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

SOUTH AUSTRALIA

ANNUAL REPORT

OF THE

Department of Public Health

AND THE

Central Board of Health

FOR THE

Year ended 31st December, 1956

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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. Sir Alexander Lyell McEwin, K.B.E., M.L.C.)

SIR—We have the honour to submit to you this report for the year ending 31st December, 1956. The report is arranged in sections dealing with :—

1. Staff and administration.
2. Legislation.
3. Vital statistics.
4. Infectious and notifiable diseases.
5. Poliomyelitis.
6. Tuberculosis.
7. School medical services.
8. General sanitation.
9. Food and drugs.
10. Summary and comments.

The section on vital statistics has been compiled by the Government Statist (Mr. A. W. Bowden) and his staff. Other sections have been prepared by officers of the Department of Public Health. The Director of Tuberculosis (Dr. P. S. Woodruff) was responsible for section 6 ; the Principal Medical Officer for Schools (Dr. M. P. Casley Smith) supplied section 7 ; the Poliomyelitis Medical Officer (Dr. R. R. Horton) prepared the section on poliomyelitis ; and Dr. C. M. Deland collated and drafted most of the other material. The Secretary (Mr. H. T. Hutchins) and his staff assisted in the general work of the report.

1. STAFF AND ADMINISTRATION.

Personnel of the Board.—During the year the constitution of the Board remained unchanged :—

Chairman—Albert Ray Southwood, M.D.

Members appointed by the Governor—
John Burton Cleland, M.D.
George Hugh McQueen, M.B., B.S.

Member elected by the metropolitan local boards—
Arthur Roy Burnell, J.P., re-elected February, 1955.

Member elected by other local boards—
Alfred Bertram Cox, J.P., re-elected February, 1955.

Secretary—Hedley Thomas Hutchins.

Staff Changes.—The following were appointed as medical officers :—Drs. P. H. Burton, W. J. W. Close, R. H. M. Connell, Margaret C. Fereday, C. O. Fuller, Bernadette D. Gillam, A. W. Grote, A. C. Helme, H. C. Robjohns, Joy D. Seager, and R. Sharma. Dr. R. N. Reilly was appointed part-time audiologist for the newly-established Deafness Guidance Clinic. Messrs. I. Tohver and G. D. Clarke were appointed as dentists, and Mr. M. H. Smith was appointed under the Health and Food and Drugs Acts as an inspector. Radiographers added to the staff were Messrs. S. H. N. Bravington, H. H. Cummings and J. C. Dawes, and Misses Morris N. Caldwell and Margaret S. Sinclair. Misses Mary M. Boughen, Marie T. Corner, Margaret W. Fletcher and Jocelyn M. Nankivell were appointed as nurses. Miss Frances E. Davidson was appointed as a physiotherapist, and Miss Helen Sard as a social worker.

Resignations and retirements during the year were Drs. P. H. Burton, Margaret C. Fereday, and M. H. Thomas, Mr. N. J. White, Mrs. Mary B. Anspach, and Miss June Hicks.

Dr. H. F. Hustler was seconded for duty with the Children's Welfare and Public Relief Department for eight months.

Visits to Local Boards.—Apart from routine general inspections, officers of the Board visited a large number of local boards during the year.

The District Medical Officers covered their districts as usual, giving special attention to the Murray Flood Area. Other visits were made by teams of officers, generally to deal with problems of sanitation.

The Director-General of Public Health (Dr. A. R. Southwood), accompanied by the Chief Inspector (Mr. D. J. Wilson), the Pharmaceutical Inspector (Mr. R. C. McCarthy), and a member of the Board (Mr. A. Bertram Cox), called on all local boards on Eyre Peninsula in November. In December the Director-General accompanied Dr. C. M. Deland on a trip to Ernabella Mission in the far North-West, calling on the way at Woomera, Coober Pedy, Andamooka, and a number of station homesteads. On other occasions visits were made by senior officers of the Department to the local boards for Mount Pleasant, Mannum, and town and the district of Strathalbyn.

"Good Health".—The Department's quarterly bulletin "Good Health" was published as usual during the year. The January issue was devoted to papers read at the Health Conference held at the end of 1955; the contribution of Dr. A. J. Metcalfe, Commonwealth Director-General of Health, was especially appreciated. In April the bulletin was a Directory of Social Agencies; in that form it has proved widely useful.

The July number was devoted to articles on the duties of a Medical Officer of Health, as well as one on "Growing Up in the Home", by Councillor Esther Lipman, M.B.E. The October issue was No. 100 of the series and the occasion was celebrated in the issue; contributors included Dr. M. E. Chinner, President of the South Australian Branch of the B.M.A., and Dr. H. M. J. Halloran, Medical Officer of Health to the East Torrens County Board.

Directory of Social Agencies.—Material for the April issue of "Good Health" was prepared by Mrs. Elizabeth Butler, M.A., on behalf of the Council of Social Service of South Australia. It was a heavy task, and Mrs. Butler has earned high commendation for her splendid work.

Some years ago the Council of Social Service issued a directory in typescript form. It had been found so useful that, towards the end of 1955, it was decided to produce a revised and enlarged edition as a printed booklet. Just at that time the Department of Public Health had arranged for Dr. H. F. Hustler to compile a directory of medico-social agencies. A joint effort was planned, with much satisfaction to all concerned.

The general supervision of the publication rested with Mrs. Amy Wheaton, M.B.E., M.A., of the Social Science Department at the University of Adelaide. Mrs. Wheaton and her assistants have carried out a most useful piece of work; it will, of course, need frequent revision, and it is hoped that further editions will appear from time to time as special issues of "Good Health".

