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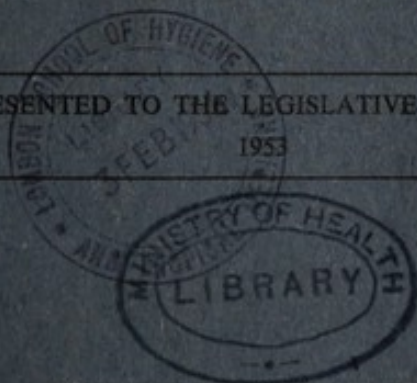
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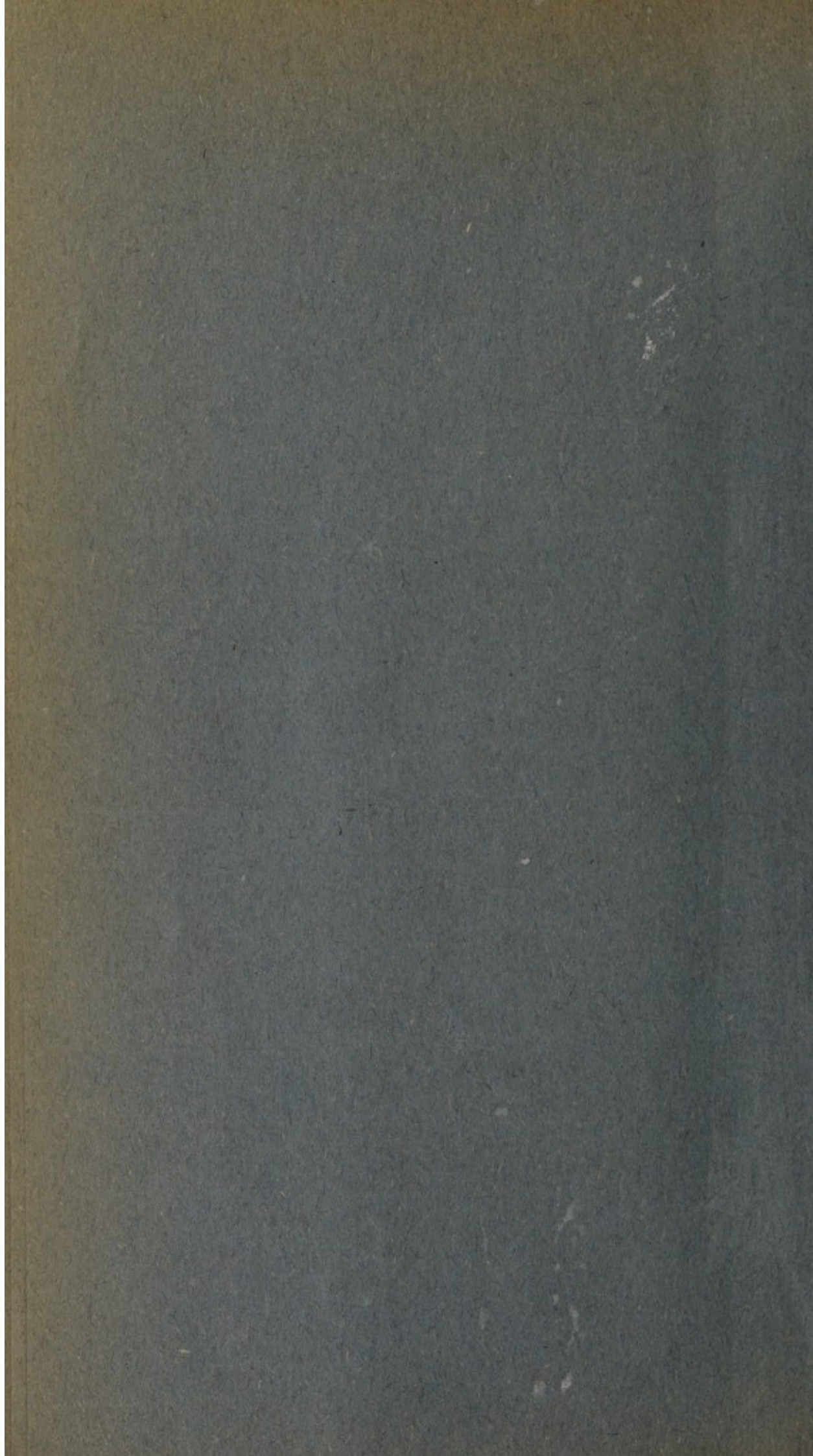
