

Annual report of the Department of Public Health and the Central Board of Health / South Australia.

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SOUTH AUSTRALIA

ANNUAL REPORT

OF THE

Department of Public Health

AND THE

Central Board of Health

FOR THE

Year ended 31st December, 1965

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THE PUBLIC HEALTH

Annual Report of the Department of Public Health and the Central Board of Health to the Minister of Health (Hon. Albert James Shard, M.L.C.)

SIR—We have the honour to submit the report for the Department of Public Health and the Central Board of Health for the year ended 31st December, 1965. The report is divided into the following sections :—

1. Staff and administration.
2. Public Health Branch.
3. School Health Branch.
4. Poliomyelitis Branch.
5. Tuberculosis Branch.
6. Summary and comments.

Sections 2, 3, 4 and 5 deal with the Branches of the Department and have been prepared by the respective officers in charge.

1. STAFF AND ADMINISTRATION

Personnel of the Board.—During the year the members of the Board were :—

Chairman—Philip Scott Woodruff, M.D., B.S., D.T.M. & H., F.R.A.C.P.

Members appointed by the Governor—

Sir John Burton Cleland, C.B.E., M.D., Ch.M., F.R.A.C.P.

George Hugh McQueen, M.D., B.S., D.P.H., D.T.M., F.R.S.H., F.R.S.T.M. & H.

The undermentioned members were elected following nominations in accordance with section 15 of the Health Act, 1935-1963—

Member elected by the metropolitan local boards—

Charles John Henry Williamson, J.P.

Member elected by other local boards—

Alfred Bertram Cox, J.P., F.A.S.A., F.C.I.S.

Secretary—

Murray Edwin Stephens Bray (to June 1965).

Robert William Laver, A.U.A. (appointed August 1965).

Staff of the Department.—As at 31st December, 1965, the principal staff consisted of the Director-General of Public Health (Dr. P. S. Woodruff), the Principal Medical Officer (Public Health) (Dr. G. H. McQueen), the Principal Medical Officer for Schools (Dr. C. O. Fuller), the Principal Medical Officer (Poliomyelitis) (Dr. B. H. Jeanes), the Director of Tuberculosis (Dr. T. G. Paxon), and the Secretary (Mr. R. W. Laver). Mr. Bray, who had been Secretary of the Department since 1960, was appointed Secretary, Minister of Local Government and Roads, in June. Throughout the year there was an average of 201 officers and employees.

"Good Health"—Distribution of these booklets to local boards, medical officers and other interested persons continued this year. Subjects dealt with were :—

The problem of noise ; conservation of hearing in industry—public health approach ; the reduction of industrial noise; the Deafness Guidance Clinic; the use and disposal of radioactive materials; metropolitan Adelaide and lessons from the United States.

The National Health and Medical Research Council and Committees.—The 59th session at Sydney and the 60th session at Canberra were both attended by Dr. P. S. Woodruff as State representative on the Council and the Public Health Advisory Committee.

Dr. C. H. McQueen, Principal Medical Officer (Public Health), attended the Occupational Health Committee and Radiation Technical Sub-Committee meetings and Mr. R. C. McCarthy, Pharmaceutical Inspector, attended the meetings of the Food Standards Committee and Poison Schedules Sub-Committee.

Maternal Mortality Committee.—This Committee met on three occasions during 1965 and considered 11 maternal deaths which occurred during the year.

Anaesthetics Mortality Committee.—Following the success achieved by the Maternal Mortality Committee, the Honourable the Minister approved of the formation of a Committee to investigate anaesthetic deaths. This Committee is widely representative of anaesthetists, general practitioners, surgeons, public health authorities and the University. The members of the Committee are :—

Dr. P. S. Woodruff—Director General of Public Health.

Dr. M. J. W. Sando—Nominated by the South Australian State Committee, Faculty of Anaesthetists, Royal Australasian College of Surgeons.

- Dr. M. C. Newland—Nominated by the Australian Society of Anaesthetists, South Australian Section.
 Dr. R. Steele—Nominated by the South Australian Branch of the Australian Medical Association.
 Dr. F. C. Archibald—Nominated by the Australian College of General Practitioners, South Australian Faculty.
 Dr. P. R. Hodge—Nominated by the University of Adelaide, Department of Pathology.
 Dr. S. L. Skinner—Nominated by the University of Adelaide, Department of Human Physiology and Pharmacology.
 Sir Ivan Jose—Nominated by the State Committee of the Royal Australasian College of Surgeons.

The first meeting of the Committee was held in December, 1965, and a recommendation has been made for an amendment to the Health Act to preserve the confidential nature of information supplied.

Advisory Council on Health and Medical Services.—This Council is constituted under section 4 of the Health and Medical Services Act, 1949, to investigate and report on matters referred by the Honourable the Minister.

Late in 1964, the Honourable the Minister referred for the consideration of the Council the matter of the maintenance of standards in rest homes and the care of people needing such places. Eight meetings were held during the year and a considerable volume of evidence was taken from interested individuals and representatives of organizations concerned with the care of aged and infirm persons. A full report and summary of evidence was submitted to the Minister late in the year.

Clean Air Committee.—The functions of the Committee, which was constituted under the amendment to the Health Act of 1963, are to carry out investigations into problems of air pollution and air impurities and report to the Minister thereon and to advise and make recommendations to the Minister as to the making and contents of regulations on a variety of matters set out in the Act.

To date the Committee has considered a number of matters, and visits of inspection have been made to several industrial premises. Several members of the Committee attended a Clean Air Conference held in Sydney in August 1965 under the joint sponsorship of the New South Wales Department of Public Health and the University of New South Wales, with active support from Industry.

The Committee is at present engaged on drafting regulations for submissions to the Minister.

Bread Committee.—Following representations made by industry and trade organizations on difficulties concerning administration of bread legislation, the Honourable the Minister of Health approved a Committee to consider ways and means of improving the control of bread in this State. The aims of the Committee are to examine existing legislation dealing with bread, to prepare a full report on these and make recommendations for alterations in legislation and to suggest improvements in conditions under which bread is handled in South Australia.

Legislation by which bread is now controlled in this State is as follows :—

- The Bread Act.
- The Bakehouses Registration Act.
- The Food and Drugs Act.
- The Local Government Act.

Members of the Committee are—

- A Medical Officer nominated by the Director General of Public Health—Dr. G. H. McQueen (Chairman).
- The Senior Cereal Chemist, Department of Chemistry—Mr. F. E. Acton.
- The Chief Inspector, Department of Public Health—Mr. D. J. Wilson.
- A representative of the Bread Manufacturing Association—Mr. G. B. Piper.
- A representative of the Bread Carters Union—Mr. H. H. Ross.
- A representative of the Bakers Union—Mr. W. N. Brogan.
- A representative of local authorities—Mr. C. W. Anderson.
- The Secretary of the Food and Drugs Advisory Committee—Mr. R. C. McCarthy.
- A representative of the Metropolitan County Board—Mr. A. L. Jamieson.

The inaugural meeting of the Committee was held in December.

2. PUBLIC HEALTH BRANCH

PRINCIPAL MEDICAL OFFICER—Dr. G. H. McQueen, M.B., B.S., D.P.H., D.T.M., F.R.S.H., F.R.S.T.M. & H.

This report of the Public Health Branch consists of the following sections :—

- (a) Staff ;
- (b) Legislation ;
- (c) Vital Statistics ;
- (d) Control of Infectious Diseases ;
- (e) Control of Venereal Diseases ;
- (f) Supervision of Environmental Health ;
- (g) Supervision of Food and Drugs ;
- (h) Supervision of Occupational Health and Control of Air Pollution ;
- (i) Report of the Medical Officer for Gaols and Prisons ;
- (j) Health Education.

(a) STAFF

The professional and sub-professional staff of the Public Health Branch of the Department of Public Health at the end of 1965 consisted of :—

The Principal Medical Officer.
 Medical Officer (Occupational Health).
 Three District Medical Officers.
 Two Part-time District Medical Officers.
 Medical Officer for Gaols and Prisons.
 Two Scientific Officers.
 Two Pharmaceutical Inspectors.
 One Biophysicist.
 Chief Inspector.
 Assistant Chief Inspector.
 Three Senior Inspectors.
 Four Resident District Inspectors.
 Seventeen Inspectors.
 Two Inspector's Assistants.
 Thirteen Part-time Inspectors.
 One Public Health Nurse.
 One Part-time Nurse.
 One Drafting Assistant.

Increased demands for departmental services by local boards of health and the public generally necessitated revision of the approved staff establishment of the Branch. A number of new positions were created in the Inspection Section and some were reclassified. Work of that Section was divided into six major subsections. The original position of Senior Inspector was upgraded to Assistant Chief Inspector, and three new positions of Senior Inspector were created to supervise the work of the subsections, as follows :—

- (a) environmental health and food supervision ;
- (b) occupational health and air pollution ;
- (c) septic tank systems and common drains.

Resident District Inspectors will be stationed at Port Pirie, Loxton and Mount Gambier. A second Inspector will be stationed at Whyalla, where there is already a District Inspector.

Dr. K. J. Wilson, who was in charge of the Occupational Health Section, was promoted to the new position of Medical Officer, Occupational Health.

Dr. A. G. Sweetapple, formerly of South Africa, was appointed as the second Medical Officer for Gaols and Prisons in April, 1965, but after a short illness died on 16th September, 1965. He has rendered faithful service during his short stay.

During the year, Dr. Z. Seglenieks, one of the District Medical Officers, completed the course and passed the required examination for the Diploma of Public Health at the School of Public Health and Tropical Medicine, University of Sydney. On his return he was assigned to the supervision of the South-eastern and Upper Murray districts of the State.

As at the end of the year under review, vacancies existed for one Medical Officer for Aborigines, one Medical Officer for Gaols and Prisons, six Inspectors, and two Inspector's Assistants.

(b) LEGISLATION

Health Act and Health Regulations.—No amendment was made to the Health Act.

Health Regulation 131, paragraph 15, which required the provision of mortuaries at private hospitals and maternity homes, was deleted and a new paragraph inserted which requires every private hospital and maternity home to be provided with a separate and suitable place or room for holding and preparing the bodies of deceased persons and still born infants. Under the same paragraph the Central Board may require any private hospital or maternity home to have a mortuary of a prescribed standard.

New Health Regulation 80A requires provision of temporary privy accommodation of a prescribed type at every building site, and at places where persons are temporarily employed.

In November, 1965, Gonorrhoea and Syphilis were proclaimed notifiable diseases under the Health Act.

Food and Drugs Act Regulations.—No amendments or additions were made.

Other Acts and Regulations.—Section 13 of the Noxious Trades Act was amended to give some further control of nuisances associated with licensed noxious trades, particularly those not situated in the Noxious Trades Area.

(c) VITAL STATISTICS

Changes in population of the State during 1965.—The following particulars for 1965, obtained from the Deputy Commonwealth Statistician, are included in this report to show general movement in the composition of the State's population, and for purposes of subsequent comparison between this and the incidence of diseases reported during the year. Some figures are subject to minor revision. Details for 1964 are shown in parenthesis.

Population.—The mean population for the State in 1965 was 1,053,425 (1,032,021).

Births.—The number of births registered during 1965 totalled 20,891 (20,866).

The ratio of male births to female births, expressed as the masculinity ratio, usually remains constant over a number of years. In recent years it has varied widely. It fell in 1959 to the unusually low figure of 102.77, the lowest recorded since 1936 when it was 102.43. The figure of 106.58 for 1965 is higher than the average ratio of 105.2 for the previous 10 years, but is 1.73 lower than the ratio for 1964. In 1965, 10,778 male and 10,113 female births were registered.

Still Births.—During 1965, 256 (252) still births were registered. They are not included in births or deaths figures.

Deaths Registered.—A total of 8,788 deaths were recorded during 1965, 118 less than the record high number of 8,906 in the previous year. The death rate of 8.34 was 0.29 lower than that of the previous year but higher than in each of the years 1960 to 1963, the lowest being 8.06 in 1961.

Infantile Mortality.—Infant deaths registered in 1965 totalled 385 (397). The resultant infant mortality rate was 18.43; the lowest on record, the previous lowest being 18.67 in 1963.

There were 263 (277) deaths of children under one month, and 122 (120) deaths of children aged from one month to one year.

The main causes of Infant Deaths from 1961 to 1965 are shown in Appendix 1.

Marriages.—A record number of 8,680 (7,765) marriages were registered in 1965. The rate per 1,000 of the mean population in 1965 was 8.24 (7.53). The previous highest number and rate were 8,129 and 13.34 respectively in 1942. The average age of marriage for bachelors was 24.87 (25.16) years, and for spinsters 21.83 (22.01) years. During the nine years to 1964 there has been a downward trend in the average age at marriage of single persons.

Summary.—Appendix 2 shows the causes for movement in the composition of the State's population. The rates of registered births, deaths and marriages are per 1,000 of the mean population and the infantile death rates are per 1,000 live births.

(d) CONTROL OF INFECTIOUS DISEASES

Statistics.—Infectious and notifiable diseases in the Second and Third Schedules of the Health Act, and tuberculosis, are notified to local boards of health and the Central Board of Health. Tuberculosis is notified to the Central Board of Health in the first place.

Those notified in the years 1963, 1964 and 1965 are shown in Appendix 3.

The most notable increases were in the reported incidence of bacillary dysentery—178 (73), and infective hepatitis—414 (289). Downward trends in the number of notifications occurred in pulmonary tuberculosis—126 (147), and scarlet fever—127 (202).

Infective Hepatitis.—After rubella, this disease still continues to be the second most frequently reported disease in South Australia. Its reported incidence has taken a sharp upward swing since the lowest figure (289) in 1964. The quarterly figures of the notified incidence do not reflect its usual seasonal pattern (higher incidence in warmer months), because of the higher figure notified during the second quarter; this, however, can be explained by the fact that most of the notifications were received during the first half of the second quarter, and also that reports of cases occurring during the warm months were not received until much later. Of the total of 414 cases notified, 210 occurred in the metropolitan area and 204 outside it. Two deaths occurred due to infective hepatitis; one was a 46-year-old man, normally resident in a country town, the other a 6-month-old child living in the metropolitan area.

Comparative figures for the years from 1958 to 1965 are shown in Appendix 4.

Typhoid Fever.—In 1965, only one case of typhoid fever was diagnosed and reported. This occurred in a 15-year-old schoolgirl. All close family contacts were investigated, but tests were all negative. The infection was probably contracted from the patient's grandmother who had come from Yugoslavia early in 1964. Unfortunately this could not be confirmed as the grandmother had returned to Europe in December 1964, before the girl was taken ill. The Consul-General of Yugoslavia was notified of the suspicion that the girl's grandmother was the probable source of infection. The strain of *Salmonella typhi* isolated from this case was reported to be "untypable".

Paratyphoid Fever.—Two cases of paratyphoid fever and one *Salmonella paratyphi* B carrier were notified during 1965. One case was diagnosed on serological evidence only; routine agglutination tests gave negative results on admission to the Northfield Wards of the Royal Adelaide Hospital, but three subsequent tests were positive for *Salmonella paratyphi* A; examination of faecal specimens gave negative results.

The other case was an 8-month-old child who was admitted to the Northfield Infectious Diseases Hospital suffering from a *Salmonella paratyphi* B gastroenteritis. The investigation of close family contacts led to the discovery of the source of the infant's infection; his grandmother was found to be an excretor of *Salmonella paratyphi* B. She failed to respond to medical treatment and continued to excrete bacilli even after the removal of her gall bladder. She was placed under the surveillance of the Local Board of Health.