2. LEGISLATION.

Health Act.—The Health Act was modified in 1956 by an amendment relating to radio-active substances and irradiating apparatus. Provision was made for the appointment of a Radiological Advisory Committee to advise the Minister on the making of regulations and on any other matters relating to radio-active substances or irradiating apparatus referred to them by the Minister. The Act enabled regulations to be made to provide for, among other things, the controlling and prohibiting the manufacture, possession, use, storage, transport, sale and disposal of radio-active substances; regulating control, possession and use of irradiating apparatus; and other relevant matters.

The Health Act Regulations.—Amendments were made to provide that certain of the requirements relating to infectious diseases should also apply to notifiable diseases. Measures of control of cases of meningococcal infection and diphtheria were varied. The period of isolation of poliomyelitis sufferers was reduced from 21 to 14 days. Consequent on the withdrawal of measles and whooping cough from the list of infectious diseases, requirements in respect of these were deleted. The possible period under which a person who has suffered from typhoid fever may be kept under surveillance was reduced. Regulations now require that a rest home shall have a resident registered nurse on the staff when the number of patients exceeds 10.

The Bread Act, 1954.—It has now been provided that the Central Board of Health shall enforce the Act throughout the whole State and that every local authority appointed under the Food and Drugs Act shall enforce the Act throughout its district and direct its inspectors under the Food and Drugs Act to exercise the power and authorities of an inspector under the Bread Act, 1954.

Noxious Trades Act.—As a further consequence of the appeals heard by the Central Board of Health under the Noxious Trades Act, 1943, the requirements regarding floors and washing down of hide and skin drying stores were amended. The ground surface of every skin drying shed is now required to be formed of material presenting a hard, smooth, impervious surface, at least 3in. above the level of the adjacent ground surface. The sheds must now be thoroughly cleansed by washing down immediately after all dried skins have been removed from the whole or any such section of the shed and before other hides or skins are placed therein for drying, but in any event notwithstanding this provision every hide or skin drying shed shall be thoroughly cleansed by washing down not less than once in every three months.

Regulations under the Food and Drugs Act.—The regulation regarding the washing of drinking glasses, crockery, and other articles used in common was modified. Dried skim milk, but not dried milk, may now be added to margarine. Pasteurized milk may now be bottled on premises licensed under the Dairy Industry Act, as well as on premises registered under the Food and Drugs Act. The appliances used in the bottling of milk must be approved by the local authority. Pasteurized milk may be bottled but not raw milk. Terramycin, when included in a veterinary medicine registered under the Stock Medicines Act, is now exempted from the prescription requirements for antibiotic drugs. Registered veterinary medicines containing stilboestrol for use as a caponizing agent are now exempt from the prescription-only requirements of the Poison Regulations.

Sodium Fluoroacetate.—The restrictions on the sale of prepared bait containing sodium fluoroacetate for rabbit destruction were relaxed. The sale of sodium fluoroacetate or fluoroacetamide in a bait prepared to a formula and on a base approved by the Central Board is now permitted, providing the prepared bait is for the destruction of rodents, and is labelled accordingly.

Dangerous Drugs.—The Dangerous Drugs Act, 1934, enabled regulations to be made to provide that any licence or authority to be in possession of or to prescribe dangerous drugs may be withdrawn by the Minister, on the recommendation of the Central Board of Health. Regulation 38 of the Dangerous Drugs Regulations carried into effect that intention of the Act. Neither the Act nor the Regulations, however, gave any power to restore an authority once it had been withdrawn. The regulations were therefore amended to give effect to a clause included in the Dangerous Drugs Act Amendment Act of 1955 to give power to the Minister, on recommendation of the Central Board of Health, to restore any licence or authority which had been previously withdrawn.

3. VITAL STATISTICS.

The following preliminary particulars for 1956 are published subject to slight revision, with particulars for 1955 in parentheses :—

Population.—The estimated mean population of the State for 1956 was 848,531 (820,141).

Births Registered.—The number of births registered was 18,964 (18,494). The last seven years have shown successive records in numbers, increasing from 16,042 in 1949. The highest birth rate per 1,000 of population in recent years was 25·23 in 1947 ; it has now fallen to 22·34 (22·55).

Deaths Registered.—Seven thousand five hundred and ninety-three (7,536), an increase of 57 on the record number of the previous year, the rate being 8·94 (9·19).

Infantile Mortality.—Deaths of children under 1 year were 377 (431). The infantile death rate, the number of deaths of children under 1 year per 1,000 births during the year of calculation, was 19·88 (23·30). The 1956 rate is the lowest recorded for this State, the previous lowest being 20·65 in 1953, and is one of the lowest in the world. The rate has shown a remarkable decrease. Eighty years ago it was 150, 60 years ago it was 110, 35 years ago it was 60, and 25 years ago it was more than double the present rate.

There were 114 (108) deaths of children under 1 day, 144 (153) of children from 1 day to 1 month, and 119 (170) of those from 1 month but under 1 year. Compared with earlier years there has been a distinct decrease in the death rate of children under 1 month, but a far greater decrease in respect to children from 1 month and under 1 year, although there was a large increase in the latter group for 1955.

Deaths of infants from certain causes for 1956 (1955) have been :—Diarrhoea 5 (24) ; congenital malformation, 71 (81) ; prematurity, 99 (90) ; injury at birth, 32 (38) ; other diseases peculiar to early infancy, 77 (82) ; cerebro-spinal meningitis, 0 (1) ; meningitis, 5 (4) ; whooping cough, 2 (2) ; pneumonia, 35 (54) ; hernia and intestinal obstruction, 2 (5) ; external causes, 7 (18) ; and all other causes 42 (32).

Still Births.—These are not included in either births or deaths and they number 274 (271).

Marriages.—The number of marriages celebrated was 6,277 (6,226), and the rate per 1,000 of population was 7·39 (7.59). The record number of marriages was 8,129, with a rate of 13·34 in 1942 and the lowest in recent years was 5,321, with a rate of 8·48 in 1945.

