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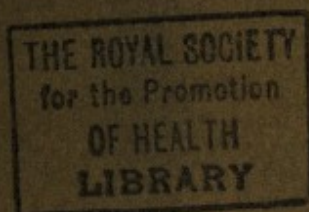


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COMMONWEALTH DIRECTOR-GENERAL OF HEALTH



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*The Honorable Harrie W. Wade,
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, 1964.*

*W. D. REFSHAUGE
Director-General of Health.*

*31st August, 1964.
Canberra, A.C.T.*

INTRODUCTION

This year has been one of continued growth and development in all facets of the Department's activities. The year has also seen the introduction of a number of important amendments in the National Health Scheme.

Amendments to Scheme

The most important amendment was to the Medical Benefits Scheme, in which there was an increase of Commonwealth medical benefits of approximately one-third without any change in contributions. This amendment was made in order to reduce the gap between medical fees and benefits and should mean that contributors will receive a satisfactory return on the charges most commonly made by doctors for medical procedures.

In the field of hospital benefits, the Special Account provisions were amended to alter some of the provisions at which criticism had been levelled. The most important amendment was one which will enable Special Account contributors to receive benefits exceeding the amount of the hospital fees, if the rules of their registered organizations so provide.

To counteract the spread of rebate arrangements in the Pharmaceutical Benefits Scheme, an amendment to the National Health Act was introduced on 23rd April, 1964, which provided that friendly society dispensaries must now charge the full pharmaceutical benefits fee of 5/- to members who have joined after 23rd April, 1964. The dispensaries may still exempt from payment of the full 5/- fee members who had enrolled on or before 23rd April, their spouses and their children under 16 years of age.

Pharmaceutical Benefits Costs

The Government has made it clear that it is vital that the cost of the Pharmaceutical Benefits Scheme be kept within reasonable bounds and it is one of the major tasks of Departmental administration to provide the Government with proper advice on how this may be fairly and equitably achieved.

What I regard as an essential feature is a full and proper understanding among both professional people and the public at large of the scheme itself and of the effects of the changes that have been made from time to time. In published material that has come under my notice comparisons have been made between the scheme as it was in the early 1950's and as it is now. These comparisons can be seriously misleading as the basic concept of the scheme changed in March, 1960, when the range of drugs available as pharmaceutical benefits was greatly widened. Instead of being restricted to a comparatively small number of costly life-saving and disease-preventing drugs, the scheme now operates so that up to 80% of prescriptions written by doctors are available as pharmaceutical benefits.

Valid comparisons can therefore be made only between periods after March, 1960 and the graphs on page 17 show the changes from 1960/61 to 1963/64, in the cost per head of population, the average cost per prescription, the number of prescriptions and the average number of prescriptions per head of population.

Commonwealth expenditure on prescriptions for pharmaceutical benefits for the general public, exclusive of pensioners, fell by £316,014 in 1963/64. This fall, which occurred in spite of the continued tendency for doctors to write more prescriptions per patient, is due in the main to the fall in the average cost per prescription for this type of patient from £1 0s. 11d. in 1962/63 to £1 in 1963/64.

The price reductions which occasioned this fall in average price were aimed mainly at the most frequently prescribed drugs in wide use and, although the average cost per prescription for pensioners was also reduced, the greatest effect was felt in the field excluding pensioners. The fall in average cost per prescription for the pensioner group was not as great as for the rest of the population, being only two pence from 15/8 to 15/6, and was not sufficient to offset the increased number of prescriptions written and dispensed.

The cost of pharmaceutical benefits for pensioners rose by £385,482, slightly more than offsetting the fall in Commonwealth expenditure for the rest of the population, so that the net rise in expenditure on benefit prescriptions was £69,468, which is an increase of only 0.2% over the Commonwealth expenditure in 1962/63 on prescription benefits.

In the year under review the total increase in the Commonwealth expenditure on pharmaceutical benefits was less than £1,000,000, being £964,256, the major portion of this increase, £894,788, being due to the increased cost of pharmaceutical benefits to hospitals. The increase is mainly attributable to increased prescribing in public hospitals, but a further contributing factor is that certain costly drugs have been made available as benefits for use in hospitals only.

The rise in the cost of the pharmaceutical benefits prescribed by doctors, including the patient contribution of 5/- per prescription, from £40.83 million to £41.32 million, is equivalent to a rise in the cost per head of population of only 0.4%. When the period 1960/61 to 1963/64 is considered, however, the most striking feature is the fact that while the average cost per prescription has fallen by 2.2% the number of prescriptions for pharmaceutical benefits dispensed has increased by 42.1%. The rate of increase was lower in 1963/64 than in the previous three years, but the total number of prescriptions still increased by 2.16 million over the year and has now reached the very high figure of 44.36 million.

The fall in the average cost of each prescription is due in no small measure to the negotiations carried out with drug manufacturers by Departmental officers. In 1963/64 negotiations resulted in the reduction in prices of a number of drugs, the most important of which was tetracyclines, the non-mercurial diuretics and a group of penicillin drugs, which would result in savings of approximately £2.7 million in a full financial year if the number of prescriptions for these drugs were to remain at the same level.

The increasing number of prescriptions is naturally of some concern in our efforts to keep the cost of the scheme to a minimum while ensuring that a full and effective service is available. In this regard it is noteworthy that the prescribing of hypnotic drugs, mainly the barbiturates, continues to absorb an increasing proportion of the total number of prescriptions written, increasing from 8.8% of the total in 1961/62 to 10.8% in 1962/63 and rising still further to 12.4% in 1963/64. A

total of 364 million tablets and capsules in the hypnotic drug group were supplied as pharmaceutical benefits in 1963/64. This figure does not include the tablets and capsules supplied to patients in hospital.

A number of claims have been made recently that the assurance of potency and purity given to the doctor by identifying a drug by its brand name is lost when drugs are prescribed by their generic names only. The validity of this claim is dependent on the quality requirements imposed for drugs listed as benefits and the control measures carried out to ensure that these requirements are adhered to.

I take this opportunity to outline the procedures followed by my Department to ensure that all drugs listed as pharmaceutical benefits meet proper standards of composition and purity.

The National Biological Standards Laboratory in Canberra, which is equipped with the latest scientific instruments and staffed by highly qualified personnel, ensures that proper standards of manufacture and quality control are maintained by regular visits and inspections of manufacturers' factories. Drugs which are listed as pharmaceutical benefits are subjected to testing in accordance with a sampling programme which ensures that all drugs are continuously tested. Should any drug fail to meet requirements the batch is withdrawn from the market or the drug may be removed from the list of benefits.

Listing of any drug, recommended by the Pharmaceutical Benefits Advisory Committee for inclusion in the list of benefits, is not confirmed until tested by the National Biological Standards Laboratory. If listed, the drug is, of course, subject to the rigid testing system outlined above.

Complementary to the sampling by the National Biological Standards Laboratory, the Department, under the provisions of the Therapeutic Substances Act, also undertakes the testing of a selected sample of imported bulk materials and finished pharmaceutical products.

It will be clear from this that, as far as practicable, proper Government supervision of the quality and purity of all drugs listed as benefits is being maintained irrespective of the sources of the drugs.

Thalidomide Babies

Commonwealth financial and other special assistance to the State Governments in the manufacture and fitting of prostheses for children born deformed as a result of their mothers

taking the drug thalidomide was approved early in 1963/64. The Commonwealth agreed to meet half the cost of fitting limbs for such children in all cases where a State Government meets the remainder of the cost. The limbs are supplied by the Department of Repatriation Artificial Limb and Appliance Centres, which also carry out the initial training in their use.

The services of specialists at the Institute of Child Health and of the Repatriation Department have been made available and in November, 1963, the Commonwealth sponsored the visit of Dr. D. S. McKenzie, senior medical officer and research medical officer of the British Ministry of Health's limb fitting centre at Roehampton. Dr. McKenzie visited each State of Australia, where he inspected Artificial Limb and Appliance Centres and rehabilitation centres. He interviewed the parents of children and gave expert advice to members of the medical and ancillary professions. The visit was eminently successful, many expressions of gratitude and appreciative remarks being received from many sources.

Infectious Diseases

In view of the persistence of large numbers of cases of infectious hepatitis, 9213 cases in 1963/64 compared with 8781 in 1962/63, a grant has been made by the National Health and Medical Research Council for a research worker at the Fairfield Infectious Diseases Hospital, Melbourne, to undertake tissue culture studies with infectious hepatitis virus and to engage in epidemiological studies of the disease.

The outbreak of typhoid in Great Britain in May, 1964, highlighted the necessity for the quarantine measures imposed in Australia and the maintenance of a highly efficient service to ensure that the requirements are adhered to. Typhoid is not normally a quarantinable disease, but the outbreak in Great Britain illustrates what could occur if a quarantinable disease were to pass through the quarantine barrier, and it is gratifying to be able to report

that not one case of quarantinable disease entered Australia in 1963/64.

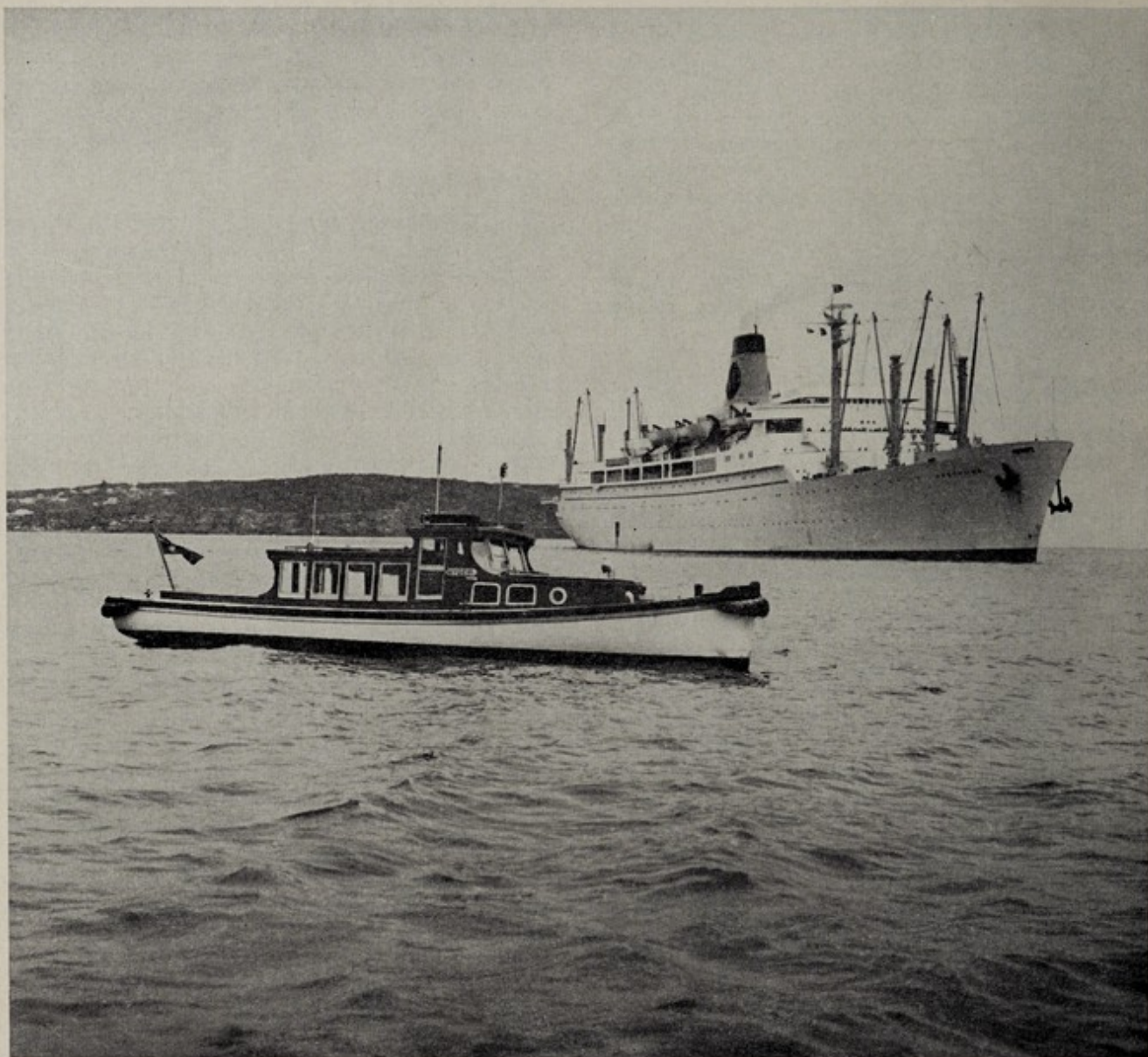
As stated in my report for the year ended 30th June, 1963, one million doses of each of the three poliovirus types of Sabin vaccine are held at the Commonwealth Serum Laboratories for use in a future emergency. On the advice of the National Health and Medical Research Council, it has now been decided to implement an immunization programme in Tasmania of Sabin vaccination of persons who have received three doses of Salk Vaccine. The use of the Sabin vaccine as a booster dose in Tasmania will provide an opportunity to study the administrative problems associated with such a campaign and will assist in determining conditions under which general campaigns with oral vaccine might be initiated in Australia.

World Health

In September, 1963, a meeting of the World Health Organization Regional Committee for the Western Pacific was held at Port Moresby under the chairmanship of Dr. R. F. R. Scragg, Director of Health for the Territory of Papua and New Guinea. This was an historic occasion in that it was the first time that the Committee has met on Australian territory, although we have been an active member of the World Health Organization since its inception and of the Western Pacific Regional Committee since it was created in 1951. Many health matters related to the Western Pacific area, many of which were of particular interest to our Northern territories, were discussed at the meeting, which was opened by the Prime Minister, Sir Robert Menzies.

In March, 1964, I attended the 17th World Health Assembly at Geneva. One hundred and fifteen nations were represented at the Assembly and I consider that Australia's continued active participation in international health affairs is an obligation which we must accept. It is, at the same time, greatly in our own interests, because the co-operation received from other countries is a vital factor in the maintenance and improvement of our own health standards.

*Quarantine launch approach-
ing an overseas liner so that
the Quarantine Officer may
board.*



NATIONAL HEALTH BENEFITS

Commonwealth expenditure on hospital benefits, medical benefits, the Pensioner Medical Service and pharmaceutical benefits, the payment of which is provided for in the *National Health Act 1953-1964*, continued to rise during the year ended 30th June, 1964.

The greatest increase in expenditure occurred in the Hospital Benefits Scheme, where expenditure increased by £4,400,000, due mainly to the variations in the benefits payable from the 1st January, 1963. These variations were outlined in my report for 1962-63.

Expenditure on medical benefits and the Pensioner Medical Service continued to follow a steady upward trend, rising by £700,000 and £200,000 to £12,400,000 and £4,800,000 respectively.

The sharp annual rise in the cost of pharmaceutical benefits, which has occurred in previous years, has, however, been reduced in 1963-64. Commonwealth expenditure on pharmaceutical benefits increased by only £1,000,000 in the current year, compared with a rise of £3,300,000 in 1962-63.

HOSPITAL BENEFITS

Commonwealth benefits paid towards meeting the cost of hospital and nursing home treatment totalled £28,107,971 in 1963-64, an increase of 18.8 per cent over the previous year. Amounts paid by registered organizations by way of hospital fund benefits also increased from £18,400,000 in 1962-63 to £20,955,000 in 1963-64.

Under the National Health Act the Commonwealth pays the following benefits for patients in approved hospitals and nursing homes—

In approved hospitals—

- (a) for insured patients—20s. a day.
- (b) in respect of pensioners enrolled in the Pensioner Medical Service and their dependants in public wards of public hospitals—36s. a day.
- (c) for uninsured patients not included in (b)—8s. a day.

In approved nursing homes—

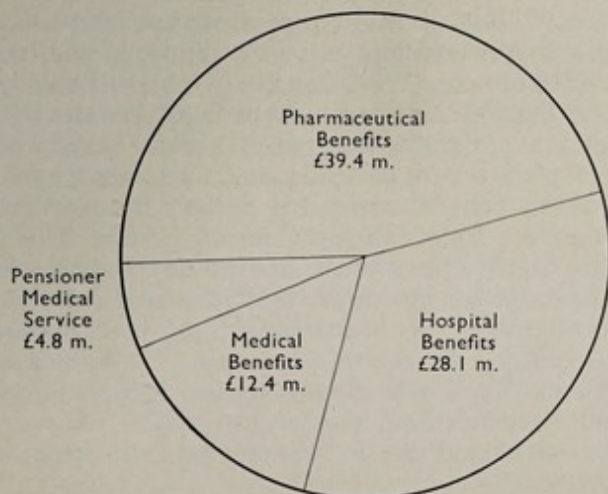
for all patients—20s. a day.

Insured Patients in Approved Hospitals

An insured patient is a person who contributes to a hospital benefit fund registered under the National Health Act, or a dependant of such a person. A condition of eligibility for receipt of the Commonwealth hospital benefit of 20s. a day is that a person who has joined a registered organization after 31st December, 1962, must contribute for a fund benefit of at least 16s. a day. Persons who, at 31st December, 1962, were contributing for a fund benefit of at least 6s. a day may continue to contribute for the same fund benefit and still be eligible to receive the Commonwealth hospital benefit of 20s. a day.

Insured patients who receive hospital treatment in approved hospitals are entitled to a Commonwealth hospital benefit of 20s. a day. The benefit is paid through the contributors' registered benefit organizations. Generally the Commonwealth hospital benefits are paid direct to the contributor together with the fund benefits to which he is entitled. Most organiza-

NATIONAL HEALTH BENEFITS
1963-64



tions, however, have arrangements whereby the contributor may submit the hospital account together with the certificate of hospitalization to the organization and payment of benefits is made to the hospital and offset against the amount owing. The benefit of 20s. a day is paid direct to hospitals where no charge is made, for example, in the public wards of Queensland's public hospitals and in infectious diseases hospitals.

Expenditure for the year ended 30th June, 1964 on Commonwealth hospital benefits for insured patients in approved public and private hospitals was £11,202,971 which includes Special Account deficits.

Provision for Pensioners in Approved Hospitals

All but a few public hospitals provide eligible pensioners and their dependants with free public ward treatment. In return for this, the Commonwealth pays the hospitals 36s. a day for each pensioner or dependant. One of the conditions under which this payment is made is that the approved public hospital must not charge any fees for any eligible pensioner or dependant who is a public ward patient. Eligible pensioners are those in possession of a Pensioner Medical Service entitlement card.

Commonwealth expenditure under these arrangements during 1963-64 amounted to £6,677,085.

Pensioners who receive treatment in intermediate and private wards of public hospitals and in private hospitals may be charged by the hospitals and are eligible for benefits under the Hospital Benefits Scheme as ordinary patients. They may, if they wish, contribute to a registered hospital benefits organization to obtain assistance towards meeting the cost of such treatment.

Uninsured Patients in Approved Hospitals

A Commonwealth benefit of 8s. a day is deducted from the accounts of uninsured patients (except eligible pensioners who receive free public ward treatment) in approved public and private hospitals. The benefits are paid direct to the hospitals by the Commonwealth.

Commonwealth hospital benefits for uninsured patients during 1963-64 amounted to £1,288,981.

Nursing Home Patients

A Commonwealth Nursing Home benefit of 20s. a day is paid for qualified patients who receive nursing home care in approved nurs-

ing homes, whether the patient is insured or not. The benefit is deducted from the patient's account, if any, and paid by the Commonwealth to the nursing home. Approved nursing homes consist, in the main, of convalescent and rest homes and infirmary sections of State benevolent homes and of homes for the aged.

Commonwealth Nursing Home benefits paid during 1963-64 totalled £8,939,911.

Approval of Hospitals and Nursing Homes

The Director-General is empowered to approve institutions as hospitals or nursing homes for the purposes of the payment of Commonwealth benefits under the National Health Act.

The following are details of new approvals granted in 1963-64—

	No.	Beds
Hospitals—		
Public	9	460
Private	6	192
Total	15	652
Nursing Homes—		
Public	6	404
Private	63	1,478
Total	69	1,882

During the year 211 premises were inspected for the purpose of reviewing their approval status held for the purposes of the National Health Act. The number of approved premises and beds increased as under in 1963-64—

Approved hospitals—	30.6.63	30.6.64
No.	1,136	1,142
Beds	69,101	70,216
Approved nursing homes—		
No.	902	948
Beds	25,535	28,685

Special Accounts

The Special Account system was introduced on 1st January, 1959 to provide an assured rate of hospital fund benefit to contributors who would otherwise have been excluded from fund benefits on account of organizations' rules relating to pre-existing ailments, chronic illnesses and maximum fund benefits. The purpose of the Special Account system is to ensure that such a patient is assured of a fund benefit at, a standard rate of 16s. a day, or at his insured rate of benefit, where the patient is contributing for a benefit of less than 16s. a day. Where the fund rules would operate to reduce the patient's benefit below this standard rate, the contributor is transferred to the Special Account. From 1st January, 1959 to 31st December, 1963, the legislation required that all hospital fund contributors over 65 years of age should also be transferred to the Special Account.

The contributions of all Special Account contributors are credited to the Special Account. If, at the end of any financial year, the payments from the Special Account for benefits and reasonable management expenses exceed the contributions credited to the Account, the amount of deficit is reimbursed by the Commonwealth.

A condition usually applying to payment of Special Account fund benefit is that the patient must have been treated in an approved hospital. However, provision exists for the payment of Special Account fund benefit to particular individual patients in approved nursing homes where the patient was suffering from an illness or injury requiring hospital treatment of the kind provided in approved hospitals and had in fact received such treatment.

Certain sections of the National Health Act relating to the Special Accounts of hospital benefits organizations were amended by Act No. 77 of 1963 which received the Royal Assent on 31st October, 1963. The new provisions came into operation on 1st January, 1964. The two main changes effected by the amending legislation are—

the requirement that contributors over 65 years of age must be transferred to the Special Account has been repealed; and the requirement that a Special Account contributor's combined benefits for any period of hospitalization must not exceed the gross fees and extra charges charged by the hospital has been modified. In certain circumstances a Special Account contributor may receive benefits in excess of the hospital charge, but the excess will be paid from the Ordinary Account.

The purpose of the changes was to remove some of the provisions in the Special Account system at which criticism had been levelled or which had acted inequitably against Special Account members. As the net result of these changes would be to substantially increase the payments from the Ordinary Accounts of hospital benefit organizations, it was considered desirable to provide some means of modifying this effect. This has been achieved by the introduction of a provision which permits an organization to transfer a contributor to the Special Account twenty-one days before his maximum benefit period terminates. The contributors transferred to the Special Account under these provisions are entitled to the same Benefits as ordinary con-

tributors and their entitlements are not affected by the amendment.

The introduction of the new arrangements was achieved smoothly and all hospital benefits organizations co-operated fully with the Department in this regard.

Hospital Fund Benefits

In all States hospital benefit tables are available to provide adequate cover for persons who wish to insure against the cost of public, intermediate or private ward accommodation. Organizations operate tables providing a combined Commonwealth and Fund benefit of up to £5 16s. a day.

Payments by registered organizations by way of hospital fund benefits amounted to £21,640,939 in 1963-64.

Statistics relating to hospital benefits are set out in tables 2 to 7 on pages 77 to 79.

Relationship with Organizations

During 1963-64 the relations between the hospital benefit organizations and the Department in the administration of the Scheme continued on a co-operative basis.

The statutory annual returns lodged by the organizations were examined to determine the financial experience and stability of each registered organization. Membership of organizations increased from 3,176,000 to 3,286,000 during the year.

During the year three hospital benefit organizations were granted registration. They were The Post Office Mutual Benefits Society, Manchester Unity of Australia Limited and M.I.A. Hospital Benefits Fund. At 30th June, 1964, there were 112 registered hospital benefit organizations.

Verification of Commonwealth Benefit Payments

The more important aspects of the Departmental activities in verifying Commonwealth benefits allowed through registered hospital and medical benefits organizations, and in inspecting private hospitals and private nursing homes were maintained up-to-date in 1963-64. However, less important aspects of the programme lapsed into arrears on occasions. The arrears were due to the additional inspections of private hospitals and private nursing homes that were necessitated by the changed hospital benefit arrangements introduced on 1st January, 1963. Steps have been instituted to overcome these arrears.

During the year negotiations continued with the State hospital authorities for verification

by the State Auditors-General of Commonwealth benefits paid direct to State-controlled public hospitals and nursing homes. All six States have now agreed to verify the Commonwealth benefit payments. Certificates in respect of payments of Commonwealth benefit in South Australia and Western Australia in the six months to 30th June, 1963, were received from the Auditors-General for those States.

MEDICAL BENEFITS

Medical benefits for the medical services detailed in the Schedule to the National Health Act are available to contributors insured with a registered medical benefits organization. Each organization pays the Commonwealth benefits to its contributors together with the appropriate Fund benefit payable for each medical service rendered to the contributor or his dependants. The Commonwealth benefit varies according to the type of service and the amount of Fund benefit, provided from the organization's own funds, is usually calculated as a fixed percentage of the Commonwealth benefit.

A few registered organizations provide medical services for their members under contract arrangements with doctors. In these cases the Commonwealth benefit takes the form of a subsidy towards the payments made by the organization to the contract doctors.

Although the Medical Benefits Scheme has been in operation since 1953, there had been no complete revision of the Schedules of benefits since their introduction. Some variations in the benefits payable for particular services had been made from time to time, and in 1959 the maximum Commonwealth benefit payable for major surgery was increased from £11 5s. to £22 10s. Notwithstanding these changes, it had become evident over the years that there were still anomalies in the Schedules. Moreover the general rise in medical fees over the last decade had led to a widening gap between benefits and fees, as a result of which the average contributor was required to meet from his own pocket a greater proportion of the cost of each medical service.

Following discussions with the Australian Medical Association regarding the anomalies in the Schedules which the Association's own examination had revealed, and after a detailed examination of the Schedules within the Department, the Government, in April, 1964, passed legislation which provided a new Schedule of Commonwealth benefits which came into operation on 1st June, 1964. The general effect of the new Schedule is to increase

Commonwealth benefits by 33½ per cent. In a number of instances, because of alterations to benefits to adjust previous anomalies, the increase is greater than 33½ per cent.

The new Schedule, apart from correcting anomalies and providing an overall increase in Commonwealth benefits, also contains many new services and now covers some 1,100 different items. In addition, the substitution of a single Schedule for the old First and Second Schedules was designed to simplify the structure and operation of the Medical Benefits Scheme.

The Government's decision to increase Commonwealth benefits followed lengthy negotiations between the Minister and the Australian Medical Association, which resulted in an assurance being given by the Association that no increase in fees would be sponsored by the Association as a result of increases in benefits under the National Health Act. The new Commonwealth benefits will, in many instances, be greater than the current Fund benefits and, when added to the Fund benefits, will give contributors a satisfactory return on the charges most commonly made by doctors for medical procedures.

The increased Commonwealth benefits were made available without the need for increased contributions by members of registered organizations. There has, however, been no change in the requirement that Commonwealth and Fund benefit must not exceed 90 per cent of the fee charged for the service.

In keeping with the spirit of co-operation between the Commonwealth and the registered organizations which has been a feature of the Medical Benefits Scheme since its inception, the registered organizations were kept informed of developments in the field of Commonwealth benefit. The registered organizations, for their part, decided through their representative body, the Commonwealth Health Insurance Council, that current levels of Fund benefit will remain as they are until the full implications of the new Schedule become apparent.

While 1963-64 will be remembered for the introduction of the new Schedule, the usual work of the Department in connection with such important matters as the review of the financial experience of registered organizations and the examination of proposed changes in organizations' rules was continued. Although staffing difficulties had to be overcome, the review programme set down in this regard was fully implemented.

The Medical Benefits Scheme continues to grow both in membership and as a social

service. Commonwealth benefits of £12,424,143 were distributed through registered medical benefits organizations covering some 73 per cent of the population in 1963-64. During the year the Hospitals Contribution Fund of New South Wales, the Post Office Mutual Benefits Society and the Manchester Unity of Australia Ltd., were registered as medical benefits organizations, bringing the total number of registered organizations as at 30th June, 1964 to eighty-one.

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 continue to operate satisfactorily.

COMMONWEALTH HEALTH INSURANCE COUNCIL

The Commonwealth Health Insurance Council is constituted under Section 136 of the National Health Act. Its functions are to advise the Minister on matters relating to the Hospital and Medical Benefits Schemes and to recommend means by which improvements in methods and standards may be effected. The Council consists of the Director-General of Health as Chairman, six members nominated by the State Associations of registered organizations, five members representative of registered organizations generally and one member nominated by the Federal Council of the Australian Medical Association.

The Council met in Canberra twice during the year—in July, 1963 and in February, 1964.

At the first of these meetings the Council considered a detailed report by a special sub-committee of the Council which had reviewed the operation of Special Accounts in hospital benefits organizations in the light of the changes in hospital benefits arrangements which came into effect as a result of the amendment of the National Health Act as from 1st January, 1963.

As a result the Council recommended a number of changes in the Special Account provisions of the Act relating to hospital benefits organizations. The Minister for Health accepted these recommendations and the National Health Act was amended as from 1st January, 1964 to give effect to Council's recommendations. The details of the changes have been stated earlier.

The second meeting considered the proposed changes in the Commonwealth Medical Benefits Schedules and the implications arising therefrom. The Council strongly supported

the proposal to increase Commonwealth medical benefits.

However, the Council was of the view that, for the present, organizations should not attempt to introduce new fund benefit tables linked to the new Commonwealth Schedule, but should continue to operate the present fund benefit tables based on the repealed Schedules. Further consideration will be given to the introduction of new fund benefit tables when Council has had the opportunity to examine the experience of the operation of the new Commonwealth benefits.

The Council also considered at these meetings a number of other matters relating to the operation of the Medical Benefits and Hospital Benefits Schemes.

REGISTRATION COMMITTEE

The Registration Committee, which is constituted under Section 70 of the National Health Act, consists of the Commonwealth Actuary or his representative and two officers of the Department of Health. The functions of the Committee are to examine and to make recommendations to the Minister for Health in regard to applications for registration as medical and/or hospital benefits organizations and proposed changes to the rules of registered organizations.

