Annual report of the Department of Public Health / Union of South Africa.

UNION OF SOUTH AFRICA

ANNUAL REPORT

OF THE

Department of Health

Year ended 31st December, 1953

Published by Authority

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UNION DEPARTMENT OF HEALTH.

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THE HONOURABLE THE MINISTER OF HEALTH.

SIR,

I have the honour to submit, for your information, the following report on the work of the Department of Health for the year ended 31st December, 1953.

(I) INTRODUCTION.

As mentioned in the previous annual report the problem of the health and welfare of the people in the Union of South Africa, with its many racial components, differing widely in levels of development, culture, tradition and belief, has in recent years been intensified by an unprecedented industrial revolution with a resultant flow of population from the rural to the urban areas, as indicated in the following Demographical Table:—

(1) *Population in Census Year* 1951 (Revised figures).

Europeans...	2,641,689	= 20·9 per cent of total.
Asiatics.....	366,664	= 2·9 per cent of total.
Coloureds....	1,103,016	= 8·7 per cent of total.
Bantu.....	8,556,390	= 67·5 per cent of total.
ALL RACES...	12,667,759	

(2) *Percentage of Population Enumerated in Urban Areas* (Revised figures).

Race.	1946.	1951.	Increase.
Europeans.....	74·6	78·4	3·8 ± 302,000.
Asiatics.....	71·3	77·5	6·2 ± 81,000.
Coloureds.....	60·9	64·7	3·8 ± 148,000.
Bantu.....	23·7	27·2	3·5 ± 473,000.
All Races.....	38·5	42·6	4·1

(II) 1.—DEPARTMENT OF HEALTH AS AT 31ST DECEMBER, 1953.

Minister of Health: Dr. The Hon. A. J. R. van Rhyn.
Secretary and Chief Health Officer: Dr. J. J. du Pré le Roux.

Under-Secretary: N. A. G. Reeler, Esq.

Assistant Secretary: S. C. Schoeman, Esq.

Departmental Chief Clerk: H. J. Adams, Esq.

Head Office.

Commissioner for Mental Hygiene: Dr. I. R. Vermooten.

Deputy Chief Health Officers: Dr. B. M. Clark and Dr. R. J. Smit.

Chief: Division of Venereal Diseases: Dr. H. F. Schiller.

	Total Number of Posts.
Professional.....	14
Administrative.....	35
Clerical.....	139
Other posts.....	51
Non-European posts.....	62
Temporary.....	1

Regional Offices.

(Including Pathological Laboratories and Port Health Staff).

Tzaneen..... Deputy Chief Health Officer: Dr. D. H. S. Annecke.

Cape Town... Deputy Chief Health Officer: Dr. P. C. Eagle.
Senior Pathologist: Dr. R. Turner.
Port Health Officer: Dr. J. M. Bosman.
Port Health Officer (Port Elizabeth): Dr. D. C. Gosling.

Durban..... Deputy Chief Health Officer: Dr. A. L. Ferguson.
Senior Pathologist: Dr. M. C. Botha.
Port Health Officer: Mr. N. Miller.

East London.. Deputy Chief Health Officer: Dr. W. A. Smit.

Bloemfontein.. Deputy Chief Health Officer: Dr. C. J. H. Brink.

Johannesburg.. Deputy Chief Health Officer: Dr. C. A. M. Murray.
Medico-legal Pathologist: Prof. R. H. Mackintosh.
Ecologist and Chief Rodent Officer: Mr. D. H. S. Davis.

	Total Number of Posts.
Professional and Technical.....	125
Administrative.....	6
Clerical.....	61
Other posts.....	125
Non-European posts.....	162
Temporary (all grades).....	1,525

2.—DEPARTMENTAL INSTITUTIONS.

Tuberculosis Services.

King George V Hospital, Durban: Medical Superintendent, Dr. B. A. Dormer.
Nelspoort Sanatorium, Restvale: Medical Superintendent, Dr. T. W. Randall.
Rietfontein Hospital, Johannesburg: Medical Superintendent, Dr. J. H. Loots.
Westlake Hospital, Retreat, Cape Town: Medical Superintendent, Dr. P. Scher.
West End Hospital, Kimberley: Medical Superintendent, Dr. C. A. Sleggs.
Tembuland Hospital, Umtata: Medical Superintendent, Dr. F. J. Wiles.
Durban Chest Clinic: Medical Officer-in-Charge, Dr. G. S. Pirrie.
Nama Hospital, Springbok: Part-time Medical Superintendent, Dr. F. H. Bakker.

	Total Number of Posts.
Professional and Technical.....	104
Administrative.....	6
Clerical.....	39
Nursing.....	294
Other posts.....	159
Non-European posts.....	1,330
Temporary.....	10

Mental Hospitals and Institutions for the Feebleminded.

Weskoppies Hospital, Pretoria: Physician Superintendent and Deputy Commissioner for Mental Hygiene, Dr. B. P. Pienaar.
Alexandra Institution, Cape Town: Physician Superintendent, Dr. M. Ginsberg.
Fort England Hospital, Grahamstown: Physician Superintendent, Dr. M. M. Cohen.
Fort Napier Hospital, Pietermaritzburg: Physician Superintendent, Dr. D. J. Rossouw.
Komani Hospital, Queenstown: Physician Superintendent, Dr. K. B. Wright.
Kowie Hospital, Port Alfred: Physician Superintendent, Dr. C. A. D. Heese.

Umgeni Waterfall Institution, Howick: Physician Superintendent, Dr. C. G. A. Simonsz.
Oranje Hospital, Bloemfontein: Physician Superintendent, Dr. D. S. Huskisson.
Sterkfontein Hospital, Krugersdorp: Physician Superintendent, Dr. L. A. Hurst.
Tower Hospital, Fort Beaufort: Physician Superintendent, Dr. J. J. G. de Kock.
Town Hill Hospital, Pietermaritzburg: Physician Superintendent, Dr. T. E. Cheze-Brown.
Valkenberg Hospital, Observatory: Physician Superintendent, Dr. G. J. Key.
Witrand Institution, Potchefstroom: Physician Superintendent, Dr. P. C. W. Deppe.

	Total Number of Posts.
Professional and Technical	84
Administrative	9
Clerical	56
Nursing	1,809
Other posts	627
Non-European posts	1,537
Temporary	48

Leper Institutions.

Westfort Institution, Pretoria: Medical Superintendent, Dr. A. R. Davison.
Mjanyana Institution, Transkei: Medical Superintendent, Dr. P. A. Thornton.
Amatikulu Institution, Zululand: Superintendent, Mr. I. G. C. Scotney.
Mkambati Institution, Pondoland: Superintendent, Mr. P. R. Schoeman.
Bochum Institution, Pietersburg (Transvaal): Superintendent, Mr. J. H. G. Franz.

	Total Number of Posts.
Professional and Technical	9
Administrative	4
Clerical	7
Nursing (European)	38
Other posts (European)	53
Non-European posts	328
Temporary	2

Venereal Diseases Hospitals.

Rietfontein Hospital, Johannesburg: Medical Superintendent, Dr. J. H. Loots. (There are other small hospitals, viz. at King William's Town, Vryburg and Zeerust.)

3.—Health Centre Services.

Institute of Family and Community Health, Clairwood, Durban. Medical Officer-in-Charge, Dr. S. L. Kark.

The following 30 Health Centres were in operation in the different provinces on 31st December, 1953 (at each centre it is indicated by means of a cross, which section of the community is catered for):—

CAPE.

Health Centre.	European.	Non-European.
1. Adelaide	*	*
2. Cradock		*
3. Fort Beaufort	*	*
4. George	*	*
5. Gordonia		*
6. Grahamstown		*
7. Grassy Park (Cape Town)		*
8. Knysna	*	*
9. Mossel Bay	*	*
10. Sandflats (Alexandria)	*	*
11. Stellenbosch	*	*
12. Umtata		*
13. Walmer (Port Elizabeth)	*	*
14. Zwelitsha (King William's Town)		*

NATAL.

Health Centre.	European.	Non-European.
1. Botha's Hill		*
2. Gcilima (Port Shepstone)		*
3. Ixopo		*
4. Newlands (Durban)		*
5. Nottingham Road		*
6. Polela (Bulwer)		*
7. Springfield (Durban)		*
8. Tongaat		*
9. Clairwood (Durban)	*	*

TRANSVAAL.

Health Centre.	European.	Non-European.
1. Bloemhof		*
2. Bosbokrand		*
3. Evaton		*
4. Lady Selborne (Pretoria)		*
5. Randfontein		*
6. Witrivier	*	*

ORANGE FREE STATE.

Health Centre.	European.	Non-European.
1. Bethlehem		*

	Total Number of Posts.
Professional and Technical	82
Administrative	1
Clerical	18
Nursing	65
Other Posts	13
Non-European Posts	678
Temporary	7

4.—District Surgeons.

The following table shows the distribution of whole-time and part-time districts surgeons in the Union. All part-time district surgeons, in addition to their annual salary, receive a drug-allowance and certain other fees and allowances. One post (i.e. Laagersdrift) where a part-time district surgeon worked on an inclusive salary was converted into a full-time post during the year.

District Surgeons as at Dates Shown.

Date.	Province.	Whole-time.	Part-time.		Total.
			On Inclusive Salary.	On Annual Salary with Certain Fees and Allowances.	
31/12/52.	Cape	13	—	186	199
	Natal	5	—	47	52
	Transvaal	35	1	82	118
	Orange Free State	3	—	67	70
	Relief	2	—	—	2
	Union	58	1	382	441
31/12/53.	Cape	11	—	186	197
	Natal	4	—	47	51
	Transvaal	35	—	82	117
	Orange Free State	3	—	68	71
	Relief	2	—	—	2
	Union	55	—	383	438

(III) REGIONAL OFFICES.

1. The Union is divided into six regions, each under the control of a Deputy Chief Health Officer who is responsible for the activities of the Department in his region. In accordance with the policy of decentralisation further functions have been delegated to the different Regions. Except that a new Magisterial District, Warmbaths, has been proclaimed in the Northern Transvaal Region, the six regions remain the same as set out in the last Annual Report and are as follows:—

(1) *Cape Region, Deputy Chief Health Officer, Cape Town*—

Aberdeen.	Mossel Bay.
Beaufort West.	Murraysburg.
Bellville.	Namaqualand.
Bredasdorp.	Oudtshoorn.
Britstown.	Paarl.
Caledon.	Pearston.
Calitzdorp.	Philipstown.
Calvinia.	Piquetberg.
Cape Town.	Port Elizabeth.
Carnarvon.	Prieska.
Ceres.	Prince Albert.
Clanwilliam.	Richmond.
Cradock.	Riversdale.
De Aar.	Robertson.
Fraserburg.	Simonstown.
George.	Somerset East.
Gordonia.	Somerset West.
Graaff-Reinet.	Stellenbosch.
Hanover.	Steytlerville.
Heidelberg.	Sutherland.
Hopefield.	Swellendam.
Hopetown.	Tulbagh.
Humansdorp.	Uitenhage.
Jansenville.	Uniondale.
Kenhardt.	Van Rhynsdorp.
Knysna.	Victoria West.
Ladismith.	Wellington.
Laingsburg.	Williston.
Malmesbury.	Willowmore.
Middelburg.	Worcester.
Montagu.	Wynberg.

(2) *Eastern Cape Region, Deputy Chief Health Officer, East London*—

Adelaide.	Matatiele.
Albany.	Middeldrift.
Albert.	Molteno.
Alexandria.	Mount Ayliff.
Aliwal North.	Mount Currie.
Barkly East.	Mount Fletcher.
Bathurst.	Mount Frere.
Bedford.	Mqanduli.
Bizana.	Ngqeleni.
Butterworth.	Nqamakwe.
Cathcart.	Peddie.
Colesberg.	Port St. Johns.
East London.	Queenstown.
Elliot.	Qumbu.
Elliotdale.	St. Marks.
Engcobo.	Sterkstroom.
Flagstaff.	Steynsburg.
Fort Beaufort.	Stockenstrom.
Glen Grey.	Stutterheim.
Herschel.	Tabankulu.
Idutywa.	Tarka.
Indwe.	Tsolo.
Keiskamahoek.	Tsomo.
Kentani.	Umtata.
King William's Town	Umzimkulu.
Komga.	Ventersdorp.
Lady Grey.	Victoria East.
Libode.	Willowvale.
Lusikisiki.	Wodehouse.
Maclear.	Xalanga.
Maraisburg.	

(3) *Natal Region, Deputy Chief Health Officer, Durban*—

Natal Province.

(4) *Orange Free State, and North West Cape, Deputy Chief Health Officer, Bloemfontein.*—

Orange Free State Province and the following districts in the Cape Province:—

Barkly West.	Mafeking.
Hay.	Postmasburg.
Herbert.	Taung.
Kimberley.	Vryburg.
Kuruman.	Warrenton.

(5) *Northern Transvaal Region, Deputy Chief Health Officer, Tzaneen*—

Barberton.	Nelspruit.
Belfast.	Pilgrim's Rest.
Carolina.	Pietersburg.
Groblersdal.	Potgietersrust.
Letaba.	Warmbad.
Lydenburg.	Waterberg.
Middelburg.	Zoutpansberg.

(6) *Southern Transvaal Region, Deputy Chief Health Officer, Johannesburg*—

Amersfoort.	Marico.
Benoni.	Nigel.
Bethal.	Piet Retief.
Bloemhof.	Potchefstroo n.
Boksburg.	Pretoria.
Brakpan.	Roodepoort.
Brits.	Rustenburg.
Bronkhorstspruit.	Schweizer Reneke.
Christiana.	Springs.
Ermelo.	Standerton.
Germiston.	Ventersdorp.
Heidelberg.	Vereeniging.
Johannesburg.	Volksrust.
Klerksdorp.	Wakkerstroom.
Krugersdorp.	Witbank.
Lichtenburg.	Wolmaransstad.

2. The following functions are common to all Regions:—

(1) Control of infectious diseases.

(2) Control of vector borne diseases: e.g. plague, typhus, rabies, malaria, bilharzia, relapsing fever.

(3) Venereal Disease Control.

(4) District Surgeons.

(5) Health Centres.

(6) Maternity and Child Care.

(7) Statutory and Inspectorial duties.

Statutory duties under:—

(*a*) Public Health Act.

(*b*) Food and Drugs Act.

(*c*) Medical, Dental and Pharmacy Act.

Inspectorial duties connected with:—

(*a*) Environmental hygiene.

(*b*) Industrial hygiene.

(8) Health Education.

(9) Pathological Laboratories (Cape and Natal Regions).

(10) Port Health (Cape, Natal Regions and Eastern Cape Regions).

3. In addition to the above functions, the following are of special importance in the Region mentioned:—

(1) *Natal.*—Malaria, amoebiasis, airport control.

(2) *Orange Free State.*—Control of newly developing gold fields in respect of plague, environmental and industrial hygiene.

(3) *Eastern Cape.*—Health services in Native Reserves, including typhus and plague control.

(4) *Cape.*—Port health, laboratories and biological control. Production of smallpox vaccine and control of therapeutic substances.

(5) *Northern Transvaal.*—Malaria, bilharzia.

(6) *Southern Transvaal.*—Industrial hygiene and airport control.

Details of work done and statistics compiled by the various regions are included in the relevant sections of this report.

4. The population of the Union of South Africa as distributed over the various Regions is as follows:—

UNION OF SOUTH AFRICA.

CENSUS 1951.—POPULATION FIGURES—DEPUTY CHIEF HEALTH OFFICERS' AREAS.

Area.	Europeans.		Asiatics.		Coloureds.		Natives.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	
Cape Region.....	352,930	359,525	7,965	5,892	442,782	444,512	196,365	142,187	1,952,158
Eastern Cape Region.....	74,651	77,281	1,210	1,037	27,625	27,719	826,256	1,086,630	2,122,409
Natal Region.....	136,300	137,940	153,297	146,194	15,255	16,230	878,079	932,023	2,415,318
Orange Free State and North West Cape Region.....	151,952	146,371	952	800	27,429	26,418	519,677	495,095	1,368,694
Northern Transvaal Region..	56,441	53,018	2,027	1,817	1,740	1,414	582,262	657,775	1,356,494
Southern Transvaal Region...	550,480	544,800	24,144	21,329	35,748	36,144	1,366,518	873,523	3,452,686
Total.....	1,322,754	1,318,935	189,595	177,069	550,579	552,437	4,369,157	4,187,233	12,667,759

(IV) EPIDEMIOLOGY.

Advances in Public Health and Sanitation, as well as the powerful weapon of modern antibiotics, have combined to reduce further the incidence of certain diseases which, not so long ago, constituted a major public health problem. This has, however, been counterbalanced by problems of other diseases coming to the fore and claiming more and urgent attention.

1.—Bilharzia.

Bilharziasis continues to be a most important public health problem. In Natal there appears to be an increase in the number of rectal bilharziasis infections, and at a conservative estimate there would appear to be anything up to 3,000 cases of bilharziasis (urinary and rectal) actively spreading infection. It is planned to undertake a survey of potential and actual breeding places of the vector freshwater snails in the Natal Region during the coming year.

In the Northern Transvaal Region, work during the year was directed towards field research with control as the ultimate objective. It was found that the incidence of intestinal bilharziasis was highest in those areas where irrigation is practised on a large scale and where the carrier is present. The variation in incidence of the intestinal disease from place to place is mainly due to living conditions of the population and water supply types. *S.haematobium* variation, however, is more dependent on population densities, both snail and human, and the amount of water available in certain instances.

The incidence of bilharziasis was studied mainly in the Lowveld, where it was found that 70 per cent of Native labourers on European farms suffered from *S.mansoni* and about 80 per cent from *S.haematobium*. In the Native Reserves the *S.haematobium* figure remained the same, but the *S.mansoni* rate was much lower, being in the region of 10 per cent to 35 per cent. These findings are based on the examination of one specimen of urine (uncentrifuged but sedimented) and one stool specimen (acid ether technique).

Snail infection rates in both *Physopsis* and *Biomphalaria* were highest in summer and, though Biomphalaria tends to breed throughout the year, snail breeding was more intense during the summer. In view of these facts, pilot control schemes were instituted—all copper sulphate work being done during the summer months. A further reason why sulphate work was not done during the winter months was because it was found that the habits of the two snails changed completely from summer to winter. In the summer, they remained largely above the mud, but they went down to the bottom during winter.

Experimental work with Sodium Pentachlorophenate was unsuccessful due to the presence of chemical constituents in certain waters, which tend to inactivate this molluscicide.

Experimental work in which high concentrations of copper sulphate were used, and where the vegetation was not removed, did not produce encouraging results.

Experiments on the effect of high water-pressures on snails, proved that both baby snails and snail egg masses can withstand pressures of 150 lb. per square inch. Results obtained from this experiment suggest that the average pressure-pump cannot be depended upon to prevent the passage of snails from a snail-infested source, through piping, to the point of discharge.

2.—Diphtheria.

Statistics: Table II (B) (1), pages 37-38.

The position in South Africa with regard to this readily preventable disease, is far from satisfactory. Such powerful weapons as the modern prophylactic preparations have, in certain parts of the world, almost wiped out this scourge. In England and Wales in a recent period of 10 years (1941–51) both the notification-rate and the death-rate from diphtheria fell by 98·8 per cent. In the city of Copenhagen no case of diphtheria has occurred since 1952. This Department and various local authorities have issued repeated warnings; and a free immunisation service is offered throughout the country. Yet for the Union as a whole, this dreaded disease shows no signs of decreasing. Why should this be the case? It is generally accepted that, in order to eradicate diphtheria, an immunisation rate in infants of from 55 per cent to 80 per cent, and in school children, one of about 95 per cent, is needed. The rasing of the immunisation rate must depend, in South Africa, on the active co-operation of the population as a whole, which in turn depends largely on a realisation by the public of all the factors involved in the cause, transmission and successful prevention of this disease.

Investigations indicate that the reaction to diphtheria in the Union is that of a non-immunised communty. This view is further supported by a study of the age-distribution of the disease, which shows the greatest incidence in the younger age-groups, without that shift to older age-groups characteristic of well-immunised communities. A state of affairs exists which constitutes a grave challenge to our ability to get well-known achievements of disease-prevention accepted by the population as a whole.

3.—Leprosy.

Statistics: Table II (B) (2), page 39.

The policy of compulsory segregation of all patients suffering from active leprosy is being continued. It is frequently stated, even by responsible bodies such as the World Health Organisation, that compulsory segregation must fail because patients will hide their disease, or will abscond, rather than submit to detention. All our institutions cover large areas of ground and are surrounded by ordinary wire fences. Any patient, even a child, could abscond without great difficulty. Yet at Westfort, over the last five years, less than 2 per cent have absconded and many of these have walked back after settling their home affairs.

If fear of segregation leads to concealment, we would expect a long duration of the disease prior to admission. This is not so in the Union. Most of the patients have had the disease for months, not years, prior to admission. It is obvious that a few old and burnt-out cases can distort the average, but, taking all cases into account, we find in Bantu males the average duration of the disease, prior to admission, is two years and two months, and for the females, the figure is two years and three months. These figures compare favourably with the analysis in 1929, when it was found that the figures were eight years for males and ten years for females. The figures compare favourably with Carville where, as Badger states " . . . over 50 per cent were admitted after more than five years had elapsed between the onset and admission, and over 25 per cent were admitted after more than ten years had elapsed ".

It was interesting to analyse the reasons for the delay in commencing treatment among 500 patients who were questioned in this connection:—

(1) Only 64 patients, i.e. 13 per cent, recognised the disease or were diagnosed immediately the first signs appeared. (With our low incidence of 0·77 per thousand unfamiliarity of our population and of our doctors with this disease is not unexpected).

(2) Some 86, i.e. 17 per cent of patients, stated they were under European doctors' treatment, but their disease was not diagnosed at first, thus, their admission to an Institution was delayed.

(3) Native witch doctors delayed the admission of 70, i.e. 14 per cent of the patients. They treated the patient until his money ran out.

(4) Nine children stated that their parents did not bother to take them to a doctor.

(5) The greatest number, viz. 245, or 49 per cent, did not recognise the disease and delayed seeking medical aid.

(6) Six cases did not come for treatment as it was against their religious principles to seek medical treatment.

(7) Out of the 500 patients, only 17, or 3·4 per cent stated that they hid their disese because they feared isolation. This is significant evidence, which does not support the claim that compulsory segregation leads to the wholesale hiding of cases of leprosy.

4.—Malaria.

Statistics: Table II (B) (3), page 40.

Northern Transvaal.—For the first time since the introduction of a proper malaria control system, this organisation was subjected to a rigorous test. Rainfall during November and December, 1952, showed an average fall of 4 inches to 5 inches, and 8 inches to 10 inches, respectively, but increased in intensity during January and February, 1953, when a fall of over 30 inches (more or less equally distributed over the two months) was registered over all the Transvaal malarial areas. This was the heaviest rainfall for many years and occurred mainly during the months most suited to mosquito-breeding. During three summer months the rainfall figures in certain places were four times those of the previous year, and twice as high as in any one of the preceding five years. The almost incessant and continuous rains during January and February interfered severely with the mobility of the field staff. Use had to be made of Natives on bicycles for spraying in certain areas which motor transport was unable to reach. A total of 1,658 blood smears were examined and 700 were found to be positive. 790 patients alleged to be suffering from malaria were hospitalised.

As rains diminished, as complete an anti-larval programme as possible was launched. All shallow waters considered to be potential gambiae breeding places, were treated with larvicide, diverging outwards from human concentrations. D.D.T. emulsion, diluted with any available water, was used as larvicide. The residual spraying programme was also brought up to date.

Gambiae had, however, gained such a start that residual spraying alone, particularly in sparsely populated areas, could only stem the disease, but not stop it altogether—gambiae was found mostly outside human habitations and could not be eliminated with residual insecticides. Malaria cases continued to occur until the anti-larval programme came into full operation. As a result, a rapid decline in mosquito numbers and malaria cases occurred at the peak of the transmission season.

In spite of the high incidence, no disruption of agricultural economy occurred and a true epidemic was averted by effective field measures.