Summary Return.—The following return (Table 1) shows the number of births, deaths, and marriages, the rate per 1,000 of mean population, the number of infantile deaths and the rate per 1,000 births.

TABLE 1.

Period.	Births Registered.		Marriages.		Deaths Registered.			
					Total.		Infants.	
	No.	Rate (*a*).	No.	Rate (*a*).	No.	Rate (*a*).	No.	Rate (*b*).
Mean—								
1920-24	11,857	23·43	4,326	8·55	4,901	9·68	693	58·45
1925-29	11,301	20·16	4,225	7·54	5,034	8·98	526	46·54
1930-34	8,989	15·54	3,660	6·33	5,001	8·65	342	38·05
1935-39	9,039	15·32	5,305	8·99	5,430	9·20	297	32·85
1940-44	11,743	19·30	6,843	11·25	6,235	10·25	406	34·57
1945-49	15,615	24·02	6,328	9·73	6,369	9·80	427	27·35
1950-54	17,807	23·62	6,362	8·44	7,023	9·31	404	22·69
Year—								
1952.....	17,884	23·69	6,241	8·27	7,050	9·34	413	23·09
1953.....	18,156	23·39	6,149	7·92	6,962	8·97	375	20·65
1954.....	18,227	22·89	6,190	7·77	7,179	9·01	388	21·29
1955.....	18,494	22·55	6,226	7·59	7,536	9·19	431	23·30
1956.....	18,964	22·34	6,277	7·39	7,593	8·94	377	19·88

(*a*) Per 1,000 of mean population. (*b*) Per 1,000 births.

4. INFECTIOUS AND NOTIFIABLE DISEASES.

The numbers of cases and deaths reported are shown in Tables 2 and 3.

TABLE 2.

Infectious Diseases. (Second Schedule).	Cases.		Deaths.	
	1955.	1956.	1955.	1956.
Acute infective encephalitis	5	17	3	2
Amoebiasis	1	1	1	—
Ancylostomiasis.....	1	—	—	—
Diphtheria	26	7	3	2
Diarrhoea, infantile infective	7	—	—	—
Dysentery, bacillary	63	37	4	2
Influenza in epidemic form	—	19	2	6
Meningococcal infection	10	12	5	4
Poliomyelitis	182	122	6	3
Puerperal pyrexia	1	3	—	—
Salmonella infection	4	26	1	—
Scarlet fever.....	289	249	—	—
Typhoid fever	1	—	—	—
Tuberculosis, pulmonary	297	319	46	39
Tuberculosis, other forms	29	30	4	5

TABLE 3.

Notifiable Diseases. (Third Schedule).	Cases.		Deaths.	
	1955.	1956.	1955.	1956.
Acute rheumatism	16	15	1	1
Brucellosis	3	3	—	—
Chorea	1	1	—	—
Erythema nodosum	6	4	—	—
Encephalitis following another disease	24	23	1	—
Hydatid disease	—	1	1	1
Infective hepatitis	502	791	5	7
Lead poisoning	3	—	1	—
Rubella	179	800	1	1
Tetanus	5	5	6	4
Typhus, flea borne	1	2	—	—

Diphtheria.—The cases were sporadic. All occurred in non-immunized persons, and were of severe type. Again the need for continued universal immunization is stressed.

Encephalitis.—"Encephalitis following another disease" covers complications of a considerable range of infections, including influenzal colds, mumps, and chickenpox. All are known occasional complications of the primary diseases.

Encephalitis (acute infective).—No identification of the virus has been made in any case. On circumstantial evidence, some would appear to be mosquito-borne, others not. It would seem that apart from the known Port Augusta type, Murray Valley Encephalitis may have spread to other parts of the State. Migrations of water birds in the very wet winter may be a related feature.

Meningococcal Infection.—Sporadic cases have occurred as in previous years. There has been no epidemic, but there was one occurrence of multiple cases in a family. Because of its response to modern treatment, the disease has lost its former deadliness.

Tetanus.—There were five cases and four deaths. Now that immunization is so widely available there should be no tetanus. The disease can be prevented effectively; its cure is difficult.

5. POLIOMYELITIS.

Statistics.—There were 122 cases of poliomyelitis and three deaths reported during the year under review. The yearly figures for the epidemic which commenced in May, 1949, appear in Table 4.

TABLE 4.

Year.	Cases.			Deaths.		
	Metropolitan Area.	Other Districts.	Total.	Metropolitan Area.	Other Districts.	Total.
1949	490	90	580	15	5	20
1950	816	157	973	7	10	17
1951	1,012	479	1,491	39	23	62
1952	435	274	709	7	5	12
1953	287	111	398	11	10	21
1954	123	53	176	2	3	5
1955	110	72	182	5	1	6
1956	58	64	122	2	1	3

Salk Vaccine.—The first batch of Salk vaccine manufactured by the Commonwealth Serum Laboratories, Melbourne, arrived in Adelaide on the 27th June, 1956. On the following day all four mobile units commenced injections in schools on a mass scale. To ensure that country people received comparable treatment with city residents, two units worked continuously in the country and two in the city until the end of the year. Until the Department closed on the 21st December, 1956, 223,979 injections were given. The breakdown into eligible categories is shown in Table 5.

TABLE 5.

	School Children.	Pre-school Children.	Expectant Mothers.	Special Risk.	Others.
First injections (126,602)	82,969	40,949	2,283	221	180
Second injections (97,377)	77,980	17,440	1,783	78	96
	160,949	58,389	4,066	299	276

Practically all schools in the State have been visited once; in 36 local board areas every school has been visited twice, so completing there the first and second injections.

People residing on the "Trans" line were immunized by arrangement with the Western Australian Department of Public Health. Outlying towns in the far north were visited by the Flying Doctor Service, by arrangement with the city of Broken Hill.