Trachoma.—Although notifications of this disease in 1963 and 1964 numbered 54 and 42 respectively, no cases were officially notified by the local boards in 1965.

Inquiries made regarding private patients attending Adelaide eye specialists have disclosed that there have been a considerable number of patients suffering from inclusion conjunctivitis, sometimes labelled as "trichconjunctivitis" (trachoma-inclusion conjunctivitis). As the latter name implies, the virus causing it is closely related to or identical with the virus of trachoma, but the clinical picture is different. It is a mild condition without serious complications. There is a difference of opinion between eye specialists whether or not "trichconjunctivitis" is a mild form of trachoma. This may, in part, explain the variation in the number of notifications received.

An independent survey carried out by the Institute of Medical and Veterinary Science at a school on the West Coast showed that 25 of 73 aboriginal children attending this school had an active clinical infection with the trachoma virus, proved by the presence of inclusion bodies in the scrapings.

Tetanus.—During the year, six cases of tetanus were notified, and three deaths due to tetanus were recorded by the Registrar of Births, Deaths and Marriages. Two of the patients who died at the Royal Adelaide Hospital

had contracted the infection through a minor injury—a nail penetrating the sole of the foot. The third death occurred in an elderly woman patient at the Mount Gambier Hospital; she was already suffering from diabetes and congestive cardiac failure.

Altogether, 10 cases of tetanus came to the notice of this Department—seven males and three females. Six of the males were outdoor workers, the other one died as the result of severe injuries received in a road accident, tetanus being a complicating factor. All three females (including the one who died) were over the age of 50. None of the cases had received full or, in most instances, any active immunization against tetanus.

Bacillary Dysentery.—A total of 178 cases were notified during the year. Of these 131 occurred in the metropolitan area; the rest were reported from other parts of the State. Nearly half of the cases were reported in the third quarter of the year.

An outbreak of bacillary dysentery occurred at a Migrant Hostel. Eleven cases were confirmed bacteriologically and notified; the infection was due to *Shigella sonnei*, and most of the victims were children. Outbreaks of *sonnei* dysentery occurred also at two institutions caring for children; six bacteriologically proven cases were at one and 14 at the other. There were also six cases of *Shigella sonnei* dysentery reported from a Royal Australian Air Force base, and 12 cases of dysentery occurred in a ward for mentally retarded children in a psychiatric institution.

Of 372 strains of *Shigella* organisms isolated by the laboratories at the Adelaide Children's Hospital and the Institute of Medical and Veterinary Science, 255 were *Shigella sonnei*, 109 were *Shigella flexneri* and eight were *Shigella schmitzii*.

Salmonella Infection.—Out of a total number 127 cases reported, 79 occurred in the metropolitan area, and 48 in the country areas.

Salmonella strains isolated by the laboratories at the Adelaide Children's Hospital and the Institute of Medical and Veterinary Science were as follows:—

	Number of Cases
<i>Salmonella typhi</i> murium	147
<i>Salmonella derby</i>	7
<i>Salmonella bovis</i> moribificans	4
<i>Salmonella</i> St. Paul	4
<i>Salmonella</i> bareilly	2
<i>Salmonella kottbus</i>	2
<i>Salmonella newport</i>	2
<i>Salmonella havana</i>	1
<i>Salmonella orientalis</i>	1
<i>Salmonella hindmarsh</i>	1
<i>Salmonella</i> Group B	1
<i>Salmonella eastbourne</i>	1
<i>Salmonella</i> unidentified	2
	175

Diphtheria.—A 15-year-old girl student was admitted to the Northfield Wards of the Royal Adelaide Hospital in August, suffering from a sore throat. She had migrated to Australia from North Africa with her parents some years ago, and there was no certainty about her having had any immunization against diphtheria in earlier life.

An organism with the characteristics of a toxigenic strain of *C. diphtheriae* was isolated from the throat of the patient. She was given the usual treatment for diphtheria and recovered without any complications.

Family and school contacts of the patients and her siblings were investigated by the Enfield Local Board of Health in conjunction with the Bacteriology Division of the Institute of Medical and Veterinary Science. A total of 181 throat and nasal swabs were examined, yielding positive results for *C. diphtheriae* mitis in four cases. Three of the healthy carriers came from one family, one being a child who attended an infant school with one of the patient's siblings. The other positive swab was obtained from another child attending the same school. Four swabs taken from members of the patient's family gave negative results.

Poliomyelitis.—No cases of poliomyelitis were reported during 1965. Details of activities and immunization programmes are given in the Report of the Poliomyelitis Branch.

Tuberculosis.—The incidence of tuberculosis and the number of deaths from this disease during 1965 in South Australia continued to decrease. Details are given in the Report of the Tuberculosis Branch.

Immunization.—Routine immunization was continued during the year by officers of the Branch in areas outside local government control, and by some local boards of health in their own areas.

The Department continued to encourage smallpox vaccination, particularly in those groups of people who would be exposed to smallpox if it were introduced into the State.

The following table shows the numbers of immunization courses given by local boards of health during 1965. Those given during 1964 are included for comparison.

Courses	Triple Antigen	Combined Diphtheria and Tetanus Toxoid	Tetanus Toxoid
Complete	5,385	1,365	1,869
Incomplete	3,985	1,367	1,091
Refresher	2,873	7,831	4,087
Totals for 1965	12,243	10,563	7,047
Totals for 1964	12,096	8,762	4,283

(e) CONTROL OF VENEREAL DISEASES

During 1965, \$7,265 (\$5,348) was spent by the Department of Public Health on investigation and treatment of gonorrhoea and syphilis. The major part of this amount was paid to the Institute of Medical and Veterinary Science for bacteriological examinations and serological tests was done for private practitioners.

Thirty (63) patients were investigated in the Department's Female Investigation Clinic at the Royal Adelaide Hospital. This number included 17 girls brought to the Clinic from Vaughan House. Smear examinations were positive for gonococci in four of these girls. Another 40 girls were seen at Vaughan House; all their smear tests were negative for gonococci but three had positive gonococcal complement fixation tests.

On 4th November, 1965, gonorrhoea and syphilis were proclaimed notifiable diseases and included in the Third Schedule of the Health Act. Four cases of gonorrhoea were reported up to the end of 1965.

(f) SUPERVISION OF ENVIRONMENTAL HEALTH

Public Health Inspection.—Supervision of the environmental health of the State and inspection of sanitation in local board areas is carried out mainly by inspectors of the Public Health Inspection Section of the Branch.

The Section's approved staff establishment at December, 1965, was 39, comprised of the Chief Inspector, the Assistant Chief Inspector, three Senior Inspectors, five Resident District Inspectors, 23 Inspectors, one Public Health Nurse, four Inspector's Assistants and one Drafting Assistant. At the end of 1965 the following positions were vacant—one Resident District Inspector, six Inspectors and two Inspectors' Assistants.

Resident District Inspectors will be stationed at Port Pirie, Loxton, Mount Gambier, and a second Inspector will be appointed to Whyalla.

The work of the section is now divided into the following six major subsections :—

Environmental Health.—Eight trips were made to Andamooka, Kingoonya, Pimba and Coober Pedy areas to supervise the sanitation of those isolated settlements.

Six thousand seven hundred acres of mangrove and samphire tidal swamp land on Torrens and Garden Islands and on the adjacent mainland to St. Kilda were aerially sprayed in December to control mosquitoes. This was the third successive year that the Section had organized the spraying.

During the summer months, inspections of potential fly breeding sites were made with local board inspectors in metropolitan and near metropolitan areas. Areas where organic material, animal manure and lawn clippings were stored and market gardens and poultry farms were inspected.

Temporary privy accommodation at construction sites had frequently been discovered to be unsatisfactory. Privy contents in many instances provided a potential site for fly breeding. Following the promulgation in September of regulations prescribing specific standards for these temporary privies, a marked improvement had occurred.

During January, a survey of 40 metropolitan and 15 country swimming pools was completed. It was found generally that pools without mechanical chlorination and continuous filtration did not meet the following accepted standards :—

- (1) 0.2 parts per million free residual chlorine ;
- (2) pH value of between 7.2 and 8.5 ;
- (3) water clarity such that a 6in diameter mat black disc placed on the bottom of the deepest point of the pool is visible under the water when viewed from a distance of 30ft. ;
- (4) less than 100 bacteria per 1 ml. growing on agar in two days at 37°C ; and
- (5) B. Coli and streptococci absent in 100 mls.

The persons concerned have been requested to remedy any defects found.

The Public Health Nurse has regularly visited licensed private hospitals and rest homes, and improvements are gradually being effected at these premises. Following the proclamation of gonorrhoea and syphilis as notifiable diseases in November, the work of the Inspection Section in locating contacts of reported cases for treatment or investigation has considerably increased.

Food.—Wine and spirits in 6,316 opened containers exposed for sale in 292 hotels and wine saloons were tested and 18 samples taken for analysis. Two licensees were prosecuted for incorrectly labelled liquors and 36 others were warned as a result of detection of minor breaches of the Regulations.

Imports of boneless buffalo meat from the Northern Territory were continued and a total amount of 49,200 lb. were brought into the Adelaide area.

It was again necessary during the autumn to grant permits under the Food and Drugs Regulations to add skim milk powder to milk to raise the solids-not-fat component of pasteurized milk to the legal minimum standard.

Local boards submitted 1,065 samples of foodstuffs, of which 111 samples failed to comply with the standards.

Air Pollution.—The Section has assisted in the collection of atmospheric deposited matter and in the sulphur dioxide and smoke sampling programme of the Department. Fifty-five complaints of excessive smoke, soot, dust or odour have been investigated since 1963.

Occupational Health.—Inspectors have participated in noise control activities by conducting audiometric screening tests, determining sound pressure levels in industry, and investigating complaints of excessive environmental noise. They have also conducted preliminary environmental inquiries following complaints of alleged hazardous conditions and assisted in the assessment of dental X-ray units and air sampling for lead in industrial environments.

Septic Tanks.—Three thousand eight hundred and ninety two plans of proposed systems were approved and 3,128 permits to use systems were issued. Eighty per cent of the systems were installed in the peripheral metropolitan area and are subjected to regular inspection.

Various methods are available to make the best use of the home site for the disposal of effluent, and home builders could make better use of these methods by considering them in early planning stages of building.

At the request of the State Planning Office, subdivision plans of 33 areas were assessed to determine if the lot sizes were adequate for continuous long term disposal of domestic waste waters within the confines of each allotment.

Common Drains.—Resulting from difficulties experienced in disposing of septic tank effluent in built-up areas, further use has been made of common drain schemes. These have been extensively installed in the Tea Tree Gully area and some have been constructed in the Reynella and Morphett Vale areas. Installation of a system to serve Maitland is 25 per cent complete. Planning is proceeding in a further seven country towns.

Report of District Inspector (Whyalla).—A brief summary of the activities of the Resident District Inspector at Whyalla are given in the following paragraphs :—

At the end of 1965, the estimated population of Whyalla was 21,500, representing an increase of 2,000 from the previous year.

Generally, duties were concentrated in areas directly controlled by the Central Board of Health, in Whyalla, and in local board areas on Eyre Peninsula.

During 1965, 1,858 inspections of septic tank systems were made and 495 systems were passed as satisfactory in Whyalla. These figures represent 819 more inspections and 139 more systems found to be satisfactory in 1965 than in 1964. The systems installed were mainly of the household type, with a number of large installations such as the Whyalla Hospital extensions, a motel, and a number of schools.

Regular visits were made to Port Augusta to inspect septic tank systems and give advice on aspects of public health to the local board there.

During the year, seven subdivisions were inspected in Port Lincoln, Lincoln, Murat Bay, Streaky Bay and Le Hunte Local Board areas. The sizes of building allotments were checked and reports prepared on soil structures and the suitability of each allotment for domestic waste water disposal. In some instances it was necessary to report that the areas of some proposed allotments were insufficient for the continuous disposal of domestic waste water and larger allotments were recommended.

A programme of immunizing residents of Iron Knob and Iron Baron was continued with satisfactory attendances being recorded in both areas. The programme is to be continued in 1966.

(g) SUPERVISION OF FOOD AND DRUGS

Food and Drugs Regulations.—No amendments to the Regulations were made during the year, but recommendations for amendments dealing with kangaroo meat, meat, poisons, advertising, labelling of dispensed medicines and drugs, were made.

Uniform standards.—Progress continued in the preparation and consideration of uniform food standards recommended by the National Health and Medical Research Council for adoption by the States. The standards at present awaiting adoption include those for butter, butter products, cheese, confectionery, soft drinks and type size in labelling.

Drugs.—Labelling of dispensed medicines with the names of drugs contained in the medicine, unless the prescriber directs otherwise, was considered and recommendations were made for an appropriate regulation.

Poisons.—A review of the Poisons Schedules was made and recommendations made for amendments to bring the schedules into line with the Uniform Schedules recommended by the National Health and Medical Research Council.

Poisons Reference Centres.—Following the publication of the National Poisons Register, discussions were held with the Commonwealth Department of Health and local hospitals regarding the establishment of Poisons Information Centres in this State. It was agreed in principle that such centres be set up and discussions are continuing.

Narcotic Drugs Single Convention.—The question of the adoption of the Single Convention on Narcotic Drugs has been considered at the request of the Commonwealth and a conference between all States and the Commonwealth was arranged for 1966.

Advertising of Proprietary Medicines.—Following the decision at a conference of Ministers of Health, a conference of State and Commonwealth officers was convened to discuss the need for uniform legislation to control the advertising of proprietary medicines. The South Australian representative was requested to prepare draft legislation and the work is proceeding.

(h) SUPERVISION OF OCCUPATIONAL HEALTH AND CONTROL OF AIR POLLUTION

Staff.—Supervision of occupational health and control of air pollution was carried out by officers of the Occupational Health and Air Pollution Section. The staff of this Section, under the Medical Officer (Occupational Health), included a Scientific Officer (Chemist), Scientific Officer (Physicist), Biophysicist, Senior Inspector, and two Inspectors.

General activities.—Throughout the year, the Section was available to give advice on all aspects of occupation and the working environment. Investigations were conducted into hazards arising from chemicals, dusts, excessive noise and radiation associated with both occupational and environmental exposures. Recommendations were made to remove any proven hazard. Interviews were held with individual workmen to discuss problems arising from their occupations, and with management regarding industrial medical services for employees, including pre-employment medical examinations, industrial nursing services, first-aid facilities, safety programmes and records. Close liaison was also maintained with the Department of Labour and Industry and with industrial safety organizations.

Investigations.—Work requiring extensive investigations, such as air sampling, instrumental measurements or research, originated from the following sources :—

Industrial Management.....	24
Labour Organizations—	7
Waterside Workers Federation (through the Australian Stevedoring Industry Authority)	11
	18
Department of Labour and Industry	10
Department of Labour and National Service	1
Other Government Departments.....	11
Local Boards of Health	4
Departmental Surveys	28
Reported Illnesses of Individuals	5
Reports for Parliament and other official organizations.....	5
Total	106

In most instances where corrective action had been found necessary to remove a health hazard or nuisance, management was co-operative in accepting and implementing recommendations. In no case was it found necessary to institute legal action to enforce Departmental requirements. Further, a steadily growing number of enquiries from management, architects and design engineers for advice at the planning stages of new industries or major constructional or process alterations, was an encouraging sign of increased awareness of the less obvious hazards, such as dust, noise, radiation and air pollution, sometimes associated with industry, both primary and secondary.

Safety in Industry.—In the promotion of safety in industry, good practices require acceptance and co-operation from both management and labour. Reports were frequently received of the reluctance of workmen to adopt safe practices recommended for their own protection. This applied especially to the use of protective clothing, such as goggles, ear protectors, gloves and face masks. In this regard there is a need for continued positive support to management, its safety officers and committees, and Union representatives, by co-ordination of the efforts of the various organizations concerned with promoting safety in industry.

