Report on the public health / Southern Rhodesia.

SOUTHERN RHODESIA

REPORT

on the

PUBLIC HEALTH

For the Year 1950

PRESENTED TO THE LEGISLATIVE ASSEMBLY
1951

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Report on the Public Health for the Year 1949.

Health Department, Salisbury.
27th April, 1950.

The Minister of Health.

Sir,

I have the honour to submit the Annual Report of the Health Department for the year, 1949.

I have the honour to be, Sir, your obedient servant,

R. M. MORRIS, O.B.E., M.D., D.P.H.
Secretary for Health, Medical Director and Chief Health Officer.

INTRODUCTION.

The year 1949 was one of steady progress in all departments in spite of some difficulty in recruiting and maintaining staff and more considerable difficulty in the provision of new buildings and services such as water supplies at rural stations and clinics. The details of this progress are shown in the body of the report and the statistics in the appendices, but it will be appropriate to deal with the more important aspects in this part.

CURATIVE SERVICES.

Hospitals.—The main extension has been the opening of the 12-bedded European Hospital at Chipinga, thus providing locally for a community previously 120 miles from hospital care. Additional African accommodation of modern design has been provided at Ingutsheni Mental Hospital, Bulawayo, where the programme of entire reconstruction is proceeding steadily.

Progress in the rehousing of African patients at the Ngomahuru Leprosy Hospital is also being maintained and it is hoped to expedite this general plan over the next few years. In Bulawayo and Gwelo wards previously closed for lack of nursing staff have now been re-opened.

Maternity Homes.—Work has been commenced on temporary additions to the Lady Chancellor Maternity Home in Salisbury to alleviate the present congestion and, as a permanent solution, plans have been drawn for a new maternity hospital which can be built in sections—the first of these will provide 80 beds. Progress on the Harari Native Maternity Block and Training School in Salisbury and on the corresponding Mpilo Hospital in Bulawayo has been slower than could be desired, but there is every hope that both will be in operation in a few months' time. Both these institutions will be used not only for the benefit of the local inhabitants but also as central training schools for African Maternity Assistants, later to be raised to full training as midwives.

Clinics.—The construction of three more African clinics—one at Gwelo Village Settlement, one in the Narira Reserve and the other, Sibanga, at Selukwe, have been completed and the buildings have been brought into operation.

The Department gratefully acknowledge the continued interest and financial support of the Beit Trustees whose generosity has enabled clinics to be erected at Urungwe and Biriwiri (Muwashi) Reserves. Both are expected to be available for use within a few months.

The work at all others is expanding so rapidly that there is a real danger that facilities will be inundated.

The staffing problems with regard to trained African nursing orderlies have been considerably eased by the introduction of higher rates of pay. The wastage is now very much less and the demand for employment enables a higher standard of efficiency to be maintained.

Medical Services.—One new medical officer's station—at Umvukwes—was opened during the year and arrangements made to open another—Mrewa—early in January. These steady developments have enabled districts previously too large for satisfactory supervision to be divided to the great satisfaction of the patients and medical officers alike.

The provision of quarters for medical officers has given rise to much concern during the year in several centres. Even when funds have been available it has not always proved possible to get building tenders at reasonable prices with the result that more than one officer has had to work in very uncomfortable circumstances. The policy of providing official quarters before opening up a station has now been accepted and in most of the older stations houses have been built, but a few places remain to be satisfactorily covered.

An additional appointment of a Pathologist (Morbid Anatomist) fills a long felt want and it is hoped he will be able to do some research work in his speciality as well as dealing with the large volume of routine duties.

Nursing Services.—The recruiting of trained nursing staff has presented many problems, as the wastage, especially by marriage, remains at a very high level. Fortunately a fair percentage of these nurses are available after marriage to work on the temporary staff.

The Department continues to be extremely grateful to the Society for the Overseas Settlement of British Women for their careful assistance in the selection of candidates for this branch of the Service.

Improvements have been effected in the housing of nursing staff at several of the main hospitals, and plans are in hand for similar work in other places.

During the year it was decided to separate completely the District Nursing Service from the institutional branch, giving the former financial prospects comparable with the latter. The intention is to make the arduous duties of a single-handed rural District Nurse more attractive, but other factors also require attention, especially housing and the provision of adequate transport. The extension of the District Nursing Service is being seriously handicapped by these factors and to a large extent reliance has had to be placed on married nurses residing in their own homes in the district. The student nurse position has improved to a very slight extent.

Laboratories.—The routine laboratories in Salisbury, Bulawayo, Umtali and Gwelo are in grave danger of being swamped by the number of investigations requested by practitioners. The limit of capacity of the present buildings has very nearly been reached and a solution to the problem is not easy to find.

Some of the present work would appear to be not strictly essential, for instance, nearly 90 per cent. of the hundreds of complete blood counts done show no departure from normal and the co-operation of the private practitioner is being sought to curtail demands as far as possible. Otherwise the solution must either be the extension of existing buildings with the provision of more trained technicians or an increase in the number of centres with full laboratory facilities, but this will entail not only a large capital expenditure but high maintenance costs as each new centre should be provided with specialist professional supervision as well as technical staff. The training of African microscopists has been continued and these men are doing extremely useful work in rural clinics within the restricted field for which they are being trained.

Medical Missions.—The benefit to the Colony of the enhanced scales of financial assistance to medical missions is still apparent in every way. The standard of mission hospitals is rising steadily owing to the help the societies can now obtain towards capital expenditure and the present rates of refunds towards trained medical and nursing salaries, combined with a demand for skilled supervision in order to qualify for grants have had the further effect of raising the number of qualified medical practitioners in the mission field to 18, an increase of four.

Training Schools.—The Government schools for European female general nurses in Bulawayo and Salisbury continue to do excellent work, although all but a few of the trainees marry soon after qualification.

The Government schools in Bulawayo for African female and male nursing orderlies and the school in Salisbury for African male nursing orderlies have been slightly expanded and are lining out a steady stream of trained staff for work in the clinics. These schools which train candidates for the examinations held by the Medical Council of Southern Rhodesia have now been joined in this work by Mnene, Mt. Selinda and Nyadiri Missions which have been recognised as training schools on this lighter grade.

Reference has already been made to the proposals for expanding and improving the standard of African midwifery assistants training in Salisbury and Bulawayo, which schools will take over some of the work now being done at the Government school at Umtali. A close watch will need to be kept on the numbers now being trained for this work so as not to have more trained persons than can be employed, but the risk of this is not yet great, as a fair number of nursing assistants can now get employment at the more progressive mines and on the larger farms and estates where medical facilities are being provided for the labour force.

There would, however, seem to be less reason to continue the training of nursing orderlies to the lower standard of the Department of Health Certificate, which training is now being given at some medical missions.

Preventive Services.

It has not been possible to expand in personnel this very important Department in the Division of Health, but work has been intensified in many directions. The arrangements with the municipalities have been further clarified by new financial agreements with Gwelo and Gatooma Town Councils, thereby enabling these local authorities to extend their public health work.

In conjunction with the Bilharzia Research Team and with the generous and greatly appreciated provision of funds by the State Lottery Trustees, a detailed scheme for the control of malaria by the use of residual insecticides and of bilharziasis by the use of copper sulphate has been started in the Mazoe Valley. It is hoped thus to demonstrate that comparatively simple steps will control these diseases over an area of 1,800 square miles. The project is also designed to give figures for the average cost of these preventive measures in a fairly closely settled area.

The training school for African Hygiene Demonstrators has continued to function on a reorganised basis at Domboshawa. The trainees already in employment in Reserves and Native Settlement Areas have shown their keenness and have done excellent practical work in raising the standards of environmental hygiene and in propaganda towards personal and communal cleanliness in the villages and houses.

The Schools Medical Service continues to be handicapped by the rapid increase in the numbers of scholars in the Government schools whose needs have to be covered by the same number of medical officers, but it has been possible to give some assistance by the appointment of one school nurse in each of the main centres, Salisbury and Bulawayo. These factors have been even more detrimental in the case of the Schools Dental Service, the officers of which are also responsible for the dental care of the members of the B.S.A. Police and Permanent Staff Corps. The attractions of private practice make it even more difficult to keep the establishment of five dental officers filled and the increase in work puts a heavy strain on this department.

Research.

Bilharziasis.—The Bilharzia Research Unit, working under the supervision of the Director of Preventive Services, has contrived to do excellent work in the investigation of Miracil D as a cure for bilharziasis. As a result several papers have been published in various medical journals and the Department has now sufficient evidence to recommend the use of uncoated tablets of this medicament as a routine oral treatment for cases of S. *haematobium* infection. It is much less satisfactory for *S. mansoni* cases.

Venereal Disease.—During the year, again by means of funds provided by the State Lottery Trustees, to whom the Department expresses is gratitude, it was possible to invite to the Colony a consulting venereologist—Dr. R. R. Willcox, of St. Mary's Hospital, London—to investigate and advise on the problem of venereal disease in Africans.

Dr. Willcox did a very thorough and comprehensive tour of the Colony with very extensive investigations at all the main centres. He was accompanied by a skilled technician in a mobile laboratory so that very numerous tests could be done on the spot. His work has revealed many extremely interesting sociological as well as professional facts. On the whole the position disclosed is not as alarming as was feared and certainly not nearly as bad as some critics had maintained. His report is at present in the Press and should be available for publication shortly.

The success of this visit has been so apparent that applications are now being made for other scientific investigators to come to the Colony on comparatively short-term projects. There are many suitable subjects for this purpose, but it is not always easy to find the right investigator or to provide the necessary facilities for his work. It is, however, hoped that this scheme will be more and more developed in future years.

Tuberculosis.—A small team in Bulawayo has been engaged as a Tuberculin survey of a section of the African population as a preliminary to the introduction of B.C.G. vaccination of selected groups whose duties or work are thought to render them more liable to infection.

Leprosy.—At Ngomahuru Leprosy Hospital the magnificent results obtained by the use of Sulphetrane as a routine treatment have led to much work being done in the optimum courses for the various types of this disease and the adjuvant medication needed.

Although there have been no spectacular extensions during the year under review, it can be looked back upon as one of steady achievement, due very largely, if not entirely, to the loyal and instructing work of all members of the staff, work which has perforce sometimes to be done under difficulty and in circumstances leaving a good deal to be desired.

Chapter I.—VITAL STATISTICS.

(1) *African Census.*

The analysis of the data obtained in the 1948 sample census of the African population has been pursued and further information can now be given.

The final estimate of the indigenous population by sample census was close to the annual estimate of native population prepared by the Department of Native Affairs from the registers of tax-paying males, the number of these being multiplied by a factor which varied from district to district to give the estimated total population.

The birth rate was estimated to be 46.2 per 1,000, the death rate at 18.1 per 1,000, and infant mortality rate at 131 per 1,000 live births.

These indices are more satisfactory than had generally been expected and especially the infant mortality rate.

The African population has doubled itself in the past 20 years. In 1946 it was estimated that the African population was double what it had been 25 years ago, so it would appear that the population is increasing at an accelerated rate and shows at present every indication of continuing to do so.

The vital significance of this apparently very high rate of increase in the population is not receiving from the general public the consideration and attention warranted as it has a big influence on the future progress and development of the Colony.

(2) *Population of Southern Rhodesia.*

The population is estimated at the 30th June each year:—

	1949	1944	1940
Europeans	116,000	82,680	61,450
Asiatics	3,400	2,870	2,540
Coloured Persons	5,000	4,100	3,420
Natives	1,898,000 (a)	1,556,000	1,367,000
Total	2,022,400	1,645,650	1,434,410

(a) Provisional figure.

(3) *Summarised Vital Statistics.*

The vital statistical information concerning the European population is given below and compared with the data of five and ten years ago:—

	1949	1944	1940
Estimated European population (as at 30th June)	116,000	82,680	61,450
Rate of natural increase per 1,000 of population	20.4	15.6	19.6

	1949	1944	1940
Gross number of immigrants	14,096	601	1,157
Number of European births	3,171	2,026	1,748
Illegitimate births included above	42	39	22
Annual birth rate per 1,000	27.3	24.5	28.4
Number of European deaths	808	735	544
Crude death rate per 1,000	7.0	8.9	8.9
Number of infant deaths	93	91	71
Infant mortality rate per 1,000 live births	29	45	40
Number of still-births (not included in births or deaths)	54	42	33
Number of maternal deaths	2	8	5
Maternal mortality rate per 1,000 live births	0.6	3.9	2.9

(4) *European Birth Rates.*

Southern Rhodesia	27.3	24.5	28.4
England and Wales	17.0 (a)	18.0	14.6
Union of South Africa	26.7 (a)	26.6	25.4

(a) Provisional figures.

(5) *European Infant Deaths.*

(I) Causes of Death, 1940-49.

Disease	No. of Deaths	Percentage of Total
Premature birth and diseases of early infancy	465	57.41
Bronchitis and pneumonia	63	7.78
Diarrhoea and enteritis	91	11.23
Malaria	54	6.67
Measles, whooping cough, diphtheria, dysentery	27	3.33
Various, not classified above	110	13.58
	810	100.00

(II) Deaths during Different Months of Age, 1940-49.

	No. of Deaths	Percentage of Total
First month	474	58.52
Two months to six months	201	24.81
Six months to twelve months	135	16.67
	810	100.00

(III) Infant Mortality Rates.

	1949	1944	1940
Rate per 1,000 live births—			
Southern Rhodesia	29	45	40
England and Wales	32	46	55
Union of South Africa	40	43	50

The rate (29 per 1,000 live births) is the lowest rate ever experienced, the previous best being 1946 when the rate was 30 per 1,000 live births. Despite the satisfactory rate it will be obvious from the table below that the elimination of deaths from easily preventible disease would still further improve the rate. The steady drain in infant death from malaria has again to be noted. It is interesting to compare the public anxiety expressed during 1949 at a total incidence of 11 European cases of poliomyelitis resulting in one death with the indifference shown to the six infant and twelve adult deaths resulting from malaria.

(IV) Causes of Infant Deaths, 1949.

International List No.	Cause of Death	Number of Deaths
9	Whooping cough	1
24	Purulent infection and septicaemia	1
28	Malaria	6
33	Influenza	2
66	Other general diseases	1
84	Mental disorders and deficiency (a) mental deficiency	1
106	Bronchitis	1
107	Broncho pneumonia	5
109	Pneumonia (unspecified)	1
119	Enteritis and diarrhoea (under two years of age)	7
122	Hernia, intestinal obstruction	1
157	Congenital malformations	8
159	Premature birth	41
160	Injury at birth	6
161	Other diseases peculiar to the first year of life	10
182	Accidental mechanical suffocation	1
		93

(6) *European Deaths.*

(I) European Death Rates per 1,000.

	1949	1944	1940
Southern Rhodesia	7.0	8.9	8.9
England and Wales	11.7	12.7	14.4
Union of South Africa		9.3	9.4

The crude death rate of 7.0 per 1,000 of the population is the lowest rate ever experienced, the previous best being the rate of 8.0 per 1,000 experienced in 1947 and 1948.

(II) Causes of European Deaths, 1945-49.

	1949	1948	1947	1946	1945	Total	Percentage of Total Deaths
1.—Cancer	129	97	108	86	94	514	13·82
2.—Violence	81	81	70	53	73	358	9·62
3.—Heart Diseases	152	165	123	127	137	704	18·92
4.—Pneumonia and Bronchitis	29	35	26	41	38	169	4·54
5.—Malaria and Blackwater fever	18	32	25	34	33	142	3·82
6.—Nervous Diseases	83	75	70	75	51	354	9·52
7.—Premature Birth and Diseases of early Infancy	65	55	62	38	38	258	6·94
8.—Tuberculosis (all forms)	13	23	8	11	12	67	1·80
9.—Influenza	6	4	3	8	7	28	0·75
10.—Diarrhoea and Enteritis	10	8	18	5	16	57	1·51
11.—Old Age	6	11	10	16	11	54	1·45
12.—Enteric Fever	5	4	2	4	3	18	0·48
13.—Diphtheria	4	1	1	4	6	16	0·43
14.—Dysentery	2	5	2	1	4	14	0·38
15.—Whooping Cough	1	2	4	—	5	12	0·32
16.—Measles	1	1	—	1	—	3	0·08
17.—Scarlet Fever	—	—	—	—	—	—	—
18.—Other Causes	203	222	186	183	159	953	25·62
Total	808	821	718	687	687	3,721	100·00

(7) *Maternal Mortality.*

European Maternal Deaths, 1940-49.

	No. of Deaths	Percentage of Total
Puerperal sepsis	19	35.85
Accidents of pregnancy	5	9.44
Other accidents of childbirth	11	20.75
Puerperal haemorrhage	9	16.98
Puerperal albuminuria and convulsions	8	15.09
Other causes	1	1.89
	53	100.00

The maternal mortality rate of 0.6 per 1,000 live births is the lowest rate ever experienced in the Colony, the previous best rate being in 1941 when there were 1.1 deaths per 1,000 live births.

Chapter II.—INFECTIOUS AND COMMUNICABLE DISEASES.

(1) *Notification of Infectious Disease.*

During the year efforts have been made to improve the notification of infectious disease. If such cases die the medical practitioners will register the cause. It is therefore probable that the figures given for deaths are reasonably reliable but the incidence is probably a good deal higher than indicated. All medical practitioners are invited to co-operate with the health services by notifying all cases promptly and thus increasing the value of the statistics.

Disease	European		Non-European	
	Cases	Deaths	Cases	Deaths
1. *Convention Diseases.*				
* Cholera	—	—	—	—
* Plague	—	—	—	—
* Smallpox	4	—	857	60
* Typhus fever (exanthematous)	—	—	—	—
* Yellow fever	—	—	—	—
2. *Tuberculosis and Silicosis.*				
* Pulmonary tuberculosis	26	2	432	82
* Non-pulmonary tuberculosis	1	—	102	39
Silicosis	—	—	5	—
* Silicosis with active tuberculosis	—	—	14	8
3. *Infectious Diseases of Childhood.*				
* Chickenpox	235	—	611	—
German measles	18	—	2	—
Measles	49	1	298	1
Mumps	95	—	54	—
Whooping cough	17	—	636	—
4. *Virus Encephalitis Group.*				
* Acute anterior poliomyelitis	11	1	5	1
* Encephalitis lethargica	—	—	1	1
5. *Bacterial infections.*				
Tetanus	—	—	2	1
* Scarlet fever	151	—	3	1
* Erysipelas	4	—	1	—
* Puerperal septicaemia	—	—	9	3
* Cerebro-spinal meningitis	9	—	164	20
Meningitis—other organisms	—	—	20	9
* Diphtheria	30	1	147	22
* Typhoid fever	43	1	192	33
* Paratyphoid fever	2	—	2	—
6. *Miscellaneous.*				
Relapsing fever	—	—	5	—
Tick typhus	1	—	—	—
Trachoma	—	—	49	—
* Trypanosomiasis	—	—	4	2
* Undulant fever	1	—	1	—

* Indicates diseases declared notifiable infectious diseases in terms of the Public Health Act.