All vaccine was used as received from the Commonwealth Serum Laboratories; on some occasions it was used so quickly that the work of metropolitan units was suspended for several days. Despite the great difficulties in planning the country programme, with the risk of mechanical breakdowns and delays due to bad roads, the country mobile units were able to fulfil their programmes.

Expectant mothers of the metropolitan area were given appointment times at the Norwood office for their injections. In the country they and pre-school children were immunized when units were working in the local board of health areas. In 1957 three units will work in the country and one in the metropolitan area.

Effects of the Campaign.—It is too early yet to make any statement on the efficacy of the Salk vaccine in this State. It is encouraging, however, that so far there has been no proven case of poliomyelitis in any child who has received both first and second injections. On the other hand, during the first half-year of the project, there were 42 confirmed cases of poliomyelitis in unvaccinated persons; 26 of those patients were under 15 years of age. Two children developed poliomyelitis after their first immunization injection; both had been ill for approximately a week before they received the injection, and were, in fact, suffering from poliomyelitis before the injection was given. It was not expected that the vaccine would prevent development of the disease in such circumstances. Another child, aged 10½ months, after receiving one injection was reported as suffering from poliomyelitis; the diagnosis was not confirmed and it is considered that the child was suffering from another disease. One other child, aged 6 years, had received two injections, and later was reported as suffering from poliomyelitis; the diagnosis in this child has not been confirmed, but the results of the laboratory tests so far indicate that this child could be regarded as a "possible" poliomyelitis.

In summary then 42 cases have occurred in unvaccinated persons, 26 of whom were under 15 years of age. There has been no proven case in any child who has received first and second injections, but there is one possible case.

The information so far available, together with the great response from the public (the consent rate in almost every school has been over 90 per cent, and in many 100 per cent), gives reason for optimism that the incidence of poliomyelitis in South Australia will be considerably reduced by the introduction of the Salk vaccine.

6. TUBERCULOSIS.

New Notifications.—The number of new cases reported during the year again showed a slight rise to 349, of which 319 were pulmonary and 30 were in other sites. The age and sex incidence followed the familiar pattern of recent years, 215 cases being in males. There were some notable changes in the geographical distribution of new cases as compared with 1955. Increases in notifications in some areas, e.g., Port Adelaide, followed compulsory X-ray surveys in those areas; 249 cases were reported from the metropolitan area and 95 from country towns and districts. Table 6 shows the distribution by Local Board of Health areas.

TABLE 6.

Metropolitan Area.		Country Area.	
Local Board of Health—	Notifications.	Local Board of Health—	Notifications.
Port Adelaide	47	Salisbury	6
Enfield	29	Yorke Peninsula	6
Adelaide	23	Murat Bay	6
Woodville	22	Port Pirie	5
Marion	18	Millicent	4
Unley	15	East Torrens	3
Mitcham	14	Gawler	3
Payneham	13	Peterborough Town	3
Burnside	12	Clare Town	3
Prospect	9	Naracoorte District	3
Glenelg	7	Kimba, Whyalla, Burra, Wallaroo, Meningie, Kadina Town, Waikerie, Penola, Naracoorte Town, Stirling, Onkaparinga, and Port Augusta, each	2
West Torrens	7		
Thebarton	6		
St. Peters	6		
Hindmarsh	5		
Campbelltown	5		
Kensington and Norwood	5		
Brighton	3		
Henley and Grange, Walkerville, and Colonel Light Gardens, each	1	Kadina District, Elliston, Tumby Bay, Port Lincoln, Cleve, Orroroo, Port Broughton, Yorketown, Jamestown Town, Jamestown District, Kingscote, Strathalbyn Town, Yankalilla, Lacepede, Beachport, Meadows, Teatree Gully, and Barossa, each	1
		Out Districts	8
		Northern Territory	1
		Broken Hill, N.S.W.	1
		Overseas (Sailors)	5

Migrants.—The incidence of tuberculosis in migrants who have been less than five years in Australia remains about the same. There were 36 notifications from this group in the year, 11 being from the United Kingdom, 15 from Italy, and 10 from other countries. They make up 10·3 per cent of all notifications. Corresponding figures for 1955 were 30 notifications, or 9·2 per cent of the total.

Tuberculosis Allowances.—An important index of the success of the tuberculosis campaign is the fact that, despite increased notifications and decreased deaths, fewer people are now receiving tuberculosis allowances. This is because more and more sufferers are recovering and becoming self-supporting. At the beginning of 1955, there were 499 persons in receipt of the allowance. By January, 1956, this number had fallen to 464, and by the end of the year there was a further decline to 441. There has thus been a decrease of 11·6 per cent in numbers receiving tuberculosis allowance during the past two years.

Mortality.—During 1956 44 persons died from tuberculosis. This is the lowest number of deaths from tuberculosis on record in South Australia for any year of this century. The death rates of 4·6 per 100,000 of population for pulmonary tuberculosis, and 5·2 per 100,000 for all forms of tuberculosis, are considerably lower than any previously recorded.

Table 7 sets out the 44 deaths by age and sex. Deaths from tuberculosis among males were more than twice those among females. More than half the deaths were in persons aged 55 years or more.

TABLE 7.—DEATHS FROM TUBERCULOSIS, BY AGE AND SEX—1956.

Age Group.	Males.	Females.	Total.
0– 4 years	—	2	2
5–14 years	—	—	—
15–24 years	1	—	1
25–34 years	2	2	4
35–44 years	5	3	8
45–54 years	4	1	5
55–64 years	7	2	9
65 and over	12	3	15
Totals	31	13	44

X-ray Surveys.—The areas covered by compulsory chest X-ray surveys in 1956 included, in the metropolitan area, the whole of Port Adelaide, the large western portion of Woodville not previously surveyed, and a large part of Marion. Country areas covered were the districts of Stirling, East Torrens, Onkaparinga, and Gumeracha in the Adelaide Hills, and the whole of Eyre Peninsula from Franklin Harbour to Penong. The West Coast people took full advantage of the survey; practically everyone as far north as the East-West railway line, and west to the Western Australian border, attended.