The Committee met on 23 occasions during 1963-64 and made recommendations on 114 proposals submitted by organizations, including four applications for registration as medical and/or hospital benefits organizations. De-registration was recommended for one organization which had requested it.

PENSIONER MEDICAL SERVICE

The Pensioner Medical Service, which operates under Part IV of the *National Health Act* 1953-1964, is a general practitioner medical service provided free of charge to eligible pensioners and their dependants. The Service first came into operation on 21st February, 1951.

Persons eligible for the Pensioner Medical Service are persons receiving an age, invalid or widow's pension under the Commonwealth Social Services Act or a service pension under the Repatriation Act, subject to an income means test, and persons receiving an allowance under the Tuberculosis Act. Dependent wives and children, under sixteen years of age, of eligible pensioners are also entitled to the benefits of the Pensioner Medical Service. Eligible pensioners are issued with Entitlement Cards which must be produced on each

occasion a pensioner or a dependant consults a participating doctor.

The National Health Act authorises the Director-General of Health, on behalf of the Commonwealth, to enter into an agreement with a medical practitioner in accordance with the common form of Pensioner Medical Service agreement for the provision of medical services for pensioners and their dependants. Doctors participating in the Service provide medical attention of a general practitioner nature such as is ordinarily rendered by a general practitioner in his surgery or at the patient's home, to enrolled pensioners and their dependants. This includes treatment of a patient, who has undergone a surgical operation, from the time that he returns home from a hospital. The Service does not extend to specialist treatment, general anaesthetics or fractures. The pensioner, or dependant, has freedom of choice as to which participating doctor he will consult.

The prescribed fees paid by the Commonwealth on a concessional fee-for-service basis to doctors participating in the Service are 12s. for surgery consultations and 14s. for domiciliary visits.

In addition to the general practitioner service given to enrolled pensioners, a full range of medicines is available free of cost from an approved chemist upon presentation of a prescription written by a doctor. Eligible pensioners also receive free hospital treatment in the public wards of approved public hospitals.

During the year there was no change in the basis of operation of the Pensioner Medical Service.

The number of doctors participating in the Service at 30th June, 1964, was 5899. The average annual payment to each participating doctor during the year was £799 and the total payments by the Commonwealth to participating doctors amounted to £4,765,625.

The steady increase in the number of pensioners and dependants enrolled since the inception of the Service continued during the year. At 30th June, 1964 the number of persons (including dependants of pensioners) covered by the Service was 844,048, an increase of 1.6 per cent over the corresponding figure at 30th June, 1963. The average number of medical services received by persons covered by the Service showed a slight decrease from 9.0 services for 1962-63 to 8.9 services for 1963-64.

Statistics relating to the Pensioner Medical Service are set out in tables 14 to 17 on pages 81 and 82.

Committees of Inquiry

Medical Services Committees of Inquiry have been established in each State under the provisions of section 110 of the National Health Act. The personnel of each committee consists of the Commonwealth Director of Health for the particular State and four medical practitioners appointed by the Minister for Health from a panel of medical practitioners nominated by the Council of the State branch of the Australian Medical Association. The functions of the committees are to inquire into and report to the Minister for Health or the Director-General of Health on any matter referred to them in respect of, or arising out of, the services or conduct of medical practitioners in connection with the Pensioner Medical Service. Broadly, the committees' investigations are directed to breaches of the spirit and principles of the Pensioner Medical Service rather than to breaches of statutory provisions. The committees' functions also include matters in relation to the prescribing of pharmaceutical benefits by medical practitioners.

The committees have no power to impose penalties or to take disciplinary action themselves. However, on completion of an inquiry, the Committee recommends to the Minister what it considers to be the appropriate action to be taken. The Minister, on receipt of the Committee's report, may disallow, in whole or in part, payment of fees to the doctor in respect of medical services specified in the report, reprimand the medical practitioner or terminate immediately the agreement entered into with the medical practitioner. Notice of the action taken may be published in the Commonwealth Gazette.

In one case in which the partial disallowance of the claims of a partnership of doctors was made by the Minister for Health, following an inquiry by a Medical Services Committee of Inquiry into the apparent excessive attendances by the doctors concerned, they instituted legal proceedings against the Commonwealth. In the course of these proceedings, the parties agreed to state a case to the Supreme Court of New South Wales for determination of certain legal issues involved. The Court recently found against the Commonwealth on these issues. Although the basic principles of the Committee of Inquiry system remain unchanged, the effects of this judgment are at present being examined to solve the problems it has raised.

During 1963-64 Committees of Inquiry finalized 41 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 £24,475 in 35 cases and of these seven medical practitioners were reprimanded by the Minister and one agreement was terminated.

PHARMACEUTICAL BENEFITS

Under the Pharmaceutical Benefits Scheme a comprehensive range of drugs and medicinal preparations used for the treatment of most conditions and diseases is available as pharmaceutical benefits. These benefits are supplied on presentation by the patient, to an approved chemist, of a prescription written by a legally qualified medical practitioner. Except for pensioners and dependants covered by the Pensioner Medical Service and certain members of friendly society dispensaries, the patient pays 5s. towards the cost of each prescription.

Amendments to National Health Act

During the year, changes were made in the Scheme in relation to the conditions under which members of friendly society dispensaries were exempted from payment of the full 5s. fee and those under which arrangements could be made to insure against this charge with pharmaceutical funds or pools.

Since 1960, friendly society dispensaries, by virtue of the provisions of the National Health Act, had been permitted to exempt members and their dependants from payment of the full 5s. fee. It was considered reasonable that persons who had been contributing for long periods to dispensaries for benefits in respect of medicines should not be required to make additional payments towards the cost of medicines.

In recent years, however, the practice of allowing refunds or rebates against the 5s. charge had spread and at least one of the larger health insurance funds had been considering the introduction of such arrangements. The Government viewed this development with concern in view of the possible breakdown of the deterrent effect of the 5s. fee. This fee is regarded as a necessary and proper contribution which patients should make towards the cost of pharmaceutical benefits prescriptions and one which falls within the "self-help" principle on which the National Health Scheme is based.

To counteract the spread of rebate arrangements, an amendment to the National Health Act was introduced into Parliament on the 23rd April, 1964. This amendment provided that friendly society dispensaries must now charge the full pharmaceutical benefits fee of

5s. to members who joined after the 23rd April, 1964. The dispensaries may still exempt from payment of the full 5s. fee members who had enrolled on or before the 23rd April, their spouses, and their children under the age of 16 years.

Similarly, while pharmaceutical funds may continue to pay cash rebates against the 5s. fee to persons who had insured for such benefits on or before 23rd April, 1964, the Act now provides that such funds may not enter into new contracts of insurance of this nature.

The main reasons for the introduction of these provisions were to maintain a proper balance of financial responsibility in the pharmaceutical benefits field and to preserve an effective deterrent against unnecessary use of the Scheme.

At the same time as this amendment was introduced, provision was made to extend the approvals of 23 friendly society dispensaries which were previously approved to supply pharmaceutical benefits only to their own members and these members' families. Under this extension, these 23 dispensaries are now approved to supply pharmaceutical benefits to the general public as well as to members. This action brought to 140 the number of friendly society dispensaries approved to supply pharmaceutical benefits to the general public.

Other amendments to the Act which were made at the same time included machinery arrangements arising out of the above changes, and a change in regard to advertising. It is now a condition of approval of an approved pharmaceutical chemist that, where he advertises in regard to charges for drugs or medicinal preparations, he must include a statement as to whether or not the advertisement relates to the supply of pharmaceutical benefits.

Special Arrangements Under National Health Act

Provision exists in the National Health Act to enable special arrangements to be made for the supply of pharmaceutical benefits to persons living in isolated and remote areas of Australia. These arrangements include, for example, supply through the Royal Flying Doctor Service, Bush Nursing Centres and similar organizations. A number of such arrangements, additional to those already in force, were made during the year.

Changes in the List of Benefits

The Pharmaceutical Benefits Advisory Committee met on three occasions during the year and, as a result of its recommendations, a

total of 34 new preparations were added to the list of pharmaceutical benefits. Of these additions, the most important were the addition of a new semi-synthetic penicillin, three new antibiotics, five new anabolic steroids, an additional tranquillizing drug, and other drugs and medicinal preparations used in the treatment of leukaemia, cancer, Parkinson's disease, tuberculosis, heart disease and asthma.

In addition, a number of new forms and strengths of existing pharmaceutical benefits were made available during the year. These included a long-acting sulphonamide, three anti-histamines, a synthetic milk powder and two corticosteroids.

The Committee also recommended the removal of a number of drugs from the list of benefits. The majority of these drugs had been superseded by more effective ones.

Committees of Inquiry

During the year the Pharmaceutical Services Committees of Inquiry in all States considered a total of 75 cases which had been referred to them. The cases concerned the dispensing of pharmaceutical benefits prescriptions which failed to satisfy Departmental standards on analysis, some prescriptions which had been incorrectly dispensed, the incorrect endorsement of particulars on prescriptions by an approved chemist and the failure to issue repeat authorizations on prescriptions to patients entitled to receive them.

Following the receipt of the Committees' reports on these references, 39 approved chemists received warnings from the Director-General of Health, 25 chemists were reprimanded and one approved chemist was suspended from supplying pharmaceutical benefits for one month. In addition, the explanations given to the Committees by ten chemists were accepted and no further action taken in these cases.

The Medical Services Committees of Inquiry considered four matters which had been referred to them. As a result of the Committees' recommendations, three medical practitioners were reprimanded by the Minister for Health for excessive or irregular prescribing and were required to repay to the Department the cost of the pharmaceutical benefits concerned in the references. Notice of the three reprimands was published in the Commonwealth Gazette.

Court Proceedings

Court proceedings were instituted against five approved chemists for breaches of the pharma-

ceutical benefits provisions of the National Health Act. Convictions were recorded in all five cases. In one case, in addition, the chemist's approval to supply pharmaceutical benefits was suspended for two calendar months.

One doctor was fined for breaches of the National Health Act and his approval to write prescriptions for pharmaceutical benefits was suspended for three months.

Price Negotiations

The Department keeps drug prices under constant review and is continually engaged in price negotiations with drug manufacturers. Negotiations with manufacturers during 1963-1964 resulted in reductions in prices which will save the Pharmaceutical Benefits Scheme approximately £2,700,000 in a full financial year provided the number of prescriptions for the drugs concerned remains the same. Most of the reductions in price have applied to commonly used drugs such as antibiotics and non-mercurial diuretics.

Prescribers' Journal

Publication of the "Prescribers' Journal" continued throughout the year and doctors have expressed their appreciation of its value in prescribing. The Journal, which is a reprint of the British "Prescribers' Journal", contains articles by recognized experts on the efficacy and use of drugs and medicinal preparations, including many new and potent drugs. It is issued three to four times each year depending upon the receipt of the British information. Publication of the Journal will be carried on in view of its value to the medical profession.

Pricing by Computer Processing

The co-operation of the Federated Pharmaceutical Service Guild of Australia has been obtained regarding the introduction of a scheme by which prescriptions which have been dispensed as benefits under the National Health Act and submitted by chemists for payment will be individually priced and the total amount due to a chemist determined by computer processes.

Under this scheme chemists will be required to enter coding details, relevant to the benefit dispensed, on to the prescription form instead of entering pricing details as at present. Pricing details are obtained from a Schedule of Benefits issued by this Department.

As one of the first steps towards the introduction of the new scheme, the existing Schedule of Benefits was re-designed. The new format, which will facilitate reference by chemists for coding purposes, will include coding and pricing details for 2,200 preparations which have to be mixed by a chemist in addition to the existing and amended details for ready-prepared items.

The new Schedule of Benefits now provides relevant details in respect of approximately 95 per cent. of benefits dispensed under the National Health Act. These details will be used in the coding of prescriptions under the computer system. For the remaining 5 per cent. of prescriptions which cannot be pre-priced, a chemist will be able to accept an average price for the benefit dispensed, the price being determined by the computer, or, if he so desires, he may price the prescription himself.

Cost of the Scheme

Expenditure by the Commonwealth on pharmaceutical benefits for the year was £39,419,335. This was an increase of £964,256 over the 1962-63 level, as compared with an increase in that year of £3,265,196.

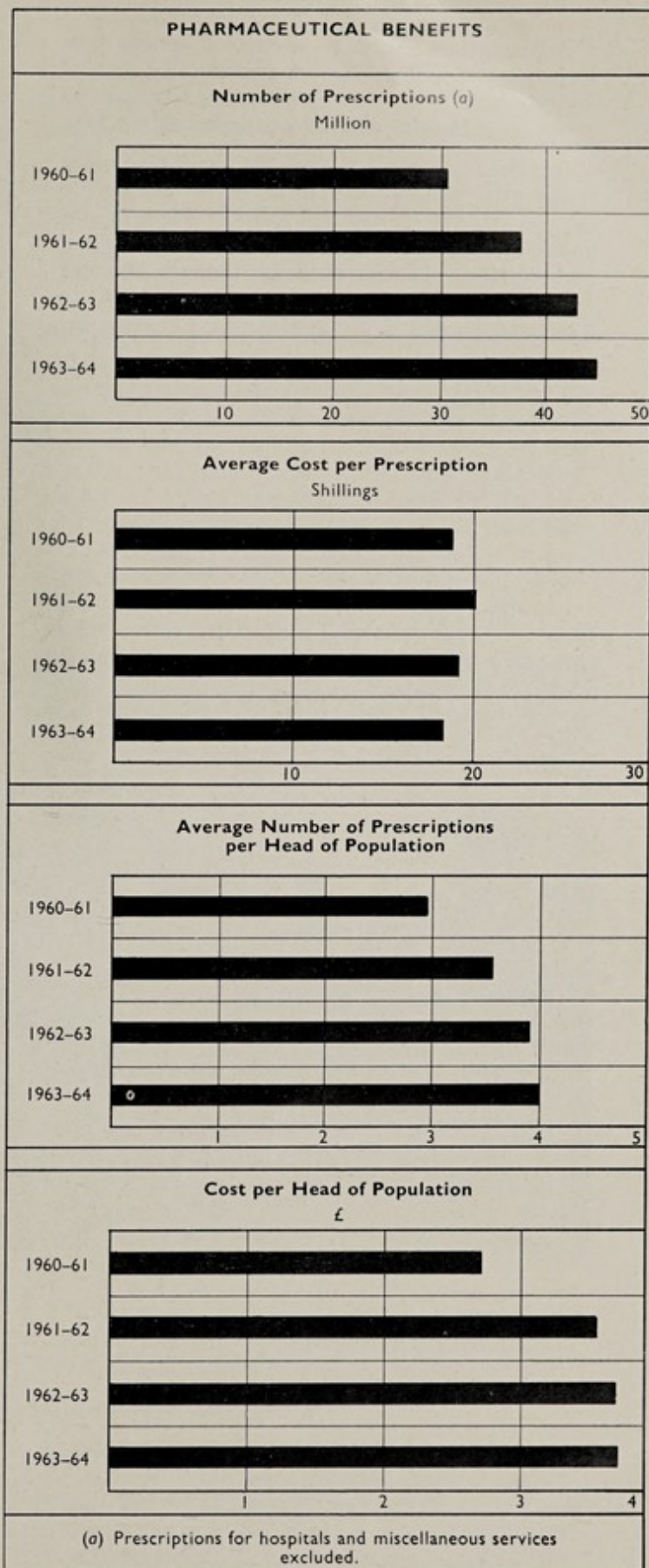
The 1963-64 total of £39,419,335 included £10,300,857 for pensioners and £5,887,979 reimbursed to approved public hospital authorities, bush nursing centres, &c. Total payments by patients, at 5s. per prescription, amounted to £7,786,902.

The number of prescriptions represented by the above payments (excluding the £5,887,979 reimbursement to hospitals, Bush Nursing Centres, &c.) totalled 44,356,897 made up of 13,317,273 for pensioners and 31,039,624 for the general public.

The average cost per prescription in 1963-64 was 18s. 7d. compared to 19s. 4d. in 1962-63.

Expenditure for benefit prescriptions (excluding hospitals, Bush Nursing Centres, &c.) increased by £69,468. The increase was due to a higher volume of prescriptions involving an additional amount of £1,716,916. This amount was partly offset by a reduction in the average cost per prescription which meant a saving of £1,647,448.

The increased volume of prescriptions was due to a combination of the rise in population, more frequent prescribing and additions to the list of benefits. The reduction in the average cost per prescription reflects reductions in prices made by manufacturers for drugs included in the list of benefits.

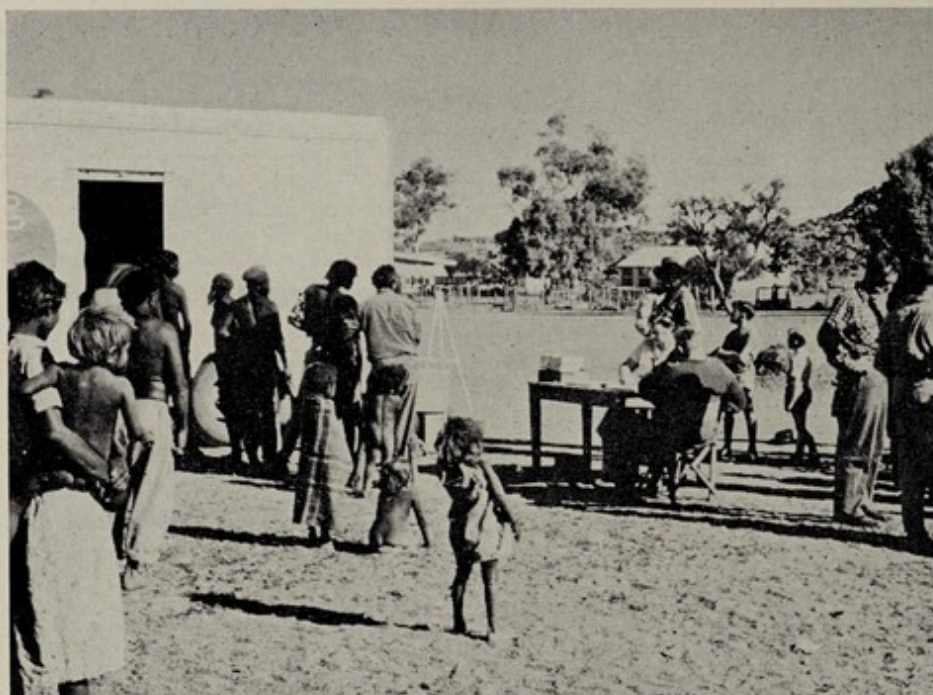


A dissection of the total cost of benefit prescriptions dispensed by chemists into cost of ingredients and chemists' remuneration is given in tables 20 and 21 on pages 83 and 84.

Itemized expenditure on some of the more frequently prescribed therapeutic groups is set out in the following table. Figures are based on claims received during the year and include the patient contribution of 5s. per prescription but exclude reimbursements to approved hospitals, Bush Nursing Centres, &c.

Therapeutic Category	Expenditure for Period 1.7.63 to 30.6.64 £'000
Broad Spectrum Antibiotics	7,204
Penicillins	4,030
Analgesics	3,189
Diuretics	2,875
Hypnotics	2,873
Blood Vessels	2,642
Anti-histamines	1,786
Antacids	1,339
Expectorants and Cough Suppressants	1,206
Sulphonamides	1,245

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



A Mobile X-ray unit on location in Central Australia.

TUBERCULOSIS DIVISION

This year has been one in which intensified efforts to counter the growing complacency towards tuberculosis have been undertaken. Among the factors giving rise to this complacency are the dramatic fall in the death rate from tuberculosis during the past few decades and the favourable outlook in most individual cases resulting from the relatively new anti-tuberculosis drugs.

The focal point of this part of the Division's work was "World Health Day" on 7th April, 1964. The World Health Organization set aside this day to emphasize the dangers of allowing apathy and complacency to develop in any country regarding the significance of tuberculosis as a public health problem. Even in the advanced countries, this problem is still regarded as significant and, of course, the position cannot remain static. If tuberculosis is not overcome, it will increase in the community.

This Department, in addition to carrying out the administration of the Commonwealth's financial commitments in the fight against tuberculosis gave considerable aid to the various States and voluntary bodies in the campaign to dispel the prevailing complacency.

Notifications

The present position regarding notifications of newly discovered cases within the Commonwealth is a most potent reason why we cannot be complacent regarding the extent of the problem in Australia. The position is clearly indicated in tables 27 and 28 on page 86.

As compulsory chest X-rays are now being carried out in all States, and since this has been a comparatively recent undertaking in the larger States, it is expected that the total number of new cases found will continue to increase for some years. The fall in the numbers found in the smaller States, where compulsory attendance for chest X-rays is of longer standing, will be more than off-set by the increased numbers which, it is expected, will be discovered in the larger States.

Chest X-ray Surveys

In addition to the encouragement given to the various States in respect of chest X-ray surveys, the Department has instituted a similar compulsory survey in the southern portion of the Northern Territory. In this survey, the staff and equipment are being supplied by the New South Wales Government and the New South Wales Anti-Tuberculosis Association, and the whole cost is to be met from Commonwealth funds under the Commonwealth-State Tuberculosis Arrangement.

The actual operation began at Alice Springs on 8th June, 1964 and so far the attendances have been most satisfactory. The Northern Territory Medical Service and the Alice Springs Hospital are co-operating in the follow-up work and the hospitalization of any cases where this is necessary.

It is planned to survey the northern portion of the Territory by means of a portable X-ray unit which is regarded as most suitable for the terrain of the Northern Territory. It is expected that the survey will commence in the coming year.

Annual Expenditure

As far as capital expenditure and the cost of Tuberculosis Allowances are concerned, the figures show a slight downward trend, but in the case of maintenance the expenditure continues to increase at a substantial rate. This increase is due to the extended compulsory chest X-ray programmes in the larger States, to the provision of increased chest clinic services, as well as to the rising costs of hospitals and of administration generally.

Total expenditure since the inception of the Commonwealth-State agreement is shown in table 29 on page 87.

Tuberculosis Allowances

In 1963-64 three variations were made to the allowances paid to sufferers from Tuberculosis. These were—an increase of 10s. for a sufferer without dependants when maintained in an institution free of charge; 15s. for each

dependent child under 16 years of age (previously it was 15s. for the first child and 10s. for each additional child); the extension of the allowance for dependant children undergoing full-time education which may now be continued up to the end of the year in which they attain 18 years of age. Previously this entitlement ceased when children reached 16 years of age.

The allowances payable at 30th June, 1964, were—

	£	s.	d.
Sufferer with dependent wife	12	2	6
Sufferer with dependent child or children only	7	7	6
Sufferer without dependants—			
When not in an institution	7	7	6
When maintained in an institution free of charge	5	15	0
Allowance for each dependent child under 16 years (may be extended)	0	15	0

The number in receipt of the allowance again decreased slightly—from 1,845 at 31st December, 1962, to 1,796 at 31st December, 1963. The decrease in numbers in receipt of

allowances reflects to some extent the reduction in the average time of receipt of the allowance due to more efficient treatment.

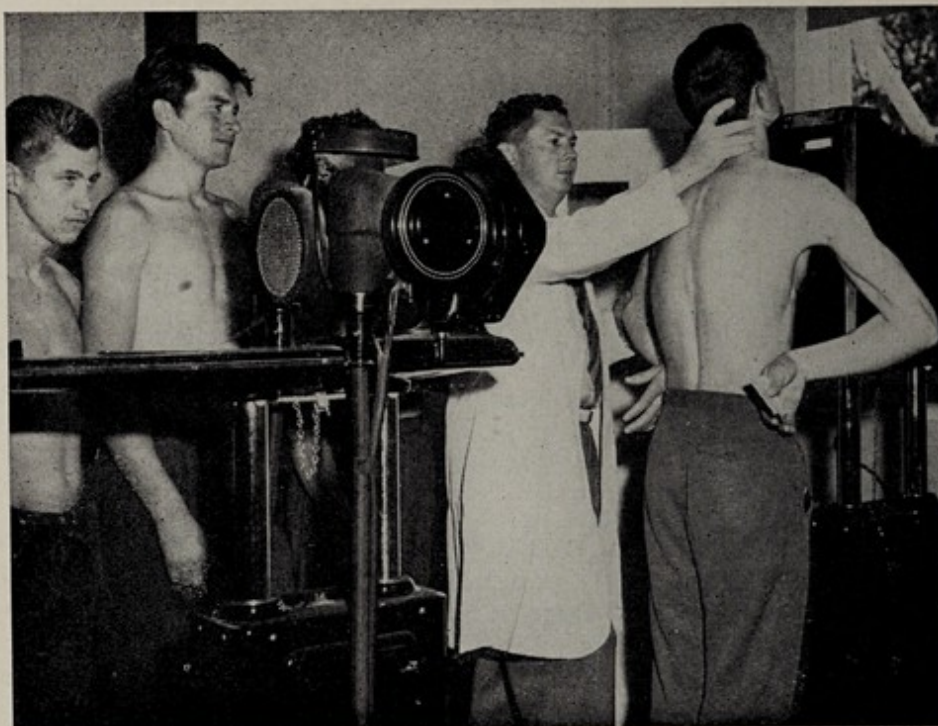
Statistics

The recent introduction of uniform statistical forms for State returns was a helpful step in furthering the national campaign.

The Department is most appreciative of the efforts made by State Directors and their staffs and of the co-operation of their Governments in providing any extra assistance necessary; the first set of returns was regarded as most encouraging.

As envisaged at the time of introduction of such an undertaking, needs for alterations, additions and deletions have become apparent and some changes will be made in future forms. The result, however, should be an increasingly informative set of statistics. Such information is necessary for State and Commonwealth authorities, as a guide to the further efficient prosecution of the campaign.

Patient being X-rayed at Bonegilla Migrant Centre



PUBLIC HEALTH

Broadcasting and Television Censorship

The broadcasting of talks on medical subjects and advertisements relating to medicines on radio or television is controlled by the provisions of the Broadcasting and Television Act 1942-1963. The Director-General's authority is contained in the following sections of that Act—

SECTION 100 (6). A licensee shall not broadcast or televise an advertisement relating to a medicine unless the text of the proposed advertisement has been approved by the Director-General of Health or, on appeal to the Minister under this section, by the Minister.

SECTION 122 (1). Except as prescribed, a person shall not broadcast or televise a talk on a medical subject unless the text thereof has been approved by the Director-General of Health, or, on appeal to the Minister under this section, by the Minister.

Details of commercials examined during the year are—

	Approved	Approved as Amended	Rejected
Radio commercials	333	297	22
Television commercials	142	80	26

The number of scripts for commercials was considerably less than in the previous year, but the proportion of scripts rejected was lower. The most common reasons for rejection were that grossly exaggerated claims or unjustified claims for prevention or cure were made. Although the proportion of scripts which required amendment was higher, most amendments were of a minor nature and the overall standard of commercials submitted showed considerable improvement.

Since the introduction of a code relating to the advertising of proprietary medicines in 1962, the number of difficult problems has decreased steadily and the degree of co-operation from the advertising and manufacturing industries has been excellent.

A guide for the advertising of vitamins, which is acceptable to industry, was completed during the year and has been used as a basis

for assessing scripts for vitamin advertising. The distribution of the guide to manufacturers and advertising agencies has resulted in a marked decrease in the number of rejections of vitamin advertisements.

In view of the equivocal evidence and divided opinion regarding the rate of absorption, safety, and efficacy of various forms of aspirin and aspirin-containing preparations, a guide for the advertising and labelling of analgesic preparations has been prepared in an attempt to obtain a more uniform approach to the advertising of analgesics. This guide has been adopted by industry.

In order to prevent unnecessary distress to certain members of the community, films dealing with puerperal mania, Caesarian section with fatal outcome or mental disorders in children will not be approved for telecasting.

During the year, 1,208 medical talks for radio broadcast were submitted for approval, of which 890 were approved as submitted, 275 were approved after amendment and 43 were rejected. Only 14 television talks were submitted of which six were approved and eight were approved after amendment.

Joint FAO/WHO Programme on Food Standards

The Codex Alimentarius Commission, which was formally constituted in June, 1963 for the purpose of preparing in a unified form a collection of internationally acceptable food standards, has set up a number of Expert Committees. Each Committee has been charged with the task of preparing a draft standard for a particular foodstuff or substance associated with foodstuffs.

In December 1963, a member of the Public Health Division, at the invitation of FAO, attended a Working Party on Pesticides in Agriculture in Rome, the object of which was to recommend tolerances for pesticide residues in various foods for incorporation into standards prepared by the Codex Alimentarius Commission.

A medical officer of the Department of Health attended a meeting of the Expert Committee on Food Additives, which met at The Hague in May, 1964 to discuss definitions, tolerances and lists of permitted food additives.

A meeting of the Expert Committee on Food Hygiene was held in Washington in June, 1964 to define standards for food processing sanitation inspection, analytical methods for food hygiene control, and toxic or disease-producing micro-organisms.

An interdepartmental committee has been established in Canberra for the purpose of preparing briefs for Australian delegates to the Expert Committees of the Commission and studying recommendations of the Commission.

Commonwealth Poisons Register

Work in compiling the pesticide section of the Commonwealth Poisons Register has continued, the initial steps being to deal fully with the basic ingredients which are used in the formulation of commercial products.

Where there are several substances very closely related chemically and toxicologically, one substance is dealt with in full detail as regards pathology, clinical features, therapy, &c., on a master card but only the toxic dose and any special features of other members of the group are considered individually.

Each substance is described under its recognized common name, but included on each card are its synonyms. Each synonym is separately indexed and referred to the common name card.

Little difficulty has been experienced in compiling information regarding toxicity, pathology and clinical manifestations but, with regard to some poisons (e.g. kerosene, phosphorus), much controversy exists among highly reputable authorities concerning treatment. Overseas opinion, in addition to local expert advice, has been sought.

National Health and Medical Research Council

In addition to the duties above, the Public Health Division is responsible for the preparation of the agenda for a number of com-

mittees and sub-committees of the National Health and Medical Research Council, and for the preparation of reports of all meetings.

It is through these reports that public health recommendations are presented to the National Health and Medical Research Council. Details of the two sessions of the National Health and Medical Research Council held during 1963-64 are given on pages 63 to 65.