(2) *Malaria and Blackwater Fever.*

A year of drought in most parts of the territory has resulted in a general decrease in the incidence of malaria. Admissions of European cases to Government Hospitals numbered 999 and resulted in four deaths which represents a hospital admission rate per 1,000 of the population of 8.6 which is the lowest annual rate ever recorded; and a case mortality rate of 0.4 per cent. which is also very low. Compared with 1948, Bulawayo Hospital admitted less than one-third of the malaria patients of that year, but the Gatooma, Que Que and Sinoia Hospitals showed substantial increases.

Experience with proguanil (paludrine) as a prophylactic drug has been most conflicting. In treatment most practitioners rely on quinine or mepacrine to control the paroxysms of fever and then switch to proguanil later.

With the aid of funds generously provided by the State Lottery Trustees, block control of malaria (and bilharzia) has been inaugurated over about 2,000 square miles of the Mazoe River catchment area. The aim is to rely solely on residual insecticides applied to all living and sleeping rooms in all human habitations in the area. It is hoped to control malaria for a whole season with only two applications. While it is as yet far too early to see any definite effect, preliminary reports are promising. An interesting side effect has been the destruction of bed bugs in native huts by the application of residual insecticide. Some employers have noted an increased capacity for work which is attributed to sound rest at nnght. Further details will be seen at Appendix O.

(3) *Schistosomiasis (Bilharzia).*

Further work has been done in connection with Miracil D as an oral drug in the treatment of schistosomiasis. The work has shown that in the type of case seen in this country where the worm load is probably much less than in Egypt, *S. haematobium* infections can be cured satisfactorily with a three-day course of treatment with the drug administered twice a day. A dose of 0.5 gramme night and morning for three days will suffice for a patient weighing 110 lbs. In an effort to counteract the unpleasant taste of the drug and the abdominal discomfort and nausea of which some patients complain, the manufacturers produced the drug in an enteric and sugar-coated tablet. Unfortunately, though the complaints of taste and abdominal discomfort were reduced, the therapeutic efficiency was almost halved.

S. mansoni cases show little improvement on Miracil D at the doses used in *S. haematobium* cases and antimonials will still be necessary for the treatment of this variety of infection. A half gramme tablet of Miracil D costs 8d., so that a patient of 110 lbs. weight, which is quite usual for an African, would cost 4s. to treat in drug alone. Despite the present high cost of Miracil D, which may be reduced when large-scale manufacture is undertaken, it is proposed to introduce the drug in the routine treatment of the disease. Patients could be treated if necessary as out-patients especially at schools where the administration is under supervision and in any case there would be a great saving in the expense of maintaining patients in hospitals or in-patient clinics. With orthodox antimony treatment the defaulter rate is very high and few patients could be detained for a full six weeks' course.

Copper sulphate is the standard molluscide used in Southern Rhodesia and has been made available free of charge to landowners for the treatment of their streams and surface waters. Three and a half tons were issued to farmers and local authorities and two tons were applied by the Health Department. Despite demonstrations arranged for groups of farmers it has not been easy to maintain the interest of landowners in the eradication of snails from farm dams and streams. It may be necessary to reconsider the present policy and embark on a snail eradication scheme by the systematic treatment of places of high potential risk followed by the treatment of the less heavily infested stretches of watercourses. With the same organisation as is now undertaking malaria control in the Mazoe Valley it is hoped to undertake systematic snail control over the same area during the winter months. By a two-fold attack on both diseases in the same area it is hoped that a trained and equipped control organisation can be profitably employed throughout the year. Further details of work done on the subject of this disease appear at Appendix O.

The film "African Schistosomiasis" prepared in Southern Rhodesia by the collaboration of the Public Relations Department and the Department of Health for the instruction of medical men and public health workers had its first showing in London to a distinguished group of workers on these diseases. A number of copies have been supplied to medical schools and copies with Arabic commentary are in use in Egypt. A shortened version of this film, including the life cycle of the parasite and the prevention of the disease, is used for the instruction of senior classes in biology in the Rhodesian schools.

(4) *Smallpox.*

This disease continued to smoulder throughout the year, many cases being introduced from neighbouring territories. Although all immigrant Africans are vaccinated at "ports of entry" many develop the disease some days later when they have made contact with many local inhabitants. It would be difficult to arrange for all immigrants to be held at the border until it was certain that the vaccination was successful. Many arrive who have never been vaccinated and it might be possible to retain at the border for surveillance this especially dangerous category. One European case occurred, an unvaccinated housewife. Her history is rather interesting. The native cook developed smallpox and was removed for isolation. He absconded from the hospital and returned to the house and came into contact with the housewife. She developed confluent smallpox, but the remaining vaccinated members of the family escaped entirely.

Fortunately an epidemic of variola major in Matabeleland was little in evidence, though it appears likely that the cases with a high death rate in the Belingwe District were an extension of the infection by this virulent strain. Elsewhere in the Colony cases occurred at many scattered localities, but on the whole secondary cases were few. Some difficulty was experienced with the evasion of vaccination by members of certain religious sects. Strict measures by the magistrates concerned soon prevented the situation getting out of hand. The course of the present visitation has been as follows: 33 cases and no deaths in 1945; 181 cases and one death in 1946; 685 cases and 117 deaths in 1947; 1,823 cases and 425 deaths in 1948; 861 cases and 60 deaths in the present year. In all, 613,851 vaccinations were done in 1949, efforts being concentrated on vaccinating the unprotected children and the adults who had not been vaccinated for some years previously. Routine mass vaccination of the African population has had to be discontinued in order to cope with the emergency vaccinations demanded.

(5) *Yellow fever.*

Southern Rhodesia is outside the southern limit of the "endemic yellow fever area" of Africa, but in view of the close relationship with Barotseland in Northern Rhodesia and Bechuanaland it seemed unlikely that no evidence of the disease would be found. There is no evidence that any clinical cases of yellow fever have occurred and certainly no reports which might have referred to an epidemic of the disease. In previous years small scale surveys of the mouse protection properties of serum taken from human beings living in defined districts have been carried out. No positive cases however were found. The districts sampled included Mtoko, Salisbury and Fort Victoria. During 1949, as and when supplies of 30 c.c. vacuum venules were available, samples were taken at certain sites near the western borders of the Colony with the following results:—

Site	No. of Samples	Mouse Protection Test Positive
1. On the Zambesi north of Wankie	40	1
2. South and west of Victoria Falls	78	—
3. Gwaai Reserve	104	—
4. Gokwe, Sebungwe	23	—
5. Urungwe Reserve	26	1

As far as possible samples were taken from adolescents and young adults and from females because they are less likely to have travelled far away from their homes.

The first positive could not be confirmed as the area is extremely inaccessible. The case in the Urungwe Reserve has been confirmed on a second specimen. Prophylactic inoculation in these cases could be excluded. It is proposed to increase the number of samples taken in the coming year and investigate areas to the east of the country with samples from populations living in or near forest areas.

It is highly desirable that an intensified survey should be carried out so as to determine the south-eastern boundary of endemnity. Should this survey reveal foci of infection, a team of investigators will be necessary to elucidate the aetiological and other factors in the problem. This work should be done conjointly with Northern Rhodesia, Bechuanaland and Nyasaland on an international basis.

(6) *Plague.*

Plague in human beings has never been reported in Southern Rhodesia, nor is there any evidence of any epizootic of the disease in the rodent population having occurred at any time. On two occasions rodent plague has occurred in country not far removed from our border, but despite the most searching investigations in 1935 and in 1944-45 no abnormal mortality of rodents was noted, although in 1935 a wave of burrow desertion from the focus of infection in Bechuanaland was noted.

During the year the Department has been co-operating with the National Museum of Southern Rhodesia in collecting material for a comprehensive survey of the rodents and their ecto-parasites. One native member of the staff of each Government Health Inspector has been trained by the National Museum in trapping and preserving rodents and collecting their ecto-parasites. Nine hundred rodents and 432 collections of ecto-parasites have been dealt with and the material is still being classified. *Rattus rattus alexandrinus* has been recorded for the first time in six urban centres and the presence of this destructive rodent lends even more pressing urgency to the introduction generally throughout the Colony of proper anti-rodent proofing and protection.

It is clear from the localities of capture of rodents that the main types of veld rodents in this country have become "domesticated" or are on the way to attaining that state. *Mastomys coucha* and *Aethomys chrysophilus* especially show this tendency.

The examination of the ecto-parasite material has revealed ten genera of fleas including among the Xenopsylla, *X. cheopis* and *X. braziliensis.* One flea new to science was found on a rodent in the Matopos near Bulawayo. Among other ecto-parasites noted were mites, a variety of ticks and fly larvae.

The year 1949 was a prolific breeding year for rodents and much damage by them to growing crops and stored products was reported. The surveys will be continued and extended so that a fairly complete picture of the rodent population will be at hand. It is obvious from the knowledge gleaned so far that there is urgent need to tighten up anti-rodent measures and proofing in all urban areas, and improve the conditions under which food stocks, particularly grain, are stored. The loss of grain stocks during 1949 by rodent activity must have had a serious effect on the already depleted harvests resulting from the drought.

(7) *Leprosy.*

Details of the cases treated in the two leprosy hospitals are given in Table A of the Appendix. There has been a satisfactory reduction in the number of European patients due mainly to the excellent results with sulphetrone. Only two male patients remain, both of whom probably contracted their disease on active service.

The African patients have on the whole been more contented with far fewer desertions at Ngomahuru where 250 lepromatous cases are under treatment with sulphetrone. A classification of the African patients at this institution show that the neural and lepromatous cases are almost exactly equal in number. In a total of 886 cases, 339 are classed as early neural and 261 as early lepromatous. Treatment with sulphetrone has not been without incident and the Medical Superintendent, Ngomahuru, reports that in the 250 cases under treatment 44 had initial severe reactions accompanied by a severe anaemia. Dosage was reduced or suspended temporarily and the anaemia treated. Two patients are reported to have died during the period of reaction.

At the other leper settlement at Mtemwa treatment with sulphetrone could not be introduced extensively because of shortage of supplies of the drug. Ten lepromatous patients were treated with sulphetrone with good results which were much appreciated by the patients. At Mtemwa there are 200 lepromatous cases to be treated. The water supply of this institution continues to give rise to anxiety, especially as the patients continue to increase in number, largely by voluntary requests for admission.

There has been an increasing tendency for Africans from neighbouring territories to enter the Colony ostensibly to seek work, but in whom leprosy is found soon after entry. It would appear that some have deliberately come seeking treatment, especially since the news of the advent of sulphetrone. A census of the new cases in males admitted to Ngomahuru in 1949 shows that in a total of 133, 44 were indigenous, 21 from Northern Rhodesia, 26 from Nyasaland, 39 from Portuguese East Africa and three from other territories.

(8) *Trypanosomiasis.*

Only three African cases and deaths were reported during the year. Two of the cases were undoubtedly infected outside the Colony, but the third was infected in the Zambesi Valley north-west of Miami. One case first infected in 1946 and treated, then relapsed in 1948 and again in 1949, and died while receiving treatment after the second relapse in 1949. It has not been possible to conduct a survey of the tsetse fly belts where human cases of the disease have occurred in recent years, nor as yet to arrange for a co-operative survey of the whole locality, with our northern neighbours. There have been no reports of abnormal mortality or morbidity from the people living in the infected tsetse fly belts and it is therefore unlikely that any considerable focus of the disease exists. A member of the Department attended the meeting in London in February of the International Committee for Research into Tsetse Fly and Trypanosomiasis. Discussion of the problem of the "healthy carrier" cases of the disease commonly encountered in Southern Rhodesia was initiated.

Chapter III.—CURATIVE SERVICES.

(1) *European Hospitals.*

A 12-bedded cottage hospital, including two beds for maternity cases, was opened at Chipinga on 7th April, 1949, providing for this area of European settlement previously 120 miles away from the nearest hospital at Umtali. Plans are now well advanced for the establishment of similar facilities at Filabusi.

Certain measurements of hospital usage and pressure on accommodation in Government General Hospitals are as follows:—

	1949	1944	1940
General Hospital admissions	15,537	12,740	9,632
Admission rate per 1,000	134	154	156
Average days in hospital each case	10.2	12.0	11.9
Average number of patients per hospital bed	23.7	20.0	20.1

The pressure on accommodation has been steadily increasing since the war and the building programme which can be undertaken offers little hope of materially easing the position. The situation has been met in two ways, firstly by an increase in the number of beds over the ideal number for which the hospital was designed. This is often possible by the use of verandahs, but as an almost permanent addition to the bed strength means that the sanitary accommodation, staff quarters, kitchen facilities are also overtaxed. The second device is to reduce the stay of patients in hospital wherever possible and this has resulted in a one-sixth reduction in the average stay. The total beds in Government hospitals for European patients is now 656. In 1939 the number was 478. Taking into consideration the increase in population, hospital accommodation in 1949 on 1940 standards should be 902 beds. There is therefore a deficit of nearly 250 beds. In practice, the position is a little better than these figures suggest because in seven of the hospitals by rearrangement and use of any verandah space available 40 extra beds have been made available.

The position in maternity homes is even more critical and at several times during 1949 the Lady Chancellor Home at Salisbury was at the end of its resources. The following figures will demonstrate the maternity home position:—

	1949	1948	1947	1946	1945
Percentage of births taking place in maternity homes	91.9	88.7	88.8	88.7	86.2
Total No. of maternity beds	125	123	133	118	127
Average No. of confinements per bed	23.6	20.7	17.9	16.3	13.8

It is a great tribute to the staffs of the maternity homes that a great press of mothers was dealt with without a single maternal death resulting.

The statistical tables concerning European General Hospitals will be found in Tables D to F and the maternity home figures in Table H of the Appendix.

(2) *District Nursing Service.*

Twelve district nurses are now employed of which eight are on the temporary staff. Three new stations have been opened during the year—Plumtree, Headlands and Karoi—and one station abolished on the opening of a cottage hospital, namely Chipinga.

The work done by the staff during 1949 was as follows :—

Number of homes visited	787
Number of home visits paid	5,458
Visits of patients to nurse	1,670
Midwifery cases	30
Vaccinations	171
Other duties	2,529

The development of this service has been rather disappointing. It was thought that the rural communities would welcome having a trained nurse in their midst able to deal with many of the minor problems which face women in rural homes, especially in regard to their children and their ailments. Rural communities are very active in trying to secure the appointment of a district nurse to their area, but once the nurse is installed the community takes little advantage of her services. Despite further increase in staff and stations the volume of work has diminished and in certain centres it is very doubtful whether the continued maintenance of a district nurse and her transport can be justified. Considering the pressure that exists on the maternity homes of the Colony little effort has been made to use the midwife or maternity nurse service which could be given to multiparae in their own homes. In the past four years only 1.3 per cent. of all European births were conducted by the district nurses. In 1949 the proportion is even lower.

(3) *Mental Disease.*

The number of patients dealt with in the Colony's only mental institution, Ingutsheni Hospital at Bulawayo, continues to increase. There were 1,045 patients on the register at the end of the year, an increase of 146 over 1948. During the year 535 patients were admitted, 198 discharged and 93 died. It is interesting to note the preponderance of African males in the admissions.

At the end of 1949 the population comprised 106 European males and 109 females and 632 African males and only 198 females. Voluntary patients admitted numbered 35, 25 European and 10 African. Thirty-two of the voluntary patients admitted were also discharged during the year. Further steps towards the rebuilding of Ingutsheni were taken during the year, but with the increase of work it has been difficult to adhere to plan. The third male ward put into service late in 1948 is full because of the high admission rate of this category. The new native female ward has now been completed and the better housing conditions have resulted in this group, being less agitated and quieter than formerly. The kitchen and laundry block is also complete and should be in operation soon. Occupational therapy has been carried on on an increased scale in the male ward blocks and equipment for use in hospitals and clinics has been made. The African patients are usefully employed in the farm and gardens run in conjunction with the hospital, and milk, butter and vegetables produced. Normally these farming operations result in a fair profit, but in 1949, because of the drought, all crops and stock suffered, and instead of a profit in the region of £1,000 it amounted to £104 only. The general health of the patients has been good, and physical ailments and injuries have been few. The main treatment employed is electric convulsant therapy which is showing good results. Due to the inability of institutions in the Union of South Africa to accept more mental defectives from this Colony, an influx of these cases has been experienced. The need for separate accommodation for these unfortunates will soon be a pressing matter.

(4) *Native Hospitals.*

The position in respect of these institutions steadily deteriorates and the building programme, while promising eventual relief, has not improved the immediate situation. The new native maternity hospitals of 80 beds each which it was hoped would be in operation during 1949 are still not quite ready for opening. There have been many delays, particularly in the delivery of heavy equipment. Repairs to the fabric of some of the older institutions is becoming a formidable item and many of these out-dated institutions prove expensive to operate because of their cramped and over-crowded accommodation.

The following figures will give some measure of the overcrowding which exists :—

	1949	1944	1940
No. of beds for which hospitals were designed	1,460	1,062	822
Patients admitted	54,336	26,123	22,964
Average stay of patients in days	13.2	15	17
Daily average in-patient population	1,973	1,085	869

It should be appreciated that in this year native hospital figures do not list separately venereal disease patients from others and that the average stay in hospital has been further reduced from 13.4 to 13.2 days despite the addition of venereal disease patients whose courses of treatment require long stays in hospital. In 1944 the apparent overcrowding in native hospitals was of the order of 102 per cent., in 1948 is was 127, and in 1949 it had risen to 135 per cent. The point has now been reached when no amount of ingenuity and skill displayed by hospital staffs in the rearrangement of beds and in the early discharge of patients will be able to compete with the flood of patients demanding admission to these institutions. It is a great tribute to the fortitude and pertinacy of the African in his desire for European medicine that he accepts the conditions with very little complaint. The detailed statistics relating to native hospitals appear in Tables D to F of the Appendix.

(5) *Native Clinics.*

The following figures give some idea how the work done in these institutions has increased during the past ten years :—

	1949	1944	1940
Number of clinics	82	66	51
Inpatients treated	107,486	64,192	28,762
Outpatients treated	315,164	181,165	57,890

Only three new clinics were opened for service during 1949. This does not represent the sum total of extension of this most useful service to the Africans. A number of clinics are due to be opened early in 1950 and much work has been done at other established clinics to effect improvements in staff accommodation and sanitary facilities. In Table B of the Appendix the details of the work done at each clinic is given. This year the clinics are not listed alphabetically, but instead grouped under the station of the Government Medical Officer who serves them. Demands for new clinics are continually being received and provisional sites have been selected for a number which will occupy the present clinic construction facilities for some years to come. It was hoped to have extended the air service to clinics in order to reduce the hours of travelling time spent by medical officers visiting the more distant clinics of their districts. At present only one clinic, at Gokwe, is visited monthly by air. One of the difficulties experienced is that good landing strip sites are not easy to find near clinic sites where easy access for stores and a plentiful water supply are primary considerations. Another aspect is that medical officers rarely visit clinics solely for the purpose of attending patients therein, but carry out a variety of other duties and visits *en route*.