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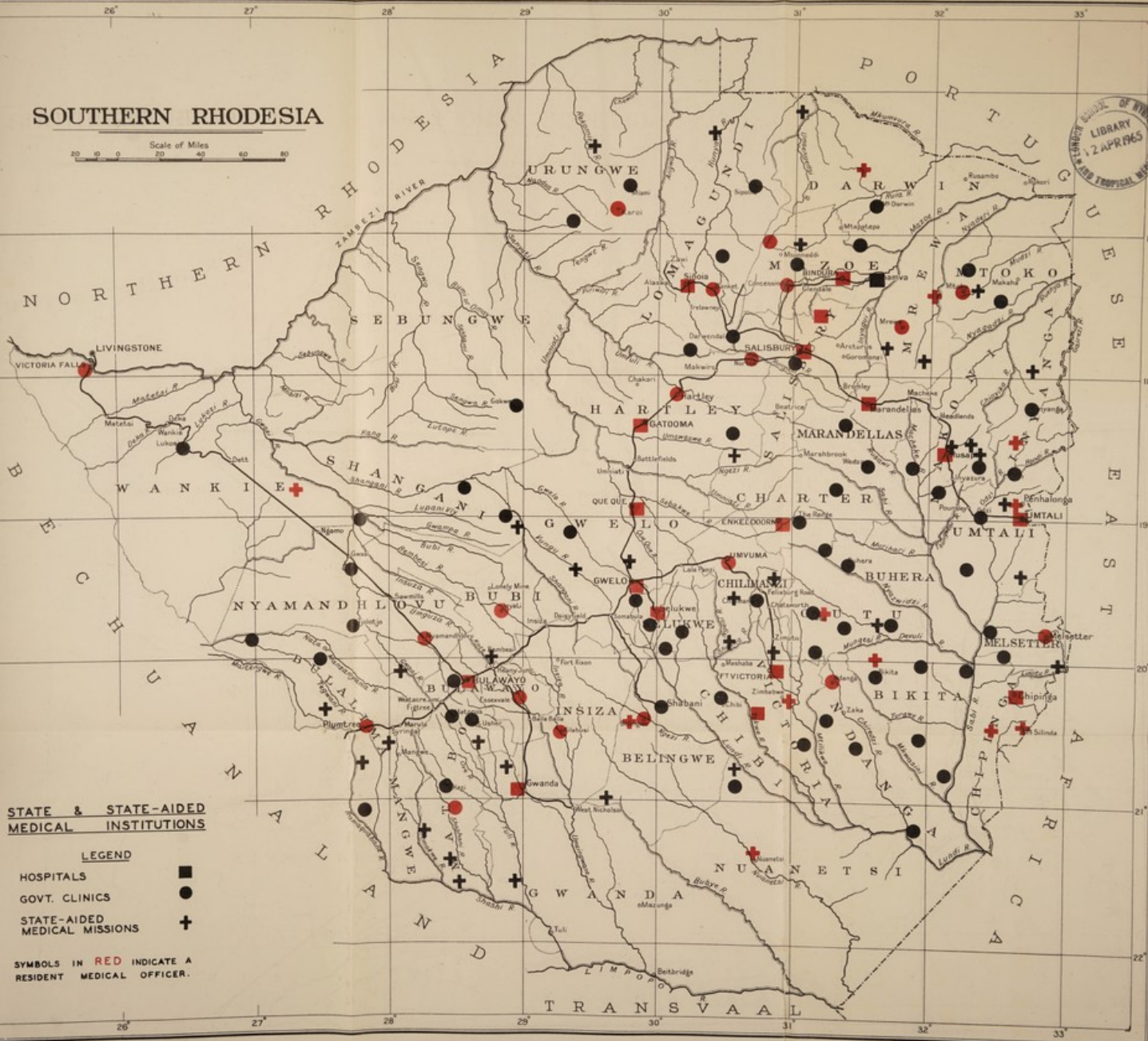
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REPORT
on the
PUBLIC HEALTH
For the Year 1950