Epidemiology

Details of diseases notified in the States of Australia for the six months to 30th June, 1963 and for the year ended 30th June, 1964, are given in table 31 on page 88, while statistics relating to the number of confirmed cases of poliomyelitis and to the number of infectious hepatitis cases notified are given in tables 32 to 35 on pages 89 and 90.

IMMIGRATION MEDICAL SERVICE

In October, 1963, the administration of the migrant centres at Benalla, Scheyville and Holden was transferred to Commonwealth Hostels Ltd., so that the Department now provides medical facilities only for the Bonegilla Centre where 271 beds, cots and bassinets are installed.

The number accommodated in all centres varied from a maximum of 1,109 in August, 1963, to a minimum of 399 in October, 1963. At Bonegilla the highest monthly intake of migrants was 635 in November, 1963 and the lowest monthly intake was 296 in September, 1963.

A total of 255 in-patients covering 1,375 bed-days were treated at Bonegilla and 5,767 out-patients attendances were recorded, 100 infectious cases were treated and 695 immunizations given at all centres. In addition, 30 minor operations were performed.

Staff figures at the commencement and end of the period were—

	1st July 1963	30th June 1964
Medical Officers	1	1
Nursing Staff	8	4
Orderlies	13	7
Others	6	5

THERAPEUTIC SUBSTANCES

Commonwealth activities in the control of Therapeutic Substances are co-ordinated by the Therapeutic Substances Branch under the provisions of the *Therapeutic Substances Act* 1953-1959 and Regulations and certain items included in the Third Schedule to the Customs (Prohibited Imports) Regulations.

Standard of Therapeutic Substances

The supervision of the standards of therapeutic substances apply to controlled therapeutic substances which are imported into Australia; exported from Australia; the subject of interstate trade or commerce; supplied as Pharmaceutical Benefits; and otherwise supplied to the Commonwealth (e.g. to the Repatriation Department). The discharge of these responsibilities is directed to ensuring the potency, purity and safety of therapeutic substances in Australia.

The chief regulatory instrument is the *Therapeutic Substances Act* 1953-1959 which provides the main framework for public supervision of therapeutic substances at Commonwealth level. This Act and its supplementary Regulations makes provision for the definition of official standards, the examination of the quality of therapeutic substances and the operation of advisory Committees to assist the Minister in the exercise of his powers.

Under these provisions a number of controlled therapeutic substances are subjected to examination in respect of packaging, labelling and conformity to standard on importation into Australia.

To avoid undue delay to importers, the analyses are conducted by the Department of Customs and Excise Laboratories in the various States.

The following table indicates the number of samples assayed by the Customs' Laboratories for the year ended 30th June, 1964. Examination of the other categories of therapeutic substances outlined in this table is conducted by the National Biological Standards Laboratory and details of these examinations are outlined

in the section of the report relating to that Laboratory.

State	Number of Samples	
	Passed	Failed
New South Wales	114	5
Victoria	229	3
Queensland	2	...
South Australia	24	...
Western Australia	3	...
Tasmania	Nil	...

Adverse Drug Reactions

Steps have been taken to establish machinery for the collation of reports of adverse drug reactions and the assessment and dissemination of information relating thereto.

This programme is being instituted by the Branch with the assistance of the Australian Medical Association, the Australian College of General Practitioners and the medical profession generally. Reports of adverse drug reactions will be assessed by the Therapeutic Substances Branch in co-operation with the Australian Drug Evaluation Committee. Action appropriate to the situation can then be instituted by the Branch to notify State Health Departments and the medical profession.

The internal programme will complement that of overseas countries and the World Health Organization. Reciprocal arrangements have been made for an exchange of information with some overseas countries, namely the United Kingdom, Canada, the United States of America, Denmark and Switzerland. The Australian delegation to W.H.O. has consistently supported international control measures being undertaken by the World Health Organization. Reports of adverse drug reactions from overseas health authorities are being processed in a similar manner as those received from within Australia. Following assessment, recommendations are forwarded for the information of State Health Departments and the medical profession.

Reports from the World Health Organization of a number of adverse drug reactions involving Tetracyclines, Pargyline Hydro-

chloride (Eutonyl), Ethionamide (Trescatyl) and Tranlycypromine (Parnate) have been evaluated and warnings despatched to the appropriate authorities.

Australian Drug Evaluation Committee

To assist in the evaluation of new therapeutic substances and the establishment of a Register of Adverse Drug Reactions, the Minister for Health has created an expert advisory Committee known as the Australian Drug Evaluation Committee.

The Committee, under the chairmanship of Dr. E. F. Thomson and consisting of seven members eminent in the fields of clinical medicine and pharmacology, has met at regular intervals since its first meeting in July, 1963.

A number of recommendations have been made to the Minister in relation to the action

to be taken in Australia following reports of drug toxicity in overseas countries.

Some of the more important recommendations have related to—

prohibiting importation and withdrawing from sale existing stocks of Bunamiodyl (Buniodyl) Sodium and preparations containing Bunamiodyl Sodium, which were used as oral cholecystographic agents and reported to be associated with the development of oliguria, renal tubular necrosis and death;

suspending the use of Tannic Acid and any proprietary preparation containing Tannic Acid administered rectally as an enema pending further investigation of reports of an association between Tannic Acid administered rectally and necrosis of the liver and until such time as a safe dosage level for this route of administration has been determined.



Examination of vaccination certificates at Kingsford-Smith Airport.

QUARANTINE

HUMAN QUARANTINE

Human quarantine is concerned primarily with the procedures necessary to exclude quarantinable diseases from Australia. The principal diseases are smallpox, cholera, plague and yellow fever.

Smallpox

The introduction of smallpox into Poland, Switzerland and Sweden by air during 1963 stressed the continuing danger for countries including Australia, which have been long free of the disease.

Smallpox continues as a threat as long as it remains prevalent in many parts of the world and there are people unprotected by vaccination. Despite the dramatic advances in other fields, progress in the effort to eradicate smallpox has been slow particularly in the endemic areas of Africa and Asia. The introduction of a single imported case into Poland from India resulted in 113 cases of smallpox including seven deaths from the disease. In the campaign to control the disease, it was necessary to vaccinate a total of 7,000,000 people in Poland.

The Australian Quarantine Service which was fully maintained during the year ended 30th June 1964, is able to report that no case of quarantinable disease entered Australia and constant efforts are being directed at overseas airlines to obtain their co-operation in an effort to ensure that passengers carried into Australia are in possession of the necessary vaccination certificate.

It was noted however, that 1,293 people arriving in Australia did not possess valid international certificates of vaccination and were revaccinated at the airport on arrival. In addition, it was necessary to detain 16 persons in quarantine because they had arrived by air unvaccinated and had refused to be vaccinated.

Six Australian Quarantine Medical Officers visited Madras, India, early in 1964 for a training course in smallpox diagnosis. The experience gained from this course should prove invaluable in the early detection of smallpox.

The rapid and early identification of smallpox is an additional safeguard against its introduction into this country.

Cholera

The potential threat to Australia from cholera was increased because of outbreaks in a number of South East Asian countries. Cholera occurred in Korea for the first time since 1937, in Cambodia for the first time since 1958 and in the Republic of Vietnam for the first time since 1953.

During the year under review it was necessary to vaccinate 475 persons who had arrived from cholera infected areas without valid certificates of vaccination.

Yellow Fever

Yellow fever is confined to circumscribed areas in Africa and America but the mosquito vector exists in Australia. Persons coming from a yellow fever area to Australia within the incubation period of the disease must therefore be vaccinated against yellow fever or they are subject to detention in a quarantine station until the incubation period has passed. During 1963-64 five persons were detained in quarantine because they arrived unvaccinated from a yellow fever area.

Plague

The threat of plague to Australia from other countries continues to diminish but the Quarantine Service ensures that ships visiting Australia are maintained in a sanitary condition and carry a current deratting certificate. Whenever indicated, fumigation or trapping of rats is carried out to ensure that there are no plague infected rats on these ships.

ANIMAL QUARANTINE

The task of the Animal Quarantine Service is a complex one. Despite advances in scientific knowledge, particularly in the field of virology, tests have not yet been devised to enable the presence of diseases in live animals to be detected with certainty and this influences quarantine requirements.

Importations Subject to Quarantine

Importations of domesticated animals during the year comprised—

from the United Kingdom, 49 horses, 635 dogs and cats;

from New Zealand, 597 horses, 218 dogs and cats

Total, 646 horses, 853 dogs and cats.

Recognized scientific institutions in Australia imported 240 small laboratory animals under quarantine permits during the year, while the Commonwealth Serum Laboratories imported 1,875 monkeys from Malaysia and the United States of America under strict quarantine supervision.

A total of 356 zoological and other animals were permitted to enter Australia for permanent quarantine in registered zoological gardens and circuses. Consignments of queen bees and aquarium fish from overseas were inspected for disease and, when found to be healthy, were given quarantine clearance.

In recent years, with the continuance of the total prohibition on the importation of many species of animals, the emphasis in animal quarantine work has been on the problems associated with products of animal origin

which represent a risk of introducing exotic animal diseases.

The implementation of Item 28A of the Third Schedule to the Customs (Prohibited Imports) Regulations continued to give quarantine control of imported therapeutic substances, such as sera, glandular extracts derived from animals, and vaccines. A close liaison was maintained in this field with the associated sections of the Department. The volume and variety of products in this category has increased appreciably in recent years and continues to increase.

Exports Subject to Quarantine

Negotiations continued with countries importing from Australia to ascertain full details of their current requirements, and, where appropriate, modifications to these requirements were recommended in the light of Australia's comparative freedom from serious animal diseases.

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 country.



Animals in quarantine get the best of attention.

Legislation

During the year the only amendments made to the animal quarantine legislation were effected by Quarantine Proclamation No. 72A of 27th February, 1964. This Proclamation revoked the provisions of Quarantine Proclamation No. 70A relating to the importation of animal fodder and also revoked Quarantine Proclamation No. 71A which dealt with the importation of hides and skins of cattle.

The importation of fodder derived from plants is now permitted, if the plants themselves are not prohibited under Plant Quarantine legislation, in the case of—

- fodder derived from stems or leaves of plants from New Zealand; and
- fodder consisting of cereal grains or bran and pollard derived from cereal grains, from Canada, New Zealand or the United States of America.

The importation of all other fodder of plant origin is prohibited except with the consent of the Minister.

Hides and skins of cattle may be imported only from Canada, Eire, Fiji, New Caledonia, New Hebrides, New Zealand, Norfolk Island, Papua and New Guinea, Tonga, the United Kingdom, the United States of America, or Western Samoa, provided they are imported by sea and are accompanied by the prescribed health certificates.

Committee Meetings

During 1963-64 the Director of Veterinary Hygiene attended the following meetings:—

The meeting of the Standing Committee on Agriculture, February, 1964.

The meeting of the Cattle Tick Control Commission as Chairman, September, 1963.

The inaugural meeting of the Australia-New Zealand Technical Committee on Animal and Plant Quarantine held in Canberra, July 1963, and the second meeting in Wellington, March 1964.

Australia—New Zealand Technical Committee

A joint committee of Australian and New Zealand Departmental officers, known as the Australia-New Zealand Technical Committee on Animal and Plant Quarantine, was established to consider and report on animal and plant quarantine restrictions as they affect trade between the two countries. The Committee held its inaugural meeting in Canberra in July, 1963.

The Commonwealth subsequently agreed to modify certain of Australia's quarantine requirements in relation to the importation from New Zealand of animals and products of animal origin, following the Committee's recommendations.

The revised policies, which were effective from 4th November, 1963, permitted the importation of pigs and of bovine semen into Australia from New Zealand subject to stringent safeguards, and permitted horses, dogs, cats and poultry to be transported to Australia from New Zealand by air via Norfolk Island provided the aircraft had not visited other places for at least a month and other prescribed precautions were taken. The conditions governing the importation of meat into Australia from New Zealand were also modified.

Following on the recommendations of an extraordinary meeting held in April, 1964, the Commonwealth has now agreed to permit aircraft engaged on the New Zealand-Australia-Noumea-Fiji-American Samoa circuit, and not visiting other places, to transport horses, dogs, cats and poultry to Australia from New Zealand subject to prescribed safeguards.

Overseas Visits

In August, 1963, the Director of Veterinary Hygiene visited Indonesia to confer with the governmental authorities on problems of animal health and quarantine, with particular reference to West Irian. He was accompanied by officers of the Administration of the Territory of Papua and New Guinea, including the Chief of the Division of Animal Industry.

In May, 1964, the Assistant Director of Veterinary Hygiene attended the annual meeting in Paris of the Office International des Epizooties as the Australian delegate. In the course of his overseas visit he also held discussions with officers of the Food and Agriculture Organization in Rome and with officials of the United Kingdom Ministry of Agriculture, Fisheries and Food, and visited animal disease research centres in Great Britain.

Training of Veterinarians—Exotic Animal Diseases

Because Australia is free from many of the serious livestock diseases which cause heavy losses in other countries, most Australian veterinarians have not had first-hand experience of these diseases.

Two Australian veterinary officers, one from the Northern Territory Administration and the other from the Victorian Department of Agriculture, who are also Quarantine Officers

(Animals), attended the annual exotic diseases course at the Grosse Ile Experimental Station, Quebec, Canada in September, 1963, and later visited the Plum Island Animal Disease Laboratory, New York, to observe and discuss foot and mouth disease and other exotic animal diseases under investigation. On returning to Australia, these officers disseminated the knowledge so gained. It is proposed to send Australian veterinary officers to the Canadian course each year in future.

As an additional extension project, the Veterinary Hygiene Section, with the co-operation of the Post-Graduate Committee in Veterinary Science of the University of Sydney, conducted a one-week course in Sydney on exotic diseases of animals in April, 1964 when fifteen of the major exotic diseases of livestock were dealt

with. The course was a noteworthy success, and it is planned to conduct similar courses annually.

Visit by F.A.O. Expert on Foot and Mouth Disease

In April-May, 1964, Dr. E. A. Eichhorn, a world expert on foot and mouth disease from the United Nations' Food and Agriculture Organization, visited Australia at the invitation of the Commonwealth Government. During his five weeks' tour he visited all States and Territories, accompanied by the Director of Veterinary Hygiene, and a critical examination of the existing plans for the control and eradication of foot and mouth disease was made by these officers.

This dog has served his quarantine period and re-united with his owner.



PLANT QUARANTINE

The year 1963-64 was one in which intense plant quarantine precautions against the importation of plant pests and diseases were continued throughout Australia. The routine handling of imported seed and plant material for growing or for processing was carried out with the full and active co-operation of the State Departments of Agriculture, C.S.I.R.O., the Universities and other institutions such as the Waite Agricultural Research Institute.

More progress has been made towards the establishment of Commonwealth Plant Introduction Stations for the post-entry quarantine of vegetatively propagated plant material, especially ornamental species. The control of the quarantine station at Bruny Island, Tasmania, was handed to this Branch and plans are afoot to make this station the plant introduction centre for Tasmania and possibly for other parts of southern Australia. This establishment is already in use as a plant quarantine station for the introduction of plant material requiring growth in post-entry quarantine, but certain improvements are planned to make it a satisfactory unit.

A quarantine glasshouse has been erected at the new Division of Biological Services station, which the Queensland Department of Agriculture is establishing at Indooroopilly. Plans are well in hand for a similar unit at Perth. Considerable attention has been devoted to the design of these units to ensure that they meet the quarantine requirement of being insect-proof, yet, at the same time, are suitable for satisfactory plant growth under the high temperature conditions which prevail in Brisbane and Perth.

Fumigation chambers used by plant quarantine officers throughout Australia have been improved with the addition of thermostatically controlled heaters and exhaust fans to expel the gas used in the fumigation.

Safflower, Sorghum and Maize

Amending legislation was passed during the year prohibiting the importation of Safflower seed except by permit. This action was necessary to protect a new and potentially valuable vegetable oil crop from seed-borne diseases, which are known to occur overseas.

During recent years there has been a sustained interest in the introduction of hybrid varieties of sorghum and maize, in particular from the United States of America. In North America a considerable amount of the development of hybrid varieties has been undertaken by commercial firms specializing in these fields

and these firms are prepared to make parental material of newly-evolved hybrid varieties available only to commercial firms in Australia under a business arrangement. So that Australia is not deprived of the benefit of these new varieties evolved overseas and importers' interests are protected, special quarantine arrangements, involving negotiations with the New South Wales State Department of Agriculture, have been made for the importation of parental material using temporary quarantine stations proclaimed for the purpose.

Timber

The inspection of imported timber and logs and the treatment of infected consignments continues to make heavy demands on plant quarantine officers. During the year, tariff restrictions on timber were replaced by increased duties and this led to an increase in imports from South East Asia. Many quarantine problems arising from the importation from these countries to the north of Australia still exist, but active co-operation, especially by the Malaysian authorities, is tending to improve the position.

When returning from Bangkok after attending a meeting of the sub-committee of the Plant Protection Committee for South East Asia and Pacific Regions in December, 1963, the Director of Plant Quarantine visited Kuala Lumpur and discussed with Malaysian forestry officials and timber exporters problems associated with the importation of Malaysian timber into Australia and arranged for a senior forestry official to visit Australia to see the condition of arrival of Malaysian timber. Mr. Abdul Hamid of the Malaysian Forestry Department subsequently visited Australia and was conducted on an inspection tour of all the main ports by an officer of the Plant Quarantine Division. During this tour they discussed various problems with importers and merchants who handle Malaysian timber and were able to clarify many misconceptions.

As in past years the most common pests found infesting timber and logs were beetles of the families Cerambycidae, Scolytidae, Platypodidae, Buprestidae, Bostrychidae and Lyctidae. The Bostrychidae have become far more prevalent over the past twelve months and with certain imported timbers are so common that they constitute a real threat to the timber industry of this country. In addition, many of these beetles are also serious pests of fruit trees, and this makes the problem even more critical. The reason for the increase in the incidence of this beetle of the family Bostry-

Quarantine officer inspects a log for evidence of timber pests.



chidae is thought to be a change in the methods of storing timber at Port Swettenham, Malaya, and the matter is being pursued with the Malaysian authorities.

The discovery on more than one occasion of live insects in imported crates, certified as having been treated, has caused much concern and each finding has been thoroughly investigated. Because no satisfactory explanation could be found the certificate of one exporter in Europe is no longer accepted by plant quarantine officers.

Cotton

The interest in cotton growing throughout Australia has intensified during the past twelve months. Representations by certain commercial firms for the bulk importation of cotton seed from the United States of America has continued, but the policy of permitting only 5 lb. of new varieties for growth, after special treatment under official quarantine supervision, has been maintained. In two instances officers of the New South Wales Department of Agriculture have detected disease outbreaks in quarantine plots which clearly indicates that even a relatively small sample of seed can be the vehicle for introducing diseases.

Keeping in mind the experience with contaminated pop-corn machinery, mentioned in the 1962-63 report, a very close scrutiny was maintained on cotton machinery, including cotton pickers and cotton gins, which arrived in some volume from the United States of America during the year.

Nursery Stock

The importation of nursery stock is now at a manageable level from a quarantine point of view. Thorough and detailed screening of nursery stock of fruit varieties such as stone fruit, grapes, strawberries, bananas and apples was arranged at the few centres throughout Australia where facilities and staff are available to carry out the specialised virus testing of imported varieties. I am grateful to the State Departments of Agriculture and the Waite Agricultural Research Institute for performing this special work.

Miscellaneous

Facilities are being provided at the major ports around Australia for the steam cleaning of motor vehicles and earth moving machinery which arrive carrying soil. In the very near future a relatively cheap, yet effective, service

should be available at each of the main ports.

C.S.I.R.O. and various State Departments were granted permission to import many different parasites and predators for the biological control of pests and weeds. Among the most important were five new parasites of *Sirex noctilio* and a nematode parasite *Diplogaster Iheritierii*. Permission to import a serious locust pest for experimental purposes was refused, however, because the risk involved was considered to be too great.

Conferences

The Division was represented at two conferences organized by C.S.I.R.O. Liaison Section, namely, the Fruit Research Conference at Orange and Gosford and the Entomologist Conference at Hobart.

The first meeting of the Australia-New Zealand Technical Committee on Plant and Animal Quarantine was held in Canberra in July, 1963, when a number of problems on plant quarantine were resolved.

In December, 1963 the Director attended a sub-committee meeting of the Plant Protection Committee for South East Asia and Pacific Regions. The South Pacific Commission invited the Director to attend their conference at Apia, Western Samoa, in March 1964, as a consultant. Within the South East Asia and South Pacific areas Australia is regarded as the country with the most advanced plant quarantine service, hence countries, which are developing such

services, constantly turn to Australia for advice and guidance.

Sirex Wasp

Under the chairmanship of the Director of Plant Quarantine the National Sirex Fund Committee met on several occasions during the year and co-ordinated the work of the sub-committees for Survey and Eradication and for Research. At a recent meeting of Commonwealth and State Ministers it was unanimously decided to recommend to governments, both State and Commonwealth, that the National campaign of survey, eradication and research under the National Sirex Fund should continue until June 1965, and that the Commonwealth should match a collective contribution by the States of £100,000, making a total of £200,000 available for work in this field.

Publications and Publicity

During the year *Recorded Diseases In and Outside Australia Part III—Field and Pasture Crops*—was released and distributed on a restricted basis. Fruit and Vegetable Lists were released in 1960 and 1961 respectively. In order that plant quarantine may function effectively it is essential that this information should be compiled for all crops or plants of interest to Australia.

Plant Quarantine publicity is carried on vigorously during the year and our full resources were committed.



A car imported from overseas is cleaned to remove soil which could harbour disease germs.

TERRITORY HEALTH

AUSTRALIAN CAPITAL TERRITORY

The Public Health Ordinance 1928-1951 places under the control of the Minister for Health matters relating to public health and hygiene in the Australian Capital Territory. In addition to the public health activities normally undertaken by the State Governments, the Commonwealth Department of Health undertakes certain duties which in the States would be the responsibility of local government instrumentalities.

The area of the Australian Capital Territory, including Jervis Bay, is 939 square miles and the population at 30th June, 1964 has been estimated to be 80,235 with a growth rate of 9.45 per cent over the preceding twelve months.

Health Laboratory

The Commonwealth Health Laboratory, situated at the Australian Institute of Anatomy, provides full clinical laboratory services to the Canberra Community and adjacent hospitals and to private medical practitioners in the area.

The number of pathological services carried out during 1963-64 totalled 273,889 and the number of patients who attended was 76,469. The Laboratory also carried out investigations in the public health and medico-legal fields. These involved 6,378 samples and 50,147 tests.

A.C.T. District Nursing Service

The staff of the A.C.T. District Nursing Service was increased by the addition of two full-time sisters on 27th May, 1964, so that at 30th June, 1964, eight full-time and two part-time sisters under the direction of a sister-in-charge are providing a service from 7.30 a.m. to 9 p.m. every day of the week. The sisters made a monthly average of 2,356 visits, the monthly average number of patients attended was 207 and the average number on the books at the end of each month was 96.

Throughout the year liaison was maintained by the District Nursing Service with agencies engaged in social welfare work and the newly established rehabilitation unit at the Canberra

Community Hospital. Lectures on the aims and objects of the district nursing service were given to third and fourth year student nurses at the Canberra Community Hospital and field visits were also organized.

Health Inspection

A medical officer of health and a staff of four health inspectors have been appointed to administer the Public Health Ordinance and Regulations.

The following licences were issued under the Public Health Ordinance during the year—

Barbers' Shops	53
Boarding Houses	42
Eating Houses	62
Ice Cream Vendors	11
Meat Vendors	47
Milk Distributors	73
Milk Vendors	151
Milk Shops	161
Prepared Meat Goods Vendors	170

Legal action was taken in 29 cases for offences against the legislation.

Samples of milk, other foods, water and sewage were submitted from this section to the Health Laboratory for bacterial and chemical analysis. Samples taken were—

	for bacterio- logical investigation	for chemical investigation
Milk	572	363
Cream	53	35
Ice Cream	5	2
Meat		25
Other Foods		9
Water	1,161	860
Swimming Pools	48	
Sterile Water	39	
Sewage	130	222

There were 10 throat swabs taken and complaints investigated numbered 196. Approval was given to instal 32 septic tanks and 154 building plans were examined.

Quarantine

The inspection staff continued to be responsible for the quarantine inspection of parcels arriving under bond at the Canberra Post Office. Four hundred and thirty-one of these parcels were subject to quarantine and from these 41 seizure notices were issued.

Fourteen aircraft arriving from overseas were subjected to quarantine inspection at Canberra airport.

Infectious and Notifiable Diseases

Infectious Diseases notified were—

Infantile Diarrhoea	6
Leprosy	1
Malaria	1
Meningococcal Infection	1
Paratyphoid	1
Salmonella Infection	3
Scarlet Fever	7
Tuberculosis	8
Typhoid Fever	1

Notifiable Diseases reported were—

Brucellosis	3
Encephalitis	1
Hydatid	5
Infective Hepatitis	20
Ophthalmia	3
Rubella	2

Tuberculosis

The Director of the Tuberculosis Division of the Commonwealth Department of Health, in addition to the responsibility of co-ordinating the activities of the States in the national campaign against tuberculosis, is concerned with the prevention, detection, examination and treatment of tuberculosis in the Australian Capital Territory. In 1963-64 eight cases of tuberculosis were notified in the Australian Capital Territory.

Infant Welfare

The Canberra Mothercraft Society, which is subsidised by the Commonwealth Department of Health, administered the Infant Welfare Service in Canberra. A staff of nine triple certificated sisters employed by the Society maintained 17 main centres and eight sub-centres and carried out a programme of home visiting. During the year there were 37,932 attendances at the centres, and 5,510 home visits were made by the sisters to mothers and babies.

The Queen Elizabeth II Coronation Home for Mothers and Babies, which is also under the management of the Canberra Mothercraft Society, was opened in 1963. It is staffed by sisters and mothercraft nurses and provides post-natal care for mothers and babies. An honorary medical staff has been appointed. The Home, which is an approved Public Hospital for Hospital Benefits purposes, has accommodation for two mothers and nine babies and during 1963-64 33 mothers and 109 babies were admitted resulting in a daily occupied bed average of 5.6.

Medical Inspection of School Children

The Commonwealth Department of Health is responsible for health aspects of child welfare in the Australian Capital Territory. These include a school medical service carried out by three medical officers and three sisters. The number of school children enrolled in the First term of 1964 was 19,212.

Medical examinations are carried out at all schools, public and private, within the Territory. The majority of the examinations were of children aged six, eight, 12 and 15 years. Another large group of children was referred for special examinations. The number of school children examined was 6,755 while personal interviews with parents numbered 286.

Defects notified during the year were—

Eye	386
Nose and Throat	62
Hearing Loss	86
Miscellaneous	148

In addition, 257 cases of hearing loss not requiring further treatment were found.

Regular visits from the Commonwealth Acoustic Laboratory audiologists continued throughout the year and 101 children were tested.

Medical Inspection of Pre-School Children

Medical examinations of children aged four years were carried out in 11 of the 27 Pre-school Centres functioning in Canberra. Children examined numbered 595. In most cases, mothers attended these examinations.

Defects found were—

Eye	17
Nose and Throat	5
Hearing Loss	11
Minor Hearing Loss	45
Miscellaneous	13

Immunization

Triple antigen injections, totalling 8,446 were given at regular sessions held throughout the year at Infant Welfare Centres.

In continuation of the campaign to control the incidence of poliomyelitis the Department of Health in Canberra gave 8,042 injections of poliomyelitis vaccine to infants, 1,232 to school children and 2,094 to adults.

School Dental Service

Free dental treatment from the School Dental Service is available to infants' and primary schools. The number of children under routine treatment increased to 8,621.

An extensive programme of preventive dentistry involving the application of stannous

fluoride to erupted teeth has been continued. The effectiveness of these applications will be assessed during the next 12 months.

Two new clinics have been put into operation at the Watson and Hughes Primary Schools, and new clinics are at present being built in the Hackett and Curtin Primary Schools.

As in previous years, visits were made to Jervis Bay School, the Wreck Bay Aboriginal Station, Norfolk Island, and the Cocos (Keeling) Islands.

Miscellaneous

Some 13,000 children attending schools in the Territory were eligible to receive one-third of a pint of milk a day. This milk was provided under the *States Grants (Milk for School Children) Act 1950*.

Registrations by the several boards during the year were—

Medical Practitioners	34
Dentists	8
Pharmacists	16
Nurses	100
Optometrists	2

In addition, seven Assistants in Nursing were enrolled by the Nurses Registration Board.

Approximately 200 inspections were made under the Poisons and Dangerous Drugs Ordinance.

Members of the Staff continued throughout the year to provide consultative and advisory services to medical practitioners, Government departments, various organizations and the general public.

The certificates in use in the Australian Capital Territory have been revised so that they now conform with the resolutions of the National Health and Medical Research Council.

Co-operation from medical practitioners has permitted the smooth introduction of the two forms now in use. Under this new procedure a certificate, known in medical and statistical spheres as the medical certificate of cause of perinatal death, relates to deaths of children within 28 days of birth or children who are not born alive, whilst the other certificate is used when death occurs at any other age.

Veterinary Services

The veterinary service of the Commonwealth Department of Health within the Australian Capital Territory includes the prevention and control of disease in stock, advice to district stock owners with field diagnosis on a herd or flock basis supported by laboratory confirmation, the supervision of the hygiene of dairies

and piggeries and the control of the Canberra Abattoir, an establishment where a full time meat inspection service of high standard is provided.

Field and Laboratory Veterinary Service

Several properties were quarantined for the presence of contagious footrot of sheep. In such cases quarantine is lifted only when the disease has been eradicated by slaughter, with written permission, at an approved abattoir or when eradication procedures, including paring of the feet and footbathing, has proved effective.

Advice was given to stock owners on disease problems and autopsies and specimen examinations 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 issued following examination for animals leaving the Australian Capital Territory both for overseas and to other Australian States.

Routine Veterinary Services

Frequent inspections of dairy premises were made to ensure the maintenance of satisfactory standards of hygiene.

