TERRITORY HOSPITALS—1965-66

	Darwin	Alice Springs	Tennant Creek	Katherine	Batchelor
Total Number of Daily Occupied Beds	90,187	33,565	5,388	11,071	..
Total Number of Admissions	6,717	2,856	889	1,220	..
Average Daily Number of Patients	247.1	91.6	15.6	30.3	..
Total Number of Births	767	273	63	74	..
Total Number of Deaths in Hospital	112	117	12	9	..
Total Number of Post Mortem Examinations	90	56	10	19	..
Total Number of Major Operations	571	203	..	25	..
Total Number of Minor Operations	2,480	683	133	220	..
Total Number of Outpatients Treated	75,630	30,811	8,168	9,681	1,337* 4,487†
Dispensaries—					
Prescriptions Dispensed	49,186	15,111	3,400	4,395	..
Average Number of Prescriptions Dispensed per Working Day	194	61.5	15.7	13.8	..
X-Ray Department—					
Number of Exposures	21,714	4,168	1,032	1,212	..
Ambulance Services—					
Number of Trips	2,796	752	107	195	..
Number of Patients Carried	3,916	1,084	137	222	..
Number of Miles Travelled	40,999	26,226	14,404	17,914	..
Physiotherapy Department—					
Number of Patients	770	310	..	..	..
Number of Treatments	3,786	1,163	..	..	..

*Doctor's Clinic.

†Daily Clinic.

TABLE 44

NORTHERN TERRITORY HEALTH

DENTAL SERVICES PROVIDED IN THE NORTHERN TERRITORY—1965-66

	Darwin Dental Clinic	Aerial Mobile (operating from Darwin)	Overland Mobile (operating from Darwin)	Darwin Schools	Alice Springs (including Mobiles and Schools)	Nightcliff Clinic	Leprosarium, Gaol and Bagot
Examinations	5,921	6,755	3,531	2,296	3,209	929	286
Extractions	4,654	2,486	959	547	1,836	807	80
Porcelain Restoration	689	16	206	218	312	411	1
Amalgam Restoration	5,963	3,865	1,835	2,647	2,736	2,358	230
Inlays	184	..	52	2	51	36	..
Crowns	64	..	5	1	25	4	..
Bridges	18	..	1	3	2	..	..
Dressings	937	89	92	105	373	218	10
X-rays	803	..	70	1,347	370	232	1
G.A.'s Hospital	110	..	4	..	22	..	..
Root Treatment	47	..	14	3	26	19	..
Scale and Clean	174	5	122	5	85	107	1
Infective Gingivitis	10	..	6	..	3	5	..
Orthodontist	65	..	6	5	220	16	..
Oral Surgery	131	3	18	6	67	24	..
Jaw Fracture	20	..	..	..	11	..	..
Other Treatment	2,754	253	783	643	1,496	990	..
Dentures, Full	218	..	108	5	151	75	2
Dentures, Part	156	..	52	4	73	84	..
Dentures, Repair	505	..	79	1	269	84	..
Dentures, Remodel	81	..	20	1	65	15	..
Alveolar Osteitis	..	..	..	..	..	..	..

TABLE 45

NORTHERN TERRITORY HEALTH

AERIAL MEDICAL SERVICE—1965-66

	Darwin	Alice Springs
Emergency Flights	206	1
Routine Flights	205	156
Hours Flown	1,550	584
Miles Flown	198,078	75,575
Patients Carried	998	275
Patients Carried by Charter and Commercial Services	754	340
Radio Medical Consultations	1,056	2,382

TABLE 46

AUSTRALIAN CAPITAL TERRITORY HEALTH

LICENCES ISSUED UNDER THE PUBLIC HEALTH ORDINANCE—1965-66

Barber Shops	60
Eating Houses	71
Boarding Houses	64
Ice Cream Vendors	13
Meat Vendors	53
Milk Distributors	85
Milk Vendors	164
Prepared Meat Vendors	197