Conferences and Visits of Occupational Health Interest.—Dr. K. J. Wilson attended the Industrial Safety Convention held at the University of Adelaide in November. The Convention was sponsored by the South Australian Government. With the theme of "Safety in Materials Handling", the Convention was well attended by a representative cross-section of employees and employers. The various sessions dealt with such items as the physical and human aspects of accidents and their prevention, medical and surgical aspects of injuries, accident statistics, and the part played by management and labour in the promotion of safety.

Mr. G. F. Sweetapple attended the interstate meeting of air pollution control officers held at the New South Wales Department of Public Health, Sydney. The subjects discussed included air pollution zoning, automobile emissions, catalytic afterburners, chimney heights, polycyclic hydrocarbon measurements, electrical precipitation, legislation and air pollution measurements.

Following this conference, Mr. Sweetapple attended the annual meeting of Scientific Officers engaged in the field of industrial hygiene. Matters discussed included sampling and analysis, standard concentrations of pollutants, testing of respiratory equipment, hazards from welding epoxy-resin substances, organic phosphates and lowered cholinesterase activity, nitroglycerin, ethylene glycol dinitrate and benzene air sampling and evaluation.

During the year, Mr. R. G. Stafford visited the New South Wales Department of Public Health, Occupational Health Division; the Commonwealth Acoustic Laboratories, Sydney; and the Australian Atomic Energy Commission Establishment at Lucas Heights. The problem of noise measurement and control in industry was discussed, together with the effects of excessive noise on hearing. A suitable means of evaluating the radiation safety of medical and dental X-ray machines was formulated with members of the Occupational Health Division and the problems of environmental radiation monitoring, sampling of radioactive dust, calculation of expected dose rates and necessary shielding for radioisotopes used in industrial applications were discussed, together with the problem of radioactive waste disposal. The radioactive waste disposal system at Lucas Heights was investigated during the visit.

Dr. G. H. McQueen attended two meetings of the Occupational Health Committee and the Radiation Technical Advisory Sub-Committee of the National Health and Medical Research Council.

Advisory Committee on Noise.—The Committee held nine meetings during 1965, considering aspects of noise in industry and its control, and submitted recommendations to the Director General of Public Health. Some of the main topics discussed were methods of approach to industries to initiate noise surveys, follow-up procedures to encourage the establishment of hearing conservation programmes, possible assessment of the results of hearing conservation programmes conducted by the Section by using automatic data processing facilities, and the role of compensation as an influence in the acceptance of the need for noise control.

Material for a pamphlet to be entitled "The Problem of Noise", designed to present the essentials of the causes and prevention of noise-induced hearing loss to industrial management, was prepared and published as an article in the Departmental journal "Good Health".

Radioactive Substances and Irradiating Apparatus Regulations.—The number of licences and registrations granted under the Regulations are shown in Appendix 5.

Film Badge Service.—Radiation workers within South Australia use the film badge service operated by the Commonwealth X-ray and Radium Laboratories as a means of personal radiation monitoring. The total number of organizations receiving film badges at the end of 1965 was 294, embracing about 1,400 persons, compared with 235 organizations covering 1,200 persons, at the end of 1964.

During the year several excessive doses were recorded during a one-month period and these were investigated by officers from the section. No person exceeded the 5 rem annual dosage permitted by the Radioactive Substances and Irradiating Apparatus Regulations.

New Equipment.—Major items of new equipment purchased by the Section during the year included—a Bruel and Kjaer Sound Level Meter, to be used for industrial noise surveys; two Telex TA16 Audiometers for carrying out audiometric tests in industrial hearing conservation programmes; a Bruel and Kjaer Pistonphone for calibrating the sound level meter and a Philips Portable Radiation Monitor, used in examining medical and dental X-ray machines together with industrial radioisotope installations. In addition to new glass sampling apparatus and gas detectors, an A.E.I. Tube Velometer and other air flow equipment was purchased. It is intended to use the latter for the measurement of air velocities in ducts and booths in industry as an aid to determining the efficiency of extraction systems.

Lead Investigations.—The survey of industries using lead, commenced in 1964, was extended by inspection of 27 paint companies. Air sampling for lead-in-air concentrations was carried out in the premises of four battery manufacturers, one lead melting industry and one solder manufacturer. Excessive levels were found to be associated with some processes, and recommendations were made to remove the hazards. Clinical tests were made on 17 workmen for evidence of excessive lead absorption. The results led to recommendations of temporary transfer of three men to less hazardous operations.

The Section furnished expert advice, based on air sampling, to a Conciliation and Arbitration Commissioner regarding necessary safety precautions in the handling of lead in a vehicle building works. Advice was also given to two companies on safe procedures to be adopted for employees engaged in lead burning.

Insecticide Survey.—The pilot survey into hazards associated with the use of organic phosphorus insecticides in the upper River Murray area, commenced in 1964, was completed. Periodic blood samples collected from contract sprayers and other individuals regularly handling pesticides were examined for cholinesterase activity. In general, the results did not support the need for continuing or expanding the scope of investigations in that form; however, the survey revealed many unsafe practices and its educational value was very useful.

During the year, the Section has prepared detailed codes of practice for other Government Departments, commercial firms, trade unions and individuals using or manufacturing insecticides.

Artificial Fertilizers.—Due to Commonwealth Government regulations, commercial firms producing artificial fertilizers are required to use a proportion of "Florida Rock" in the manufacture of superphosphate. "Florida Rock" contains up to four per cent of flourides, which during processing are evolved in gaseous form causing high atmospheric levels of flouride fumes. Extensive investigations by the Section have resulted in recommendations for modifications in the manufacturing processes to overcome this problem.

The possible hazard from atmospheric contamination associated with the manufacture of manganese sulphate from manganese dioxide was investigated. Air sampling showed that excessive air concentrations occurred during the final bagging stage only. Satisfactory respiratory protection was provided for and worn by employees during this procedure.

Service to the Australian Stevedoring Industry Authority.—When conditions, which in the opinion of members of the Waterside Worker's Federation are hazardous, occur during loading or unloading of ships, a report is made to the Australian Stevedoring Industry Authority. The local representative of the Authority in turn contacts this Section with a request for an investigation. Since work ceases under these circumstances until the existing condition is remedied or declared safe, such requests are treated as urgent and an officer proceeds immediately to carry out an inspection.

During the year, 11 investigations were made. Of these, five concerned obnoxious smells in ships' holds arising from cargo: three concerned spillage of dangerous substances, one of arsenic and two of cyanide; two concerned handling of a dusty substance; and one required air sampling for carbon monoxide and nitrous fumes in a vehicle carrier whilst loading and unloading was in progress.

At the request of the Occupational Health Committee of the National Health and Medical Research Council, an examination of the first-aid facilities and practices on the waterfront was carried out and a detailed report submitted. This work formed part of a general survey of such services on all Australian waterfronts.

Miscellaneous.—During the year, many other requests for assessment of alleged hazardous conditions were received from various sources. Possible harmful effects of a paste used to clean stainless steel, effects of fumes arising from chromic acid baths used in the chrome plating process, dermatitis caused by skin contamination by an oil-base rust-proofing preparation, harmful properties of oil mist evolved from an oil bath used to cool hot metal castings, the source of an odour thought to be that of arsine in the kitchen of a country house, industrial hazards associated with the use of toluene di-isocyanate, the toxic effects of the fumigants ethylene dibromide and methyl chloride, safe practices in the use and storage of toluol, acetone and turpentine, sulphur dioxide fumes from oil burning furnaces, and carbon monoxide and other fume concentrations associated with the use of "Vidalloy" and "low hydrogen" welding rods, were some of the occupational health problems dealt with by the Section.

Investigations were made of conditions, forming the basis of trade union claims for special rates. One involved the possibility of carbon monoxide poisoning in basements containing coal-fired boilers for water heating; no hazard was found. In another case, the concentrations of zinc fumes evolved during welding of galvanized metal were claimed to be dangerous. Many variable factors were found to be involved in this process and investigations are continuing.

Respiratory Protection.—Throughout the year, advice has been given to numerous inquirers concerning effective respiratory protection appropriate to various hazards. Such hazards include exposures to insecticides, various dusts, fumes and vapours. By courtesy of the New South Wales Division of Occupational Health, tests are being conducted on a commercial make of respirator cartridge to determine reduction in efficiency due to aging, if any. To date results have been satisfactory.

Dusts.—Investigations have been carried out to determine the breathing zone concentrations of a variety of dusts in industry.

Dust exposures in the manufacture of rubber containing suprex clay, zinc oxide, lime and kaolin, the quarrying and subsequent cutting of siliceous building stone, the use of silicate sand as an abrasive, and conditions associated with the unloading of cement clinker and "Volclay" from ship holds have been determined.

A preliminary survey of 10 companies using asbestos in manufacturing processes has been completed and it is proposed to carry out extensive air sampling at these premises early in 1966. Following assessment of the results of the above sampling, clinical testing of employees will be carried out, if indicated.

Noise.—The Section has actively pursued the problem of excess noise in industry and its activities in this field have been expanded to include the fitting of employees with a satisfactory form of ear plug where such protection has been deemed necessary.

A total of 27 noise surveys were completed during the year in the following industries—boilermaking, ship-building, paper and chip board manufacture, wool and cotton textile manufacture, timber processing, sheetmetal working, foundries, rail transport, bottling and canning plants, together with production of vibrated concrete slabs and engine test cells.

Hearing conservation programmes involving biannual audiometric testing of 150 employees in the printing, wood-working and boilermaking trades are being carried out by the Section. All of these men have been fitted with ear protection and have attended lectures dealing with the adverse effects of excessive noise on the human ear.

Advice has been given to management regarding the advantage of pre-employment audiometry as a safeguard for employee hearing and as a guide to the subsequent placement of the worker within the firm. This test is slowly becoming accepted as an integral part of pre-employment medical examinations.

In offices, the Section has advised on the control of noise arising from computer machines and data processing units.

Much of the work in the above field has been carried out at the request of Government Departments, in particular the Department of Labour and Industry, and trade union organizations.

Ionizing Radiation.—A total of 168 dental X-ray machines were examined during the year, using "survey pack" films as a means of determining the beam diameter and total beam filtration in equivalent millimetres of aluminium for each unit.

Standards laid down by the International Commission on Radiological Protection relating to beam filtration, beam diameter and other factors, were adopted with a view to obtaining uniformity throughout the Commonwealth and to enable ready comparison of results with other published work in this field.

It was considered that with these standards, the exposure of the population to radiation from dental X-rays would be kept within acceptable limits without restricting the usefulness of X-rays for dental diagnosis.

A similar survey of all X-ray units possessed by medical practitioners and chiropractors has been planned for completion in 1966.

Survey of Industrial Radioisotope Limit Indicators.—A total of 37 limit indicators were examined for excessive radiation leakage from the source housing, adequate beam control and appropriate labelling under the Radioactive Substances and Irradiating Apparatus Regulations. In no case was the radiation leakage from a source holder such that it would cause any employee to receive an excessive dose of radiation under normal working conditions.

Radiation Protection in New Suites for Radiologists.—Suitable radiation protection to be incorporated in the construction of suites containing radiographic and radiotherapy rooms was evaluated in accordance with the standards laid down by the International Committee on Radiological Protection, and forwarded to the architects concerned. As a result of discussions held with the architect on one such project, a barium concrete block was designed that would eliminate the need for plastering brick walls with barium sulphate. The barium concrete block affords protection equivalent to that of a 4in. brick with a 1in. cover of barium sulphate plaster.

Pipeline proving with Cobalt 60 "Go-Devil".—During the year, two petroleum companies used a "Go-Devil" tagged with a 400 mc. Cobalt 60 source in the proving of oil pipelines. The initial job was the proving of the 15 mile pipeline between Port Stanvac and Birkenhead. Later in the year, a similar experiment was carried out on 1½ miles of pipeline within the Birkenhead oil wharf area. A detailed radiation safety specification for each of the above projects was prepared and supervised by the Section to ensure minimum radiation hazard to the population and minimum exposure of the radiation workers involved.

Mambray Creek Pipeline Project.—An on-site inspection of the industrial radiography being carried out on the Mambray Creek Pipeline Project was made in May. Recommendations regarding the use, storage and transport of the 5c Iridium 192 source being used to radiograph welds in the 3ft. diameter pipeline were given to the site radiographer.

Further advice dealing with the use and handling of radioisotopes of lower specific activity was given throughout the year to industry and to other Government Departments.

Air Pollution.—Slow expansion in the scope of air pollution control continued. Work consisted mainly of investigations of day to day environmental complaints, and of broadening the scope of the general metropolitan air pollution survey by installation of more sulphur dioxide and smoke haze monitors. In addition, the Clean Air Committee continued deliberations within its terms of reference. Further, approval was received for the appointment of an Engineer, Air Pollution, in the Department. When this appointment is filled in 1966, it is anticipated that work in this field will increase.

Fallout of particulate matter has been collected in gauges sited at various points in the metropolitan and selected country areas over the past five years. The results will be studied and assessed during 1966 to determine the value of gauge sampling as an indication of trends in air pollution. Typical fall-out gauge results, expressed in tons per square mile, are shown in Appendix 6.

The monthly averages and the corresponding daily readings for both smoke and sulphur dioxide are given for four stations in Appendices 7 and 8.

Medical Examinations.—Medical examinations of persons awarded cadetships and studentships, and applicants for permanent appointment to the South Australian Public Service and for acceptance by the South Australian Superannuation Fund were carried out by medical officers of the Public Health Supervision Branch. Seven hundred and seventy nine people were examined and medical reports of a further 191, who were examined by medical practitioners elsewhere in the State, were checked.

In addition, 37 officers of the Department of Mines were examined for medical fitness to carry out surveys in areas of the State where medical attention is not readily available. Ten Harbors Board pilots, 26 applicants for loans from the Housing Loans Redemption Fund, and seven others who have significant medical histories, were also examined.

These medical examinations provide part of an occupational health service for the Government and its employees.

(i) REPORT OF THE MEDICAL OFFICER FOR GAOLS AND PRISONS

Supervision of the health of inmates of gaols and prisons in South Australia is carried out by two medical officers of the Branch and two medical orderlies of the Prisons Department.

During the year, Dr. A. G. Sweetapple commenced duties at Adelaide Gaol as the second medical officer for gaols and prisons, but died after several months service.

As no applications have been received for this position, it is still vacant. In the meantime it is not possible to carry out a full service with only one medical officer.

At Adelaide Gaol, the total number of persons seen on sick parades was 6,789, of which 4,003 were new admissions and 2,787 had reported sick. At Yatala Labour Prison, the total number of persons seen on sick parades was 3,035. In addition, many others were dealt with by the medical orderlies. A total of 381 minor surgical operations was performed.

During the year, a small X-ray machine was provided. In nine months, 90 X-ray photographs were taken, resulting in the saving to the Prisons Department in excess of the cost of the machine.

Plans for an urgently needed hospital are well advanced. During the year, 49 prisoners were admitted to the Royal Adelaide Hospital. Most of these were for surgical treatment which could have been done in a prison hospital.

Country gaols have been visited and inspected during the year. Inspections of all areas of the metropolitan prisons have also been carried out.

No major epidemics have occurred, though there have been several outbreaks of diarrhoea and minor epidemics of respiratory infections among inmates.

(j) HEALTH EDUCATION

Active work in this field consisted of addresses to interested community groups, window displays, meetings of health inspectors, a Public Health Conference, and attendance at local board meetings.