(6) *Orthopaedic Centre.*

This service has proved to be a most useful addition to the specialist services offered by the Department and already it has been necessary to recruit a second technician. Periodic visits are paid to other centres in the Colony where patients requiring to be seen are collected. During the year 505 *new* patients have been entered on the books, and when it is realised that each patient represents several visits and refittings and adjustments, the additional work is very considerable. Artificial limbs are not made locally and it is hoped to use the new Vokes-Ernst light metal limb in the future. The following list of appliances made will give some idea of the scope of the work undertaken : 39 spinal supports, 58 calipers, 225 shoe supports, 26 leg irons, 48 belts and corsets and a variety of other splints and supports. A total of 713 appliances were supplied and fitted.

(7) *Missions.*

The improved scale of financial aid to the missions is now beginning to have its effect, and more and more mission stations are taking steps to improve the accommodation they provide for patients and to attract the services of trained nursing staff and doctors.

Forty-five missions are now undertaking medical work which entitles them to claim Government financial grants. Resident doctors totalling in number thirteen are stationed at eleven mission hospitals. Of these, nine are registered to full practice and four are doctors holding foreign degrees which are not registrable in the Colony but who are permitted by the Medical Council to practice their profession at the mission, or in emergency outside the mission, provided they do not levy fees directly on patients.

A summary of the medical work done by missions is as follows:—

	1949	1944	1940
No of aided medical missions	45	29	34
Total admissions	32,924	18,842	20,072
Outpatients treated	236,022	97,218	72,679

Fuller details of the work done by missions in 1949 appear in Table G of the Appendix. It will be noted that the form of this table has been changed so that the medical missions are grouped under the various religious bodies responsible for their operation.

(8) *Native Labour on Mines.*

Very little improvement in the general sanitation, housing and water supplies has been possible, and it has been very difficult to justify legal pressure because of the undoubted shortage of materials. It is, however, noteworthy that some larger new mines now in production have contrived to arrange excellent accommodation for their African labour force from the outset. The plea of material shortages is however no justification for the insanitary state to which some mining compounds are allowed to sink.

Food rationing of mine labour has been a great difficulty and meat has been in even shorter supply and protein and fat substitutes such as groundnuts are virtually unobtainable. Increased production of foodstuffs is urgently necessary if only to permit the proper feeding of the existing labour force, and this should be accounted for before consideration is given to encouraging even further mining and industrial expansion.

The following statistical details on sickness and mortality on mines relates to the year ending 30th November, 1949:—

(i) *Comparative Statement of African Mortality on Mines,* 1945-49.

	Twelve Months Ended November				
	1945	1946	1947	1948	1949 (a)
Average of number employed at end of month	71,829	70,819	69,953	64,124	58,857
Diseases:					
Number of Deaths	564	525	497	436	432
Death rate per mille	7·85	7·41	7·10	6·80	7·34
Accidents:					
Number of Deaths	77	78	78	80	77
Death rate per mille	1·07	1·10	1·12	1·25	1·31
All Causes:					
Number of Deaths	641	603	575	516	509
Death rate per mille	8·92	8·51	8·22	8·05	8·65

(ii) *Rates of Deaths from Disease.*

Death Rate per 1,000 Employed	Twelve Months ended November				
	1945	1946	1947	1948	1949 (a)
Pneumonia	2·20	1·81	1·84	1·22	1·36
All other Diseases	5·65	5·60	5·26	5·58	5·98
All Diseases	7·85	7·41	7·10	6·80	7·34

(III) *African Sickness, Deaths and Death Rates.*

Disease	Twelve Months ended November, 1949 (a)		
	Number of Cases	Number of Deaths	Death Rate per Mille Employed per Annum
Malaria	4,480	21	0·36
Scurvy	42	—	—
Venereal Disease	2,454	27	0·46
Pneumonia	1,015	80	1·36
Phthisis	79	62	1·05
Other Diseases of Chest	1,076	19	0·32
Dysentery or Diarrhoea	1,867	13	0·22
Other Intestinal Diseases	658	43	0·73
Heart	51	45	0·76
Debility	294	12	0·20
Influenza	3,501	7	0·12
Other Diseases	2,163	103	1·75
Minor Ailments	18,531	—	—
TOTAL DISEASES	36,211	432	7·34
Accidents and Injuries:			
Major	505	77	1·31
Minor	14,048	—	—
TOTAL ALL CASES	50,764	509	8·65

(a) Subject to adjustment on receipt of returns still outstanding.

(9) *Mining and Industrial Medical Services.*

The larger mines have developed for themselves efficient medical services and facilities. These were at first required of them by legislation, but the more enlightened have found by experience that a well-run medical service on the mine itself is of great value in securing a healthy and contented labouring population and in speeding the rehabilitation of workers after sickness and injury. Apart from mining itself a number of large industrial concerns are finding it worth their while to develop medical services and hospital facilities. Most mine medical officers have a right to private practice, so it is difficult to decide how much of their services are devoted to mines. The following list gives an indication of the scope of these services and shows those who have medical officers living on the mine or plant or who have medical officers who devote considerable time to their mining or industrial practice :—

Place	No. of Medical Officers	Mines and Industries Served
Antelope	1	Antelope (gold)
Banket	1	Umvukwes (chrome)
Eiffel Flats	1	Cam and Motor (gold)
Filabusi	1	Fred (gold)
Gwelo	1	Bata (leather)
Mashaba	1	Gath's (asbestos)
Motapa	1	Motapa (gold)
Nyamandhlovu	1	Gwaai (timber)
Penhalonga	1	Rezende (gold)
Que Que	2	Globe and Phoenix (gold) Gaika (gold) Connemara (gold)
	1	Riscom (steel)
Selukwe	2	Wanderer (gold) Selukwe Group (chrome)
Shabani	4	Shabanie (asbestos)
Wankie	2	Wankie (coal)

In addition to these, a number of medical officers are employed on a part-time basis by smaller mines throughout the country and by secondary industries now being established in and around the larger centres. The following summary prepared from reports provided by some mining and industrial medical officers shows the volume of work undertaken by this ever-more important branch of the medical services of the Colony:—

	1	2	3	4	5	6	7
Number of Europeans Employed	182	302	65	320	112	44	10
Number of Africans Employed	5,793	5,285	1,615	1,500	1,058	745	344
Beds for Europeans	20	20	—	—	—	—	—
Beds for Africans	114	350	85	34	69	—	(a)
European Admissions (including dependants and others).	255	364	—	(a)	—	—	—
African admissions (including dependants and others)	2,405	4,305	1,799	799	962	149(b)	402
European out-patient attendances	(a)	3,086	653	(a)	(a)	(a)	(a)
African out-patient attendances	14,000	10,144	57	8,558	3,103	475	1,058
Occupational Accidents (Workmen's compensation Cases)	1,814	999	(a)	5,026	342	155	(a)
European Employed Hospital rate per cent ..	33·0	84·8	38·5	(a)	(a)	(a)	(a)
African Employed Hospital rate per cent ..	36·3	58·8	76·6	53·3	69·2	63·2	116·9

1. Wankie Colliery.
2. Shabanie Asbestos Mines.
3. Gath's Asbestos Mines, Mashaba.
4. Riscom Steel Works, Que Que.
5. Globe and Phoenix Gold Mine, Que Que.
6. Connemara Gold Mine, Que Que.
7. Gaika Gold Mine, Que Que.

(a) No figures given.
(b) Admitted for treatment elsewhere.

It is interesting to note the low incidence of occupational accidents at the Shabanie Mine where training of recruits is undertaken seriously. A very high accident rate will be noted at the Steelworks, where the work means the acquisition of new skills by Africans.

(10) *Native Medical Services Generally.*

In 1949, for the first time since the present system of Government clinics began to operate, a number of clinics have shown a drop in the number of patients treated. In many instances this has been balanced by a big rise in the number of outpatients. This is undoubtedly influenced by therapeutic advances now coming into more general use which allow treatment to be given to ambulant patients in a matter of a few days which previously required bed treatment over weeks or even months. Particularly is this so in the venereal diseases. Africans even in the more remote and primitive areas now accept medical advice and treatment unhesitatingly and trust their children in the hands of the native nursing orderly. The maternity services are very popular even for normal confinements. It is a great revolution in African conservatism and tradition when a husband will agree to his wife being confined at a clinic instead of at home with the traditional maternal assistance. At all the clinics there are now stationed female nursing orderlies who, of course, undertake the maternity practice. At other clinics, however, some of the man-midwives enjoy great local esteem in this connection and are preferred to the females.

A number of medical officers in their reports have suggested that the African would appreciate the clinic services much better if they were asked to make a direct payment, however small it might be, for the services rendered. The difficulty of arranging for the accounting of the monies received is, however, insuperable.

In the following table are given details of the inpatient treatment given in various types of Government and other State assisted institutions for the African:—

	1949	1944	1940
Native Hospitals	52,665	26,123	19,840
.D. Sections of Native Hospitals	included above	4,101	3,489
Mental Hospital	824	639	476
Leprosy Hospitals	314	241	203
Government Native Clinics	107,486	64,192	28,762
Medical Missions	32,924	18,842	20,679
Local Authority Hospitals	8,580	(a)	(a)
TOTAL	202,793	114,138	73,449
Admission rate per 1,000 of the African population	106·8	73·3	53·7

(a) Figures not available.

The 1949 admission rate per 1,000 shows a ten per cent. increase over the 1948 figure.

(11) *Extracts from District Reports.*

Much useful observation and suggestions are contained in the reports submitted by Government Medical Officers. Short extracts taken from a number of these reports will help to illustrate the variety of work these medical officers accomplish.

G.M.O., Antelope, remarks on the high proportion of congenital syphilis seen in his patients. He estimates that four in every ten children at his clinics show signs of this condition. He draws attention to the need of close questioning as to the treatment received by the parents. He has noted instances where husband and wife are said to have received treatment, but not the wife who gave birth to the child.

G.M.O., Chipinga, draws attention to the conservative attitude of the European population of his district to modern medicine. Turpentine and linseed oil are panaceas for most ills and claims are made of wonderful cures affected by "witch doctors" and by the use of the bark of certain trees. Investigation of these cases is not profitable. He recounts the case of a hunter who attempted to shoot a buffalo with a bow and arrow. As a result of his foolhardiness, three ribs were broken and the lower left lung lacerated. After being carried for some distance he was operated on at the clinic and a primitive lobectomy performed. He made an uneventful recovery. Stationed near his clinic at Nyanyadzi are two Health Demonstrators and credit is given to them for the increased attendances of patients seeking treatment in the early stages of their illness. As they move around the villages doing their preventive health work, they use their opportunities of persuading the ailing and sick to seek treatment.

G.M.O., Gatooma, remarks on the apparent increase in hookworm infections encountered. He thinks hookworm and bilharzia explain a number of cases with diverse symptoms. He has noted a number of cases of gross haemothorax. All these cases had hookworm eggs in the faeces and suggest that hookworm may be the causal agent. The native hospital at Gatooma is one of the most overcrowded and congested. The admissions have increased 25 per cent. over 1948.

G.M.O., Gwanda.—The medical officer has attempted to make a *post-mortem* examination of all Africans dying at this hospital. In 26 examinations 10 were found to have silicosis as a cause or associated cause of death.

G.M.O., Filabusi, suggests that supplies of oxygen and masks should be available at all larger mines and would undoubtedly save many lives. The clinic serves a large mining district and accident surgery forms an important part of the medical officer's duties. A total of 341 operations were performed, including 30 obstetric emergencies, 16 laparotomies, 15 orthopaedic, 9 amputations and 8 thoracic cases.

G.M.O., Inyati, observes the frequency of myositic abscess in his area. The condition is very debilitating and the patient has to remain under treatment for long periods. This is one of the few districts where Africans do not go to the clinic for their confinements. A number of deaths of mothers

and infants could probably have been prevented if the facilities at the clinic had been made use of earlier. This district has two outlying clinics in well-populated areas and the medical officer draws attention to the prime necessity of reliable road communications if medical supervision is to be adequate. He reports that experience with groguanil as a prophylactic is satisfactory.

G.M.O., Karoi.—The medical officer has as yet only outpatient facilities at his headquarters and has perforce had to undertake the treatment of cases which would certainly have been admitted had inpatient accommodation been available. He has successfully treated as outpatients open Potts' fractures, forceps deliveries and even a strangulated inguinal hernia by operation and then sent home on a lorry complete with intravenous saline drip. He has also attempted the outpatient treatment of pneumonia with penicillin to be followed by a course of sulphonamide at home. He realises that the issue of such drugs to outpatients is open to abuse, but the system is worth trying if the patient has a reliable employer. He has been told that the local barter price of a sulphonamide tablet is now equivalent to one shilling.

G.M.O., Melsetter.—The provision of a cottage hospital and properly constructed native clinic must await the redistribution and planning of this increasingly popular holiday resort. The District Nurse in an emergency has taken cases into her own home.

G.M.O., Ndanga.—This medical officer deals with almost an entirely native area and will be seen in Table B of the Appendix to contribute substantially to the total of clinical work accomplished. One medical officer through a group of ten clinics serves an area of 7,500 square miles with a population not far short of 120,000. He points out that the work of a medical officer in such an area includes that of a transport officer, builder, grocer and mechanic, and that these duties have to be done at visits to each clinic as the need or emergency arises. Maternity practice is now looming large in this group of clinics and includes visits by orderlies to women in difficult labour who are being confined at home. He pays tribute to the staff, and enthusiasm of his African staff in dealing with these cases in particular.

G.M.O., Nyamandhlovu.—This station and its outlying clinics serves the area between Bulawayo and Wankie. Scurvy occurring at the end of the dry season is always a problem, and especially so after a drought year. Rations of vegetables and fruit are hard to obtain in this area and it is surprising how little attempt is made to grow vegetables and fruit in places where water is available. The clinics in this area were originally built as temporary structures and now that they have proved their worth and the suitability of their location, steps are to be taken to replace them with permanent clinics on the modern design.

G.M.O., Que Que, notes that despite the dry season experienced, the incidence of malaria has been heavy and the number of cases of cerebral malaria in African children has been much higher than usual.

A helminthic survey of all African patients admitted to this hospital has been continued during 1949. All inpatients have urine and stool specimens examined. In 2,000 cases, 716 (36 per cent.) had a helminthic infection. There were 185 hookworm infections, 350 urinary and 17 intestinal bilharzial infections, of whom a number had double infections. There seems to be no doubt that these infections must play an important part in increasing the severity of intercurrent illness and reduce the general capacity to perform manual work.

S.G.M.O., Salisbury, notes a big increase in the number of cases of tick typhus which at certain seasons becomes one of the more common diseases in the medical wards. Aureomycin has been used in some cases with dramatic success and chloromycetin has also been employed with good results.

S.G.M.O., Umtali, draws attention to the steady deterioration in the maintenance of the fabric of the clinics in his area. With a steady increased call on these institutions it is most important that the fabric be maintained in good order if reasonable conditions for nursing and maintenance of patients is to be continued. Much has been done to improve the general standard of housing at Penhalonga, but it was necessary to have recourse to law to achieve the improvement.

G.M.O., Umvukwes.—This station was created in 1949 and has taken over two native clinics previously supervised from Concession. He notes that in this prosperous district where many Africans are employed at high wages on tobacco farms the services at the clinic are at times treated lightly or even refused. Many of these labourers prefer to go further afield and pay for treatment usually by injection.

He feels that if all patients seeking treatment at a clinic had to pay a nominal sum the service given would be better appreciated.

He notes a high incidence in furunculosis and gastro-enteritis in the area which is attributed to the number of young assistants, often bachelors employed on tobacco estates who are content to consume a badly balanced and ill-cooked diet.

A.G.M.O., Wankie, reports a number of cases clinically diagnosed as cerebro-spinal meningitis in whose spinal fluid although pus cells were found no organisms were seen. He also notes an increased prevalence of scurvy. Hookworm constitutes a major problem in this area and is an intercurrent condition in many of the fatal cases.

Chapter IV.—PREVENTIVE HEALTH SERVICES.

(1) *Laboratories.*

The reports of the laboratories are reproduced in Appendices L, M, N and O. The numbers of investigations carried out at routine laboratories are as follows:—

	1949	1944	1940
Public Health Laboratory, Salisbury	94,978	77,881	46,354
Hospital Laboratory, Umtali	14,864	—	—
Public Health Laboratory, Bulawayo	78,722	42,184	12,380
Hospital Laboratory, Gwelo	14,909	—	—
Government Analyst's Laboratory	3,101	1,927	1,497
Total	206,574	121,992	60,231

The demand for laboratory services is now very heavy indeed. Trained native microscopists at clinics and hospitals have done much to ease the load of the simpler examinations, blood films, urine and stool examinations now being examined by these specially trained staff at the place where the patient is being attended instead of being dispatched into the central laboratories. This has, however, been more than compensated by the demands for other laboratory procedures often of an elaborate and time consuming nature. The volume of work done in some departments of the laboratories is hard to defend. For example, 22,711 blood counts, one per five of the European population, were done in 1949. In many of these cases the need for a full blood count seems hard to justify when an indication of the degree and type of anaemia is all that is wanted.

Local training of medical laboratory technicians at Salisbury and Bulawayo is now in full operation. Regulations published in Government Notice No. 753 of 1949 empower the Medical Council to open a register and control the local training of such technicians.

(2) *Schools' Medical Service.*

A summary of the findings at routine schools medical inspections of European, Coloured and Asiatic and African children is given in Tables I, J and K of the Appendix.

There are 116 European schools, which includes 80 Government schools with an enrolment of 16,855, and a total enrolment of 20,693. There are 11 private schools, the remainder being Government aided and farm aided schools. Coloured and Asiatic schools number 16 with an enrolment of 2,698, and African schools 10 with an enrolment of 4,427. In addition to the African schools conducted by the Government there are 2,087 Government aided African schools with an enrolment of 207,492, the vast majority of these being conducted by missionary bodies under the inspection and supervision of the Department of Native Education. None of this latter group

have regular school medical inspections. It was not possible to visit and examine children at all these schools nor was it possible to inspect children at all the schools scheduled, but a large proportion were attended to. The staff of four medical officers in 1949 visited all but 13 of the European schools scheduled, all Coloured and Asiatic schools and three of the African schools. The following is a summary of the findings in 1949 compared with earlier years:—

	1949	1944	1940
European children examined	11,751	6,562	3,275
Coloured and Asiatic children examined	2,172	1,228	461
African children examined	1,285	—	—
Unsatisfactory nutrition—			
European children	11.4%	9.0%	11.6%
Coloured and Asiatic children	28.9%	15.4%	24.9%
African children	22.9%	—	—
European entrants found to be unvaccinated	137	242	380
Coloured and Asiatic entrants found to be unvaccinated	37	24	77

Children examined includes re-examinations and special examinations. In 1949 there were 812 cases recorded in the register of mentally defective children, that is they have an intelligence quotient of 80 or less. Mental testing of 321 children was carried out, all on cases referred to the medical officers by the schools. Routine mental testing of Standard IV children will be undertaken in the future. The school nurses at Salisbury and Bulawayo have done useful work, including 723 home visits, 567 follow-up visits and 4,940 head and body inspections.

(3) *Government Dental Service.*

During the year one of the dental surgeons resigned and in view of the new salary scale set for the post there has been much difficulty in attracting applicants. The State Lottery Trustees have provided funds for the purchase of a mobile dental trailer. With its aid dental work, especially treatment, will be more comfortably and expeditiously undertaken, especially at rural schools. With the increased demands for classrooms it is becoming very difficult at many schools to provide dental surgeons with reasonable working conditions.