PRESENTED TO THE LEGISLATIVE ASSEMBLY
1951

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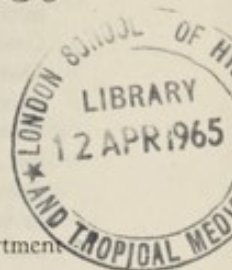
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Report on the Public Health for the Year 1950



The Minister of Health.

Sir,

I have the honour to submit the Annual Report of the Health Department for the year, 1950.

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 1950 was marked by several important achievements in the field of Health. On the international plane, the Colony of Southern Rhodesia was accepted as an Associate Member of the World Health Organisation at the Third World Health Assembly in May, thus becoming the first Associate Member of that body. It is felt that this will be of mutual advantage in that the Colony will derive considerable help and advice and may possibly be in a position to be of assistance in technical and professional matters. The Director of Preventive Services, Dr. Dyson Blair, O.B.E., already a member of the Expert Study Group on Bilharziasis became also a W.H.O. Consultant in this important disease with a view to stimulating interest in the prevention and treatment of what is now becoming recognised as one of the main scourges of tropical Africa.

At home, whilst the routine work of previous years has been continued, special efforts have been made in the directions of Maternity work, Tuberculosis and Venereal Diseases.

Maternity Work.—In September, the Government Maternity Scheme was introduced. This provides benefits in the form of grants-in-aid towards the cost of—

- (a) medical services;
- (b) in-patient accommodation in private maternity homes;
- (c) skilled nursing for confinements at home and a small grant, in this latter case, for out-of-pocket expenses.

Admission to Government Maternity Homes is now without charge. The scheme is applicable to Europeans, Coloureds and Asiatics, but not to Africans, since the latter have for many years enjoyed free ante-natal clinics and free in-patient treatment in all Government institutions and subsidised medical missions. Important extensions to these facilities for Africans were provided by the opening in 1950 of the new African Maternity Blocks in Salisbury and Bulawayo—named respectively Harari and Mpilo, the latter being a word having the double meaning of health and safety. Designed on two floors as the maternity wings of the new African General Hospitals, they will have ultimately 82 beds, and are not only centres for treatment, but training schools for maternity assistants. For the present, part of the accommodation has to be used for staff, but there are 54 beds in use at each hospital. An important experiment is being made in using a maximum of trained African midwives with an absolute minimum of European supervision.

Tuberculosis.—The problem of Pulmonary Tuberculosis grows more pressing year by year. Among Europeans, this is largely due to the numbers of immigrants, who are either given temporary permits of entry, or who evade the immigration regulations. The effect is not only to put an additional and very heavy strain on the available accommodation, but to introduce into the Colony even more foci of infection for the existing population.

Among Africans, there is much evidence that not only is the incidence rising, but the type of disease is changing from the infantile non-fibrosing to a more chronic type in which the acute symptoms are more easily controlled, but with infrequent success in rendering patients' sputum negative and therefore non-

infectious. There has also been a marked rise in bone and joint tuberculosis. An important advance was made on the curative side by the opening of the Martin Tuberculosis Sanatorium for Africans at Mkumbi in the Chindamora Reserve. This institution houses 100 patients under a specially selected medical officer. The Government of the Colony is grateful to the Revd. Mother General of the Dominican Order for the supply of trained sisters for the nursing staff. It is important that the patients for this sanatorium be carefully selected and that only those with a fair chance of arrest of the disease are admitted, and so obviate the risk that the hospital achieve a reputation among the Africans as a home for the dying. The sanatorium is equipped with an X-ray plant and an operating theatre as well as enjoying facilities for modern methods of treatment including Streptomycin and P.A.S.