Community groups of women were addressed and shown films on early detection of breast and cervical cancer. Proper methods of handling food were discussed with trade groups from the hotel and catering trades.

The possible dangers when using organic phosphate insecticides were brought to the notice of Upper Murray orchardists by discussion and a film.

During World Health Week, a store window display stressed the possible incidence of smallpox and advocated vaccination. This display received a gratifying amount of public comment.

Aspects of domestic fly control were displayed in a showcase adjacent to a busy city bus stop concurrently with peak infestation periods.

Quarterly meetings of health inspectors continued this year and were useful in informing these officers of current problems and suggesting uniform methods of approach.

A Public Health Conference in September was well attended by local board officers. Discussion following the addresses was spirited and contributed to a successful conference. The topics were :—

The Public Health Team, Past, Present and Future—

Officer of Health.

Public Health Inspector.

Public Health Nurse.

Trends in Septic Tanks and Common Drains.

Environmental Sanitation—

Fly Control Programme.

Pest Control with Modern Insecticides.

Refuse and Waste Disposal.

Care of Aged.

Control of Communicable Diseases.

Child Minding Establishments.

Food Hygiene and Education of Food Handlers.

When requested, officers attended local board meetings and discussed with members particular aspects of community health needing the board's attention. This close personal transmission of factual information resulted in informed decisions on community matters to the benefit of all parties.

Royal Society of Health.—At examinations conducted by the Society's South Australian Board of Examiners, 29 candidates for the Diploma of Health Inspection and seven candidates for the Diploma of Meat and Other Foods Inspection passed the required examinations.

3. SCHOOL HEALTH BRANCH

PRINCIPAL MEDICAL OFFICER—DR. C. O. FULLER, M.B., B.S., D.P.H.

The professional staff at the end of 1965 consisted of—

Principal Medical Officer.

Medical Section—

Senior Medical Officer.

Nine Medical Officers.

Senior Sister.

Ten Sisters.

Deafness Guidance Clinic—

Four Otologists (Part-time Consultants).

Three Audiometrists.

Dental Section—

Senior Dental Officer.

Twelve Dental Officers.

Twelve Dental Assistants.

The annual visit areas commenced in 1964 have been continued and the only modification that proved necessary involved small schools of under 30 pupils within a 60 mile radius of the General Post Office, Adelaide. These will now be visited every second year and all children examined at each visit.

During 1965, one medical officer was overseas for nine months and another on sick leave for five months. Although some temporary help was obtained, the total number of children examined was less than for the previous 12 months.

MEDICAL SECTION

Examinations carried out in Education Department Schools.—The number of children examined in Education Department schools during 1965 was 80,156. This figure included 79,869 children examined by School Health Branch medical officers and 287 children examined by local doctors in Eyre Peninsula schools on behalf of the Branch. The total Education Department school enrolment for 1965 was 207,989. School doctors visited 409 schools and the local practitioners on Eyre Peninsula one school. For details, see Appendices 9, 10 and 11.

The parents of 30 children requested that their children be exempted from medical examinations.

Examinations carried out by School Health Branch staff at 169 Rundle Street, Adelaide.—

(1) *Medical Examinations of school Children seen previously at School.*—Children may be asked to attend head office for further assessment of a particular defect before being referred on to their family doctor, hospital or eye specialist. Teachers and parents occasionally bring children to head office for advice and assessment of a particular problem. During 1965, 360 children were seen for additional assessment.

(2) *Medical Examinations Apart from School Children.*—Two thousand five hundred and sixty-eight students entering or leaving the Teachers Colleges, or applying for Leaving and Leaving Honours Teaching Scholarships, Junior Teaching positions and Laboratory Assistantships, were medically examined in 1965. This represented a reduction of 828 from the 1964 total and was mainly the result of the new matriculation teaching scholarships scheme whereby Leaving Teaching Scholarships have been discontinued. The full impact of the new Teachers College at Bedford Park has not yet been felt and this total can be expected to increase in the next few years.

Teachers referred by the Education Department were seen before returning to duty from sick leave. Applications from teachers for invalidity pensions referred by the Education Department were considered and where necessary, the applicants were examined. A total of 719 teachers were seen during 1965. Forty-eight children travelling interstate with cricket, basketball and football teams were medically examined.

The total number of examinations carried out at head office was 3,287.

Health Education Lectures.—These were continued during 1965. The Principal Medical Officer (Dr. C. O. Fuller) lectured in each college, viz.—

1st Term—Wattle Park Teachers College, eight lectures per week.

2nd Term—Adelaide Teachers College, eight lectures per week.

3rd Term—Western Teachers College, six lectures per week.

He also set and marked one question in the final examination paper for each college.

Dr. Fuller continued lecturing on the Nurses Lecture Panel at the Royal Adelaide Hospital and the Adelaide Children's Hospital.

Paediatric Refresher Week.—Permission was granted for four medical officers to attend the refresher week at the Adelaide Children's Hospital.

Mothers' Clubs.—The demand for speakers continued and 12 metropolitan and country mothers' clubs, school committees of parents' groups were addressed by medical and dental officers.

Follow-up Work.—This was discontinued temporarily due to staff shortages.

Defect Notices.—Under an arrangement approved by the Australian Medical Association, 2,721 forms S.H.S. 5 were returned by doctors and specialists to whom children were taken by parents. Their co-operation is gratefully acknowledged as it enabled this section to complete their records and follow the progress of the children.

S.H.S. 5 Forms Returned—

Metropolitan	1,715
Country	1,006
	2,721

Infections in School Children.—A total of 4,946 cases of communicable disease in school children was reported to teachers in State schools during 1965. Details of these are shown in Appendix 12.

DEAFNESS GUIDANCE CLINIC

The Deafness Guidance Clinic completed its seventh year with a total of 2,635 attendance.

New cases were referred from the following sources :—

	Per Cent
Officers of the School Health Services	81.2
Family Doctors	7.5
Parents	5.6
Others (Kindergarten Union, Teachers, Psychology Branch) .	5.7

The liaison with the Education Department through the Advisory Panel for Deaf and Hard of Hearing Children has been maintained.

The monthly lists of all children discovered to have a significant loss have been continued and 315 were made the subject of specific letters. Of these, 129 were discovered at the initial test.

In addition to children, tests were carried out on student teachers, scholarship applicants and public servants.

Screen Testing in the Field.—Audiometric testing was conducted in Education Department and private schools and pre-school kindergartens associated with the Kindergarten Union of South Australia Incorporated.

A total of 22,046 children had pure tone audiometer tests. Of these, 1,215 were found to have some hearing loss at the time of testing. Parents were notified accordingly and, where possible, further testing was carried out in the Deafness Guidance Clinic.

The percentage of defects found was :—

	Per Cent
Audiometrists	5.5
School Sisters	3.1

Audiometers supplied and maintained by the Commonwealth Acoustic Laboratory were used for all field work.

Appointments at Deafness Guidance Clinic.—Three hundred and seventy two appointments previously made with the Clinic were not kept. This included new cases and retests. Steps were taken to bring the omission to the notice of parents and they were encouraged to make another appointment.

The figures for New Cases, Retests and Disposal are given in Appendices 13 and 14.

DENTAL SECTION

The appointment of five graduates from the studentship scheme in November, 1964, increased the number of dentists in the field to 12. This number was further increased to 13 by the graduation of another student in May, 1965.

The increase allowed a number of new areas to be opened and others to be modified in order to increase the coverage of remote areas. Areas served or part served during the year were :—

Ceduna	Kingscote
Streaky Bay	Lucindale
Wudinna	Pinnaroo
Kimba	Karoonda
Far North	East West Line
Hawker	Broken Hill
Leigh Creek (2 terms)	

Summary of Work for the Year in Country Schools.—

Total number of Children examined	6,167
Schools visited	70
Schools in which work was completed	60
In schools completed—	
Children offered treatment	4,971
Children accepting treatment	4,440
Total work done—	
Number of visits for treatment	17,020
Fillings	28,040
Extractions	2,970
Other treatments	7,811

Ten schools have not been completed. The average daily attendance at these schools is 2,438. Some of these children are still receiving treatment and others have been completely treated. The work done for children in these schools has been included in the figures for total work done, but the number of children completed cannot be shown until the whole school is completed.

Children in primary grades were offered comprehensive treatment and an emergency service was again offered to pre-school children, secondary school children and adults, as in the past.

The percentage of parents who accepted treatment on behalf of their children increased from 85 per cent to 89.3 per cent.

The average treatments per child required overall were as follows :—

Fillings.....	6.3
Extractions.....	0.7
Other Treatments.....	1.8

These figures are higher than those of last year because of the erstwhile untreated new areas opened.

Institutions under the Control of the Department of Social Welfare.—A service was also offered to these Institutions during school holidays. Institutions served were :—

Magill Boys Training School	Seaforth Home
Vaughan House	Lochiel Park Boys Training School
Glandore Boys Home	

Summary of work done in Institutions—

Fillings.....	1,056
Extractions.....	99
Other Treatments.....	417
Visits for Treatment.....	790
Institutions Visited.....	7

As much of the time spent in Institutions was occupied in treating emergency and urgent cases, the number of patients actually treated is unknown, hence it is not possible to arrive at an average figure for treatments per child.

4. POLIOMYELITIS BRANCH

PRINCIPAL MEDICAL OFFICER—Dr. B. H. JEANES, M.B., B.S., D.P.H.

In 1965, the poliomyelitis immunization campaign was interrupted on two occasions by shortage of vaccine. In May, the shortage was confined to single dose ampoules and the inconvenience caused brought about a considerable decrease in the overall use of vaccine. Supplies were eventually restored just before multiple dose ampoules also ran out. In October, a more prolonged shortage of both packs of vaccine held up all immunizing for a period. These setbacks had some effect on the campaign as a whole and, as a result, the total number of injections given for the year was less than desirable. In addition, the absence of cases of poliomyelitis meant that a potent stimulus to immunization was lacking.

CASES REPORTED

For the second consecutive year there was no case of poliomyelitis in South Australia, the last confirmed case being in October, 1963. Medical investigation was confined to people in whom administration of Salk vaccine had been thought to be associated with some form of reaction. Several cases were investigated but in no instance was any serious reaction reported, the most severe being primary irritative dermatitis due probably to spirit extracting dye from a child's frock.

ADMINISTRATION OF VACCINE

Injections were given by four main agencies. A tabular summary of the work performed by them is given in Appendix 15, and a summary of vaccine use and wastage in Appendix 16. The total number of injections given in 1965 dropped to 134,752 (170,390 in 1964). A more detailed description of the activities of the various agencies follows :—

1. Poliomyelitis Services.

A total of 28,826 injections (24,526 in 1964) was given. Injections were given daily at Norwood headquarters and an evening clinic was held once a week. Visits to institutions in the metropolitan area continued and in addition a start was made to carry out immunization in Departments of the Public Service. Seven Departments were covered to the end of 1965 but the vaccine shortages encountered during the year restricted activity considerably. Country visits were co-ordinated with the Public Health Branch and this year visits were made to the far West Coast, the area between Oodnadatta and Hawker, and the Broken Hill line. Late in the year, Poliomyelitis Services undertook immunization of Army personnel in the metropolitan area and Woodside Camp, and one visit was made to country establishments at Gladstone and Port Wakefield.

Clinics at the Adelaide Children's Hospital and Queen Victoria Maternity Hospital were continued and details are given below :—

	First	Second	Third	Fourth	Total
Adelaide Children's Hospital.....	2,152	1,827	1,434	2,932	8,345
Queen Victoria Maternity Hospital.....	1,198	987	332	976	3,493

While the numbers at the Adelaide Children's Hospital remained quite high, there was a fall-off in the number of injections given at the Queen Victoria Maternity Hospital. The importance of contacting the mothers prior to the birth of their babies, and impressing upon them the need for immunization of their children is felt to be of considerable value, as many of these people might otherwise not make the effort.

2. Local Boards of Health

The Local Boards of Health continued to contribute the greatest number of injections given. The total of all local boards for 1965 was 75,139 injections (119,277 in 1964). Not only did the total number fall, but the percentage of injections given by local boards also fell from 70 per cent to 56 per cent. This was due partly to the increased number of injections given by private doctors and partly because of the expanding work of Poliomyelitis Services in such places as Public Service Departments, which were not areas in which local boards would be expected to function. A breakdown of the number of injections given by each local board is given in Appendix 17.

3. Private Doctors

The number of private doctors using Salk vaccine continued to rise slowly. At the end of 1965, 154 metropolitan and 64 country doctors (partnerships are grouped singly) had indicated their intentions of using Salk vaccine. The numbers at the end of 1964 were 146 metropolitan and 59 country doctors. In the metropolitan area, vaccine was delivered by Poliomyelitis Services on a fortnightly basis, and vaccine was despatched to the country, on request, by the most expedient method. These private practitioners are becoming an increasing force in the use of poliomyelitis vaccine and in 1965 a total of 26,933 injections were given (20,734 in 1964). Wastage and poor recording continued to be significant problems and at the end of the year 378 doses of vaccine remained unaccounted for. Although there were only 105 doses unaccounted for in 1964, differences in accounting methods in the two years would mean that the actual difference in the two figures was somewhat less than apparent. Had the 1965 method been in use in 1964, the total would have been much higher. As in previous years, most of the wastage was by metropolitan doctors. The doses not accounted for made the problems of the filing room more difficult.

4. Special Groups

Special groups were not quite so active this year. A total of 3,854 injections were given by all special groups (5,282 in 1964). Once again, it is stressed that the value of the work of these groups is not to be measured merely by the total number of injections given, because many of these centres are in remote areas of the State where immunization would otherwise be difficult to obtain. New centres were opened at the Royal District and Bush Nursing Society Hospital, Iron Knob, and the Australian Inland Mission at Andamooka.

POSITION AT THE END OF 1965

During 1965, the two millionth injection was given in South Australia. The child who received the injection was presented with a card commemorating this and the event was televised. At the end of the year, a grand total of 2,053,342 injections had been given. These are summarized below :—

Injection	Number of Injections	Percentage of Population Covered, Based on the December 1965 Population Estimate
1st	653,766	61.5
2nd	639,804	60.0
3rd	566,710	53.3
4th	193,062	18.0

It should be appreciated that these percentages are approximate and in all probability will be higher than stated.

The continuing absence of poliomyelitis indicates that the protection afforded by Salk vaccine is not only of high order but persists over a number of years. There has been no reported instance in which a person receiving three or more doses of Salk vaccine in South Australia has contracted poliomyelitis.

CURRENT PROBLEMS

The greatest cause for concern at present is a lag in immunization of pre-school children. There must always be a number of uncontrollable factors contributing to this, such as unavailability of vaccine, children sick on the day of a clinic and having to wait for the next one, but the lag is more serious than that. Of approximately 10,000 children born in the first half of 1965, only 4,577 had begun courses before the end of 1965, and only 2,814 had had second doses. As poliomyelitis virus has not been discovered from any source in South Australia since October 1963, it is highly probable that children now being born are obtaining little if any natural immunity, and are therefore fully susceptible to poliomyelitis if not artificially immunized. There has been a tendency over the last few years for the percentage of cases of poliomyelitis occurring in children under five to rise and this possibly reflects the waning of natural immunity. It is well-known that in advanced countries natural immunity is developing at a much later age than in primitive countries. In the latter, however, clinical poliomyelitis with all its sequelae does not present a major problem.