Natal and Zululand.—During 1952 drought conditions, most severe in the coastal section, prevailed. The drought was, however, broken by the onset of heavy rains towards the close of December, 1952, and during January, 1953, when abnormally high temperatures and a high relative humidity produced optimum conditions for vector breeding and for the transmission of malaria.

The favourable climatic conditions thus created resulted in a severe outbreak, necessitating the intensification of control measures by Malaria Committees, Local Authorities, and Departmental staff throughout the area. Larvicidal measures in closely settled areas were vigorously applied. Non-European dwellings in the coastal area north of Durban, and Native huts in the river valleys in the midland areas, were treated with residual insecticides.

The following table shows the incidence, at the end of each week, of cases reported during January—April, 1953:—

January.	Cases.	February.	Cases.	March.	Cases.	April.	Cases.
3/1/53	10	7/2/53	270	7/3/53	40	4/4/53	30
10/1/53	50	14/2/53	100	14/3/53	80	11/4/53	20
17/1/53	100	21/2/53	100	21/3/53	40	18/4/53	30
24/1/53	190	28/2/53	70	28/3/53	30	25/4/53	10
31/1/53	430						
	780		540		190		90

During May, 1953, a further 10 cases occurred bringing the total up to 1,610 notified cases.

A total of 1,036 positive blood slides (2 benign tertian and 1,034 sub-tertian) were examined during the year under review. It is considered that for every positive slide received, there were two further cases of malaria. Thus, the estimated total number of cases lies in the vicinity of 3,000. The following table shows the distribution of the positive blood slides examined:—

MALARIA.

POSITIVE BLOOD SLIDES (NATAL AND ZULULAND).

Month.	European.	Non-European.
January	23	515
February	2	316
March	4	80
April	2	34
May	3	38
June	1	4
July	1	1
August	—	1
September	—	—
October	1	1
November	—	2
December	1	6
TOTAL	38	998
GRAND TOTAL		1,036

From the outbreak much useful experience was gained. The value of residual D.D.T. spraying was fully vindicated. The method evolved, of using a knock-down insecticidal spray, followed immediately by a residual D.D.T. spray in areas where there were cases of malaria or where adult malaria vectors—particularly A. gambiae—were found, proved of definite value and cut short extensive spread from many actual and potential foci.

5.—PLAGUE.

Statistics: Table II (B) (4), page 41.

(*a*) *Human Plague.*—Three outbreaks of bubonic plague, with 11 cases and two deaths, were reported from the districts of Lindley, Aliwal North and Calvinia. The details are as follows:—

Outbreak.	Date.	Locality.	Cases.	Result.
1	29/1/53	Farm Stoffelfontein No. 407, Lindley, O.F.S.	9 Native	One fatal.
2	2/5/53	Sonskyn Siding, Aliwal North, C.P.	1 Native	Recovery.
3	12/9/53	Brandvlei Townlands, Calvinia, C.P.	1 Coloured	Fatal.

The two fatal cases were not seen before death. Eight patients on the farm Stoffelfontein recovered under treatment with aureomycin. The patient from Sonskyn was treated with aureomycin, but convalescence was protracted (54 days).

(*b*) *Rodent Plague.*—During the year, over 800 specimens (pooled fleas or rodent carcasses) were examined at the South African Institute for Medical Research, Johannesburg, from the Union, South-West Africa and Bechuanaland; only three of these proved positive. *Past. pestis.* was found in—

(1) a house-rat (*Rattus rattus*) found dead in an outbuilding on the farm Ganskuil No. 870, 16 miles north of Kroonstad;

(2) Karroo rat (*Parotomys*), Burrow-fleas (*Xenopsylla eridos*) from a point 30 miles north-east of Fraserburg on the road to Loxton; and

(3) house-rat fleas(*X. brasilliensis*) from the floor of an outbuilding on the farm Uitkoms, 13 miles south-west of Viljoenskroon, Bothaville district.

Plague remained at a low level throughout the Union during 1953. It is significant that, at times of low general incidence, pockets of infection are present in the northern Orange Free State. This should serve as a warning to industrial concerns operating in that area to take every precaution against plague rodents and fleas and to insure that no building is erected that is not fully rodent-proof. It is expected that plague will not remain for long at this low level, and that, as in the past, it will work up to a peak again in two or three years.

(*c*) *Rodent, Flea and Plague Surveys.*—Through the good offices of the Chairman of the National Parks Board, a team carried out the first survey of the smaller rodents, and their parasites, of the Kruger National Park. A survey of the rodents and fleas of the highland area of Basutoland was also carried out in conjunction with the Basutoland Medical Department. Four new species of fleas were discovered. The Department is indebted to the Resident Commissioner and to the Director of Medical Services for the arrangments which made the survey possible.

(*d*) *Research.*—During the year some of the last gaps in our knowledge of the distribution of the fleas of small mammals associated with the reservoir of plague were filled, and the task of mapping and collating the results of 15 years of intensive collecting was begun.

The Entomology Department of the South African Institute for Medical Research houses the National Flea Collection and has done all the identifications; the preparation of a joint monograph on the taxonomy and ecology of the fleas of southern Africa with special reference to plague has been begun. Distribution data on over 70 species of fleas were made ready for publication by preparing a new series of maps. At the same time a critical revision of the host species was started to determine the validity of the recognised "species" of small rodents and other mammals and to analyse the host associations of the different species of fleas.

6.—POLIOMYELITIS.

Statistics: Table II (B) (5), pages 42–45.

On the 14th of November the Laboratories of the Poliomyelitis Research Foundation were officially opened by the Hon. Dr. van Rhijn, Minister of Health. These laboratories were erected by the Board of Trustees

of the Poliomyelitis Research Foundation, with funds subscribed by the public following an appeal to support research in poliomyelitis. They provide full facilities for the study of virus and related diseases. The studies undertaken during the year 1953 included studies of poliomyelitis and Coxsackie virus infections, meningo-encephalitis, Rift Valley Fever, and rabies. The programme of research in poliomylitis was designed to elucidate some of the problems of this disease in this country, and included an epidemiological study of poliomyelitis as it occurs in an urban native township. During the year, the typing of strains of polio virus isolated at the South African Institute of Medical Research in monkeys during the past epidemics and in tissue cultures during the current year was undertaken. Thirty-four strains were typed and of these 19 were found to be Type 1, or Brunhilde type virus, 6 were Type 2, or Lansing type virus, and 9 including 5 from one outbreak in a nursery school were Type 3, or Leon type virus. In this outbreak in the nursery school, Dr. Malherbe carried out a study of the contacts of a patient who died of poliomyelitis. It was found, that of the 46 children examined, 28 were infected. Several weeks later virus was again isolated from 3 of 24 previously positive children. It is of interest to note that the strains isolated in the 1948 epidemic all proved to be Type 1 strains.

A systematic study of all cases of meningo-encephalitis admitted to the Johannesburg Fever Hospital was continued during the year. Most of these cases were admitted with a provisional diagnosis of poliomyelitis. However, this investigation revealed that few of them were suffering from this infection. Eight were proved to be cases of mumps meningo-encephalitis. Two, of which one was fatal, were cases of herpes infection, and six were infected with Coxsackie A virus. The relation of this virus to the patients' illness has not yet been defined and it may be that it was a fortuitous finding. Seven were infected with Coxsackie B virus, and in these cases there is no doubt that this virus was the cause of the patient's condition, because the same virus was also isolated from the cerebrospinal fluid in some of the cases.

These detailed virus studies have thus been of value in determining the exact aetiology of many cases which hitherto have been diagnosed as poliomyelitis. Such information will be of help to Public Health Authorities concerned with the control of the disease.

Preliminary studies with a view to developing a vaccine against poliomyelitis.—It was shown that the South African vervet monkey *Cercopithecus aethiops pygerythrus* is a suitable animal for the study of poliomyelitis and that its tissues support the growth of all three types of polio virus in tissue culture tubes. The various tissues from these monkeys have been tested for their suitability for this purpose and it has been found that while testicular tissue is convenient for isolation and typing studies, kidney tissue gives much higher yields of virus. It was therefore decided to prepare virus suspensions from kidney tissue cultures for the preparation of vaccine as it is probable that a certain minimum titre of virus will be necessary before such vaccines will be effective. There is every promise that these titres will be obtained and that a vaccine will be evolved. Studies of the techniques of inactivation of the virus suspensions are being carried out to ascertain which are the best methods.

The immunity survey to determine the distribution of antibodies against poliomyelitis in the population of Southern Africa was continued. Sera from representative samples of the population of the Union of South Africa, as well as from the Rhodesias and the Protectorates, have been tested. The tests are of two kinds. The Lansing mouse protection test detects the presence of antibodies against Type 2 virus, but it has been found that the presence of these antibodies reflect in a general way the incidence of other types as well, although there are individual situations in which this will not be the case. The tissue culture technique which has the advantage of being able to be applied to each of the three types, has also been used, though on a more limited scale. In future, however, this technique will be used as the standard technique for the detection of antibodies. Some of the results of this survey will be presented by Dr. Gear at the Third International Poliomyelitis Congress to be held in Rome in September, 1954. These will not now be described in detail but it may be said that generally the Bantu section of the population has a higher degree of immunity to each of the three types in each age group as compared with the European section of the population. It is clear, therefore, that the relative immunity enjoyed by the older age groups of the Bantu when poliomyelitis is epidemic, results from this immunity acquired by over 90 per cent of them before they are six years old. The more hygienic Europeans do not acquire this immunity to the same degree and therefore are more liable to suffer from paralytic cases when the disease becomes epidemic.

The study of poliomyelitis as it occurs in an urban native township was carried out by the Poliomyelitis Research Foundation in collaboration with the Medical Officer of Health and the staff of the Germiston Health Department. This study has confirmed, by actual isolation of the virus from infants in this location, that the antibodies which are present in over 90 per cent of children aged 6 years and over, results from infection, and it has been shown that all three types of polio virus are endemic in such townships, though paralytic cases are exceptionally rare.

In addition to a study of polio virus infections, a study of infections due to Coxsackie viruses has been undertaken. These viruses were isolated and identified before it was known what diseases they caused. However, it is now clear that Coxsackie group A viruses are responsible for the condition known as herpangina and are often associated with polio virus in cases of paralytic poliomyelitis. The significance of this association has still to be assessed, but it occurs so frequently that it is possible that these two viruses may act synergically in cases of paralytic poliomyelitis. Coxsackie group B viruses have been shown to be the cause of Bornholm disease. As a result of studies carried out in the laboratories of the Poliomyelitis Research Foundation it is also clear that this group of viruses is the commonest cause of benign meningo-encephalitis in this region. Coxsackie group B virus was shown to be the cause of an acute outbreak of myecarditis neonatorum in a maternity home in Johannesburg in October, 1952. In this outbreak six of the ten babies affected died, and Coxsackie Group B Type 3 virus was isolated from two of those who recovered. This condition, unlike other manifestations of Coxsackie Group B virus infections, thus may end fatally. It is apparent, therefore, that the Coxsackie viruses may have considerable public health importance.

7.—Rabies.

Statistics: Table II (B) (6), page 46.

Rabies continues to be a disease of increasing public health importance from the time, a few years ago, when the canine strain of the virus crossed our northern borders, leading to the occurrence of numerous cases of canine rabies in the Northern Transvaal. Until then the disease had occurred mainly in the small wild carnivorous animals of the meercat or mongoose family (*viverridae*) and in wild cats (*felidae*). The very real danger inherent in recent developments to the domestic dog population of the Union, and the consequent potential danger to human beings, are easy to visualise. The Division of Veterinary Services of the Department of Agriculture is continuing its campaign to bring the disease under control and to create an immune dog population.

Human Rabies, once symptoms develop, is a fatal disease. The only hope of saving the life of a person who has become infected with the virus through the bite of a rabid animal is to arrest the infection before it is able to reach and develop in the central nervous system. The Department is fully aware of the unsatisfactory position regarding the safety and efficacy of most of the anti-rabic vaccines hitherto used, but is also aware of the promise contained in modern experimental work, indicating that more effective and safer vaccines will be readily available in the near future. The report of the second meeting of the Expert Panel of the W.H.O. on Rabies is being closely studied, especially with regard to the use of rabies hyperimmune serum for the prophylactic and therapeutic treatment of men and animals. Fortunately, no case of human rabies was reported during the year under review.

8.—Rift Valley Fever.

There was a recrudescence of Rift Valley Fever in 1953. Advantage was taken of an outbreak near Luckhoff, in May, to conduct fruther field investigations on potential vectors and reservoir hosts. A team from the South African Institute for Medical Research and the Department's Medical Ecology Centre (Plague Research Laboratory), succeeded in isolating virus from *Aëdes caballus* and *Culex theileri*. Furthermore, *Aëdes caballus* was shown to be a vector. The only wild animal, of many examined, that had immune bodies to Rift Valley fever, was a polecat (*Ictonyx striatus*).

9.—Smallpox.

Statistics: Table II (B) (7), page 46.

The history of smallpox constitutes an example illustrating pre-eminently the triumph of public health measures in preventing the occurrence of an infectious disease which, not so very long ago, claimed hundreds of victims every year. Table II (B) (7) illustrates how the incidence of this once dreaded disease has declined in recent years, the year under review showing the lowest number of cases ever reported, viz. 14 cases. This, however, is no reason for complacency, particularly in view of the ever-present danger of infection being introduced from outside the country, thus the Department is continuing its policy of yearly vaccination campaigns so as to ensure adequate protection of the population.

10.—Tuberculosis.

Statistics: Table II (B) (8), pages 47–48.

Mortality.—Table II (B) (8) (*a*) reflects the registered deaths from tuberculosis by race, age and sex groups of Europeans, Coloureds and Asiatics for the calendar years 1952 and 1953. As, up to the present, there has been only partial registration of deaths in Natives, similar details for this racial group are therefore not available. Moreover, although a total of 7,852 and 6,424 deaths in Natives from all forms of tuberculosis were registered in each of the years 1952 and 1953, respectively, no less than 49 per cent of deaths from all causes in Natives were not medically certified in 1953; these totals are therefore unreliable and of limited value. (By comparison, in Europeans only 1·8 per cent of deaths from all causes were not medically certified in 1953; and only 2 per cent in Asiatics and 13·7 per cent in Coloureds).

Table II (B) (8) (*a*) shows that the downward trend in mortality from tuberculosis, which started in 1949, has continued, probably due to improvement in medical and surgical treatment through the development of anti-microbial drugs. The number of deaths from tuberculosis, registered for all races, shows a most encouraging decrease.

In Europeans, tuberculosis caused 1·8 per cent of deaths from all cuases in 1952, and only 1·1 per cent in 1953, when it was relegated to sixteenth place as a cause of death. In Asiatics, tuberculosis was reponsible for 6·2 per cent of deaths from all causes in 1952, and 3·5 per cent in 1953, when it was the ninth most important cause of death. Tuberculosis remains a very important cause of death in Coloureds. In 1952, 17·3 per cent of deaths from all causes was due to tuberculosis, which was then second only to the enteritis, gastritis and colitis group as the most important cause of death. In 1953, this percentage had dropped to 13·8 per cent. Tuberculosis, as a cause of death, took third place, with the enteritis group of diseases once again as the most important cause of death, but with pneumonia occupying second position. These three groups together caused just over 49 per cent of the total deaths from all causes.

An analysis of the mortality table II (B) (8) (*b*) reveals that in all races the overall majority of deaths occurred in males and especially so in the older age groups. In Europeans in 1952, 61·6 per cent and in 1953, 63·8 per cent of total deaths were in males. For Coloureds the percentages were 53·1 per cent and 55·6 per cent, respectively, and for Asiatics, 49·5 per cent and 56 per cent.

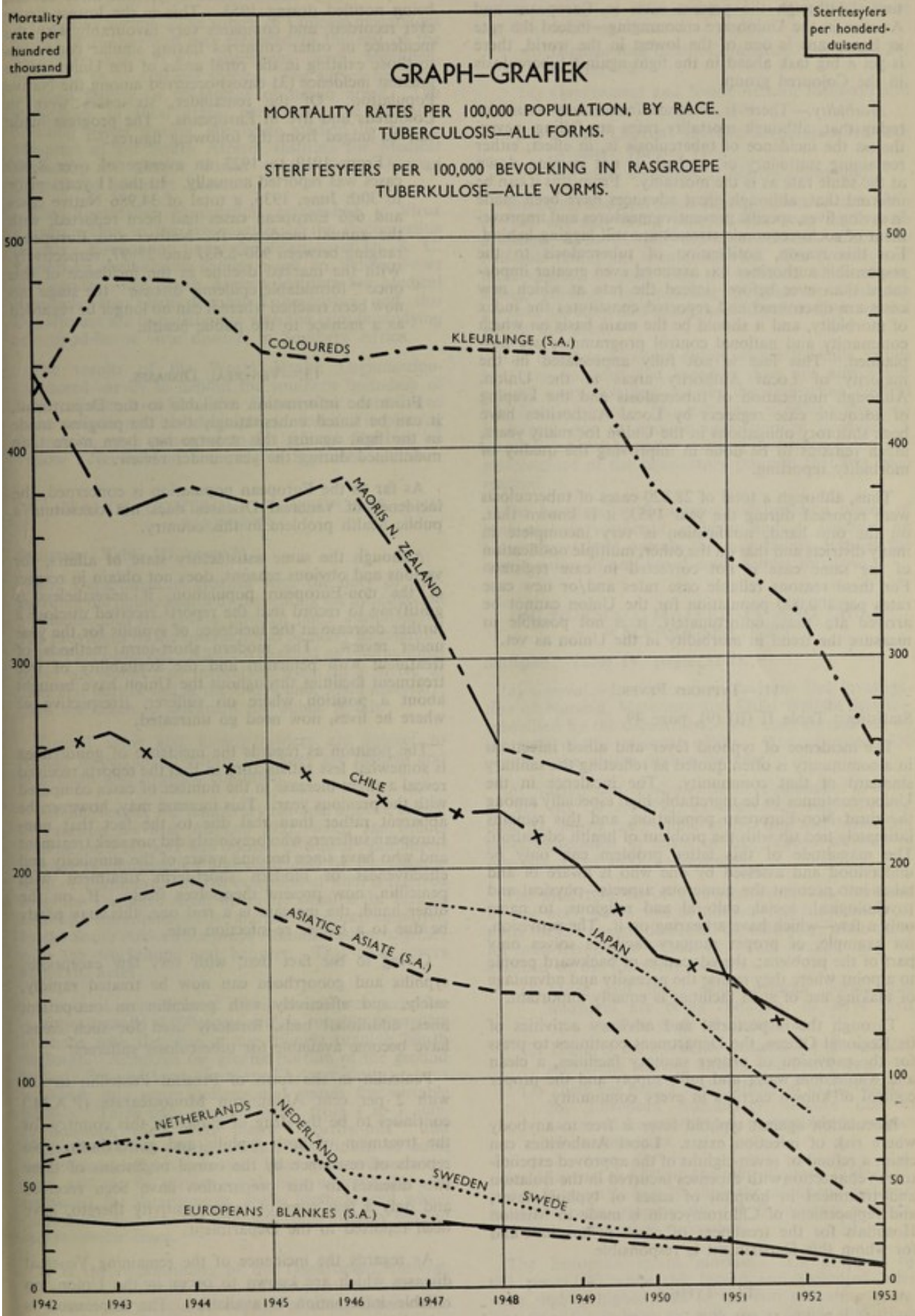
In the previous report, reference was made to deaths in children under five years of age constituting an index of home infection. Attention must be drawn again to the high proportion of deaths in this age group, and to the fact that in Coloureds and Asiatics the percentage was even higher than in previous years. In Europeans, 12·4 per cent of all deaths from tuberculosis occurred in children under five in 1952, and in 1953 the figure was 8·1 per cent. In Coloureds the proportions were 22·7 per cent both in 1952 and 1953; and in Asiatics, 17·1 per cent in 1952, and 23·2 per cent in 1953. In table II (B) (8) (*b*) an analysis has been made of the specific causes of death in this age group. In Europeans and Asiatics in particular, the high proportion of deaths due to tuberculosis meningitis is shown. It is manifestly clear that in planning control programmes, the high cost that is being paid in child life must constantly be borne in mind; the prevention of exposure of children to infection in the home should therefore be given very high priority.

Death rates from tuberculosis (all forms) also continue to fall markedly and the rates per 100,000 population for 1952 and 1953 are as follows:—

Year.	Europeans.			Coloureds.			Asiatics.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1952.....	18·5	11·5	15·0	339·8	299·2	319·3	54·9	59·5	57·1
1953.....	12·6	7·1	9·8	277·4	220·2	248·6	35·2	29·2	32·3

Unfortunately, population figures in age groups for the years 1952 and 1953 are not yet available: it is therefore not possible to give age specific death rates in any racial group.

In the graph the rates in Europeans, Asiatics and Coloureds during the years 1942 to 1953 are shown, together with similar rates in selected countries for comparative purposes. These latter rates are based


Mortality rate per hundred thousand
Sterftesyfers per honderd-duisend
GRAPH–GRAFIEK
MORTALITY RATES PER 100,000 POPULATION, BY RACE.
TUBERCULOSIS—ALL FORMS.
STERFTESYFERS PER 100,000 BEVOLKING IN RASGROEPE
TUBERKULOSE—ALLE VORMS.
500
400
300
200
100
50
0
COLOUREDS
KLEURLINGE (S.A.)
MAORIS N. ZEALAND
CHILE
ASIATICS ASIATE (S.A.)
JAPAN
NETHERLANDS
NEDERLAND
SWEDEN
SWEDE
EUROPEANS BLANKES (S.A.)
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953

on information published by the World Health Organisation. Although the present rates in Europeans and Asiatics in the Union are encouraging—indeed the rate in Europeans is one of the lowest in the world, there is yet a big task ahead in the fight against tuberculosis in the Coloured group.

Morbidity.—There is evidence from many countries today that, although mortality rates are falling, nevertheless the incidence of tuberculosis is, in effect, either remaining stationary or, at best, is not coming down at the same rate as is the mortality. From this it can be inferred that, although great advances have been made in saving lives, specific preventive measures and improvement of socio-economic stresses are still lagging behind. For this reason, notification of tuberculosis to the responsible authorities has assumed even greater importance than ever before—infeed the rate at which new cases are discovered and reported constitutes the index of morbidity, and it should be the main basis on which community and national control programmes are now planned. This fact is not fully appreciated in the majority of Local Authority areas in the Union. Although notification of tuberculosis and the keeping of adequate case registers by Local Authorities have been statutory obligations in the Union for many years, much remains to be done in improving the quality of morbidity reporting.

Thus, although a total of 28,820 cases of tuberculosis were reported during the year 1953, it is known that, on the one hand, notification is very incomplete in many districts and that on the other, multiple notification of the same case is not corrected in case registers. For these reasons reliable case rates and/or new case rates per 100,000 population for the Union cannot be arrived at; thus, unfortunately, it is not possible to measure the trend in morbidity in the Union as yet.

11.—Typhoid Fever.

Statistics: Table II (B) (9), page 49.

The incidence of typhoid fever and allied infections in a community is often quoted as reflecting the sanitary standard of that community. The incidence in the Union continues to be regrettably high especially among the rural Non-European population, and this remains intimately tied up with the problem of health education. The magnitude of this latter problem can only be understood and assessed by one who is aware of and takes into account the numerous aspects—physical and psychological, social, cultural and religious, to name only a few—which have a bearing on it. The provision, for example, of proper sanitary facilities solves only part of the problem; the education of backward people to a point where they realise the necessity and advantage of making use of such facilities is equally important.

Through the inspectorial and advisory activities of its Regional Offices, the Department continues to press for the provision of proper sanitary facilities, a clean and wholesome water and milk supply and the proper control of known carriers in every community.

Inoculation against typhoid fever is free to anybody where risk of infection exists. Local Authorities can claim a refund of seven-eighths of the approved expenditure in connection with expenses incurred in the isolation and treatment in hospital of cases of typhoid fever, and replacement of Chloromycetin is made to Mission Hospitals for the treatment of cases in hospitals and for whom this Department is responsible.

12.—Typhus.

Statistics: Table II (B) (10), page 50.