(a) *Schools.*

	Mashonaland and Manicaland	Midlands	Matabeleland
Children examined	10,443	3,102	6,656
Children treated	1,218	542	399
Fillings—			
Temporary teeth	395	584	179
Permanent teeth	1,468	720	110
Extractions—			
Temporary teeth	1,227	432	455
Permanent teeth	204	81	28
Other operations	15	—	17
Scalings	21	3	7

(b) *Uniformed Services.*

	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Extractions	111	75	17	4	—	—	113	—	—
Fillings	296	227	3	29	2	—	105	10	15
Dentures supplied	36	19	6	2	—	—	16	1	—
Dentures repaired	31	11	3	—	—	—	11	—	2
Other operations	151	169	3	7	—	—	45	3	—

(1) B.S.A. Police. (2) Permanent Staff Corps. (3) Prison Services.

(c) *Indigent Europeans and Africans.*

	Mashonaland and Manicaland	Midlands	Matabeleland
Extractions	2,463	24	2,645
Fillings	104	—	130
Dentures supplied	66	2	25
Dentures repaired	28	—	12
Other operations	213	—	30

The increase in the work of the Dental Service is well illustrated by comparing the work done with the figures for 1944 and 1940:—

	1949	1944	1940
Schools Service—			
Children examined	20,201	10,675	8,984
Children treated	2,159	1,453	1,158
Extractions	2,427	1,926	1,601
Fillings	3,456	1,572	1,265
Other operations	63	14	11
Others—			
Extractions	5,452	3,507	3,130
Fillings	921	278	102
New dentures	173	112	98
Dentures repaired	98	48	13
Other operations	621	541	97
Dental Surgeons	5	3	3

(4) *Health of the B.S.A. Police.*

Despite the continued and rapid increase of the Force the sickness reported is satisfactory.

At the end of 1949 the Force numbered 774 European and 1,819 African members.

In the following table light duty is counted for record purposes as half a day lost:—

	Europeans	Africans
Number sick	795	1,627
Days lost	7,649	12,221
Average days lost per case	9.6	7.5
Cases of venereal disease	—	39
Discharged medically unfit	9	5
Deaths	1	3

(5) *Military Medical Services.*

Since the end of the war and the demobilisation of the citizen forces to their peace-time level there has been a great increase in the size of the Permanent Staff Corps which includes the S.R. Women's Military and Air Service. Their medical care and hospital needs are supplied by the Health Department. A total of 352 P.S.C. cases reported sick of whom all but 102 were for minor illness. The S.R.W.M. and A.S. recorded 89 cases, of whom 44 were of minor illness. It is interesting to note that the P.S.C. had 73 cases reporting sick on account of injury.

The Cadet Camp was held at Ikwani, near Sinoia, in August, and despite the dusty nature of the site the health of the Cadets was good. Only 42 cases needed to be admitted to hospital and 205 were treated as outpatients. The medical officer at the camp was one of the Schools Medical Officers and his status has now been regularised by the granting of a commission.

At the same camp site the Territorial Force assembled in September, and this was followed by a mobile exercise across country to the firing ranges at Inkomo. Despite the dusty conditions at the camp and the intensely hot weather at the time and the relatively untrained state of the troops as far as hygiene was concerned, the amount of illness was not great. Admissions to hospital were 56 and 125 were treated as outpatients. Great credit for this is due to the exertions of the medical officers who included R.A.M.C. officers from East Africa Command and to the Hygiene Officer, a member of the staff of this Department. All recruits for military training were examined by the Battalion Medical Officers and by many Government Medical Officers throughout the Colony.

Proposals for the formation of a Medical Corps have not yet proceeded beyond the stage of discussions. No very elaborate medical organisation whose staff may be removed for operations outside Southern Rhodesia can be afforded without seriously prejudicing the civilian medical requirements of the Colony. It seems expedient to establish a sound, well-trained framework of organisation and staff on which can be built the medical requirements of a military force, rapidly, as the need arises.

(6) *Central Government Health Services.*

No staff increases during 1949 were possible and the development of further regions for public health work has unfortunately had to be postponed. There has been great difficulty in recruiting doubly certificated health inspectors, and it is feared that it may be necessary to recruit inspectors holding the Sanitary Inspector's Certificate only in order to maintain a service. The areas over which a health inspector has to operate are generally far too large, and one health inspector district may be contiguous with six medical officer districts. Much time and money is spent therefore on travelling and in view of petrol and transport restrictions work has been confined except for epidemic disease emergencies to the more populous areas. Despite this policy, the volume of work which had to be done has risen and 194,476 miles were covered on official duties, an increase of 46,807 miles over 1948. Many scattered outbreaks of infectious disease, especially smallpox, occupied a great deal of the attention of the inspectors. The inspections and reports of the inspectors have greatly assisted the general level of accommodation and maintenance of licensed premises and the improvements affected over the past five years are most noticeable. Improvements in the housing of hotel native staff is now the most serious outstanding matter still requiring attention.

Work on new public health regulations has been proceeding slowly and steadily and testing of the value of the Public Health Act as a legal measure of health enforcement in a number of fields has shown it to be a much more inept weapon that was ever realised. There is a distinct danger that without an increase in staff the flood of new legislation placed on the inspectors of this Department—duties in connection with certificates and reports on trading concerns, factories, mines, etc., may prejudice their important health and environmental sanitation advisory services to the general public.

All health officers have drawn attention to the steady deterioration in African housing conditions, particularly in the unorganised areas around the larger towns. The larger municipalities have a huge task in the housing and rehousing of the Africans employed in their areas and it will be many years before the building programme catches up with the urgent needs.

The Native Health Demonstrators have now been working in their areas for two years and have established themselves as valuable aids in the general health improvement in the African communities in the Reserves. The more primitive communities are beginning to realise the advantages of wholesome water supplies, a clean environment, a house relatively free of insect pests, clean meat and food, and generally a movement in the direction of healthy living is under way. There are still many matters which require attention, especially in the field of African nutrition, particularly in children when newly weaned from their mothers. A start has also been made with elementary health education in the African schools because there is no doubt that the best hope of steady progress is in the education of the rising generation.

The following is a summary of the work done by Government Health Inspectors in 1949:—

	1949	1944	1940
Vaccinations	602,237	358,579	203,958
Diphtheria prophylaxis	1,531	8,812	—
Inspection of licensed hotels	211	—	—
Routine inspection of premises	10,805	6,938	—
Other duties	1,850	3,412	—
Prosecutions instituted	34	2	—
Number of inspectors	16	9	1

In 1940 the only health inspector was fully engaged in smallpox vaccination.

(7) *Local Government Health Services.*

By the end of 1949 all the municipalities had engaged for their service at least one fully qualified health inspector which can be claimed to be the minimum health staff of an autonomous health authority. Town Management Boards, of which there are now 17, are also local health authorities for the administration of the Public Health Act, but so far only one Board, Fort Victoria, is employing a health inspector. All Town Management Boards

rely on the local Government Medical Officer for advice, as the M.O.H. and Government Health Inspectors advise and report to the Boards except of course in the case of Fort Victoria.

The experience over the years confirms the opinion that responsibilities for the administration of health legislation should only be devolved to authorities financially able and willing to engage at least the minimum health staff, one fully qualified health inspector. The health staff position of local authorities has greatly improved since 1947 when the last statement was published.

Municipality	Medical Officers	Health Inspectors	Health Visitors
Salisbury	3	8	4
Bulawayo	2	9	3
Gatooma (a)	—	1	—
Gwelo (a)	—	2	—
Que Que (a)	—	1	—
Umtali (a)	—	2	—

(a) Part-time medical officer of health only.

The following précis gives an indication of the scope of the work carried out by the municipal health authorities in 1949 :—

	Salisbury	Bulawayo
Estimated European population	22,000	20,500
Estimated Coloured and Asiatic population	1,870	2,050
Estimated African population	59,358	55,000
Admissions: European I.D. Hospital	154	173
Admissions: Native I.D. Hospital	3,690	652
Admissions: Native V.D. Hospital	2,330	1,908
Attendances: Native V.D. Clinics	25,870	71,154
New cases of syphilis in Africans	1,145	2,216
New cases of gonorrhoea in Africans	1,620	3,174
Medical examinations of Africans in employment	129,443	30,944
Laboratory investigations	(a)	10,774
Cases seen at ante-natal clinics (all races)	4,840	3,700
Infant and child welfare clinic attendances (all races)	24,259	13,327
Diphtheria immunisation	525	501
Vaccination	7,582	46,506
Visits paid by health visitors	12,880	5,537
Inspections by health inspectors	33,748	21,360

(a) Figures not available.

Figures are not available as to the work done by the Umtali and Gwelo Municipalities, both of whom undertake certain institutional duties in relation to infectious and venereal disease. The corresponding services at Que Que and Gatooma are still in an embryo stage and cannot be developed properly until stable appointments of health inspectors are made.

(8) *Nutrition Services.*

The Nutrition Council met only once during 1949. Until technical staff can be engaged there is very little material progress that can be achieved. Three nutrition pamphlets have been prepared and issued by the Nutrition Council and the Department, namely—

No. 9—"Foods and Facts," which deals in a topical and simple manner with the correct feeding of children on European dietaries.

No. 11—"Meals Make Money" discusses the feeding of African labourers and is aimed at the education of all employers of labour.

No. 12—"The Wise and the Foolish Brothers" deals in the form of a simple narrative with the value of proper feeding. This is designed for use by African teachers and demonstrators.

During the year it was decided to alter the conditions under which free supplementary meals are supplied to malnourished children as a charge against the Votes of this Department.

Previously a specified number of children at some European schools and all children at a few European schools and at all Coloured and Asiatic schools received free supplementary mid-morning meals consisting of one-third of a pint of milk, bread and butter or a bun and butter. The ration allows of the issue of cheese, but this produce is in such short supply that it is virtually a dead letter. The free rations issued, on examination, were found to bear little relation to the number of malnourished children. It has now been decided to make free supplementary nutrition available free at all schools to those children who at school medical inspections are found to be malnourished. It is felt that this is a more equitable way than before. Free milk is also made available to malnourished African children at Government schools in the larger centres, and certain of the municipalities provide milk at subsidised price to expectant mothers and infants. Little improvement can be expected in the general level of nutrition, especially of the Africans, until such times as agricultural planning makes easily available for all, enough foods to allow the giving and obtaining of a balanced diet. Ration scales especially when set down by law are a hollow mockery when even with all the will and the money the foods are just not available. During 1949 the pressing need has been for proteins and fats and meat; groundnuts, beans, fruit and fresh vegetables have been in short supply or even for short periods unobtainable in some areas at any price.

(9) *Aviation Health.*

Three sanitary aerodromes are maintained in the Colony conforming to the requirements of the International Sanitary Convention for Aerial Navigation. These are the airports of Belvedere at Salisbury, Kumalo at Bulawayo and the water aerodrome at the Victoria Falls.

Difficulties have arisen through air travellers from Britain undertaking the journey to Southern Africa armed only with a vaccination certificate on doctor's notepaper. Usually no difficulties are experienced on the south-bound journey. For the return journey the certificate is valueless as the countries transited are more concerned at the introduction of smallpox from Africa than they are from the United Kingdom. The unfortunate travellers are then compelled to submit themselves to re-vaccination and proceed often after some delay, armed with an international form of certificate. In Southern Rhodesia two centres for yellow fever inoculation are maintained, at the Salisbury and Bulawayo Hospitals and international certificates of vaccination against smallpox are completed only by medical officers in Government Service. At these centres 1,533 yellow fever inoculation certificates were issued, chiefly to air travellers.

All examinations of civilian pilots for "B" licences are carried out by Government Medical Officers at Salisbury and Bulawayo, and 114 of these were done in 1949.

Chapter V.—ADMINISTRATION AND MISCELLANEOUS.

(1) Staff (Establishment).

1. Medical Officers—		
At Headquarters (Secretary for Health, 1; Directors of Curative and Preventive Services, 2; Medical Officer of Health, Peri-Urban Areas (Northern) and Executive Officer, Nutrition Council, 1; Schools Medical Officers, 2)	6	
In Districts (Senior Government Medical Officers, 6; Government Medical Officers, 44; Aided Government Medical Officers, 7; Regional Medical Officer of Health, 1; Schools Medical Officers, 2)	60	
Specialists (Directors of Laboratories, 2; Pathologist, 1; Superintendents and Assistant, Mental and Leprosy Institutions, 3; Radiologists, 3; Psychiatrist, 1)	10	
Resident Medical Officers	11	
Total		87
2. Dental Surgeons		5
3. Analytical Chemists		5
4. Pharmaceutical Chemists—		
At Headquarters	2	
Medical Store	6	
At Hospitals (Hospital Secretaries, 11; Dispensers, 3)	14	
		22
5. Health Inspectors		21
6. Laboratory Professional and Technical Assistants		18
7. Research Staff (Professional Assistants, 2; Technical Assistants, 3; Medical Entomologist, 1)		6
8. Nursing Staff (Staff Matron, 1; Senior Matrons, 2; Matrons, 25, Sister Tutors, 5; Sisters, 56; Qualified Nurses (General), 214; District Nurses, 20; Student Nurses, 176. Mental Branch: Males—Head Attendants and Charge Nurses, 4; Qualified Nurses, 20; Females—Senior Matron, 1; Matrons, 2; Sisters, 3; Female Mental Nurses, 18)		579
9. Preventive Staff (Anti-Malaria Officer, 1; Sanitary Airport Control Officers, 2)		3
10. Orthopaedic Technician and Assistant		2
11. Radiographers, including Learners		18
12. Masseuses		7
13. Dietitians		4
14. Clerical Staff (Men, 44; Women, 72)		116
15. Other European Staff		115
16. Non-European Staff		1,732
Total		2,740

(2) Staff.

While there have been few changes in staff establishment, the actual staff engaged has shown some increases. A pathologist (morbid anatomist) has figured on the establishment for some years, but until September, 1949, the duties were performed by a medical officer with other responsibilities. A whole-time pathologist has now been appointed and stationed at Salisbury. He has taken over all research and routine duties in morbid anatomy and histology.

An additional analyst has been appointed in view of the heavy increase in duties at the Government Analyst's Laboratory. Provision has been made for three additional health inspectors who will be appointed when the Urban District Councils in peri-urban Salisbury and Bulawayo are approved.

At the end of 1949 there were a total of 64 medical officers on the permanent establishment, which excludes the Aided Government Medical Officers, Resident Medical Officers and temporarily engaged medical officers. It is interesting to analyse the ages and length of service of this group. Nine are under 30 years of age, 31 between 30 and 39 years, 17 between 40 and 49 years, and 7 over 50 years of age. The average age of the group is 38 years. The average length of service of the group is 8.0 years and 13 of them have over 15 years' service each. Of the general duty medical officers, 13 saw active service before joining the Department and this no doubt has some bearing on the high average age on joining the Service of 30 years.

The Medical Services of this Colony first took shape just 50 years ago, and it is thought that a full list of the medical officers at the present time and for comparison the roll of the medical staff in 1899 will be of interest. In 1899, 14 medical officers met the needs of the country, while in 1949, 71 medical officers, including a number of specialist officers, were actually employed. Drs. A. M. Fleming and H. K. Smyth are happily still with us. The lists of medical officers appear in Appendix Q.

During 1949, 28 papers on medical subjects were published or submitted for publication from Southern Rhodesia. A full list of these, giving the titles and the journals in which they were published, appears in Appendix P. All but seven of these papers were prepared by members of the staff of the Department.

(3) Nursing Service.

The supply of nurses has much improved and the difference between the authorised establishment and the number actually in employment has been further reduced, 114 in 1947, 87 in 1948 and now 70. The most heartening feature is the increase of nurses on the permanent staff who now total 294 instead of 213 in 1948. The turnover of even the so-called permanent staff is very great. Recruits to the permanent staff numbered 112, which includes four transfers from the ranks of the temporary staff, but resignations totalled 71. In this figure there are only two retirals on account of age and marriage as usual was the principal factor, 42 leaving for this reason. A number of these are not entirely lost to the nursing potential of the Colony as, if they live in a centre where a hospital exists, a fair number do seek employment on the temporary staff. The turnover of the temporary staff is also very high: 50 joined and 46 resigned during the year. All temporary staff are now doubly qualified.

The student nurse position remains unsatisfactory, and it is quite evident that unless there is a great change of heart, the Colony will have to depend on recruiting trained nurses from overseas and the Union of South Africa in order to maintain the Service. There has been a decrease in student recruits and an increase in the number of resignations during the training period. Fifty-five student nurses started their training in 1949, 36 completed their contract and training and 23 left during their training. The wastage in training nurses who fail to qualify is rather disheartening. Of the 36 who completed their nursing training, only three joined the permanent staff. A number, of course, seek further experience and qualifications overseas and in South Africa, and may join the Service later, but the great majority of student nurses marry soon after qualification and thereafter are only irregularly occupied in the practice of nursing.

(4) Medical Council of Southern Rhodesia.

The numbers on the Registers of the Council at the end of 1949 are as follows, not all necessarily residing and practising in Southern Rhodesia:—

	Additions	Total at 31.12.49
Medical Practitioners	40	364
Temporary Registrations (Medical Practitioners)	5	5
Dental Surgeons	8	62
Chemists and Druggists	11	154
Opticians	2	10
Trained Nurses—		
General	112	813
Mental	5	32
Sick Children's	7	13
Fever	2	7
Orthopaedic	1	3

	Additions	Total at 31.12.49
Midwives	90	378
Masseurs and Masseuses	1	19
Radiographers	—	5
Sanitary (Health) Inspectors	6	47
Meat and Other Food Inspectors	6	41
Health Visitors	—	6
School Nurses	—	4
Native Nursing Orderlies	25	137
Native Health Demonstrators	1	19

It is estimated that of the total number of medical practitioners registered 282 are resident in the Colony. Of these, 101 are practising in Salisbury and 78 in Bulawayo, a heavy concentration in the two European areas of big population. In addition to the practitioners noted above, there are five doctors who have permission to restricted practice at missions despite the fact that their qualifications are not registrable by the Medical Council. There is therefore approximately one doctor for each 7,000 of the population of all races.

(5) Training.

(i) *Nursing Training (General Nursing).*

The following are the results of the examinations held by the Medical Council of Southern Rhodesia during the calendar year 1949:—

	No. of Candidates	No. Passed	No. Failed
Preliminary examinations	51	48	3
Preliminary examinations (Part I only)	40	34	6
Final examinations	42	41	1

The examinations were held in April, August and December. Fourteen nurses passed the final examination with honours, three of whom qualified for the gold medals provided by the local branches of the British Medical Association.

(ii) *Native Nursing Orderlies.*

These are trained on a three-year course at Salisbury and Bulawayo Hospitals and at the Swedish Mission Hospital at Mnene:—

	No. of Candidates	No. Passed	No. passed Anatomy and Physiology	No. passed Nursing and Hygiene	No. Failed
Lower exam.	90	62	11	6	11
Higher exam.	27	25	—	—	2

(iii) *Native Health Demonstrators.*

One student sat the examination in December, 1949, and was admitted to the Register.