TABLE 47

AUSTRALIAN CAPITAL TERRITORY HEALTH

SAMPLES COLLECTED BY HEALTH INSPECTION SECTION—1965-66

	For Bacteriological Examination	For Chemical Examination
Milk	792	409
Cream	112	99
Ice Cream	24	13
Meat	..	33
Other Foods	20	12
Water—		
City Supply	860	1,917
Swimming Pools	129	10
Picnic Resorts and Other Supplies	140	6
Sewage	118	118
Lake Burley Griffin and Molonglo River	976	318

TABLE 48

AUSTRALIAN CAPITAL TERRITORY HEALTH

SCHOOL MEDICAL SERVICE EXAMINATIONS—1965-66

	School	Pre-School
Number of Children Examined	6,243	300
Defects Notified—		
Eye	431	19
Nose and Throat	165	2
Hearing Loss	292	7
Miscellaneous	651	14

TABLE 49

NATIONAL FITNESS

ALLOCATION OF ANNUAL GRANT TO STATE NATIONAL FITNESS COUNCILS—1965-66

Item	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Total
	$	$	$	$	$	$	$
Wages, salaries, allowances, overtime and services not otherwise provided for	6,100	6,100	5,230	5,230	5,230	5,230	33,120
Services to associated groups including leader training	6,980	6,980	5,230	5,230	5,230	5,230	34,880
Grants to voluntary youth organizations	1,740	1,740	1,536	1,536	1,536	896	8,984
Subsidies to local national fitness committees	2,620	2,620	2,284	2,284	2,284	1,350	13,442
Services to sports organizations	846	846	520	520	520	350	3,602
Development of camps and hostels	6,980	6,980	5,230	5,230	5,230	5,230	34,880
Total	25,266	25,266	20,030	20,030	20,030	18,286	128,908

TABLE 50

NATIONAL FITNESS

ALLOCATION OF ANNUAL GRANTS TO STATE EDUCATION DEPARTMENTS—1965-66

Item	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	C/wealth
	$	$	$	$	$	$	$
Training of general teachers in physical education—							
(*a*) Short courses	1,000	1,000	1,000	600	600	600	4,800
(*b*) Residential courses	1,000	1,000	1,000	1,000	1,000	1,000	6,000
Provision of bursaries to enable selected teachers to undertake university courses	..	..	..	1,200	1,200	1,200	3,600
Development of health and physical education in practising schools and teachers colleges—							
(*a*) Equipment	600	600	600	400	400	400	3,000
(*b*) Camps for teachers college students	500	500	500	300	300	300	2,400
Publications, films, records, &c.	968	968	966	966	966	966	5,800
Development of school camping and hostelling—							
(*a*) Equipment of camps and schools	1,000	1,000	1,000	800	800	800	5,400
(*b*) School camping and hostelling	600	600	600	400	400	400	3,000
Total	5,668	5,668	5,666	5,666	5,666	5,666	34,000

TABLE 51

COMMONWEALTH MEDICAL OFFICERS

NUMBER OF CLINICAL EXAMINATIONS BY COMMONWEALTH MEDICAL OFFICERS—BY STATES—1965-66

State	Departments	Seamen	Pensioners	Others	Total
New South Wales	27,634	1,400	5,640	28	34,702
Victoria	13,008	309	3,237	10	16,564
Queensland	6,066	136	2,121	4	8,327
South Australia	4,325	124	1,630	..	6,079
Western Australia	2,719	242	1,733	..	4,694
Tasmania	1,517	8	369	42	1,936
Australian Capital Territory	5,177	..	142	1,064	6,383
Northern Territory	1,401	2	47	229	1,679
Commonwealth	61,847	2,221	14,919	1,377	80,364