The incidence of this once dreaded disease, which has been declining steadily since the introduction of modern insecticides, has shown a further marked drop over previous years; 42 cases only, with three deaths, being notified during 1953. This is the lowest figure ever recorded, and compares very favourably with the incidence in other countries having similar conditions to those existing in the rural areas of the Union. The greatest incidence (31 cases) occurred among the Native Population. Of the remainder, six cases were in Coloureds and five in Europeans. The progress made can be judged from the following figures:—

> From 1919 to 1923 an average of over 8,000 cases was reported annually. In the 11 years prior to 30th June, 1935, a total of 34,986 Native cases and 686 European cases had been reported, with the annual incidence for Natives and Europeans ranging between 950–8,637 and 37–97, respectively. With the marked decline in the incidence of this once " formidable epidemic disease " the stage has now been reached where it can no longer be regarded as a menace to the public health.

13.—Venereal Diseases.

From the information available to the Department, it can be stated unhesitatingly that the progress made in the fight against this scourge has been more than maintained during the year under review.

As far as the European population is concerned, the incidence of Venereal Diseases does not constitute a public health problem in this country.

Although the same satisfactory state of affairs, for various and obvious reasons, does not obtain in respect of the non-European population, it nevertheless is gratifying to record that the reports received disclose a further decrease in the incidence of syphilis for the year under review. The modern short-term methods of treatment with penicillin and the availability of free treatment facilities throughout the Union have brought about a position where no sufferer, irrespective of where he lives, now need go untreated.

The position as regards the incidence of gonorrhoea is somewhat less satisfactory in that the reports received reveal a slight increase in the number of cases compared with the previous year. This increase may, however, be apparent rather than real due to the fact that non-European sufferers who previously did not seek treatment and who have since become aware of the simplicity and effectiveness of modern short-term treatment with penicillin, now present themselves freely. If, on the other hand, the increase is a real one, this may partly be due to a higher re-infection rate.

Owing to the fact that, with very few exceptions, syphilis and gonorrhoea can now be treated rapidly, safely, and effectively with penicillin on out-patient lines, additional beds, formerly used for such cases, have become available for tuberculosis sufferers.

Penicillin in the form of Procain Penicillin in Oil with 2 per cent Aluminium Monostearate (P.A.M.) continues to be the drug of choice in this country for the treatment of both syphilis and gonorrhoea. No reports of resistance by the causal organisms of these two diseases to this preparation have been received and only a few cases of hypersensitivity thereto, have been reported to the Department.

As regards the incidence of the remaining Venereal diseases which are known to occur in the Union, no reliable information is available. The impression is gained however, that more cases of chancroid, lymphogranuloma venereum and granuloma inguinale presented themselves for treatment during the past year than previously.

14.—Yellow Fever.

Mosquito Survey.—The survey of Culicine mosquitoes on the Witwatersrand was extended to the rest of the Transvaal and 31,402 specimens were identified, belonging to 61 different species. The survey has been confined largely to mosquitos of urban areas. The mosquitoes of rural areas, particularly the tree-hole breeding *Aëdes* species, are being studied by Mr. J. Muspratt of the South African Institute for Medical Research, and Senior Bursar of the South African Council for Scientific Research.

The Rockefeller Foundation established a Virus Research Unit in the laboratories of the Poliomyelitis Research Foundation under the direction of Dr. K. C. Smithburn, well-known for his work on Yellow Fever in Uganda. The South African Institute for Medical Research, the Onderstepoort Laboratories and this Department are to collaborate with the Unit in studying arthropod-borne virus diseases in Southern Africa.

The results of the World Health Organisation-sponsored survey to delimit the southern boundary of Yellow Fever, to which the Department contributed in the collection of blood samples for test and in plotting the results, were presented to the African Seminar on Yellow Fever held at Kampala in September, 1953.

(V) HEALTH CONTROL AT SEAPORTS AND AIRPORTS.

Statistics: Table III, page 51.

The Department is charged with the duty of safeguarding the public health by preventing the introduction of disease into the Union through ports and airports. The provisions of the International Sanitary Regulations of 1952 are observed. All ships engaged on international travel are subject to inspection when they arrive at their first port of call in the Union and, when necessary, steps are taken to safeguard the public health.

Coastal ships and fishing-trawlers are subject to regular inspection to ensure that they are rat-free and in a clean and hygienic condition.

Palmietfontein, the temporary national airport, ceased to function on 31st August, 1953, when Jan Smuts International Airport was opened to traffic. Jan Smuts Airport is administered and controlled by the Department of Transport, with the exception of what is referred to as the Technical Area, where are situated the various offices for the administrative and technical staff employed by the South African Railways Administration, together with the workshops and hangers. This area covers about 10 acres.

The total area enclosed within the airport perimeter is approximately 4,000 acres and is roughly triangular in shape with the base of the triangle running North to South. Although the greater portion of the ground is fairly flat and level, there are 27 depressions or pans in which rain water collects and stands for variable periods. These pans vary in extent from ⅛ to 1 acre. In addition, there were many "borrow-pits" and excavations from which soil had been taken to build up and level off the runways. Having its source in the area, and fed by springs which now underlie the area reclaimed for the runways, is the Blesbokspruit which flows north-east into the Bloupan, some distance beyond the perimeter fence.

It is the responsibility of the Department, through its officials stationed there, to maintain the area free of rodents and mosquitoes capable of acting as reservoirs or vectors of disease.

Durban National Airport.—The Department assumed responsibility for Yellow Fever Control within a radius of a mile of the airport as from 1st August, 1953. The total area under control is approximately 2,600 acres or 4 square miles. Within this radius of one mile there are 356 dwellings situated as under:—

(i) Isipingo Rail Health Committee: European, 24; Indian, 108.

(ii) Government and South African Railways and Harbours: European, 104.

(iii) Umlazi District: Durban Corporation Housing Scheme: Native, 120.

(iv) Various: Factories 2, Native compound.

Anti-larval and anti-adult control measures have been carried out and much progress has been made with drainage. The subsoil drainage scheme within the half-mile radius has been completed. The provision of these drains, coupled with the removal of bamboos, filling, grading, and planting of grass on made up ground, has simplified mosquito and yellow fever control within this area.

The breeding of *aëdes egypti* within the mile radius has been confined and breeding does not now occur around every dwelling, as was the case when control was first instituted. The reduction in *aëdes* population is largely due to routine inspection of premises, a measure essential, under existing conditions, for the maintenance of the satisfactory position that has been reached.

The location, in September, of breeding places of both malaria vectors *A. gambiae* and *A. funestus*, on Government land outside the mile radius, justifies the continuation of anti-larval control over this land.

(VI) NURSING, MATERNITY AND CHILD WELFARE SERVICES.

Statistics: Table IV, pages 52-53.

(*a*) *General.*—Inspections, supervision and investigation of Nursing, Maternity and Child Welfare Services, subsidised by the department, have been carried out by the staff of the regional offices. Approximately 736 centres were visited during the year.

(*b*) *Nursing and Maternity Services subsidised in terms of Act No. 57 of 1935, as amended.*—Table IV (1), page 52, shows the number of Nursing and Midwifery posts established in terms of the various sections of Act No. 57 of 1935, as amended.

The total number of approved posts was increased by one only, but it will be noticed that the number of posts for Europeans decreased considerably, while those for non-Europeans increased. This change may be ascribed to the following factors:—

(1) More and more non-European nurses and midwives are being employed to serve their own races in place of Europeans.

(2) There is an increased demand for domiciliary and clinic services among non-Europeans.

(3) There has been a slight falling-off in the demand for European domiciliary services due to increased hospitalisation, particularly in respect of confinements.

(*c*) *Maternal and Infant Mortality Rates.*—Tables I (4) and I (7), pages 24 and 29, show the infant and maternal mortality rates, respectively, for Europeans, Asiatics, and Mixed and other Coloureds.

The European infant mortality rate dropped by 0·1 per 1,000 while the Indian and Coloured rates were slightly higher than in the two preceding years. The rates for Indians are still about double and those for Coloureds about four times the rate for Europeans. A similar discrepancy between Europeans and non-Europeans obtains in New Zealand where in 1951 the European rate was 22·7 per 1,000 and the Maori rate

68·16 per 1,000. Maternal mortality rates for both Europeans and non-Europeans have fluctuated slightly for the last 5 years.

Figures for Native maternal and infant mortality rates are not yet sufficiently reliable for publication.

(*d*) *Private Nursing and Maternity Homes.*—During 1953, there were no amendments to the legislation regarding the registration of Nursing and Maternity Homes by the department.

Inspections of registered homes and premises, in respect of which application for registration had been made, were carried out during the year by the staff of the regional offices in the Transvaal and the Orange Free State.

Table (IV) (3) shows the number of Nursing and Maternity Homes and the number of beds and of staff as registered by the department as at 31st December, 1953.

(*e*) *Midwives.*—No additional areas were proclaimed as prescribed areas in terms of Section 39 of Act No. 13 of 1928, as amended, and the regulations regarding persons practising midwifery were not applied to any additional areas during the year.

(VII) GOVERNMENT LABORATORIES AND BIOLOGICAL CONTROL.

Statistics: Table (V), pages 54-55.

The Departmental Laboratories maintained at Cape Town and Durban fall, respectively, under the control of the Deputy Chief Health Officer for the Region. The activities of both laboratories were again seriously hampered by the lack of staff.

The Biological Control Section of the Cape Town Laboratory is responsible for the application of the Therapeutic Substances Regulations of the Medical, Dental and Pharmacy Act (No. 13 of 1928). These regulations have been framed with the view to ensure that all therepeutic substances which are manufactured in the Union or imported for sale, comply with specified legal standards for quality, purity and potency.

The work of the section comprises—

(*a*) the issuing of licences for the manufacture or importation of scheduled therapeutic substances;

(*b*) the inspection of factories or laboratories in the Union where these substances are prepared or processed;

(*c*) the carrying out of biological assays of samples of these substances.

Analysis of the Durban Laboratory figures shows that there has been a slight increase in the overall amount of work performed in this Laboratory during 1953. Examinations made on behalf of Union Health Department's institutions have decreased, but expansion of the service performed for the Provincial Administration, Local Authorities and Medical Practitioners more than compensated for this decrease.

The training of medical technologists has proceeded and classes were attended at Provincial Institutions. A number of technologists were again successful in the Technologists Examination (Final) and the number of technologists eligible for registration with the S.A. Medical Council is now considerable.

During the year under review, investigational work was necessarily limited. The long term study of blood proteins in states of malnutrition is still under way, and haematological studies on lead workers have been undertaken. At the same time, an investigation into the practical problems affecting the bacteriological examination of water supplies has been commenced.

A new and important undertaking was a Field Survey carried out in a remote part of Northern Zululand. It has shown that at little cost, laboratory staff and equipment can be transported to do investigational work of reasonably high standard in the field.

(VIII) DEPARTMENTAL HOSPITALS AND INSTITUTIONS.

The following is a list of Departmental Hospitals and Institutions:—

Name of Institution.	Number of Beds.		
	European.	Non-European.	Total.
Tuberculosis.			
Bochum Institution, Dist. Pietersburg	—	31	31
King George V Hospital, Durban	146	1,110	1,256
Nama Hospital, Springbok	—	30	30
Nelspoort Sanatorium	128	172	300
Rietfontein, Johannesburg	—	230	230
Tembuland Hospital, Umtata	—	120	120
West End Hospital, Kimberley	22	150	172
Westlake Hospital, Cape Town	138	—	138
Total	434	1,843	2,277
Mental Hospitals and Institutions for the Feebleminded.			
Alexandra Institution, Maitland, Cape	833	59	892
Fort Maitland Hospital, Grahamstown	625	102	727
Fort Napier Hospital, Pietermaritzburg	997	720	1,717
Komani Hospital, Queenstown	616	710	1,326
Kowie Hospital, Port Alfred	—	541	541
Oranje Hospital, Bloemfontein	644	900	1,544
Sterkfontein Hospital, Krugersdorp	320	614	934
Tower Hospital, Fort Beaufort	—	1,833	1,833
Town Hill Hospital, Pietermaritzburg	320	536	856
Umgeni Waterfall Institution, Howick	270	150	420
Valkenberg Hospital, Observatory, Cape	784	675	1,459
Weskoppies Hospital, Pretoria	912	1,006	1,918
Witrand Institution, Potchefstroom	1,436	700	2,136
Total	7,757	8,546	16,303
Leprosy Institutions.			
Amatikulu, Zululand	—	476	476
Bochum, Dist. Pietersburg	—	162	162
Mjanyana, Transkei	—	817	817
Mkambati, Pondoland	—	244	244
Westfort, Pretoria	104	1,300	1,404
Total	104	2,999	3,103
Venereal Disease Hospitals.			
Amatole, King William's Town	—	66	66
Bochum, Dist. Pietersburg	—	30	30
Rietfontein, Johannesburg	8	40	48
Vryburg	—	24	24
Zeerust	—	8	8
Total	8	168	176
Infectious and Formidable Epidemic Diseases.			
Bochum, Dist. Pietersburg	—	4	4
Rietfontein, Johannesburg	48	58	106
Total	48	62	110

(IX) HEALTH CENTRES.

Statistics: Table VI, pages 57-58.

In accordance with the Department's policy of decentralisation, the Health Centres now fall under the control of the Regional Office concerned. Efforts have been continued to bring about a better co-ordination and integration of the services rendered by Health Centres and other branches of the Department.

(X) DENTAL SERVICES.

The dental services to indigent persons which are provided or subsidized by the Health Department remain the same as set out in the Annual Health Report of previous years, except that a full-time dentist has been appointed to treat indigent patients in the Westfort Institution and Weskoppies Hospital, and inmates in the Sonderwater Work Colony.

Dental Caries Research.

The Dental Health Officer continued his experimental investigations on the effect of different diets and fluorine on caries in vervet monkeys. A number of monkeys which were fed on a high carbohydrate diet developed dental caries. The effect of this diet during calcification of the teeth on caries susceptibility is now being investigated in young monkeys. As these experiments take a long time to produce results it is not yet possible to report on them. The monkeys are housed and fed at the Polio Foundation of the South African Institute for Medical Research at Rietfontein near Johannesburg, and the Health Department greatly appreciates the assistance and co-operation of this institution.

(XI) 1.—THE ADMINISTRATION OF THE FOOD, DRUGS AND DISINFECTANTS ACT No. 13 OF 1929.

Statistics: Table VII, page 59.

The Department is proceeding continuously with the general execution and enforcement of the Food, Drugs and Disinfectants Act, No. 13 of 1929, and the Regulations promulgated thereunder.

As a result, however, of the rapid development of our industries in the Union, and the consequent increased demand for a greater variety of foods, drugs and disinfectants, the Department was obliged to revise extensively the regulations, especially those pertaining to foodstuffs.

The volume of additional work arising from the application of the Act and Regulations thereunder is imposing a severe strain on the existing inspectorate staff and on the available laboratory services.

2.—ADMINISTRATION OF THE MEDICAL, DENTAL AND PHARMACY ACT No. 13 OF 1928.

Statistics: Table VII, page 59.

The steps taken by the Department during the year under review brought to the notice of medical practitioners, chemists and druggists, and dentists the fact that habit-forming drugs were in many instances being used more freely than was absolutely essential. An increase in the importation of codeine was ascertained to be due, not only to the increased consumption, but to the fact that more products containing codeine, which were previously imported, were now being manufactured in this country. The consumption of pethidine showed an increase over the previous year and steps are being considered to bring to the notice of the medical profession the addiction liability of this drug.

The quantity of dagga confiscated during the year was again very large, due no doubt, to the active steps taken by the Police Authorities and following the recommendations of the Committee of Inquiry into the abuse of dagga.

Inspections by Departmental inspectors of the stocks of poisons and preparations containing poisons—especially "patent", "proprietary" and "Dutch" medicines containing poison—which may be sold by general dealers on the authority of a certificate issued by Magistrates, revealed increased cases of contravention of the provisions of the Act. This will necessitate the intensification of legal action against the offenders.

Many cases of poisoning due to carelessness in the handling of agricultural and horticultural pest remedies were reported during the year.

The continued vigilance of the Department to ensure that the provisions of the Act relating to poisons are observed has done much to ensure the safety of the public.

(XII) INTERNATIONAL HEALTH.

The Union has continued to participate in the activities of the World Health Organisation. During 1952, four overseas study fellowships were awarded to South African citizens by the Organisation in the following subjects:—

Public Health Administration.
Hospital Administration.
Tuberculosis (clinical).
Psychiatry and Neurology.

The composition of the Union's delegation to the Sixth World Health Assembly held at Geneva from the 5th to the 22nd May, 1953, was as follows:—

Dr. J. J. du Pré le Roux, Secretary for Health and Chief Health Officer for the Union	Chief Delegate.
Mr. D. B. Sole, First Secretary for the Embassy of the Union in Paris	Delegate.

(XIII) LEGISLATION.

No legislation sponsored by the Minister of Health was adopted by Parliament during 1953.

The regulations framed under several of the Acts administered by the Department were amended in various respects during the period under review. In particular, the regulations promulgated under the Food, Drugs and Disinfectants Act No. 13 of 1928 were amended in several respects. These amendments are, in the main, designed to effect improvements in the minimum standards of purity and quality of articles of food sold in the Union. The Rural Sanitary Regulations framed under Sections 112, 115 and 132 of the Public Health Act No. 36 of 1919 and promulgated under Government Notice No. 1257 of the 25th August, 1939, with the object of vesting rural local authorities with power to remedy or prevent the development of insanitary conditions in the areas under their control, were repealed and replaced by new regulations based on modern public health concepts.

(XIV) PUBLICATIONS BY MEMBERS OF THE STAFF, YEAR ENDED 31st DECEMBER, 1953.

Bulkeley, W. M. C:—

"Tuberculosis meningitis treated with A.C.T.H. and Isoniazed". *British Medical Journal*, 21st November, 1953.

Davis, D. H. S., Ecologist and Chief Rodent Officer:—

"Plague in South Africa from 1935 to 1949. A survey of wild rodents in African territories". *Bulletin of the W.H.O.*, Vol. 9, 665–700, 1953.

"Plague in South Africa: A study of the epizootic cycle in gerbils (*Tatera brantsi*) in the Northern Orange Free State". *Journal of Hygiene*, Cambridge, Vol. 51, 427–449, December, 1953.

Dormer, B. A., G. Martinaglia and A. M. Beemer:—

"Observations on Longevity of Human and Bovine Baccilli in Calabash Milk". *South African Medical Journal*, 12th December, 1953.

Ferguson, A. L., Deputy Chief Health Officer, Durban.

"Man and his Eating Utensils: A suggested approach to the control of utensil diseases". *South African Medical Journal*, Vol. 27, No. 34, 22nd August, 1953.

HOUGHTON, H. G. H., AND P. SALINGER:—

"Bronchography: A plea for the use of suspension of sulphanilamide in iodised oil". *British Journal of Tuberculosis*, October, 1953.

JENKIN, D. J.:—

"A preliminary report on a method of intracavitary injection in the treatment of Pulmonary Tuberculosis". *British Journal of Tuberculosis*, Supplement, July, 1953.

JOUBERT, G. A., AND E. FINE:—

"Case report: Intrathoracic Lipoma". *South African Medical Journal*, 19th September, 1953.

KARK, E.:—

"Puberty in South African Girls: (i) The Menarche in Indian Girls in Durban". *South African Journal of Clinical Science*, Vol. 4, 1953.

OLIFF, W. D., Assistant Professional Officer (Ecology):—

"The mortality fecundity and intrinsic rate of natural increase of the multimammate mouse *Rattus* (*Mastomys*) *natalensis* (Smith) in the laboratory". *Journal of Animal Ecology*, Vol. 22, 217–226, November, 1953.

PHILLIPS, H. T.:—

"Some social and ethnic variations in the physique of South African nursery school children". *Arch. Diseases Childhood*, Vol. 28, 1953.

PITCHFORD, R. J., Assistant Health Officer., Tzaneen:—

"A comparative study of examination of urine and stool and of rectal biopsy material for diagnosis of Bilharziasis". *South African Medical Journal*: Vol. 28, No. 25, 19th June, 1953.

SALBER, E. J., AND MRS. E. S. BRADSHAW:—

"Birth Weights of South African babies in association with maternal age". *British Journal of Preventive and Social Medicine*, Vol. 7, Jan., 1953.

"Birth Weights of South African babies: Observations on some of the factors affecting these weights". *South African Medical Journal*, Vol. 27, April, 1953.

SCHNEIDER, J.:—

"Preliminary study of the incidence of intestinal Schistosomiasis amongst the non-white races in Natal, Union of South Africa". *Journal of Tropical Medicine and Hygiene*, Nov., 1953.

(XV) STATISTICS.

TABLE I.—VITAL STATISTICS.

(1) Summary of Vital Statistics of European Population, 1920–1953.

(2) Registered Births Classified according to Provinces and Sex, 1949–1953.

(3) Registered Deaths classified according to Provinces and Sex, 1949–1953.

(4) Births and Deaths under one year and Infantile Mortality Rate, 1949–1953.

(5) Causes of Death (Abbreviated International List), 1949–1953.

(6) Deaths according to Age, 1949–1953.

(7) Maternal Mortality, 1949–1953.

(8) European Deaths from Puerperal Causes Registered by age groups, 1952 and 1953.

(9) Comparison of Birth, Death and Natural Increase Rates amongst Europeans in the Union with other Countries.

(10) Infant Mortality Rates—Europeans in the Union compared with other Countries.

(11) Estimated Population by Race, 30th June, 1953.

TABLE II (A).—EPIDEMIOLOGY (GENERAL TABLES).

Notification of Disease and Registered Deaths during the year ended 31st December, 1953.

TABLE II (B).—EPIDEMIOLOGY (INDIVIDUAL CASES).

(1) *Diphtheria*:—

(*a*) Diphtheria Morbidity and Mortality in England and Wales, France, Copenhagen and New Zealand.

(*b*) Diphtheria Morbidity and Mortality (All Races) in the Union of South Africa, 1943–1953.

(*c*) Diphtheria Morbidity and Mortality (By Races) in the Union of South Africa, 1945–1953.

(*d*) Distribution of Cases and Deaths by Race and Age, 1st January, 1953, to 31st December, 1953.

(2) *Leprosy*:—

(*a*) Leper Institutions, Patients therein on 31st December, 1953.

(*b*) First Admissions, Recrudesced Cases, Discharges and Deaths, 1st January, 1953, to 31st December, 1953.

(*c*) Cases remaining in their own homes on 31st December, 1953.

(3) *Malaria*:—

(*a*) Huts Treated with Residual Insecticides. 1st July, 1948, to 31st December, 1953.

(*b*) Vectors found in Check Spraying. 1st July, 1948, to 31st December, 1953.

(*c*) Number of Positive Smears Examined. 1st July, 1948, to 30th June, 1953.

(4) *Plague*:—

Occurrence and Distribution of Human Plague. 1st July, 1948, to 31st December, 1953.

(5) *Poliomyelitis*:—

(*a*) Monthly Incidence of Reported Cases by Race. 1st January, 1953, to 31st December, 1953.

(*b*) Number of Cases Notified and their Distribution. 1st July, 1933, to 31st December, 1953.

(*c*) Notifications and Deaths by Race. 1st January, 1953, to 31st December, 1953.

(*d*) Distribution of Cases and Deaths by Race and Age. 1st January, 1953, to 31st December, 1953.

(*e*) Distribution of Cases and Deaths by Race and Area. 1st January, 1953, to 31st December, 1953.

(6) *Rabies*:—

(*a*) Distribution of Human Contacts. 1st July, 1949, to 31st December, 1953.

(*b*) Known Cases, 1st January, 1953, to 31st December, 1953.

(7) *Smallpox*.—Provincial Incidence of Cases. 1st July, 1948, to 31st December, 1953.

(8) *Tuberculosis*:—

(*a*) Deaths (All Forms), by Race in Age and Sex Groups. 1952 and 1953.

(*b*) Deaths in children under 5 years of age. 1952 and 1953.

(9) *Typhoid Fever*.—Distribution of Cases and Deaths. 1st January, 1953, to 31st December, 1953.