A total of 2,286 dairy stock were subjected to an intradermal tuberculin test. This figure includes 28 introduced cattle and 525 calves tested prior to Brucella Strain 19 vaccination. One animal gave a positive reaction and was forwarded for slaughter at the Canberra Abattoir, but showed no visible lesions of tuberculosis on post-mortem examination.

Throughout the year 625 heifer calves were vaccinated with Brucella Strain 19.

Stock sales were attended and examinations made for the presence of notifiable diseases, particularly lice and ked infestation and footrot of sheep. Infected lots offered for sale were returned to their properties of origin under an Order for Movement. A number of cases of eye cancer and actinomycosis were forwarded for slaughter to abattoirs on an Order for Movement.

Canberra Abattoir

Canberra Abattoir is managed by the Commonwealth Department of Health by the Division of Veterinary Hygiene. A veterinary officer is Superintendent and there is a Commonwealth staff of 13 including two meat inspectors.

The overall number of animals slaughtered at the abattoir has increased over last year's figures, increases occurring in sheep and lambs and cattle, while the number of pigs slaughtered has decreased slightly and a decrease has also occurred in the number of calves slaughtered.

NORTHERN TERRITORY

The main increase in Departmental activities in the Northern Territory during 1963-64 was in the field of rural health. There was some increase in hospital activity, but, on the whole, the year has been devoted to the investigation of activities, consideration of the re-organization necessary to improve the efficiency of operations and preparation for the large-scale building programme for the Darwin Hospital, due to commence in the financial year 1964-65.

Hospitals

There was a general increase in work handled at hospitals in the Northern Territory during the year. The Department has had valuable assistance from the Advisory Boards of the Darwin and Alice Springs Hospitals, the members of which have devoted considerable time and effort to hospital activities and have materially assisted with the planning of the building programmes. The one exception was in the field of obstetrics, where the overall decline in the number of Northern Territory births is reflected in lower numbers of babies born at the Darwin and Alice Springs Hospitals. By contrast, more births took place in the smaller hospitals at Katherine and Tennant Creek. An encouraging feature has been the

increasing number of full-blood Aborigine mothers entering hospital for their confinements. At Katherine Hospital for instance, the number of Aborigines confined in hospital has more than doubled over the last three years. With increasing efforts to raise the standard of living of this section of the community, this trend is likely to increase.

The growth of the Northern Territory population and the unstable nature of private practice is reflected in the increasing number of outpatients handled at all Territory hospitals. The single exception is the small hospital at Batchelor, where the figures have declined somewhat. This was due to the lessening of mining activity in the area, but, as a new venture in the winning and processing of copper ore has been undertaken, it is possible that the trend in Batchelor will be reversed.

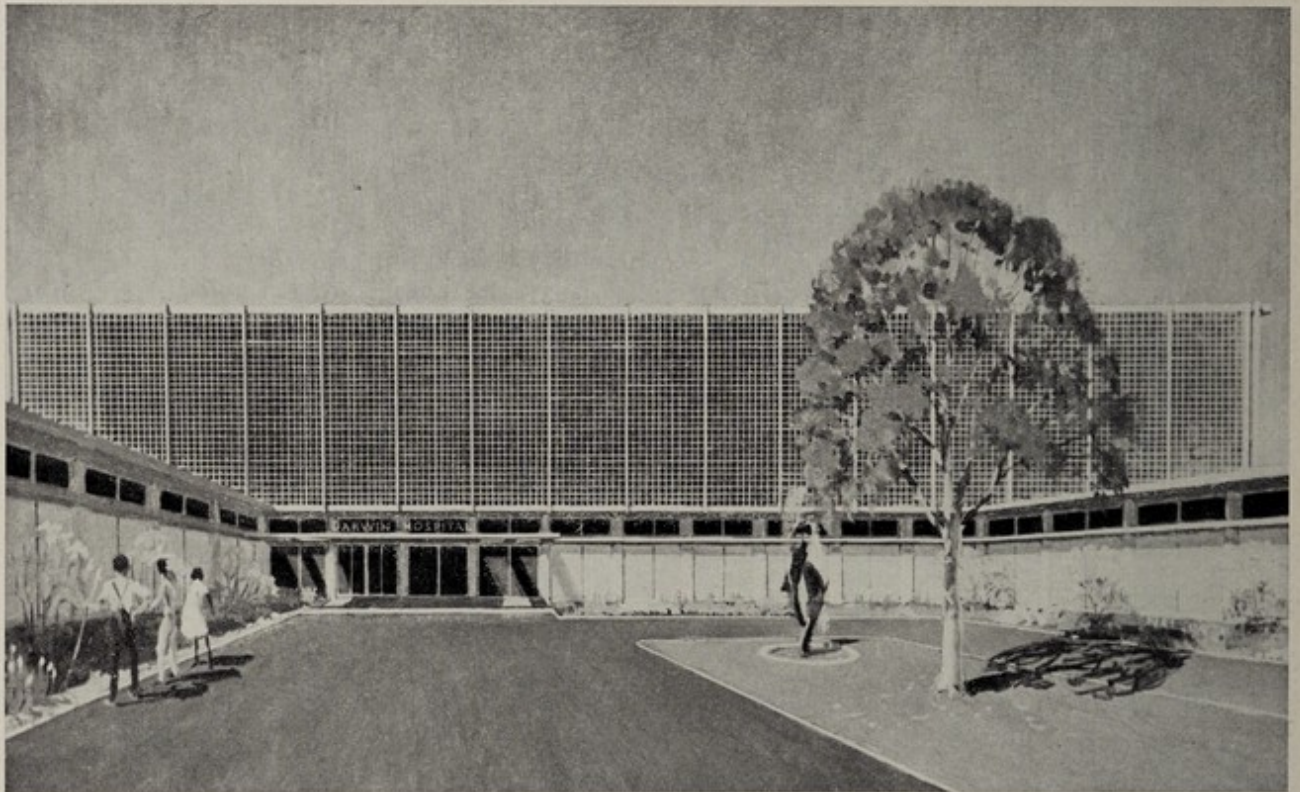
The main advance at the Darwin Hospital has been the complete re-organization of the X-ray Department. Apart from additional X-ray units installed, an automatic film processor was put into operation during the latter half of the year. As a result, the quality of the films has improved tremendously. This Department has commenced angiography and although this is in its early stages, it is anticipated that it will become standard procedure during the forthcoming year. A unit of clinical photography has also been established in the X-ray Department and much interesting material is being collected.

The first part of the proposed building programme, the extension of the existing Sisters' kitchen and provision of a new dining room,



An architect's impression of the new Nurses' Home to be built at Darwin Hospital.

An architect's impression of the new Administration Block to be built at the Darwin Hospital. Planning for a major construction programme at the hospital is now complete and work on the new building is expected to start soon.



is well under way. The coming year will see the commencement of the major developmental programme for Darwin Hospital.

A new maternity unit at the Alice Springs Hospital was opened during the year. This building, which is of the latest design and fully air-conditioned throughout, is of the highest standard. Facilities are comparable with those existing in any major hospital in the Commonwealth.

In November, 1963, two additional positions of Medical Officer were provided at the Alice Hospital and the increase in staff has resulted in easing the load on the existing doctors and increasing the efficiency and standard of the services provided.

The extensions to the Sisters' Home have been completed and it has been possible to move Sisters from temporary accommodation in the hospital grounds into this more comfortable and attractive building.

The investigation into infant morbidity and mortality in Aborigines has continued. Arrangements have been finalized for a leading specialist in child health to participate in this investigation in the forthcoming year.

The new building at the Tennant Creek Hospital, which was opened in November, 1962, has functioned admirably during this year. The fully air-conditioned environment and modern hospital facilities have been greatly appreciated by the inhabitants of this isolated community.

A new ward block for the Katherine Hospital is well under way and it is anticipated that it will be completed in September, 1964. A pleasant feature of the activities in Katherine has been the increasing number of full-blood Aborigines who are having their babies in hospital. These people are gaining confidence in European methods and the hospital is thus able to provide a better service for this section of the community.

The Medical Officer-in-Charge of the Leprosarium has now been re-designated as Medical Superintendent of the Leprosy Hospital and freed from other commitments to devote his entire time to this work.

It is pleasing to be able to record that the change from a custodial-care type institution to a specialized treatment and rehabilitation unit has now been accomplished. The activity in rehabilitative surgery is reflected in the figures which show a big increase in admissions to and discharges from the hospital. A further fall in the number actually in the East Arm Settlement has occurred, the majority of patients being treated as outpatients.

To assist in the performance of the surgery and rehabilitation which is being carried out, a part-time physiotherapist has been appointed and a technical assistant has commenced duty in the Laboratory.

Infant Health

In spite of a drop in the number of babies born throughout the Territory, the enrolments of new babies at clinics throughout the Territory showed an increase over the previous year. In fact, so heavy has been the load on the clinics in Darwin, that it has been necessary to make a change from weekly to fortnightly or monthly visits for older children. An additional position of Infant Health Sister, provided for the Darwin Area, was filled in April, 1964.

The drop in total clinic attendances from 13,994 in 1962-63 to 12,822 in 1963-64, caused mainly by extension of visiting periods, as mentioned above, together with the closing of the Winnellie Clinic, was offset by the increase in home visiting from 4,430 to 6,399.

The new clinic in Darwin functioned well and a start was made on the construction of a further new building at Nightcliff. This will be combined with a Dental Clinic and the whole building will be fully air-conditioned.

A course of lecture demonstrations on baby care for expectant mothers has been introduced at the Darwin Clinic and these have proved very popular. An attempt is being made to extend this to the Greek community which contains a large number of non-English speaking mothers. Voluntary interpreters from the community are assisting the Infant Health Sister in this work which is still in its early stages.

In Alice Springs the same picture of increasing enrolments in spite of a drop in numbers born is seen. An innovation in this Centre has been the giving of triple antigen immunizations at the clinic which is achieving a wider coverage than the former arrangements at the hospital.

District Nursing

There has been a big extension of this service in Darwin with the provision of three full-time Nursing Sisters in an effort to cope with the needs peculiar to the situation in the Northern Territory. This service, which is operated on a referral system from both Departmental and private doctors, is filling a long-felt need and expressions of appreciation are being received by the Department on both

the nature and quality of the service provided.

The District Nursing Service at Alice Springs continues to provide facilities for home visiting to residents and there were 2,622 visits made during the financial year 1963-64.

Communicable Diseases and Tropical Diseases

The campaign against such diseases has been materially assisted by the increased activity of our Field Health Inspection staff.

The work of the field staff has shown that treatment campaigns can dramatically reduce the instance of hookworm in communities where it has formerly approached levels of 100 per cent. infestation. In some instances levels as low as three per cent. have been reached. It is apparent, however, that permanent eradication is unlikely to be achieved until levels of hygiene and sanitation are brought to a higher standard than at present exist. Nevertheless the easing of the burden of worm infestation, particularly of the children, is of great benefit and the health education carried out by field staff among the Aborigines themselves is arousing an awareness of the preventable nature of this affliction.

Once again the year has passed without the occurrence of a single indigenous case of malaria. All four cases which occurred in the Territory during the year were imported.

The eradication campaign continues. Examination of blood films from inhabitants of the Roper area was carried out without detection of any parasites.

During the year, there were 54 notifications of leprosy. This reflects to some extent an increasing case finding activity, as some of the patients notified had disease which had obviously existed for many years and had become inactive. A comprehensive long range programme for active case finding and surveillance is in operation. The implementation of this campaign has been assisted by the provision of the full-time position of Sister, Leprosy Records, which enables us to keep a constant check on progress and to ensure that regular follow-up is maintained in all cases.

More co-operation from persons in isolated communities is forthcoming and health education efforts among the Aborigines appear to be having the desired effect.

The activities of the ophthalmic surgeon and medical staff, in particular those engaged in the field, have resulted in an increase in notifications of trachoma for the year, most of which were from the Alice Springs district.

As a follow-up to the survey conducted in June, 1963, which was directed mainly to population centres along the main north-south

road, a mass chest X-ray survey of inhabitants of remote communities commenced in the Alice Springs district in June, 1964. Initial indications are that very few fresh cases are being detected. Although it is too early for final conclusions to be drawn, nevertheless this is encouraging.

The purchase of a mobile X-ray Unit which will operate on two 12-volt batteries and is thus independent of generators and mains supply, will enable active case finding to be extended to areas which are accessible only by air.

There was one case of typhoid notified during the year and one case of paratyphoid. There have been no further cases reported from Oenpelli, where, it will be remembered, the carrier was detected following an investigation in 1962-63.

Infective hepatitis was introduced to coastal communities in Arnhem Land during the year. Prompt action by Health Inspectors in the field was successful in limiting the spread, in spite of conditions which are extremely favourable for the transmission of this disease. Infective hepatitis is a condition which poses particular problems in areas such as the Northern Territory, where facilities for personal and community hygiene are scanty in rural communities.

Aerial Medical Service

The emphasis throughout the year has been on increasing routine services to provide a more effective coverage in closer liaison with the Rural Health Teams and visiting medical and dental staff. An attempt has been made to anticipate possible emergencies and epidemics, and to carry out preventive visits before emergencies actually occur. This was foreshadowed in the Report for 1962-63 and it is pleasing to be able to report that the increasing emphasis on routine and preventive aspects have resulted in a slight fall in the emergency evacuations.

At the beginning of the financial year 1964-65, it is anticipated that the majority of outposts of the Barkly Tablelands will transfer from Queensland radio network to the base at Alice Springs. This direct radio communication will make it easier for us to carry out our operations in this area, particularly in so far as emergency evacuations are concerned.

Details of flights made during the year are—

	Darwin	Alice Springs
Emergency flights	202	....
Routine flights	136	121
Hours flown	1,201	434
Miles flown	164,185	58,089
Landings	979	436
Patients carried ..	600	71

Health Laboratories

In this sphere of activities also there has been an increase in patients seen and tests performed.

For the year 89,640 tests were carried out at the Darwin laboratory. There was an increase in the number of *Salmonella* isolations. For example, there was only one case in which *S. typhi* was isolated, but 15 other species were included in the 17 isolations made during the first five months of 1964.

This sharp increase in the *Salmonella* isolation in Darwin may be partly due to improved techniques. However, food poisoning needs closer examination in the Northern Territory, as, for example, in September, 1963, there was an extensive outbreak affecting more than 100 people. Laboratory investigation revealed that this was due to a combination of strains of *Cl. Welchii* and *Shigella sonnei*.

Shigella isolations are also more numerous. Although the greatest incidence occurred in the Alice Springs district, 64 cases occurred in the Darwin area. In the same five months of 1964 as has been mentioned in connection with *Salmonella* infections, there were 63 isolations of *Shigella* species in Darwin.

Specimens submitted for culture for tuberculosis numbered 1,462. Of these 129, i.e., 7 per cent. coming from 28 patients, grew *Mycobacteria*. Of the 25 fully typed, 15 were typical *M. tuberculosis*, one was in Runyon's Group I, two were in Runyon's Group II, five were in Runyon's Group III and two were in Runyon's Group IV. These isolates are similar in type and number to those which have been obtained in recent years.

At Alice Springs an increase in the number of tests available in haematology and biochemistry is rendering the service more versatile and adaptable to the needs of the hospital. Microbiology and histopathology are still done at the Animal Industry Branch Laboratory at Alice Springs. During the year 8,064 patients were seen and 17,223 tests were performed.

Dental Services

In common with the rest of the Commonwealth, there is a heavy demand on dental services. A further complication encountered in the Northern Territory is the necessity to provide a dental service to the widely scattered communities in rural areas.

All centres involved in aerial mobile work were visited at least once during the year and the overland mobile has carried out a full programme by road. With the arrival of the second fully air-conditioned mobile dental surgery and laboratory, there are now two units of this type operating in the Northern Territory. These are providing greatly improved conditions for both patients and staff and are proving very popular.

A new clinic building for the combined Infant Health Centre - Dental Clinic is under construction at Nightcliff and this will enable us to provide a better service to this rapidly extending suburban area of Darwin.

Rural Health Services

Rural Health Services are provided by Survey Medical Officers, Survey Sisters and Field Health Inspectors. Instead of operating as distinct units, as has formerly been the practice, these have now been combined to form Rural Health Teams.

In 1964 a two-week course in health education was held for members of the Rural Health Service under the guidance of a Senior Medical Officer from the Department and an anthropologist from the Australian School of Pacific Administration. Considerable benefit was received from this course and the field staff are tackling many problems in the bush with renewed enthusiasm.

Following the re-organization, a visit was paid to a Mission in eastern Arnhem Land by a Rural Health Team composed of a doctor, Senior Health Inspector, Survey Sister and a Technical Assistant who is a full-blood Aborigine. Participation of all sections of the community at the Mission, both European and Aboriginal, was invited and the Team met with an enthusiastic response. It is apparent that there is a growing awareness of health needs among Aborigines and that they are, at least in areas such as that visited, eager to co-operate with the various interested organizations in campaigns directed at raising the standard of hygiene and sanitation and improving the health of all residents in these remote areas.

Some idea of the scope of the work can be seen from the following:—

Survey Sisters in 1963-64 administered the following immunizations:—

Triple Antigen	124
C.D.T.	325
Tetanus Toxoid	266
Salk Vaccine	740

These are in addition to immunizations given by resident sisters on Missions, Settlements

and Pastoral Properties. In the course of their work, Survey Sisters travelled 11,040 miles by road in addition to aerial assignments.

Audiometric testing of school children in remote areas has continued during the year, 255 being assessed in 1963-64.

Field Health Inspectors were very active in a continuing programme of periodic inspections and special public health campaigns during the year. Special attention was paid to bowel disorders both bacterial and those caused by parasites and these have been briefly mentioned in the communicable and tropical diseases section.

An important aspect of field health is the training of full-blood Aborigines as Hygiene Assistants. Seven courses each of one month's duration were held during 1963-64 with a total of 84 pupils drawn from all areas of the Northern Territory. Although this training programme is directed primarily towards the acquisition of Hygiene Assistants, the fact that the persons attending the course have a great potential for health education in their own communities has not been lost sight of. Attempts have therefore been made to fit them for the passing on of the principles of good personal and community hygiene to their fellows.

Mention must be made of the advantages which accrue from the participation of a full-blood Aborigine as a member of Rural Health Teams. Much better contact with Aborigines is established and the fact that one of their own kind has succeeded in establishing himself in such a position is a constant example to them

of what can be done. It is anticipated that a young full-blood Aborigine from a coastal Mission will join the staff next year to undergo training with the eventual aim of joining the Rural Health Teams as an additional Technical Assistant.

Quarantine

There has been a general increase in activity in the Port and it is anticipated that this will continue with the opening up of direct services by sea between Darwin and overseas countries, particularly in the East.

The continuing trend towards larger pure jet machines has resulted in a further reduction in the number of aircraft cleared but in a rise in the actual number of people passing through the Darwin Airport. For example, in 1962-63 there were 976 aircraft handled with 47,790 persons involved. In 1963-64, although the number of aircraft had fallen to 896, persons involved totalled 55,576. As companies are anxious to maintain the turn around times which were established for smaller machines with lighter loadings, Quarantine staff are subject to considerable pressure.

Sixty-one ships were cleared during 1963-64 as against 40 in 1962-63. Although crew numbers remained approximately the same, 3,242 as against 2,379, the number of passengers carried returned to more normal levels expected for mainly freighter vessels.

During the year six persons were detained at the Quarantine Station, five for yellow fever precautions, and one as a precaution against the introduction of smallpox.



Sports coaching at a National Fitness Camp.

NATIONAL FITNESS MOVEMENT

There was no major development during the year in the Department's administration of National Fitness activities under the Commonwealth *National Fitness Act 1941*.

As in former years the Department continued to administer the movement in co-operation with the three main State agencies engaged in National Fitness activities. These are the State National Fitness Councils, the Universities and the State Education Departments.

The main development in the States has been an increase in the activities by the State National Fitness Councils in their work in the community. This has occurred as a direct result of the stimulating effect of the increase of £27,500 granted annually from 1962-63 to the Councils by the Commonwealth Government. The increase raised the grant to the Councils to £64,454 annually and has enabled them to provide increased services to youth and sporting organizations and to engage and train additional specialist staff.

It is appropriate that this increase in activities should have occurred during 1964 as the year marks the twenty-fifth anniversary of the founding of the movement by the Commonwealth Government. A commencement of activities on a national scale to raise and keep the fitness of the nation at a satisfactory level was made on 5th and 6th January, 1939, when Commonwealth and State representatives forming the National Co-ordinating Council for Physical Fitness met for the first time to plan the campaign.

The twenty-five years which have elapsed since the inaugural meeting have served to confirm the soundness of plans evolved then to provide training facilities in the Universities

for specialists in the field of physical education, the fostering of activities in the schools where the foundation for physical fitness is laid, and the formation of special councils in each State to assist work in the community, including that of voluntary organisations. In the period, the National Fitness Movement has become a firmly established part of our social structure.

The total Commonwealth Government appropriation to the National Fitness Fund during the year was £100,000. This sum was allocated as follows—

	£
State National Fitness Councils	64,454
State Education Departments	17,000
Universities	12,400
Australian Capital Territory	2,750
Central Administration	3,396
	<hr/> £100,000

The areas in which the grants allocated to the State National Fitness Councils and the State Education Departments were expended are set out in tables 40 and 41 on pages 92 and 93.

With the aid of the Commonwealth grant of £12,400 made during the year, the Universities of Sydney and Tasmania (£2,000 each) and Melbourne, Queensland, Adelaide and Western Australia (£2,100 each), continued to train much needed specialists in physical education. As in former years these persons were absorbed mainly in the schools and were engaged in their specialty.

With the support of the Department, a programme of activity was carried out in the Australian Capital Territory and grants were made to voluntary youth and sporting organizations towards the purchase of equipment and the development of facilities for their activities.

NURSING

Under the sponsorship of the Colombo Plan Technical Co-operation Scheme, the Special Commonwealth African Assistance Plan, the International Award Scheme, the Malayan Assistance Scheme and the World Health Organization, training has been arranged for graduate and undergraduate nurses.

The Colleges of Nursing and the hospital authorities have again played an all-important part in providing training for the nurses under the above schemes.

The table below sets out the number of graduates and undergraduates who have commenced study programmes since 1955.

Graduate Nurses—	
Colombo Plan,	255.
Special Commonwealth African Assistance Plan,	11.
World Health Organization,	27.
Undergraduate Nurses—	
Colombo Plan,	163.
International Award Scheme,	1.
Malayan Assistance Scheme,	16.

Wide Range of Specialities

As in previous years training has been arranged in a wide range of specialities. In all, 36 are undertaking formal college courses in nursing administration, sister tutor, midwife tutor, psychiatric tutor diploma courses, and certificate courses in operating theatre management, ward sister and orthopaedic nursing. During the year 16 nurses have studied organized post certificate courses in tuberculosis, paediatrics, cancer, radio-therapeutic, ear and eye, midwifery and infant welfare. Three nurses have had practical cardiac nursing arranged in hospitals, while another two have followed *ad hoc* courses in public health nursing.

Undergraduate Trainees

There are at present 56 Colombo Plan nurses from Malaya undergoing a three-year general

nursing course; of this number, 37 will complete their training before the end of 1964. Under the Malayan Assistance Plan 16 are at present undergoing a three-year course.

Nominating Countries

Countries nominating nurses under the various Schemes are Burma, Basutoland, Ceylon, India, Indonesia, Japan, Korea, Malaya, Nigeria, Noumea, South Vietnam, Philippines, Singapore and Thailand.

A.C.T. District Nursing Service

The staff of the A.C.T. District Nursing Service was increased by the addition of two full-time sisters on 27th May, 1964, so that at 30th June, 1964, eight full-time and two part-time sisters under the direction of a sister-in-charge are providing a service from 7.30 a.m. to 9 p.m. every day of the week. The sisters made a monthly average of 2,356 visits, the monthly average number of patients attended was 207 and the average number on the books at the end of each month was 96.

Throughout the year liaison was maintained by the District Nursing Service with agencies engaged in social welfare work and the newly established rehabilitation unit at the Canberra Community Hospital.

Lectures have been given to 3rd and 4th year student nurses at the Canberra Community Hospital on the aims and objects of district nursing service and field visits have also been organized.

Home Nursing Subsidy Scheme

For particulars of the Home Nursing Subsidy Scheme see the section dealing with Commonwealth Grants on page 69.

COMMONWEALTH HEALTH LABORATORIES

The Health Laboratories are located at strategic centres around Australia, namely, Darwin, Alice Springs, Kalgoorlie, Port Pirie, Launceston, Hobart, Bendigo, Albury, Lismore, Tamworth, Toowoomba, Rockhampton, Townsville, Cairns and Canberra. The functions and activities of the Health Laboratories which provide a diagnostic service are authorized by Section 9 of the National Health Act 1953-1964.

In recent years the volume of work performed at the Health Laboratories has continued to increase and the scope of the service has progressively widened with the demand for new procedures and the greater use by the medical profession of laboratory investigations as an aid to diagnosis and prognosis of disease. The laboratories now provide services in haematology, histopathology, serology, biochemistry and bacteriology. They also work in close association with the hospitals and the Red Cross Blood Transfusion Centres of the areas they serve and are responsible for all blood grouping tests required for emergency blood transfusion and transfusions required for major surgery.

This has necessitated the recruitment and training of a staff of science graduates, medical laboratory technologists as well as medical graduates. With the approval by the College of Pathologists of Australia of the laboratories at Canberra, Townsville and Cairns as training laboratories, medical officers attached to these laboratories will in the future have in-service training qualifying them to sit for membership of the College. It is expected that the laboratories at Toowoomba and Lismore will soon meet the requirements for this approval.

Dr. J. Crotty, Pathologist-in-Charge of the Health Laboratory at Darwin, returned to duty this year having successfully completed the course for the University of London's Academic Post Graduate Diploma in Bacteriology. Dr. R. M. Symes, Pathologist-in-Charge of the Tamworth Health Laboratory has been awarded a W.H.O. Fellowship and in September, 1964, will proceed to undertake the course for the Diploma in Clinical Pathology at the Post-graduate Medical School, London.

Four positions of cadet biochemist are filled at present and two cadets should complete training in 1964. Discussions are in progress with the Australian Institute of Medical Laboratory Technologists to promote medical laboratory technology training in country centres. The Hobart and Launceston laboratories have been approved for technology training by the Tasmanian Branch of the Association and leave has been granted to permanent officers to attend lectures to a maximum of five hours per week.

Refresher course training at the School of Public Health and Tropical Medicine was arranged this year for Mr. Easton and Mr. Whyte from the Hobart and Launceston Laboratories, respectively.

Dr. V. McGovern, Consultant Pathologist, Royal Prince Alfred Hospital, has continued to forward to all laboratories his notes and slides on histopathology and the laboratories have gradually built up an excellent reference library in this field. A similar haematology correspondence course has been circulated through the laboratories and this will be followed by an advanced course.

Following a Public Service Board review and reclassification, the organization of the laboratories has been improved. However, the increasing demands for laboratory tests and out of hours and on call duties in blood transfusion serology have created staff problems at the larger laboratories. In the Queensland laboratories a specialized section for tuberculosis bacteriology has become necessary. Action is in progress to meet these demands.

A conference of Senior Pathologists was held at the Health Laboratory, Cairns, from June 23rd to June 25th, 1964. It was noted at the conference that many of the recommendations made at the 1962 conference had been implemented over the last two years. As a result of discussions on advances in laboratory techniques, staff requirements, equipment and facilities, a report will be prepared and circulated to all laboratories and action taken to carry out the recommendations made.

Statistics of the number of tests performed and the number of patients who attended the laboratories are given in table 42 on page 93.

SCHOOL OF PUBLIC HEALTH AND TROPICAL MEDICINE

Post-graduate studies were conducted for the Diploma in Public Health and the Diploma in Tropical Medicine and Hygiene. Single subjects were provided for the University diploma courses in Clinical Pathology, Social Work and Public Health Dentistry.

For undergraduate studies in fifth year medicine the School of Public Health and Tropical Medicine conducted a course of 50 lectures and practical instruction in Preventive and Social Medicine, while for fourth year students lectures and demonstrations were given in Parasitology and Malaria. Courses in Protozoology, Hygiene, and Industrial Hygiene and Safety were given to science, architecture and engineering students respectively.

Increasing demands for instruction in Industrial Health and an almost total lack of other local services for the provision of this have caused the Section of Occupational Health to accept a heavy teaching load in this subject. The Post-graduate Course in Occupational Health for medical practitioners, held annually for three weeks full-time, was attended in 1963 by 13 graduates.

A course for technical and managerial staffs in industry, designed to provide instruction on the recognition and prevention of industrial health hazards, was held this year for the second time and attracted 78 persons.

Six short courses on Ergonomics, of either one or two days' duration, were held. Instruction mainly related to scientific handling methods and safety techniques in industry and was provided particularly for officers of Commonwealth departments and instrumentalities. The number of persons attending totalled 650.

RESEARCH AND INVESTIGATION

Bacteriology and Pathology

An epidemiological investigation of *Tinea imbricata* infection of the skin, a common ailment of the native inhabitants of New Guinea, was commenced in association with the department of Public Health for the Territory of Papua and New Guinea.

The results of serological surveys of leptospirosis in humans and domestic animals, which define the status of this disease in New South Wales, have been published. Parts of this

work, extending over ten years, were carried out in association with the N.S.W. Veterinary Research Station, Glenfield.

Following an outbreak of infection with *Coxiella burnetii* among abattoir workers, a survey of ovine sera for the presence of antibodies to this organism was undertaken in association with the N.S.W. Institute of Clinical Pathology and Medical Research and the N.S.W. Veterinary Research Station, as part of a survey for the presence of leptospirosis, brucellosis and Q fever in persons associated with the meat industry and with sheep and cattle.

Biochemistry

An investigation of cholinesterase levels in normal persons and in persons working with organo-phosphorus compounds is proceeding. Frequency curves for the adult population have been established and comparison between various methods undertaken.

Serum protein studies in New Guinea natives, undertaken as part of a survey associated with a malaria-eradication programme, are being continued in association with the Department of Public Health of the Territory of Papua and New Guinea. Work on the correlation of electrophoretogram quantitation methods in connection with the above has also been extended.