TABLE 52

COMMONWEALTH MEDICAL OFFICERS

NUMBER OF VACCINATIONS BY COMMONWEALTH MEDICAL OFFICERS—BY STATES—1965-66

State	Smallpox	Yellow Fever	Cholera	T.A.B.	Tetanus	Plague	Total
New South Wales	23,493	935	21,377	331	671	10	46,817
Victoria	2,296	438	3,628	1,161	120	..	7,643
Queensland	4,656	199	5,012	390	196	5	10,458
South Australia	2,630	111	1,866	18	..	..	4,625
Western Australia	2,314	254	2,464	346	213	3	5,594
Tasmania	1,192	119	1,553	288	124	4	3,280
Aust. Capital Territory	2,130	59	3,834	1,522	105	67	7,717
Northern Territory	1,929	20	2,327	580	476	3	5,335
Commonwealth	40,640	2,135	42,061	4,636	1,905	92	91,469

TABLE 53

COMMONWEALTH HEALTH LABORATORIES

NUMBER OF PATHOLOGICAL EXAMINATIONS AND LABORATORY TESTS PERFORMED AND NUMBER OF PATIENTS—1965-66

Health Laboratory	Examinations and Tests*	No. of Patients
Albury	105,242	18,917
Alice Springs	41,749	8,202
Bendigo	140,705	22,682
Cairns	295,458	43,498
Canberra	450,568	93,746
Darwin	164,281	38,115
Hobart	145,787	16,509
Kalgoorlie	49,934	10,032
Launceston	59,122	12,374
Lismore	200,068	31,921
Port Pirie	60,662	13,096
Rockhampton	369,095	56,137
Tamworth	200,103	29,841
Toowoomba	203,139	36,089
Townsville	352,022	55,737
Total	2,837,935	486,896

*Nuffield Points Score.

TABLE 54

NATIONAL BIOLOGICAL STANDARDS LABORATORY

SUMMARY OF ALL SAMPLES EXAMINED—1965-66

Type	Number Examined	Failures	Percentage of Failures
			Per cent
Therapeutic Substances Act—Official Samples	945	342	36.2
National Health Scheme—Pharmaceutical Benefits Samples	187	49	26.2
Other Departments and Authorities	231	36	15.6
Item 28A—Customs (Prohibited Imports) Regulations and Miscellaneous Samples	47	29	61.7
Total	1,410	456	32.3

TABLE 55

NATIONAL BIOLOGICAL STANDARDS LABORATORY

SAFETY TESTS PERFORMED—1965-66

Type	Number Examined	Passed	Failed	Suspected Failures not Confirmed
Sterility—				
Standard Test Technique	457	442	15	4
Millipore Technique	65	65	..	2
Histamine-like Substances	37	37	..	..
Toxicity	101	98	3	..
Pyrogens	186	186	..	..

TABLE 56

COMMONWEALTH ACOUSTIC LABORATORIES

CASES EXAMINED—1965-66

New Cases Attending Laboratories	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	C/wealth
Repatriation	2,050	514	518	349	254	99	3,784
Children	1,638	820	1,261	766	560	417	5,462
Miscellaneous	39	221	267	88	109	99	823
Social Services	..	1	..	1	5	1	8
Army	160	53	46	36	4	..	299
R.A.A.F.	7	5	6	42	10	183	253
Navy	34	6	..	2	5	..	47
Directors of Health	91	84	4	50	10	20	259
Commonwealth Compensation	115	30	14	9	10	..	178
State Compensation	2	1	108	..	..	1	112
Total	4,136	1,735	2,224	1,343	967	820	11,225
Civil Aviation Referrals	362	398	199	124	116	15	1,214

TABLE 57

COMMONWEALTH ACOUSTIC LABORATORIES

CALAID HEARING AIDS FITTED—1965-66

Calaids Fitted	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	C/wealth
Repatriation	448	470	197	155	107	78	1,455
Children	236	207	139	94	48	17	741
Health	..	15	3	1	1	1	21
Adolescents	9	..	4	..	4	..	17
Social Services	..	1	1	..	1	..	3
Army	3	1	1	1	1	1	8
R.A.A.F.	..	2	..	..	..	..	2
Navy	6	..	..	..	..	..	6
Commonwealth Compensation	7	..	..	..	1	..	8
Total	709	696	345	251	163	97	2,261