All future classes of instruction for health demonstrators will now be on a three-year course from an entrance Standard VI instead of a heretofor one year of specialised training following a two-year post-Standard VI artisan training.

(6) Military Pensions.

There has been a marked fall in the number of Medical Boards held on Southern Rhodesia pensioners. These amounted to 850 Europeans in 1949. The reduction is due to the number of pensions now being made permanent awards when, of course, the annual medical board falls away. Many of the pensioners examined for other Administrations are boarded only every second year, and so the number of pensioners drawing their awards from other sources must now exceed the Southern Rhodesia pensioners. Medical boards which are conducted by Government Medical Officers assisted when necessary by the Honorary Consultants numbered in 1949 as follows:—

Southern Rhodesia pensioners—	
European	564
Coloured	20
African	22
New claims to pension: Southern Rhodesia	7
Pensioner examined for Northern Rhodesia	1
Pensioners for Imperial Government	115
Pensioners for Union Government	85
Pensioners for elsewhere in the Empire	6
Total	820

(7) St. John Ambulance and Red Cross Associations.

These devoted organisations report all-round increases in their activities which have such an important bearing on the public welfare. In the reaction in the years immediately after the war, some feared that these bodies would not be able successfully to redirect their enthusiasm into peace-time channels of service. The present steady expansion and development of their activities gives the lie to this opinion.

The St. John Ambulance Association report that 1,691 certificates were issued, including 779 for First Aid and that their members performed 19,623 hours of duty in hospitals. Nursing members staffed the Cadet Camp hospital at Sinoia during the annual camp.

The Red Cross Society report an increase in membership of detachments and that one new European and one African detachment have been formed. Associate members have given useful service at hospitals and at school medical inspections.

Both organisations report a most encouraging increase in work amongst the Africans, especially in the formation of active units on mines and in large industrial concerns. The annual first-aid competitions attracted the usual widespread interest and were well attended.

(8) Habit-Forming Drugs.

Ninety-nine import and 34 export certificates were issued in 1949.

Drug.	Imports in Grammes	Exports in Grammes
Medicinal opium	5,896	—
Opium (in tinctures, extracts and other preparations)	28,181	1,998
Indian hemp (in form of galenicals)	992	—
Morphine alkaloid	1,981	49
Diacetyl morphine (heroin) alkaloid	528	3
Cocaine alkaloid	802	16
Methyl morphine (codeine) alkaloid	4,703	311
Ethyl morphine (dionine) alkaloid	51	—
Pethidine (as base)	4,852	68
Amidone	18	—

During the year inspections of premises and the methods of storage and accounting for habit-forming drugs have been pursued with good results. Full action will not, however, be possible until the new Poisons Act is promulgated.

LEPROSY, 1949.

TABLE A.

Institution	Race of Patients	Number on Registers on 1.1.49	Admissions	Readmitted for Treatment	Discharged	Died	Deserted	Number on Registers on 31.12.49	Total Treated	Babies Born
Ngomahuru	European	4	1	—	3	—	—	2	5	—
	Coloured	1	—	—	—	—	—	1	1	—
	African	816	181	58	114	28	28	886	1,055	22
Mtemwa	African	623	133	43	94	26	24	655	799	20
TOTAL		1,444 ✓	315 ✓	101 ✓	211 ✓	54 ✓	52 ✓	1,544 ✓	1,860 ✓	42 ✓

GOVERNMENT NATIVE CLINICS, 1949.

TABLE B.

Government Medical Officer	Clinic	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Treatments		
		V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total
Antelope ..	Antelope	7	64	71	99	471	570	—	1	1	857	7,097	7,954	2,474	23,001	25,475
	Kezi ..	251	577	828	5,051	8,538	13,589	1	11	12	173	1,489	1,662	1,612	3,609	5,221
Banket ..	Banket ..	279	1,496	1,775	10,347	13,466	23,813	—	41	41	309	3,034	3,343	1,896	22,211	24,107
	Darwendale	110	345	455	4,820	4,524	9,344	—	16	16	42	1,304	1,346	130	6,630	6,760
Belingwe ..	Belingwe	322	1,127	1,449	7,512	19,038	26,550	2	33	35	265	1,340	1,605	917	6,360	7,277
	Shabani ..	—	—	—	—	—	—	—	—	—	630	5,593	6,223	4,945	24,630	29,575
Bindura ..	Mt. Darwin	124	719	843	2,080	11,552	13,632	1	7	8	791	4,695	5,486	2,308	16,403	18,711
Bulawayo ..	Fort Usher	677	14	691	24,841	456	25,297	2	—	2	258	1,909	2,167	1,142	3,107	4,249
	Luveve ..	18	619	637	294	9,541	9,835	—	4	4	150	12,783	12,933	844	26,472	27,316
	Matobo ..	7	223	230	195	3,806	4,001	1	2	3	49	1,665	1,714	256	8,908	9,164
Chipinga ..	Chipinga	114	1,214	1,328	3,033	18,691	21,724	—	15	15	191	2,048	2,239	369	9,746	10,115
	Birchenough Bridge ..	57	859	916	1,851	16,298	18,149	1	5	6	14	3,966	3,980	214	25,710	25,924
	Nyanyadsi	160	1,096	1,256	4,218	21,044	25,262	—	10	10	119	4,609	4,728	863	68,534	69,397
Concession ..	Concession	1,353	1,310	2,663	22,697	29,986	52,683	5	71	76	119	1,248	1,467	563	4,390	4,953
	Rosa ..	68	967	1,035	1,181	11,079	12,260	—	19	19	260	4,410	4,670	948	13,685	14,633
Enkeldoorn	Buhera	109	418	527	4,174	11,119	15,293	—	4	4	291	2,668	2,959	2,235	17,740	19,975
	Kwenda ..	51	997	1,048	1,054	12,640	13,694	1	9	10	277	6,303	6,580	1,566	20,613	22,179
	Narira ..	139	541	680	3,963	10,636	14,599	—	2	2	248	1,863	2,111	262	6,600	6,862
	Range ..	478	485	963	17,828	13,619	31,447	—	1	1	573	2,254	2,827	3,274	12,331	15,605
Filabusi ..	Filabusi ..	246	2,180	2,426	9,684	38,034	47,718	4	65	69	246	2,493	2,739	738	7,479	8217,
	Essexvale	284	879	1,163	10,524	17,695	28,219	1	18	19	215	2,139	2,354	2,580	25,668	28,248
Fort Victoria	Chibi ..	666	2,678	3,344	21,158	39,999	61,157	1	13	14	—	4,791	4,791	—	57,884	57,884
	Matibi ..	516	1,740	2,256	8,943	51,288	60,231	—	11	11	150	897	1,047	834	2,312	3,146
Gatooma ..	Gokwe ..	89	326	415	3,562	11,208	14,770	2	3	5	35	454	489	210	3,713	3,923
Gwelo	Gwelo Native Village Settlement	—	—	—	—	—	—	—	—	—	—	653	653	—	3,325	3,325
Hartley ..	Hartley ..	361	2,011	2,372	10,297	22,249	32,546	3	53	56	247	6,671	6,918	760	17,410	18,170
	Kutama ..	115	538	653	1,914	6,622	8,536	1	10	11	381	38,072	38,453	1,181	54,113	55,294
	Mondoro	217	1,072	1,289	4,447	16,468	20,915	—	2	2	157	7,302	7,459	378	10,726	11,104

Government Medical Officer	Clinic	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Treatments		
		V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total
Inyanga ..	Inyanga	313	1,602	1,915	5,637	22,154	27,791	—	2	2	286	3,974	4,260	1,878	17,654	19,532
	Tsonzo ..	28	531	559	698	5,787	6,485	1	8	9	445	4,436	4,881	1,630	6,877	8,507
Inyati	Inyati ..	220	597	817	11,959	8,934	20,893	2	18	20	136	873	1,009	608	5,688	6,296
	Dagamella	57	399	456	1,046	4,337	5,383	—	3	3	284	2,501	2,785	1,489	20,777	22,266
	Nkai ..	319	625	944	11,989	18,255	30,244	1	6	7	336	705	1,041	3,900	17,700	21,660
Karoi	Karoi ..	—	—	—	—	—	—	—	—	—	280	6,577	6,857	1,124	7,992	9,116
	Miami ..	239	1,209	1,448	3,304	11,182	14,486	—	31	31	180	1,058	1,238	2,983	5,945	8,928
	Urungwe	95	293	388	1,711	2,624	4,335	1	3	4	153	4,505	4,658	731	12,199	12,930
Marandellas	Marandellas	1,499	3,248	4,747	24,803	29,386	54,189	2	87	89	182	4,390	4,572	473	10,407	10,880
	Shiota ...	275	818	1,093	14,610	14,068	28,678	1	24	25	179	6,356	6,535	822	11,415	12,237
	Wedza ..	184	709	893	4,416	9,926	14,342	—	5	5	149	6,130	6,279	1,192	42,910	44,102
Melsetter ..	Melsetter	39	302	341	1,222	5,091	6,313	1	11	12	46	1,521	1,567	783	10,716	11,499
Morgenster (a)	Jena ..	66	570	636	980	18,205	19,185	1	7	8	305	4,435	4,740	1,578	34,352	35,930
Mtoko ..	Mtoko ..	229	4,625	4,854	10,725	41,713	52,438	—	66	66	599	5,529	6,128	1,718	13,710	15,428
	Mrewa ..	252	1,887	2,139	7,555	28,543	36,098	—	24	24	—	7,011	7,011	—	13,595	13,595
	Nyamazuwi	81	1,379	1,460	1,925	15,980	17,905	—	4	4	233	4,204	4,437	300	9,131	9,431
Ndanga ..	Ndanga	917	4,804	5,721	30,921	84,394	115,315	12	87	99	—	—	—	—	—	1,689
	Bikita ..	76	3,497	3,573	4,100	113,043	117,143	—	45	45	—	—	—	—	—	3,892
	Chichidza	277	2,405	2,682	10,995	66,395	77,390	3	34	37	—	—	—	—	—	4,397
	Chiduma	40	360	400	1,674	23,100	24,774	4	9	13	—	—	—	—	—	1,955
	Chikuku	177	1,690	1,867	6,765	52,442	59,207	4	26	30	—	—	—	—	—	4,005
	Chingombe	306	5,104	5,410	9,720	116,183	125,903	2	36	38	—	—	—	—	—	14,661
	Chitando	151	1,958	2,109	4,772	51,424	56,196	3	28	31	—	—	—	—	—	4,197
	Matsai ..	95	2,450	2,545	3,399	75,543	78,942	1	18	19	—	—	—	—	—	2,239
	Sangwe	49	662	711	2,403	25,705	28,108	—	10	10	—	—	—	—	—	687
	Siyawarewa	253	2,011	2,264	9,382	58,062	67,444	2	15	17	—	—	—	—	—	2,508
TOTAL	NDANGA GROUP (10)	2,341	24,941	27,282	84,131	666,291	750,422	31	308	339	—	—	—	—	—	40,230
Norton ..	Norton ..	280	1,243	1,523	9,364	14,804	24,168	2	37	39	16	3,478	3,494	81	20,685	20,766
Nyaman-hdlovu ..	Nyaman-dhlovu	197	783	980	5,869	14,593	20,462	—	22	22	60	903	963	386	5,420	5,806

GOVERNMENT NATIVE CLINICS, 1949.

TABLE B (*Cont.*)

Government Medical Officer	Clinic	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Treatments		
		V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total
Nyamandhlovu	Lupani ..	39	1,084	1,123	567	6,031	6,598	—	6	6	20	389	409	58	951	1,009
	Sipepa	125	319	444	9,228	9,536	18,764	2	7	9	165	1,914	2,079	844	3,596	4,440
	Tjolotjo ..	226	880	1,106	5,212	12,765	17,977	1	7	8	308	2,326	2,634	1,342	21,328	22,670
Plumtree ..	Plumtree	410	1,255	1,665	6,650	13,223	19,873	—	18	18	434	1,974	2,408	2,846	19,950	22,796
	Lady Mary Baring	34	62	96	1,726	2,343	4,069	3	4	7	248	756	1,004	2,091	11,112	13,203
	Mpoengs	179	240	419	2,273	3,262	5,535	—	1	1	560	1,774	2,334	4,681	9,225	13,906
	Stanley	51	197	248	1,059	7,176	8,235	—	4	4	406	1,319	1,725	1,728	8,630	10,358
Que Que ..	Loreto ..	47	498	545	468	6,627	7,095	3	12	15	110	6,442	6,552	1,346	19,982	21,338
Rusape ..	Chikuku ..	61	341	402	781	5,357	6,138	—	1	1	98	1,649	1,747	442	15,410	15,852
	Nedewedzo	102	1,171	1,273	3,558	15,609	19,167	—	8	8	98	4,926	5,024	1,072	23,481	24,553
Salisbury ..	Highfield	—	1,542	1,542	—	8,057	8,057	—	28	28	276	10,476	10,752	2,496	51,157	53,653
	Makumbi	82	2,483	24,565	1,068	15,411	16,479	1	31	32	89	10,135	10,224	1,068	30,405	31,473
Selukwe ..	Selukwe	205	856	1,061	8,100	11,385	19,485	—	39	39	625	4,697	5,322	1,630	9,100	10,730
	Sebanga	152	—	152	6,169	—	6,169	—	—	—	—	—	—	—	—	—
	Mabadzenge	—	—	—	—	—	—	—	—	—	—	5,219	5,219	—	6,500	6,500
Sinoia	Chinomwe	173	1,133	1,306	6,153	13,390	19,543	1	17	18	55	2,445	2,500	316	8,308	8,624
Umtali ..	Maranke	69	449	518	1,146	5,558	6,704	—	6	6	179	2,134	2,313	987	8,320	9,307
	Odzi ..	557	755	1,312	6,871	4,542	11,413	1	7	8	125	1,861	1,986	1,045	4,528	5,573
Umvukwes	Arrowan	107	535	642	2,536	9,247	11,783	1	19	20	71	1,104	1,175	511	5,200	5,711
	Sipolilo ..	34	918	952	810	14,167	14,977	—	19	19	78	4,121	4,199	301	14,459	14,760
Umvuma ..	Umvuma	141	1,277	1,418	9,376	21,099	30,475	2	33	35	125	4,340	4,465	773	15,552	16,325
	Chilimanzi	95	1,194	1,289	4,687	19,860	24,547	1	21	22	63	1,987	2,050	1,451	12,848	14,299
	Chinyika	121	1,004	1,125	2,689	13,820	16,509	1	16	17	38	4,230	4,268	150	5,452	5,602
	Gutu ..	245	1,676	1,921	10,479	30,575	41,054	7	23	30	7	10,126	10,133	308	11,314	11,622
Victoria Falls ..	Victoria Falls ..	—	—	—	—	—	—	—	—	—	—	10,335	10,335	—	20,346	20,346
Wankie ..	Lukosi ..	233	341	574	8,199	9,236	17,435	1	8	9	28	1,027	1,055	236	8,218	8,454
TOTAL (82)		17,020	90,466	107,486	487,516	1,610,217	2,097,733	94	1,427	1,521	15,122	300,042	315,164	82,896	1,115,855	1,238,981

(*a*) Supervised by a Missionary Doctor.

TABLE C.

CLASSIFICATION OF EUROPEAN DEATHS, 1949.

Deaths Classified according to the International List of Causes of Sickness and Death: Fifth Decennial REVISION.

International List No.	Cause of Death.	No. of Deaths
	I.—*Infective and Parasitic Diseases.*	
1	Typhoid fever	5
6	Cerebro-spinal (meningococcal) meningitis	1
9	Whooping cough	1
10	Diphtheria	4
13	Tuberculosis of the respiratory system—	
	(a) With mention of occupational disease of lung	3
	(b) Without mention of occupational disease of lung	6
	(c) Tuberculosis of unspecified site	2
14	Tuberculosis of the meninges and central nervous system	1
19	Tuberculosis of the lymphatic system	1
24	Purulent infection and septicaemia	1
27	Dysentery	2
28	Malaria	16
28 (d)	Blackwater fever	2
30	Syphilis—	
	(c) Aneurysm of the aorta	3
	(d) Other forms of syphilis	1
31	Relapsing fever	2
33	Influenza	6
35	Measles	1
36	Acute poliomyelitis and polioencephalitis	1
38	Other diseases due to viruses	1
44	Other infective or parasitic diseases	2
	II—*Cancer and Other Tumours.*	
45	Cancer of the buccal cavity and pharynx	5
46	Cancer of the digestive organs and peritoneum	53
47	Cancer of the respiratory system	14
48	Cancer of the uterus	9
49	Cancer of other female genital organs	2
50	Cancer of the breast	10
51	Cancer of the male genital organs	9
52	Cancer of the urinary organs	13
53	Cancer of the skin (scrotum excepted)	2
54	Cancer of the brain and other parts of the nervous system	1
55	Cancer of other or unspecified organs	11
56	Non-malignant tumours	1
	III—*Rheumatism, Diseases of Nutrition and of the Endocrine Glands, Other General Diseases and Vitamin Deficiency Diseases.*	
58	Rheumatic fever	4
59	Chronic rheumatism and other rheumatic diseases	1
61	Diabetes mellitus	24
65	Diseases of the adrenal glands (not specified as tuberculosis)	2
66	Other general diseases	4
	IV.—*Diseases of the Blood and Blood-forming Organs.*	
72	Haemorrhagic conditions	1
73	Anaemias	5
74	Leukaemias and aleukaemias	5
75	Diseases of the spleen	1

List No. International	Cause of Death.	Deaths No. of
	V.—*Chronic Poisoning and Intoxication.*	
77	Alcoholism (Ethylism)	1
	VI.—*Diseases of the Nervous System and Sense Organs.*	
82	Diseases of the medulla and spinal cord	4
83	Intra-cranial lesions of vascular origin	54
84	Mental disorders and deficiency—	
	(a) Mental deficiency	3
	(d) Other mental disorders included under 84	9
85	Epilepsy	5
87	Other diseases of the nervous system	7
89	Diseases of the ear and of the mastoid antrum	1
	VII.—*Diseases of the Circulatory System.*	
91	Acute endocarditis	1
92	Chronic affections of the valves and endocardium	6
93	Diseases of the myocardium	62
94	Diseases of the coronary arteries, angina pectoris	76
95	Other diseases of the heart	7
96	Aneurysm (except of heart and aorta)	1
97	Arteriosclerosis (excluding coronary or renal sclerosis or cerebral haemorrhage)	16
100	Diseases of the veins	1
102	High blood pressure (idiopathic)	11
103	Other diseases of the circulatory system	1
	VIII.—*Diseases of the Respiratory System.*	
105	Diseases of the larynx	1
106	Bronchitis	7
107	Broncho-pneumonia	13
108	Lobar pneumonia	5
109	Pneumonia (unspecified)	4
110	Pleurisy	1
111	Congestion, oedema, haemorrhagic infarction and thrombosis of the lungs	2
112	Asthma	1
113	Pulmonary emphysema	1
114	Other diseases of the respiratory system—	
	(a) Silicosis and other occupational pneumoconioses	1
	(e) Other diseases included under 114 not specified as occupational	1
	IX.—*Diseases of the Digestive System.*	
115	Diseases of the buccal cavity and annexa and of the pharynx and tonsils	4
117	Ulcer of the stomach or duodenum	6
118	Other diseases of the stomach	1
119	Enteritis and diarrhoea (under 2 years of age)	7
120	Enteritis and diarrhoea (over 2 years of age)	3
121	Appendicitis	7
122	Hernia, intestinal obstruction	10
123	Other diseases of the intestines	2
124	Cirrhosis of the liver	10
126	Biliary calculi	3
127	Other diseases of the gall bladder and bile ducts	1
128	Diseases of the pancreas (other than diabetes)	3
	X.—*Diseases of the Urinary and Genital Systems (not Venereal or connected with Pregnancy or the Puerperium).*	
131	Chronic nephritis	19
132	Nephritis not stated to be acute or chronic (over 10 years of age)	9
133	Other diseases of the kidney and ureters	2
136	Diseases of the urethra, urinary abscess, etc.	1
137	Diseases of the prostate	4
139	Diseases of the female genital organs	3