During the year 71,666 persons were examined, an increase of 40 per cent over the previous year. In the 45,293 examinations made in the Adelaide metropolitan area 53 new active cases of tuberculosis were discovered through the survey (one per 855 examined). Among the 26,373 subjects in country areas, 21 new active cases of tuberculosis were found (one per 1,256 examined). Patients discovered in surveys continue to present with tuberculosis in an earlier stage than patients found by the Chest Clinic. The results of treatment are correspondingly good.

Tuberculin Testing and BCG Vaccination.—The Mantoux testing programme has continued among national service trainees, 7th grade school children in the metropolitan area, and all school children in country towns and districts which the mobile X-ray unit is visiting.

In addition, contacts of known tuberculosis patients, and groups at special risk, such as nurses, are tested at the Chest Clinic, and medical students at the University Student Health Service.

TABLE 8.—TUBERCULIN TESTING AND BCG VACCINATION OF VARIOUS GROUPS, 1956.

Group.	Number Tested.	Natural Positives.	Percentage Natural Positives.	Previous BCG.	Non-Reactors.	BCG Given.
Metropolitan 7th Grade School Children—						
Australian born	4,351	183	4·1	22	4,146	4,547
Migrants	577	118	20·5	28	431	
Country School Children, All Grades—						
Australian born	6,374	158	2·5	22	6,194	1,857
Migrants	471	38	8·1	41	392	
National Service Trainees	2,471	377	15·3	191	1,903	1,880
Aboriginal Natives, Eyre Peninsula	293	4	1·4	1	288	234

There has been a continual decline in recent years in the proportion of children reacting to tuberculin at a given age. This is true of both migrant children and those born in Australia. In fact, the proportion of positive reactors in each group is now half of the 1952 figure. This is, perhaps, the most valuable sign that the tuberculosis campaign is producing real and lasting results.

The remarkably low infection rate among aboriginal natives on Eyre Peninsula is both a cause for satisfaction and a warning that members of this susceptible group require protection should they move into centres of infection. The natives tested were in two groups—those living at Koonibba Mission under conditions approximating European standards and those living under semi-tribal outdoor conditions at Talawan Tank. The four positive reactors were all in this latter group.

7. SCHOOL HEALTH SERVICES.

Staff.—The year 1956 was a satisfactory one in many respects. At the end of the year the School Health Services consisted of the Principal Medical Officer, six medical officers, five dental officers, nine nurses, five dental assistants, one part-time audiologist, one audiometriste, and two shorthand typistes.

In December, Dr. Kenneth N. Steele, a part-time officer for many years, died; it was a sad loss, and appreciation is expressed of his services over the years. Dr. Marcella Sexton retired after 16 years of loyal work in the schools. There were several other changes of medical staff, which from July to October consisted of seven full-time medical officers, and one part-time officer.

Medical Examinations.—Despite changes in personnel, the numbers of children examined over the year increased from 26,482 in 1954 and 35,359 in 1955 to 53,330 in 1956. The school attendance in 1956 was 135,270. Two hundred and thirty-two schools were visited during the year. Table 9 shows the number of schools visited, children examined, and defects noticed.

TABLE 9.

	Metropolitan.	Country.	Total.
Schools visited	82	150	232
Children examined	36,721	16,609	53,330
Defect notices sent—			
Vision	2,294	1,641	3,935
Hearing	835	464	1,299
Nose and throat	1,008	610	1,618
Teeth	7,686	6,178	13,864
Heart	200	79	279
Skin	470	368	838
Lungs	84	23	107
	12,577	9,363	21,940

Notices of dental defect were sent to parents of 13,062 children. Children already under dental treatment were not included in the statistics and their parents were not notified.

Defects noticed, calculated per 10,000 children examined, are shown in Table 10.

TABLE 10.—DEFECTS NOTICED PER 10,000 CHILDREN EXAMINED.

Year.	Vision.	Hearing.	Nose and Throat.	Teeth.	Heart.
1951	599	202	739	4,784	55
1952	693	200	689	4,439	40
1953	676	168	514	4,466	46
1954	646	272	355	3,769	43
1955	691	252	256	3,136	38
1956	738	244	303	2,599	52

In 1956 16,609 children in 150 country schools were examined. Defects were found in 9,363. During 1955 a pilot scheme for the examination of school children by the nearest resident doctor was introduced at Cowell and Tumby Bay. The children from the surrounding smaller schools were brought in to the main school by arrangement. It is hoped to extend the scheme over most of Eyre Peninsula.

In 82 metropolitan schools, out of a total of 103, 36,721 children were examined by medical officers in 1956. It is obvious that a larger staff is necessary for all the schools to be visited yearly, so that all the children can be examined regularly in the stated grades.

Twenty-one thousand eight hundred and fifty children had pure tone audiometer tests in 142 schools, and 1,197 defects were discovered—5·4 per cent. A further 440 attended at the office and 21 were finally fitted with hearing aids at the Commonwealth Acoustic Laboratory. Arrangements were made with the Kindergarten Union for their children to have audiometer tests. The audiometriste visited 26 branch kindergartens during the year. Affiliated kindergartens will be tested in 1957.

Infections in School Children.—The numbers of communicable diseases in children attending State schools are shown in Table 11.

TABLE 11.