Satisfactory methods have been established for the micro-estimation of serum bromide and sera from methyl bromide handlers are being sought for continuation of the project.

Investigation of catecholamine excretion in the urine with reference to adrenaline and noradrenaline in cold-stressed subjects is in progress in co-operation with the Environmental Health Section.

Entomology

The production of a check list of Australasian Culicidae, in association with Miss E. N. Marks of the University of Queensland, has progressed. This includes a summary of biological data and keys for the identification of all species of Australasian mosquitoes.

The former extensive field studies on the mosquito transmission of myxomatosis, conducted in association with the C.S.I.R.O. Wild-

life Survey Section, have been restricted over the past few years. The Mount Flora area is visited once or twice each year to assess the status of the rabbit population and the myxomatosis incidence.

A continuous flow of material from every Australian State and territory has been received as the result of light-trapping by staff members of the C.S.I.R.O. and other workers. Much of the heavy work of classification is unproductive but the more important information, especially concerning distributions of individual species of *Culicoides*, is of immediate relevance in re-inforcing the quarantine restriction on the importation of sheep and cattle into Australia.

Investigations on unsolved problems of public health importance relating to house-flies (Muscidae) and blow-flies (Calliphoridae) were continued. These were commenced on the assumption that the further advancement of fly-control measures depends not only on insecticide technology but on the association of this with basic information on the life history, ecology and distribution, &c., of the pertinent species of flies.

Fortnightly trappings were undertaken in various urban and peripheral locations. These resulted in a total catch of over 400,000 flies of which almost 300,000 have now been identified and counted. The following are tentative indications from the incomplete data as yet available: (i) very heavy catches were recorded for October 1963 to February 1964, establishing the period of seasonal maximum fly-abundance for the Sydney area; (ii) a total of 80 species has been identified although the dominant species are less than 10 in number; (iii) there are important changes in seasonal incidence for different species; (iv) garbage disposal areas provide the maximum catches and their effect is obvious at least to a distance of one quarter of a mile; (v) some interesting enigmas have been disclosed, such as the occurrence of the bushland species *Calliphora ochracea* in Sydney and of *Chrysomya megacephala* at unusual distances from its known dominant habitat in mangrove areas, and the marked dominance of *Lucilia* in some autumn catches.

Environmental Health

A report of investigations on acclimatization to cold carried out during a year in Antarctica has been completed and is in the press. Four men were studied over a period of 17 months (1958-60), in Australia and Antarctica, by

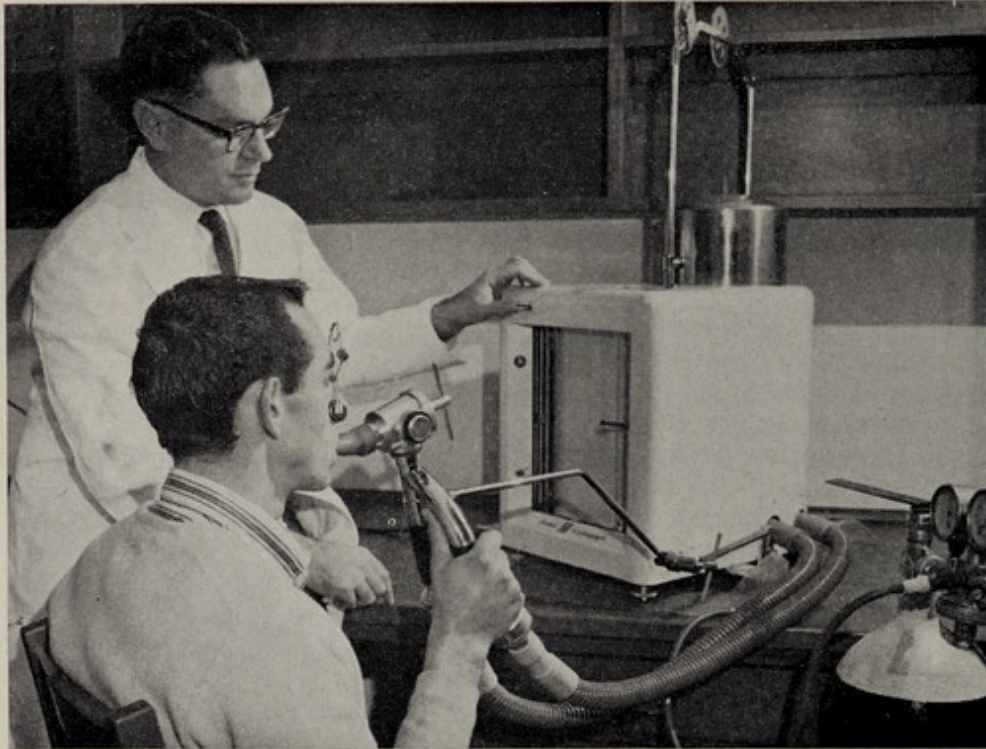
means of test cold exposures. In Antarctica they showed improved ability to maintain rectal temperature in the cold, which was attributed to general acclimatization. It appeared to be proportional to the environment cold stress, but not to the hours of daylight or the season of the year. It developed slowly but decayed rapidly.

Four papers have been completed on the work carried out by Dr. G. M. Budd at Heard Island between January and April, 1963. Two of these, general accounts of the expedition, are in the press. The remaining two deal with the breeding of the Kerguelen fur seal and the recolonization of Heard Island by the king penguin (both with M. C. Downes). Thermal adaptation and population ecology in these species are discussed.

A project, undertaken in collaboration with the C.S.I.R.O. Engineering Division, has now been completed and the findings published. It has been shown that further developmental work on the engineering aspects is required before radiant cooling can be considered an adequate alternative for conventional air-conditioning methods. It has, however, certain valuable applications in the cooling of individuals when the environmental air temperature cannot be reduced below the prevailing value.

A study of the effects of climate on the cardiovascular system and temperature regulation in the aged and chronically ill has been undertaken at a hospital and home for old people by Dr. R. K. Macpherson and Dr. F. Ofner, Lidcombe State Hospital and Home, Lidcombe, N.S.W. This project has advanced to the stage where the collection of information is complete and the analysis of the results is proceeding. Two important conclusions have so far emerged. The first is that the aged may have great difficulty in maintaining their body temperature in the winter in Sydney. The second is that even mildly hot days, such as are common in the summer in this city, may constitute a grave hazard to the continued existence of the aged who are also ill.

Work on this subject was done in collaboration with Mr. H. G. David of C.S.I.R.O. Division of Textile Physics. Inspection of the findings in these experiments has served to show that the buffering effect of woollen clothing (the Cassie Effect) is in practice only approximately one-third of that which had been predicted on theoretical grounds and which had been mistakenly thought to apply in practice and quoted as such in standard text-books.



Lung function test being carried out in Industrial Health Section, School of Public Health and Tropical Medicine.

Occupational Health

A survey of the health and working conditions of telegraphists, commenced in April 1963, was continued.

Progress has been made in a survey of the possible effects of exposure to ink and paper dust in printing works in the printing industry. A medical examination has been made of 215 employees and investigation of the working conditions is to be undertaken.

An investigation of dust production in the sandblasting of ships and its possible effects has been continued. The medical examination of persons engaged in a naval dockyard has revealed no evidence of pneumoconiosis.

An extensive investigation of the carbon monoxide hazard from liquefied petroleum gas machines was undertaken in response to a request by the Federal Advisory Committee on Waterfront Accident Prevention. It was concluded that LP-gas machines could be used in ships' holds without hazard provided certain precautions as to type, construction, tuning and method of operation of the carburetion system of the machines were adopted, and proper ventilation provided. Recommendations for the operation of LP-gas-powered fork-lift trucks in ships' holds have been prepared.

An investigation was undertaken to determine whether or not the burning or welding

of steel plate covered with zinc chromate paint constituted a health hazard, particularly from exposure to lead or zinc. It was shown from environmental studies that no significant health hazard from this operation was likely.

Parasitology

Studies on the epidemiology and control of filariasis for the purpose of selecting a routine method for the control of the disease in New Guinea have been pursued for five years in association with the Department of Public Health of the Territory of Papua and New Guinea.

Villages in the control area on the Rai Coast, New Guinea, were visited in October-November, 1963. Three courses of diethylcarbamazine, a drug under trial for the control of filariasis, had been given prior to the last annual examination with marked reduction in the microfilaria rate and density. Examination of blood films taken on this visit has not been completed, but it is indicated that microfilarial parasites persisted at a low level without further use of the drug.

Parasite and vector studies were made at Sindamon, at an altitude of 4000 feet, where filariasis is endemic and diethylcarbamazine was distributed for seven days.

Specimens were also received from the Wengei district of the Sepik, another test area, where residual insecticidal control of mosquitoes is undertaken by the Health Department. Annual observations are made here to determine the extent to which insecticidal spraying alone will influence the transmission of filaria.

A survey of helminths and protozoa in aborigines and European schoolchildren in the North Coast district of New South Wales was commenced in June, 1963, in association with the Health Department of N.S.W. A laboratory, for this purpose, was set up at the Lismore Base Hospital. Approximately 1500 stool specimens from European schoolchildren and 390 from aborigines were examined. Results indicate that the schoolchildren harbour few helminths other than *Enterobius* but that there is a high incidence of hookworm, strongyloidiasis, ascariasis, trichuriasis and alimentary protozoa in all aborigine groups. Suggestions for the control of hookworm, strongyloidiasis and ascariasis will be made.

A survey was commenced of the incidence of helminthic and protozoal infestations in certain mental institutions and about 500 specimens have now been examined. In an institution from which three cases of amoebic dysentery were reported, a high incidence of cyst passers of *Entamoeba histolytica* (30% on single specimen examination) was found. Suggestions for the control of infestations will be made.

Cases of an often-severe irritative dermatitis in rice farmers at Humpty Doo, Northern Territory, were reported in January, 1964, by the Commonwealth Director of Health, Darwin, and parasitic investigation requested. The ailment is due to superficial penetration of the skin by aquatic forms of avian schistosomes whose life cycle also involves other stages in birds and water snails.

Preventive Medicine

A long-term investigation of the efficacy of B.C.G. inoculation in the prevention of leprosy, which was commenced in 1962, in association with the Department of Public Health of the Territory of Papua and New Guinea, is proceeding. The Karamui district of New Guinea, selected for the project, is an isolated mountain area with a high incidence of leprosy and virtually no tuberculosis. In 1962 the population was examined for leprosy and later Mantoux tested for tuberculosis and was thereafter randomly divided into two groups, the first receiving B.C.G. and the second, a control group, saline. A re-survey of the area was completed in April, 1964, and the data is in course of analysis.

The results of an epidemiological study of 674 persons suffering from carcinoma of the breast between 1954 and 1961, undertaken by Dr. G. C. Scott in co-operation with Dr. L. Atkinson and Dr. J. Fleming, of St. Vincent's Hospital, Sydney, have been published.

Students of the Diploma in Tropical Medicine and Hygiene class at work in the Parasitology Laboratory, School of Public Health and Tropical Medicine.



Further studies of cancer in native inhabitants of New Guinea, based on data obtained from the Papua and New Guinea Cancer Registry, and on nasopharyngeal tumours in Australia, are in preparation.

Studies in social medicine, and particularly in medical care, were continued by Dr. J. M. Last.

A statistical review of medical manpower in Australia was made in an attempt to provide information, important in planning but otherwise unavailable, on such items as the number of practising doctors in Australia, the forms of practice in which they are engaged, their distribution, and the numbers of overseas graduates among them. The subject of the sufficiency of supply of doctors for the country's needs is discussed, though satisfactory estimates are precluded by the paucity of information available.

Radiobiology

Work on radiogenic tumours was continued. Cell-free extracts, prepared from the thymus, spleen, liver and lymph nodes of the *propositos* of radiogenic lymphoma in the C57BL mouse strain, were used to inoculate random mice. In order to test the acellular nature of the homogenized and differentially centrifuged preparations, the neonatal mice were hybridized with mice bearing a marker chromosome. The presence of an effect attributable to a sub-cellular agent yielding an incidence of 22% disseminated lymphoma accords with the theory of emergence of a latent virus following irradiation.

Although no consistent abnormality of chromosome morphology or number was observed, the karyotypes of these lymphomatous mice were consistently abnormal. The appearance did not differ from that seen previously in radiogenic lymphoma and its pre-leukaemic phase.

Of thirteen spontaneous lymphomata examined in AKR, (C58 x T6)F₁ and C57BL strains, all have shown abnormalities of the chromosome set evinced by the presence of abmodes or clones of abnormal cells. It is considered that whether chromosome aberrations are relegated to the category of epiphenomena in mouse lymphoma, depends at which stage the cell is judged to be lymphomatous.

Tropical Medicine

An epidemiological study of the specific occupational injuries of copra cutters has been published by Professor R. H. Black. This includes consideration of beliefs on the causation of accidents and proposed measures for prevention.

A monograph on the Russell Islanders of the British Solomon Islands has also been published by Professor Black. The Russell Islanders provide a small example of a population explosion, the effects of which are accentuated by the alienation of land and by the progressive restriction of the area available for food production.

An investigation of the effect of a new depot antimalarial drug C1-501 (Dihydrotriazine pamoate) against relapsing vivax malaria was commenced early in 1964 by Professor Black, on an agreed protocol study with the manufacturer's research department. A single dose of the drug was injected intra-muscularly into each of 24 volunteers at the Australian School of Pacific Administration.

Consultative and Advisory Services

The consultative services provided by the sections of the School in their special subjects continued to be widely used by Departmental institutions and by various Commonwealth and State Departments, institutions and public authorities. Honorary consultant posts to various hospitals were also held by members of the staff.

INSTITUTE OF CHILD HEALTH

The long-term study of rheumatic patients admitted to the Royal Alexandra Hospital for Children continues. It was begun in 1952 with two principal objectives. The first to determine the effectiveness of penicillin prophylaxis in preventing rheumatic recurrence and ultimate cardiac damage and the second to study the history and course of this disease in as large a group of Australian children as possible. Since the commencement of the survey to determine the effectiveness of penicillin prophylaxis 230 children have received regular penicillin prophylaxis in the unit, but 19 of these have been lost from the group during the 12 years. Two have died. Whenever a new patient is admitted to the group an initial home visit is paid by the social worker, and further interviews are arranged as required. A number of these patients have now reached school leaving age, and the problems associated with their future occupations are being investigated. Since the commencement of the study into the history and course of the disease over 1,000 patients admitted to hospital, including those in the first survey have been interviewed and examined at regular intervals. The course of the illness in each instance is being recorded for study and eventual publication.

A number of patients have now left school and their type of employment or career is being recorded. The effect of a history of rheumatic fever or residual rheumatic heart disease on each patient's occupation will then be assessed.

The studies in endemic goitre in Tasmania were continued through 1963-64 in collaboration with an officer from the Department of Health Services of that State. This year the work was concentrated upon the treatment, with graded doses of thyroxine, of 60 girls who have had long-standing goitres. Regular clinical observations, including growth studies, have been made and a series of X-ray studies of the wrist bones have been taken to study bone growth. Appropriate groups of controls are also being studied.

The study of cretinism has been continued. Eleven infants and children of average age 35 months are now enrolled in the survey. The principal criteria of progress used are measurements of height, span, weight, head circumference and developmental quotient based on the Mary Sheridan Scale. An initial assessment of osseous age, cholesterol and protein bound iodine concentration in the serum is made, the

latter investigation being usually repeated at 12-monthly intervals to check the clinical progress as estimated by the other parameters. The Unit Social Worker keeps in constant contact with each patient at visits to the clinic.

The study of thyroid-antibodies in these children, their mothers and siblings, is being continued. The method used is a modified tanned sheep-cell agglutination technique.

The study of urinary tract infections in childhood continued through the year. Long-term follow-up of children with chronic urinary infections confirmed the effectiveness of prolonged chemotherapy in controlling clinical evidence of infection.

The judicious use of renal biopsy in selected patients helped to establish a definite diagnosis of pyelonephritis when other methods of investigation suggested, but did not confirm the presence of chronic renal infection. In co-operation with the Radiology Department of the Hospital, increasing interest was found in a radiographical assessment of diminished renal size and its association with ureteric reflux in patients with chronic advanced pyelonephritis.

More patients again were found to have chronic renal infection unassociated with obvious congenital abnormality of the urinary tract. This finding tended to confirm the impression that chronic urinary infections in children are not associated with congenital urinary tract abnormalities in the majority of instances, as has hitherto been believed.

A paper on "Scurvy: A Problem of Health Education" was published. This paper reports an investigation made into the social background of families of children admitted to the Royal Alexandra Hospital for Children with a diagnosis of scurvy between mid-September 1959 and August 1961. The purpose of the study was to obtain information as to why these children had not been given ascorbic acid.

Further developments in cardio-pulmonary bypass, using a disposable plastic oxygenator of small primary volume, have made this technique available for small infants. This has made it practicable to carry out bypass surgery on children under 20 lb. weight.

During 1963 a film showing the use of the R.A.H.C. heart-lung machine was prepared and shown at the Sixth International Medical Film Exhibition of the World Medical Association in New York City.

Check-up on a young patient during a ward round at the Institute of Child Health.



Studies of families in whom there is a child with this hereditary abnormality of the blood have continued.

Active co-operation with the Tumour Study Group (of which the Director is Chairman) of the Royal Alexandra Hospital for Children has continued.

Studies of leucine-sensitive hypoglycaemia have been continued.

During 1963-64 the Institute sponsored articles in national and local newspapers on various subjects pertaining to child health and child health education.

A submission, by request, was made to the

Health Services Committee, New South Wales, which is considering hospital policy for the State. Consultations were held with a number of hospital authorities on the planning of accommodation for children and expert opinion given, on request, in relation to the treatment of juvenile offenders. Discussions continued with the Child Welfare Department with respect to the care of children in institutions.

Dr. Vanna Kovitaya, Thailand, under the supervision of Dr. F. W. Clements, is conducting a project on the adjustment of infants and children under two years of age to full day care in day nurseries.

NATIONAL BIOLOGICAL STANDARDS LABORATORY

The National Biological Standards Laboratory continued to expand over the year despite acute accommodation problems. It has increased its output of analyses, both for samples of pharmaceutical benefits and those taken under the Therapeutic Substances Act. The Laboratory has been in a position to do this because of the provision of accommodation for an animal breeding establishment at Downer, A.C.T., and lately, the conversion of quarters in Braddon, A.C.T., into a laboratory for the Antibiotics Section. This has allowed for a limited expansion of the Pharmaceutical Chemistry Section and the provision of additional space for the Pharmacology Section.

During the year, the principle of building a laboratory adjacent to the new Mint building in the Woden area was approved. Plans are now being prepared for this building, which will accommodate all sections of the laboratory, and for a workshop, animal house, library and administrative block.

Work has continued on the provision of standards or the modification of existing standards, for therapeutic substances and many of these were considered by the Biological Products Standard Committee and the Therapeutic Substances Standards Committee. As a result of recommendations of these committees, some proposals for standards have been submitted for drafting and incorporation into legislation.

Good relations have been maintained with the pharmaceutical manufacturers and copies of proposed standards submitted to the industry, inviting their comments. Certain changes in proposed standards and general requirements have been made as a result of suggestions received from manufacturers. Officers of the laboratory have visited a number of these companies and advised them on matters relating to the Department's requirements and in return the laboratory has received visits from a number of representatives of the industry.

Reports of the activities of each individual Section are set out as follows:—

BIOLOGICAL PRODUCTS DIVISION

Bacterial Products Section

This section commenced to function in June of this year in laboratory space made available by the Australian National University at the Animal Breeding Establishment, Downer. Qualified staff has been recruited, including the Officer-in-Charge, and the laboratory is now in a position to test a number of bacterial vaccines, anti-toxins, sera and diagnostic agents, both for human and veterinary use, and to draft standards for these products.

Viral Products Section

During the past year, in addition to the programme of testing Salk Poliomyelitis vaccine for the presence of live polio virus and simian virus 40, a set of minimum requirements governing the manufacture of this vaccine in Australia was drafted in consultation with the manufacturer.

Vaccine testing activities were expanded to include the potency testing of stocks of Sabin Oral Poliomyelitis vaccine which are held for use in emergencies. This has involved a critical appraisal of current methods of assay, which, together with research into factors of importance in such assay procedures, is expected to lead to a considerable improvement in the reliability of potency testing procedures for this vaccine.

A programme to evaluate Australian reference standards necessary for use in the testing of Salk and Sabin Vaccines is at present being undertaken. Up to the present, these reference standards have been obtained from overseas laboratories.

Further study of infectious laryngo-tracheitis vaccine strains in collaboration with the New South Wales Department of Agriculture has resulted in a strain being detected which will probably be selected for widespread use in Australia.

Endocrine Products Section

This section moved to new quarters in Downer during this year. The additional space

available has permitted the installation of specially designed animal accommodation with automatic watering and flush cleansing devices.

Automation of the biochemical determinations necessary for the assay of endocrine preparations has enabled the Section to confidently handle all those in common usage. However, work has been limited to some extent until a satisfactory supply of suitable animals can be maintained.

Antibiotics Section

A number of draft standards was prepared in this Section for tetracycline, streptomycin and penicillin preparations for which no official standard exists. These were presented to the Biological Products Standards Committee for consideration.

Routine testing of antibiotic products, both under the Therapeutic Substances Act and the National Health Act (Pharmaceutical Benefits) continued and an adequate coverage of those currently available on the Australian market was maintained.

Testing of products for sterility, both for antibiotics and those submitted from other Sections was carried out in addition to the normal operations of this Section.

An area in Braddon has been converted for the use of the Antibiotics Section and was occupied during the latter part of the year.

PHARMACEUTICAL PRODUCTS DIVISION

The output of the Pharmaceutical Section increased over the year, due to an increase in professional staff to carry out analyses. Much work on the preparation of standards has been carried out, covering such items as radioactive isotopes for medical use, chloramphenicols and various other pharmaceutical products.

A study on the stability of aspirin has been completed and a preliminary report issued. The results of this survey should enable manufacturers to improve the quality of these products.

Studies are also being undertaken into the problems of particulate matter in solutions, variables which effect the amount of material that may be removed from ampoules and vials, and the setting up of a unit to test bandages, surgical dressings and similar products.

The work of the Pharmacology Section has been hampered during the year by the absence of the officer who carried out assays and investigations in this field. However, the services of a highly qualified pharmacologist have now been obtained and the section will now be developed to carry out its full part in the laboratory's activities.



Reading results from spectrophotometer at National Biological Standards Laboratory.

COMMONWEALTH ACOUSTIC LABORATORIES

SERVICES

Clinical Audiology and Psychology

Clinical audiology covers those professional aspects of hearing and deafness that are not amenable to medical or surgical treatment. In the case of deaf individuals there are many psychological problems and for this reason the staff working in this field of what may be termed audiological psychology are all graduate psychologists. The services provided at the State laboratories entail the listing for hearing defects and subsequent aural rehabilitation of all eligible persons.

The laboratories also carry out clinical tests required by International Civil Aviation Regulations for all civil aircrew and of Commonwealth compensation cases involving the loss of hearing.

In the rehabilitation of deaf persons the main factor is the provision of hearing aids which are issued on loan and remain the property of the Commonwealth. These hearing aids, designed by the Commonwealth Acoustic Laboratories and manufactured in Australia, are maintained throughout the lives of the recipients. They are altered or changed without charge according to technological advances or variations in the deafness of the patients. Children, however, are required to purchase privately their own batteries on leaving school.

Extension of these services to country areas has been assisted by the opening, during 1963-64, of special laboratory facilities at Toowoomba and Ballarat; this makes a total of 10 country centres with special facilities. The total number of Cal aids, as the hearing aids are known, fitted now exceeds 20,000.

Details of statistics are shown in tables 43 to 45 on pages 93 and 94.

Hearing Conservation

Hearing conservation is an important part of the Laboratories' work.

The most effective method of assisting in hearing conservation is by screening tests to detect early losses which may be remedied by treatment. Small portable battery audiometers are provided and maintained by the Acoustic

Laboratories for this purpose and are used by school medical services, the armed services medical services, recruiting centres and industrial medical services. These services are continually being extended and the number of audiometers on loan at 30th June, 1964 was 142. About 250,000 individuals were tested for the period July, 1963, to June, 1964.

Engineering

The professional engineering group at the Central Laboratory designs and maintains the special rooms and equipment for audiology tests. In addition, the engineering services carry out acceptance tests, quality control and supervision of production of hearing aids and special audiometric equipment. A major function is to assist the defence services and Commonwealth instrumentalities with advice regarding noise reduction treatment, especially where this is designed to reduce noise levels which are high enough to cause deafness in personnel. Examples of work accomplished by this group are advice on acoustic treatment for the vehicular deck vessel "Princess of Tasmania" for the Ship Building Board, and design of a test cell for marine engines for the Department of the Navy.

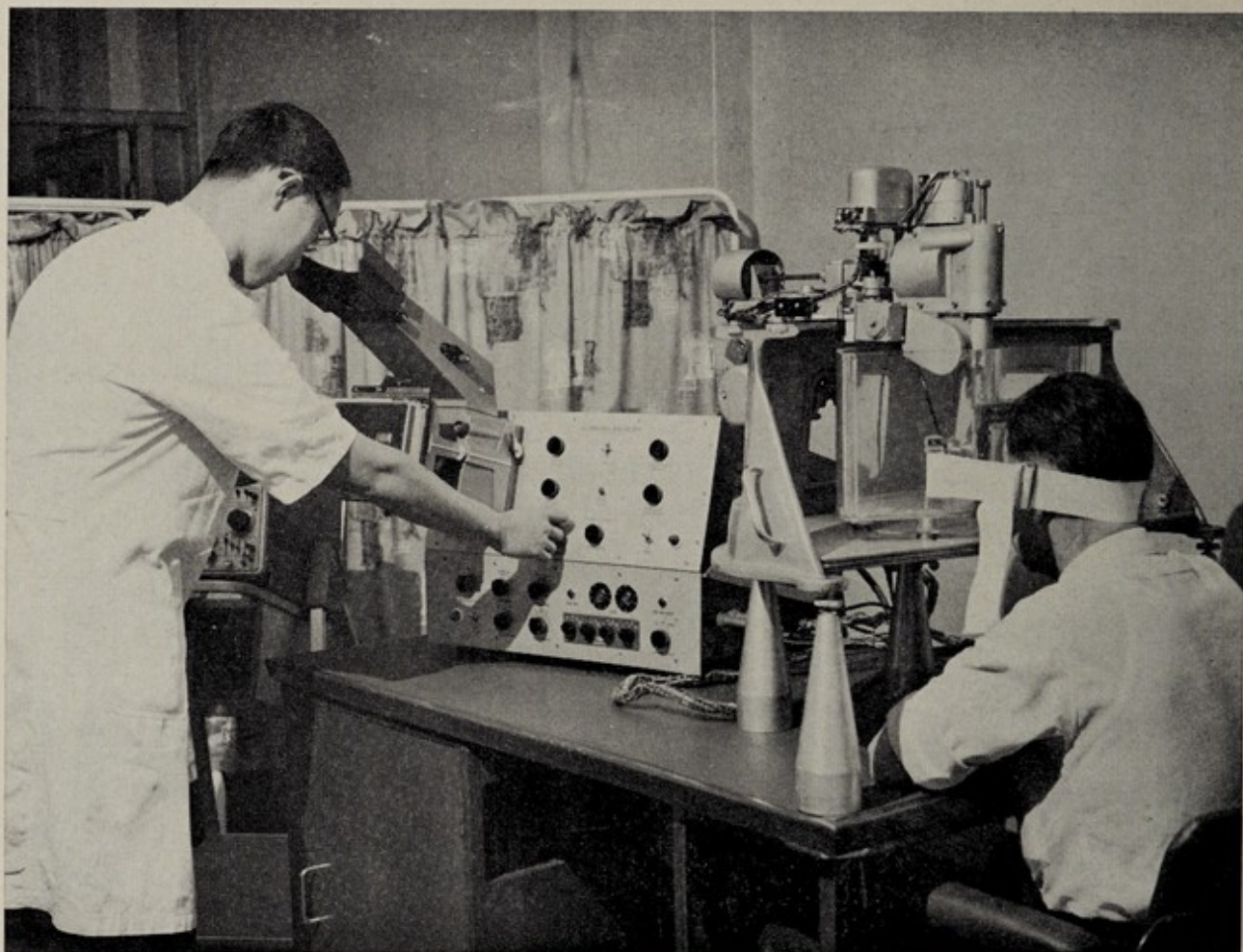
RESEARCH

Acoustic and Electroacoustic Section

Work in this section has been concentrated mainly on fundamental studies of the methods of measurement and transmission of sound, particularly blast and shock waves such as sonic booms, and of methods by which estimates might be made of the effect of these complex noises on personnel both from the aspect of hearing conservation, annoyance and interference with communication and sleep. From this research new proposals have been made to the International Standards Organization Section on Acoustics as the basis of recommended international standards.

These proposals were presented by the head of this section, Mr. R. A. Piesse, at the meeting of the International Standards Organisation at Aix-les-Bains, France, in June, 1964. Mr.

An ultrasonic echoscope in use during an ophthalmological study at the Commonwealth Acoustic Laboratories.



Piesse was overseas on investigations during May and June, 1964, paying particular attention to the latest work in the United States of America on military noise and sonic boom problems. Mr. Piesse also attended the International Congress Against Noise, which was held in Paris.

Investigations have been concerned with studies of sound transmission across water and surrounding areas. This has become of topical interest because of studies of possible noise from motor vessels on Lake Burley Griffin in Canberra.

Detailed studies have been made of new equipment required for more extensive audiology tests. This has resulted in the design of a new automatic transistorized multipurpose audiometer.

Investigations concerned with the most efficient microphone position for a head mounted hearing aid have been completed and it is expected that this will lead to the development of a most efficient head mounted aid which may be produced as a Calaid. Such an aid at present can be used only for patients having small degrees of hearing loss, but research is being directed towards the possibility of using head mounted hearing aids for all deaf persons.