In Matabeleland, a Tuberculin skin survey was undertaken of special groups of persons including African school children, student orderlies and maternity assistants in training, and European student nurses. The results to date appear later in the body of this report. Work will be continued and early in 1951 B.C.G. vaccinations will be undertaken to offer some degree of protection to those with an abnormally high risk of infection, such as the nursing orderlies and student nurses.

Venereal Disease.—The attack on this problem was intensified during 1950 in two directions. Firstly, all Coloured and Asiatic patients were included in the free scheme applying to Europeans. This scheme permits any patient to consult the registered medical practitioner of his choice at any time and to receive the necessary treatment at Government expense on an agreed tariff. The medical practitioner has free laboratory diagnostic services at his disposal. Africans have enjoyed similar free privileges at Government institutions and subsidised medical missions or at local authority centres for many years.

Secondly, strides have been made in the implementation of the Wilcox Report of 1949. Several of the more important stations now have their own facilities for dark ground examinations, so as to differentiate treponemal infections from other venereal diseases. Except in the more remote clinics, penicillin has now been introduced as the standard method of treatment for gonorrhoea and primary and secondary syphilis. This decision has resulted in a very large increase in the cost of specifics in treatment, but there has been a compensatory saving in costs of feeding and maintenance of patients and a marked saving in the aggregate time lost from work by Africans, who previously, for geographical reasons, had to be admitted as in-patients for several weeks under the old arsenical and bismuth regimen.

Whether because of more intensive and careful examination or because of a real increase in incidence, there is some evidence that the numbers of venereal disease patients presenting for treatment is increasing. This is more especially to be noted among African females and in the more highly industrialised areas. The problem here is not entirely a medical one and can only be solved by health education and the provision of better recreational facilities for the younger Africans. In other words, it is a sociological problem made even more difficult by the peculiar attitude of indifference of the African patient towards venereal infections.

Malaria.—The malaria season of 1950 was a remarkable one in that, in most areas of the Colony, there was a higher incidence than normal, corresponding with the increased rainfall in the early months of the year. This provided an even greater contrast to the position obtaining in the Mazoe Valley, where B.H.C. spraying of every habitation in an area of 2,000 square miles under the Mazoe Valley Project produced extremely satisfactory results. Details appear in the body of the Report, but it will be convenient here to stress that the Project has been financed by the State Lottery Trustees and carried out by specially recruited teams working under the general supervision of the Director of Preventive Services and the staff of the Research Laboratory. The project will continue in this form till August/September, 1951, but it is essential that thereafter a satisfactory method of continuing it should be found so as not to lose the benefits already gained.

The Department of Health considers that this continuation should take the form of a Government-sponsored and controlled scheme for the Native areas adjoining the Mazoe Valley area, partly financed by contributions from the African inhabitants themselves, but that in the European areas, the local people should themselves undertake the work with technical advice and assistance from Governmental sources. Such a scheme would be much more easily extended to those other areas which suffered severely in the 1950 season.

It is gratifying to record that in 1950, in at least one European area, the farmers appointed their own anti-malaria committee and carried out widespread

B.H.C. spraying with advice and help from the Regional Medical Officer of Health and with good results. Similarly a large part of the Gwaai Native Reserve was partially protected by the local action of the Africans working under the Native Commissioner and the Regional M.O.H. and very largely financed by the Africans themselves.

It is particularly pleasing to record that the African is more ready than the European to appreciate the value of B.H.C. spraying, although his reason is almost certainly more connected with the freedom from bedbugs and cockroaches and his better sleep at night, than with the anti-malarial aspect. As one recent testimonial phrased it: "It is now possible to keep the beer free of beetles." Perhaps not what the hygienists intended, but nevertheless a sound reason for the Africans' support of the measures.