Year.	Diphtheria.	Scarlet Fever.	Measles.	Rubella.	Whooping Cough.	Chicken-Pox.	Mumps.	Polio-myelitis.	Infective Hepatitis.
1951	14	160	1,880	761	148	1,398	1,198	364	(a)
1952	2	128	3,099	452	664	3,144	2,188	123	( )
1953	2	84	958	99	236	2,252	1,727	71	(a)
1954	2	125	3,933	268	162	1,744	1,952	36	(a)
1955	11	215	1,114	452	264	1,696	2,207	43	93
1956	1	179	5,027	1,178	227	1,856	2,607	30	117

(a) not recorded.

For comparison, the figures for communicable diseases are shown per 10,000 children attending all State schools (Table 12).

TABLE 12.

Year.	Diphtheria.	Scarlet Fever.	Measles.	Rubella.	Whooping Cough.	Chicken-Pox.	Mumps.	Polio-myelitis.	Infective Hepatitis.
1951	1·5	16·7	198	80·1	15·6	147	126	36·3	(a)
1952	0·2	12·4	300	43·9	64·4	305	212	12·3	(a)
1953	0·2	8·4	95·8	9·9	23·6	225·2	172·7	7·1	(a)
1954	0·164	10·25	322·4	22	13·3	143·2	160·2	3·0	(a)
1955	0·8	16·9	87·8	35·6	20·8	133·7	173·5	3·3	7·3
1956	·07	13·2	371·6	87·1	16·7	137·2	192·7	2·2	8·6

(a) not recorded.

The total number of communicable diseases was 11,364. This is an increase on the 1955 figures of 5,157, mainly due to the increase in measles to 5,027 cases, and rubella to 1,178 cases. Poliomyelitis cases were slightly lower. There were seven cases of meningitis, eight of encephalitis, and seven of tuberculosis. Sixteen cases of conjunctivitis were also reported.

Other Examinations.—Five hundred and ninety-three female and 363 male students entering and leaving the Teachers' College or attending State schools as probationary students were examined medically in 1956. All female teachers and some male teachers who were referred by the Education Department after returning from sick leave were seen, and all applications for invalidity pensions were considered, and, if necessary, the applicant was examined. Two hundred and seventy-three teachers applying for permanent appointment, superannuation, or temporary positions were seen during the year. Children in interstate sports teams were also examined. These examinations were much facilitated by the structural alterations completed early in the year. The increase in numbers makes smooth running essential.

Health Lectures.—One lecture a week in hygiene was given to students at the Teachers' College, and two lectures a week to two groups of temporary teachers. The Principal Medical Officer was assisted in this by a medical officer of her staff.

Thirty-four mothers' clubs were addressed by medical officers. Time spent in this educational work is rewarding. It is encouraging to note the growing demand for knowledge about child health matters. A desirable link is established between the mother and the medical officer. Visual aids are not used, but would probably be helpful.

Treatment.—Follow-up work by the nurses was continued in the metropolitan schools. Seventy per cent of the children had received the attention recommended by the medical officers. Where nothing had been done further notices were sent or the parents interviewed. A few outstanding cases were visited by social workers of the Psychology Branch. One thousand and seventy forms were returned by doctors and specialists to whom the children were taken in accordance with the arrangement suggested to, and approved by, the British Medical Association. It is hoped for even greater co-operation in the future.

The School Health Services continue to act in close touch with the Psychology Branch of the Education Depart, ment. It is, however, unfortunate that such long waiting lists occur. In the case of children needing speech therapy-95 cases were referred in 1956, and only nine of the more urgent cases could receive treatment. At present there is only one part-time speech therapist on the staff.

Dental Services.—The position of Senior Dentist was created and Mr. M. L. Kranz was appointed in October, on his return from England. Four dentists and their dental assistants were working during the year at Karoonda, Loxton, Kimba, Peterborough, and Kangaroo Island. The following work was done :—

Number of Children Treated.—1,652.

Extractions.—Permanent teeth, 588 ; deciduous teeth, 2,572 ; totalling 3,160, and averaging 1·9 per child.

Fillings.—Permanent teeth, 6,253 ; deciduous teeth, 2,082 ; totalling 8,335, and averaging five per child.

Of the children examined, 92 per cent were found to require dental treatment of some description.

School dentists are requested to give talks and show films to parents' meetings from time to time. It is hoped to extend that work.

Plans for two dental caravans were completed during the year, and they are now under construction. Four new electric dental units were also acquired, greatly facilitating the work of the dental officers.

It is anticipated that two dentists who obtained their degrees in 1956 under the new bursary system will join the School Health Services in February, 1957, bringing the number of dentists to seven. It is obvious that the work possible by the present staff is far below the needs of country children.

Deafness Guidance Clinic.—The Clinic commenced to function in March, 1956. Dr. R. N. Reilly was appointed audiologist. Under his supervision a sound proof room with audiometers, wobbulator and tape recorders was erected in the offices used by the School Health Services at the State Bank Building. An audiometriste was also appointed to the Clinic, and to assist Sister Greig in testing the children in the schools and kindergartens.

The number of children seen to the end of 1956 was 330, comprising 147 girls and 183 boys. Of these, 300 were of school-going age, mainly referred by school medical officers, and 30 were younger, coming from kindergartens or privately. One hundred and ninety-seven of these children had a hearing loss of less than 30 decibels, but needed treatment. Table 13 shows the numbers of children examined at the Clinic, and the disposal of them according to treatment requirements.

TABLE 13.

INITIAL EXAMINATION.

	Number.	No Abnormality Detected.	No Treatment.	Family Doctor.	Specialists.	Adelaide Children's Hospital.	Royal Adelaide Hospital.
School-age boys	162	10	5	109	18	17	3
School-age girls	137	4	2	88	20	17	6
Pre-school boys	20	2	3	14	1	—	—
Pre-school girls	10	1	1	5	2	1	—
FIRST RE-TEST EXAMINATION.							
School-age boys	15	7	—	8	—	—	—
School-age girls	20	1	3	12	1	—	3
Pre-school boys	2	1	—	1	—	—	—
Pre-school girls	1	1	—	—	—	—	—
SECOND RE-TEST EXAMINATION.							
School-age girls	5	—	—	3	—	1	1

In addition, four school-age boys were referred to the Advisory Panel for Hard of Hearing Children.