Psychology and Audiology Section

The services carried out above provide the Laboratories with a wide range of clinical material for research. In order to extend our access to clinical data for research, arrangements have been made with the Royal Prince Alfred Hospital for access to cases attending the Ear, Nose and Throat Department of that hospital. As this access also gives facilities for experimenting on new apparatus and audiology tests, the Commonwealth Acoustic Laboratories have designed special testing rooms and are providing and maintaining audiology equipment on loan to the Royal Prince Alfred Hospital.

Detailed investigations have been carried out on the possible effect of hearing aids in causing further deterioration of the patients' hearing losses. This consideration has become particularly important because very high powered hearing aids can now be made smaller by the use of transistors. Initial investigations show that this can be a serious problem due to the fact that hearing aids of much higher power are generally used with the deafer patients, thus risking the loss of small, most valuable, residual hearing.

Research has been carried out into audiological tests that may assist in diagnosis and prognosis as to the retention of residual hearing in Meniere's disease treated by ultrasonics.

Psychoacoustics

This term is generally used to cover psychological effects of noise but often includes experimental work on hearing and deafness. The major important projects are experiments to study the relevant annoying and disturbing features of impact noises, particularly those simulating sonic boom from supersonic aircraft.

Detailed studies also have been made of possible annoyance and methods of estimating real annoyance from the increased use of jet aircraft, including the future use of new types of aircraft on interstate flights. These studies have resulted in suggestions to the International Standards Association recommending new methods of calculating annoyance from physical measurement of sounds.

Studies were also made of the possible subjective effects of noise from motor boats on Lake Burley Griffin.

Medical Ultrasonics

A new study has begun with the University of New South Wales to evaluate the union of fractures in weight bearing bones.

A transistorized nystagmograph has been developed to measure movements of the eye. This instrument is used to determine the progress of the variation during ultrasonic irradiation of the vestibular apparatus and can also be used with various caloric tests.

An ultrasonic echoscope developed for examination of the eye for disease or damage, such as retro-orbital tumours or detached retinas, has been completed and arrangements have been made to set this up as part of the ophthalmological section in the Royal Prince Alfred Hospital to continue investigations with the objective of possible clinical use.

An ultrasonic echoscope for localizing the shift of the midline echo in visualization of ventricles has been installed in the Royal Alexandra Hospital for Children to be used in studies in conjunction with neurosurgeons.

Studies have been completed on the feasibility of using an ultrasonic echoscope for diagnosis of degenerative pulpitis. An ultrasonic echoscope is now being developed for further studies at the Sydney Dental Hospital.

COMMONWEALTH X-RAY AND RADIUM LABORATORY

RADIUM

Commonwealth radium is on loan to centres as distant as Fiji. The national holding of radium is subject to audit and periodical checks of the radium are made from records maintained at the Laboratory.

The Laboratory holds a Secondary International Radium Standard (Second Series No. XII), issued by the International Radium Standards Commission in 1928. This standard consists of a known mass of radium bromide sealed in a glass tube. As it was known that the glass would have steadily deteriorated under the action of the radiations emitted by the decay products of the radium and could now be very brittle, arrangements were made to purchase a new standard tube. This tube which was compared with the British National Standard held at the National Physical Laboratory before despatch, was delivered to the Laboratory on 10th March, 1964.

Tests for leaking radium containers have been made during the year using the improved equipment, designed in the Laboratory and constructed by the Technical Services Section. This equipment has considerably reduced the time required for tests of this nature.

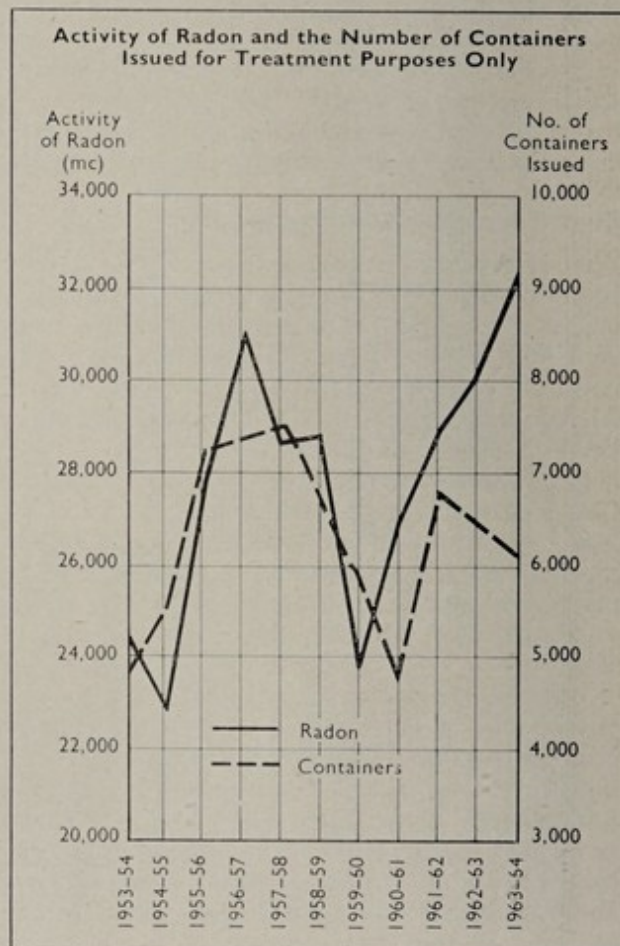
Radon

The total activity of the radon issued by the Laboratory during the year, for medical purposes in the form of needles, gynaecological tubes and capillary for implantation or construction of surface moulds was 32,409 millicuries, of which 24,559 millicuries were issued to hospitals and 7,850 millicuries to approved private practitioners. The total activity of radon issued for medical purposes in these types of containers during the current year represents an increase of approximately seven per cent over the issues for the year 1962-63.

Until a few years ago, radon held an important place in industrial radiography by reason of its low monetary value and the small size of the highly active sources which could be prepared. At the present time artificial radioisotopes such as cobalt-60 have largely

replaced radon. In 1963-64, six sources for industrial radiography were issued with a total activity of 2,640 millicuries. No radon was issued for industrial radiography in the previous year.

During the year approximately 1,392 feet of gold tubing of all types were constructed by the Technical Services Section—an increase of approximately 19 per cent over the previous year. In addition, 12 nasal applicators and six industrial sources were constructed.



Diagnostic X-rays

During the year there has been a steady demand for advice and tests on accessory items used in diagnostic radiology.

By arrangement with the Australian College of Dentistry, an encephalometer unit is maintained at the Laboratory. The Laboratory has continued to co-operate with the Department of Anatomy in the University of Melbourne and during the year 190 patients have been radiographed. The encephalometer is available by arrangement to orthodontists in private practice and 177 patients were examined in the year.

Advice on the purchase of new equipment for hospital departments and on the condition of existing equipment is frequently sought from the Laboratory by Government Departments and by hospital authorities. The Laboratory undertakes acceptance tests on new equipment when requested. Assistance has been given to the Department of External Affairs in purchasing X-ray equipment of Australian manufacture for export under the Colombo Plan; in all cases the equipment has been inspected before despatch to ensure that it complies with specifications.

Radiation Dosimetry

In the year under review the radiation output and associated characteristics of seven deep-therapy X-ray units and twenty-one superficial-therapy X-ray units were assessed and reported on, while nine dosimeters were calibrated.

In one commonly-used type of dosimeter the instrument is charged electrically by an electrostatic device using the friction between two rubbing surfaces as a means of producing charge. These devices may become ineffective after a relatively short period of use and then require careful cleaning, with some risk of damage to the more fragile components of the dosimeter. During the year the Technical Services Section has designed and constructed an electronic charging device which operates from the torch batteries normally used in dosimeters of this type. The dosimeter has been modified in such a way that either the original electrostatic charging device or the electronic charging device may be used. As this modification proved very satisfactory, arrangements have been made to fit electronic chargers to several other dosimeters of the same type possessed by the Laboratory.

Investigations on the calibration of sealed sources of cobalt-60 continued. Cobalt-60 sources of different geometries have been compared and the corrections appropriate to different conditions of measurement have been determined.

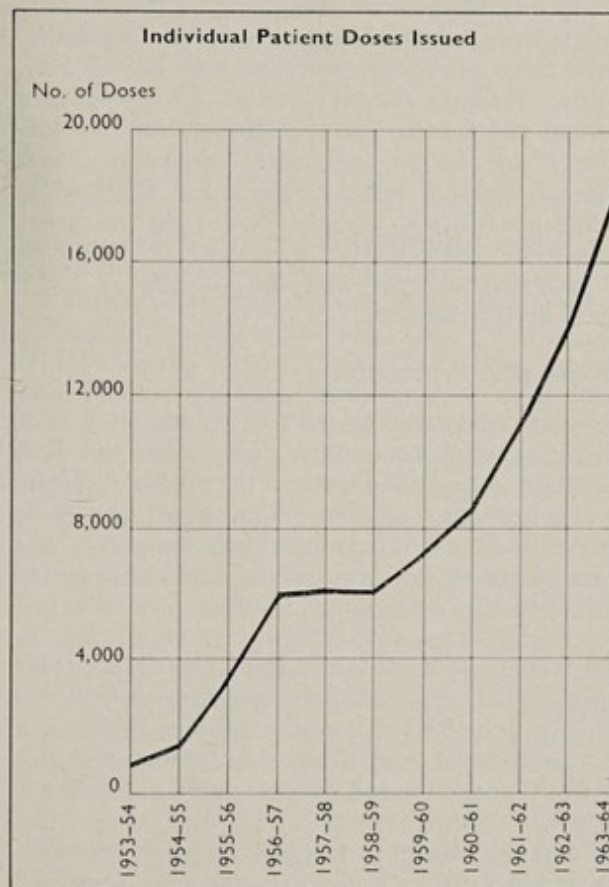
Eighteen samples of biological material have been irradiated under controlled con-

ditions for the Department of Zoology, University of Melbourne, as part of a continuing research programme in that Department. Similar work (two samples) has been undertaken for the National Biological Standards Laboratory.

The Laboratory maintains equipment for the dosimetry of the beta particles emitted by plane medical applicators. Twenty-one applicators, containing strontium-90, were measured and reported on during the year.

Radio-isotopes

The functions of the Laboratory include the procurement and distribution of radio-isotopes. Stable isotopes are also obtained as occasion requires.



In the twelve months ended 30th June, 1964, 1,559 shipments, including 38 different isotopes and a large number of compounds, have been procured and distributed by the Laboratory; of these, 76 shipments including seven different isotopes were received from the Australian Atomic Energy Commission. There has been increasing interest in the medical uses of the short-lived radio-isotopes available from the Australian Atomic Energy Commission—a

total of 2,877 millicuries was obtained in 76 shipments during 1963-64, compared with a total of 1,019 millicuries in 68 shipments during 1962-63.

In the year 1963-64, 18,159 issues of radio-isotopes required for medical diagnosis and therapy were made. This represents an increase of 27 per cent over the number for the previous year. The majority of the radio-isotopes were made available free of charge to all patients.

The Laboratory provides an advisory service on the availability and cost of radio-isotopes and on the physical aspects of their use for medical diagnosis, treatment and research, including the necessary safety precautions.

The Laboratory actively participates in physical aspects of the use of radio-isotopes at the Royal Melbourne Hospital, in the Professorial Unit of the Department of Medicine, University of Melbourne (at the Royal Melbourne Hospital) and in the Radio-isotopes Unit at the Queen Victoria Hospital. In addition, "ad hoc" technical enquiries from medical users of radio-isotopes are dealt with. It has been found necessary, during the year, to restrict these activities owing to the lack of experienced staff and the volume of other work in the section.

Radiological Protection

The expanding use of radiation and of radioactive substances in medicine, research and industry and consideration of possible public health problems arising from these uses have resulted in an increased work-load for the various protection services of the Laboratory.

Advice has been given to those undertaking the design and construction of facilities in which sources of radiation are to be used. During the year specifications of the requirements for adequate protection against ionizing radiation were prepared for seven medical X-ray departments, and for one industrial and three research establishments.

The Laboratory is frequently called upon to assess the adequacy of the protection provided in various installations and to evaluate the safety procedures in use. In the year under review, 33 such investigations were made of 17 medical X-ray departments, two dental X-ray units, four industrial and 10 research installations.

Fourteen radiation monitors of various types have been calibrated during the year.

The Laboratory has given advice and assistance to centres wishing to dispose of radioactive waste material. The methods used de-

pend on the nature of the material and its activity.

At the request of the Department of Shipping and Transport, the Department of Health, through this Laboratory, has arranged for the inspection and monitoring of cargoes of radioactive materials being transported by sea, whenever appropriate, 10 such cargoes being inspected.

Film-Badge Service

The number of institutions registered in the film-badge service rose from 524 at the beginning of the year 1963-64 to 674 at the end of the year. Of these 575 are making full-time use of the service, 24 use the service at irregular intervals, due to the nature of the work done, and the remainder have discontinued the use of film-badges.

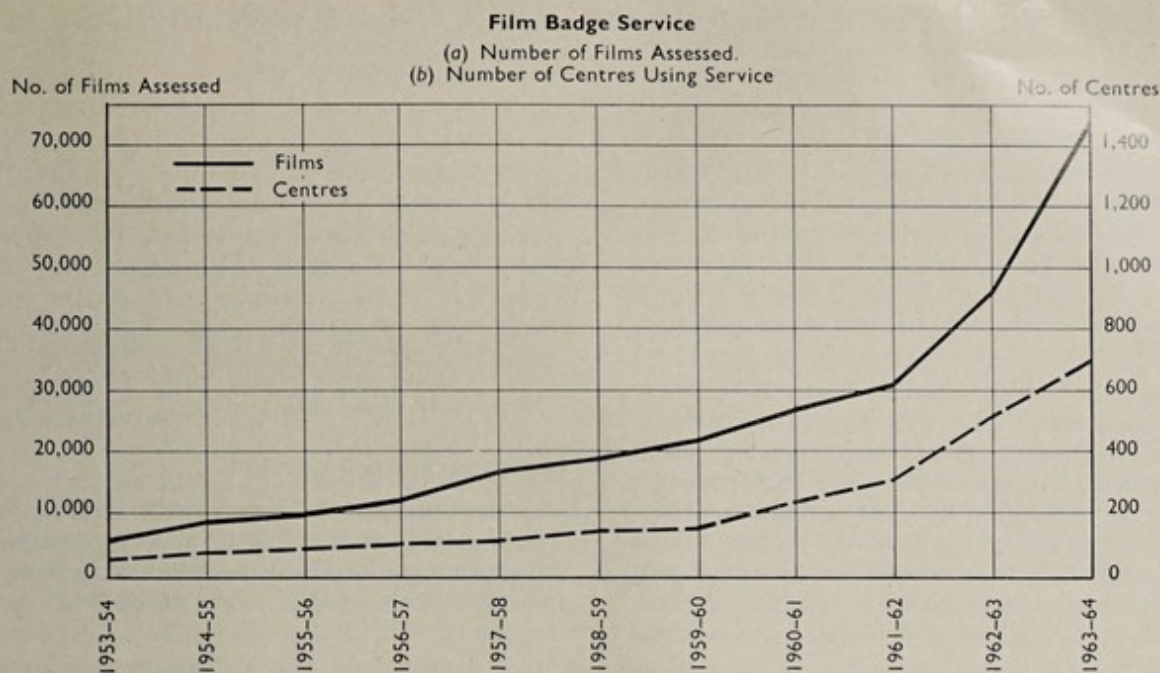
The number of films assessed during the year was 72,411, compared with 46,370 for the previous year. The number of film-badges assessed, and the number of centres registered, over the period 1953-54 to 1963-64 are shown graphically on page 59.

It should be noted that the increase in the number of radiation workers now covered by the film-badge service of the Laboratory is not truly reflected by a comparison of the figures of film-badges assessed for the years prior to 1960-61 with those of subsequent years. Prior to the 5th September, 1960, films were worn for a period of one working week, but, with the operation of a modified service from this date, the period of wearing the films was extended to two weeks, except in a few instances where experience had shown that higher radiation levels were possible. In fact, there was an almost two-fold increase in the number of persons using the film-badge service at the end of the year 1960-61 as compared with the end of the previous year and further increases have since occurred.

Radiochemical and Low-level Measurement Laboratories

The work of the radiochemical and low-level measurement laboratories is directed towards the collection of information which is necessary to allow an estimate to be made of any possible effects arising from exposure of the population to radiation from radioactive materials in the environment. Measurements of both natural and man-made radioactivity are therefore being made.

Methods have been, or are being, developed for the identification and assay of extremely low concentrations of alpha-, beta- and



gamma-emitting radio-isotopes in biological materials and environmental samples. This has required the design and construction, in the Laboratory, of much of the specialized equipment needed.

Two zinc sulphide alpha scintillation counters are available for the measurement of total alpha activities in air-filter samples, smear tests, ashed food samples, &c. To assist in the identification of alpha-emitting materials a spectrometer using a surface-barrier detector is being developed.

For the extremely low beta activities which it is generally desired to measure, special end-window and hollow-anode geiger pairs are used in anti-coincidence, with massive shielding. To deal with our present work-load of low-level beta sample counting, five anti-coincident counters are in operation and a sixth unit will soon be completed.

Gamma activities may be identified and assayed using suitably shielded sodium iodide crystals (two-inch and four-inch). These are used in conjunction with a multichannel analyzer, the whole acting as a gamma-ray spectrometer. Radioactive reference standards are being prepared for each of 20 radio-isotopes in each of five standard geometries; these represent standard samples of liquid, organic ash and two types of soil.

As variations in ambient temperature can adversely affect the stability and reliability of the various low-level counting facilities, parti-

cularly gamma-ray spectrometers, ducted air-conditioning, thermostatically-controlled, has been installed in all low-level counting rooms.

During the year 1963-64, assays have been performed on human bone tissue (for strontium-90), public water supplies (for strontium-90 and caesium-137), liquid milk (for caesium-137), sea water (for yttrium-90, iodine-131 and caesium-137), soil (for strontium-90 and caesium-137) and ashed ion-exchange resins (for strontium-90, caesium-137 and radium D). About 1,100 samples for radioactive assay were prepared by the low-level radiochemical laboratory. Of these, there were 80 standard samples, 12 soil, 55 sea water, 180 public water supplies, 145 milk, 8 human bone tissue and 500 samples from ashed ion-exchange resins, plus 100 sundry samples of various isotopes.

Some of these activities have been carried out on behalf of the Australian Atomic Weapons Tests Safety Committee in its Australia-wide programme of monitoring global fall-out from the testing of nuclear weapons. In the combined programmes in the year 1963-64, 2,033 samples of various materials were ashed and prepared for radiochemical assay; of these 1,480 were prepared in a special furnace at the Laboratory and 553 in a larger furnace made available for the purpose by the Department of Supply. The Laboratory has also co-operated with the Committee in its investigations of various methods of collecting samples for analysis.

COMMONWEALTH BUREAU OF DENTAL STANDARDS

Standards

Work on local dental specifications is continuing in conjunction with the Standards Association of Australia. Australian standards for dental casting investments (AS T22), dental hypodermic needles (AS T24), dental cobalt-chromium casting alloy (AS T28), and dental silver solder (AS T30) have been approved and printed and assistance was given in the preparation of the standard published for syringes for insulin injection (AS T29). Draft standards nearing completion include those for elastomeric impression materials, gold solders, cold-processing resins for denture repairs, hand instruments, and hypodermic needles for insulin injection.

A new sub-committee has been set up to consider orthodontic materials and several other technical sub-committees are active.

Internationally, Australia was represented at the first plenary meeting in London of the Dental Committee of the International Organization for Standardization and the Officer-in-Charge of the Bureau has been appointed to three of the four I.S.O. working groups. The Federation Dentaire Internationale Committee on the Standardization of Dental Materials has been raised to the status of a Special Commission on which Australia is represented through the Bureau.

Testing

With further improvements in the testing facilities of dental manufacturers and a better system of grouping production batches, the amount of routine testing has been reduced. During the year laboratory reports were issued to public instrumentalities and to local and overseas firms on products in the following classifications—

Mineral products	13
Cements	18
Waxes and impression materials	34
Synthetic resins	35
Metals and alloys	68
Instruments	9
Surgical and therapeutic instruments.....	24
Total	201

A large number of products obtained on the open market are being check-tested to the appropriate Australian dental standards.

Laboratory Investigations

In the course of systematically testing dentifrices available on the Australian market, a laboratory method was adopted for estimating the effectiveness of fluoride products in reducing the solubility of tooth enamel.

As a result of the technique employed by an Adelaide orthodontist there has been considerable interest, particularly overseas, in a stainless steel arch wire commonly referred to as "the Australian wire". As part of a project in developing specifications for orthodontic wires, this particular product together with numerous other wires have been investigated in an attempt to correlate tensile, torsion and bending properties with clinical behaviour. Suitable classifications and appropriate test requirements have been recommended.

In the preparation of artificial dentures, difficulties are encountered in producing a satisfactory surface of the gypsum model when cast into an impression prepared with an alginate material. The chemical reason for the surface defects and methods of overcoming them have been studied.

For stability and accuracy, prosthetic and casting waxes require some control of their high thermal expansion properties. The anisotropic characteristics of extruded, moulded or rolled waxes introduce difficulties in the estimation of the effective thermal expansion and contraction. Methods have been developed to assess the behaviour of waxes under clinical use.

Over the past few years the processing of porcelain facings and crowns direct to a gold or other precious metal castings has become increasingly popular. Assistance has been given in the study of the process and the nature of the ceramic-alloy bond.

With the variety of brands of hypodermic needles now available on the Australian market, assessment of quality and workmanship is im-

portant. Work has been carried out on a range of products to give guidance in hospital purchasing, the disposable type of needle also receiving attention.

The specified physicochemical method of determining whether a dental anaesthetic solution is isotonic has been found to be inadequate with some of the newer anaesthetic drugs and alternative methods have been studied which give a more direct indication of the effect of the solutions on blood cells. Other specified test methods have been revised.

Advisory Services

Assistance was given in undergraduate training of dental students in the properties and use of materials. The number of graduates training in the subject of Metallography and Dental Materials for higher degrees has increased.

A series of eight "Practical Guides" to the successful use of materials was prepared. These brochures cover amalgams, silicate cements, zinc phosphate cements, impression materials, plasters and stones, waxes, inlay casting and denture base resins.

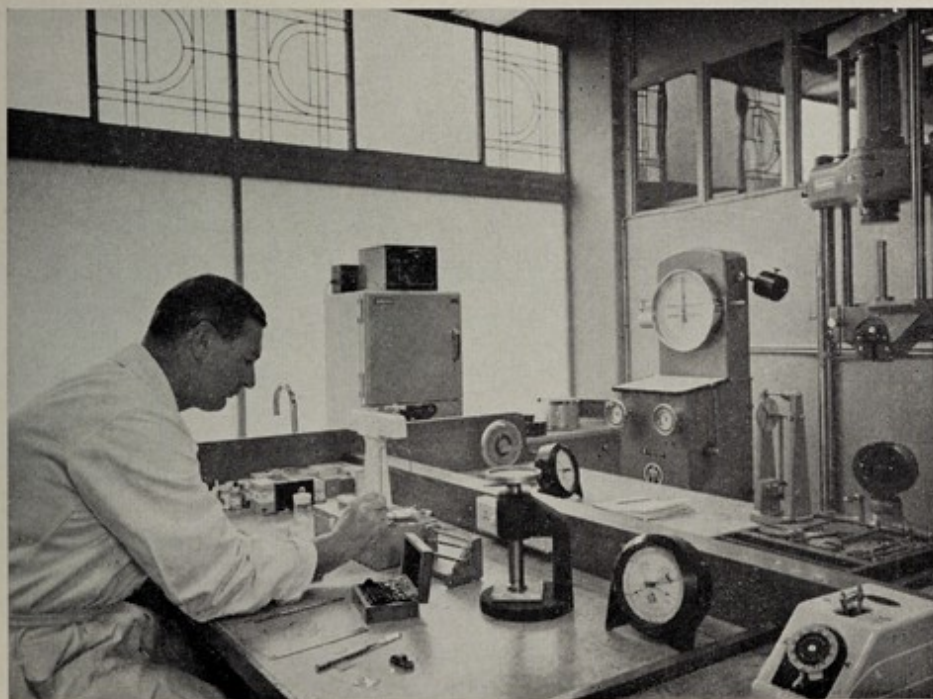
In addition to the lectures and exhibits at the 17th Australian Dental Congress in Perth, presentations have been given in Sydney, Lismore, Brisbane and Melbourne.

The Bureau has actively co-operated with the Dental Materials Board of the Australian Dental Association which conducts a very successful certification programme for dental products. This is based on the recognized Australian Standards for dental materials and on testing carried out at the laboratory. The present quality of dental supplies available to the dental profession in Australia speaks well for the support given by individual dentists, manufacturers and distributors to this accreditation programme.

Congress

The dental year was climaxed by the 17th Australian Dental Congress in Perth, at which considerable stimulus was given to interest in research, testing and standardization of materials and instruments. The Bureau was able to integrate its presentations with those of eminent overseas visitors in the field of dental materials.

The opportunity afforded by the Congress was taken by Professor R. W. Phillips, University of Indiana, Dr. K. Eichner, Free University of Berlin, and Mr. R. F. Stockwell, University of Otago, to spend some time at the Bureau. There is interest in setting up a similar bureau in Western Germany, while in New Zealand steps are being taken to adopt and apply appropriate standards for dental products.



Test in progress at Commonwealth Bureau of Dental Standards.

INSTITUTE OF ANATOMY

Museum

Further work on the revision of the exhibit dealing with the Ancestry of Man has been undertaken. A number of casts of fossil relics recently discovered in Africa by Dart and Leakey, and some other Asian fossil relics, with flesh reconstructions have been ordered from the University Museum, Philadelphia.

Two collections have been acquired by the Australian Institute of Aboriginal Studies to be included in the National Collections housed at the Institute of Anatomy. One is the Collection of stone artefacts from the estate of the late S. R. Mitchell, Melbourne metallurgist who became the authority on aboriginal stone artefacts. The other is an unique collection of carved figures, animal and human, which had been used in totemic ceremonies performed at Aurukun in Cape York Peninsula in November, 1962. A special display of five large showcases was erected in the Ethnological Hall for the ANZAAS Conference which met in Canberra in January, 1964.

Nutrition Research

The Nutrition Section took a leading part in the organization of four Symposia, dealing with public health and social problems which

were held at the ANZAAS Conference in Canberra during January, 1964. These were—

An Integrated Approach to Nutrition and Society—the Case of Chimbu,
The Social and Economic Consequences of Adding Years to Life,
Growth and Physical Fitness of Australians,
Trace Elements and Dental Caries—Relationships.

The publication every two months of *Food and Nutrition Notes and Reviews* has been continued, as well as the advisory services on nutrition problems provided for a number of Government Departments and/or private organizations and individuals. Members of the staff have continued to serve on Committees, &c., requiring expert knowledge of problems on nutrition, such as the Nutrition Committee of the National Health and Medical Research Council, the National F.A.O. Committee, the Standing Committee on Nutrition of the Pacific Science Association, and the 2nd Far East Symposium on Nutrition.

A reference library dealing with nutrition publications has been maintained and many outside requests for specialized nutritional literature have been dealt with.

Collection of Australian aboriginal artefacts at the Institute of Anatomy.



NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL

During the year ended 30th June, 1964, two sessions of the National Health and Medical Research Council were held and there were over 80 meetings of the various committees and sub-committees of the Council. The 56th Session of the Council was held at University House, Canberra on the 31st October, 1963, and the 57th Session was held at the Manchester Unity I.O.O.F. Building in Melbourne on the 28th May, 1964.

Medical Research

The amount of £318,500 was allocated to the Medical Research Endowment Fund in 1963-64 for expenditure on grants for medical research recommended by the Council. The increase over the previous year's allocation was given to provide increased salaries for the junior grades of graduate medical research staff receiving salaries under N.H. & M.R.C. grants. At the 57th Session of Council a completely new salary structure for graduate medical research workers was adopted, which closely follows the university scales for academic staff. Similar salary scales are now being adopted by a number of non-governmental organizations supporting medical research in Australia.

The Medical Research Advisory Committee was enlarged to 14 members during the year to increase its specialist cover in the many types of research supported by the Council grants. These grants are mostly given to support specific research projects in institutions which already have the basic facilities for research, and great care is taken to see that N.H. & M.R.C. grants are not used for purposes which are the proper responsibility of other Commonwealth or State organizations such as the Australian Universities Commission or State Health Departments.

Detailed reports of the work supported by N.H. & M.R.C. grants are presented to Parliament.

Antibiotics

The publication of the Second Edition of the Special Council Report on *Chemotherapy with*

Antibiotics and Allied Drugs has been an outstanding success. The report has received excellent reviews in Britain and the U.S.A., as well as in Australia, and has been in great demand. It is planned to publish a Third Edition in 1965.

The Council has been concerned about the toxicity of some antibiotics in general use and, in particular, warned about the toxic and other side effects of the tetracyclines. In addition to causing discolouration and enamel hypoplasia of both deciduous and permanent teeth in children, tetracyclines may inhibit bone growth in infants and intravenous administration in pregnancy may produce hepatic damage. Medical practitioners were reminded of the hazards of administering tetracyclines during pregnancy and the first four years of life.

Dental Health

For some years the Council has been in favour of fluoridating public water supplies to reduce dental caries in children, and at both meetings during the year supported this view.

Attention was also given to the role of sticky carbohydrate rich foods in producing dental caries. Such foods are often sold in school tuck shops and the Council considers that they result in more caries when they are consumed at frequent intervals between meals. To combat this it was recommended that those responsible for school tuck shops give consideration to reducing the sale of these caries-producing foods.

Epidemiology

The Council has recommended Salk vaccination for some years as a protection against poliomyelitis and was still convinced of the efficacy of this vaccine. At the same time, however, Council had recommended that Sabin vaccine should be kept available for use in the event of an outbreak of poliomyelitis. At the 57th Session, Council also approved a proposal to use Sabin vaccine as part of the routine immunization programme in Tasmania. This programme will provide an opportunity to

study the administrative problems associated with such a campaign.