International List No.	Cause of Death.	No. of Deaths
	XI.—*Diseases of Pregnancy, Childbirth and the Puerperal State.*	
141	Abortion without mention of septic conditions	1
148	Puerperal toxaemias	1
	XII.—*Diseases of the Skin and Cellular Tissue.*	
153	Other diseases of the skin and cellular tissue	2
	XIII.—*Diseases of the Bones and Organs of Movement.*	
154	Osteomyelitis and periostitis	1
	XIV.—*Congenital Malformations.*	
157	Congenital malformations	8
	XV.—*Diseases Peculiar to the First Year of Life.*	
159	Premature birth	41
160	Injury at birth	6
161	Other diseases peculiar to the first year of life	10
	XVI.—*Senility, Old Age.*	
162	Senility, old age	6
	XVII.—*Deaths from Violence.*	
163	Suicide by poisoning	4
164	Other forms of suicide—	
	(a) Suicide by hanging or strangulation	1
	(c) Suicide by firearms and explosives	15
	(d) Suicide by cutting or piercing instruments	1
	(g) Suicide by other or unspecified means	1
166	Homicide by firearms	1
167	Homicide by cutting or piercing instruments	2
168	Homicide by other or unspecified means	1
169	Railway accident (any cause of death except war)	1
170	Motor vehicle accidents (any cause of death except war)	17
173	Air transport accidents (any cause of death except war)	9
174	Accidents in mines and quarries (any cause of death except war)	1
175	Agricultural and forestry accidents (any cause of death except war)	1
179	Other acute accidental poisoning (not by gas)	3
181	Accidental burns (conflagration excepted)	2
182	Accidental mechanical suffocation	1
183	Accidental drowning	3
184	Accidental injury by firearms	2
186	Accidental injury by fall, crushing, landslide, etc.	4
193	Other accidents due to electric currents	1
195	Other accidents—	
	(b) Other accidents due to medical or surgical intervention	3
	(d) Other and unspecified accidents included under 195	7
	XVIII.—*Ill-defined Diseases.*	
200	Causes of death unstated or ill-defined	14
	Total	808

ADMISSIONS TO GOVERNMENT HOSPITALS AND OUTPATIENT ATTENDANCES, 1949.

TABLE D.

Hospital	Admissions			Deaths			Out-patient Attendances		
	European	Coloured and Native	Total	European	Coloured and Native	Total	European	Coloured and Native	Total
Salisbury	3,505	11,650	15,155	114	687	801	22,969	150,213	173,182
Bulawayo	4,943	10,853	15,796	128	625	753	10,374	110,031	120,405
Bindura	348	1,996	2,344	4	64	68	525	5,024	5,549
Chipinga	164	—	164	3	—	3	304	—	304
Enkeldoorn	224	1,351	1,575	3	58	61	948	1,770	2,718
Fort Victoria ..	474	2,557	3,031	6	99	105	3,166	12,834	16,000
Gatooma	926	5,363	6,289	19	279	298	533	6,729	7,262
Gwanda	166	2,537	2,703	5	64	69	843	2,760	3,603
Gwelo	1,140	3,675	4,815	23	189	212	2,632	53,366	55,998
Marandellas	242	—	242	8	—	8	373	—	373
Que Que	656	2,479	3,135	9	127	136	229	1,418	1,647
Rusape	216	3,256	3,472	6	77	83	881	12,577	13,458
Selukwe	298	—	298	8	—	8	119	—	119
Shamva	16	2,133	2,149	1	44	45	253	5,299	5,552
Sinoia	373	2,144	2,517	5	109	114	369	8,565	8,934
Umtali	1,481	2,671	4,152	30	141	171	546	13,671	14,217
TOTAL	15,172	52,665	67,837	372	2,563	2,935	45,064	384,257	429,321
Ingutsheni	110	324	434	10	83	93	—	—	—
Nervous Disorders	238	—	238	4	—	4	376	—	376
GRAND TOTAL ..	15,520	52,989	68,509	386	2,646	3,032	45,440	384,257	429,697

STAFFING, BEDS AND PATIENTS OF GOVERNMENT HOSPITALS, 1949. TABLE E.

Hospital	Nursing Staff		Number of Beds		Number of In-patients (a)			Daily Average of In-patients			Number of In-patient Units Maintained			Average stay in Hospital in days	
	European	Coloured and Native	European	Coloured and Native	European	Coloured and Native	Total	European	Coloured and Native	Total	European	Coloured and Native	Total	European	Coloured and Native
Salisbury	112	37	139	232	3,631	11,949	5,580	126·8	331·5	458·3	46,280	120,990	167,270	12·7	10·1
Bulawayo ..	116	102	244	367	5,071	11,174	16,245	163·2	337·2	500·4	59,575	123,066	182,641	11·7	11·0
Bindura	6	8	13	25	352	2,034	2,386	6·8	37·7	44·5	2,470	13,749	16,219	7·0	6·8
Chipinga (b) ..	5	—	14	—	164	—	164	3·1	—	3·1	832	—	832	5·1	—
Enkeldoorn ..	6	9	14	45	227	1,390	1,617	3·6	70·6	74·2	1,327	25,787	27,114	5·8	18·5
Fort Victoria ..	8	13	24	78	481	2,617	3,098	8·1	89·5	97·6	2,981	32,685	35,666	6·2	12·5
Gatooma	19	25	40	139	943	5,553	6,496	22·4	205·0	227·4	8,192	74,841	83,033	8·7	13·5
Gwanda	5	13	7	55	170	2,656	2,826	4·0	146·5	150·5	1,458	53,487	54,945	8·5	20·1
Gwelo	21	31	56	90	1,165	3,832	4,997	31·8	145·9	177·7	11,615	53,262	64,877	10·0	13·9
Marandellas ..	5	—	8	—	246	—	246	3·6	—	3·6	1,311	—	1,311	5·3	—
Que Que	11	19	12	98	671	2,602	3,273	16·8	183·0	199·8	6,148	66,763	72,911	9·1	25·6
Rusape	6	12	15	77	218	3,344	3,562	4·1	112·3	116·4	1,511	40,982	42,493	6·9	12·2
Selukwe	6	—	12	—	306	—	306	6·1	—	6·1	1,872	—	1,872	5·1	—
Shamva	2	4	9	96	16	2,186	2,202	0·3	77·4	77·7	98	28,263	28,361	6·1	12·9
Sinoia	6	12	11	60	375	2,244	2,619	7·6	86·0	93·6	2,780	31,393	34,173	7·4	14·0
Umtali	17	30	38	98	1,501	2,745	4,246	28·6	150·9	179·5	10,448	55,078	65,526	7·0	20·0
TOTAL	351	315	656	1,460	15,537	54,336	69,873	435·3	1973·5	2508·8	158,898	720,346	879,244	10·2	13·2
Ingutsheni ..	50	71	136	580	269	824	1,093	138·4	593·9	732·3	50,530	216,770	267,300	187·8	263·0
Nervous Disorders	6	—	23	—	248	—	248	15·2	—	15·2	4,204	—	4,204	17·0	—
GRAND TOTAL	407	386	815	2,040	16,054	55,160	71,214	585·3	2567·4	3142·7	213,632	937,116	1,150,748	13·3	17·0

(a) Includes patients in hospital on 1st January 1949.

(b) Opened 7th April, 1949.

TABLE F.

ADMISSIONS TO GOVERNMENT HOSPITALS, 1949, OF CASES OF MALARIA, BLACKWATER FEVER, DYSENTERY, PNEUMONIA, TYPHOID FEVER AND SCURVY.

Hospital	Malaria				Blackwater Fever				Dysentery				Pneumonia				Typhoid Fever				Scurvy			
	European		Coloured and Native		European		Coloured and Native		European		Coloured and Native		European		Coloured and Native		European		Coloured and Native		European		Coloured and Native	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Salisbury	67	—	164	4	1	—	—	—	22	—	9	—	127	—	894	154	12	—	49	15	—	—	1	—
Bulawayo	88	—	224	4	—	—	—	—	131	—	104	10	106	7	686	106	12	—	146	18	—	—	72	—
Bindura	88	—	52	1	—	—	—	—	2	—	1	1	3	—	48	5	2	1	1	—	—	—	—	—
Chipinga	18	—	—	—	—	—	—	—	4	—	—	—	4	—	—	—	1	—	—	—	—	—	—	—
Enkeldoorn	13	—	55	1	—	—	—	—	8	—	35	—	12	—	127	10	—	—	—	—	2	—	46	1
Fort Victoria	132	1	246	9	1	—	—	—	9	1	21	10	8	—	81	17	2	—	7	—	—	—	—	—
Gatooma	222	3	621	30	—	—	—	—	13	1	141	11	30	—	240	33	3	1	2	—	—	—	11	—
Gwanda	8	—	67	1	—	—	—	—	3	—	6	—	—	—	88	3	—	—	4	—	—	—	3	—
Gwelo	49	—	250	12	—	—	—	—	84	—	94	4	99	4	244	29	2	—	7	2	—	—	—	—
Marandellas	17	—	—	—	—	—	—	—	15	—	—	—	7	1	—	—	—	—	—	—	—	—	—	—
Que Que	83	—	155	11	1	—	—	—	13	—	—	—	28	1	76	24	—	—	1	1	—	—	5	—
Rusape	21	—	99	9	—	—	—	—	5	—	20	5	2	—	54	14	—	—	8	—	—	—	1	—
Selukwe	25	—	—	—	—	—	—	—	2	—	—	—	19	—	—	—	1	—	—	—	—	—	—	—
Shamva	3	—	364	11	—	—	—	—	—	—	5	—	1	—	47	7	—	—	—	—	—	—	—	—
Sinoia	75	—	167	5	—	—	—	—	4	—	21	—	12	—	101	17	4	1	1	1	1	—	33	—
Umtali	90	—	121	3	1	—	—	—	9	—	12	—	25	1	177	20	3	1	23	5	—	—	1	1
TOTAL	999	4	2,585	101	4	—	—	—	324	2	469	41	483	14	2,863	439	33	4	249	42	3	—	173	2

Missions grouped by Denominations.	Admissions			In-patient Units			Deaths			Out-patients			Out-patient attendances			Beds	
	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	Authorised for Grants	Total
American Board.																	
Chikore (*a*)	5	617	622	39	4,558	4,597	—	4	4	32	2,499	2,531	114	6,600	6,714	16	24
Mt. Selinda (*a*)	74	1,330	1,404	2,681	15,374	18,055	—	36	36	53	3,533	3,586	570	10,706	11,276	50	50
Anglican.																	
Daramombe	—	—	—	—	—	—	—	—	—	—	1,739	1,739	—	1,840	1,840	—	—
St. Augustine's (*a*)	—	216	216	—	1,937	1,937	—	7	7	253	4,818	5,071	2,736	19,813	22,549	—	6
St. David's Bonda (*a*)	564	1,951	2,515	6,089	17,790	23,879	—	16	16	463	3,346	3,809	3,377	7,972	11,349	54	80
St. Faith's	—	78	78	—	334	334	—	—	—	50	7,297	7,347	185	8,649	8,834	—	8
Brethren in Christ.																	
Mtshabezi (*b*)	156	854	1,010	3,900	9,758	13,658	—	8	8	50	3,062	3,112	350	13,655	14,005	15	20
Dutch Reformed Church.																	
Gutu (*a*)	—	459	459	—	3,526	3,526	—	7	7	119	4,650	4,769	1,077	33,143	34,220	20	20
Morgenster (*a*)	—	2,105	2,105	—	22,606	22,606	—	106	106	937	10,459	11,396	14,055	53,497	67,552	62	75
Free Methodist Church of North America.																	
Lundi	—	7	7	—	74	74	—	1	1	6	4,053	4,059	24	21,436	21,460	—	—
Nuanetsi	—	—	—	—	—	—	—	—	—	10	5,347	5,347	68	16,616	16,684	—	—
Free Presbyterian Church of Scotland.																	
Zenka	—	—	—	—	—	—	—	—	—	—	2,778	2,778	—	3,386	3,386	—	—
London Missionary Society.																	
Dombodema	—	—	—	—	—	—	—	—	—	19	1,163	1,182	21	1,599	1,620	—	—
Methodist Episcopal.																	
Mutambara	197	737	934	4,638	9,412	14,050	3	7	10	1,081	2,696	3,777	11,700	12,255	23,955	17	17
Nyaderi (*a*)	161	2,920	3,081	814	20,634	21,448	—	45	45	156	1,591	1,747	1,042	12,074	13,116	56	57
Old Umtali	11	595	606	92	4,660	4,752	—	5	5	150	991	1,141	1,869	4,001	4,870	24	28
Roman Catholic.																	
All Souls Mtoko	46	1,072	1,118	551	8,413	8,964	—	16	16	707	12,995	13,702	4,878	44,270	49,148	16	16
Chishiwasha	2	518	520	10	3,793	3,803	—	1	1	51	9,647	9,698	255	12,541	12,796	5	6
Driefontein	—	290	290	—	1,157	1,157	—	2	2	—	896	896	—	1,187	1,187	—	8
Empandene (*b*)	2	284	286	20	3,836	3,856	—	4	4	343	17,194	17,537	1,657	20,784	22,441	12	23
Fatima (*a*)	27	83	110	597	978	1,575	—	3	3	23	2,314	2,337	153	3,001	3,154	80	100
Gokomere	—	114	114	—	1,825	1,825	—	3	3	396	18,620	19,016	1,316	37,023	38,339	1	20
Mt. Melleray	9	71	80	169	716	885	—	4	4	7	493	500	44	1,600	1,644	—	6
Mukaro	32	224	256	212	1,584	1,796	—	5	5	4,614	13,104	17,718	29,116	94,809	124,925	2	2
Silviera (*a*)	62	538	600	339	4,691	5,030	1	10	11	175	12,620	12,795	742	36,193	36,935	2	25
St. Barbaras (*b*)	218	808	1,026	2,037	10,698	12,735	1	10	11	105	6,485	6,590	510	19,595	20,105	20	20
St. Josephs, Gwelo	—	—	—	—	—	—	—	—	—	275	10,036	10,311	2,850	20,154	23,004	—	4
St. Josephs, Semokwe	120	68	188	1,685	938	2,623	4	2	6	286	4,326	4,612	1,153	7,406	8,559	—	—
St. Michaels, Mondoro	53	715	768	467	2,803	3,270	—	11	11	844	6,993	7,837	4,923	11,045	15,968	6	7
St. Pauls Musami	30	553	583	359	6,498	6,857	1	17	18	175	9,573	9,748	693	21,684	22,377	12	12
Triashill (*b*)	266	898	1,164	2,748	12,714	15,462	3	12	15	368	7,943	8,311	2,405	16,989	19,394	18	19

Missions grouped by Denominations.	Admissions			In-patient Units			Deaths			Out-patients			Out-patient attendances			Beds	
	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	Authorised for Grants	Total
Salvation Army.																	
Howard Institute	43	869	912	385	6,700	7,085	—	6	6	—	2,157	2,157	—	11,092	11,092	15	15
Mbombeswana	—	226	226	—	1,794	1,794	—	2	2	—	1,342	1,342	—	3,639	3,639	2	6
Tshelanyemba	12	89	101	114	553	667	1	4	5	112	1,306	1,418	413	2,625	3,038	—	8
Scandanavian Alliance.																	
Dande	—	169	169	—	953	953	—	1	1	25	948	973	175	1,225	1,400	—	4
Msengedzi	26	380	406	67	2,147	2,214	—	2	2	12	2,095	2,107	141	7,126	7,267	—	6
Seventh Day Adventist.																	
Lower Gwelo	75	689	764	606	5,156	5,762	1	17	18	962	3,943	4,905	4,205	6,940	11,145	16	16
Solusi	—	116	116	—	812	812	—	5	5	643	976	1,619	2,183	3,423	5,606	5	6
South African General Mission.																	
Rusitu	—	155	155	—	1,043	1,043	—	—	—	37	1,968	2,005	149	8,347	8,496	8	12
Swedish Mission.																	
Manana (*b*)	697	323	1,020	16,031	7,143	23,174	1	6	7	161	89	250	1,114	1,877	2,991	25	25
Masase (*b*)	1,422	858	2,280	35,870	19,862	55,732	2	32	34	221	336	557	1,412	2,369	3,781	50	50
Mnene (*a*)	1,738	2,614	4,352	37,882	65,114	102,996	7	64	71	177	2,389	2,566	1,029	8,977	10,006	160	160
Wesleyan Methodist.																	
Epworth (*b*)	—	—	—	—	—	—	—	—	—	6	1,002	1,008	42	5,344	5,386	—	—
Waddilove	—	718	718	—	6,759	6,759	—	9	9	—	5,923	5,923	—	12,117	12,117	20	20
Zambesi Industrial.																	
Mavurandontha	450	1,115	1,565	1,500	5,243	6,743	—	15	15	150	4,033	4,183	1,000	6,849	7,849	—	11
TOTAL (45)	6,498	26,426	32,924	119,902	294,586	414,488	25	505	530	14,254	221,768	236,022	99,746	657,473	757,219	789	992

(*a*) Resident Medical Practitioner. (*b*) Visited regularly by Medical Practitioner.

MATERNITY HOMES, 1949.

TABLE H.