Since March the attendances have continued to increase, and it is anticipated that they will continue to do so as more screen testing should be possible in the schools and kindergartens.

Examination Facilities.—Inadequate accommodation at the schools still makes the work of medical and dental examination very difficult. Head masters as a general rule do all they can to assist, but all their rooms are in use and often overcrowded. The great increase in the number of school children renders the aim of three medical examinations for each child in the primary school unattainable with the present staff. All schools should be seen yearly, but at present many schools are only seen every other year, and country schools still less frequently. Children's teeth also are much neglected, both in city and country. A much larger staff is necessary, or some other means must be arranged if the needs are to be supplied. With the increase in school attendance from 126,847, in 1955, to an estimated 143,000 in 1957, additional officers are needed with increasing urgency each year.

8. GENERAL SANITATION.

Inspections.—The Central Board of Health is required to supervise the work of local boards of health and advise them on all matters relating to the health of the areas under their control.

Inspections in local board areas are regularly carried out by health inspectors of the Department of Public Health who are appointed under the Health Act and the Food and Drugs Act. With the small number of the present staff of the Department it is not practicable for an annual visit to be made to each local board, but that is the aim.

Each inspection consists of a routine examination with the local health inspector. Samples of everything in the area that has any bearing on the health of the district are inspected ; food shops, food preparation places, other business premises, houses, sewage disposal systems, toilets, water supplies, are a few of the items inspected.

In addition, special attention is paid to any health problems or anything relating to health about which the local board has requested assistance. A comprehensive report, including recommendations on the inspection, is submitted to the Central Board. A copy of this report with comments and action required by the Central Board is then forwarded to the local board concerned. In this way the Central Board is kept informed of conditions, and the local boards are assisted and encouraged to maintain a high standard of health within their areas.

Slaughtering Premises.—The construction and conduct of slaughtering premises in country areas continue to give concern. There has been steady improvement in the structures, but some lag in the sanitary conduct of the work. Inspectors of the Central Board staff continue to report defects such as the feeding of uncooked offal to swine and dogs, dogs allowed to run loose at slaughtering premises, and inadequate attention to general sanitation. In this matter, as in all branches of sanitation, improvement depends on the steady supervision of premises and correction of errors by the local boards' inspectors. The assistance of the Central Board and its officers can be relied on in all efforts to improve conditions.

Sanitary Matters at Naracoorte.—The sanitary troubles in the town are centred about the desire for deep drainage, the installation of which would solve most of the problems. At present some parts of the town are suitable for septic tanks, and some are not. Septic closets might be a partial answer—but some residents hold the view that their installation would be prejudicial to the prospects of obtaining deep drainage. In the meantime the installation of a town drain to take effluent, sullage, and rain water from the main business area to a point in the creek beyond the town limit is being considered.

Floods in the Murray Valley.—The record floods in the Murray Valley necessitated several visits by the Department's officers. Advice both direct to local boards and by means of circulars was given on a number of subjects.

The expected incidence of mosquitoes and other insect pests was discussed ; the technical circulars explained methods of minimizing the effects. It was realized that elimination would be an enormous job, but that much could be done to avoid extreme discomfort. Careful disposal of sewage effluents, and the protection of water supplies were important features.

There has been no report of disease outbreaks following the floods, a tribute to the care and good sense of the public. The people have experienced a period of grave distress and anxiety.

The Murray Valley Rash.—An apparently new epidemic disease occurred in the Murray Valley before the floods. It appeared to be a virus disease, possibly spread by an insect vector. Symptoms were feverishness, a skin rash, and multiple joint pains. It closely resembled a disease known as "epidemic polyarthritis", which occurred among troops in North Australia in 1943-44. Though painful and unpleasant, recovery is fairly rapid, and always complete.

Lead Poisoning.—An investigation of allegations of lead poisoning at Peterborough was made. Considerable amounts of fine lead sulphide dust are blown from the trucks carrying the concentrates. Many years ago, there were many cases of "leading" in railway employees and others. This quite suddenly ceased and there have been no proved cases for many years. The improvement coincided with the cessation of the mining of oxidized surface ores. It is evident that the lead sulphide in the ore is physically and chemically so inert that it is not soluble in body fluids ; though lead dust is widely distributed in the neighbourhood, no actual poisoning occurs, nor is there any practical risk.

A wide investigation was made into the possibility of "leading" in industry in Adelaide and the vicinity. A few minor imperfections of precaution were seen but not actual cases. Nothing resembling last year's severe case in a battery salvaging plant was seen.

9. FOOD AND DRUGS.

Testing of Samples.—Samples are submitted by officers of the Metropolitan County Board, and other local authorities, as well as by officers of the Department. Table 14 shows the results of analyses of samples of food and drugs submitted to the Government Analyst.

TABLE 14.—RESULTS OF ANALYSES OF FOODS AND DRUGS FOR 1956.

Article.	Number Submitted.	Not to Standard or Incorrectly Labelled.
Bread	10	5
Butter	1	—
Cheese	20	—
Coffee essence	1	1
Cordial and cordial extract	7	—
Cream	3	—
Cream puffs	4	3
Crustacean meat	4	4
Dripping	1	1
Flour "Continental"	1	1
Ginger, powdered	3	3
Ham loaf	1	—
Ice cream and snow cream sundae	20	2
Margarine	6	2
Meat	1	—
Milk	1,318	65
Pepper, cayenne	4	4
Pepper, white	6	—
Pickles	5	5
Salt	4	—
Sausage	25	11
Smoked salmon	2	1
Temperance drinks	3	1
Tinned fish	6	5
Waters, aerated	7	2
Wines	8	2

Dangerous Drugs.—Several new synthetic drugs were brought under the provisions of the Dangerous Drugs Act, 1934-1955, in accordance with the recommendations of the World Health Organization. The drug pholcodine was classified in the same category as codeine and dionine. The Dangerous Drugs Regulations, 1937, were amended to provide that any licence or authority which had been withdrawn by the Minister could be re-issued or regranted by the Minister on the recommendation of the Board.