WORK PROJECTED FOR 1966

It is intended to keep the clinics at the Adelaide Children's Hospital and the Queen Victoria Maternity Hospital going and attempts will be made to establish other clinics. Visits will be made to all outback areas in conjunction with the Public Health Branch and efforts will be made to improve and increase the efficiency of the delivery service. The possibility of extending this to Salisbury and Elizabeth is being considered. It is hoped to resume immunization in Public Service Departments, possible including those areas in the country where relatively large numbers of Public Servants are congregated.

5. TUBERCULOSIS BRANCH

DIRECTOR OF TUBERCULOSIS—Dr. T. G. PAXON, M.D., M.R.C.P.

A review of the tuberculosis statistics in South Australia since 1945 has been undertaken and the main points are set out in Appendix 18, which shows year by year the population in thousands, the number of notifications, morbidity and mortality rates.

The maximum number of new cases notified in 1952 was 416, which gave the highest morbidity rate of 56.3. The low rate of 33.5 in 1947 may be somewhat misleading as at that time it is unknown how thorough was the practice of notification. After 1948, when the value of the tuberculosis allowance was increasingly being appreciated, the care in notification would probably have increased also. The figures from 1952 onwards represent as accurate an estimation of the decline in tuberculosis in this State as can be obtained.

It was not anticipated in 1960 that by 1965 the numbers of new pulmonary cases would have fallen by about 50 per cent. The morbidity rate in 1960 was 26.9. In 1965 it was 12. As much of the new disease probably occurs in persons infected many years ago, it would seem that the factors which produce the immune responses in tuberculosis are being maintained in our community in increasing strength. Non pulmonary forms of the disease do not show the same decline but the rate has fallen steadily nevertheless from 33 in 1960 to 29 in 1965.

Appendix 19 shows the age, sex and stage of the disease notified in 1965. The age period 40-55 seems the most important. Elsewhere in Australia also these are the important years for tuberculosis.

Appendix 20 shows the details concerning those cases regarded as reactivated. A reactivated case is one that has previously been notified and entered on the active case register but removed three years after cessation of treatment. About 5 per cent of the new notified pulmonary cases were those thought previously to have been successfully treated.

Appendix 21 shows the Local Board of Health areas of origin of the disease.

Migrants.—Twenty eight per cent of the total new cases occurred in migrants. Appendix 22 shows the country of origin.

Mortality.—The mortality rate for tuberculosis is now below unity—0.7. Details are given in Appendix 23.

Tuberculosis Allowances.—These are always a sensitive indicator of the prevalence of tuberculosis. In 1960, 215 persons received the allowance. In 1965 only 97 received it. See Appendix 24.

Miniature Radiography.—Appendices 25 and 26 show the work of the X-ray units in the metropolitan and country areas. Appendix 27 is a breakdown of the work performed by the City Unit. The examination of contacts has again been unrewarding, but the continued examination of some persons found with inactive disease at previous surveys is valuable. The reactivation rate approaches 0.5 per cent per annum in this group of persons.

The latter group of patients may assume considerable future significance when the yield of cases from mass surveys falls to such low levels that it will be economically unjustifiable to continue them. The units might then be used for the follow up of those cases known from previous surveys to have inactive disease.

Source of Notification.—The sources of notification are shown in Appendix 28 and it will be noted that the mass community surveys contributed 34.6 per cent of the new pulmonary cases.

Tuberculin Testing.—Appendix 29 shows the results of persons who were tuberculin tested but were not contacts.

Some 12,500 children in the age group 5-9 were skin tested, mainly those in Grade 1 of the primary schools. The overall positive reactor rate was 1.5 per cent but amongst migrant born children it was 2.2 per cent and 1.3 per cent for Australian born children.

In Grade VII of the metropolitan schools, the figures were 11,898 tested giving the overall rate of 3.9 per cent of positive reactors. The rate among migrant children was 7.0 per cent and 3.1 per cent for Australian born children.

During the months of July and October, Dr. Paxon (Director of Tuberculosis) had the opportunity of inspecting tuberculosis control services in many different countries and as a result reported that there is no country in western civilization that has less of a tuberculosis problem than this State. Our morbidity rate for pulmonary disease is amongst the lowest in the world. The reasons for this are multiple—climate, living standards and the work of those interested in tuberculosis control since the war, are the main ones.

Emphasis on future work will be the follow-up of the known cases and those with radiological evidence of old healed disease.

6. SUMMARY AND CONCLUSIONS

The activities of the various Branches have been detailed earlier in this report and each Branch has recorded matters which are worthy of comment.

The importance of immunization is reflected in the infectious and notifiable disease statistics. However, the isolated case of diphtheria and the three deaths from tetanus highlight the need to continue intensive and vigorous immunization campaigns.

The absence of poliomyelitis for the second year in succession is worthy of comment, but it has been again pointed out by the Principal Medical Officer (Poliomyelitis Branch) that this absence tends to lessen the demand for immunization with the consequential increase in the number of unprotected persons in the community who would be vulnerable in the event of a future epidemic.

Attention is invited especially to the report of the Occupational Health Section. A wide variety of important hazards to the health of workers have been studied and dealt with. This is a rapidly growing and important facet of the Department's work, and is a necessary accompaniment of the rapid expansion of secondary industry and the development of new techniques in both primary and secondary production.

The demands on the Department for supervision, assistance and advice in the fields of environmental health and occupational health continue to grow and the additional staff appointed, although not sufficient to meet all demands made, will greatly assist in providing an improved service in these areas.

The continuing downward trend in the number of cases of pulmonary tuberculosis notified is encouraging and it is pleasing to note the remarks of the Director of Tuberculosis, following his overseas visit, that in his opinion there is less of a tuberculosis problem in South Australia than in most other countries.

The School Health Branch continues to meet the increasing demands for regular medical examination of school children throughout the State despite periodic staff shortages.

A welcome increase in the dental staff of the Branch during the year enabled some progress to be made in meeting the demands for treatment of children in Education Department schools in areas where there is no private practising dentist. Near the end of the year, the Government agreed to approach the New Zealand Government for assistance in implementing a scheme for the use of school dental nurses to undertake treatment of school children. Arrangements are proceeding and it is hoped that it will be possible to set up a training school to commence a two year training course in 1967. Although it will be several years before the first trainees are available for field work, it is nevertheless encouraging to look forward to some progress in this urgently needed work.

The Central Board of Health desires to express its thanks to the local boards of health, its own officers and staff of the Department of Public Health for their efforts and co-operation. The continued valuable assistance of other Government Departments and the Institute of Medical and Veterinary Science is also appreciated.

To you, Sir, we offer our thanks for your interest and support since your appointment to the portfolio of Minister of Health early in the year.

P. S. WOODRUFF, Chairman.

G. H. McQUEEN,
J. B. CLELAND,
C. J. H. WILLIAMSON,
A. BERTRAM COX.

Members

R. W. LAVER, Secretary.

Adelaide, 7th February, 1967.

APPENDIX 1—INFANT DEATHS : MAIN CAUSES, SOUTH AUSTRALIA 1961 TO 1965

Cause	1961	1962	1963	1964	1965
	No.	No.	No.	No.	No.
Diarrhoea	12	7	15	9	12
Congenital Malformations	102	76	91	79	82
Prematurity	72	77	72	82	67
Injury at birth	46	56	41	38	35
Post-natal Asphyxia and Atelectasis	38	39	36	58	38
Other diseases peculiar to early infancy	65	52	63	41	73
Cerebro-spinal Meningitis	3	—	1	2	—
Meningitis	1	5	—	3	4
Whooping Cough	—	1	1	1	—
Pneumonia	38	47	42	37	39
Hernia and Intestinal obstruction	8	4	6	6	4
External causes	24	11	9	14	14
All other causes	39	34	22	27	17
Total	448	409	399	397	385

APPENDIX 2—BIRTHS, MARRIAGES AND DEATHS : NUMBERS REGISTERED AND RATES 1961 TO 1965

Period	Births Registered		Marriages		Deaths Registered			
					Total		Infants	
Year	No.	Rate (a)	No.	Rate (a)	No.	Rate (a)	No.	Rate (b)
1961	22,399	23.10	6,804	7.02	7,815	8.06	448	20.00
1962	21,361	21.58	7,021	7.09	8,232	8.32	409	19.15
1963	21,367	21.18	7,302	7.24	8,201	8.13	399	18.67
1964	20,866	20.22	7,765	7.53	8,906	8.63	397	19.03
1965	20,891	19.84	8,680	8.24	8,788	8.34	385	18.43

(a) Per 1,000 of Mean Population.

(b) Per 1,000 Live Births.

APPENDIX 3—INFECTIOUS AND NOTIFIABLE DISEASES, NOTIFIED TO THE CENTRAL BOARD OF HEALTH

Infectious Diseases	Cases			Deaths		
	1963	1964	1965	1963	1964	1965
Acute infective encephalitis	6	2	1	2	3	2
Amoebiasis	—	1	—	—	—	1
Ancylostomiasis	—	2	—	—	—	—
Diphtheria	—	—	1	—	—	—
Diarrhoea, infantile infective	34	12	13	—	—	—
Dysentery, Bacillary	197	73	178	—	—	—
Leptospirosis	1	2	1	—	—	—
Malaria—relapses	—	—	3	—	—	—
Meningococcal infection	6	5	4	2	5	—
Ornithosis	1	1	—	—	—	—
Paratyphoid fever	11	1	3	—	—	—
Poliomyelitis	10	—	—	1	—	—
Puerperal pyrexia	2	2	4	—	—	—
Salmonella infection	48	120	127	—	—	—
Scarlet fever	198	202	127	1	—	—
Trachoma	54	42	—	—	—	—
Typhoid fever	3	4	1	—	—	—
Tuberculosis, pulmonary	205	147	126	27	9	6
Tuberculosis, other forms	31	30	30	—	1	1
Notifiable Diseases	Cases			Deaths		
	1963	1964	1965	1963	1964	1965
Acute rheumatism	5	—	1	—	—	—
Brucellosis	—	2	—	—	—	—
Eclampsia	1	—	—	1	—	—
Erythema Nodosum	1	3	3	—	—	—
Encephalitis, following another disease	3	1	5	—	—	—
Gonorrhoea	—	—	4	—	—	—
Hydatid disease	—	—	1	—	—	—
Infective hepatitis	293	289	414	—	2	2
Lead poisoning	1	—	—	—	—	—
Ophthalmia	2	—	2	—	—	—
Rubella	621	664	649	—	—	—
Tetanus	—	—	6	3	—	3

APPENDIX 4—NOTIFICATIONS OF INFECTIVE HEPATITIS

Year	1958	1959	1960	1961	1962	1963	1964	1965
1st quarter	50	289	142	490	254	86	51	101
2nd quarter	38	127	154	237	91	56	92	124
3rd quarter	41	106	247	306	74	58	46	70
4th quarter	178	227	578	373	85	93	100	119
Totals	307	749	1,121	1,406	504	293	289	414

APPENDIX 5—NUMBER OF LICENCES AND REGISTRATIONS GRANTED UNDER RADIOACTIVE SUBSTANCES AND IRRADIATING APPARATUS REGULATIONS

Type of Application	1962	1963	1964	1965
	No.	No.	No.	No.
To import, sell, etc., irradiating apparatus	1	2	4	5
To import, sell, etc., radioactive substances	1	6	4	3
To register irradiating apparatus—				
First Unit	7	322	285	329
Additional Units	48	112	149	167
To use irradiating apparatus	33	380	234	157
To use irradiating substances	54	118	163	220
Total	144	940	840	881

APPENDIX 6—AIR POLLUTION—DEPOSIT GAUGE RESULTS, JULY 1964 TO JUNE 1965

Location of Gauge	Tons Per Square Mile Average Rate Per Month			
	Insoluble Matter	Combustible Matter	Ash	Soluble Matter
Adelaide Metropolitan Area—				
Adelaide	16.4	9.5	12.6	5.9
Beverley	12.3	7.9	9.8	5.1
Beverley	14.6	9.5	10.4	6.1
Birkenhead	12.9	9.7	8.7	6.4
Birkenhead	20.3	12.4	14.8	7.9
Birkenhead	19.4	11.4	14.0	10.1
Birkenhead	12.5	9.5	9.3	6.3
Black Forest	8.8	9.6	5.1	7.8
Black Forest	12.4	9.6	9.9	6.8
Black Forest	8.0	9.7	5.8	7.0
Black Forest	9.7	9.4	6.3	6.7
Black Forest	9.0	8.6	5.3	5.7
Black Forest	7.4	9.9	4.2	7.5
Black Forest	11.5	11.2	7.2	7.7
Clarence Gardens	6.7	8.8	4.9	6.9
Clarence Park	10.0	8.2	7.6	6.2
Colonel Light Gardens	9.3	6.7	6.8	4.8
Findon	11.6	8.4	8.6	5.7
Flinders Park	11.9	9.1	8.0	6.0
Hammersmith	8.1	9.0	5.3	7.0
Hammersmith	9.6	9.1	6.8	7.2
Hammersmith	11.0	10.9	6.3	7.1
Hammersmith	7.8	9.3	4.5	6.2
Islington Sewage Farm	13.5	10.1	9.3	7.4
Kent Town	11.3	9.5	7.9	6.5
Largs Bay	11.9	9.8	8.0	7.1
Linden Park	6.8	8.0	4.2	5.8
Mansfield Park	18.0	14.4	11.4	8.5
North Adelaide, Lower	8.7	6.2	6.1	4.3
North Adelaide	7.0	8.6	4.1	6.0
Port Adelaide	8.4	8.4	5.4	6.4
Prospect	7.7	6.4	5.1	4.1
Wayville Showgrounds	16.7	7.3	13.5	4.6
Woodville South	12.9	7.1	10.3	5.0
Port Stanvac Area—				
Christies Beach	9.1	12.3	5.8	9.6
Halletts Cove	5.9	14.2	4.0	12.7
Morphett Vale	10.7	8.3	8.1	6.0
Morphett Vale	7.2	9.0	4.8	7.2
Morphett Vale	8.4	7.7	5.8	5.4
O'Halloran Hill	7.3	9.8	4.6	7.6
O'Sullivan's Beach	11.6	14.1	7.3	10.4
Reynella	9.8	13.3	6.8	10.5
Reynella	4.0	8.4	3.1	7.3
Reynella	6.6	6.1	4.1	4.0
Reynella	7.1	8.8	4.8	6.8
Angaston Area—				
Angaston	37.2	12.8	27.6	4.5
Angaston	23.9	10.5	17.0	5.6
Angaston	31.2	13.3	23.8	7.4
Angaston	28.5	14.4	20.4	8.7
Angaston	22.4	11.4	15.0	6.5
Salisbury Area—				
Parafield Aerodrome	9.4	4.7	7.7	3.0
Salisbury	7.6	4.1	6.1	2.6
Salisbury	8.8	4.9	7.2	3.2
Salisbury	19.1	6.4	16.3	3.7
Mount Gambier Area—				
Mount Gambier	1.4	3.3	1.0	4.8
Mount Gambier	7.4	14.3	2.8	9.7
Mount Gambier	5.3	12.0	1.3	8.0
Mount Gambier	8.6	11.6	5.1	8.0
Mount Gambier	8.9	17.3	5.4	13.8

APPENDIX 7—AIR POLLUTION—SULPHURE DIOXIDE CONCENTRATIONS, 1965.