Bilharziasis.—Details of work on this problem also appear later in the Report, but allusion should be made here to the development, on the curative side, in the introduction of Miracil D (Nilodin) in uncoated tablets as the standard treatment of *B. Haematobium* infections, saving much time and producing better results.

Silicosis.—The promulgation of the Silicosis Act (which also covers asbestosis and some classes of Pulmonary Tuberculosis in mine workers) during the year has added considerably to the work of the Department of Health. The administration of the Act is assigned to the Minister of Mines, but the personnel for the Silicosis Bureau, the approved medical practitioners, and the X-ray and laboratory facilities are found from this Department. So far, this has been possible without much increase of staff, but if industries other than mining are declared to be "dusty occupations," as further investigation may easily prove to be necessary, it will become essential to have a nucleus of whole-time officers for the purpose.

Costs of Medical Services.—A feature of great concern to the Department during 1950 was the progressive and marked rise in the cost of maintaining curative institutions. This was only too apparent under every heading, foodstuffs, drugs, dressings and equipment. Although the Department was voted 8.7 per cent. of the total Budget for the Colony, it was urgently necessary to call for extreme care in the control of expenditure from every officer. The success achieved in obtaining a real economy by almost every medical officer, matron and hospital secretary and their whole-hearted co-operation with the Head Office is here acknowledged with real gratitude.

In the course of the year, because of certain public utterances, a very careful analysis was made of the expenditure for 12 months on Medical Services (Preventive and Curative) for the African population on a per capita basis. The result of the analysis was seven shillings and elevenpence for each man, woman and child of the African population.

The importance of this subject has not so far been realised by the public in general whose constant demands for more and larger curative facilities carries the grave risk that the preventive side may be unduly starved. Each new institution now costs very much more than the same amenities would have cost only a few years ago, which is a serious enough state of affairs in itself, but each new institution also commits the Government to an annual cost in maintenance and operational cost to an extent which now demands very serious consideration. This is the more urgent because of the growing tendency to demand curative services of very high standard in each district. It cannot be emphasised too often that numerous small units are much more wasteful of staff and finance and give much less efficient service than fewer and larger institutions, leaving the onus on the patient to bring himself to the facilities with the assistance, of course, of the ambulance service for those for whom such transport is essential.

The Colony's Clinic System.—From numerous communications received there seems to be some misconceptions in some minds as to the precise nature of the "Clinic System" in Southern Rhodesia and it may not be inappropriate here to review the scheme. The term "Clinic" is probably a misnomer as it usually conveys the idea of an out-patient dispensary, whereas in the Colony it means a rural hospital with in- and out-patient facilities under the supervision of a medical officer, but staffed entirely by African nursing orderlies without European nursing staff. The scheme is based on the 38 Native Districts in each of which will be at least one medical officer (in many there are already far more than this number). Each medical officer has a "home station" clinic of up to 200 beds and not more than three subsidiary clinics of 24-50 beds, which he visits approximately once a week, and which is in communication with him by telephone and possibly later by wireless. Each Clinic has a senior trained

orderly, one or more junior trained orderlies, female trained maternity assistants and untrained assistants in numbers commensurate with the numbers of patients treated. The "home-station clinics" have each a trained microscopist. After considerable trial and experiment, a standard pattern has now been evolved which allows for one quarter of the final clinic building to be the first section built. This is L shaped and has three wards (total 24 beds), an out-patient room, which can also be used as an operating theatre and a dispensary/laboratory, as well as male and female sanitary block, the former being sited so as to fit in with the next stage of extension. Behind the building is a kitchen and storeroom connected by a covered way. The cost of the first stage of a clinic is now about £7,000. The second stage converts the L into an E shape by the provision of three more wards, an operating theatre, and a separate laboratory. The successive stages provide a third and then a fourth wing so that the final is H-shaped, with the kitchen centrally placed. From the first stage, two open-air wards for infectious disease cases, a mortuary, an incinerator and staff housing are provided. The latter is increased *pari passu* with the additions to ward accommodation. Where suitable electrical power is available at home-station clinics, small mobile X-ray units are placed. There are as yet many gaps in this organisation, but they are gradually being filled. No charge is made to any African patient at any Government clinic.