(10) *Typhus*:—

(*a*) Monthly Incidence according to Provinces. 1st January, 1953, to 31st December, 1953.

(*b*) Number of cases in the Union. 1st July, 1932, to 31st December, 1953.

(*c*) Incidence, 1st January, 1953, to 31st December, 1953.

TABLE III.—HEALTH CONTROL AT SEAPORTS AND AIRPORTS.

(1) Ports of the Union: Health Measures. 1st January, 1953, to 31st December, 1963.

(2) Monthly Totals of Aircraft arriving from outside the Union at Sanitary Airports. 1st January, 1953, to 31st December, 1953.

(3) Annual Totals of Aircraft arriving from outside the Union at Durban Airport. 1st July, 1949, to 31st December, 1953.

TABLE IV.—NURSING, MATERNITY AND CHILD WELFARE SERVICES.

(1) District Nursing Services, number of nurses, etc., in respect of whom subsidies or part-refund of salaries are paid. 1949–1953.

(2) Summary of Work done by Deputy Chief Health Officers' Regions. 1st January, 1953, to 31st December, 1953.

(3) Nursing Homes registered as at the 31st December, 1953.

TABLE V.—LABORATORIES AND BIOLOGICAL CONTROL.

(1) Analyses and Examination. 1st January, 1953, to 31st December, 1953.

(2) Number of Examinations performed. 1st January, 1953, to 31st December, 1953.

(3) Nature of Examinations performed. 1st January, 1953, to 31st December, 1953.

Government Vaccine Institute, Rosebank, Cape.

(4) Work carried out. 1st January, 1953, to 31st December, 1953.

(5) Lymph issued free in the Union. 1st January, 1953, to 31st December, 1953.

(6) Sales outside the Union. 1st January, 1953, to 31st December, 1953.

TABLE VI.—HEALTH CENTRES.

Summary of Work Done, 1st January, 1953, to 31st December, 1953.

TABLE VII.—STATUTORY INSPECTION SERVICES.

Food, Drugs and Disinfectants Act No. 13 *of* 1929.

(1) Samples taken for Examination or Analysis. 1st January, 1953, to 31st December, 1953.

Medical, Dental and Pharmacy Act No. 13 *of* 1928.

(2) Prosecutions and Convictions under laws relating to Habit-forming Drugs. 1st January, 1953, to 31st December, 1953.

(3) Licences and Permits issued under the Therapeutic Substances Regulations. 1st January, 1953, to 31st December, 1953.

(4) Examinations carried out under the Therapeutic Substances Regulations. 1st January, 1953, to 31st December, 1953.

(5) Narcotic Drugs imported into the Union of South Africa, 1949–1953.

ACKNOWLEDGMENTS.

My thanks are due to all other Government Departments, the South African Railways, Airways and Harbours Administration, the four Provincial Administrations and the numerous Local Authorities for their continued co-operation with this Department. Mention must also be made of Magistrates and officials of the Department of Native Affairs and of the Railway Health Office with whom the staff of this Department works in very close collaboration. I also wish to express my thanks to all those other official bodies with which the Department is very closely associated, such as the South African Medical and Dental Council, the South African Pharmacy Board, the South African Nursing Council, the South African Institute for Medical Research and the Council for Scientific and Industrial Research.

I should like also to express my sincere appreciation of the loyal and efficient manner in which all the members of the staff of the Department of Health carried out their duties under extremely difficult conditions.

I have the honour to be,

Sir,

Your obedient servant,

J. J. du Pré LE ROUX.

PRETORIA *Secretary for Health.*

TABLE I (1).—UNION OF SOUTH AFRICA—SUMMARY OF VITAL STATISTICS OF EUROPEAN POPULATION, 1920-53.

Calendar Year.	European Population (estimated).	Birth Rate per 1,000 of Population.	Death Rate per 100,000 of Population.				Death Rate per 100,000 of Population from Tuberculosis (all Forms).‡									Percentage of Total Deaths, the Cause of which was Medically Certified.	Infantile Mortality Rate (Deaths of Infants under 1 year per 1,000 live births Registered).	Maternal Mortality Rate (Deaths of Mothers in connection with Pregnancy or Childbirth per 1,000 Live Births Registered).	Survival Rate of Rate of Natural Increase (Excess of Births over Deaths per 1,000 of Population.)
			Actual or Crude.	Diseases of Heart and Circulatory System.	Pneumonia and Bronchitis.	Cancer.	Cape Province.		Transvaal.		Orange Free State.		Natal.		Union.				
							Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.					
1920.....	1,499,911	28·97	11·09	95·67*	113·87*	58·87*	§	§	§	§	§	§	§	§	45·93*	79·78	90·07	4·10*	17·88
1921.....	1,519,488†	28·44	10·41	102·91	136·15	69·09	§	§	§	§	§	§	§	§	58·26	80·76	77·09	4·94	18·03
1922.....	1,556,241	27·52	9·48	97·99	127·24	70·88	§	§	§	§	§	§	§	§	47·74	82·96	72·91	5·21	18·04
1923.....	1,579,733	26·70	9·77	108·50	120·72	78·94	55·03	52·43	74·45	21·12	19·91	17·17	41·62	40·45	46·46	82·77	74·42	5·22	16·93
1924.....	1,610,774	26·29	9·62	123·92	123·79	76·36	67·04	82·82	84·54	23·41	14·71	22·25	50·93	36·38	51·59	84·74	73·73	4·75	16·67
1925.....	1,637,472	26·51	9·39	128·86	97·04	72·86	65·65	62·14	74·27	21·84	30·01	12·59	73·89	40·51	52·70	86·45	68·39	3·62	17·12
1926.....	1,676,660†	26·16	9·59	127·21	113·44	71·18	58·97	57·36	95·54	24·41	24·89	16·22	49·23	39·85	53·41	87·76	64·82	4·56	16·57
1927.....	1,708,955	25·95	9·73	122·76	110·42	73·20	61·36	59·87	78·78	17·87	24·58	12·98	71·95	28·73	50·50	89·93	70·62	4·80	16·22
1928.....	1,738,937	25·77	10·15	133·53	127·52	77·72	60·72	56·51	85·08	20·72	31·76	15·54	54·99	25·55	50·95	89·93	70·49	4·98	15·62
1929.....	1,767,719	26·15	9·51	127·11	104·04	77·44	57·98	51·63	72·48	18·08	22·16	17·47	44·58	22·56	45·37	90·19	64·22	5·26	16·64
1930.....	1,797,900	26·44	9·69	132·33	112·87	82·62	62·20	50·58	73·84	18·96	23·47	6·87	51·74	31·51	46·78	91·15	66·84	5·26	16·75
1931.....	1,829,300	25·38	9·37	131·53	103·75	85·55	55·79	53·75	64·26	15·05	24·81	11·92	54·26	26·35	44·22	90·46	63·07	4·70	16·01
1932.....	1,859,400	24·17	9·97	137·52	113·75	89·06	51·02	54·55	59·19	16·40	20·02	15·83	58·63	24·66	42·33	90·84	68·57	5·31	14·20
1933.....	1,890,300	23·55	9·35	142·52	100·30	95·33	57·48	54·40	52·21	14·58	22·86	6·90	46·86	19·63	40·86	91·45	61·01	4·81	14·20
1934.....	1,914,700	23·44	9·68	156·21	94·53	92·39	50·85	50·23	52·30	16·50	19·03	12·77	70·31	26·97	39·54	91·91	60·79	5·99	13·76
1935.....	1,973,700	24·18	10·45	169·58	131·98	95·76	50·85	56·52	49·18	16·83	14·63	26·16	43·39	28·72	40·43	92·55	62·81	4·73	13·72
1936.....	2,008,700	24·21	9·57	154·38	106·19	97·28	46·61	44·72	45·28	12·57	18·65	9·08	45·03	15·69	34·40	92·88	59·06	5·10	14·64
1937.....	2,043,700	24·90	10·08	172·97	113·62	106·57	47·19	50·17	41·72	16·39	13·74	15·14	44·56	27·78	36·40	93·17	56·57	4·38	14·81
1938.....	2,081,400	25·01	9·48	153·55	102·53	103·44	54·90	51·75	42·42	13·54	18·65	11·10	60·54	28·28	38·34	94·20	51·69	3·69	15·53
1939.....	2,116,500	25·29	9·40	170·42	90·05	104·75	54·44	43·81	43·05	14·32	21·59	10·09	52·79	17·87	36·19	94·32	49·48	3·61	15·88
1940.....	2,152,700	25·29	9·42	190·18	89·93	102·80	52·03	50·68	37·74	11·23	12·76	12·11	57·29	18·55	35·12	94·75	50·02	3·37	15·87
1941.....	2,188,200	24·94	9·47	197·61	86·14	109·40	54·83	43·83	38·11	11·90	10·00	11·11	48·62	25·45	34·26	94·95	50·93	2·69	15·47
1942.....	2,230,000	25·18	9·35	199·69	81·97	109·33	59·71	44·95	38·20	14·95	15·00	7·07	54·05	24·11	36·19	94·83	47·52	2·83	15·83
1943.....	2,265,000	25·94	9·53	211·92	92·23	109·98	51·67	45·11	36·52	10·25	12·00	13·13	46·90	26·32	33·16	95·25	45·60	2·85	16·41
1944.....	2,300,000	26·63	9·33	214·83	84·78	111·96	55·32	51·90	31·87	12·17	17·00	5·05	55·65	12·07	34·17	95·03	42·53	2·20	17·30
1945.....	2,335,000	25·48	9·32	236·10	85·65	112·59	54·46	43·53	34·70	10·51	13·00	7·07	46·15	22·88	32·46	95·59	40·33	2·10	16·16
1946.....	2,372,690†	26·92	8·65	211·64	78·15	107·52	57·24	43·94	28·73	11·05	12·75	8·00	57·63	24·17	32·57	96·02	35·90	1·77	18·27
1947.....	2,434,000	27·23	8·63	219·06	77·04	107·80	57·69	40·63	29·95	9·04	10·48	10·39	59·84	21·14	31·75	96·87	34·39	1·37	18·60
1948.....	2,505,000	26·54	8·90	241·90	83·80	112·70	55·80	41·80	28·00	8·06	15·60	16·90	44·90	26·00	30·81	97·20	36·00	1·50	17·60
1949.....	2,567,000	25·91	8·38	207·01	77·52	115·31	51·97	34·27	37·46	8·68	14·29	12·96	48·48	19·70	26·64	97·51	36·63	1·13	17·08
1950.....	2,610,000	25·09	8·70	202·41	72·45	118·35	49·02	34·90	33·89	7·47	8·77	1·82	29·63	11·85	24·48	97·50	35·74	0·95	16·39
1951.....	2,650,000	25·07	8·82	223·63	70·60	116·07	39·35	26·48	35·60	8·17	6·03	6·19	32·85	18·84	21·41	97·90	33·52	1·12	16·25
1952.....	2,696,000	25·29	8·24	257·21	59·03	115·99	28·72	19·46	12·10	7·34	10·92	5·26	18·57	7·80	15·02	98·14	32·76	0·98	17·05
1953.....	2,752,000	25·09	8·56	268·39	59·92	119·11	17·23	11·96	10·73	5·09	5·74	2·59	11·03	3·45	9·85	98·23	32·67	1·20	16·53

* Medically certified deaths only. Rates for subsequent years calculated on the total deaths registered.
† Actual (per census).
‡ Includes miners' phthisis combined with pulmonary tuberculosis.
§ Not available.

TABLE I (2).—BIRTHS REGISTERED BY PROVINCE AND SEX, 1949 TO 1953.

The compulsory registration of births of Natives was extended to the rural areas on the 1st January, 1952, but it will be several years before registration can be regarded as complete. The following tables show the number of births of Europeans, Coloureds and Asiatics registered during the past five years, according to provinces and sex, and also indicate the birth rate per thousand.

Year.	Cape Province.		Natal.		Transvaal.		Orange Free State.		Union.			
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	Birth Rate per 1,000.
EUROPEAN.												
1949	11,460	10,720	3,038	2,893	17,037	16,054	2,743	2,578	34,278	32,245	66,523	25·9
1950	11,110	10,358	3,003	2,772	16,834	15,910	2,878	2,627	33,825	31,667	65,492	25·1
1951	11,048	10,585	2,994	2,953	16,692	16,215	2,927	2,844	33,661	32,597	66,258	25·0
1952	11,401	10,818	3,216	2,998	17,238	16,148	3,237	2,975	35,092	32,939	68,031	25·2
1953	12,106	11,320	3,360	3,203	17,824	16,809	3,222	2,922	36,512	34,254	70,766	25·7
COLOURED.												
1949	22,527	22,276	636	591	1,362	1,355	216	214	24,741	24,436	49,177	47·6
1950	22,972	22,764	603	577	1,431	1,368	221	191	25,227	24,900	50,127	46·9
1951	24,214	24,075	701	660	1,484	1,481	235	213	26,634	26,429	53,063	47·0
1952	24,777	24,477	717	724	1,533	1,559	208	237	27,235	27,000	54,235	47·8
1953	24,190	25,527	766	703	1,692	1,631	315	295	28,963	28,156	57,119	48·8
ASIATIC.												
1949	240	272	5,057	4,848	1,030	914	—	—	6,327	6,034	12 361	37·0
1950	261	277	5,494	5,361	1,031	960	—	—	6,786	6,598	13,384	38·1
1951	272	310	5,227	5,234	999	972	—	—	6,498	6,516	13,014	35·5
1952	291	272	5,328	5,343	958	963	—	—	6,577	6,578	13,155	34·8
1953	342	348	5,255	5,202	1,077	1,013	1	—	6,675	6,563	13,238	34·2

TABLE I (3).—DEATHS REGISTERED BY PROVINCE AND SEX, 1949 TO 1953.

In the same way as the registration of births of Natives was made compulsory also in rural areas, so the registration of Native deaths was extended to these areas as from the 1st January, 1952, but for various reasons reliable figures are not yet available. The following is a table indicating registered deaths of Europeans, Coloureds and Asiatics in the different provinces, according to sex and showing also the death rate per thousand.

Year.	Cape Province.		Natal.		Transvaal.		Orange Free State.		Union.			
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	Death Rate per 1,000.
EUROPEAN.												
1949	4,898	3,888	1,490	1,066	5,533	3,817	1,148	827	13,069	9,598	22,667	8·8
1950	4,735	3,857	1,480	1,153	5,506	3,993	1,157	836	12,878	9,839	22,717	8·7
1951	4,910	3,910	1,477	1,064	5,815	4,100	1,158	875	13,360	9,949	23,309	8·8
1952	4,705	3,630	1,463	998	5,492	3,872	1,193	815	12,853	9,315	22,168	8·2
1953	4,872	3,733	1,517	1,122	6,029	4,231	1,171	890	13,589	9,976	23,565	8·6
COLOURED.												
1949	10,845	9,895	204	168	769	603	143	122	11,961	10,788	22,749	22·0
1950	10,118	9,570	239	177	686	607	174	146	11,217	10 500	21,717	20·3
1951	10,054	9,120	230	186	840	680	199	155	11,323	10,141	21,464	19·7
1952	10,130	8,858	227	187	763	576	185	144	11,305	9,765	21,070	18·5
1953	10,023	8,794	226	159	814	645	183	140	11,246	9,738	20,984	17·9
ASIATICS.												
1949	141	47	1,609	1,326	320	218	—	—	2,070	1,591	3,661	11·0
1950	117	72	1,878	1,530	269	178	—	1	2,264	1,781	4,045	11·5
1951	132	56	1,549	1,388	258	175	2	—	1,941	1,619	3,560	9·7
1952	125	50	1,620	1,290	264	143	—	1	2,009	1,484	3,493	9·2
1953	114	43	1,715	1,285	242	180	1	—	2,072	1,508	3,580	9·3

TABLE I (4).—BIRTHS AND DEATHS UNDER ONE YEAR AND INFANTILE MORTALITY RATE, 1949–1953.

Year.	CAPE.			NATAL.			TRANSVAAL.			ORANGE FREE STATE.			UNION.		
	Births Registered.	Deaths.	Death-rate per 1,000 Births.	Births Registered.	Deaths.	Death-rate per 1,000 Births.	Births Registered.	Deaths.	Death-rate per 1,000 Births.	Births Registered.	Deaths.	Death-rate per 1,000 Births.	Births Registered.	Deaths.	Death-rate per 1,000 Births.
EUROPEANS.															
1949	22,180	830	37·42	5,931	174	29·34	33,094	1,302	39·35	5,323	252	47·36	66,523	2,558	38·50
1950	21,468	732	34·09	5,775	168	29·09	32,744	1,200	36·65	5,505	241	43·78	65,492	2,341	35·74
1951	21,633	717	33·14	5,947	158	26·57	32,907	1,121	34·07	5,771	225	38·99	66,258	2,221	33·52
1952	22,219	717	32·30	6,214	161	25·90	33,386	1,116	33·40	6,212	235	37·80	68,031	2,229	32·80
1953	22,497	660	29·30	6,483	196	30·20	33,860	1,161	34·30	6,209	239	38·50	69,049	2,256	32·70
ASIATICS.															
1949	512	38	74·22	9,905	632	63·80	1,944	171	87·96	—	—	—	12,361	841	75·33
1950	538	38	70·63	10,855	737	67·80	1,991	142	71·32	—	—	—	13,384	917	69·92
1951	582	44	75·60	10,461	642	61·37	1,971	128	64·94	—	—	—	13,014	814	62·55
1952	563	34	60·39	10,671	673	63·07	1,921	139	72·36	—	—	—	13,155	847	64·39
1953	685	28	40·88	10,837	736	67·92	2,005	131	65·34	—	—	—	13,527	895	66·16
MIXED AND OTHER COLOURED.															
1949	44,803	5,460	121·87	1,227	98	79·87	2,717	354	130·29	430	74	172·09	49,177	5,986	126·03
1950	45,736	6,187	135·25	1,180	111	94·07	2,799	340	125·04	412	91	220·87	50,127	6,729	134·04
1951	48,289	5,979	123·82	1,361	116	85·23	2,965	427	144·01	448	94	209·82	53,063	6,616	124·68
1952	49,254	6,378	129·49	1,444	116	80·33	3,092	394	127·43	445	102	229·21	54,235	6,990	128·88
1953	50,699	6,695	132·05	1,356	104	76·70	3,217	474	147·34	428	82	191·59	55,700	7,355	132·05

TABLE I (5).—CAUSES OF DEATH (ABBREVIATED INTERNATIONAL LIST), EUROPEANS, 1949 TO 1953.

	Cause of Death.		1949.						1950.						1951.						1952.						1953.					
			Uncertified.			Certified and Uncertified.			Uncertified.			Certified and Uncertified.			Uncertified.			Certified and Uncertified.			Uncertified.			Certified and Uncertified.			Uncertified.			Certified and Uncertified.		
			M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
B 1.	Tuberculosis of respiratory system	001–008	5	3	8	344	194	538	5	1	6	319	175	494	8	4	12	259	162	421	5	4	9	205	116	321	3	3	6	146	74	220
B 2.	Tuberculosis, other forms	010–019	—	—	—	63	54	117	1	1	2	66	50	116	—	—	—	71	45	116	—	—	—	44	39	83	—	—	—	27	24	51
B 3.	Syphilis, and its sequelae	020–029	3	—	3	108	45	153	—	—	—	90	45	135	—	2	2	70	50	120	—	—	—	86	33	119	—	1	1	64	31	95
B 4.	Typhoid fever	040	—	—	—	20	15	35	—	—	—	17	7	24	—	1	1	4	7	11	1	—	1	10	2	12	—	—	—	6	4	10
B 5.	Cholera	043	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
B 6.	Dysentery, all forms	045–048	—	—	—	18	12	30	—	—	—	17	7	24	—	—	—	14	11	25	—	—	—	21	4	25	—	—	—	11	9	20
B 7.	Scarlet fever and streptococcal sore throat	050, 051	—	—	—	2	2	4	—	—	—	2	5	7	—	—	—	1	2	3	2	—	2	—	—	—	—	—	—	1	—	1
B 8.	Diphtheria	055	—	1	1	46	55	101	—	—	—	61	50	111	—	—	—	60	62	122	—	2	2	46	38	84	—	—	—	42	51	93
B 9.	Whooping cough	056	—	2	2	29	35	64	1	—	1	13	20	33	1	—	1	26	27	53	—	1	1	7	11	18	—	—	—	5	7	12
B 10.	Meningococcal infections	057	—	—	—	32	21	53	—	—	—	27	17	44	—	—	—	20	14	34	—	—	—	13	5	18	1	—	1	14	13	27
B 11.	Plague	058	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—
B 12.	Acute poliomyelitis	080	—	—	—	7	9	16	—	—	—	7	5	13	—	—	—	14	11	25	—	—	—	4	4	8	—	—	—	13	11	24
B 13.	Smallpox	084	—	—	—	14	4	18	—	—	—	3	5	8	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—
B 14.	Measles	085	2	3	5	23	23	46	2	—	2	14	14	28	—	—	—	21	15	36	—	—	—	5	6	11	—	—	—	15	7	22
B 15.	Typhus and other rickettsial diseases	100–108	—	—	—	3	1	4	—	—	—	4	2	6	—	—	—	1	2	3	—	—	—	3	2	5	—	—	—	1	2	3
B 16.	Malaria	110–117	—	1	1	6	5	11	—	—	—	12	6	18	—	—	—	8	7	15	—	—	—	8	5	13	—	—	—	7	8	15
B 17.	All other diseases classified as infective and parasitic	030–039 041, 042 044, 049 052–054 059–074 081–083 086–096 120–138	—	3	3	83	62	145	2	—	2	102	88	190	4	—	4	79	49	128	—	1	1	34	39	73	—	—	—	40	32	72
B 18.	Malignant neoplasms, including neoplasms of lymhatic and haematopoietic tissues	140–205	29	17	46	1,537	1,422	2,959	27	23	50	1,593	1,495	3,088	26	24	50	1,774	1,532	3,306	26	21	47	1,766	1,538	3,304	26	20	46	1,819	1,685	3,504
B 19.	Benign and unspecified neoplasms	210–239	1	—	1	40	44	84	1	—	1	47	55	102	1	—	1	55	55	110	—	—	—	27	50	77	—	2	2	40	60	100
B 20.	Diabetes, mellitus	260	1	7	8	78	187	265	1	5	6	87	194	281	5	2	7	98	178	276	2	3	6	75	164	239	3	1	4	72	147	219
B 21.	Anaemias	290–293	—	—	—	36	29	65	—	2	2	40	57	97	—	—	—	29	43	72	—	—	—	29	43	72	—	—	—	16	46	62
B 22.	Vascular lesions affecting central nervous system	330–334	26	25	51	853	1,109	1,962	36	24	60	963	1,241	2,204	20	26	46	973	1,298	2,271	14	20	34	943	1,165	2,108	18	12	30	1,084	1,318	2,402
B 23.	Nonmeningococcal meningitis	340	3	2	5	48	34	82	—	1	1	36	30	66	—	1	1	39	25	64	—	1	1	23	13	36	1	1	2	34	25	59
B 24.	Rheumatic fever	400–402	—	—	—	11	7	18	—	—	—	3	4	7	—	—	—	4	10	14	—	—	—	11	11	22	—	—	—	5	7	12
B 25.	Chronic rheumatic heart disease	410–416	1	2	3	111	131	242	1	2	3	94	112	206	1	2	3	111	116	227	1	—	1	69	74	143	—	—	—	62	78	140
B 26.	Arteriosclerotic and degenerative heart disease	420–422	42	10	52	2,619	1,332	3,951	31	10	41	2,417	1,342	3,759	30	18	48	2,866	1,464	4,330	37	13	50	3,127	1,600	4,727	40	12	52	3,375	1,801	5,176
B 27.	Other diseases of the heart	430–434	14	8	22	197	180	377	13	2	15	186	185	371	13	7	20	206	184	390	7	11	18	110	109	219	1	1	2	46	39	85
B 28.	Hypertension with heart disease	400–443	3	2	5	377	367	744	3	4	7	351	396	747	2	7	9	298	394	692	—	3	3	239	314	552	3	1	4	286	325	611
B 29.	Hypertension without mention of heart	444–447	—	1	1	67	90	157	1	1	2	74	88	162	2	2	4	82	90	172	1	2	3	100	95	195	2	2	4	118	114	232
B 30.	Influenza	480–483	1	2	3	55	42	97	3	1	4	102	69	171	1	1	2	65	33	98	1	2	3	54	43	97	—	1	1	23	20	43
B 31.	Pneumonia	490–493	29	26	55	902	706	1,608	18	30	48	817	678	1,495	23	13	36	851	648	1,499	13	12	25	767	571	1,338	13	10	23	779	605	1,384
B 32.	Bronchitis	500–502	5	2	7	224	158	382	3	4	7	252	134	386	2	—	2	244	123	367	4	3	7	155	95	250	3	—	3	181	76	264
B 33.	Ulcer of stomach and duodenum	540, 541	2	—	2	108	22	130	1	—	1	110	28	138	1	—	1	97	24	121	2	—	2	98	29	127	—	—	—	126	31	157
B 34.	Appendicitis	550–553	—	2	2	56	28	84	—	—	—	52	21	73	1	1	2	60	28	88	—	—	—	32	20	52	—	—	—	43	28	71
B 35.	Intestinal obstruction and hernia	560, 561 570 543,	1	—	1	79	79	158	2	—	2	87	84	171	—	—	—	67	83	150	—	—	—	85	74	159	—	1	1	117	75	192
B 36.	Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the new-born	571, 572	9	10	19	334	239	573	9	9	18	273	232	505	5	3	8	264	234	498	6	5	11	263	252	515	9	2	11	272	235	507
B 37.	Cirrhosis of liver	581	1	1	2	136	54	190	1	1	2	112	48	160	1	—	1	157	76	233	1	—	1	147	68	215	—	—	—	132	61	193
B 38.	Nephritis and nephrosis	590–594	4	6	10	329	277	606	3	2	5	277	231	508	5	3	8	293	245	538	2	2	4	172	195	367	—	1	1	238	218	456
B 39.	Hyperplasia of prostate	630	1	—	1	202	—	202	—	—	—	169	—	169	1	—	1	228	—	228	3	—	3	233	—	233	—	—	—	222	—	222
B 40.	Complications of pregnancy, childbirth and the puerperium	640–652 670–689	—	1	1	—	75	75	—	1	1	—	62	62	—	2	2	—	74	74	—	—	—	—	68	68	—	—	—	—	83	83
B 41.	Congenital malformations	750–759	2	4	6	129	117	246	1	1	2	166	88	254	4	—	4	127	105	232	1	1	2	166	120	286	1	2	3	157	146	303
B 42.	Birth injuries, postnatal asphyxia and atelectasis	760–762	2	2	4	211	126	337	1	—	1	190	142	332	4	2	6	235	142	377	2	1	3	237	147	384	2	2	4	220	153	373
B 43.	Infections of the new-born	763–768	—	—	—	26	9	35	2	—	2	18	12	30	—	—	—	19	9	28	—	—	—	13	16	33	—	—	—	13	11	24
B 44.	Other diseases peculiar to early infancy, and immaturity unqualified	769–776	23	11	34	502	360	862	16	10	26	406	319	725	12	7	19	387	308	695	10	5	15	414	311	725	4	8	12	416	335	751
B 45.	Senility without mention of psychosis, ill-defined and unknown causes	790–795	80	68	148	501	501	1,002	74	80	154	424	449	873	62	48	110	448	408	856	53	48	101	510	513	1,023	63	73	136	646	631	1,277
B 46.	All other diseases		21	19	42	1,308	956	2,264	24	18	42	1,441	1,160	2,601	26	19	45	1,455	1,151	2,606	24	10	34	1,269	923	2,192	19	8	27	1,326	869	2,195
BE 47.	Motor vehicle accidents	E810–E835	1	—	1	337	76	413	6	—	6	342	71	413	2	2	4	335	77	412	1	4	5	420	93	513	3	2	5	449	113	562
BE 48.	All other accidents	E800–E802 E840–E965	4	1	5	563	230	793	6	6	12	570	242	812	5	3	8	582	243	825	13	1	14	567	223	790	7	2	9	562	280	842
BE 49.	Suicide and self-inflicted injury	E970–E979	—	—	—	233	58	291	2	—	2	187	58	245	2	2	4	204	63	267	3	—	3	191	61	252	4	1	5	267	61	328
BE 50.	Homocide and operations of war	E980–E999	—	—	—	62	15	77	1	—	1	38	16	54	—	—	—	57	22	79	1	—	1	52	13	65	—	1	1	54	27	81
	Total		318	242	560	13,069	9,598	22,667	318	239	557	12,878	9,839	22,718	290	202	492	13,360	9,949	23,309	236	176	412	12,853	9,315	22,168	246	170	416	13,589	9,976	23,565