Site		Parts per One Hundred Million											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Adelaide Metropolitan Area— Thebarton Police Station	Ave.	1.2	1.7	1.5	1.0	1.2	1.1	1.1	1.2	1.1	1.0	1.1	1.8
	H.D.R.	2.2	4.0	3.5	2.7	3.1	2.4	3.7	4.7	2.7	2.4	4.0	2.4
Fort Largs Academy	Ave.	—	—	3.7	1.8	1.5	0.9	0.5	0.6	0.8	1.1	1.0	0.8
	H.D.R.	—	—	6.2	5.3	3.5	2.4	1.3	1.2	2.4	3.1	2.2	2.3
Woodville North Police Station	Ave.	—	—	—	—	—	—	—	—	1.5	2.4	1.9	2.2
	H.D.R.	—	—	—	—	—	—	—	—	3.8	7.7	4.5	6.0
Richmond Police Station	Ave.	—	—	—	—	—	—	—	—	2.2	1.4	1.8	2.1
	H.D.R.	—	—	—	—	—	—	—	—	3.5	4.4	5.4	4.0
Port Augusta— Council Chambers	Ave.	—	—	—	—	—	—	—	—	—	5.1	2.6	4.3
	H.D.R.	—	—	—	—	—	—	—	—	—	24.6	6.3	15.8

APPENDIX 8—AIR POLLUTION—SMOKE DENSITIES, 1965.

Site		COH units per 1,000 linear feet											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Adelaide Metropolitan Area— Thebarton Police Station	Ave.	Less than 0.1	Less than 0.1	Less than 0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1
	H.D.R.	0.1	0.1	0.1	0.3	0.5	0.4	0.7	0.4	0.3	0.3	0.4	0.2
Fort Largs Academy	Ave.	—	—	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1
	H.D.R.	—	—	0.3	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2
Woodville North Police Station	Ave.	—	—	—	—	—	—	—	—	0.2	0.2	0.2	0.1
	H.D.R.	—	—	—	—	—	—	—	—	0.4	0.4	0.3	0.3
Richmond Police Station	Ave.	—	—	—	—	—	—	—	—	0.2	0.2	0.2	0.1
	H.D.R.	—	—	—	—	—	—	—	—	0.5	0.6	0.4	0.2
Port Augusta— Council Chambers	Ave.	—	—	—	—	—	—	—	—	—	0.1	0.1	0.1
	H.D.R.	—	—	—	—	—	—	—	—	—	0.3	0.2	0.2

APPENDIX 9—CHILDREN EXAMINED IN EDUCATION DEPARTMENT SCHOOLS

	1963	1964	1965		
			Metropolitan	Country	Total
Schools visited	333	341	175	234	409
Children examined	77,943	81,261	53,907	26,249	80,156
Defects found—					
Vision (excluding spectacles)	5,696	6,620	3,962	2,012	5,974
Wearing spectacles	5,066	6,415	4,188	1,669	5,857
Hearing	2,387	2,497	1,726	555	2,281
Nose and throat	1,092	984	695	335	1,030
Heart	368	549	380	205	585
Skin	1,356	1,472	534	314	848
Lungs	204	220	166	170	336
Epilepsy	100	119	66	23	89
Allergies	4,189	4,020	2,555	831	3,386
Others including postural defects, colour blindness, enuresis	8,395	7,947	5,631	3,282	8,913
Teeth—seen by medical officers only and excluding children under dental treatment	11,707	8,851	6,817	6,280	13,097
Total defects	46,560	39,674	26,720	15,676	42,396

APPENDIX 10—SCHOOL CHILDREN EXAMINED BY LOCAL DOCTORS ON EYRE PENINSULA ON BEHALF OF
THE SCHOOL HEALTH SERVICE

Schools visited	1
Children examined	287
Defects formally notified—	
Vision (excluding spectacles)	39
Wearing spectacles	14
Hearing	10
Nose and throat	14
Heart	5
Skin	1
Lungs	3
Allergies	1
Epilepsy	1
Others (not classified)	59
Teeth	44
Total defects	191

APPENDIX 11—DEFECTS PER 10,000 CHILDREN EXAMINED

Year	Vision	Hearing	Nose and Throat	Heart	Epilepsy	Allergies	Teeth*
1959	776	140	146	60	12	364	2,092
1960	706	233	104	57	11	476	2,059
1961	571	282	119	51	11	475	1,912
1962	615	211	113	52	11	398	1,687
1963	730	306	140	47	13	537	1,500
1964	817	308	121	68	15	496	1,093
1965	723	284	129	73	11	423	1,637

*This figure does not represent the total decay rate. These were children examined by medical officers and found to have sufficient decay present to warrant the issuing of a dental notice. Children already under private dental supervision and children examined by departmental dental officers are not included.

APPENDIX 12—INFECTIONS IN SCHOOL CHILDREN—NUMBERS OF COMMUNICABLE DISEASES REPORTED
TO TEACHERS IN STATE SCHOOLS

Year	Diphtheria	Scarlet Fever	Measles	Rubella	Whooping Cough	Chicken Pox	Mumps	Polio-myelitis	Infective Hepatitis	Other Conditions
	COMMUNICABLE DISEASES									
1961	1	130	766	67	51	2,438	461	1	359	113
1962	—	171	4,494	686	91	1,804	962	2	107	49
1963	—	172	1,444	826	218	2,607	4,750	—	59	99
1964	1	200	2,488	985	54	1,997	1,618	—	85	85
1965	2	122	1,283	639	27	1,737	892	—	126	118
	COMMUNICABLE DISEASES PER 10,000 CHILDREN ENROLLED									
1961	—	7.4	43.2	3.7	2.9	137.7	26.0	—	20.3	6.4
1962	—	9.3	244.0	37.3	4.9	98.0	52.3	—	5.8	2.7
1963	—	9.1	73.9	43.5	11.5	137.2	250.0	—	3.1	5.2
1964	—	10.0	124.8	49.2	2.7	99.8	80.9	—	4.3	4.3
1965	—	5.8	61.0	30.4	1.3	82.7	42.5	—	6.0	5.6

APPENDIX 13—ATTENDANCES AT THE DEAFNESS GUIDANCE CLINIC

	New Cases			Retests		
	Male	Female	Total	Male	Female	Total
Pre-school—						
Metropolitan	23	21	44	7	7	14
Country	2	2	4	1	—	1
Primary School—						
Metropolitan	626	472	1,098	427	352	779
Country	121	90	211	69	53	122
Secondary School—						
Metropolitan	55	47	102	97	69	166
Country	11	13	24	13	6	19
Government Departments and others	20	9	29	11	11	22
Total	858	654	1,512	625	498	1,123

APPENDIX 14—DISPOSAL AFTER ATTENDANCE AT THE DEAFNESS GUIDANCE CLINIC

	New Cases	Retests
Referred to Family Doctor	674	305
Referred to Specialists or Hospitals	104	74
Returning for further testing	387	481
Discharged	347	263

APPENDIX 15—POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN IN THE YEAR ENDED 31ST DECEMBER, 1965
(In applicants' years of birth and in first, second, third and fourth injections.)

Year of Birth	Poliomyelitis Services				Local Boards of Health				Hospitals and other Authorities				Private Doctors				Total			
	1st	2nd	3rd	4th+	1st	2nd	3rd	4th+	1st	2nd	3rd	4th+	1st	2nd	3rd	4th+	1st	2nd	3rd	4th+
1965	308	192	—	—	2,592	1,478	—	—	79	58	—	—	1,598	1,086	—	—	4,577	2,814	—	—
1964	944	889	425	5	7,134	7,296	3,467	21	179	195	47	—	3,251	3,483	2,106	9	11,508	11,863	6,041	35
1963	353	359	686	266	978	1,231	5,596	2,181	36	53	151	40	386	481	1,621	374	1,753	2,124	8,054	2,861
1962	248	253	320	525	538	589	1,289	4,582	19	17	35	89	197	230	435	724	1,002	1,089	2,079	5,920
1961	161	172	222	399	318	349	586	1,808	12	19	24	39	131	170	284	417	622	710	1,116	2,663
1960	161	159	187	259	352	351	471	1,399	10	9	10	30	105	121	182	387	628	640	850	2,175
1959	135	133	142	330	391	407	518	1,360	10	12	17	25	74	93	135	311	610	645	812	2,026
1958	87	94	99	286	279	320	403	1,098	4	7	5	25	48	51	76	233	420	472	583	1,642
1957	80	93	101	262	199	211	340	962	4	3	10	22	40	39	62	186	323	346	513	1,432
1956	60	71	71	260	188	208	298	872	7	6	1	12	35	43	40	169	290	328	410	1,313
1955	64	63	80	265	142	145	196	828	3	4	1	8	31	26	35	145	240	238	315	1,246
1954	68	61	64	258	145	140	186	822	4	2	5	13	19	18	30	145	236	221	285	1,218
1953	58	53	50	220	128	134	203	734	2	2	1	4	14	16	34	122	202	205	288	1,080
1952	57	57	60	217	85	93	166	540	3	2	2	5	19	18	20	118	164	170	248	880
1951	48	40	41	173	53	65	105	476	—	2	—	3	11	8	16	85	112	115	162	737
1950	31	35	34	180	39	40	44	346	1	2	2	9	4	4	19	93	75	81	99	628
1949	29	23	24	164	26	16	24	242	2	3	3	4	8	9	9	96	65	51	60	506
1948	27	30	24	210	18	21	27	195	3	1	2	67	7	5	8	54	55	57	61	526
1947	46	39	30	276	14	10	16	181	11	14	8	468	5	7	3	78	76	70	57	1,003
1946	49	39	40	204	18	13	13	169	19	19	12	252	8	9	6	49	94	80	71	764
1945	54	43	49	333	12	18	18	134	31	29	23	63	16	13	19	60	124	115	126	570
1944	59	56	51	290	23	27	33	148	26	19	16	61	23	33	38	94	179	167	149	609
1943	93	73	48	265	46	43	47	180	17	18	16	33	36	34	45	90	232	209	222	569
1942	118	91	61	220	69	73	100	226	9	11	16	33	36	34	45	90	232	209	222	569
1941	145	121	112	181	103	92	151	275	17	14	25	45	63	58	74	104	328	285	362	605
1940	152	135	137	187	120	128	156	285	16	16	18	36	55	70	97	106	343	349	408	608
1939	147	139	115	194	102	110	172	382	11	8	14	26	46	51	73	119	306	308	374	721
1938	145	121	105	186	106	120	173	413	10	8	17	21	64	60	88	116	325	309	383	736
1937	129	111	83	171	93	112	175	370	9	12	9	17	43	37	74	101	274	272	341	65
1936	127	111	101	174	82	94	155	364	7	6	14	18	47	48	72	107	263	259	342	663
1935	122	118	95	147	100	93	136	306	9	7	9	14	35	41	69	89	266	259	309	556
1934	103	104	82	167	75	78	130	301	8	5	8	11	42	51	56	89	228	238	276	568
1933	100	87	68	163	76	68	115	371	7	3	8	7	40	45	55	93	223	203	248	585
1932	95	83	90	162	61	76	107	326	8	3	8	7	29	41	43	90	193	203	248	585
1931	89	73	89	144	50	48	94	302	5	5	5	10	33	32	30	86	177	158	218	542
1930	118	101	84	175	62	64	99	307	13	5	12	13	22	23	54	93	215	193	249	588
1929	86	78	91	187	46	51	80	307	6	6	12	11	22	25	30	76	163	160	213	581
1928	86	70	98	177	49	59	93	296	7	5	9	8	22	32	30	77	164	166	230	558
1927	94	86	97	168	43	59	72	242	5	6	9	4	16	22	39	103	158	173	217	517
1926	84	79	80	152	51	65	82	210	9	11	4	7	18	18	37	66	162	173	209	435
1925	80	70	96	146	50	58	83	247	4	5	6	11	22	28	27	57	156	161	212	461
1924	82	69	74	159	46	54	66	221	8	4	3	1	16	21	35	59	152	148	178	440
1923	72	62	75	116	36	39	57	224	4	6	9	5	14	16	38	50	126	123	179	395
1922	70	51	67	118	32	33	42	195	5	4	9	5	16	24	37	51	123	112	155	369
1921	71	58	63	98	29	31	55	164	2	3	7	7	12	13	33	45	114	105	158	314
1920	61	52	71	90	25	27	49	131	6	5	14	9	16	13	33	45	108	97	167	275
1919	63	56	62	66	27	23	38	120	2	3	4	4	11	16	24	29	103	98	128	219
1918	45	38	59	72	26	27	31	108	3	3	6	1	6	7	24	27	80	75	120	208
1917	45	38	53	63	14	17	27	66	4	3	4	4	9	13	22	19	72	71	106	152
1916	42	34	71	61	15	20	46	80	1	8	6	8	9	12	30	15	67	74	153	164
1915	48	34	58	46	18	20	37	68	6	3	2	7	8	7	18	24	80	64	115	145
1914	57	40	76	46	13	17	37	74	4	4	3	1	13	16	25	15	87	77	141	136
1913	44	39	64	34	22	33	52	77	—	—	6	4	9	11	30	14	75	83	152	129
1912	57	60	66	22	26	43	64	88	4	3	6	1	19	13	27	11	97	119	163	122
1911	42	42	70	23	19	24	52	73	—	—	2	1	14	12	28	6	75	78	152	103
1910+	405	397	993	101	166	223	484	426	38	35	38	22	100	109	257	43	709	764	1,772	592
Total	6,444	5,875	6,454	10,053	15,570	15,284	17,362	26,923	731	716	721	1,686	6,959	6,992	6,846	6,136	29,704	28,867	31,383	44,798

APPENDIX 16—USAGE AND WASTAGE OF SALK VACCINE IN SOUTH AUSTRALIA IN 1965 BY VARIOUS AGENCIES

	Local Boards of Health	Special Groups	Poliomyelitis Services	Country Doctors	Metro-politan Doctors
Single doses of Salk issued	24,180	3,280	21,624	6,263	23,411
Multiple doses of Salk issued	62,590	1,020	8,430	1,260	1,430
Single doses gained during use	135	nil	2	2	nil
Multiple doses gained during use	430	6	5	16	nil
Total issues and gains	87,335	4,306	30,061	7,541	24,841
Total injections given	75,139	3,854	28,826	6,458	20,475
Single doses returned	1,089	99	—	nil	—
Multiple doses returned	2,230	20	—	nil	—
Single doses wasted during use	3,556	236	205	624	797
Multiple doses wasted during use	5,241	97	1,030	459	214
Doses discarded by Poliomyelitis Services	—	—	—	—	2,977
Doses unaccounted for	80	nil	nil	nil	378
Total usage and wastage	87,335	4,306	30,061	7,541	24,841

APPENDIX 17—POLIOMYELITIS INJECTIONS GIVEN BY LOCAL BOARDS OF HEALTH

	Injections given	
	1965	1964
METROPOLITAN		
Adelaide	481	700
Brighton	973	1,699
Burnside	1,058	1,816
Campbelltown	2,630	3,180
Colonel Light Gardens	12	148
Enfield	4,232	6,519
Glenelg	470	752
Henley and Grange	741	1,327
Hindmarsh	652	852
Kensington and Norwood	996	1,723
Marion	4,492	8,493
Mitcham	1,510	2,896
Payneham	960	1,895
Port Adelaide	2,006	3,025
Prospect	2,006	1,708
St. Peters	349	1,342
Thebarton	585	1,120
Unley	1,502	2,229
Walkerville	143	187
West Torrens	1,779	3,768
Woodville	7,126	11,439
COUNTRY		
Angaston	510	890
Balaklava	353	522
Barmera	464	654
Barossa	22	158
Beachport	Carried out by Millicent	Carried out by Millicent
Berri	321	992
Blyth	53	101
Brown's Well	Carried out by Loxton	Carried out by Loxton
Burra Town	269	398
Burra Burra	Carried out by Burra Town	Carried out by Burra Town
Bute	—	26
Carrieton	—	—
Clare Town	153	292
Clare District	Carried out by Clare Town	Carried out by Clare Town
Cleve	554	408
Clinton	Carried out by Yorke Peninsula	Carried out by Yorke Peninsula
Coonalpyn Downs	245	317
Crystal Brook	130	246
Dudley	51	62
East Murray	Carried out by Karoonda and Loxton	Carried out by Karoonda and Loxton
East Torrens	179	355
Elizabeth	Included with Salisbury	Included with Salisbury
Elliston	46	161
Encounter Bay	95	159
Eudunda	185	240
Franklin Harbour	145	127
Freeling	219	243
Gawler	562	1,651
Georgetown	Carried out by Gladstone	Carried out by Gladstone
Gladstone	210	239
Gumeracha	667	—
Hallett	114	227
Hawker	81	86
Jamestown Town	218	245
Jamestown District	Carried out by Jamestown Town	Carried out by Jamestown Town
Kadina	321	579
Kadina District	Carried out by Kadina Town	Carried out by Kadina Town
Kanyaka	Included in Quorn	Included in Quorn
Kapunda Town	Included in Kapunda District	Included in Kapunda District
Kapunda District	165	551
Karoonda	155	141
Kimba	184	289
Kingscote	373	483
Lacepede	163	302
Lameroo	216	473
Laura	93	181
Le Hunte	148	268
Lincoln	262	460
Loxton	293	1,672
Lucindale	155	50
Maitland	Carried out by Yorke Peninsula	Carried out by Yorke Peninsula
Mallala	144	375
Mannum	365	412
Marne	56	49
Meadows	160	251
Meningie	690	560
Millicent	750	1,048

APPENDIX 17—POLIOMYELITIS INJECTIONS GIVEN BY LOCAL BOARDS OF HEALTH—continued.