Food Committees

During the year the Food Additives and Food Standards Committees continued their most important work directed to the elaboration and adoption of uniform food standards in the States and Territories. These standards protect the public from unnecessary or toxic additions to food and mis-representation of food contents. During the year draft standards were issued for pickles, cheese, invalid foods, meat and meat products, soft drinks and the general labelling of foods.

Maternal and Child Health

Resolutions were made during the year on many different aspects of child health. One of particular interest to all families concerned "rooming-in". This is the accommodation of mothers after child birth in the same rooms as their babies. The Council considered that rooming-in should be routine with all first-born unless there are exceptional circumstances, and also with subsequent children if possible. If a mother does not want to be accommodated in the same room as her baby, this may indicate that she is already consciously or unconsciously rejecting the child. The presence of visitors is not a contra-indication to rooming-in and the husband and other children in the family should be allowed to touch the baby.

Medical Statistics

The Medical Statistics Committee has been mostly concerned with the uniform recording of disease and death and methods of analysing the figures so obtained. During the year, however, one of the more important recommendations arising from the work of this Committee concerned tetanus prophylaxis. It is estimated that there are about 80 cases of tetanus in Australia each year resulting in about 40 deaths. As some half of these cases arise from trivial injuries for which medical attention is not sought, it is clear that the only way to prevent these deaths is to actively immunise the whole population. The Council therefore continued to recommend immunisation with tetanus toxoid with booster doses at least once every 5 years. Unfortunately, if tetanus does develop, the only effective treatment is with tetanus antitoxin. The readily available A.T.S. prepared in horses carries a risk of sensitizing patients to horse's serum and of a smaller, but

not entirely negligible, risk of causing fatal anaphylaxis. A.T.S. prepared in human beings is, of course, very much safer, but is in extremely short supply and the Council will be considering during the coming year the special indications for its use. Meanwhile, Council considered that horse A.T.S. should only be given prophylactically to patients who have not been actively immunised, have no history of a definite allergic diathesis, have no clinical reaction to a subcutaneous trial dose and in whom there is reason to believe that cleaning and dressing of the wounds may not eliminate tetanus organisms.

Nutrition

A warning was given on the misuse of vitamin preparations which appear to be widely used as placebos. Healthy people who eat a balanced diet will obtain their requirements of all vitamins and will derive no benefit from extra vitamin preparations. Indeed, there is increasing evidence that large doses of some vitamins are toxic. It has been known for some time that large doses of Vitamin A and Vitamin D may be toxic and there is now some evidence to suggest that large doses of Vitamin C may condition the body so that it becomes vulnerable when these large doses are suspended.

Occupational Health

The Occupational Health Committee has produced some extremely valuable reports during the year. The first of these concerned the safe handling of cyanides on the waterfront. Detailed recommendations were given on this important problem and it is hoped that if these are followed the workers concerned will be adequately safeguarded. Another report listed the recommended maximum concentrations of atmospheric contaminants for occupational exposures. The third report gave detailed recommendations for the operation of liquefied petroleum gas powered forklift trucks in ships' holds. These problems are mainly concerned with the control of carbonmonoxide concentrations in the air when these machines are used in confined spaces.

Radiation Health

The Council issued detailed recommendations on radiation protection standards for individuals exposed to ionizing radiation. It is hoped that this will be of assistance to Commonwealth and State authorities and to industrial organizations. At the same time, the Council

considered the nature and frequency of medical examinations required for radiation workers and concluded that, apart from a pre-employment medical examination, there was no special merit in the routine medical examination of radiation workers when the maximum permissible doses in the Council's recommended radiation protection standards are not exceeded.

The Council was concerned about the risks involved in radiological examinations of the pelvis and lower abdomen of pregnant women. Only urgent examinations should be carried out during pregnancy and particular care should be taken to avoid radiation of the foetus. Where practicable, lower abdominal X-rays of women in the child-bearing age should be confined to the 10 day interval following the onset of menstruation.

Poisons Schedules

During the years since the war the Council has had a most important influence in obtaining fairly uniform scheduling of poisons in the different States and Territories. During the year the Council put out a number of revised and comprehensive recommended poisons schedules.

Traffic Injury

In considering the prevention and treatment of traffic injuries the importance of the use of seat belts has again been emphasized. The

Council recommended that consideration be given to requiring effective seat belts to be fitted in all new cars, with provision to be made so that the belts are interchangeable and any belt can be fitted to any car without special adaptors. It was recommended that members of the medical profession should set an example to the public by installing safety belts in their own cars and wearing them.

Tropical Medicine

During the year the Council again considered the problem of leprosy control and added further recommendations to those made in the previous year. Consideration was also given to the stinging associated with seasonal jellyfish infestations in Northern Australian waters. Stings by *Chironex fleckeri* are sometimes fatal and it was considered that work on this problem should be encouraged.

Veterinary Public Health

The Council made detailed recommendations on hygiene at abattoirs, on the control of hydatid disease and the prevention of brucellosis. It was considered that one of the most important features in the control of hydatid disease was that raw liver and other raw offal from sheep should under no circumstances be fed to dogs. To reduce the incidence of brucellosis among meat workers it was recommended that gravid uteri should not be opened in abattoirs except in specified controlled areas.

WORLD HEALTH ORGANIZATION

Australia is a financial member of the World Health Organization and is represented at the World Health Assembly and also at the Regional Committee for the Western Pacific.

The Seventeenth World Health Assembly was held at Geneva from 3rd-20th March, 1964. One hundred and fifteen nations were represented at the Assembly, in most cases by the Director-General of Health or his equivalent.

The Australian delegation consisted of Major-General W. D. Refshauge, Director-General of Health, as Chief Delegate, and other delegates were Mr. R. W. Furlonger, Ambassador, Australian Permanent Mission to the European Office of the United Nations; and Dr. R. C. Webb, Chief Medical Officer, Australia House, London. The alternate delegate was Dr. K. H. S. Cooke, Medical Director, Australian Migration Mission in Greece.

Some of the more important matters discussed at the Assembly were the malaria eradication programme, the smallpox eradication programme and a proposal to set up a World Health Research Centre.

Malaria

The malaria eradication programme now covers over two-thirds of the world population previously exposed to the disease and many millions of people living in these areas are benefiting from a striking reduction of malaria infections. There has also been an appreciable increase in the number of countries and areas where malaria has been virtually eradicated.

However, there are still a significant number of countries, mainly in Africa, where no eradication programme has commenced and morbidity and mortality rates due to malaria continue to increase. It has been impossible to commence malaria campaigns in those countries because of the extreme lack of health and medical services. Also, in some countries "resistance" seems to be developing so that the transmission of malaria continues in spite of all eradication measures.

The World Health Assembly seemed satisfied with the progress of the eradication pro-

gramme, but it urged those Governments which had not commenced eradication programmes to do so as early as possible and also those countries where "resistance" was appearing to undertake research into methods of interrupting the transmission of the disease. There was some fear expressed that importation of malaria from non-eradicated areas to those now free of malaria could pose a problem in the future. The World Health Organization will spend 20 million United States dollars in 1964 on the malaria eradication campaign and as soon as the African countries have their programmes under way success could be in sight.

Smallpox

The smallpox eradication campaign is not progressing nearly as well as the malaria campaign. Smallpox continues to be endemic in Asia and Africa and in 1963 there were over 88,000 cases reported to the World Health Organization, with over 25,000 deaths. There were over 5,000 cases of smallpox in Indonesia.

During 1963 there were four outbreaks of smallpox in Europe, all of which were due to "importation" of the disease from an endemic area. In Poland last year there were 113 secondary cases infected from "imported" cases.

There is little doubt that a proper vaccination campaign in those countries where smallpox is endemic could eliminate this dreadful disease. But two problems at present prevent this. Firstly the amount of vaccine needed exceeds 100 million doses per year, and this is beyond the present capacity of the world to supply over and above current needs. Secondly is the lack of trained vaccinators to carry out the campaign.

The World Health Assembly viewed this situation with great concern and requested the Director-General to prepare a comprehensive plan for the world-wide eradication of smallpox. The Director-General of the World Health Organization has to table his plan at the next World Health Assembly. The Assembly further requested the Director-

General to provide for some portion of the campaign to be incorporated into the Regular Budget.

World Health Research Centre

A World Health Research Centre has been proposed whereby members of the World Health Organization could co-operate, with a view to stimulating and supporting a broad co-ordinated and accelerated research attack on major health problems. It is proposed that each country which desires to be a member will make a substantial annual contribution.

The Research Centre would carry out large-scale laboratory research into epidemiology, communications of science and technology, and bio-medical problems. It is proposed to build up the Research Centre over a period of years, the full staff to be selected over five years.

Detailed plans have been drawn up to assist all Governments to reach a decision as to whether to participate or not in the establishment and operation of the World Health Research Centre; and a decision concerning its establishment will be taken later. In the meantime, the World Health Organization continues its co-ordinating role of exchange of information concerning country research projects.

General

Detailed discussions were also held at the Assembly on international quarantine arrangements, and the international exchange of information on drug safety.

REGIONAL COMMITTEE FOR WESTERN PACIFIC

The Fourteenth Session of the World Health Organization Regional Committee for the Western Pacific was held at Port Moresby from 5th-10th September, 1963.

The meeting was held in the Legislative Council Chambers and was officially opened by the Prime Minister, Sir Robert Menzies, on 5th September. The Ministers for Health and Territories and the Administrator of the Territory of Papua and New Guinea also attended.

The Australian official delegation was headed by Dr. R. F. R. Scragg, Director of Health, Territory of Papua and New Guinea, with, as alternate representatives, Dr. C. Haszler, Regional Medical Officer, Department of Public Health, Territory of Papua and New Guinea, Dr. Kila Wari and Dr. Himson Mulas, Assistant Medical Officers in the Department of Public Health, Territory of Papua and New Guinea, the Commonwealth Director-General of Health, Major-General W. D. Refshauge and the

Assistant Director-General, Dr. H. E. Downes, and the General Secretary of the Australian Medical Association, Dr. C. J. Ross-Smith.

Although Australia has been an active member of the World Health Organization since its inception and of the Western Pacific Regional Committee since it was created in 1951, this is the first occasion on which the committee has met on Australian territory. The Western Pacific is one of six W.H.O. regional areas.

Fifteen countries 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, such as the South Pacific Commission, the World Medical Association and the League of Red Cross Societies.

The meeting dealt with the programme and budget for 1965, and discussed the problems of Kuru in the Territory of Papua and New Guinea, El Tor Cholera in the Western Pacific Region, fluoridation of water supplies and other health matters related to the area. These debates were followed by technical discussions under the heading "The Role of Local Health Services in Leprosy Control".

Kuru

Kuru, a disease of the nervous system, which was first noted by medical observers in 1956, at present occurs only in a particular area in the Okapa sub-district of the Eastern Highlands of New Guinea. It is almost invariably fatal, affecting children of both sexes and women of child-bearing age. Adult men are much less frequently affected. Kuru appears to be of genetic origin, but it is believed that other factors, still unknown, may also be involved. To date this disease is incurable.

El Tor Cholera

El Tor Cholera, formerly regarded as less virulent than cholera, has appeared practically throughout South-East Asia during recent years and has now been declared a quarantinable disease by the World Health Organization. Current experience suggests that it must be regarded as important as cholera.

There were 1278 cases of El Tor Cholera in West Irian, with 445 deaths, between October, 1962 and March, 1964. A vaccination campaign was undertaken on the New Guinea side of the border as a precautionary measure. No case has been encountered in New Guinea. Australia has proclaimed the following countries as being areas from which travellers by sea or air must carry a current cholera vaccination certificate: Burma, Cambodia, Colony of

Hong Kong, India, Republic of Indonesia, Republic of Korea, Macao, Malaysia, North Korea, Pakistan, Republic of the Philippines, Republic of Vietnam, and Thailand.

The meeting agreed that the 15th Session

be held at the Regional Committee's headquarters in Manila. It was decided that the subject for technical discussions at this Session should be "The Use of Statistics in Public Health Administration".

Patient from an outback station on the way to hospital under the care of the Royal Flying Doctor Service.



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

One of the most important of the services rendered by the Australian Red Cross Society is its Blood Transfusion Service which operates in all State and Territories of the Commonwealth.

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

Details of grants made by the Commonwealth during the period under review are included in the following table—

State	1963-64 (Based on Ex- penditure for year ended 30th June, 1963)
	£
New South Wales	50,354
Victoria	60,735
Queensland	40,855
South Australia	22,097
Western Australia	18,313
Tasmania	5,557
Total	197,911

ROYAL FLYING DOCTOR SERVICE

The Royal Flying Doctor Service of Australia is conducted 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 work of all of the Councillors and the bodies which support and assist the administration is purely voluntary.

The work of the Flying Doctor Service is aimed at providing medical services to the white and aboriginal populations in isolated areas and, in addition, as incidental to its main activities, wireless communications are maintained and utilized for social, private and business uses. From time to time special purposes work is undertaken in connexion with flood relief, searching for lost parties and co-ordinating cattle movements. The service is not conducted with a view to profit.

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. In some sections there is an arrangement to levy a fixed annual charge per person on graziers in certain areas.

The Commonwealth has been making grants available towards the cost of conducting the Flying Doctor Service since 1936. The Commonwealth grant in 1963-64 was £95,000. This provided for £55,000 towards the cost of operational expenses and £40,000 towards the cost of capital expenses. The Commonwealth also continued to meet the cost of the 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.

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 newly formed organizations. A subsidy at the rate of £1,000 per annum is paid in respect of each additional nurse employed in the first instance and at the rate of £500 per annum in respect of nurses employed by newly formed organizations.

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

	£
1956-57	1,807
1957-58	18,135
1958-59	34,538
1959-60	53,616
1960-61	78,014
1961-62	107,668
1962-63	144,387
1963-64	185,938

The Commonwealth subsidy paid to various district nursing organizations now permits the employment of 228 trained nurses.

FREE MILK FOR SCHOOL CHILDREN

The *States Grants (Milk for School Children) Act 1950* makes provision for the Commonwealth to subsidize the States for the cost of providing 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 subsidy for 1963-64 was £3,887,605, which permitted the free distribution of one-third of a pint of milk daily to approximately 1,366,000 school children attending public and private primary schools, kindergartens, crèches and aboriginal missions throughout Australia. The cost per child in 1963-64 was £2 17s. 1d.

Expenditure by the Commonwealth on the Free Milk Scheme since its commencement in 1950-51 is shown in table 47 on page 95. However, these figures do not include amounts reimbursed to the States in respect of 50 per cent of capital and incidental expenditure, which was £12,068 for 1963-64.

An innovation in the Free Milk Scheme was the introduction, without any rise in price, of flavoured and homogenized milk into schools in the northern part of Tasmania. This resulted in a 15 per cent increase in consumption in that area and it is proposed to introduce this milk into the southern section in September, 1964.

MENTAL HEALTH INSTITUTIONS

A feature of the current year was the passing of new legislation by the Commonwealth Government to provide a continuation of Commonwealth financial aid to the States for capital expenditure in respect of mental health institutions. In May, 1964, the *States Grants (Mental Health Institutions) Act 1964*, was enacted. This legislation made two significant alterations to the arrangements previously imposed by the *States Grants (Mental Institutions) Act 1955*.

The 1955 Act provided that the Commonwealth would contribute £1 for every £2 contributed by the States towards capital expenditure for buildings and equipment at mental institutions. The Commonwealth made available the sum of £10,000,000 which was divided between the States in proportion to the respective State populations, with the result that the States became entitled to the following amounts—

	£
New South Wales	3,830,000
Victoria	2,740,000
Queensland	1,460,000
South Australia	895,000
Western Australia	720,000
Tasmania	355,000
	<hr/> £10,000,000

No provision was made as to the time for which this assistance would be available. The amounts would be dispersed in accordance with the expenditure by the States. Final payments were made to Victoria and Tasmania in the 1960-61 financial year.

The 1964 Act fixed three years as the period for which the financial assistance would be continued. The basis of £1 by the Commonwealth for each £2 by the State was not disturbed. However, no upper limit of the amount of assistance was set either in total or for individual States. As in the former legislation, all expenditure, to be eligible for Commonwealth aid, must have received the prior approval of the Minister for Health. The grant will continue to be paid to the States as a part reimbursement of their expenditure. The Commonwealth contribution is dependent entirely upon the capital expenditure of the States in connection with their mental health institutions.

Details of the total expenditure each year since the inception of the scheme, together with the amounts contributed by the Commonwealth and the States, are shown in table 48 on page 95.

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APPENDIX 1 — STATISTICS

TABLE 1
DEPARTMENTAL EXPENDITURE—1959-60 TO 1963-64

	YEAR ENDED 30TH JUNE				
	1960	1961	1962	1963	1964
NATIONAL WELFARE FUND	£	£	£	£	£
Hospital Benefits	18,599,245	20,668,010	22,202,153	23,663,049	28,107,971
Medical Benefits	9,291,706	9,976,154	10,911,483	11,737,161	12,424,143
Pharmaceutical Benefits	24,335,671	27,881,222	35,189,883	38,455,079	39,419,336
Pensioner Medical Service	4,112,637	4,200,273	4,397,938	4,572,898	4,765,625
Free Milk for School Children	3,359,369	3,560,124	3,741,638	3,727,154	3,887,605
Tuberculosis*	4,337,210	4,179,012	4,332,897	4,873,907	5,236,401
Miscellaneous	688,992	1,045,579	847,978	764,528	892,391
TOTAL NATIONAL WELFARE FUND	64,724,830	71,510,374	81,623,970	87,793,776	94,733,472
CONSOLIDATED REVENUE FUND					
Tuberculosis Capital Reimbursement	781,089	410,370	386,579	491,993	299,242
Administration	743,562	690,129	763,430	798,041	880,767
Subsidies and Grants	939,266	1,113,880	954,073	925,936	994,709
Quarantine	308,840	341,961	381,226	419,156	454,113
Health Services	1,163,647	1,405,071	1,544,077	2,421,333	2,471,530
Northern Territory	805,738	976,081	1,225,939	1,249,880	1,365,967
Australian Capital Territory	494,962	520,910	575,688	675,152	725,493
Capital Works and Services	316,081	328,316	630,972	624,222	120,882
TOTAL CONSOLIDATED REVENUE FUND	5,553,185	5,786,718	6,461,984	7,605,713	7,312,703
SPECIAL CAPITAL GRANTS TO STATES FOR MENTAL HEALTH INSTITUTIONS	1,147,472	727,243	824,216	795,162	797,257
TOTAL EXPENDITURE	71,425,485	78,024,337	88,910,173	96,194,653	102,843,431

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 87.

TABLE 2
HOSPITAL BENEFITS
NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE—
1952-53 TO 1963-64

As at 30th June	No. of Registered Organizations	Membership (a)	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

(a) As advised by the organizations.

TABLE 3
HOSPITAL BENEFITS
NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE—
BY STATES—30th JUNE, 1964

State	No. of Registered Organizations	Membership	Estimated Coverage	Percentage of Population Covered
		000's	000's	Per cent
New South Wales ..	33	1,281	3,068	74
Victoria	44	956	2,560	83
Queensland	3	305	779	50
South Australia ..	13	367	877	84
West Australia ..		261	634	81
Tasmania	10	116	276	74
Commonwealth ..	112	3,286	8,194	74

TABLE 4
HOSPITAL BENEFITS
BENEFITS PAID TO CONTRIBUTORS BY REGISTERED ORGANIZATIONS—
1952-53 TO 1963-64

Year Ended 30th June	No. of Days Fund Benefit Paid	Average Daily Benefit	Percentage of Members Receiving Benefit	Average Stay in Hospital Per Claim
	000's	£ s d	Per cent	Days
1953	1,874	10 4	13.4	10.98
1954	3,413	14 0	19.9	10.17
1955	4,642	15 10	23.5	9.92
1956	4,808	18 1	20.8	10.60
1957	5,492	1 3 3	23.3	10.30
1958	6,215	1 6 2	25.6	9.96
1959	7,049	1 7 6	26.9	9.74
1960	8,937	1 6 9	29.4	10.81
1961	9,740	1 8 9	29.7	11.02
1962	10,341	1 11 8	30.9	10.78
1963	10,419	1 14 4	32.1	10.29
1964	9,576	2 4 0	30.7	9.39

TABLE 5
HOSPITAL BENEFITS
BENEFITS PAID TO CONTRIBUTORS BY REGISTERED ORGANIZATIONS—
BY STATES—1963-1964

State	No. of Days Fund Benefit Paid	Average Daily Benefit	Percentage of Members Receiving Benefit	Average Stay in Hospital Per Claim
	000's	£ s d	Per cent	Days
New South Wales ..	4,216	2 11 9	30.9	9.86
Victoria	2,255	1 15 10	24.4	9.87
Queensland	1,044	1 12 2	37.5	9.49
South Australia ..	964	2 3 10	34.1	7.95
West Australia ..	781	2 1 2	38.1	7.95
Tasmania	316	2 5 6	30.4	9.32
Commonwealth ..	9,576	2 4 0	30.7	9.39

TABLE 6
HOSPITAL BENEFITS
AMOUNT OF COMMONWEALTH AND FUND BENEFITS PAID*—BY STATES—1963-64

State	COMMONWEALTH				FUND			Total
	Uninsured Patients	Insured Patients	Pensioner Patients	Total	Excluding Ancillary	Ancillary	Total	
	£	£	£	£	£	£	£	£
New South Wales ..	376,928	5,010,778	2,580,937	7,968,643	10,905,335	86,341	10,991,676	18,960,319
Victoria	254,743	2,709,923	1,496,642	4,461,308	4,037,723	166,121	4,203,844	8,665,152
Queensland	482,586	1,148,727	1,302,211	2,933,524	1,677,366	65,808	1,743,174	4,676,698
South Australia ..	70,045	1,112,471	507,021	1,689,537	2,111,798	163,526	2,275,324	3,964,861
West Australia ..	75,340	892,658	601,832	1,569,830	1,608,700	72,232	1,680,932	3,250,762
Tasmania	29,339	328,414	188,442	546,195	719,175	26,814	745,989	1,292,184
Commonwealth ..	1,288,981	11,202,971	6,677,085	19,169,037	21,060,097	580,842	21,640,939	40,803,976

* Refunds of £937 have not been deducted.

† Includes payment of Special Account deficits of £1,874,623.

TABLE 7
HOSPITAL BENEFITS
AMOUNT OF COMMONWEALTH NURSING HOME BENEFIT PAID—BY STATES—1963-64

State	State Nursing Homes	Private Nursing Homes	Total
	£	£	£
New South Wales	715,893	2,851,693	3,567,586
Victoria	1,082,595	1,002,851	2,085,446
Queensland	787,663	593,776	1,381,439
South Australia	186,460	630,587	817,047
West Australia	335,560	447,162	782,722
Tasmania	143,397	162,274	305,671
Commonwealth	3,251,568	5,688,343	8,939,911

TABLE 8
MEDICAL BENEFITS
NUMBER OF REGISTERED ORGANIZATIONS, MEMBERSHIP AND COVERAGE—
1953-54 TO 1963-64

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	(a) 2,850	(a) 7,173	(a) 68
1962	82	2,846	7,275	68
1963	78	2,952	7,686	71
1964	81	3,095	8,058	73

(a) 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, 1964

State	No. of Registered Organizations	Membership	Estimated Coverage	Percentage of Population Covered
		000's	000's	Per cent
New South Wales	28	1,239	3,164	76
Victoria	21	869	2,416	78
Queensland ..	6	303	788	50
South Australia ..	8	330	819	78
West Australia ..	8	247	615	78
Tasmania ..	10	107	256	68
Commonwealth	81	3,095	8,058	73

TABLE 10
MEDICAL BENEFITS
MEDICAL SERVICES RECEIVED BY CONTRIBUTORS TO REGISTERED ORGANIZATIONS—
FEE-FOR-SERVICE ONLY—1953-54 TO 1963-64

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		£ s. d.
1954	3,284	74	3.4	1 8 6
1955	9,453	70	6.2	1 9 1
1956	12,259	71	6.8	1 9 1
1957	13,668	75	6.6	1 11 0
1958	15,582	75	6.7	1 12 5
1959	16,819	75	6.5	1 12 9
1960	19,625	75	7.1	1 13 0
1961	20,123	73	7.3	1 15 7
1962	21,669	72	7.7	1 16 5
1963	23,431	72	8.0	1 16 11
1964	24,308	71	7.8	1 18 6

TABLE 11
MEDICAL SERVICES RECEIVED BY CONTRIBUTORS TO REGISTERED ORGANIZATIONS—
FEE-FOR-SERVICE ONLY—BY STATES—1963-64

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		£ s. d.
New South Wales	9,789	70	7.4	2 0 10
Victoria	6,378	73	7.5	1 18 8
Queensland ..	2,710	72	9.3	1 14 6
South Australia ..	2,642	73	8.4	1 16 1
West Australia ..	2,070	68	8.5	1 15 2
Tasmania ..	719	65	6.7	1 19 1
Commonwealth	24,308	71	7.8	1 18 6

TABLE 12
MEDICAL BENEFITS
COST OF MEDICAL SERVICES TO CONTRIBUTORS TO REGISTERED ORGANIZATIONS—
1953-54 TO 1963-64

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	4,556	31.7	31.4	36.9
1955	13,585	33.9	30.9	35.2
1956	17,638	35.0	30.6	34.4
1957	21,002	34.1	29.3	36.6
1958	24,812	33.9	28.3	37.8
1959	27,309	34.4	28.5	37.1
1960	32,101	35.4	28.2	36.4
1961	35,621	36.0	27.4	36.6
1962	39,250	36.9	27.0	36.1
1963	43,107	37.1	26.6	36.3
1964	46,656	36.8	25.9	37.3

TABLE 13
MEDICAL BENEFITS
COST OF MEDICAL SERVICES TO CONTRIBUTORS TO REGISTERED ORGANIZATIONS—
BY STATES—1963-64

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 ..	20,044	37.7	24.4	37.9	7,571,469	561,867
Victoria	12,290	31.5	25.5	43.0	3,875,896	77,214
Queensland	4,678	41.5	27.2	31.3	1,939,836	106,748
South Australia ..	4,766	38.4	29.2	32.4	1,828,739	54,352
West Australia ..	3,558	40.7	29.6	29.7	1,464,039	28,909
Tasmania	1,320	40.5	25.9	33.6	541,241	24,920
Commonwealth ..	46,656	36.8	25.9	37.3	17,221,220	854,010

TABLE 14
PENSIONER MEDICAL SERVICE
NUMBER ENROLLED, NUMBER OF SERVICES RECEIVED AND AVERAGE ATTENDANCES PER ENROLLED
PERSON PER ANNUM—1951-52 TO 1963-64

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

TABLE 15

PENSIONER MEDICAL SERVICE

NUMBER ENROLLED, NUMBER OF SERVICES RECEIVED AND AVERAGE ATTENDANCES PER ENROLLED PERSON PER ANNUM—BY STATES—1963-64

State	Number of Pensioners and Dependants Enrolled at 30th June	No. of Services Received			Average No. of Services per Enrolled Person
		Surgery	Domiciliary	Total	
	000's	000's	000's	000's	
New South Wales	323	1,878	1,247	3,125	9.6
Victoria	215	1,016	882	1,898	9.0
Queensland ..	141	693	324	1,017	7.3
South Australia ..	77	348	336	684	9.0
West Australia ..	60	345	166	511	8.7
Tasmania	28	126	65	191	6.9
Commonwealth	844	4,406	3,020	7,426	8.9

TABLE 16

PENSIONER MEDICAL SERVICE

NUMBER OF PARTICIPATING DOCTORS, PAYMENTS RECEIVED AND AVERAGE ANNUAL PAYMENT PER DOCTOR—1951-52 TO 1963-64

Year Ended 30th June	No. of Participating Doctors at 30th June	Payments to Doctors	Average Receipts Per Annum
		£'000's	£
1952	3,502	1,035	310
1953	3,898	1,740	464
1954	4,239	2,115	512
1955	4,567	2,516	566
1956	4,730	2,874	618
1957	4,990	2,999	617
1958	5,243	3,199	625
1959	5,531	3,806	688
1960	5,685	4,113	733
1961	5,861	4,200	728
1962	6,012	4,398	738
1963	6,025	4,573	760
1964	5,899	4,766	799

TABLE 17

PENSIONER MEDICAL SERVICE

NUMBER OF PARTICIPATING DOCTORS, PAYMENTS RECEIVED AND AVERAGE ANNUAL PAYMENT PER DOCTOR—BY STATES—1963-64

State	No. of Participating Doctors at 30th June	Payments to Doctors	Average Receipts per Annum
		£'000's	£
New South Wales ..	2,299	1,995	863
Victoria	1,744	1,225	700
Queensland	721	647	850
South Australia ..	542	448	830
West Australia ..	428	324	758
Tasmania	165	127	775
Commonwealth ..	5,899	4,766	799

TABLE 18
PHARMACEUTICAL BENEFITS
COST OF PRESCRIPTIONS—1960-61 TO 1963-64

Year Ended 30th June	Payments by Commonwealth			Patient Contribution	Total Cost
	Excluding Pensioners	Pensioners	Total		
	£	£	£	£	£
1961	17,141,248	7,338,349	24,479,597	5,162,370	29,641,967
1962	22,316,244	9,097,498	31,413,742	6,503,888	37,917,630
1963	23,546,513	9,915,375	33,461,888	7,371,224	40,833,112
1964	23,230,499	10,300,857	33,531,356	7,786,902	41,318,258

TABLE 19
PHARMACEUTICAL BENEFITS
COST OF PRESCRIPTIONS—BY STATES—1963-64

State	Payments by Commonwealth			Patient Contribution	Total Cost
	Excluding Pensioners	Pensioners	Total		
	£	£	£	£	£
New South Wales	9,346,494	4,415,197	13,761,691	3,164,576	16,926,267
Victoria	6,656,881	2,409,699	9,066,580	2,130,443	11,197,023
Queensland	3,083,560	1,564,875	4,648,435	1,069,221	5,717,656
South Australia	2,090,526	954,157	3,044,683	739,752	3,784,435
West Australia	1,475,269	693,220	2,168,489	486,083	2,654,572
Tasmania	577,769	263,709	841,478	196,827	1,038,305
Commonwealth	23,230,499	10,300,857	33,531,356	7,786,902	41,318,258

TABLE 20
PHARMACEUTICAL BENEFITS
DISSECTION OF BENEFIT PRESCRIPTION COSTS INTO INGREDIENT COST AND CHEMISTS'
REMUNERATION—1960-61 TO 1963-64

Year Ended 30th June	Cost of Ingredients and Containers	Chemists' Remuneration	Total Cost
	£	£	£
1961	17,814,281	11,827,686	29,641,967
1962	23,357,245	14,560,385	37,917,630
1963	24,556,448	16,276,664	40,833,112
1964	24,698,886	16,619,372	41,318,258

TABLE 21

PHARMACEUTICAL BENEFITS

DISSECTION OF BENEFIT PRESCRIPTION COSTS INTO INGREDIENT COST AND CHEMISTS' REMUNERATION—BY STATES—1963-64

State	Cost of Ingredients and Containers	Chemists' Remuneration	Total Cost
	£	£	£
New South Wales	10,088,055	6,838,212	16,926,267
Victoria	6,785,395	4,411,628	11,197,023
Queensland	3,356,264	2,361,392	5,717,656
South Australia	2,255,523	1,528,912	3,784,435
West Australia	1,592,743	1,061,829	2,654,572
Tasmania	620,906	417,399	1,038,305
Commonwealth	24,698,886	16,619,372	41,318,258

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, AVERAGE COST PER PRESCRIPTION AND AVERAGE COST PER HEAD OF POPULATION—1960-61 TO 1963-64

Year Ended 30th June	Number of Prescriptions	Average Cost per Prescription	Average Cost per Head of Population
	000's	s. d.	£ s. d.
1961	31,217	19 0	2 17 0
1962	37,714	20 1	3 12 0
1963	42,192	19 4	3 14 9
1964	44,357	18 7	3 15 1

TABLE 23

PHARMACEUTICAL BENEFITS

NUMBER OF PRESCRIPTIONS, AVERAGE COST PER PRESCRIPTION AND AVERAGE COST PER HEAD OF POPULATION—BY STATES—1963-64

State	Number of Prescriptions	Average Cost per Prescription	Average Cost per Head of Population
	000's	s. d.	£ s. d.
New South Wales	18,325	18 5	4 1 7
Victoria	11,467	19 6	3 12 10
Queensland	6,518	17 7	3 12 2
South Australia	4,121	18 4	3 12 7
West Australia	2,813	18 10	3 8 0
Tasmania	1,113	18 8	2 15 8
Commonwealth	44,357	18 7	3 15 1

TABLE 24
PHARMACEUTICAL BENEFITS
PAYMENTS TO HOSPITALS AND MISCELLANEOUS SERVICES—1963-64

New South Wales	Victoria	Queensland	Hospitals			Miscellaneous Services*	Total
			South Australia	Western Australia	Tasmania		
£	£	£	£	£	£	£	£
1,670,554	2,150,000	1,100,023	355,944	446,243	37,268	127,947	5,887,979

* Miscellaneous Services Expenditure consisted of—

	£
Biological Products and Prophylactic Materials	72,754
Commonwealth Medical Officers and Immigration Medical Service	2,785
Miscellaneous (Including Bush Nursing and Testing Expenses)	52,408
	<u>127,947</u>

TABLE 25
PHARMACEUTICAL BENEFITS
NUMBER OF PHARMACEUTICAL CHEMISTS AND MEDICAL PRACTITIONERS DISPENSING
PHARMACEUTICAL BENEFITS PRESCRIPTIONS—1949-50 TO 1963-64

A. *Pharmaceutical Chemists* approved under Section 90 of the *National Health Act* 1953-1964 for the purpose of supplying pharmaceutical benefits.