TABLE 58

COMMONWEALTH ACOUSTIC LABORATORIES

CALAID HEARING AIDS MAINTAINED—1965-66

Calaids Maintained	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	C/wealth
Repatriation	4,284	4,187	1,743	1,564	1,356	462	13,596
Health	1,140	610	435	344	239	85	2,853
Children	1,714	1,683	844	728	408	220	5,597
Social Services	11	12	2	1	4	4	34
Army	27	12	7	7	1	1	55
R.A.A.F.	3	7	2	3	..	..	15
Navy	3	2	..	..	..	..	5
Commonwealth Compensation	12	..	..	..	1	..	13
Total	7,194	6,513	3,033	2,647	2,009	772	22,168

TABLE 59

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL

GRANTS MADE FROM THE MEDICAL RESEARCH ENDOWMENT FUND—1965-66

Universities, Institutions and Hospitals	Research Workers	Scholarships	Technical Assistance	Maintenance and Equipment	Total
	$	$	$	$	$
UNIVERSITIES—					
University of Adelaide	23,940	30,120	13,100	9,102	76,262
University of Melbourne	79,075	47,300	57,040	13,134	196,549
Monash University	10,470	19,800	22,618	4,600	57,488
University of New South Wales	..	12,240	12,600	2,000	26,840
University of Queensland	15,388	30,320	12,740	4,852	63,300
University of Sydney	44,458	44,300	22,936	18,950	130,644
University of Tasmania	..	..	..	3,000	3,000
University of Western Australia	10,700	9,540	16,732	2,000	38,972
INSTITUTIONS AND HOSPITALS—					
New South Wales	70,946	..	7,000	6,288	84,234
Victoria	130,430	5,000	53,832	8,286	197,548
Queensland	3,132	..	6,364	3,800	13,296
South Australia	..	..	3,120	200	3,320
Total	388,539	198,620	228,082	76,212	891,453

TABLE 60

COMMONWEALTH GRANTS

FREE MILK FOR SCHOOL CHILDREN—1950-51 to 1965-66

Year	Commonwealth Grant
	$
1950-51	71,550
1951-52	1,629,612
1952-53	3,042,788
1953-54	3,998,624
1954-55	4,474,850
1955-56	4,810,698
1956-57	5,214,080
1957-58	5,511,204
1958-59	6,137,272
1959-60	6,718,738
1960-61	7,120,248
1961-62	7,483,276
1962-63	7,454,308
1963-64	7,775,210
1964-65	8,059,292
1965-66	8,493,363

TABLE 61

COMMONWEALTH GRANTS

FREE MILK FOR SCHOOL CHILDREN—BY STATES—1965-66

State	No. of Children*	Payments
	As at 30th June, 1966	1965-66
	000's	$
New South Wales	607	2,909,568
Victoria	460	2,382,306
Queensland	254	1,256,441
South Australia	170	798,931
Western Australia	137	619,077
Tasmania	60	397,620
Australian Capital Territory	15	73,916
Northern Territory	9	55,504
Commonwealth	1,712	8,493,363

*These figures represent the approximate number of school children eligible to participate in the Free Milk Scheme.