	Injections given	
	1965	1964
Minlaton	175	417
Mobilong	Included in Murray Bridge	Included in Murray Bridge
Moonta	94	123
Morgan	155	113
Mount Barker	105	557
Mount Gambier Town	1,996	3,152
Mount Gambier District	Included in Mount Gambier Town	Included in Mount Gambier Town
Mount Pleasant	146	217
Mudla Wirra	60	161
Munno Para	1,118	1,271
Murat Bay	280	337
Murray Bridge	1,091	4,065
Naracoorte Town	889	1,122
Naracoorte District	Included in Naracoorte Town	Included in Naracoorte Town
Noarlunga	1,354	1,338
Onkaparinga	451	704
Orroroo	163	283
Owen	125	369
Paringa	Carried out by Renmark	Carried out by Renmark
Peake	122	155
Penola	859	861
Peterborough Town	455	427
Peterborough District	Included in Peterborough Town	Included in Peterborough Town
Pinnaroo	160	264
Pirie	Included in Port Pirie	Included in Port Pirie
Port Augusta	1,471	1,442
Port Broughton	104	261
Port Elliot	58	388
Port Germein	180	209
Port Lincoln	813	1,908
Port MacDonnell	101	53
Port Pirie	1,589	2,452
Port Wakefield	86	157
Quorn	117	143
Redhill	108	193
Renmark Town	906	3,508
Renmark Irrigation Trust	Included in Renmark	Included in Renmark
Riverton	161	182
Robe	72	43
Robertstown	70	191
Saddleworth	163	320
Salisbury	7,128	7,778
Sedan	59	179
Snowtown	68	121
Spalding	Carried out by Clare Town	Carried out by Clare Town
Stirling	338	552
Strathalbyn Town	69	304
Strathalbyn District	Included in Strathalbyn Town	Included in Strathalbyn Town
Streaky Bay	292	225
Tantanoola	Included in Millicent	Included in Millicent
Tanunda	236	452
Tatiara	891	996
Tea Tree Gully	1,103	1,696
Truro	91	22
Tumby Bay	229	358
Upper Wakefield	83	97
Victor Harbour	327	434
Waikerie	257	631
Walleroo	152	322
Warooka	68	87
Whyalla Town Commission	1,236	1,434
Willunga	120	272
Wilmington	43	106
Yankalilla	257	835
Yorke Peninsula	794	978
Yorketown	259	251
Total	75,139	119,277

APPENDIX 18—YEARLY RECORD OF POPULATION, NOTIFICATIONS, MORBIDITY AND MORTALITY RATES

Year	Population	Notification			Morbidity Rate			Deaths			Mortality Rate		
	1,000's	Pul.	Non Pul.	Total	Pul.	Non Pul.	Total	Pul.	Non Pul.	Total	Pul.	Non Pul.	Total
1945	629	226	22	248	35.9	3.5	39.4	173	28	201	27.5	4.4	31.9
1946	636	233	8	241	36.6	1.3	37.9	168	15	183	26.4	2.4	28.8
1947	646	202	14	216	31.3	2.2	33.5	169	23	192	26.1	3.6	29.7
1948	658	279	18	297	42.4	2.7	45.1	154	13	167	23.4	2.0	25.4
1949	673	251	18	269	37.3	2.7	40.0	124	20	144	18.5	3.0	21.5
1950	700	343	19	362	49.0	2.7	51.7	117	15	132	16.7	2.1	18.8
1951	720	352	24	376	48.9	3.3	52.2	105	15	120	14.6	2.1	16.7
1952	739	286	30	316	38.7	4.1	42.8	88	9	97	11.9	1.2	13.1
1953	757	362	28	390	47.8	3.7	51.5	44	5	49	5.8	0.7	6.5
1954	797	287	21	308	36.0	2.6	38.6	61	7	68	7.7	0.9	8.6
1955	820	297	29	326	36.2	3.5	39.7	46	4	50	5.6	0.5	6.1
1956	848	319	30	349	37.7	3.5	41.2	39	5	44	4.6	0.6	5.2
1957	874	239	26	265	27.3	3.0	30.3	33	6	39	3.8	0.7	4.5
1958	895	269	33	302	30.0	3.7	33.7	57	4	61	6.4	0.4	6.8
1959	921	240	43	283	26.0	4.7	30.7	42	3	45	4.6	0.3	4.9
1960	945	255	33	288	26.9	3.5	30.4	36	3	39	3.8	0.3	4.1
1961	969	177	37	214	18.2	3.8	22.1	46	3	49	4.7	0.3	5.0
1962	989	210	32	242	21.2	3.2	24.4	35	1	36	3.5	0.1	3.6
1963	1,000	205	31	236	20.5	3.1	23.6	—	—	—	—	—	—
1964	1,045	147	30	177	14.1	2.8	16.9	—	—	—	—	—	—
1965	1,060	127	29	156	12.0	2.7	14.7	—	—	—	—	—	—

APPENDIX 20—RE-ACTIVATED CASES OF TUBERCULOSIS FOR YEAR ENDED 31ST DECEMBER, 1965
SHOWING AGE, SEX AND STAGE OF DISEASE

Age Group	MALES				FEMALES				PERSONS				
	Min.	Mod. Adv.	Adv.	Non-Pulmonary	Min.	Mod. Adv.	Adv.	Non-Pulmonary	Min.	Mod. Adv.	Adv.	Non-Pulmonary	Total Persons
0-4	—	—	—	—	—	—	—	—	—	—	—	—	—
5-9	—	—	—	—	—	—	—	—	—	—	—	—	—
10-14	—	—	—	—	—	—	—	—	—	—	—	—	—
15-19	—	—	—	—	—	—	—	—	—	1	—	—	1
20-24	—	1	—	—	—	—	—	—	—	—	—	—	—
25-29	—	—	—	—	—	—	—	—	—	—	—	—	—
30-34	—	—	—	—	—	—	—	—	—	—	—	—	—
35-39	—	—	—	—	—	—	—	—	—	1	—	—	1
40-44	—	1	—	—	—	—	—	—	—	1	—	—	1
45-49	—	—	—	—	—	—	—	—	—	—	—	—	—
50-54	—	—	—	—	—	—	—	—	—	—	—	—	—
55-59	—	—	—	—	—	—	—	—	—	1	—	—	1
60-64	—	1	—	—	—	—	—	—	—	1	—	—	1
65-69	—	1	—	—	—	—	—	—	—	—	1	—	1
70-74	—	—	1	—	—	—	—	—	—	—	—	—	—
75 and over	—	—	—	—	—	—	—	—	—	—	—	—	—
N/S	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	5	1	—	—	—	—	—	—	5	1	—	6

APPENDIX 21—LOCAL BOARD OF HEALTH ORIGIN FOR THE YEAR ENDING 31ST DECEMBER, 1965
PULMONARY TUBERCULOSIS

METROPOLITAN		COUNTRY	
LOCAL BOARD AREA	Notifications	LOCAL BOARD AREA	Notifications
Adelaide	5	Angaston	1
Brighton	2	Barmera	1
East Torrens County Board	13	Berri	1
Enfield	10	Crystal Brook	1
Glenelg	6	Elliston	1
Henley and Grange	1	Willmington	1
Hindmarsh	2	Leigh Creek Out District	1
Marion	10	Loxton	1
Mitcham	5	Meningie	2
Port Adelaide	13	Mount Gambier Town of	2
Salisbury	4	Murray Bridge	1
Tea Tree Gully	1	Naracoorte	1
Thebarton	1	Onkaparinga	1
Unley	7	Port Augusta	2
Walkerville	1	Port Lincoln	1
West Torrens	7	Port Pirie	4
Woodville	5	Renmark	2
	93	Stirling	1
		Tatiara	1
		Whyalla	4
		Willunga	1
		Yorke Peninsula	1
			32

NON-PULMONARY TUBERCULOSIS

METROPOLITAN		COUNTRY	
LOCAL BOARD AREA	Notifications	LOCAL BOARD AREA	Notifications
Adelaide	1	Angaston	1
Brighton	2	Munno Para East	1
East Torrens County Board	6	Onkaparinga	1
Elizabeth	1	Port Augusta	1
Enfield	2	Renmark	1
Glenelg	1	Tatiara	1
Marion	5		
Mitcham	2		6
Prospect	1		
Unley	1		
Woodville	3		
	25		

APPENDIX 22—NOTIFICATION OF MIGRANTS IN SOUTH AUSTRALIA FOR YEAR ENDING 31ST DECEMBER, 1965

Arrival in Australia	BRITISH				NON-BRITISH			
	Assisted	Non-Assisted	Total	Per Cent of Total Notified Migrants	Assisted	Non-Assisted	Total	Per Cent of Total Notified Migrants
Within 1 year . . .	1	1	2	4.5	2	2	4	9
Within 5 years . . .	2	—	2	4.5	3	2	5	11
Within 10 years . . .	—	—	—	—	6	2	8	18
Over 10 years . . .	1	5	6	14	14	3	17	39
	4	6	10	23	25	9	34	77

COUNTRY OF ORIGIN

	Assisted	Non-Assisted
England	3	5
Scotland	1	—
Wales	—	1
America	—	1
Austria	1	—
Estonia	1	—
Germany	4	—
Greece	3	1
Holland	1	—
Hungary	2	—
Indonesia	—	1
Italy	1	2
Latvia	1	1
Lithuania	1	—
Malaysia	—	1
Pakistan	1	—
Poland	5	2
Spain	1	—
Ukraine	1	—
Yugoslavia	2	—
	29	15

Assisted Migrants 29 (66 per cent)

Non-Assisted Migrants 15 (34 per cent)

Migrants comprised 28 per cent of all notified cases which totalled 156.

APPENDIX 23—DEATHS FROM TUBERCULOSIS (ALL FORMS) FOR YEAR ENDING 31ST DECEMBER, 1965

Age at Death	Male	Female	Total
50-54 years	1	—	1
55-59 years	—	1	1
60-64 years	—	2	2
65-69 years	—	1	1
70-74 years	1	—	1
75 and over	—	1	1
	2	5	7

APPENDIX 24—PERSONS RECEIVING TUBERCULOSIS ALLOWANCE FOR YEAR ENDED 31ST DECEMBER, 1965

LOCATION OF PATIENTS

Receiving Treatment in Institution			Receiving Treatment Outside Institution			Total Persons Receiving Treatment		
Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
75	10	85	12	—	12	87	10	97

PERIOD IN RECEIPT OF ALLOWANCE

Period	Males	Females	Persons
Under 1 year	54	6	60
1-2 years	8	1	9
2-3 years	4	1	5
3-4 years	1	2	3
4-5 years	1	—	1
Over 5 years	19	—	19
Totals	87	10	97

APPENDIX 25—MASS X-RAY SURVEYS FOR YEAR ENDED 31ST DECEMBER, 1965

Age	Number X-Rayed	Active Cases		Suspect Active at 31st December		Inactive Cases		Other Conditions Requiring Investigation
		Number	Rate per 1,000	Number	Rate per 1,000	Number	Rate per 1,000	
METROPOLITAN AREAS								
10-14	46	—	—	—	—	—	—	—
15-19	16,363	1	0.06	—	—	16	0.98	14
20-24	10,358	—	—	—	—	9	0.87	9
25-29	8,306	—	—	—	—	9	1.10	9
30-34	8,729	2	0.23	1	0.11	16	1.83	12
35-39	11,851	3	0.26	1	0.08	39	3.31	15
40-44	12,753	3	0.24	2	0.16	55	4.31	23
45-49	11,458	4	0.35	2	0.18	58	5.07	23
50-54	10,868	2	0.19	3	0.28	72	6.63	43
55-59	8,824	1	0.11	4	0.45	82	9.23	40
60-64	7,147	3	0.42	3	0.42	69	9.66	52
65-69	5,951	1	0.17	1	0.17	63	10.58	66
70-74	5,126	4	0.78	—	—	44	8.58	52
75 and over	5,626	3	0.53	1	0.18	43	7.65	70
Totals ..	123,466	27	0.22	18	0.15	575	4.66	428

APPENDIX 26—MASS X-RAY SURVEYS FOR YEAR ENDED 31ST DECEMBER, 1965

Age	Number X-Rayed	Active Cases		Suspect Active at 31st December		Inactive Cases		Other Conditions Requiring Investigation
		Number	Rate per 1,000	Number	Rate per 1,000	Number	Rate per 1,000	
COUNTRY AREAS								
10-14	20	—	—	—	—	—	—	2
15-19	3,273	—	—	—	—	9	0.28	3
20-24	2,102	—	—	—	—	—	—	6
25-29	1,845	2	1.08	—	—	4	2.17	4
30-34	1,806	—	—	1	0.55	3	1.66	7
35-39	2,218	1	0.45	2	0.90	3	1.37	9
40-44	2,301	—	—	—	—	13	5.65	9
45-49	1,960	—	—	—	—	11	5.61	12
50-54	1,853	3	1.62	1	0.54	11	5.99	15
55-59	1,438	1	0.69	—	—	18	12.52	14
60-64	1,099	—	—	—	—	11	10.00	18
65-69	851	1	1.18	2	2.35	9	10.58	12
70-74	746	—	—	1	1.34	6	7.64	15
75 and over	784	—	—	1	1.28	8	10.20	22
Totals ..	22,314	8	0.36	8	0.36	106	4.75	148

APPENDIX 27—CITY X-RAY UNIT EXAMINATIONS, 1965

Categories	Number Examined	New Active T.B. X-Rayed Current Year	Active Rate per 1,000 Examined	Active T.B. X-Rayed Previous Year
Contacts	1,661	—	—	2
Probationer Nurses, Police Recruits etc.	2,136	—	—	—
Migrants (New Arrivals)	10,595	3	0.28	2
Referred by Private Doctors	5,642	7	1.24	6
Commonwealth Government Employees	1,821	1	0.55	—
State Government Employees	690	—	—	—
Industrial Groups	622	1	1.61	—
Pensioners	1,026	1	0.98	—
Volunteers	5,506	3	0.54	5
Teachers Training College	2,939	—	—	—
University Students	2,125	—	—	1
Positive Mantoux Children and Contacts	1,867	1	0.54	2
Inactive Previous Surveys—Re X-Rayed	1,765	8	4.53	7
Totals ..	38,395	25	0.65	25