TABLE 1 (6).—DEATHS FROM ALL CAUSES, IN AGE GROUPS, EUROPEANS, 1949–1953.

	Under One Day.	Days. 1–6.	7–13.	14–20.	21–30.	Total Under One Month.	Months. 1–2.	3–5.	6–8.	9–11.	Total Under One Year.	1	2	3	4	Total 0–4.	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85–	90–	95–	100 Years and over.	Unsp.	Total All Ages.
1949—																																						
M.....	337	345	86	33	37	838	197	226	130	90	1,481	142	102	61	53	1,859	150	98	168	269	255	282	362	459	575	732	967	1,157	1,391	1,452	1,372	841	492	153	32	3	—	13,069
F.....	228	241	57	29	24	579	146	176	100	76	1,077	147	81	58	35	1,398	125	71	101	136	160	187	240	320	352	485	609	749	940	998	1,078	820	565	204	50	10	—	9,598
T.....	565	586	143	62	61	1,417	343	402	230	166	2,558	309	183	119	88	3,257	275	169	269	405	415	469	602	779	927	1,217	1,576	1,906	2,331	2,450	2,450	1,661	1,057	357	82	13	—	22,666
1950—																																						
M.....	299	307	67	26	36	735	164	221	138	79	1,337	152	80	59	56	1,684	130	78	167	223	206	251	343	505	574	736	1,026	1,210	1,366	1,441	1,345	976	514	150	38	4	1	12,878
F.....	215	234	55	22	24	550	123	159	102	70	1,004	122	51	52	35	1,264	135	63	85	126	145	175	267	299	397	488	595	715	984	1,091	1,169	962	591	237	65	5	1	9,839
T.....	514	541	122	48	60	1,285	287	380	240	149	2,341	274	131	111	91	2,948	265	141	252	349	351	426	610	804	971	1,224	1,621	1,835	2,350	2,532	2,514	1,938	1,105	387	103	9	2	22,717
1951—																																						
M.....	281	335	80	28	23	747	135	175	120	67	1,244	160	81	70	40	1,595	160	79	171	218	235	253	335	496	640	721	1,051	1,244	1,410	1,544	1,339	1,065	569	183	43	8	—	1	13,360
F.....	233	216	52	14	9	524	121	146	112	74	977	135	49	36	51	1,248	120	84	92	129	131	176	242	309	359	498	640	857	955	1,126	1,166	949	613	197	52	6	—	1	9,949
T.....	514	551	132	42	32	1,271	256	321	232	141	2,221	295	130	106	91	2,843	280	163	263	347	366	429	577	805	999	1,219	1,691	2,101	2,365	2,670	2,505	2,014	1,182	380	95	14	1	23,309
1952—																																						
M.....	307	339	72	29	26	773	156	190	110	69	1,298	139	63	56	32	1,588	141	83	174	314	200	254	320	460	620	736	959	1,201	1,329	1,453	1,377	1,009	511	180	38	5	—	1	12,853
F.....	214	226	68	16	26	550	102	127	84	68	931	115	53	33	23	1,155	109	73	72	95	132	137	224	305	426	454	528	703	877	1,078	1,084	988	581	236	57	1	—	—	9,315
T.....	521	565	140	45	52	1,323	258	317	194	137	2,229	254	116	89	55	2,743	250	156	246	309	332	391	544	765	1,046	1,190	1,487	1,904	2,206	2,531	2,461	1,997	1,092	416	95	6	1	22,168
1953—																																						
M.....	307	322	69	29	25	752	147	177	109	64	1,249	115	57	49	46	1,516	149	89	155	244	213	270	351	475	738	782	1,101	1,261	1,373	1,524	1,468	1,055	593	185	43	4	—	13,589
F.....	228	257	65	33	20	603	111	137	91	65	1,007	111	48	48	30	1,244	111	51	69	104	117	171	234	291	457	424	627	779	1,012	1,109	1,223	1,014	634	257	58	10	—	—	9,976
T.....	535	879	134	62	45	1,355	258	314	200	129	2,256	226	105	97	76	2,760	260	140	224	348	330	441	585	766	1,195	1,206	1,728	2,040	2,385	2,633	2,691	2,069	1,227	422	101	14	—	23,565

TABLE I (7).—MATERNAL MORTALITY, 1949 TO 1953.

Year.	Live Births Registered.	Deaths due to Puerperal Causes.				
		Number.		Rates per 1,000 Live Births.		
		Puerperal Sepsis.	Other Puerperal Causes.	Puerperal Sepsis.	Other Puerperal Causes.	Total Puerperal Mortality.
EUROPEANS.						
1949	66,523	5	70	0·08	1·05	1·13
1950	65,492	4	58	0·06	0·89	0·95
1951	66,258	4	70	0·06	1·06	1·12
1952	68,031	3	64	0·04	0·94	0·98
1953	69,049	5	78	0·07	1·13	1·20
ASIATICS.						
1949	13,361	2	18	0·15	1·35	1·50
1950	13,384	4	39	0·30	2·91	3·21
1951	13,014	3	33	0·23	2·54	2·77
1952	13,155	1	39	0·08	2·96	3·04
1953	13,527	5	40	0·37	2·96	3·33
MIXED AND OTHER COLOURED.						
1949	49,177	16	122	0·33	2·48	2·81
1950	50,127	15	118	0·30	2·35	2·65
1951	53,063	16	116	0·30	2·19	2·49
1952	54,235	19	126	0·35	2·32	2·67
1953	55,700	15	110	0·27	1·97	2·24

TABLE I (8).—EUROPEAN DEATHS FROM PUERPERAL CAUSES REGISTERED BY AGE GROUPS.

	Cause of Death.	YEAR 1952.							
		15–19.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and over.	Total. All Ages.
XI.—DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM.									
	Complications of Pregnancy (640–649).								
640	Pyelitis and pyelonephritis of pregnancy	—	—	—	—	—	—	—	—
641	Other infections of genito-urinary tract during pregnancy	—	—	—	—	—	—	—	—
642	Toxaemias of pregnancy	—	5	5	—	4	1	—	15
643	Placenta praevia	—	—	—	—	—	—	—	—
644	Other haemorrhage of pregnancy	—	—	—	—	—	—	—	—
645	Ectopic pregnancy	—	—	1	—	—	—	—	1
646	Anaemia of pregnancy	—	—	—	—	—	—	—	—
647	Pregnancy with malposition of foetus in uterus	—	—	—	—	—	—	—	—
648	Other complications arising from pregnancy	—	—	1	—	—	—	—	1
649	Pregnancy associated with other conditions	—	—	—	—	1	—	—	1
	SUB-TOTAL, 640–649	—	5	7	—	5	1	—	18
	Abortion (650–652).								
650	Abortion without mention of sepsis or toxaemia	—	1	2	—	1	1	—	5
651	Abortion with sepsis	—	—	—	—	—	1	—	1
652	Abortion with toxaemia, without mention of sepsis	—	—	—	—	—	—	—	1
	SUB-TOTAL, 650–652	—	1	2	—	1	2	—	6
	Delivery with Specified Complication (670–678).								
670	Delivery complicated by placenta praevia or antepartum haemorrhage	—	1	—	—	3	1	—	5
671	Delivery complicated by retained placenta	—	—	2	1	1	—	—	4
672	Delivery complicated by other postpartum haemorrhage	—	2	1	4	2	—	—	9
673	Delivery complicated by abnormality of bony pelvis	—	—	1	1	—	—	—	2
674	Delivery complicated by disproportion or malposition of foetus	—	—	—	—	—	—	—	—
675	Delivery complicated by prolonged labour of other origin	—	1	—	1	—	—	—	2
676	Delivery with laceration of perineum, without mention of other laceration	—	—	—	—	—	—	—	—
677	Delivery with other trauma	—	—	1	—	1	1	—	3
678	Delivery with other complications of childbirth	—	—	3	1	3	1	—	8
	SUB-TOTAL, 670–678	—	4	8	8	10	3	—	33
	Complications of the Puerperium (680–689).								
680	Puerperal urinary infection without other sepsis	—	—	—	—	—	—	—	—
681	Sepsis of childbirth and the puerperium	—	—	—	1	1	—	—	2
682	Puerperal phlebitis and thrombosis	—	—	—	1	—	1	—	2
683	Pyrexia of unknown origin during the puerperium	—	—	—	—	—	—	—	—
684	Puerperal pulmonary embolism	—	1	—	—	—	—	—	1
685	Puerperal eclampsia	—	1	—	1	2	—	—	4
686	Other form of puerperal toxaemia	—	—	—	—	—	—	—	—
687	Cerebral haemorrhage in the puerperium	—	—	—	—	—	—	—	—
688	Other and unspecified complications of the puerperium	—	—	—	—	—	—	—	—
689	Mastitis and other disorders of lactation	—	—	—	—	1	—	—	1
	SUB-TOTAL, 680–689	—	2	—	3	4	1	—	10
	TOTAL CLASS XI, 640–689	—	12	17	11	20	7	—	67

TABLE I (8).—EUROPEAN DEATHS FROM PUERPERAL CAUSES REGISTERED BY AGE GROUPS (*continued*).

	Cause of Death.	YEAR 1953.							
		15–19.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and over.	Total. All Ages.
	XI.—DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH AND PUERPERIUM.								
	Complications of Pregnancy (640–649).								
640	Pyelitis and pyelonephritis of pregnancy	—	—	—	—	—	—	—	—
641	Other infections of genito-urinary tract during pregnancy	—	—	—	—	—	—	—	—
642	Toxaemias of pregnancy	—	1	4	2	4	3	1	15
643	Placenta praevia	—	—	—	—	—	—	—	—
644	Other haemorrhage of pregnancy	—	—	—	—	—	—	1	1
645	Ectopic pregnancy	—	—	—	2	3	—	—	5
646	Anaemia of pregnancy	—	—	—	—	—	—	—	—
647	Pregnancy with malposition of foetus in uterus	—	—	—	—	—	—	—	—
648	Other complications arising from pregnancy	—	—	—	—	—	—	—	—
649	Pregnancy associated with other conditions	—	—	—	—	—	—	—	—
	SUB-TOTAL, 640–649	—	1	4	4	7	3	2	21
	Abortion (650–652).								
650	Abortion without mention of sepsis or toxaemia	—	2	1	—	2	—	—	5
651	Abortion with sepsis	1	—	1	—	—	1	—	3
652	Abortion with toxaemia, without mention of sepsis	—	—	—	—	—	—	—	—
	SUB-TOTAL, 650–652	1	2	2	—	2	1	—	8
	Delivery with Specified Complication (670–678).								
670	Delivery omplicated by placenta praevia or antepartum haemorrhage	—	2	—	4	2	—	1	9
671	Delivery complicated by retained placenta	—	—	—	2	1	—	—	3
672	Delivery complicated by other postpartum haemorrhage	—	2	2	—	4	1	—	9
673	Delivery complicated by abnormality of bony pelvis	—	1	—	—	—	—	—	1
674	Delivery complicated by disproportion or malposition of foetus	—	—	—	—	—	—	—	—
675	Delivery complicated by prolonged labour of other origin	—	—	1	2	2	—	—	5
676	Delivery with laceration of perineum, without mention of other laceration	—	—	—	—	—	—	—	—
677	Delivery with other trauma	—	1	—	—	—	—	—	1
678	Delivery with other complications of childbirth	—	2	1	2	2	2	2	9
	SUB-TOTAL, 670–678	—	8	4	10	11	3	1	37
	Complication of the Puerperium (680–689).								
680	Puerperal urinary infection, without other sepsis	—	—	—	—	—	—	—	—
681	Sepsis of childbirth and the puerperium	—	—	—	2	—	—	—	2
682	Puerperal phlebitis and thrombosis	—	—	1	1	1	3	—	6
683	Pyrexia of unknown origin during the puerperium	—	—	—	—	—	—	—	—
684	Puerperal pulmonary embolism	—	—	—	—	—	—	—	—
685	Puerperal eclampsia	—	3	2	2	1	1	—	9
686	Other forms of puerperal toxaemia	—	—	—	—	—	—	—	—
687	Cerebral haemorrhage in the puerperium	—	—	—	—	—	—	—	—
688	Other and unspecified complications of the puerperium	—	—	—	—	—	—	—	—
689	Mastitis and other disorders of lactation	—	—	—	—	—	—	—	—
	SUB-TOTAL, 680–689	—	3	3	5	2	4	—	17
	TOTAL CLASS XI, 640–689	1	14	13	19	22	11	3	83

These tables are in accordance with the international classification of causes of deaths adopted by the Wold Health Organisation.

TABLE I (9).—COMPARISON OF BIRTH, DEATH AND NATURAL INCREASE RATE AMONG EUROPEANS IN THE UNION WITH OTHER COUNTRIES.—AVERAGE RATES FOR THREE-YEARLY PERIODS (BASED ON LATEST AVAILABLE INFORMATION).

Countries.	Birth Rate.	Death Rate.	Natural Increase.
Union of South Africa	25·7	8·8	16·9
Holland	22·2	7·5	14·7
Canada	27·7	8·8	18·9
Portugal	24·2	11·8	12·4
New Zealand	24·4	9·2	15·2
Italy	17·8	10·0	7·8
Australia	23·0	9·4	13·6
Germany	15·7	10·7	5·0
United States of America	24·6	9·6	15·0
England and Wales	15·4	11·7	3·7
France	19·2	12·8	6·4

TABLE I (10).—INFANTILE MORTALITY RATES.—EUROPEANS IN THE UNION COMPARED WITH OTHER COUNTRIES. AVERAGE RATES FOR THREE-YEARLY PERIODS (BASED ON LATEST AVAILABLE INFORMATION).

Sweden	20
New Zealand	22
Holland	23
Australia	24
England and Wales	28
Union of South Africa	33
Canada	37
France	45
Germany	49
Belgium	49
Italy	63
Portugal	93

TABLE I (11).—ESTIMATED POPULATION BY RACE AS AT THE 30TH JUNE, 1953.

Province.	EUROPEAN.			NATIVE.			ASIATIC.			COLOURED.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Cape	477,000	485,000	962,000	1,175,000	1,371,000	2,546,000	10,000	8 000	18 000	519,000	521,000	1,040,000
Natal	145,000	145,000	290,000	898,000	947,000	1,845,000	162,000	155,000	317,000	16,000	18,000	34,000
Transvaal	635,000	629,000	1,264,000	2,012,000	1,613,000	3,625,000	27,000	25,000	52,000	41,000	41,000	82,000
Orange Free State	121,000	117,000	238,000	429,000	396,000	825,000	—	—	—	8,000	7,000	15,000
UNION	1,378,000	1,376,000	2,754,000	4,514,000	4,327,000	8,841,000	199,000	188,000	387,000	584,000	587,000	1,171,000

TABLE II (A).—NOTIFICATION OF DISEASE AND REGISTERED DEATHS DURING THE YEAR ENDED 31ST DECEMBER, 1953.

Province.	Anthrax. Cases.	Anthrax. Deaths.	Diphtheria. Cases.	Diphtheria. Deaths.	Encephalitis, Infective. Cases.	Encephalitis, Infective. Deaths.	Typhoid Fever. Cases.	Typhoid Fever. Deaths.	Erysipelas. Cases.	Erysipelas. Deaths.
I.—EUROPEAN.										
Cape Province	6	—	208	17	3	—	60	2	4	—
Natal	—	—	128	7	9	—	121	1	4	—
Transvaal	—	—	657	64	78	3	133	6	25	—
Orange Free State	1	—	73	5	—	—	39	1	—	—
Total	7	—	1,132	93	80	3	353	9	33	—
II.—NATIVE.*										
Cape Province	19	—	230	47	4	—	484	16	8	—
Natal	—	—	304	89	25	—	889	9	9	—
Transvaal	7	—	771	137	41	—	1,147	168	9	—
Orange Free State	8	—	304	52	4	—	198	26	—	—
Unspecified	—	3	—	—	—	8	—	—	—	—
Total	34	3	1,609	325	74	8	2,718	219	26	—
III.—ASIATIC.										
Cape Province	—	—	1	—	—	—	—	—	—	—
Natal	—	—	74	12	5	—	126	2	2	—
Transvaal	—	—	23	3	1	—	8	—	—	—
Orange Free State	—	—	—	—	—	—	—	—	—	—
Unspecified	—	—	—	—	—	1	—	—	—	—
Total	—	—	98	15	6	1	134	2	2	—
IV.—COLOURED.										
Cape Province	58	—	203	30	3	—	234	17	11	—
Natal	—	—	15	1	1	—	4	—	—	—
Transvaal	—	—	47	1	1	—	10	2	2	—
Orange Free State	—	—	4	3	—	—	1	—	—	—
Unspecified	—	—	—	—	—	2	—	—	—	—
Total	58	—	269	35	5	2	249	19	13	—
V.—TOTAL (ALL RACES).*										
Cape Province	83	—	812	101	9	—	806	35	26	—
Natal	—	—	524	113	41	—	1,140	12	15	—
Transvaal	7	—	1,498	213	121	3	1,320	176	35	—
Orange Free State	9	—	379	60	4	—	238	27	—	—
Unspecified	—	3	—	—	—	12	—	—	—	—
Total	97	3	3,220	488	174	15	3,504	180	74	—

Province.	Insecticidal Poisoning. Cases.	Insecticidal Poisoning. Deaths.	Lead Poisoning. Cases.	Lead Poisoning. Deaths.	Leprosy. Cases.	Leprosy. Deaths.	Malta Fever. Cases.	Malta Fever. Deaths.	Meningitis, Cerebrospinal. Cases.	Meningitis, Cerebrospinal. Deaths.
I.—EUROPEAN.										
Cape Province	1	—	—	—	5	—	1	—	47	14
Natal	—	—	—	—	—	—	—	—	7	3
Transvaal	3	1	—	—	11	1	1	—	59	34
Orange Free State	—	—	—	—	—	—	—	—	26	8
Total	4	1	—	—	16	1	2	—	139	59
II.—NATIVE.*										
Cape Province	—	—	2	—	36	—	—	—	82	72
Natal	2	—	1	—	—	—	1	—	73	63
Transvaal	3	—	—	—	56	—	1	—	223	190
Orange Free State	—	—	—	—	14	—	1	—	209	44
Unspecified	—	19	—	—	—	35	—	—	—	—
Total	5	19	3	—	106	35	3	—	587	369
III.—ASIATIC.										
Cape Province	—	—	—	—	—	—	—	—	—	—
Natal	—	—	—	—	—	—	—	—	5	19
Transvaal	—	—	—	—	—	—	—	—	5	4
Orange Free State	—	—	—	—	—	—	—	—	—	—
Unspecified	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	10	23
IV.—COLOURED.										
Cape Province	—	—	—	—	6	—	1	—	160	99
Natal	—	—	—	—	—	—	—	—	3	5
Transvaal	—	—	—	—	2	—	—	—	16	7
Orange Free State	—	—	—	—	—	—	—	—	—	2
Unspecified	—	9	—	—	—	—	—	—	—	—
Total	—	9	—	—	8	—	1	—	180	113
V.—TOTAL (ALL RACES).*										
Cape Province	1	—	2	—	47	—	2	—	370	185
Natal	2	—	1	—	—	—	1	—	86	82
Transvaal	4	1	—	—	67	1	2	—	401	235
Orange Free State	—	—	—	—	14	—	1	—	235	52
Unspecified	—	28	—	—	—	35	—	—	—	—
Total	7	29	3	—	128	36	6	—	966	564