TABLE 62

COMMONWEALTH GRANTS

MENTAL HEALTH INSTITUTIONS—BY STATES—1955-56 to 1965-66

	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	C/wealth
	$	$	$	$	$	$	$
1955-56							
Commonwealth Grant	417,526	891,492	133,176	24,490	19,970	59,644	1,546,298
Net State Expenditure	835,054	1,782,986	266,352	48,980	39,936	119,290	3,092,598
Total Expenditure	1,252,580	2,674,478	399,528	73,470	59,906	178,934	4,638,896
1956-57							
Commonwealth Grant	767,110	1,054,426	176,136	256,934	103,710	137,948	2,496,264
Net State Expenditure	1,534,222	2,108,852	352,270	513,866	207,420	275,898	4,992,528
Total Expenditure	2,301,332	3,163,278	528,406	770,800	311,130	413,846	7,488,792
1957-58							
Commonwealth Grant	648,304	1,090,730	228,206	304,318	58,472	182,768	2,512,798
Net State Expenditure	1,296,606	2,181,460	456,416	608,634	116,946	365,534	5,025,596
Total Expenditure	1,944,910	3,272,190	684,622	912,952	175,418	548,302	7,538,394
1958-59							
Commonwealth Grant	393,662	1,239,242	237,024	244,656	34,420	91,784	2,240,788
Net State Expenditure	787,322	2,478,482	474,048	489,310	68,842	183,570	4,481,574
Total Expenditure	1,180,984	3,717,724	711,072	733,966	103,262	275,354	6,722,362
1959-60							
Commonwealth Grant	718,120	1,036,470	149,226	183,540	73,598	133,990	2,294,944
Net State Expenditure	1,436,242	2,072,938	298,452	367,080	147,196	267,978	4,589,886
Total Expenditure	2,154,362	3,109,408	447,678	550,620	220,794	401,968	6,884,830
1960-61							
Commonwealth Grant	865,762	167,640	195,284	91,382	30,552	103,866	1,454,486
Net State Expenditure	1,731,522	335,282	390,570	182,764	61,102	207,730	2,908,970
Total Expenditure	2,597,284	502,922	585,854	274,146	91,654	311,596	4,363,456
1961-62							
Commonwealth Grant	1,297,274	..	141,436	55,678	154,044	..	1,648,432
Net State Expenditure	2,594,550	..	282,866	111,358	308,090	..	3,296,864
Total Expenditure	3,891,824	..	424,302	167,036	462,134	..	4,945,296
1962-63							
Commonwealth Grant	1,295,124	..	75,186	104,224	115,788	..	1,590,322
Net State Expenditure	2,590,246	..	150,374	208,448	231,578	..	3,180,646
Total Expenditure	3,885,370	..	225,560	312,672	347,366	..	4,770,968
1963-64							
Commonwealth Grant	982,178	..	108,166	172,586	331,584	..	1,594,514
Net State Expenditure	1,964,358	..	216,330	345,174	663,168	..	3,189,030
Total Expenditure	2,946,536	..	324,496	517,760	994,752	..	4,783,544
1964-65							
Commonwealth Grant	659,338	711,378	224,628	264,784	446,528	196,916	2,503,570
Net State Expenditure	1,318,678	1,422,754	449,254	529,568	893,054	393,832	5,007,140
Total Expenditure	1,978,016	2,134,132	673,882	794,352	1,339,582	590,748	7,510,710
1965-66							
Commonwealth Grant	1,717,124	1,566,824	146,461	242,107	337,670	528,804	4,538,990
Net State Expenditure	3,434,249	3,133,648	292,923	484,214	675,338	1,057,608	9,077,980
Total Expenditure	5,151,373	4,700,472	439,384	726,321	1,013,008	1,586,412	13,616,970
TOTAL:							
Commonwealth Grants	9,761,522	7,758,202	1,814,929	1,944,699	1,706,336	1,435,720	24,421,406
Net State Expenditure	19,523,049	15,516,402	3,629,855	3,889,396	3,412,670	2,871,440	48,842,812
Total Expenditure	29,284,571	23,274,604	5,444,784	5,834,095	5,119,006	4,307,160	73,264,218

Apparent minor errors in totals are due to "rounding off".

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COMMONWEALTH DEPARTMENT OF HEALTH

CENTRAL OFFICE

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