B. *Medical Practitioners* approved under Section 92 of the *National Health Act* 1953-1964 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		Total Common- wealth	
	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

TABLE 26
PHARMACEUTICAL BENEFITS
DRUGS DISPENSED BY CHEMISTS—1963-64
(Benefits dispensed in hospitals are excluded)

Therapeutic Category	Percentage of Total Expenditure	Percentage of Total Prescriptions
	Per cent	Per cent
Broad Spectrum Antibiotics	17.4	8.0
Penicillins	9.7	7.6
Analgesics	7.7	10.1
Diuretics	6.9	4.4
Hypnotics	6.9	12.4
Blood Vessels	6.4	5.0
Anti-Histamines	4.3	4.3
Sulphonamides	3.0	3.7
Antacids	3.2	5.6
Expectorants and Cough Suppressants	2.9	4.7
Other Drugs	31.6	34.2

TABLE 27
TUBERCULOSIS
NUMBER OF ALLOWANCES, NOTIFICATIONS AND MORTALITY—1952 TO 1963

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

TABLE 28
TUBERCULOSIS
NUMBER OF ALLOWANCES, NOTIFICATIONS AND MORTALITY—BY STATES—
YEAR ENDED 31st DECEMBER, 1963

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	668	1,295	1,364	33.4	169	185	4.5
Victoria	388	822	939	30.5	101	109	3.5
Queensland	424	893	929	59.1	77	80	5.1
South Australia	150	197	228	22.3	37	38	3.7
West Australia	77	208	236	30.1	13	13	1.7
Tasmania	89	97	110	29.4	12	14	3.7
Aust. Capital Terr.	*	8	14	18.0	1	1	1.3
Northern Territory	†	54	63	137.5	..	..	..
Commonwealth	1,796	3,574	3,883	35.2	410	440	4.0

* Included in New South Wales figures.

† Included in South Australia figures.

TABLE 29
TUBERCULOSIS
ANNUAL EXPENDITURE—1949-50 TO 1963-64

Year Ended 30th June								Capital Reimburse- ments to States	Maintenance Reimburse- ments to States	Allowances Paid to Sufferers	Total
								£	£	£	£
1950								236,179	346,142	..	582,321
1951								404,600	943,554	1,344,891	2,693,045
1952								645,131	2,114,291	1,777,620	4,537,042
1953								1,163,439	2,982,321	1,907,945	6,053,705
1954								1,295,476	3,738,885	1,876,582	6,910,943
1955								1,710,812	3,800,578	1,904,467	7,415,857
1956								1,747,722	4,050,581	1,689,774	7,488,077
1957								2,378,647	4,805,003	1,460,650	8,644,300
1958								2,128,462	4,569,215	1,254,693	7,952,370
1959								1,411,062	4,844,106	1,062,609	7,317,777
1960								729,236	4,376,256	1,025,473	6,130,965
1961								388,018	4,236,687	946,446	5,571,151
1962								378,095	4,400,034	872,853	5,650,982
1963								491,993	4,965,910	803,516	6,261,419
1964								299,242	5,334,725	796,667	6,430,634
Total								15,408,114	55,508,288	18,724,186	89,640,588

TABLE 30
TUBERCULOSIS
RESULTS OF MASS X-RAY SURVEYS—BY STATES—
YEAR ENDED 31st DECEMBER, 1963

State	Number Examined	Number Active T.B.	Rate per 1,000	No. In- active T.B.	Rate per 1,000	Suspect Active T.B. at 31.12.63	Rate per 1,000
New South Wales ..	990,943	282	0.28	6,387	6.44	103	0.10
Victoria	478,511	254	0.53	1,142	2.38	25	0.05
Queensland	251,848	222	0.88	1,677	6.65	1,924	7.64
South Australia ..	147,077	62	0.42	4,316	29.3	20	0.13
West Australia ..	89,769	49	0.54	—	—	—	—
Tasmania	120,687	31	0.25	27	0.22	—	—
Commonwealth ..	2,078,835	900	0.43	13,549	6.52	2,072	0.99

TABLE 31
PUBLIC HEALTH
NOTIFIABLE DISEASES IN THE STATES OF AUSTRALIA
1st JANUARY, 1963 TO 30th JUNE, 1964

A—Period 1st January, 1963 to 30th June, 1963

B—Period 1st July, 1963 to 30th June, 1964

DISEASE	N.S.W.		Vic.		Qld.		S.A.		W.A.		Tas.		A.C.T.		N.T.		Aust.	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Acute Rheumatism ..	12	31	21	34	45	78	5	—	6	16	8	32	1	—	3	3	101	194
Amoebiasis ..	*	*	7	7	15	35	—	1	3	1	—	—	—	—	—	2	25	46
Ancylostomiasis ..	6	327	2	—	18	29	—	1	—	—	—	—	—	—	120	257	146	614
Anthrax ..	*	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bilharziasis ..	*	*	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Breast Abscess ..	1	1	21	22	18	17	*	*	*	*	*	*	—	—	3	1	43	41
Brucellosis ..	4	21	26	38	4	10	—	2	3	7	—	1	—	3	—	—	37	82
Chorea (St. Vitus Dance) ..	—	2	1	1	—	—	—	—	—	1	*	*	—	—	—	—	1	4
Dengue ..	1	—	—	—	—	—	—	—	—	—	*	*	—	—	—	—	1	—
Diarrhoea, Infantile ..	90	423	184	471	114	321	3	37	4	47	—	2	8	6	93	112	496	1419
Diphtheria ..	11	29	131	110	—	4	—	—	—	6	—	—	—	—	—	1	142	150
Dysentery, Bacillary ..	*	*	39	19	27	39	39	207	41	113	7	8	—	—	89	158	242	544
Erythema Nodosum ..	*	*	7	15	—	—	—	3	—	1	*	*	2	—	—	—	9	19
Encephalitis ..	21	68	16	40	5	10	8	3	—	—	—	1	—	1	—	—	50	123
Filariasis ..	*	*	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—
Homologous S. Jaundice ..	*	*	—	—	*	*	—	—	—	—	*	*	—	—	—	—	—	—
Hydatid ..	*	*	7	24	1	—	—	—	—	—	8	16	—	5	1	—	17	45
Infective Hepatitis ..	1255	2784	1978	3313	579	1528	142	294	41	156	302	1002	8	20	26	116	4331	9213
Influenza ..	*	*	*	*	*	*	—	—	*	*	*	*	*	*	*	*	—	—
Lead Poisoning ..	*	*	*	*	2	4	—	2	—	1	*	*	—	—	—	—	2	7
Leprosy ..	—	—	—	2	4	7	—	—	4	9	—	—	—	1	29	54	37	73
Leptospirosis ..	6	15	—	—	63	80	—	1	8	10	*	*	—	—	—	—	77	106
Leukaemia ..	*	*	19	77	*	*	*	*	*	*	*	*	—	—	2	2	21	79
Malaria ..	*	*	7	19	25	44	—	—	21	11	—	1	1	1	—	4	54	80
Meningococcal Infection ..	8	50	22	33	66	81	5	1	1	4	10	15	1	1	—	—	113	185
Ophthalmia ..	*	*	*	*	*	*	—	2	31	5	—	—	—	3	—	—	31	10
Ornithosis ..	1	2	—	1	6	4	—	2	—	—	*	*	—	—	—	—	7	9
Paratyphoid ..	4	5	18	2	7	2	10	1	2	1	1	2	—	1	—	1	42	15
Poliomyelitis ..	10	8	12	21	3	—	7	1	2	3	—	1	—	—	—	—	34	34
Puerperal Fever ..	20	56	8	8	17	30	—	1	2	3	—	—	—	—	1	12	48	110
Q Fever ..	*	*	*	*	150	168	*	*	*	*	*	*	*	*	*	*	150	168
Rubella ..	*	*	631	1590	11	863	123	637	47	99	11	24	12	2	—	6	835	3221
Salmonella Infection ..	*	*	*	*	*	*	30	98	14	53	*	*	3	3	1	17	48	171
Scarlet Fever ..	122	444	335	657	15	77	68	222	19	42	18	148	3	7	—	1	580	1598
Staph Disease (Infantile) ..	18	598	12	20	4	5	*	*	*	*	*	*	*	*	*	*	34	623
Tetanus ..	*	*	2	8	15	21	—	—	6	6	—	—	—	—	—	—	23	35
Trachoma ..	*	*	—	1	*	*	1	76	39	289	*	*	—	—	11	108	51	474
Trichinosis ..	*	*	*	*	*	*	—	—	—	†1	*	*	—	—	—	—	—	1
Tuberculosis ..	521	1351	474	959	425	852	123	183	131	158	61	110	6	8	36	62	1777	3683
Typhoid Fever ..	8	6	3	3	1	1	1	6	2	5	—	—	—	1	—	1	15	23
Typhus—(flea, mite or tick borne)	—	—	—	—	3	14	—	—	—	2	—	1	—	—	—	—	3	17

* Not Notifiable

— No Cases

† Contracted outside the State (Singapore)

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

TABLE 32
PUBLIC HEALTH
POLIOMYELITIS—NUMBER OF CONFIRMED CASES—BY AGE GROUP—1963-64

Age Group													Number
0-1	..	..	..	..	..	..	..	..	..	..	..	..	1
1-4	..	..	..	..	..	..	..	..	..	..	..	..	13
5-9	..	..	..	..	..	..	..	..	..	..	..	..	3
10-14	..	..	..	..	..	..	..	..	..	..	..	..	2
15-19	..	..	..	..	..	..	..	..	..	..	..	..	—
20-24	..	..	..	..	..	..	..	..	..	..	..	..	—
25-29	..	..	..	..	..	..	..	..	..	..	..	..	1
30-34	..	..	..	..	..	..	..	..	..	..	..	..	1
35-39	..	..	..	..	..	..	..	..	..	..	..	..	—
40-49	..	..	..	..	..	..	..	..	..	..	..	..	2
50-59	..	..	..	..	..	..	..	..	..	..	..	..	1
60 and Over	..	..	..	..	..	..	..	..	..	..	..	..	—
Not Stated	..	..	..	..	..	..	..	..	..	..	..	..	1
TOTAL	..	..	..	..	..	..	..	..	..	..	..	..	25

TABLE 33
PUBLIC HEALTH
POLIOMYELITIS—NUMBER OF CONFIRMED CASES—BY SEX AND MONTH OF OCCURRENCE—1963-64

Month													Male	Female	Total
July	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
August	..	..	..	..	..	..	..	..	..	..	..	..	3	3	6
September	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
October	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
November	..	..	..	..	..	..	..	..	..	..	..	..	3	1	4
December	..	..	..	..	..	..	..	..	..	..	..	..	—	1	1
January	..	..	..	..	..	..	..	..	..	..	..	..	2	—	2
February	..	..	..	..	..	..	..	..	..	..	..	..	2	—	2
March	..	..	..	..	..	..	..	..	..	..	..	..	1	—	1
April	..	..	..	..	..	..	..	..	..	..	..	..	—	—	—
May	..	..	..	..	..	..	..	..	..	..	..	..	1	—	1
June	..	..	..	..	..	..	..	..	..	..	..	..	—	—	—
TOTAL	..	..	..	..	..	..	..	..	..	..	..	..	16	9	25

TABLE 34
PUBLIC HEALTH
POLIOMYELITIS—NUMBER OF CONFIRMED CASES—BY STATES—1955-56 TO 1963-64

State	1955-56	1956-57	1957-58	1958-5	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales	263	82	21	18	17	8	367	5	2
Victoria	236	62	3	78	10	80	21	11	19
Queensland	106	36	3	3	4	19	157	..	..
South Australia	160	61	5	1	7	22	19	17	2
Western Australia	419	12	2	1	6	..	6	2	2
Tasmania	21	37	3	1	2	46	..	..	..
Australian Capital Territory	11	..	..	..	..	..	..	..	..
Northern Territory	4	..	..	..	14	3	2	..	..
Commonwealth	1,220	290	37	102	60	178	572	35	25

TABLE 35
PUBLIC HEALTH
INFECTIOUS HEPATITIS—CASES NOTIFIED—BY STATES—1959 TO 1963

State	1959	1960	1961	1962	1963*
New South Wales	3,183	4,924	6,025	3,358	2,822
Victoria	1,452	2,385	3,515	3,533	3,840
Queensland	762	719	1,022	885	1,433
South Australia	749	1,121	1,406	504	293
Western Australia	142	256	262	117	145
Australian Capital Territory ..	16	88	281	88	20
Northern Territory	53	23	61	100	104
Tasmania	21	44	304	630	856
Commonwealth	6,378	9,560	12,876	9,215	9,513

* Figures in this column are subject to confirmation.

TABLE 36
QUARANTINE
VESSELS BOARDED AND CLEARED—BY STATES—1963-64.

State	Surface			Air		
	Vessels	Crew	Passengers	Vessels	Crew	Passengers
New South Wales	920	58,347	36,962	1,126	12,424	74,174
Victoria	474	25,832	14,995	32	276	206
Queensland	661	31,967	5,993	258	2,330	7,189
South Australia	271	16,186	11,513	..	..	..
West Australia	753	69,482	127,148	308	3,552	21,156
Tasmania	44	2,296	50	..	..	..
Northern Territory	61	3,242	145	896	7,723	47,853
Commonwealth	3,184	207,352	196,806	2,620	26,305	150,578

TABLE 37
QUARANTINE
INFECTIOUS DISEASES ON OVERSEAS VESSELS ARRIVING IN AUSTRALIA—1963-64

Disease	No. of Cases
Chickenpox	86
Enteritis	1
Glandular Fever	2
Infectious Hepatitis	10
Measles	196
Mumps	54
Paratyphoid	1
Pulmonary Tuberculosis	1
Pneumonia	1
Rubella	12
Scarlet Fever	1
Syphilis	1
Whooping Cough	2
Total	368

TABLE 38
TERRITORY HEALTH
HEALTH SERVICES PROVIDED AT MAIN NORTHERN TERRITORY HOSPITALS—1963-64

	Darwin	Alice Springs	Tennant Creek	Katherine	Batchelor
Total Number of Daily Occupied Beds	87,944	36,344	5,602	8,219	..
Total Number of Admissions	6,226	2,535	822	785	..
Average Number of Daily Patients	241	99	15.5	22.5	..
Total Number of Births	683	246	62	76	..
Total Number of Deaths in Hospital	79	90	11	23	..
Total Number of P.M. Examinations	66	61	12	7	..
Total Number of Major Operations	707	171	..	..	..
Total Number of Minor Operations	2,085	507	89	177	..
Total Number of Outpatients Treated	80,578*	20,911	9,902	6,472	1,106† 4,045‡
Dispensaries—					
Prescriptions Dispensed	33,823	13,406	3,964	8,162	..
Daily Average of Prescriptions Dispensed per Working Day	136	53	15.2	30.7	..
X-Ray Department—					
Number of Examinations (O.P.)	6,948	2,680	530	289	..
Number of Exposures	14,469	4,047	886	447	..
Ambulance Services—					
Number of Trips	2,339	610	98	130	..
Number of Patients Carried	3,150	714	127	153	..
Number of Miles Travelled	29,373	21,304	16,416	14,191	..
Physiotherapy Department—					
Number of Patients	670	347	..	..	..
Number of Treatments	3,281	1,198	..	..	..

* Including Bagot. † Doctor's Clinic. ‡ Daily Clinic.

TABLE 39
TERRITORY HEALTH
DENTAL SERVICES PROVIDED IN THE NORTHERN TERRITORY—1963-64

	Darwin Dental Clinic	Aerial Mobile (operating from Darwin)	Overland Mobile (operating from Darwin)	Alice Springs Clinic (including Mobiles and Schools)
Examinations	6,964	5,792	2,820	3,450
Extractions	4,899	1,774	840	2,707
Porcelain fillings	579	} 1,070 {	179	393
Amalgam fillings	4,949		802	2,137
Inlays	140	..	26	61
Crowns	39	..	2	16
Bridges	16	..	1	3
Dressings	1,186	..	32	163
X-rays	605	..	21	360
G.A.'s hospital	153	..	..	66
G.A.'s outpatients	7	..	..	..
Scale and clean	312	..	105	142
Pyorrhea .. .. .	..	..	1	3
Injective gingivitis	20	..	2	7
Orthodontic	49	..	1	127
Oral surgery	128	..	8	41
Jaw fracture	25	..	2	5
Other treatment	2,588	159	449	1,214
Dentures, full	303	..	66	199
Dentures, part	209	..	44	83
Denture, repair	572	..	105	311
Denture, remodel	52	..	12	38
Alveolar osteitis .. .. .	..	..	2	1
Root treatment	24	..	..	16
Total	23,819	8,795	5,520	11,543
Totals for 1962-63	24,623	6,919	6,838	8,900

TABLE 40
NATIONAL FITNESS
ALLOCATION OF ANNUAL GRANT TO STATE NATIONAL FITNESS COUNCILS—1963-64

Item	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Totals
	£	£	£	£	£	£	£
Wages, salaries, allowances, overtime and services not otherwise provided for	3,050	3,050	2,615	2,615	2,615	2,615	16,560
Services to associated groups including leader training	3,490	3,490	2,615	2,615	2,615	2,615	17,440
Grants to voluntary youth organizations	870	870	768	768	768	448	4,492
Subsidies to local national fitness committees	1,310	1,310	1,142	1,142	1,142	675	6,721
Services to sports organizations	423	423	260	260	260	175	1,801
Development of camps and hostels	3,490	3,490	2,615	2,615	2,615	2,615	17,440
Totals	12,633	12,633	10,015	10,015	10,015	9,143	64,454

TABLE 41
NATIONAL FITNESS
ALLOCATION OF ANNUAL GRANT TO STATE EDUCATION DEPARTMENTS—1963-64

Item	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Totals
	£	£	£	£	£	£	£
Training of general teachers in physical education—							
(a) Short courses	500	500	500	300	300	300	2,400
(b) Residential courses	500	500	500	500	500	500	3,000
Provision of bursaries to enable selected teachers to undertake university courses.. .. .	..	..	..	600	600	600	1,800
Development of health and physical education in practising schools and teachers colleges— ..							
(a) Equipment	300	300	300	200	200	200	1,500
(b) Camps for teachers college students	250	250	250	150	150	150	1,200
Publications, films, records, &c.	484	484	483	483	483	483	2,900
Development of school camping and hostelling— ..							
(a) Equipment of camps and schools	500	500	500	400	400	400	2,700
(b) School camping and hostelling	300	300	300	200	200	200	1,500
Totals	2,834	2,834	2,833	2,833	2,833	2,833	17,000

TABLE 42
COMMONWEALTH HEALTH LABORATORIES
NUMBER OF PATHOLOGICAL EXAMINATIONS AND LABORATORY TESTS PERFORMED
AND NUMBER OF PATIENTS—1963-64

Health Laboratory	No. of Tests	No. of Patients
Albury	67,474	17,942
Alice Springs	17,223	8,064
Bendigo	95,354	20,178
Cairns	159,974	35,692
Canberra	273,889	76,469
Darwin	89,640	28,886
Hobart	67,396	19,876
Kalgoorlie	40,017	11,563
Launceston	46,668	14,889
Lismore	117,007	27,867
Port Pirie	15,487	5,901
Rockhampton	142,057	44,272
Tamworth	82,165	23,555
Toowoomba	161,447	26,080
Townsville	242,513	42,036
Totals	1,618,311	403,270

TABLE 43
COMMONWEALTH ACOUSTIC LABORATORIES
CASES EXAMINED—1963-64

New Cases Attending Laboratories	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Australia
Repatriation	1,484	451	566	323	313	62	3,199
Children	1,385	696	967	691	399	263	4,401
Miscellaneous	112	203	261	104	104	128	912
Social Services	7	3	1	1	10	2	24
Army	135	2	68	10	1	1	217
R.A.A.F.	4	2	—	10	7	73	96
Navy	82	7	—	1	9	203	302
Directors of Health	77	40	16	31	7	4	175
C'wealth Compensation	43	117	8	6	5	2	181
State Compensation	14	34	284	—	7	—	339
TOTAL	3,343	1,555	2,171	1,177	862	738	9,846
Civil Aviation Referrals	264	294	88	72	82	4	804

TABLE 44
COMMONWEALTH ACOUSTIC LABORATORIES
CALAID HEARING AIDS FITTED—1963-64

Calais Fitted							N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Australia
Repatriation	..	..	..	..	..	..	467	433	216	182	141	48	1,487
Children	..	..	..	..	..	..	238	174	97	90	61	17	677
Health	..	..	..	..	..	..	5	5	—	—	—	1	11
Adolescents	..	..	..	..	..	..	12	4	4	7	5	—	32
Social Services	..	..	..	..	..	..	1	5	1	—	—	—	7
Army	..	..	..	..	..	..	—	—	1	—	—	—	1
R.A.A.F.	..	..	..	..	..	..	1	—	—	—	—	—	1
Navy	..	..	..	..	..	..	—	—	—	—	—	—	—
Total	..	..	..	..	..	..	724	621	319	279	207	66	2,216

TABLE 45
COMMONWEALTH ACOUSTIC LABORATORIES
CALAID HEARING AIDS MAINTAINED—1963-64

Calais Maintained							N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Australia
Repatriation	..	..	..	..	..	..	3,759	3,471	1,457	1,306	1,232	369	11,594
Health	..	..	..	..	..	..	923	514	376	310	208	85	2,416
Children	..	..	..	..	..	..	1,515	1,352	661	564	353	184	4,629
Social Services	..	..	..	..	..	..	8	9	3	1	3	3	27
Army	..	..	..	..	..	..	21	7	9	3	2	—	42
R.A.A.F.	..	..	..	..	..	..	3	4	1	2	1	—	11
Navy	..	..	..	..	..	..	3	2	—	—	—	—	5
Total	..	..	..	..	..	..	6,232	5,359	2,507	2,186	1,799	641	18,724

TABLE 46
COMMONWEALTH GRANTS
FREE MILK FOR SCHOOL CHILDREN—BY STATES—1963-64

State										No. of Children*	Payments
										As at 30th June, 1964	1963-64
										000's	£
New South Wales	..	..	..	..	..	..	..	..	..	593	1,329,188
Victoria	..	..	..	..	..	..	..	..	..	442	1,091,658
Queensland	..	..	..	..	..	..	..	..	..	248	558,330
South Australia	..	..	..	..	..	..	..	..	..	195	352,708
Western Australia	..	..	..	..	..	..	..	..	..	129	307,721
Tasmania	..	..	..	..	..	..	..	..	..	59	195,643
Australian Capital Territory	..	..	..	..	..	..	..	..	..	13	27,305
Northern Territory	..	..	..	..	..	..	..	..	..	8	25,052
Total	..	..	..	..	..	..	..	..	..	1,687	3,887,605

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

TABLE 47
COMMONWEALTH GRANTS
FREE MILK FOR SCHOOL CHILDREN—1950-51 TO 1963-64

Year	Commonwealth Grant	Year	Commonwealth Grant
	£		£
1950-51	35,775	1957-58	2,755,602
1951-52	814,806	1958-59	3,068,636
1952-53	1,521,394	1959-60	3,359,369
1953-54	1,999,312	1960-61	3,560,124
1954-55	2,237,425	1961-62	3,741,638
1955-56	2,405,349	1962-63	3,727,154
1956-57	2,607,040	1963-64	3,887,605

TABLE 48
COMMONWEALTH GRANTS
MENTAL HEALTH INSTITUTIONS—BY STATES—1955-56 TO 1963-64

	N.S.W.	Victoria	Qld.	South Australia	Western Australia	Tasmania	C/wealth.
	£	£	£	£	£	£	£
1955-56							
Commonwealth Grant	208,763	445,746	66,588	12,245	9,985	29,822	773,149
Net State Expenditure	417,527	891,493	133,176	24,490	19,968	59,645	1,546,299
Total Expenditure	626,290	1,337,239	199,764	36,735	29,953	89,467	2,319,448
1956-57							
Commonwealth Grant	383,555	527,213	88,068	128,467	51,855	68,974	1,248,132
Net State Expenditure	767,111	1,054,426	176,135	256,933	103,710	137,949	2,496,264
Total Expenditure	1,150,666	1,581,639	264,203	385,400	155,565	206,923	3,744,396
1957-58							
Commonwealth Grant	324,152	545,365	114,103	152,159	29,236	91,384	1,256,399
Net State Expenditure	648,303	1,090,730	228,208	304,317	58,473	182,767	2,512,798
Total Expenditure	972,455	1,636,095	342,311	456,476	87,709	274,151	3,769,197
1958-59							
Commonwealth Grant	196,831	619,621	118,512	122,328	17,210	45,892	1,120,394
Net State Expenditure	393,661	1,239,241	237,024	244,655	34,421	91,785	2,240,787
Total Expenditure	590,492	1,858,862	355,536	366,983	51,631	137,677	3,361,181
1959-60							
Commonwealth Grant	359,060	518,235	74,613	91,770	36,799	66,995	1,147,472
Net State Expenditure	718,121	1,036,469	149,226	183,540	73,598	133,989	2,294,943
Total Expenditure	1,077,181	1,554,704	223,839	275,310	110,397	200,984	3,442,415
1960-61							
Commonwealth Grant	432,881	83,820	97,642	45,691	15,276	51,933	727,243
Net State Expenditure	865,761	167,641	195,285	91,382	30,551	103,865	1,454,485
Total Expenditure	1,298,642	251,461	292,927	137,073	45,827	155,798	2,181,728
1961-62							
Commonwealth Grant	648,637	..	70,718	27,839	77,022	..	824,216
Net State Expenditure	1,297,275	..	141,433	55,679	154,045	..	1,648,432
Total Expenditure	1,945,912	..	212,151	83,518	231,067	..	2,472,648
1962-63							
Commonwealth Grant	647,562	..	37,593	52,112	57,894	..	795,161
Net State Expenditure	1,295,123	..	75,187	104,224	115,789	..	1,590,323
Total Expenditure	1,942,685	..	112,780	156,336	173,683	..	2,385,484
1963-64							
Commonwealth Grant	491,089	..	54,083	86,293	165,792	..	797,257
Net State Expenditure	982,179	..	108,165	172,587	331,584	..	1,594,515
Total Expenditure	1,473,268	..	162,248	258,880	497,376	..	2,391,772
TOTAL							
Commonwealth Grant	3,692,530	2,740,000	721,920	718,904	461,069	355,000	8,689,423
Net State Expenditure	7,385,061	5,480,000	1,443,839	1,437,807	922,139	710,000	17,378,846
Total Expenditure	11,077,591	8,220,000	2,165,759	2,156,711	1,383,208	1,065,000	26,068,269

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