Province.	Meningitis, Meningococcal. Cases.	Meningitis, Meningococcal. Deaths.	Ophthalmia. Cases.	Ophthalmia. Deaths.	Plague. Cases.	Plague. Deaths.	Poliomyelitis, Acute. Cases.	Poliomyelitis, Acute. Deaths.	Puerperal Fever. Cases.	Puerperal Fever. Deaths.
I.—EUROPEAN.										
Cape Province	—	4	18	—	—	—	113	10	10	1
Natal	—	1	3	—	—	—	14	1	2	1
Transvaal	11	19	12	—	—	—	61	7	16	—
Orange Free State	—	3	5	—	—	—	26	6	—	—
Total	11	27	38	—	—	—	214	24	28	2
II.—NATIVE.*										
Cape Province	—	11	166	—	1	—	19	1	66	—
Natal	—	69	89	—	—	—	13	1	56	—
Transvaal	111	49	47	—	—	—	20	4	130	—
Orange Free State	—	9	11	—	10	—	12	4	2	—
Unspecified	—	—	—	—	—	—	—	—	—	65
Total	111	78	313	—	11	—	64	10	200	65
III.—ASIATIC.										
Cape Province	—	—	3	—	—	—	1	—	—	—
Natal	—	—	3	—	—	—	2	1	22	3
Transvaal	1	—	1	—	—	—	2	—	3	—
Orange Free State	—	—	—	—	—	—	—	—	—	—
Unspecified	—	—	—	—	—	—	—	—	—	—
Total	1	—	7	—	—	—	5	1	25	3
IV.—COLOURED.										
Cape Province	—	27	142	1	1	—	32	2	24	—
Natal	—	1	2	—	—	—	—	—	—	—
Transvaal	—	—	3	—	—	—	4	—	4	—
Orange Free State	—	—	—	—	—	—	—	—	—	—
Unspecified	—	—	—	—	—	—	—	—	—	35
Total	—	28	147	1	1	—	36	2	28	35
V.—TOTAL (ALL RACES).*										
Cape Province	—	42	327	1	2	—	165	13	132	1
Natal	—	14	97	—	—	—	29	3	34	4
Transvaal	123	68	63	—	—	—	87	11	143	—
Orange Free State	—	9	16	—	10	—	38	10	2	—
Unspecified	—	—	—	—	—	—	—	—	—	75
Total	123	133	503	1	12	—	319	37	311	80

Province.	Rabies. Cases.	Rabies. Deaths.	Scarlatina. Cases.	Scarlatina. Deaths.	Smallpox. Cases.	Smallpox. Deaths.	Trachoma. Cases.	Trachoma. Deaths.
I.—EUROPEAN.								
Cape Province	—	—	158	1	—	—	2	—
Natal	—	—	195	—	—	—	—	—
Transvaal	—	—	32	—	—	—	—	—
Orange Free State	—	—	52	—	1	—	—	—
Total	—	—	425	1	1	—	2	—
II.—NATIVE.*								
Cape Province	—	—	18	—	3	—	1	—
Natal	—	—	10	—	—	—	2	—
Transvaal	—	—	—	2	9	—	288	—
Orange Free State	—	—	3	—	1	—	6	—
Unspecified	—	—	—	—	—	—	—	—
Total	—	—	31	2	13	—	298	—
III.—ASIATIC.								
Cape Province	—	—	—	—	—	—	—	—
Natal	—	—	1	—	—	—	—	—
Transvaal	—	—	—	—	—	—	3	—
Orange Free State	—	—	—	—	—	—	—	—
Unspecified	—	—	—	—	—	—	—	—
Total	—	—	1	—	—	—	3	—
IV.—COLOURED.								
Cape Province	—	—	35	1	—	—	6	—
Natal	—	—	—	—	—	—	—	—
Transvaal	—	—	—	—	—	—	2	—
Orange Free State	—	—	—	—	—	—	—	—
Unspecified	—	—	—	—	—	—	—	—
Total	—	—	35	1	—	—	8	—
V.—TOTAL (ALL RACES).*								
Cape Province	—	—	411	2	3	—	15	—
Natal	—	—	206	—	—	—	2	—
Transvaal	—	—	32	2	9	—	293	—
Orange Free State	—	—	55	—	2	—	6	—
Unspecified	—	—	—	—	—	—	—	—
Total	—	—	692	4	14	—	311	—

Province.	Tuberculosis, Respiratory. Cases.	Tuberculosis, Respiratory. Deaths.	Tuberculosis, Non-respiratory. Cases.	Tuberculosis, Non-respiratory. Deaths.	Typhus Fever. Cases.	Typhus Fever. Deaths.	Total. Cases.	Total. Deaths.
I.—EUROPEAN.								
Cape Province	770	119	34	22	1	—	1,768	189
Natal	203	19	13	3	2	—	694	40
Transvaal	389	73	5	25	1	2	1,486	236
Orange Free State	27	9	1	1	1	—	150	29
Total	1,389	220	54	51	5	2	4,098	494
II.—NATIVE.*								
Cape Province	7,474	2,592	2,113	357	12	—	10,077	2,036
Natal	4,531	993	690	234	9	—	6,718	1,459
Transvaal	4,934	1,611	392	460	7	—	8,395	2,825
Orange Free State	447	335	11	52	3	—	1,299	711
Unspecified	—	—	—	—	—	—	—	130
Total	17,386	5,531*	3,206	1,103*	31	—	27,323	7,467
III.—ASIATIC.								
Cape Province	22	8	2	1	—	—	26	12
Natal	725	67	93	35	—	—	1,052	138
Transvaal	40	8	3	4	—	—	88	19
Orange Free State	3	—	—	—	—	—	3	—
Unspecified	—	—	—	—	—	—	—	1
Total	793	83	98	42	—	—	1,171	170
IV.—COLOURED.								
Cape Province	4,808	2,280	454	447	6	2	6,222	2,942
Natal	151	28	12	6	—	—	209	45
Transvaal	263	104	4	13	—	—	370	127
Orange Free State	5	33	1	3	—	—	11	20
Unspecified	—	—	—	—	—	—	—	33
Total	5,227	2,440	471	471	6	2	6,880	3,170
V.—TOTAL (ALL RACES).*								
Cape Province	13,262	4,806	2,603	829	19	2	18,096	4,979
Natal	5,612	1,096	795	278	11	1	8,673	1,683
Transvaal	5,626	1,758	406	504	8	1	10,254	3,023
Orange Free State	480	365	13	56	4	—	1,382	779
Unspecified	—	—	—	—	—	—	—	193
Total	25,203	8,067*	3,819	1,667*	42	4	39,405	11,708

N.B.—The fact that in some cases more deaths have been notified than cases is to be explained by the incompleteness of the returns regarding cases rendered to the Department.

* Registration of native deaths is incomplete as registration is not compulsory in the rural areas. (In the case of tuberculosis, for instance, it is estimated that at least 10,000 deaths occur from this disease (all forms) per year).

TABLE II (B) (1) (*a*).—DIPHTHERIA MORBIDITY AND MORTALITY IN ENGLAND AND WALES, FRANCE, COPENHAGEN AND NEW ZEALAND.

Year.	Notified Cases per 100,000 Population.				Deaths per 100,000 Population.			Deaths as Percentage of Population (D/N × 100).		
	E. and W.	F.	C.	N.Z.	E. and W.	F.	C.	E. and W.	F.	C.
1941	128·0	—	17·3	—	6·7	—	0·57	5·2	—	3·31
1942	105·0	—	6·6	—	4·8	—	0·14	4·6	—	2·13
1943	81·9	—	30·2	51·5	3·2	—	2·50	3·9	—	8·30
1944	54·6	110·4	121·0	43·5	2·1	8·29	10·57	3·9	7·54	8·67
1945	43·6	119·9	121·0	63·6	1·6	8·86	10·55	3·7	7·38	8·73
1956	28·6	57·5	34·9	99·6	1·1	4·95	2·40	3·9	8·61	7·11
1947	12·8	29·3	9·0	30·8	0·6	2·16	1·18	4·4	7·37	13·24
1948	8·2	17·6	3·8	9·2	0·4	1·19	0·66	4·6	6·77	17·24
1949	4·3	12·6	2·1	4·9	0·2	0·73	—	4·5	5·79	—
1950	2·2	9·43	0·4	3·0	0·1	0·49	—	5·1	5·20	—
1951	1·5	6·37	—	3·6	0·08	0·32	—	5·0	5·03	—
1952	—	—	—	2·7	—	0·27	—	—	4·54	—

E. and W. = England and Wales. F. = France. C. = Copenhagen. N.Z. = New Zealand.

* Tables I (B) (1) (*a*), (*b*) and (*c*) were, with the permission of the authors, taken from the article "Diptheria in South Africa", by Drs. V. Bokkenheuser and C. S. Heymann, which appeared in the S.A. Medical Journal of the 14th August, 1954.

TABLE II (B) (1) (*b*).—DIPHTHERIA MORBIDITY AND MORTALITY (ALL RACES) IN THE UNION OF SOUTH AFRICA, 1943–1952.

Year.	Population (Million).	Notified Cases.	No. of Deaths.	Notified Cases per 100,000.	Deaths per 100,000.	D/N × 100.
1943	10·90	3,417	205	32·3	1·9	5·9
1944	11·08	3,856	269	34·7	2·5	7·2
1945	11·27	3,046	245	26·9	2·2	8·0
1946	11·45	2,738	184	23·8	1·6	6·8
1947	11·76	2,345	165	19·9	1·4	7·0
1948	11·89	2,733	195	22·9	1·6	7·1
1949	12·11	3,250	320	26·9	2·6	9·8
1950	12·26	2,733	195	22·2	1·6	7·1
1951	12·45	3,844	470	30·8	3·8	12·2
1952	12·92	3,675	401	28·5	3·1	11·0
1953	13·18	3,228	488	24·5	3·6	15·1

TABLE II (B) (1) (*c*).—DIPHTHERIA MORBIDITY AND MORTALITY (BY RACE) IN THE UNION OF SOUTH AFRICA, 1945–1952.

Year.	Notified Cases per 100,000.	Europeans Deaths per 100,000.	D/N × 100.	Notified Cases per 100,000.	Non-Europeans Deaths per 100,000.	D/N × 100.
1945	76·5	4·6	6·1	14·4	1·6	10·7
1946	62·5	2·5	3·9	13·7	1·4	10·1
1947	45·9	1·8	3·9	13·4	1·3	9·8
1948	43·6	2·1	4·9	17·5	1·5	8·7
1949	50·3	2·8	5·5	20·0	2·6	12·8
1950	41·5	2·0	4·8	17·0	1·5	8·7
1951	43·0	3·0	7·0	27·4	3·9	14·5
1952	44·1	2·6	5·9	24·3	3·3	13·7
1953	41·9	3·3	8·1	19·9	3·7	19·0

TABLE II (B) (1) (*d*).—DIPHTHERIA: DISTRIBUTION OF CASES AND DEATHS, BY RACE AND AGE, REPORTED DURING THE YEAR ENDED 31ST DECEMBER, 1953.

Province.	Cases.							Deaths.						
	Age Groups.					Total.	Incidence Rate per 100,000 of Population	Age Groups.					Total.	Death Rate per 100,000 of Population.
	Under 1 year.	1–4 Years.	5–9 Years.	10–19 Years.	20+ Years.			Under 1 Year.	1–4 Years.	5–9 Years.	10–19 Years.	20+ Years.		
EUROPEAN.														
Cape Province	11	110	97	50	30	298	30·98	—	6	5	1	—	12	1·25
Natal	15	56	30	12	13	126	43·45	2	5	2	—	—	9	3·10
Transvaal	28	204	269	81	75	657	51·98	—	13	15	4	—	32	2·53
Orange Free State	1	25	24	7	14	71	29·83	—	—	1	—	—	1	0·42
UNION	55	395	420	150	132	1,152	41·83	2	24	23	5	—	54	1·96
NATIVE.														
Cape Province	20	102	68	25	15	230	9·03	1	15	9	1	—	26	1·02
Natal	45	140	72	21	26	304	16·48	17	52	6	2	2	79	4·28
Transvaal	64	315	244	90	58	771	21·27	9	35	14	3	—	61	1·68
Orange Free State	21	109	90	65	19	304	36·85	3	14	8	7	2	34	4·12
UNION	150	666	474	201	118	1,609	18·20	30	116	37	13	4	200	2·26
ASIATIC.														
Cape Province	—	1	—	—	—	1	5·56	—	—	—	—	—	—	—
Natal	2	31	30	10	1	74	23·34	2	6	—	—	—	8	2·52
Transvaal	—	7	13	3	—	23	44·23	—	—	2	—	—	2	3·85
Orange Free State	—	—	—	—	—	—	—	—	—	—	—	—	—	—
UNION	2	39	43	13	1	98	25·32	2	6	2	—	—	10	2·58
COLOURED.														
Cape Province	42	131	57	34	19	283	27·21	5	18	3	1	1	28	2·69
Natal	1	16	12	4	2	35	102·94	—	2	—	—	—	2	5·88
Transvaal	1	21	18	4	3	47	57·31	—	1	2	—	—	3	3·66
Orange Free State	1	1	1	—	1	4	26·67	—	1	—	—	—	1	6·67
UNION	45	169	88	42	25	369	31·51	5	22	5	1	1	34	2·90
TOTAL (ALL RACES).														
Cape Province	73	344	222	109	64	812	17·78	6	39	17	3	1	66	1·45
Natal	63	243	144	47	42	539	21·68	21	65	8	2	2	98	3·94
Transvaal	93	547	544	178	136	1,498	29·82	9	49	33	7	—	98	1·95
Orange Free State	23	135	115	72	34	379	35·16	3	15	9	7	2	36	3·34
UNION	252	1,269	1,025	406	276	3,228	24·45	39	168	67	19	5	298	2·27

TABLE II (B) (2) (*a*).—LEPER INSTITUTIONS—PATIENTS THEREIN ON 31ST DECEMBER, 1953.

Institution.	European.		Native.		Mixed.		Asiatic.		Total.		Persons.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
Westfort (Pretoria)	35	21	670	371	55	28	2	5	762	425	1,187
Mkambati	—	—	58	64	—	—	—	—	58	64	122
Mjanyana	—	—	130	140	—	—	—	—	130	140	270
Amatikulu	—	—	206	168	—	—	—	—	206	168	374
Bochum	—	—	43	37	—	—	—	—	43	37	80
TOTAL	35	21	1,107	780	55	28	2	5	1,199	834	2,033

TABLE II (B) (2) (*b*).—LEPROSY: FIRST ADMISSIONS, RECRUDESCED CASES, DISCHARGES AND DEATHS, YEAR ENDED 31ST DECEMBER, 1953.

Institution.	Admissions for First Time.	Recrudesced.	Discharged.	Died.
Westfort (Pretoria)	303	29	399	32
Mkambati	44	3	66	1
Mjanyana	112	3	115	—
Amatikulu	120	9	126	15
Bochum	28	4	47	6
TOTAL	607	48	753	54

TABLE II (B) (2) (*c*).—LEPROSY CASES REMAINING IN THEIR OWN HOMES ON 31ST DECEMBER, 1953.

Province.	Certified and Awaiting Removal to Leper Institution.	Home Segregated.	Discharged from Leper Institutions, still under surveillance.	Total.
Cape Province (excluding Transkei)	—	—	681	681
Transkei	—	—	1,765	1,765
Transvaal	—	—	1,416	1,416
Natal	3	—	1,076	1,079
Orange Free State	—	—	631	631
UNION	3	—	5,569	5,572

TABLE II (B) (3) (*a*).—MALARIA—HUTS TREATED WITH RESIDUAL INSECTICIDES.

Year.	Transvaal.	Natal.
1948–49	329,494	49,373
1949–50	429,537	108,930
1950–51	356,819	106,930
1951–52	320,785	66,897
1952–53	414,787	190,632

TABLE II (B) (3) (*b*).—VECTORS FOUND IN CHECK SPRAYING.

Year.	Huts Check Sprayed.		Vectors taken.		Ratio of Vectors per Hut.	
	Trans-vaal.	Natal.	Trans-vaal.	Natal.*	Trans-vaal.	Natal.
1948–49	132,035	32,220	12,652	3,388	1:10·4	1:9·5
1949–50	211,899	36,970	8,285	2,873	1:25·6	1:12·8
1950–51	168,812	33,435	1,572	1,383	1:107	1:16·7
1951–52	157,063	24,360	1,133	1,096	1:139	1:22·2
1952–53	145,219	44,095	5,806	2,835	1:25	1:15·55

* Natal adult vectors identified from uncontrolled areas in Maputaland.

TABLE II (B) (3) (*c*).—TABLE SHOWING NUMBER OF POSITIVE SMEARS EXAMINED.

Year.	Transvaal.	Natal.	Total.
1948–49	128	94	222
1949–50	61	134	195
1950–51	41	80	121
1951–52	19	35	54
1952–53	700	1,029	1,729

TABLE II (B) (4).—OCCURRENCE AND DISTRIBUTION OF HUMAN PLAGUE.

District.	YEAR ENDED 30/6/49.			YEAR ENDED 30/6/50.			PERIOD 1/7/50 TO 31/12/51.			YEAR ENDED 31/12/52.			YEAR ENDED 31/12/53.		
	Out-breaks.	Cases.	Deaths.	Out-breaks.	Cases.	Deaths.	Out-breaks.	Cases.	Deaths.	Out-breaks.	Cases.	Deaths.	Out-breaks.	Cases.	Deaths.
Cape Province—															
Aliwal North	1	2	2	—	—	—	—	—	—	—	—	—	1	1	—
Barkly West	—	—	—	—	—	—	3	6	2	—	—	—	—	—	—
Beaufort West	—	—	—	—	—	—	1	3	—	—	—	—	—	—	—
Calvinia	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1
Cathcart	—	—	—	—	—	—	1	2	2	—	—	—	—	—	—
Glen Grey	2	7	4	—	—	—	—	—	—	—	—	—	—	—	—
Gordonia	—	—	—	7	8	2	—	—	—	—	—	—	—	—	—
Hay	2	7	3	2	7	6	—	—	—	—	—	—	—	—	—
Kuruman	9	11	9	13	13	8	—	—	—	—	—	—	—	—	—
Maraisburg	—	—	—	—	—	—	1	2	2	—	—	—	—	—	—
Port Elizabeth	—	—	—	—	—	—	—	—	—	1	3	2	—	—	—
Postmasburg	2	7	3	—	—	—	—	—	—	—	—	—	—	—	—
Queenstown	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—
Uitenhage	1	2	2	—	—	—	—	—	—	—	—	—	—	—	—
Vryburg	—	—	—	3	4	3	—	—	—	—	—	—	—	—	—
Williston	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—
Transvaal—															
Johannesburg	—	—	—	—	—	—	1	1	1	—	—	—	—	—	—
Potchefstroom	1	4	2	—	—	—	—	—	—	—	—	—	—	—	—
Orange Free State—															
Bethulie	—	—	—	1	1	1	—	—	—	—	—	—	—	—	—
Bothaville	—	—	—	1	1	1	1	1	—	—	—	—	—	—	—
Dewetsdorp	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—
Fauresmith	—	—	—	1	1	1	2	4	3	—	—	—	—	—	—
Heilbron	—	—	—	1	1	1	—	—	—	1	1	—	—	—	—
Koppies	5	7	2	—	—	—	1	1	—	—	—	—	—	—	—
Kroonstad	—	—	—	—	—	—	1	6	3	—	—	—	—	—	—
Ladybrand	—	—	—	1	1	1	—	—	—	—	—	—	—	—	—
Lindley	—	—	—	—	—	—	—	—	—	—	—	—	1	9	1
Thaba 'Nchu	—	—	—	1	5	3	—	—	—	1	1	1	—	—	—
Vredefort	2	6	1	1	1	—	—	—	—	—	—	—	—	—	—
TOTAL	27	55	30	33	44	27	12	26	13	3	5	3	3	11	2

TABLE II (B) (5) (*a*).—MONTHLY INCIDENCE OF REPORTED CASES OF ACUTE POLIOMYELITIS, YEAR ENDED 31ST DECEMBER, 1953.

Month.	CAPE.		NATAL.		TRANSVAAL.		ORANGE FREE STATE.		UNION.		Remarks.
	European.	Non-European.	European.	Non-European.	European.	Non-European.	European.	Non-European.	European.	Non-European.	
January	6	7	3	2	8	1	6	2	23	12	
February	10	3	2	3	2	1	5	2	19	9	
March	3	4	2	—	7	3	2	1	14	8	
April	3	1	2	1	10	2	—	—	15	4	
May	2	5	—	1	8	1	1	1	11	8	Total for 1953.
June	3	3	—	1	5	—	3	—	11	4	European..... 214
July	5	3	—	1	2	2	2	1	9	7	Non-European 125
August	7	4	—	—	—	6	1	1	8	11	
September	2	4	—	—	1	2	—	—	3	6	
October	10	11	—	1	3	2	—	—	13	14	
November	23	12	3	1	11	4	3	2	40	19	
December	39	15	2	4	4	2	3	2	48	23	

TABLE II (B) (5) (*b*).—ACUTE POLIOMYELITIS: NUMBER OF CASES NOTIFIED AND THEIR DISTRIBUTION SINCE 1934.

Period.	CAPE.		NATAL.		TRANSVAAL.		ORANGE FREE STATE.		UNION.
Year Ending.	European.	Non-European.	European.	Non-European.	European.	Non-European.	European.	Non-European.	Total.
30/6/1934	13	16	—	—	15	3	15	5	67
30/6/1935	23	22	2	—	9	4	1	—	61
30/6/1936	7	9	1	2	2	5	—	—	26
30/6/1937	19	10	4	3	29	2	5	10	82
30/6/1938	4	2	—	—	4	5	1	2	18
30/6/1939	9	16	4	1	—	1	2	1	34
30/6/1940	11	20	4	3	19	2	2	1	62
30/6/1941	16	14	6	1	39	12	4	—	92
30/6/1942	16	6	10	1	14	4	—	—	51
30/6/1943	10	3	12	—	9	1	—	1	36
30/6/1944	6	6	5	6	41	10	—	1	75
30/6/1945	183	211	126	168	420	122	79	71	1,380
30/6/1946	40	43	8	30	66	20	—	10	217
30/6/1947	11	20	6	13	16	10	—	3	79
30/6/1948	79	70	144	162	1,058	375	99	86	2,073
30/6/1949	38	50	47	74	183	87	36	35	550
30/6/1950	23	14	16	9	70	20	3	6	161
30/6/1951	34	46	12	13	74	19	10	7	215
Six months to—									
31/12/1951	28	12	31	19	178	33	11	8	320
31/12/1952	42	26	27	32	90	24	23	6	270
31/12/1953	113	72	14	15	61	26	26	12	339

TABLE II (B) (5) (c).—ACUTE POLIOMYELITIS: NOTIFICATIONS AND DEATHS BY RACE, REPORTED DURING THE YEAR ENDED 31ST DECEMBER, 1953.