The demand from both the employers and the Africans themselves for more and more clinics is increasing at an unprecedented rate, but it is essential for success that each demand be closely scrutinised so that the provision of Clinics is related to the population at risk, and that no medical officer is expected to supervise more clinics than he can adequately deal with. Experience has shown that this number is four, including his home-station.

BUILDING PROGRAMME.

The Departmental programme for new buildings has now reached very formidable proportions in spite of very careful screening before any item is added. The task of allotting priorities within this programme becomes daily more difficult because so many factors, other than availability of finance, have to be borne in mind. These factors include the possibility of obtaining building materials and of securing contractors able and willing to carry out the work. Furthermore, many of the projects are on a scale which will take three or more years to complete, hence careful selection must be made so that the ultimate aggregate of the annual financial grants does not exceed the share of the building potential of the Colony allotted to Health matters. The problem is not made easier by the rapid increase in demand for curative facilities occasioned by the rapid influx of European immigrants and the high rate of natural increase of the Africans (who double their numbers in less than 20 years) coupled with the enthusiasm with which, even in the most remote areas, they come for treatment on European lines.

There is a grave risk that too easy a compliance with these demands will build up an annual bill for operational costs of a magnitude which the Colony will find difficulty in meeting and hence lead to an undesirable reduction in the funds available for preventive medicine. The need for more and more emphasis on the latter aspect of the work of the Health Department is only too apparent, but, as yet, it is difficult to educate the public into realisation that it is far better (and often cheaper) to prevent malaria, bilharziasis and other diseases than to maintain elaborate institutions for treatment.

The success of the Mazoe Valley Project has gone some way towards this goal, but far too few employers of labour realise the value of adequate housing, sanitation and pure water supplies for their employees, or at least their realisation of the problem is not acute enough to lead to effective action being taken. Yet the most cursory consideration of the position should reveal the inefficiency of taking employees to a clinic for treatment of a disease, such as bilharziasis, if the conditions which caused the infection are unchanged, so that the employee is re-infected within a few days or week of returning from the clinic. On the one hand, there is the expense of transport, of treatment and the loss of working days for no permanent benefit. On the other, care in the provision of a piped water supply and sanitation would make certain that the treatment given was worth while and that real value was obtained for the expense.

Research Facilities.—In addition to the work of the officers of the Malaria and Bilharzia Research Units, many of the Government medical officers undertake, in addition to their numerous routine duties, successful schemes of clinical and field investigations. These are encouraged to the full, but there are many other health problems which can only be tackled by whole-time workers with adequate

training and background, although satisfactory conclusions can be achieved in a matter of months by the right investigators given proper facilities. With some little difficulty, research workers of this type could be obtained from outside the Colony, but there is a grave lack of suitable laboratory or office in which they could work when invited here. In spite of the pressing need for other buildings which has been referred to above, some plan will have to be formulated in the near future to fill this gap, otherwise the Colony is likely to find itself unable to accept offers of assistance from outside bodies able and willing to supply investigators of specific problems.

PERSONAL.

During 1950 the deaths were recorded of two of the pioneer medical officers of the Colony, Dr. A. J. Mackenzie and Dr. J. Davey.