Systemic Organic Phosphates.—The Board has continued its prohibition on the sale of systemic organic phosphates and their application to food crops. With the advent of less dangerous compounds, it has agreed to the sale of these, but is continuing its prohibition on their application to food crops.

Purity of Food Colours.—The standards of purity for food colours are being investigated and progress has been made towards the prescribing of such standards.

Antihistamines for Travel Sickness.—The question of an exemption for the antihistamic drugs when used for travel sickness from the prescription requirement has been considered. No exemption has yet been provided, pending discussions on the question of uniform poisons schedules in all States.

Sodium Fluoroacetate.—The Poison Regulations were amended to provide for the sale of this poison when in the form of an approved bait for vermin destruction, without the need for the purchaser to hold a permit to purchase, as applies in the case of the pure chemical. Experience had shown that there was little chance of accidental poisoning with an oat-based bait.

Food Preservation with Antibiotics.—The preservation of certain foods with antibiotics has been reviewed. However, there has been no demand as yet for the use of such methods in this State.

10. SUMMARY AND COMMENTS.

A Healthy State.—The report supports the claim that South Australia still holds its place as one of the healthiest countries in the world.

Trouble-free Year.—The year under review has presented few serious or new problems for the Board and the Department. There is always the steady routine in public health, requiring constant study and steady effort. The Board appreciates the good work of the Department's staff, the co-operation of other Commonwealth and State Government Departments, and the interest shown by local boards and their officers. Effective progress in public health requires the wholehearted enthusiasm of all concerned in its administration.

Radio-activity.—An important addition to the State's health legislation has been the introduction of measures for controlling the use of radio-active substances and machines producing radio-active substances. The rapidly expanding field of nuclear physics is producing many potential hazards to health. Through the agency of the new legislation it is hoped to provide adequate safeguards to the public health.

New Chemicals.—In the chemical world the continued elaboration of new substances for controlling insect pests and weeds has necessitated the introduction of controls in the interests of human safety. For the same reason, the increasing use of food additives and new drugs is requiring continued attention and some legislative action.

Infantile Mortality.—It is pleasing to report the low infantile death rate for 1956—the lowest on record, and perhaps approaching the irreducible minimum. The occurrence of congenital defects is likely to be the block to any rapid improvement in the near future. However, the possible effects of rubella (and perhaps other infections) in pregnant women and means for controlling those effects are receiving the attention of medical scientists.

Preventible Infections.—Although it is to be expected that some infections, and doubtless some new infections, will continue to harass mankind, many of the old-time dangers can now be averted. With the better standard of community hygiene, typhoid fever and other intestinal infections rarely give trouble. There should also be complete, or near complete, elimination of diphtheria and tetanus, thanks to the general availability of effective immunizing agents. Every young child should be given injections of triple antigen, to protect against diphtheria, tetanus, and whooping cough.

Poliomyelitis.—Like 1955, this year has been one of low incidence of this infection—a welcome relief after the long-lasting epidemic of 1949 to 1954. It is confidently hoped that the general use of the Salk vaccine, and further developments in immunizing practice, will prevent similar trouble in the future. Assessment of the results of the new procedure will be a long-term matter, perhaps 10 years. Long periods of freedom from epidemics were enjoyed in pre-vaccine days; the disease has long been "poliomyelitis the unpredictable".

Tuberculosis Declines.—The fall in deaths from tuberculosis is a hopeful sign. The early detection of the disease, and its prompt treatment with modern drugs, are saving countless lives. As long as new cases occur, however, there is need for continued activity against the infection. The patients and their families need care and help while treatment goes on.

School Health Services.—In this important section of the Department's work two major developments are reported. The Deafness Guidance Clinic is an expansion of work designed to help a group of seriously handicapped children, and to co-ordinate measures for their education and general assistance. The other feature is in the Dental Branch, for which two splendidly-equipped mobile units are being constructed; the new equipment will enable a greater volume of effective dental work to be done, especially for children in country areas where dental attention is hard to come by.

Health Education.—The Department's quarterly bulletin, "Good Health", reached its hundredth issue recently. The little journal is distributed to all members and officers of local boards of health throughout the State, as well as to Members of Parliament, pharmacists, medical practitioners, and heads of high schools and colleges. A wider distribution has been suggested, and arrangements are in hand to effect it. Medical officers of the Department's staff frequently meet with small groups, parents' associations and mothers' clubs, and discuss health matters with them. Group discussions of that type are generally considered the most effective means of spreading knowledge of community health.

The Work of Local Boards.—The modern trend in public health is towards education rather than punishment, and that fact influences the work. Health inspectors serve most effectively by showing people how to live healthfully, and by explaining the reasons for the various practices. Most people are anxious to conduct their affairs properly if they know how. The standard of health reached in the State depends mainly on the enthusiasm and efficiency of local boards and their officers. Our system is based on the well-proven English method—central guidance and local action—and both are essential to success. Every local board should ensure that its inspectorial work is well and thoroughly done. Some county boards do not need a whole-time inspector; the Health Act provides for such circumstances in its sections relating to the forming of county boards. In many country areas that is a development worth adopting.

A. R. SOUTHWOOD, Chairman.
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G. H. McQUEEN
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} Members.

H. T. HUTCHINS, Secretary.

Adelaide, April, 1957.