Month.	CAPE PROVINCE.				NATAL.				TRANSVAAL.				ORANGE FREE STATE.				UNION.			
	European.	Native.	Asiatic.	Coloured.	European.	Native.	Asiatic.	Coloured.	European.	Native.	Asiatic.	Coloured.	European.	Native.	Asiatic.	Coloured.	European.	Native.	Asiatic.	Coloured.
CASES.																				
January	6	4	—	3	3	2	—	—	8	1	—	—	6	2	—	—	23	9	—	3
February	10	—	—	3	2	1	2	—	2	—	1	—	5	2	—	—	19	3	3	3
March	3	1	—	3	2	—	—	—	7	3	—	—	2	1	—	—	14	5	—	3
April	3	1	—	—	2	1	—	—	10	2	—	—	—	—	—	—	15	4	—	—
May	2	3	1	1	—	1	—	—	8	1	—	—	1	—	—	—	11	6	1	1
June	3	—	—	3	—	1	—	—	5	—	—	—	3	—	—	—	11	1	—	3
July	5	1	—	2	—	1	—	—	2	2	—	—	2	1	—	—	9	5	—	2
August	7	—	—	4	—	—	—	—	—	6	—	—	1	1	—	—	8	7	—	4
September	2	2	—	2	—	—	—	—	1	1	—	1	—	—	—	—	3	3	—	3
October	10	—	—	11	—	1	—	—	3	—	—	2	—	—	—	—	13	1	—	13
November	23	2	—	10	3	1	—	—	11	4	—	—	3	2	—	—	40	9	—	10
December	39	5	—	10	2	4	—	—	4	—	1	1	3	2	—	—	48	11	1	11
TOTAL	113	19	1	52	14	13	2	—	61	20	2	4	26	12	—	—	214	64	5	56
DEATHS.																				
January	1	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	2	1	—	—
February	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—
March	—	—	—	1	—	—	—	—	1	—	—	—	1	—	—	—	2	—	—	1
April	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
May	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
June	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
July	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	1	1	—	—
August	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
September	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—
October	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—
November	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	1
December	—	—	—	1	—	—	—	—	1	—	—	—	1	1	—	—	2	1	—	1
TOTAL	4	—	—	4	1	—	—	—	4	2	—	—	5	1	—	—	14	3	—	4

TABLE II (B) (5) (*d*).—ACUTE POLIOMYELITIS: DISTRIBUTION OF CASES AND DEATHS—BY RACE AND AGE, REPORTED DURING THE YEAR ENDED 31ST DECEMBER, 1953.

Province.	Cases.							Deaths.						
	Age.					Total Cases.	Incidence Rate per 100,000 of Population.	Age.					Total Deaths.	Death Rate per 100,000 of Population.
	Under 1 Year.	1–4 Years.	5–9 Years.	10–19 Years.	20 Years.*			Under 1 Year.	1–4 Years.	5–9 Years.	10–19 Years.	20 Years.*		
EUROPEAN.														
Cape Province	19	35	18	23	18	113	11·75	—	1	—	1	2	4	0·42
Natal	2	3	1	6	2	14	4·83	—	—	—	—	1	1	0·34
Transvaal	2	24	15	13	7	61	4·83	—	—	4	—	—	4	0·32
Orange Free State	1	8	7	6	4	26	10·92	—	3	2	—	—	5	2·10
UNION	24	70	41	48	31	214	7·77	—	4	6	1	3	14	0·51
NATIVES.														
Cape Province	6	8	4	—	1	19	0·75	—	—	—	—	—	—	—
Natal	—	4	5	2	2	13	0·70	—	—	—	—	—	—	—
Transvaal	2	8	4	4	2	20	0·55	—	1	—	1	—	2	0·06
Orange Free State	1	6	1	2	2	12	1·45	—	—	—	1	—	1	0·12
UNION	9	26	14	8	7	64	0·72	—	1	—	2	—	3	0·03
ASIATIC.														
Cape Province	—	—	1	—	—	1	5·56	—	—	—	—	—	—	—
Natal	—	—	—	2	—	2	0·63	—	—	—	—	—	—	—
Transvaal	—	—	1	1	—	2	3·85	—	—	—	—	—	—	—
Orange Free State	—	—	—	—	—	—	—	—	—	—	—	—	—	—
UNION	—	—	2	3	—	5	1·29	—	—	—	—	—	—	—
COLOURED.														
Cape Province	14	27	5	5	1	52	5·00	2	2	—	—	—	4	0·38
Natal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Transvaal	—	1	3	—	—	4	4·88	—	—	—	—	—	—	—
Orange Free State	—	—	—	—	—	—	—	—	—	—	—	—	—	—
UNION	14	28	8	5	1	56	4·78	2	2	—	—	—	4	0·34
TOTAL (ALL RACES).														
Cape Province	39	70	28	28	20	185	4·05	2	3	—	1	2	8	0·18
Natal	2	7	6	10	4	29	1·17	—	—	—	—	1	1	0·04
Transvaal	4	33	23	18	9	87	1·73	—	1	4	1	—	6	0·12
Orange Free State	2	14	8	8	6	38	3·53	—	3	2	1	—	6	0·56
UNION	47	124	65	64	39	339	2·58	2	7	6	3	3	21	0·16

* Includes cases where age is not specified.

TABLE II (B) (5) (*e*).—ACUTE POLIOMYELITIS: DISTRIBUTION OF CASES AND DEATHS BY RACE AND AREA REPORTED DURING THE YEAR 31ST DECEMBER, 1953.

Province.	Cases.				Deaths.			
	Urban.	Rural.	Total	Incidence Rate per 100,000 of Population.	Urban.	Rural.	Total.	Death Rate per 100,000 of Population.
EUROPEAN.								
Cape Province	77	36	113	11·75	3	1	4	0·42
Natal	13	1	14	4·83	1	—	1	0·34
Transvaal	57	4	61	4·83	4	—	4	0·32
Orange Free State	8	18	26	10·92	3	2	5	2·10
UNION	155	59	214	7·77	11	3	14	0·51
NATIVE.								
Cape Province	9	10	19	0·75	—	—	—	—
Natal	3	10	13	0·70	—	—	—	—
Transvaal	17	3	20	0·55	2	—	2	0·06
Orange Free State	8	4	12	1·45	—	1	1	0·12
UNION	37	27	64	0·72	2	1	3	0·03
ASIATIC.								
Cape Province	1	—	1	5·56	—	—	—	—
Natal	2	—	2	0·63	—	—	—	—
Transvaal	2	—	2	3·85	—	1	—	—
Orange Free State	—	—	—	—	—	—	—	—
UNION	5	—	5	1·29	—	1	—	—
COLOURED.								
Cape Province	31	21	52	5·00	2	2	4	0·38
Natal	—	—	—	—	—	—	—	—
Transvaal	4	—	4	4·88	—	—	—	—
Orange Free State	—	—	—	—	—	—	—	—
UNION	35	21	56	4·78	2	2	4	0·34
TOTAL (ALL RACES).								
Cape Province	118	67	185	4·05	5	3	8	0·18
Natal	18	11	29	1·17	1	—	1	0·04
Transvaal	80	7	87	1·73	6	—	6	0·12
Orange Free State	16	22	38	3·53	3	3	6	0·56
UNION	232	107	339	2·58	15	6	21	0·16

TABLE II (B) (6) (*a*).—RABIES: DISTRIBUTION OF HUMAN CONTACTS.

	1/7/49 to 30/6/50.		1/7/50 to 30/6/51.		1/7/51 to 31/12/51.		1/1/52 to 31/12/52.		1/1/53 to 31/12/53.	
	European.	Non-European.	European.	Non-European.	European.	Non-European.	European.	Non-European.	European.	Non-European.
Transvaal—										
Wolmaransstad	1	—	—	1	5	—	2	1	—	—
Johannesburg	2	—	—	—	—	—	—	—	—	—
Pretoria	2	—	2	—	—	—	—	—	—	—
Pietersburg	1	—	1	1	—	—	—	—	—	—
Brits	1	—	—	—	—	—	—	—	—	—
Volksrust	4	8	—	—	—	—	—	—	—	—
Middelburg	1	—	—	—	—	—	—	—	—	—
Ventersdorp	1	—	—	—	—	—	—	—	—	—
Lichtenburg	1	—	—	—	—	—	—	—	—	—
Zoutpansberg	—	—	11	7	—	10	—	6	—	12
Christiana	—	—	2	1	—	—	—	—	—	—
Vereeniging	—	—	1	—	—	—	—	—	—	—
Louis Trichardt	—	—	1	—	2	—	5	3	—	—
Potgietersrus	—	—	2	—	—	2	4	2	—	—
Delareyville	—	—	2	2	—	1	4	4	—	36
Tzaneen	—	—	1	—	—	—	1	3	—	—
Letaba	—	—	—	1	2	5	—	—	—	6
Amersfoort	—	—	1	—	—	—	—	—	—	—
Maraisburg	—	—	—	—	—	2	—	—	—	—
Leeudoornstad	—	—	—	—	—	—	1	—	—	—
Klerksdorp	—	—	—	—	—	—	2	2	—	1
Messina	—	—	—	—	—	—	1	1	—	—
Heidelberg	—	—	—	—	—	—	1	1	—	—
Ermelo	—	—	—	—	—	—	—	—	1	—
Orange Free State—										
Reitz	1	32	—	—	—	—	—	—	—	—
Lindley	1	—	—	—	—	—	1	1	—	—
Brandfort	2	1	—	—	—	—	—	—	—	—
Ventersburg	2	—	—	—	—	—	—	—	—	—
Petrusburg	2	—	—	—	—	—	—	—	—	—
Bethlehem	1	—	—	—	—	—	—	—	—	—
Heilbron	2	2	1	—	—	—	—	—	—	—
Hoopstad	5	3	—	—	—	1	—	—	—	16
Kroonstad	1	5	—	—	—	—	—	—	2	2
Marquard	3	—	—	—	—	—	—	—	—	—
Lindley	1	—	—	—	—	—	1	1	—	—
Bloemfontein	1	—	1	1	—	22	—	—	—	—
Bothaville	1	—	—	—	—	—	—	—	—	—
Senekal	1	—	—	—	—	1	—	—	—	—
Boshof	2	—	1	1	—	—	—	—	—	—
Koppies	—	—	2	1	—	—	1	—	—	—
Odendaalsrus	—	—	2	—	—	—	—	—	—	—
Winburg	—	—	2	—	—	—	—	—	—	—
Bethulie	—	—	—	—	—	2	—	—	—	—
Jacobsdal	—	—	—	—	1	—	2	—	—	—
Philippolis	—	—	—	—	—	—	2	—	—	—
Edenburg	—	—	—	—	—	—	—	2	—	—
Cape Province—										
Middelburg	2	—	—	—	—	1	—	1	—	—
Williston	1	—	—	—	—	—	1	—	—	—
De Aar	—	1	—	—	—	—	—	—	—	—
Mafeking	—	—	3	3	—	—	—	—	18	18
Graaff-Reinet	—	—	3	2	—	—	—	—	—	—
Upington	—	—	—	—	—	1	—	—	—	—
Steynsburg	—	—	—	—	—	1	—	—	—	—
Prieska	—	—	—	—	—	—	1	—	—	—
Vryburg	1	2	3	1	—	—	5	—	12	19
Burgersdorp	—	—	—	—	—	—	—	—	1	—
Natal—										
Nqutu	—	1	—	—	—	—	—	—	—	—

TABLE II (B) (6) (*b*).

Known Number of Cases of Rabies from 1/1/53 to 31/12/53 (Humans).	Animals responsible for Transmission.
Nil.	Nil.

TABLE II (B) (7).—THE PROVINCIAL INCIDENCE OF SMALLPOX CASES.

Province.	1948–49.	1949–50.	July, 1950–December, 1951.	1952.	1953.
Cape	62	120	648	2	3
Natal	34	107	44	—	—
Transvaal	859	1,390	699	74	9
Orange Free State	12	18	43	4	2
	967	1,635	1,434	80	14

Table II (B) (8) (*a*).—Deaths from Tuberculosis by Race in Age and Sex Groups.

Age Group in Years.	1952.									1953.								
	Respiratory Tuberculosis.			Tuberculosis.–Other Forms.			All Forms.			Respitarory Tuberculosis.			Tuberculosis,–Other Forms.			All Forms.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Europeans.																		
0– 4	4	6	10	20	20	40	24	26	50	3	2	5	8	9	17	11	11	22
5–14	2	7	9	4	5	9	6	12	18	1	—	1	1	1	2	2	1	3
15–24	8	7	15	4	2	6	12	9	21	5	6	11	1	—	1	6	6	12
25–34	25	30	55	2	4	6	27	34	61	19	17	36	5	2	7	24	19	43
35–44	35	22	57	2	2	4	37	24	61	26	13	39	2	4	6	28	17	45
45–54	44	6	50	4	5	9	48	11	59	30	12	42	3	1	4	33	13	46
55–64	39	9	48	6	—	6	45	9	54	23	12	35	3	4	7	26	16	42
65–74	33	18	51	2	1	3	35	19	54	29	5	34	1	3	4	30	8	38
75–84	13	11	24	—	—	—	13	11	24	8	7	15	3	—	3	11	7	18
85+	2	—	2	—	—	—	2	—	2	2	—	2	—	—	—	2	—	2
Total	205	116	321	44	39	83	249	155	404	146	74	220	27	24	51	173	98	271
Coloureds.																		
0– 4	236	221	457	186	182	368	422	403	825	182	164	346	152	164	316	334	328	662
5–14	94	119	213	46	37	83	140	156	296	70	92	162	36	25	61	106	117	223
15–24	258	387	645	14	18	32	272	405	677	204	265	469	17	23	40	221	288	509
25–34	293	326	619	17	8	25	310	334	644	217	227	444	11	13	24	228	240	468
35–44	279	169	448	15	7	22	294	176	470	226	129	355	11	5	16	237	134	371
45–54	211	106	317	5	4	9	216	110	326	223	63	286	5	2	7	228	65	293
55–64	154	65	219	6	5	11	160	70	230	133	59	192	3	1	4	136	60	196
65–74	85	36	121	6	2	8	91	38	129	102	46	148	2	1	3	104	47	151
75–84	21	10	31	1	—	1	22	10	32	21	9	30	—	—	—	21	9	30
85+	3	4	7	—	—	—	3	4	7	5	4	9	—	—	—	5	4	9
Total	1,634	1,443	3,077	296	263	559	1,930	1,706	3,636	1,383	1,058	2,441	237	234	471	1,620	1,292	2,912
Asiatics.																		
0– 4	7	6	13	11	13	24	18	19	37	3	6	9	12	8	20	15	14	29
5–14	3	5	8	3	7	10	6	12	18	1	3	4	2	2	4	3	5	8
15–24	17	21	38	4	10	14	21	31	52	2	10	12	2	3	5	4	13	17
25–34	11	21	32	5	4	9	16	25	41	8	10	18	5	—	5	13	10	23
35–44	18	9	27	4	1	5	22	10	32	7	3	10	2	—	2	9	3	12
45–54	9	11	20	2	1	3	11	12	23	5	4	9	1	—	1	6	4	10
55–64	4	—	4	1	—	1	5	—	5	6	4	10	3	—	3	9	4	13
65–74	5	—	5	—	—	—	5	—	5	4	—	4	1	1	2	5	1	6
75–84	2	—	2	—	—	—	2	—	2	4	1	5	—	—	—	4	1	5
85+	1	—	1	—	—	—	1	—	1	2	—	2	—	—	—	2	—	2
Total	77	73	150	30	36	66	107	109	216	42	41	83	28	14	42	70	55	135

TABLE II (B) (8) (*b*).—FORMS OF TUBERCULOSIS CAUSING DEATH IN CHILDREN UNDER 5 YEARS OF AGE.

Cause of Death.	EUROPEANS.						COLOUREDS.						ASIATICS.					
	1952.			1953.			1952.			1953.			1952.			1953.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Pulmonary Tuberculosis	3	6	9	3	2	5	236	221	457	182	164	346	7	6	13	3	6	9
Tracheo bronchial glandular tuberculosis	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis of meninges and central nervous system	16	15	31	6	7	13	115	118	233	98	114	212	7	12	19	7	5	12
Tuberculosis of intestines, peritoneum and mesenteric glands	—	2	2	1	1	2	16	17	33	9	12	21	2	1	3	1	1	2
Tuberculosis of bones and joints	—	—	—	—	—	—	4	2	6	1	—	1	—	—	—	—	1	1
Tuberculosis of lymphatic system	—	—	—	—	—	—	1	4	5	7	3	10	—	—	—	—	—	—
Tuberculosis of genito-urinary system	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Tuberculosis of other organs	—	1	1	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—
Disseminated tuberculosis	4	2	6	1	1	2	49	41	90	37	35	72	2	—	2	3	1	4
All forms of tuberculosis	24	26	50	11	11	22	422	403	825	334	328	662	18	19	37	15	14	29

TABLE II (B) (9).—TYPHOID OR ENTERIC FEVER: DISTRIBUTION OF CASES AND DEATHS (RACE AND AREA), REPORTED DURING THE YEAR ENDED 31ST DECEMBER, 1953.

Province.	Cases.				Deaths.			
	Urban.	Rural.	Total.	Incidence Rate per 100,000 of Population.	Urban.	Rural.	Total	Death Rate per 100,000 of Population.
EUROPEAN.								
Cape	42	46	88	9·15	1	—	1	0·10
Natal	103	18	121	41·72	2	—	2	0·69
Transvaal	81	54	135	10·68	—	6	6	0·47
Orange Free State	26	13	39	16·39	1	1	2	0·84
TOTAL	252	131	383	13·91	4	7	11	0·40
NATIVE.								
Cape	145	339	484	19·01	7	5	12	0·47
Natal	182	707	889	48·18	37	20	57	3·09
Transvaal	586	581	1,167	32·19	51	21	72	1·99
Orange Free State	90	108	198	24·00	2	1	3	0·36
TOTAL	1,003	1,735	2,738	30·97	97	47	144	1·63
ASIATIC.								
Cape	—	—	—	—	—	—	—	—
Natal	39	87	126	39·75	—	8	8	2·52
Transvaal	6	2	8	15·38	—	—	—	—
Orange Free State	—	—	—	—	—	—	—	—
	45	89	134	34·63	—	8	8	2·07
COLOURED.								
Cape	114	120	234	22·50	5	7	12	1·15
Natal	4	—	4	11·76	—	—	—	—
Transvaal	8	2	10	12·20	1	—	1	1·22
Orange Free State	1	—	1	6·67	—	—	—	—
TOTAL	127	122	249	21·26	6	7	13	1·11
TOTAL (ALL RACES).								
Cape	301	505	806	17·65	13	12	25	0·55
Natal	328	812	1,140	45·86	39	28	67	2·70
Transvaal	681	639	1,320	26·28	52	27	79	1·57
Orange Free State	117	121	238	22·08	3	2	5	0·46
TOTAL	1,427	2,077	3,504	26·64	107	69	176	1·34

TABLE II (B) (10) (*a*).—TYPHUS: MONTHLY INCIDENCE ACCORDING TO PROVINCES, YEAR ENDED 31ST DECEMBER, 1953.

	CAPE.		NATAL.		TRANSVAAL.		FREE STATE.		UNION.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January	5	—	—	—	5	—	—	—	10	—
February	1	—	1	—	1	—	1	—	4	—
March	2	—	—	—	—	—	—	—	2	—
April	1	—	3	1	1	—	1	—	6	1
May	—	—	1	—	—	—	—	—	1	—
June	1	—	—	—	1	—	—	—	2	—
July	—	—	1	—	—	—	1	—	2	—
August	—	—	—	—	—	—	—	—	—	—
September	2	—	1	—	—	—	—	—	3	—
October	3	—	2	—	—	—	—	—	5	—
November	1	—	—	—	—	—	—	—	1	—
December	3	2	2	—	—	—	1	—	6	2

TABLE II (B) (10) (*b*).—NUMBER OF CASES OF TYPHUS IN THE UNION FROM 1933 TO 1953.

Period year ending 30th June.	Cape.	Natal.	Transvaal.	Orange Free State.	UNION.	
					Cases.	Deaths.
1933	1,649	208	25	243	2,125	302
1934	1,905	207	208	3,636	5,956	662
1935	2,898	224	429	3,275	6,826	998
1936	835	33	457	280	1,605	284
1937	694	89	46	178	1,007	168
1938	822	19	53	88	982	168
1939	1,067	81	93	32	1,273	424
1940	635	84	60	62	841	146
1941	616	9	44	45	714	176
1942	1,472	38	16	20	1,546	359
1943	2,687	66	145	21	2,919	521
1944	5,247	85	254	37	5,623	2,600
1945	2,473	180	190	66	2,909	566
1946	559	155	78	18	810	40
1947	440	164	12	10	626	32
1948	682	74	53	13	822	49
1949	158	67	26	8	259	15
1950	81	22	35	20	158	5
July, 1950, to 31 December, 1951	138	10	39	9	196	12
1st January, 1952, to 31st December, 1952	75	7	13	3	98	8
1st January, 1953, to 31st December, 1953	19	11	8	4	42	3

TABLE II (B) (10) (*c*).—TYPHUS: INCIDENCE, YEAR ENDED 31ST DECEMBER, 1953.

Province.	Cases.	Deaths.	Case Death Rate per Cent.
Cape	19	2	10·53
Natal	11	1	9·09
Transvaal	8	—	—
Orange Free State	4	—	—
UNION	42	3	7·14

TABLE III (1).—PORTS OF THE UNION: HEALTH MEASURES, YEAR ENDED 31ST DECEMBER, 1953.

Item.	Cape Town.	Durban.	Port Elizabeth.	East London.	Total.
Vessels dealt with	1,710	742	1,038	796	4,286
Cases communicable disease	243	90	5	2	340
Vessels disinfected—					
Consignments	240	271	1	2	514
Second-hand clothing, etc.	—	—	—	131	131
Deratization fumigation: International Sanitary Convention	80	107	—	—	187
Number of exemption certificates issued—I.S.C.	35	96	5	—	136
Rodents destroyed on vessels and in Dock Areas	2,501	4,899	595	1,329	9,324

TABLE III (2).—MONTHLY TOTALS OF AIRCRAFT ARRIVING FROM OUTSIDE THE UNION AT THE SANITARY AIRPORTS OF THE UNION BETWEEN 1ST JANUARY, 1953, AND 31ST DECEMBER, 1953.

Month.	Jan Smuts.	Palmietfontein.	Total.
January	—	174	174
February	—	165	165
March	—	175	175
April	—	172	172
May	—	160	160
June	—	162	162
July	—	179	179
August	2	167	169
September	164	—	164
October	186	—	186
November	177	—	177
December	183	—	183
TOTAL FOR YEAR	712	1,354	2,066

NOTE.—Jan Smuts Airport was opened, and Palmietfontein closed, in August, 1953.

	Monthly Average.	*Daily Average.*		*Monthly Average.*	*Daily Average.*
1947	110·825	3·603	1951	155·333	5·107
1948	129·083	4·216	1952	167·750	5·569
1949	137·166	4·509	1953	172·583	5·674
1950	134·750	4·430			

TABLE III (3).—ANNUAL TOTALS OF AIRCRAFT ARRIVING FROM OUTSIDE THE UNION AT DURBAN AIRPORTS DURING THE YEARS FROM 1ST JULY, 1949, TO 31ST DECEMBER, 1953.

Period.	From Lourenco Marques.	From further North via Lourenco Marques.	Total.
1/7/1949–30/ 6/1950	158	56	214
1/7/1950–30/ 6/1951	111	54	165
1/7/1951–30/ 6/1952	51	24	75
1/7/1952–31/12/1952	47	25	72
1/1/1953–31/12/1953	136	53	189

NOTE.—Arrivals of aircraft at Durban from outside the Union commended in 1949.

TABLE IV (1).—DISTRICT NURSING SERVICES.—NUMBER OF NURSES, MIDWIVES, NON-EUROPEAN NURSING ASSISTANTS FOR THE PERIOD 1949–53 IN RESPECT OF WHOM SUBSIDIES OR PART-REFUND OF SALARIES ARE PAID, COMPARED WITH THE TOTALS AS AT 31ST DECEMBER, 1935.

Race.	PART-REFUNDS TO LOCAL AUTHORITIES AND CHARITABLE ORGANISATIONS UNDER SECTION 14 (*a*).					
	1935.	1949.	1950.	1951.	1952.	1953.
European	23	169	181	211	212	180
Native	2	119	142	241	255	314
Coloured	—	36	47	61	66	88
ALL RACES	25	324	370	513	533	582

Race.	SUBSIDIES TO PRIVATE NURSES AND MIDWIVES UNDER SECTION 14 (*b*) [FROM 1953, SECTION 14 (*c*)].					
	1935.	1949.	1950.	1951.	1952.	1943.
European	7	16	18	9	9	3
Native	—	—	—	—	—	—
Coloured	1	1	2	1	1	—
ALL RACES	8	17	20	10	10	3

Race.	PART-REFUNDS TO CHARITABLE ORGANISATIONS, BODIES CONTROLLING MISSION HOSPITALS AND STATUTORY NATIVE BODIES IN NATIVE AREAS UNDER SECTION 15 (*a*).					
	1935.	1949.	1950.	1951.	1952.	1953.
European	—	12	12	13	16	12
Native	11	125	157	189	205	204
Coloured	—	5	3	4	4	3
ALL RACES	11	142	172	206	225	219

Race.	SUBSIDIES TO PRIVATE NURSES AND MIDWIVES IN NATIVE AREAS UNDER SECTION 15 (*b*) [FROM 1953, SECTION 15 (*c*)].					
	1935.	1949.	1950.	1951.	1952.	1953.
European	—	—	—	—	—	—
Native	3	48	45	32	30	12
Coloured	—	—	—	—	—	—
ALL RACES	3	48	45	32	30	12

Race.	PART-REFUNDS TO PROVINCIAL ADMINISTRATION UNDER SECTION 13.					
	1935.	1949.	1950.	1951.	1952.	1953.
European	—	147	155	133	92	65
Native	—	51	52	39	25	10
Coloured	—					25
ALL RACES	—	198	207	172	117	100

TABLE IV (2).—NURSING, MATERNITY AND CHILD WELFARE SERVICES.—SUMMARY OF WORK DONE, 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953 (NORTHERN TRANSVAAL 1ST JULY, 1952, TO 30TH JUNE, 1953).