APPENDIX 28—SOURCE OF NOTIFICATIONS FOR YEAR ENDED 31ST DECEMBER, 1965

Source	Pulmonary Cases		Non-Pulmonary Cases		Total Cases
	No.	Per Cent	No.	Per Cent	
Mass Community Surveys.....	44	34.6	—	—	44
Private Medical Practitioners—					
(a) Direct	15	11.8	14	48.3	29
(b) Via Chest Clinic	9	7.1	4	13.8	13
General Hospitals	20	15.8	10	34.5	30
Chest Clinics	10	7.9	—	—	10
Repatriation Clinics and Hospitals	8	6.3	—	—	8
Death Certificates	1	0.8	1	3.4	2
Special Groups—					
(a) Mental Hospital Surveys.....	2	1.6	—	—	2
City Static Unit—					
Migrant Compulsory Survey.....	3	2.3	—	—	3
Industrial Group.....	2	1.6	—	—	2
Pensioners Survey	1	0.8	—	—	1
Volunteers	3	2.3	—	—	3
Schools Tuberculin Survey	1	0.8	—	—	1
Inactive Previous Mass Surveys—Re X-rayed.....	8	6.3	—	—	8
Total Notifications—(Transfers-in not included)	127	100.0	29	100.0	156

APPENDIX 29—EPIDEMIOLOGICAL TUBERCULIN TESTS FOR YEAR ENDED 31ST DECEMBER, 1965
TYPE OF SURVEY—SCHOOL CHILDREN, NURSES, POLICE RECRUITS, ETC. (EXCLUDING CONTACTS)

Age	Number Tested	Type of Test		Positive				Negative	
		Mantoux 10 Tu of OT	Heaf OT	Not Previously Vaccinated with B.C.G.		Previously Vaccinated with B.C.G.		No.	Per Cent*
				No.	Per Cent*	No.	Per Cent†		
0-4	258	258	—	9	3.8	20	7.7	229	96.2
5-9	12,795	12,795	—	185	1.5	223	1.8	12,387	98.5
10-14	11,898	11,898	—	457	3.9	231	1.9	11,210	96.1
15-19	1,521	1,521	—	94	14.7	883	58.0	544	85.3
20-24	380	380	—	58	35.2	215	56.6	107	64.8
25-29	160	160	—	44	44.4	61	38.0	55	55.6
30-34	148	148	—	66	58.9	36	24.3	46	41.1
35-39	181	181	—	86	56.2	28	15.4	67	43.8
40-44	120	120	—	79	75.2	15	12.5	26	24.8
45-49	91	91	—	56	66.6	7	7.7	28	33.4
50 and over	374	374	—	218	60.4	13	3.5	143	39.6
Totals ..	27,926	27,926	—	1,352	—	1,732	—	24,842	—

ATTACHMENT 2A - SCHEDULE TO BUDGETARY STATEMENT FOR THE YEAR ENDED 31 DECEMBER 1982

Particulars	1982-83		1981-82	
	Rs.	Paise	Rs.	Paise
1. Salaries and Wages	14	11.8	12	11.8
2. Gratuity	10	10.8	10	10.8
3. Pension	1	1.8	1	1.8
4. Medical	1	1.8	1	1.8
5. Leave Encashment	1	1.8	1	1.8
6. Other	1	1.8	1	1.8
7. Total	17	17.8	17	17.8
8. Salaries and Wages	14	11.8	12	11.8
9. Gratuity	10	10.8	10	10.8
10. Pension	1	1.8	1	1.8
11. Medical	1	1.8	1	1.8
12. Leave Encashment	1	1.8	1	1.8
13. Other	1	1.8	1	1.8
14. Total	17	17.8	17	17.8
15. Salaries and Wages	14	11.8	12	11.8
16. Gratuity	10	10.8	10	10.8
17. Pension	1	1.8	1	1.8
18. Medical	1	1.8	1	1.8
19. Leave Encashment	1	1.8	1	1.8
20. Other	1	1.8	1	1.8
21. Total	17	17.8	17	17.8
22. Salaries and Wages	14	11.8	12	11.8
23. Gratuity	10	10.8	10	10.8
24. Pension	1	1.8	1	1.8
25. Medical	1	1.8	1	1.8
26. Leave Encashment	1	1.8	1	1.8
27. Other	1	1.8	1	1.8
28. Total	17	17.8	17	17.8
29. Salaries and Wages	14	11.8	12	11.8
30. Gratuity	10	10.8	10	10.8
31. Pension	1	1.8	1	1.8
32. Medical	1	1.8	1	1.8
33. Leave Encashment	1	1.8	1	1.8
34. Other	1	1.8	1	1.8
35. Total	17	17.8	17	17.8
36. Salaries and Wages	14	11.8	12	11.8
37. Gratuity	10	10.8	10	10.8
38. Pension	1	1.8	1	1.8
39. Medical	1	1.8	1	1.8
40. Leave Encashment	1	1.8	1	1.8
41. Other	1	1.8	1	1.8
42. Total	17	17.8	17	17.8
43. Salaries and Wages	14	11.8	12	11.8
44. Gratuity	10	10.8	10	10.8
45. Pension	1	1.8	1	1.8
46. Medical	1	1.8	1	1.8
47. Leave Encashment	1	1.8	1	1.8
48. Other	1	1.8	1	1.8
49. Total	17	17.8	17	17.8
50. Salaries and Wages	14	11.8	12	11.8
51. Gratuity	10	10.8	10	10.8
52. Pension	1	1.8	1	1.8
53. Medical	1	1.8	1	1.8
54. Leave Encashment	1	1.8	1	1.8
55. Other	1	1.8	1	1.8
56. Total	17	17.8	17	17.8
57. Salaries and Wages	14	11.8	12	11.8
58. Gratuity	10	10.8	10	10.8
59. Pension	1	1.8	1	1.8
60. Medical	1	1.8	1	1.8
61. Leave Encashment	1	1.8	1	1.8
62. Other	1	1.8	1	1.8
63. Total	17	17.8	17	17.8
64. Salaries and Wages	14	11.8	12	11.8
65. Gratuity	10	10.8	10	10.8
66. Pension	1	1.8	1	1.8
67. Medical	1	1.8	1	1.8
68. Leave Encashment	1	1.8	1	1.8
69. Other	1	1.8	1	1.8
70. Total	17	17.8	17	17.8
71. Salaries and Wages	14	11.8	12	11.8
72. Gratuity	10	10.8	10	10.8
73. Pension	1	1.8	1	1.8
74. Medical	1	1.8	1	1.8
75. Leave Encashment	1	1.8	1	1.8
76. Other	1	1.8	1	1.8
77. Total	17	17.8	17	17.8
78. Salaries and Wages	14	11.8	12	11.8
79. Gratuity	10	10.8	10	10.8
80. Pension	1	1.8	1	1.8
81. Medical	1	1.8	1	1.8
82. Leave Encashment	1	1.8	1	1.8
83. Other	1	1.8	1	1.8
84. Total	17	17.8	17	17.8
85. Salaries and Wages	14	11.8	12	11.8
86. Gratuity	10	10.8	10	10.8
87. Pension	1	1.8	1	1.8
88. Medical	1	1.8	1	1.8
89. Leave Encashment	1	1.8	1	1.8
90. Other	1	1.8	1	1.8
91. Total	17	17.8	17	17.8
92. Salaries and Wages	14	11.8	12	11.8
93. Gratuity	10	10.8	10	10.8
94. Pension	1	1.8	1	1.8
95. Medical	1	1.8	1	1.8
96. Leave Encashment	1	1.8	1	1.8
97. Other	1	1.8	1	1.8
98. Total	17	17.8	17	17.8
99. Salaries and Wages	14	11.8	12	11.8
100. Gratuity	10	10.8	10	10.8
101. Pension	1	1.8	1	1.8
102. Medical	1	1.8	1	1.8
103. Leave Encashment	1	1.8	1	1.8
104. Other	1	1.8	1	1.8
105. Total	17	17.8	17	17.8
106. Salaries and Wages	14	11.8	12	11.8
107. Gratuity	10	10.8	10	10.8
108. Pension	1	1.8	1	1.8
109. Medical	1	1.8	1	1.8
110. Leave Encashment	1	1.8	1	1.8
111. Other	1	1.8	1	1.8
112. Total	17	17.8	17	17.8
113. Salaries and Wages	14	11.8	12	11.8
114. Gratuity	10	10.8	10	10.8
115. Pension	1	1.8	1	1.8
116. Medical	1	1.8	1	1.8
117. Leave Encashment	1	1.8	1	1.8
118. Other	1	1.8	1	1.8
119. Total	17	17.8	17	17.8
120. Salaries and Wages	14	11.8	12	11.8
121. Gratuity	10	10.8	10	10.8
122. Pension	1	1.8	1	1.8
123. Medical	1	1.8	1	1.8
124. Leave Encashment	1	1.8	1	1.8
125. Other	1	1.8	1	1.8
126. Total	17	17.8	17	17.8
127. Salaries and Wages	14	11.8	12	11.8
128. Gratuity	10	10.8	10	10.8
129. Pension	1	1.8	1	1.8
130. Medical	1	1.8	1	1.8
131. Leave Encashment	1	1.8	1	1.8
132. Other	1	1.8	1	1.8
133. Total	17	17.8	17	17.8
134. Salaries and Wages	14	11.8	12	11.8
135. Gratuity	10	10.8	10	10.8
136. Pension	1	1.8	1	1.8
137. Medical	1	1.8	1	1.8
138. Leave Encashment	1	1.8	1	1.8
139. Other	1	1.8	1	1.8
140. Total	17	17.8	17	17.8
141. Salaries and Wages	14	11.8	12	11.8
142. Gratuity	10	10.8	10	10.8
143. Pension	1	1.8	1	1.8
144. Medical	1	1.8	1	1.8
145. Leave Encashment	1	1.8	1	1.8
146. Other	1	1.8	1	1.8
147. Total	17	17.8	17	17.8
148. Salaries and Wages	14	11.8	12	11.8
149. Gratuity	10	10.8	10	10.8
150. Pension	1	1.8	1	1.8
151. Medical	1	1.8	1	1.8
152. Leave Encashment	1	1.8	1	1.8
153. Other	1	1.8	1	1.8
154. Total	17	17.8	17	17.8
155. Salaries and Wages	14	11.8	12	11.8
156. Gratuity	10	10.8	10	10.8
157. Pension	1	1.8	1	1.8
158. Medical	1	1.8	1	1.8
159. Leave Encashment	1	1.8	1	1.8
160. Other	1	1.8	1	1.8
161. Total	17	17.8	17	17.8
162. Salaries and Wages	14	11.8	12	11.8
163. Gratuity	10	10.8	10	10.8
164. Pension	1	1.8	1	1.8
165. Medical	1	1.8	1	1.8
166. Leave Encashment	1	1.8	1	1.8
167. Other	1	1.8	1	1.8
168. Total	17	17.8	17	17.8
169. Salaries and Wages	14	11.8	12	11.8
170. Gratuity	10	10.8	10	10.8
171. Pension	1	1.8	1	1.8
172. Medical	1	1.8	1	1.8
173. Leave Encashment	1	1.8	1	1.8
174. Other	1	1.8	1	1.8
175. Total	17	17.8	17	17.8
176. Salaries and Wages	14	11.8	12	11.8
177. Gratuity	10	10.8	10	10.8
178. Pension	1	1.8	1	1.8
179. Medical	1	1.8	1	1.8
180. Leave Encashment	1	1.8	1	1.8
181. Other	1	1.8	1	1.8
182. Total	17	17.8	17	17.8
183. Salaries and Wages	14	11.8	12	11.8
184. Gratuity	10	10.8	10	10.8
185. Pension	1	1.8	1	1.8
186. Medical	1	1.8	1	1.8
187. Leave Encashment	1	1.8	1	1.8
188. Other	1	1.8	1	1.8
189. Total	17	17.8	17	17.8
190. Salaries and Wages	14	11.8	12	11.8
191. Gratuity	10	10.8	10	10.8
192. Pension	1	1.8	1	1.8
193. Medical	1	1.8	1	1.8
194. Leave Encashment	1	1.8	1	1.8
195. Other	1	1.8	1	1.8
196. Total	17	17.8	17	17.8
197. Salaries and Wages	14	11.8	12	11.8
198. Gratuity	10	10.8	10	10.8
199. Pension	1	1.8	1	1.8
200. Medical	1	1.8	1	1.8
201. Leave Encashment	1	1.8	1	1.8
202. Other	1	1.8	1	1.8
203. Total	17	17.8	17	17.8
204. Salaries and Wages	14	11.8	12	11.8
205. Gratuity	10	10.8	10	10.8
206. Pension	1	1.8	1	1.8
207. Medical	1	1.8	1	1.8
208. Leave Encashment	1	1.8	1	1.8
209. Other	1	1.8	1	1.8
210. Total	17	17.8	17	17.8
211. Salaries and Wages	14	11.8	12	11.8
212. Gratuity	10	10.8	10	10.8
213. Pension	1	1.8	1	1.8
214. Medical	1	1.8	1	1.8
215. Leave Encashment	1	1.8	1	1.8
216. Other	1	1.8	1	1.8
217. Total	17	17.8	17	17.8
218. Salaries and Wages	14	11.8	12	11.8
219. Gratuity	10	10.8	10	10.8
220. Pension	1	1.8	1	1.8
221. Medical	1	1.8	1	1.8
222. Leave Encashment	1	1.8	1	1.8
223. Other	1	1.8	1	1.8
224. Total	17	17.8	17	17.8
225. Salaries and Wages	14	11.8	12	11.8
226. Gratuity	10	10.8	10	10.8
227. Pension	1	1.8	1	1.8
228. Medical	1	1.8	1	1.8
229. Leave Encashment	1	1.8	1	1.8
230. Other	1	1.8	1	1.8
231. Total	17	17.8	17	17.8
232. Salaries and Wages	14	11.8	12	11.8
233. Gratuity	10	10.8	10	10.8
234. Pension	1	1.8	1	1.8
235. Medical	1	1.8	1	1.8
236. Leave Encashment	1	1.8	1	1.8
237. Other	1	1.8	1	1.8
238. Total	17	17.8	17	17.8
239. Salaries and Wages	14	11.8	12	11.8
240. Gratuity	10	10.8	10	10.8
241. Pension	1	1.8	1	1.8
242. Medical	1	1.8	1	1.8
243. Leave Encashment	1	1.8	1	1.8
244. Other	1	1.8	1	1.8
245. Total	17	17.8	17	17.8
246. Salaries and Wages	14	11.8	12	11.8
247. Gratuity	10	10.8	10	10.8
248. Pension	1	1.8	1	1.8
249. Medical	1	1.8	1	1.8
250. Leave Encashment	1	1.8	1	1.8
251. Other	1	1.8	1	1.8
252. Total	17	17.8	17	17.8
253. Salaries and Wages	14	11.8	12	11.8
254. Gratuity	10	10.8	10	10.8
255. Pension	1	1.8	1	1.8
256. Medical	1	1.8	1	1.8
257. Leave Encashment	1	1.8	1	1.8
258. Other	1	1.8	1	1.8
259. Total	17	17.8	17	17.8
260. Salaries and Wages	14	11.8	12	11.8
261. Gratuity	10	10.8	10	10.8
262. Pension	1	1.8	1</	