Name of Home	Town	Patients remaining 1.1.49	Admitted	Died	Patients remaining 31.12.49	Confinements	Births		Deaths of infants	Operations		Equipped Beds.
							Live	Still		Major	Minor	
Lady Chancellor	Salisbury	20	1,223	—	31	1,157	1,152	22	25	41	516	37
Lady Rodwell	Bulawayo	25	862	—	22	757	744	13	10	22	305	29
Appleby	Bindura	1	53	—	—	53	53	—	—	1	—	3
Birchenough	Gwelo	6	158	—	2	148	147	1	—	6	11	9
Donaldson	Selukwe	2	41	—	—	41	42	—	—	—	—	5
Enkeldoorn	Enkeldoorn	—	26	—	2	19	19	—	—	—	4	5
Fort Victoria	Fort Victoria	1	71	—	1	59	56	3	2	9	23	6
Que Que	Que Que	1	98	—	3	86	84	4	4	2	1	3
Rusapi	Rusapi	—	37	—	—	37	37	—	1	—	—	2
Sinoia	Sinoia	—	60	—	2	54	52	2	1	5	2	2
Umtali	Umtali	7	302	—	5	262	261	1	3	7	62	10
Total Government operated Homes (10)		63	2,931	—	68	2,673	2,647	46	46	93	924	111
Clarison	Bulawayo	4	147	—	2	147	145	2	3	—	—	7
Queen Mary	Gatooma	3	143	—	3	126	123	3	3	—	39	7
Total privately operated Homes (2)		7	290	—	5	273	268	5	6	—	39	14
GRAND TOTAL		70	3,221	—	73	2,946	2,915	51	52	93	963	125

EUROPEAN SCHOOLS: FINDINGS OF MEDICAL INSPECTION, 1949.

TABLE I.

Routine Medical Examinations Children Born	Group 1, 1942-1941	Group 2, 1940-1939	Group 3, 1938-1937	Group 4, 1936-1935	Group 5, 1934-1933	Group 6, 1932-1931	Total	Percentage
Children Examined	1,872	2,292	1,853	1,689	1,512	514	9,732	—
Nutritional State (U.K. Board of Education Classification):								
A	229	548	652	787	1,017	418	3,651	37·6
B	1,220	1,401	1,023	774	459	91	4,968	51·0
C	415	335	172	122	36	5	1,085	11·1
D	8	8	6	6	—	—	28	0·3
Skin Diseases	47	49	47	44	30	10	227	2·3
Scalp Diseases	23	26	20	22	8	1	100	1·0
Dental Defects	91	117	129	128	150	27	642	6·6
E.N.T.:								
Tonsils and Adenoids: (1) Removed Previously	487	859	766	739	683	242	3,776	38·8
(2) Enlarged	135	148	83	84	42	8	500	5·1
(3) Removal Advised	34	34	19	18	12	3	120	1·2
Nose: Sinusitis, chronic discharge	36	25	17	14	7	1	100	1·0
Ears:								
Otitis Media with discharge	3	3	9	5	6	—	26	0·3
Defective Hearing: Slight	21	39	27	35	22	7	151	1·5
Marked	3	4	3	7	2	—	19	0·2
Speech Defects	10	6	11	4	3	2	36	0·4
Eyes, Vision:								
Eyes, Lids: (1) Squints	24	32	18	10	7	1	92	0·9
(2) Other Defects	52	66	41	29	32	4	224	2·3
Vision:								
Refractive Defects: (1) For observation	157	219	113	106	77	17	689	7·1
(2) Requiring Glasses	42	68	88	83	93	29	403	4·1
(3) Having Glasses	19	60	82	113	131	66	471	4·8
Other Defects	2	7	6	6	5	—	26	0·3
Heart:								
Functional Disorders	13	13	13	11	11	11	61	0·6
Organic Diseases:								
(1) Rheumatic	1	—	2	2	2	—	7	0·07
(2) Other	14	13	8	12	5	3	55	0·6
Lungs:								
Asthma	5	9	4	6	3	—	27	0·3
Bronchitis	42	30	12	10	8	—	102	1·0
Abdomen:								
Enlarged Spleen	3	6	4	5	1	2	21	0·2
Nervous System:								
Functional Disorders	20	13	12	8	6	3	62	0·6
Organic Diseases	11	15	7	6	8	5	52	0·5
Posture Defects:								
Spinal	384	410	312	295	176	45	1,622	16·7
Spinal and Flat Feet	81	128	97	100	63	10	479	4·9
Flat Feet	133	181	161	192	162	29	858	8·8
Deformities:								
Head, Neck, Arms	3	5	3	5	8	—	24	0·26
Spine, Chest	12	12	5	9	11	8	57	0·6
Knock Knees, Bow Legs, Club Feet	150	170	121	106	73	25	645	6·6
Other Defects:								
Miscellaneous	61	108	72	61	66	19	387	3·9

Routine Medical Examinations Children Born	Group 1, 1942-1941	Group 2, 1940-1939	Group 3, 1938-1937	Group 4, 1936-1935	Group 5, 1934-1933	Group 6, 1932-1931	Total	Percentage
Children Examined:	287	279	287	280	236	55	1,424	—
Nutritional State (U.K. Board of Education Classification)								
A	9	24	29	82	116	37	297	20·9
B	134	146	164	147	106	18	715	50·2
C	125	98	85	47	14	—	369	25·9
D	19	11	9	4	—	—	43	3·0
Skin Diseases:	24	14	16	14	7	2	77	5·4
Scalp Diseases:	45	36	39	27	13	2	162	11·4
Dental Defects:	63	10	28	19	23	6	149	10·5
E.N.T.—Tonsils and Adenoids:								
(1) Removed Previously	34	15	20	25	19	1	114	8·0
(2) Enlarged	47	28	31	18	10	3	137	9·6
(3) Removal Advised	7	2	7	4	3	1	24	1·7
Nose:								
Sinusitis, Chronic discharge	12	4	3	—	2	—	21	1·5
Ears:								
Otitis Media with discharge	3	2	3	—	3	—	11	0·8
Defective Hearing: Slight	8	2	7	4	3	2	26	1·8
Marked	5	3	1	—	1	—	10	0·7
Speech Defects	1	—	1	1	1	—	4	0·3
Eyes, Vision:								
Eyes, Lids: (1) Squints	3	1	3	—	2	—	9	0·6
(2) Other Defects	12	1	10	7	3	—	33	2·3
Vision:								
Refractive Defects: (1) For observation	36	15	18	18	15	3	105	7·4
(2) Requiring Glasses	8	5	5	11	7	1	37	2·6
(3) Having Glasses	2	—	1	3	4	2	12	0·8
Other Defects	1	1	1	1	—	—	4	0·2
Heart:								
Functional Disorders	4	3	6	—	1	—	14	1·0
Organic Diseases: (1) Rheumatic	2	—	—	1	—	—	3	0·2
(2) Other	7	2	2	7	2	2	22	1·5
Lungs:								
Asthma	—	—	—	1	—	—	1	0·07
Bronchitis	8	6	4	1	—	—	19	1·3
Abdomen:								
Enlarged Spleen	7	2	5	13	5	2	34	2·5
Nervous System:								
Functional Disorders	—	—	1	1	1	—	3	0·2
Organic Diseases	—	—	1	—	3	—	4	0·3
Posture Defects:								
Spinal	45	57	48	42	32	8	232	16·3
Spinal and Flat Feet	6	18	19	15	8	1	67	4·7
Flat Feet	17	19	20	36	32	5	129	9·1
Deformities:								
Head, Neck, Arms	—	—	1	1	2	—	4	0·3
Spine, Chest	—	3	2	—	1	—	6	0·4
Knock Knees, Bow Legs, Club Feet	15	17	12	22	24	6	96	6·75
Other Defects:								
Miscellaneous	7	4	7	8	11	1	38	2·7

AFRICAN SCHOOLS: FINDINGS OF MEDICAL INPECTIONS, 1949.

TABLE K.

Routine Medical Examinations Children Born	Group 1, 1942-1941	Group 2, 1940-1939	Group 3, 1938-1937	Group 4, 1936-1935	Group 5, 1934-1933	Group 6, 1932-1931	Total	Percentage
Children Examined:	223	229	192	139	136	90	1,009	—
Nutritional State (U.K. Board of Education Classification)								
A ..	3	20	37	40	67	52	219	21·7
B ..	122	144	117	176	62	38	559	55·4
C ..	79	55	34	19	7	—	194	19·2
D ..	19	10	4	4	—	—	37	3·7
Skin Diseases:	30	36	19	8	9	3	105	10·4
Scalp:	7	8	1	—	—	—	16	1·6
Eyes, Vision:								
Eyes, Lids: (1) Squints	1	1	—	1	1	—	4	0·4
(2) Other Defects	10	13	12	13	4	—	52	5·2
Vision:								
Refractive Defects: (1) For observation	1	5	3	4	5	5	23	2·3
(2) Requiring Glasses	—	—	—	—	3	3	6	0·6
(3) Having Glasses	—	—	2	1	1	4	8	0·8
Other Defects	—	—	—	—	—	—	—	—
Heart:								
Functional Disorders	2	1	2	2	2	—	9	0·9
Organic Diseases: (1) Rhuematic	—	—	—	—	—	—	—	—
(2) Other	2	—	—	—	—	—	2	0·2
Lungs:								
Asthma	—	—	—	—	—	—	—	—
Bronchitis	7	3	3	1	—	1	15	1·5
Abdomen:								
Enlarged Spleen	8	11	9	9	—	—	37	3·7
Nervous System:								
Functional Disorders	—	—	—	—	—	—	—	—
Organic Diseases	—	—	1	1	—	—	2	0·2
Deformities:								
Head, Neck, Arms	—	—	—	—	—	—	—	—
Spine, Chest	1	1	—	—	—	—	2	0·2
Knock Knees, Bow Legs, Club Feet	—	—	1	1	4	3	9	0·9
Other Defects, Miscellaneous	56	35	21	16	6	13	147	14·6

REPORT OF THE PUBLIC HEALTH LABORATORY, SALISBURY.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood counts, etc.	10,867	3,055	13,922
Blood films for parasites	2,329	3,085	5,414
P. falciparum	206	241	247
P. vivax	1	1	2
Trypanosomes	—	1	1
Filaria	—	11	11
Spirochaetes	—	21	21
Cultural—			
Blood cultures performed	168	253	421
Salmonella group	15	31	46
Brucella group	—	—	—
Other organisms	16	26	42
Serological—			
Agglutination tests	428	340	768
Salmonella group	101	146	247
Brucella group	10	1	11
Other organisms	27	12	39
Serological tests for syphilis	1,063	26,054	27,117
Gonococcal complement fixation tests	3	—	3
Grouping—Landsteiner	876	112	988
Grouping—Rhesus	254	1	255
Biochemical—			
Estimations performed	1,031	710	1,741
Miscellaneous—			
Sedimentation rates, fragility curves, spectroscopic examinations, etc.	653	201	854
URINE.			
Chemical examinations	2,958	3,894	6,852
Centrifuged deposits examined	7,280	8,072	15,352
Centrifuged deposits—cultured	823	157	980
Miscellaneous examinations	24	6	30
SPUTUM.			
Microscopical—			
Stained films examined	716	1,392	2,108
Bacteriological—			
Specimens cultured	37	39	76
FAECES.			
Direct or concentrated films	4,319	5,848	10,167
S. mansoni	55	480	535
S. haematobium	2	30	32
E. histolytica, trophozoites	7	6	13
E. histolytica, cysts	45	21	66
Miscellaneous parasites	161	950	1,111
Bacteriological—			
Specimens cultured	362	204	566
Chemical—			
Estimations or tests performed	142	26	168
CEREBRO-SPINAL FLUID.			
Routine chemical examinations	112	562	674
Routine bacteriological examinations	65	380	445
Streptococcus	—	38	38
Neisseria	2	83	85
Haemophilus	—	1	1
Wassermann Reactions	18	184	202

Pus, Exudates, Puncture Fluids, etc.

	European	Non-European	Total
Microscopical—			
Examinations performed	303	1,614	1,917
Culture—			
Specimens cultured—Bacteria	1,027	588	1,615
Specimens cultured—Fungi	10	1	11
Chemical—			
Qualitative or quantitative examinations performed	7	42	49

Autogenous Vaccines.

Number prepared	31	1	32

Animal Inoculations.

Friedman tests	127	—	127
Virulence tests	—	—	—
C. diphtheriae	1	—	1
Myco. tuberculosis	25	22	47

Histological Examinations.

Number of sections examined	402	720	1,122

Medico-Legal Examinations.

Smears for spermatozoa, blood groups, etc.	2	8	10
Miscellaneous—			
Water samples examined			186
Ice-cream samples examined			12
Milk samples examined			7
Fractional test meals	141	12	153
Glucose tolerance curves	40	2	42
Hospital sterilisers	—	—	62
Government Analyst—specimens to	48	24	72

Autopsies.

Number performed	49	409	458
Estimations Performed	36,715	57,596	94,978

UMTALI LABORATORY.

Blood.

	European	Non-European	Total
Microscopical—			
Blood counts, etc.	748	166	914
Blood films for parasites	551	930	1,481
Serological—			
Agglutination tests	59	115	174
Grouping—Landsteiner	83	41	124
Biochemical—			
Estimations performed	99	20	119
Miscellaneous—			
Sedimentation rates, fragility curves, spectroscopic examinations, etc.	186	98	284

Urine.

Chemical examinations	238	1,534	1,772
Centrifuged deposits examined	1,475	2,858	4,333
Centrifuged deposits cultured	58	14	72

Sputum.

Microscopical—			
Stained films examined	63	157	220

Faeces.

	European	Non-European	Total
Direct or concentrated films	1,042	3,774	4,816
Chemical—			
Estimations or tests performed	17	—	17
Culture—			
Specimens cultured	22	9	31

Cerebro-Spinal Fluid.

Routine chemical examinations	—	—	—
Routine bacteriological examinations	7	30	37

Pus, Exudates, Puncture Fluids, etc.

Microscopical—			
Examinations performed	112	197	309
Chemical—			
Qualitative or quantitative examinations performed	45	2	47
Cultural—			
Specimens cultured	62	52	114
Estimations Performed	4,867	9,997	14,864

Appendix M.

REPORT OF THE PUBLIC HEALTH LABORATORY, BULAWAYO.

Blood.

	European	Non-European	Total
Microscopical—			
Blood counts	9,748	2,221	11,969
Blood films for parasites	1,230	2,203	3,433
P. falciparum	53	131	
P. vivax	17	23	
Trypanosomes	—	2	
Filaria	—	2	
Spirochaetes	—	25	
Cultural—			
Blood cultures performed	120	481	601
Salmonella group	7	60	
Other organisms	10	13	
Serological—			
Agglutination tests	400	4,099	4,499
Salmonella group	26	252	
Brucella group	6	—	
Other organisms	4	—	
Serological tests for syphilis	956	18,190	19,146
Gonococcal complement fixation tests	2	2	4
Grouping—Landsteiner	159	69	228
Grouping—Rhesus	59	—	59
Biochemical—			
Estimations performed	866	310	1,176
Miscellaneous—			
Sedimentation rates, fragility curves, spectroscopic examinations, etc.	647	167	814

Urine.

Chemical examinations	2,197	3,081	5,278
Centrifuged deposits examined	4,852	4,952	9,804
Centrifuged deposits cultured	1,693	1,167	2,860
Miscellaneous examinations	18	—	18

	European	Non-European	Total
SPUTUM.			
Microscopical—			
Unstained preparations examined	11	10	21
Stained films examined	549	1,811	2,360
Bacteriological—			
Specimens cultured	71	40	111
FAECES.			
Direct or concentrated films	3,459	2,771	6,230
S. mansoni	1	17	
S. haematobium	—	1	
E. histolytica, trophozoites	24	11	
E. histolytica, cysts	60	16	
Miscellaneous findings	95	196	
Bacteriological—			
Specimens cultured	717	1,213	1,930
Salmonella organisms isolated	2	12	
Shigella organisms isolated	11	1	
Miscellaneous organisms	2	5	
Chemical—			
Estimations or tests performed	62	—	62
CEREBRO-SPINAL FLUID.			
Routine chemical examination	94	295	389
Routine bacteriological examination	20	146	166
Strept. pneumoniae	1	8	
Neisseria	5	47	
Haemophilus	—	8	
Torula histolytica	—	1	
Wassermann reactions	38	174	212
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical—			
Examinations performed	632	417	1,049
Culture—			
Specimens cultured—Bacteria	1,464	1,256	2,720
Specimens cultured—Fungi	17	14	31
Chemical—			
Qualitative or quantitative examinations performed	26	37	63
AUTOGENOUS VACCINES.			
Number prepared	32	1	33
ANIMAL INOCULATIONS.			
Friedman tests	35	—	35
Virulence Tests—			
C. diphtheriae	9	3	12
Myco tuberculosis	16	19	35
Trypanosomes	—	1	1
POST-MORTEM EXAMINATIONS.			
Number performed	20	12	32
HISTOLOGICAL EXAMINATIONS.			
Number of sections examined	734	583	1,317
MEDICO-LEGAL EXAMINATIONS.			
Smears for spermatozoa, blood groups, etc.			50
Miscellaneous Tests—			
Fractional test meals	118	2	120
Bilharzia skin tests	637	—	637
Seminal fluids	47	1	48
Cancer cells (examination of sputum and exudates for)	5	11	16
Sensitivity tests (antibiotic)	97	22	119
Waters			359
Milks (methylene blue tests)			675
ESTIMATIONS PERFORMED	31,857	45,781	78,722

GWELO LABORATORY.

Blood.

	European	Non-European	Total
Microscopical—			
Blood counts, etc.	1,348	432	1,780
Blood films for parasites	194	351	545
P. falciparum	14	86	
P. vivax	—	1	
Spirochaetes	—	3	
Cultural—			
Blood cultures performed	33	45	78
Salmonella group	—	1	
Other organisms	3	1	
Serological—			
Agglutination tests	60	96	156
Serological tests for syphilis	269	2,758	3,027
Grouping—Landsteiner	5	4	9
Biochemical—			
Estimations performed	44	13	57
Miscellaneous—			
Sedimentation rates, fragility curves, spectroscopic examinations	180	33	213

Urine.

Chemical examinations	713	1,143	1,856
Centrifuged deposits examined	1,113	1,667	2,780
Centrifuged deposits cultured	139	39	178

Sputum.

Microscopical—			
Stained films examined	133	703	836
Bacteriological—			
Specimens cultured	4	—	4

Faeces.

Direct or concentrated films	1,069	1,341	2,410
S. mansoni		7	
S. haematobium		3	
E. histolytica, trophozoites	24	14	
E. histolytica, cysts	19	51	
Miscellaneous findings	43	65	
Bacteriological—			
Specimens cultured	143	95	238
Salmonella organisms		1	
Shigella organisms	4	10	

Cerebro-Spinal Fluid.

Routine chemical examinations	22	75	97
Routine bacteriological examinations	12	42	54
Neisseria		6	
Strept. pneumoniae		5	
Wassermann reactions	3	2	5

Pus, Exudates, Puncture Fluids, etc.

Microscopical—			
Examinations performed	108	136	244
Culture—			
Specimens cultured—Bacteria	140	169	309
Chemical—			
Qualitative or quantitative examinations performed	3	10	13

Miscellaneous.

Waters			8
Fractional test meals	16	1	17
Estimations Performed	5,748	9,153	14,909

REPORT OF THE GOVERNMENT ANALYST'S LABORATORY, SALISBURY.

NUMERICAL SUMMARY AND ANALYSIS.