Nature of Work.	DEPUTY CHIEF HEALTH OFFICERS' REGIONS.					
	Northern Transvaal.	Southern Transvaal.	Natal.	Orange Free State.	Cape.	Cape Eastern.
Centres visited	145	116	188	92	61	140
Maternity hospitals and nursing homes visited	53	51	—	70	31	
Lectures given	6	2	—	14	—	—
Private midwives inspected (qualified)—						
European	63	120	8	50	49	15
Non-European		11	2	53		3
Unqualified midwives inspected	12	72	10	16	—	18
Subsidised district nurses inspected—						
European	28	45	28	48	86	27
Non-European	53	136	73	—		88
Meetings attended	12	20	9	20	7	9
Persons interviewed in connection with nursing services	338	536	376	279	223	388
Investigations conducted in respect of nursing services	14	29	97	26	10	10

TABLE IV (3).—NURSING HOMES REGISTERED WITH THE DEPARTMENT AS AT 31ST DECEMBER, 1953.

ORANGE FREE STATE.		TRANSVAAL.	
European.	Non-European.	European.	Non-European.
39	1	90	9

BED ACCOMMODATION AVAILABLE.

ORANGE FREE STATE.		TRANSVAAL.	
European.	Non-European.	European.	Non-European.
168	3	2,350	192

PERSONNEL OF NURSING HOMES.

ORANGE FREE STATE.				TRANSVAAL.			
European.		Non-European.		European.		Non-European.	
Qualified.	Unqualified.	Qualified.	Unqualified.	Qualified.	Unqualified.	Qualified.	Unqualified.
52	19	1	0	954	332	7	50

TABLE V (1).—PATHOLOGICAL LABORATORIES: ANALYSES AND EXAMINATIONS, 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Particulars.	GOVERNMENT LABORATORIES.		S.A. INSTITUTE FOR MEDICAL RESEARCH.			EAST LONDON HOSPITAL BOARD.
	Cape Town.	Durban.	Johannesburg.	Port Elizabeth.	Bloemfontein.	East London.
Specimens examined for:—						
(*a*) Government Departments—						
Agriculture	—	—	—	—	—	—
Customs and Excise	—	—	—	—	—	—
Defence (and Navy)	1,057	3,421	7,778	181	210	—
Education	—	273	—	—	—	—
Finance	—	—	—	—	—	—
Health (including Leper Institutions and Mental Hospitals)	15,156	53,211	186,554	18,693	15,895	—
Interior	—	—	—	—	—	—
Justice (including Prisons)	454	3,422	6,058	664	239	—
Mines (including Miners Phthisis)	—	—	29,114	—	3,937	—
Native Affairs	—	—	—	—	—	—
Public Works	—	—	—	—	—	—
S.A. Railways and Harbours	—	1,821	—	—	—	—
Others	—	—	5,657	226	1,923	—
TOTALS	16,667	62,148	235,161	19,764	22,204	—
(*b*) General Hospitals (Provincial)	1,752	50,806	425,895	41,020	30,418	—
(*c*) Local Authorities	68,847	23,214	114,565	31,409	5,871	—
(*d*) Medical Practitioners and Members of the Public	13,664	91,512	67,574	22,846	—	—
(*e*) Other Governments and other Administrations	17,528	—	37,605	—	—	—
(*f*) Others	—	—	60,476	—	3,340	—
TOTALS	101,791	165,532	706,115	95,039	39,833	—
Manufactures and Issues:—						
Autogenous Vaccines c.c.	—	—	413	154	37	—
Bacterial Vaccines c.c.	—	—	—	—	—	—
Anti-Rabic Vaccine c.c.	44,870	—	—	—	—	—
Tuberculin Dilutions	—	—	14,337	1,606	—	—
Sera (Various) Bacterial Filtrates c.c.	—	—	271,253	—	—	—
Sera (ampules)	—	—	257,618	—	—	—
Chaulmoogra Oil Preparations Litres	—	—	—	—	—	—
Calf Lymph (issued) Tubes	—	—	944,482	2,500	5,000	—
Chick Membrane Lymph (on hand)	—	—	—	—	—	—
Other (oral) doses	—	—	1,981	—	—	—
Milk cultures bottles	—	—	353	—	—	—
Human blood processed—						
Wet bottles prepared for whole blood bottles	13,950	—	—	—	—	—
Serum separated from blood Litres	662	—	—	—	—	—
Other Vaccines c.c.	—	—	1,591,230	—	—	—

TABLE V (2).—PATHOLOGICAL LABORATORIES: NUMBER OF EXAMINATIONS PERFORMED, 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Laboratory.	Work done on behalf of Government Departments.	Work done on behalf of others.	Total Specimens.
Johannesburg	235,161	706,115	941,276
Cape Town	16,667	101,791	118,458
Durban	62,148	165,532	227,680
Port Elizabeth	19,764	95,039	114,803
Bloemfontein	22,204	39,833	62,037
TOTAL	355,944	1,108,310	1,464,254

TABLE V (3).—PATHOLOGICAL LABORATORIES: NATURE OF EXAMINATIONS PERFORMED, 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Nature of Examinations.	Johannesburg.	Cape Town.	Durban.	Port Elizabeth.	East London.	Bloemfontein.
Particular disease	178,154	—	16,396	71,303	*	36,323
General bacteriological	103,492	43,946	—	7,308	*	5,703
Serological	288,619	114,273	121,144	—	*	—
Parasitological	19,466	211	50,001	658	*	1,306
Pathological	18,821	401	—	42,197	*	9,959
Haematological	116,904	2,313	8,736	—	*	—
Chemical	211,110	7,058	14,893	12,922	*	8,505
Miscellaneous	4,710	63,556	16,510	651	*	—
TOTAL	941,276	231,758	227,680	115,039	*	61,796

* Service conducted by Provincial Administration.

TABLE V (4).—GOVERNMENT VACCINE INSTITUTE, ROSEBANK, CAPE PROVINCE. REPORT ON WORK CARRIED OUT DURING THE PERIOD 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Number of calves vaccinated	226.
Number of calves successful	225.
Number of calves' lymph rejected	1.
Amount of lymph obtained from 225 calves	183,325 c.c.
Average quantity per successful calf	811 c.c.
Average number of tubes per successful calf	32,447.
Average value per successful calf at 2d. per tube	£270. 7s. 10d.
Total number of tubes manufactured during the year ending 31st December, 1953	7,333,000.
Number of tubes issued during the above period	3,095,270.
Value of *all* lymph manufactured at 2d. per tube	£61,108. 6s. 8d.
Value of lymph issued free at 2d. per tube	£21,403. 16s. 0d.
Number of tubes (approximate) on hand at end of December, 1953	13,763,600.
Revenue received by sales outside the Union	£4,384. 9s. 8d.

TABLE V (5).—GOVERNMENT VACCINE INSTITUTE, ROSEBANK, CAPE. LYMPH ISSUED FREE IN THE UNION FROM 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Month.	Cape.	Transvaal.	Natal.	Orange Free State.	Monthly Total.
January	64,436	118,600	15,000	4,300	202,336
February	65,493	96,100	15,000	6,400	182,993
March	20,400	99,250	15,000	4,000	138,650
April	78,501	106,000	30,000	5,900	220,401
May	78,616	104,700	30,000	35,790	249,106
June	44,066	242,000	15,000	18,750	319,816
July	91,343	226,300	45,000	10,500	373,143
August	30,697	124,500	45,000	15,000	215,197
September	21,769	96,000	15,000	3,900	136,669
October	52,270	165,500	15,000	6,150	238,920
November	11,256	99,500	15,000	4,750	130,506
December	24,569	117,000	15,000	4,150	160,719
TOTAL	583,416	1,595,450	270,000	119,590	2,568,456

TABLE V (6).—GOVERNMENT VACCINE INSTITUTE, ROSEBANK, CAPE. SALES OUTSIDE THE UNION FROM 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Month.	Single Dose Tubes @ 2d. each.	Amps. 50 Dose @ 7s. 6d. each.	Amps. 100 Dose @ 14s. each.
January	44,573	18	—
February	39,261	18	—
March	35,284	—	—
April	34,417	—	—
May	47,918	—	—
June	48,255	—	—
July	54,593	—	—
August	43,130	—	—
September	47,431	—	—
October	50,884	20	6
November	42,475	—	—
December	33,693	—	15
TOTAL	521,914	56	21

Total issues for year:—

Cape	583,416	
Transvaal	1,595,450	
Natal	270,000	
Orange Free State	119,590	
Outside Union	521,914	@ 2d.
	56	@ 7s. 6d.
	21	@ 14s.
TOTAL	3,090,370	single tubes.
	56 ×	50 ampules.
	21 ×	100 ampules.

TABLE VI.—HEALTH CENTRES: UNION HEALTH DEPARTMENT.
SUMMARY OF WORK DONE, 1ST JANUARY, 1953 TO 31ST DECEMBER, 1953.

Centre.	Total Attendances.	Domiciliary.	Maternal and Child Health.		Preventative.					Infectious Disease.				Venereal Disease.	
			Total Attendances.	Antinatal.	Vaccination.	Diphtheria.	Combined Whooping Cough and Diphtheria.	T.A.B.	Total Cases.	Tuberculosis.	Diphtheria.	Typhoid.	Poliomyelitis.	Syphilis.	Gonorrhoea.
	NATAL REGION.														
*Institute of Family and Community Health	242,313	108,553	31,685	9,083	3,664	370	3,191	6,301	16,526	1,225	16	5	—	289	332
Botha's Hill	26,261	471	2,341	790	—	—	168	144	312	26	—	—	—	44	62
Gcilima	80,149	9,842	32,170	3,999	1,819	—	653	20,296	22,768	181	—	17	—	723	48
Ixopo	11,659	55	2,530	1,909	184	—	325	689	1,198	67	—	—	—	30	16
Nottingham Road	14,410	232	4,921	1,281	709	—	86	161	956	30	—	—	—	208	34
Polela	35,070	10,094	4,138	1,762	5,162	410	652	1,285	7,509	55	—	—	—	141	241
Tongaat	41,690	7,094	11,618	2,856	267	135	385	—	787	27	—	—	—	199	51
	CAPE REGION.														
Cradock	36,672	3,442	2,699	2,091	1,275	1,131	91	59	2,556	86	33	5	—	302	12
George	35,559	3,180	7,582	1,725	1,109	—	1,017	—	2,126	1,341	3	—	1	106	182
Gordonia	6,703	21	1,015	348	—	—	112	26	138	50	2	5	—	302	132
Grassy Park	37,001	19,486	3,688	614	215	129	63	59	466	59	2	—	2	71	8
Knysna	16,043	2,508	4,970	1,622	150	—	312	12	474	35	—	—	—	138	48
Mossel Bay	17,864	3,015	5,170	1,823	272	55	322	18	667	28	1	—	—	91	69
Stellenbosch	33,282	4,241	7,173	1,382	165	20	233	—	418	96	10	4	—	136	75
Walmer	32,344	9,666	6,008	1,657	162	48	65	—	275	170	—	—	—	235	43
	CAPE EASTERN REGION.														
Adelaide	12,667	1,501	4,198	1,018	—	—	—	—	—	15	1	1	—	111	3
Fort Beaufort	18,091	4,961	6,595	342	—	—	4	—	4	56	10	—	—	158	11
Grahamstown	63,572	1,630	23,021	4,576	247	—	516	849	161	33	—	—	—	557	12
Sandflats	12,704	1,815	1,307	707	217	—	534	—	751	53	1	—	—	58	—
Umtata	44,876	12,557	29,686	5,782	2,125	1,581	2,256	4,132	10,094	3,604	—	—	—	2,719	—
Zwelitsha	35,242	11,774	4,767	2,891	85	—	2,486	1,932	4,503	34	5	—	—	189	13
	SOUTHERN TRANSVAAL REGION.														
Bloemhof	11,858	190	363	65	—	45	534	569	1,148	21	—	—	—	77	22
Evaton	27,039	9,273	1,335	1,335	952	1,039	21	213	2,225	23	10	—	—	323	76
Lady Selborne	80,440	2,332	10,282	3,704	1,007	1,149	182	1,840	4,178	72	36	19	1	781	202
Randfontein	29,967	2,721	5,356	2,287	276	1	65	202	544	15	2	6	—	784	149
	NORTHERN TRANSVAAL REGION.														
Bushbuckridge	17,968	1,513	4,763	2,294	147	—	51	—	198	24	—	16	—	316	95
	ORANGE FREE STATE REGION.														
Bethlehem	14,644	—	5,343	1,934	48	72	377	—	497	19	4	3	—	352	13

* Institute of Family and Community Health includes the following health centres:—
Clairwood, Newlands, Springfield.

TABLE VII (1).—FOODS, DRUGS AND DISINFECTANTS ACT (ACT No. 13 OF 1929). SAMPLES TAKEN FOR EXAMINATION OR ANALYSIS AND THE RESULTS, 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Place.	Total taken.	Number Analysed or Examined.	Number found Adulterated or Incorrectly or Falsely Described.	Prosecutions.	Convictions.
Ports of Union	80	80	2	—	—
Cape Western Region	765	746	77	32	32
Cape Eastern Region	44	44	3	—	—
Transvaal Southern Region	3,791	3,791	543	174	141
Transvaal Northern Region	54	54	7	7	5
Natal	73	73	5	3	1
Orange Free State and North West Cape	40	40	3	—	—
TOTAL	4,847	4,828	640	216	179

TABLE VII (2).—MEDICAL, DENTAL AND PHARMACY ACT (ACT No. 13 OF 1928). PROSECUTIONS AND CONVICTIONS UNDER LAWS RELATING TO HABIT-FORMING DRUGS, 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Province and Particulars.	EUROPEAN.		NATIVE.		ASIATIC.		OTHER COLOURED.		TOTAL.	
	Prosecutions.	Convictions.	Prosecutions.	Convictions.	Prosecutions.	Convictions.	Prosecutions.	Convictions.	Prosecutions.	Convictions.
CAPE—										
Dagga	116	112	2,013	1,895	10	10	3,193	3,129	5,332	5,146
Other habit-forming drugs	—	—	—	—	—	—	—	—	—	—
NATAL—										
Dagga	61	58	3,218	3,110	500	489	221	208	4,000	3,865
Other habit-forming drugs	—	—	—	—	2	2	—	—	2	2
TRANSVAAL—										
Dagga	231	209	8,876	8,466	46	44	632	599	9,785	9,318
Other habit-forming drugs	1	1	—	—	7	5	—	—	8	6
ORANGE FREE STATE—										
Dagga	16	13	1,049	1,019	—	—	54	53	1,119	1,085
Other habit-forming drugs	—	—	—	—	—	—	—	—	—	—
UNION—										
Dagga	424	392	15,156	14,490	556	543	4,100	3,989	20,236	19,414
Other habit-forming drugs	1	1	—	—	9	7	—	—	10	8

TABLE VII (3).—THERAPEUTIC SUBSTANCES REGULATIONS. LICENCES ISSUED UNDER THE THERAPEUTIC SUBSTANCES REGULATIONS, 1ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Particulars.	Import Licences.	Manufacturing Licences.	Vitamin Permits.	Research Licences.	Blood Processing Licences.
Number of Licences—					
in force, 1/1/53	64	146	42	12	6
issued	10	13	4	2	1
cancelled	11	30	3	1	1
in force 31/12/53	63	129	43	13	6

TABLE VII (3) (*continued*).—DETAILS OF MANUFACTURING LICENCES IN FORCE, 31ST DECEMBER, 1953.

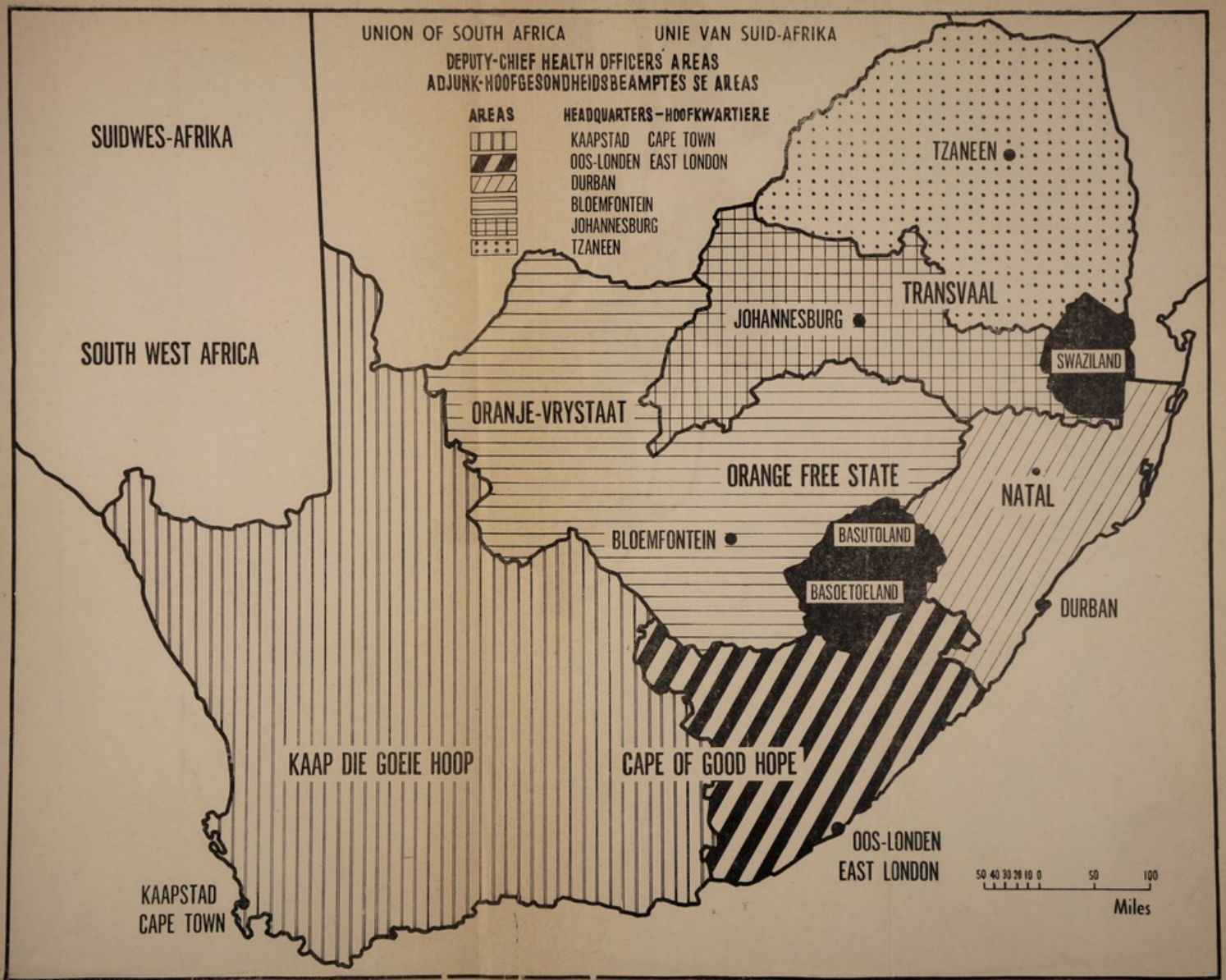
Antitoxin and sera, Toxins, antigens and vaccines	94
Vitamins	7
Antibiotics	12
Androgen and oestrogens	12
Pituitary extracts	1
Surgical catgut	1
Insulin	2
TOTAL	129

TABLE VII (4).—EXAMINATIONS CARRIED OUT UNDER THE THERAPEUTIC SUBSTANCES REGULATIONS FOR THE YEAR 31ST JANUARY, 1953, TO 31ST DECEMBER, 1953.

Product.	Manufactured in the Union.	Imported.	Number Unsatisfactory.
Bacterial vaccines	—	—	—
Schick test toxin	—	—	—
Diphtheria prophylactic	—	—	—
Diphtheria antitoxin	—	—	—
Tetanus antitoxin	—	—	—
Tuberculin	—	—	—
Arsphenamine and derivatives	—	—	—
Insulin	—	—	—
Pituitary extracts	—	—	—
Sterilised ligatures and sutures	6	6	1
Sex hormones	—	—	—
Vitamins and preparations	2	—	—
Antibiotics	20	16	20
Disinfectants	—	—	—
Others	—	—	—
TOTALS	28	22	21

TABLE VII (5).—NARCOTIC DRUGS IMPORTED INTO THE UNION OF SOUTH AFRICA, 1949–53 (IN KILOGRAMS).

Drug.	Raw Opium.	Medicinal Opium.	Opium-tinctures and Extracts.	Coca Leaves	Indian Hemp	Indian Hemp Galenicals.	Indian Hemp (R)	Morphine.	Heroin.	Crude Cocaine.	Cocaine.	Eucodal.	Diodide.	Dilaudide.	Acedicone.	Codeine.	Dionine.	Pethidine.	Phenadoxone.	Amidone.	Methorphinan.
International Code No..	1	2	3	4	5	6	7	8 (1)	9 (2)	10 (3)	11 (4)	12 (5)	13 (6)	14 (7)	15 (8)	16 (9)	17 (10)	18 (11)	21 (14)	22 (15)	23 (16)
1949.....	385·848	102·059	84·918	—	—	21·273	—	26·354	8·877	—	10·855	—	0·001	0·003	0·007	111·508	6·872	97·557	—	—	—
1950.....	487·622	118·163	71·728	—	—	23·020	—	33·001	15·496	—	8·698	—	0·126	0·117	—	278·047	9·661	68·743	0·032	0·129	—
1951.....	352·590	328·406	45·645	—	—	15·875	—	40·599	28·530	—	17·581	—	0·105	0·012	—	379·479	18·301	183·447	0·065	2·520	—
1952.....	302·750	98·838	59·346	—	—	14·288	—	36·367	—	—	22·206	—	—	—	—	311·389	12·040	149·553	—	1·537	0·061
1953.....	323·331	123·377	98·667	—	—	1·587	—	28·705	—	—	22·080	—	—	—	—	253·660	9·646	89·035	0·033	1·245	0·171


UNION OF SOUTH AFRICA
UNIE VAN SUID-AFRIKA
DEPUTY-CHIEF HEALTH OFFICERS' AREAS
ADJUNK-HOOFGESONDHEIDSBEAMPTES SE AREAS
AREAS
HEADQUARTERS—HOOFKWARTIERE
KAAPSTAD CAPE TOWN
OOS-LONDEN EAST LONDON
DURBAN
BLOEMFONTEIN
JOHANNESBURG
TZANEEN
SUIDWES-AFRIKA
SOUTH WEST AFRICA
TZANEEN
TRANSVAAL
JOHANNESBURG
SWAZILAND
ORANJE-VRYSTAAT
ORANGE FREE STATE
NATAL
BLOEMFONTEIN
BASUTOLAND
BASOETOELAND
DURBAN
KAAP DIE GOEIE HOOP
CAPE OF GOOD HOPE
OOS-LONDEN
EAST LONDON
KAAPSTAD
CAPE TOWN
50 40 30 20 10 0 50 100
Miles

104050