Exhibits in connection with Criminal Investigation—		
For presence of poisons	693	
For presence of bloodstains and bloodgrouping	205	
For presence of seminal stains	86	
Miscellaneous forensic exhibits (hairs, fibres, etc.)	170	
	——	1,154
Samples of Water—		
Private (domestic) supplies from boreholes, wells, rivers, springs and mineshafts	77	
Supplies to Government establishments—police, schools, etc.	18	
Township supplies	28	
Hotel supplies for Liquor Licensing Court	7	
Community supplies, for control purposes	11	
Abnormal waters, advice re softening, clarification, purification, etc.	15	
Corrosive, ferruginous borehole and well waters	7	
Waters causing corrosion of reservoirs	4	
Industrial borehole and well supplies, for complete mineral and general analysis	13	
Waters for boiler use	6	
Anti-bilharzial treatment, analysis for copper	9	
Swimming bath waters	10	
	——	205
Cows' Milk—		
Official samples for conformity to legal standards	102	
Routine samples for control analysis	42	
	——	144
Samples of Dairy Produce—		
Butter, cheese, cream, ice-cream (and margarine)		85
Customs Control—		
Excise samples of spirits	11	
Miscellaneous substances for tariff classification	6	
	——	17
Skokiaan Samples (Native Fermented Liquors)		981
Illicit Spirits and other Intoxicants		43
Clinical—		
Human milk specimens	9	
Various specimens from Public Health Laboratories	156	
	——	165
Drugs examined for Medical Store		38
Maize Meal Samples		36
Foodstuff Samples		50
Miscellaneous Samples		183
Total		3,101

The numerical summary gives some idea of the scope and variety of the investigations conducted by the staff of four analytical chemists. The laboratory is small and inconvenient and it is hoped that a better building will soon be available. The volume of work achieved in the accommodation is a tribute to the staff. This work includes all the analytical chemistry for the Colony, with the exception of work that is purely agricultural or geological, and in addition assistance is given to the neighbouring territories of Northern Rhodesia and Nyasaland. In view of the all-round increase in the volume of the work, due warning has been given that such facilities must eventually be withdrawn.

Arsenic remains the most frequently used poison, due no doubt to the ease with which cattle dips can be obtained by unauthorised persons. An unusual fatality occurred when a native ate a meal consisting of tripe taken from the carcass of a beast which itself had died of arsenical poisoning.

Cyanide, a poison used in the treatment of gold-bearing ores, is also a favourite instrument of murder and suicide.

Poisonous plants are much used by the natives, but without more staff and research it is not always easy to identify the plant or the poisonous principle it contains.

The examination of bloodstains is an ever-increasing item, and the number of exhibits is 90 per cent. higher than in 1948. The Laboratory has dealt with many miscellaneous items of forensic interest, including hairs, fibres, fabrics, finger-nail scrapings, paints, bullets, cartridge cases, etc.

The number of public health investigations, waters, milks and foods, is not as high as it should be, but in view of the urgent and heavy calls of forensic and medico-legal work, it is difficult to do otherwise with a small staff working in extremely cramped surroundings.

The new Harmful Liquids Act has seen the virtual end of "skokiaan" analysis, which made heavy demands on the Laboratory in preceding years and up to August, 1949.

Classified under "general miscellaneous" are a number of interesting items —milks from cows poisoned with arsenic, imported commodities damaged in transit by sea-water, damp, chemicals, etc., oils, sludges and deposits from internal combustion engines; D.D.T. spray residues; enamelware containing antimony; disinfectant powders; anthracite coal; solder and many others.

Members of the public and private firms and commercial concerns constantly seek advice and bring samples for analysis, and such work is only refused if it interferes seriously with official Government business.

APPENDIX O.

REPORT OF RESEARCH LABORATORY.

Treatment of Bilharziasis.

Last year's report discussed in brief the work being done on the new drug, Miracil D, in the treatment of urinary bilharziasis. Publications from this Laboratory on this subject are listed elsewhere.

Supplies of "*Nilodin*," the British equivalent of Miracil D, were purchased during the year.

The "Nilodin" was received as sugar and enteric-coated tablets, and large-scale trials were instituted at various African schools, and in the field in Msana Native Reserve. Preliminary results, with the dosage successfully employed when Miracil D was used, were extremely disappointing, and further trials were carried out, with increased doses, in the reserves and with a farm labour force. The results were still poor in spite of the larger doses, and it became clear that these sugar-enteric-coated tablets did not compare in efficacy with plain tablets of Miracil D. Representations were made to the manufacturers of "Nilodin," Messrs. Burroughs Wellcome, and a free supply of plain, uncoated "Nilodin" tablets was received from them late in the year. The results obtained with these plain tablets showed conclusively that we were correct in insisting that the coating of the tablets affected their efficacy. It can now safely be said that either "Nilodin" or Miracil D will cure 90 per cent. of all *B. haematobia* infections in Africans in this country when given twice a day for three days.

Mass treatment of the entire Native population is now much nearer attainment, although cost is still a limiting factor.

Transmission of the Disease.

Experimental work with *Bulinus* has continued throughout the year, and we have consistently failed to infect this snail with either *B. haematobia* or *B. mattheei*.

In addition, we have not yet found a natural infection in this snail, and it appears to be reasonably certain that it is not concerned with the transmission of bilharziasis in Southern Rhodesia. This finding is in direct contradiction to that of Porter who incriminates *Bulinus* as a carrier of *B. haematobia, B. mansoni* and *B. spindale*.

The position of *B. mattheei* is still under consideration, and several new facts fall to be reported.

Laboratory-bred *Physopsis africana* snails were infected in the laboratory during the year with miracidia from eggs passed in the urine of a young African boy, and mice were exposed to cercariae from these snails. Mature egg-laying *B. mattheei* have now been recovered from these mice. It is proposed to passage this strain once more through *Physopsis* and to expose a human volunteer to the cercariae obtained.

Transmission experiments with *B. haematobia* have still failed to produce mature worms in laboratory animals, although small, apparently stunted, parasites have been obtained in a few instances. It should be noted that monkeys have not been used.

Much laborious and time-consuming work has been done on the staining and general morphology of cercariae in an endeavour to produce acceptable criteria for their identification, but we have so far been unsuccessful, and the work continues.

Control of the Disease.

The laboratory continues to offer advice and technical help on the application of copper sulphate as a molluscicide, and to investigate problems connected with the use of water which may be infected.

One such problem is the use of natural waters, such as rivers or dams, by large bodies of troops on manoeuvres. It is apparently considered desirable, for military reasons, that storage facilities, which would greatly simplify treatment, should not be used, and the Laboratory has conducted experiments with Chloride of Lime in an endeavour to find a concentration which will kill cercariae in a matter of minutes.

A lethal concentration can be obtained readily enough, but it is such that water so treated would be unpleasant to use for bathing or washing and impossible to drink. It is proposed to attempt rapid killing of cercariae with various solutions of copper sulphate, in the hope that the unpleasant effects of high concentrations of chlorine can be avoided.

Malaria in Sabi Valley.

A visit was paid to a large estate owned by a company in the Sabi Valley, at the request of the company. Many Natives and most of the Europeans employed on this estate were incapacitated from work through malaria, although at the time the request was made, active transmission of malaria had ceased in most of the Colony.

No anti-malaria work was being carried out on the estate and a very dangerous state of affairs was elicited when our investigation was made. *A. funestus* was breeding in large numbers in an overgrown irrigation furrow, and adult mosquitoes were present in all the dwellings examined.

Recommendations made included the re-siting of properly-designed houses for European personnel, and of the Native compounds. Cutting down of vegetation in and around the furrow and liberal use of D.D.T. and prophylactic mepacrine were other measures advised. The employment of a "hygiene officer" was also urged on the company. The short-term recommendations were successful in arresting the number of fresh malaria cases, and it is to be hoped that the long-term improvements will also be carried out.

The importance of situations like this cannot be over-stressed. The Sabi Valley can very possibly be opened up and settled by Europeans without danger if proper precautions are taken. If they are not taken, and there is little sign of any thought on that subject, then nothing but trouble will follow. The work on the estate was brought to a standstill through the lack of the most elementary precautions.

Block Control of Malaria and Bilharzia.

The last paragraph of last year's laboratory report expressed the view that the time was ripe for the practical application of the knowledge of the control of these two diseases which has accumulated. Thanks to the generosity of the State Lottery Trustees, an experiment in block control has been begun this year.

The area chosen is the Mazoe Valley catchment area; the aim is to attempt control of the two diseases with one field organisation under the control of the Officer-in-Charge of the Research Laboratory.

The field personnel consists of a Government Health Inspector in charge, and four teams each consisting of one European overseer and fifteen to twenty Natives.

Anti-malaria work was begun in October, just before the rains, and will continue until the end of March.

Every dwelling place in the area has been sprayed once with residual insecticidal spray, a process which took almost three months to complete, and a second spraying is now under way. A total of 31,800 native huts and 3,607 rooms in European dwellings has been treated in the first spraying.

It is of course too soon to examine the results of the work already done, but it is probable that the good rainy seasons being enjoyed in the Mazoe Valley will provide a stringent test of the efficacy of the methods and materials employed.

When this work has been completed in March, the field teams will be switched to anti-bilharzia work for the remaining six months from April to September. It is hoped to treat all bridge and Native crossing places over all the rivers in the Valley with Copper Sulphate, and thus to remove possibly the most dangerous sources of infection.

APPENDIX P.

PUBLICATIONS IN MEDICAL JOURNALS FROM SOUTHERN RHODESIA.

The following is a list of papers published or submitted for publication in medical journals by workers in Southern Rhodesia during 1949 :—

Name of Author.	Title of Paper	Journal
Alves, W.	Miracil D in urinary bilharziasis	S. African Medical Journal
———	The eggs of *B. bovis, B. mattheei* and *B. haematobium*	Journal of Helminthology
———	The treatment of urinary bilharziasis with Miracil D and Nilodin	Annals of Tropical Medicine and Parasitology
———	Oral treatment of urinary bilharziasis	Lancet
Bennie, I.	Urinary schistosomiasis: The best time to obtain specimens: The effect of specific therapy on egg production	S. African Medical Journal
Blackie, W. K.	Quinine in acute malaria	Lancet
Blair, D.M.; Hawking, F.; Meeser, C. V.; and Ross, W. F.	Miracil: Clinical trials on patients infected with *S. haematobium* and *S. mansoni*	British Journal of Pharmacology and Chemotherapy
Blair, D. M.; Loveridge, F. G.; Meeser, C. V.; and Ross, W. F.	Urinary schistosomiasis treated with Miracil D	Lancet
Blair, D. M.	British Commonwealth Scientific Conference, 1946	Proceedings, Rhodesia Scientific Association
Department of Health	Sanitation in rural areas	Pamphlet No. 10, 26 pages
———	Meals make money	Pamphlet No. 11, 17 pages
———	The wise and the foolish brothers	Pamphlet No. 12, 20 pages
Gelfand, M.	Tropical primary phlebitis thrombophlebitis, with some remarks on its clinical features and treatment	S. African Medical Journal
———	Schistosomiasis of the female genital tract	———
———	Some peculiar cases of gangrene and their possible relationship to tropical phlebitis	Transactions of the Royal Society of Tropical Medicine and Hygiene
———	Paraffin pneumonia	British Medical Journal
———	Malignancy in the African	S. African Medical Journal
———	Tropical phlebitis and other possibly related vascular disorders of tropical Africa	Transactions, Royal Society of Tropical Medicine and Hygiene
———	A clinico-pathological study of schistosomiasis in South Central Africa	To be published by Post-Graduate Press, Cape Town
Jopling, W. H.	The eradication of schistosomiasis: A plea for a rational approach to the problem	Journal of Tropical Medicine (and Hygiene)
Paul, S.	Histamine desensitisation in Menière's Disease	British Medical Journal

Name of Author.	Title of Paper	Journal
Rail, G. A.	Intensive treatment of schistosomiasis with sodium antimonyl tartarate	Lancet
Rittey, D. A. W.	Treatment of accidental arsenical poisoning with BAL	Lancet
———	A case of antimony dermatitis treated with BAL	Lancet
Ross, W. F.	Traumatic perforation of the bladder	British Medical Journal
Trueman, R. S.	Minor rectal conditions	S. African Medical Journal
Willcox, R. R.	A venereal disease survey of the African in S. Rhodesia	To be published as a monograph
———	Aureomycin: A new treatment for syphilis	British Medical Journal

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APPENDIX Q.

MEDICAL OFFICER POSTS AND THE QUALIFICATIONS OF THE HOLDERS.

Post	Name of Holder	Qualification.
Secretary for Health	R. M. Morris, O.B.E.	M.D., D.P.H., D.T.M. & H.
Director of Curative Services	G. R. Ross	Ph.D., M.B., ChB., D.P.H.
Director of Preventive Services	D. M. Blair, O.B.E.	M.B., Ch.B., D.P.H.
Senior Government Medical Officers		
Bulawayo	J. Leggate	M.B., Ch.B.
Salisbury	W. Murray	M.B., Ch.B.
Gatooma	H. J. Knight	M.B., B.S., D.R.C.O.G.
Gwelo	W. F. McGladdery	M.B., B.S., F.R.C.S.E.
Que Que	D. O. Richards	M.R.C.S., L.R.C.P.
Umtali	J. Montgomery	M.D., F.R.C.S.E.
Ndanga (personal)	J. H. Kennedy, M.B.E.	B.M., B.Ch.
Regional M.O.H. Western	M. H. Webster	M.B., ChB., D.P.H.
M.O.H. Periurban Areas North and Nutrition Officer	E. Baker-Jones	M.B., Ch.B., D.P.H., D.T.M. & H.
Senior Schools Medical Officer	T. G. Osler	M.B., Ch.B., D.P.H.
Schools Medical Officer	S. Graham	M.B., B.Ch., D.P.H.
Lady Schools Medical Officers	E. L. J. Ryan	M.B., B.Ch., D.P.H.
	E. M. McKendrick	M.B., Ch.B.
Directors of Laboratory		
Salisbury	E. M. Barker	M.B., Ch.B.
Bulawayo	B. S. Tullock	B.Sc., M.B., Ch.B.
Pathologist	G. V. Blaine	M.R.C.S., L.R.C.P.
Psychiatrist	K. M. Rodger	M.D., D.P.M.
Superintendent, Mental Hospital	C. Dawson	M.B., Ch.B.
Asst. Superintendent, Mental Hospital	J. A. D. Higgs	M.B., Ch.B.
Superintendent, Leprosy Hospital	H. van R. Mostert	M.B., Ch.B., D.T.M.
Radiologist, Salisbury	M. Gelfand	M.D., M.R.C.P., D.M.R.
Asst. Radiologist, Salisbury	J. D. Addison	L.R.C.P., L.R.C.S., L.R.F.P.S.
Radiologist, Bulawayo	J. P. Hederman	L.R.C.P., L.M., L.R.C.S., D.M.R.E.
Government Medical Officers		
Antelope	A. I. L. Turnbull	M.B., Ch.B.
Belingwe	W. Shepherd Wilson	M.B., B.S.
Bindura	D. A. Parker	M.R.C.S., L.R.C.P.
Bulawayo	J. H. G. Robertson	M.B., Ch.B., M.Ch.(Orth.), F.R.C.S.E.
	O. C. Colt	B.M., Ch.B.
	L. Jacobson	B.Sc., M.B., Ch.B., M.R.C.P., D.T.M. & H.
	B. S. Powell	M.R.C.S., L.R.C.P.
	C. R. Forrest	M.B., Ch.B.
	J. M. Allcock	M.R.C.S., L.R.C.P.
	K. H. McDonald	M.B., Ch.B.
Chipinga	R. D. Carshalton	M.B., Ch.B.
Concession	R. S. Gibson	M.B., Ch.B.
Enkeldoorn	E. A. McDowell	M.R.C.S., L.R.C.P.
Filabusi	V. N. Barlow	M.R.C.S., L.R.C.P.
Fort Victoria	H. M. Strover	M.B., Ch.B.
Gwanda	H. S. Osburn	M.B., B.Ch.
Hartley	D. A. K. Carnegie	M.R.C.S., L.R.C.P.
Inyati	P. R. Henson	M.R.C.S., L.R.C.P.
Karoi	P. A. Taylor	M.R.C.S., L.R.C.P.
Marandellas	A. Clark	B.Sc., M.B., B.Ch.
Melsetter	B. F. Niblock	M.B., Ch.B., F.R.C.S.

Post	Name of Holder	Qualification.
Government Medical Officers (Cont.)		
Mrewa	B. F. Laidler	M.B., B.Ch.
Mtoko	F. Morley Smith, M.C.	M.R.C.S., L.R.C.P.
Nyamandhlovu	G. M. Wright	M.B., B.Ch., D.P.H.
Plumtree	M. B. Millerick	M.B., B.Ch.
Rusapi	A. W. Wragg	M.R.C.S., L.R.C.P.
Salisbury	L. P. Harington, M.B.E.	M.B., Ch.B.
	E. E. Barnett	M.R.C.S., L.R.C.P., F.R.C.S.E.
	G. N. Wright	M.B., B.S., F.R.C.S.E.
	T. W. Branch	M.R.C.S., L.R.C.P.
	G. R. B. McCarter	M.B., B.Ch.
	O. S. Peacock	M.B., Ch.B.
	W. F. Ross	B.Sc., M.B., Ch.B.
	R. G. M. Whitaker	M.B., B.Ch.
Sinoia	A. A. Linington	M.B., B.Ch.
Umvukwes	C. N. Young	M.B., Ch.B.
Umvuma	J. W. Tate	M.B., Ch.B.
On leave (from Bindura)	A. D. H. Hugo	M.R.C.S., L.R.C.P.
On leave (from Concession)	D. A. W. Rittey	M.B., Ch.B.
Aided Government Medical Officers		
Banket	M. H. Small	M.R.C.S., L.R.C.P.
Inyanga	J. D. Taylor	L.M.S.S.A.
Norton	C. C. Taffs	M.R.C.S., L.P.C.P., D.T.M. & H.
Selukwe	R. B. Saunders	M.B., Ch.B.
Wankie	H. P. Theron	M.B., Ch.B.
Victoria Falls	W. W. Cowen	M.R.C.S., L.R.C.P., D.T.M. & H.

MEDICAL STAFF IN THE COLONY, 1899.

Post	Name of Holder	Qualification.
Principal Medical Officer, Medical Adviser and Medical Officer, Salisbury	A. M. Fleming, C.M.G., C.B.E.	M.B., C.M., F.R.C.S., D.P.H.
Hospital and District Surgeons		
Gwelo	H. K. Smyth	M.B., B.Ch.
Fort Victoria	M. G. Williams	M.R.C.S., L.R.C.P.
Hospital Surgeon, Umtali	F. E. Appleyard	M.B., B.Ch.
District Surgeons		
Salisbury	T. Stewart	M.B., C.M.
Bulawayo	L. Smith	M.B., B.Ch.
Umtali	W. Craven	M.R.C.S., L.R.C.P.
Enkeldoorn	H. D. Owen	M.R.C.S., L.R.C.P.
Filabusi	P. G. Cellier	M.B., C.M.
Hartley	W. M. Eaton	M.B., C.M.
Sebakwe (now Que Que)	W. S. Heberden	M.R.C.S., L.R.C.P.
Belingwe	A. S. Patton	M.D.
Gwanda	H. Roscoe	M.R.C.S., L.R.C.P.
Selukwe	A. W. Forrester	L.R.C.P. & S.E., L.R.F.P. & S.