Dr. Alexander John Mackenzie died in Salisbury, Southern Rhodesia on 25th August, 1950, at the age of 75 years. He was born in Scotland and studied medicine at Edinburgh University where he qualified in 1900. He came to Rhodesia in 1902 and was the Resident Surgeon at the Salisbury Hospital. In 1905 he went to Hartley, in which he was to serve for most of his active life. In 1906 he married Miss Elizabeth Forbes. He was much interested in tropical medicine and undertook surveys of the remote Sebungwe district and the Zambesi Valley, where he discovered some of the earliest described cases of Rhodesian Sleeping Sickness. As a result of his tours he became a crack big game shot and hunter. In 1918 the district headquarters was moved from Hartley to Gatooma and Dr. Mackenzie had the task of building up the hospital and medical services at this centre from the beginning. In 1927 he acted as Medical Director of the Colony. In 1934 he was chosen to accompany the late Duke of Kent on his tour of the Colony. He retired in 1935 from Government Service, but continued his practice as a Mine Medical Officer for a further period. In 1940 he returned to work and undertook the arduous duties of P.M.O., R.A.F. Training Group in Southern Rhodesia. At the end of the War he retired and came to live in Salisbury.

He was blessed with a kindly, approachable nature and was most helpful to junior colleagues who learnt much from his fund of local medical knowledge. He made a close study of African medical customs and beliefs and was a born raconteur. He is survived by a widow and four children, two sons and two daughters.

Dr. James Davey died at his home near Que Que, Southern Rhodesia, on the 15th August, 1950, at the age of 73 years. He was born near Taunton in Somerset and studied at the London Hospital where he took the Conjoint Diploma in 1900. He served in the Boer War, and after a short period of practice at Serowe in Bechuanaland he came to act as *locum tenens* at the Globe and Phoenix Mine and there he continued to serve until 1939 when he retired. He married Miss Mary Alison Brown in 1907; she had been a nursing sister at the Kimberley Hospital. At Que Que he acted as the District Surgeon and later was an Aided Government Medical Officer for the district until 1937 when the Government opened a hospital and appointed a medical officer to the district. On the outbreak of War he returned to practice and released a younger man for active service by serving at the Asbestos Mines at Mashaba.

He is remembered with affection in the Que Que district where the older residents recall his mule cart travelling the countryside in all weathers, before the days of proper roads or bridges. He gave loyal and unwearying service to this community and is said to have conducted more than 1,000 deliveries.

He is survived by his widow and five children, two sons and three daughters, one of the sons having followed his father's profession.

It is fitting that the great parts they played in building up the medical work of this Colony should thus be recorded as examples and encouragement to those who follow along the road they pioneered.

In conclusion the year 1950 can be recorded as one of some solid achievements and some progress, but closing with a realisation of how much still needs to be done before any mood of complacent satisfaction can be justified.

CHAPTER I.—VITAL STATISTICS.

(1)—Information for World Health Organisation.

In accordance with Article 61 of the Constitution of World Health Organisation, information has been requested from States on various aspects of public health. Most of the items are covered adequately in the annual report on the public health. A general summary of other information may however be of interest to readers not familiar with conditions in Central Africa. It is fitting that such a survey should be made this year, as the Colony celebrated during 1950 the Diamond Jubilee of the occupation of the territory by the Pioneer Column and Police of the British South Africa Company in 1890. The celebration coincides with 27 years of responsible government as a self-governing Colony within the British Commonwealth of Nations.

Southern Rhodesia is a land-locked territory in Central Africa lying between the Zambesi and Limpopo Rivers, and is 150,333 square miles in extent. To the north and west, across the Zambesi River, the Colony bounds with Northern Rhodesia, and to the north-east and east, with Portuguese East Africa. To the south, at the Limpopo River, there is a common boundary with the Union of South Africa, and to the south-west and west, with the Bechuanaland Protectorate. None of the major rivers is navigable and there are no natural lakes.

Development of the Colony has taken place along a high watershed, between 4,000 and 5,000 feet above sea level, which runs in a wide arc, concave to the south, extending from Plumtree on the south-western border to near Umtali on the Eastern Border. Along the eastern border, a mountain range runs north and south and the highest point in the Colony, Inyangani, 8,250 feet, is in this area.

There is a considerable variety of climate, mainly because of the range of altitude. The Zambesi valley has a true tropical climate, but in the higher regions conditions are less extreme. At the 5,000 feet level the temperature rarely exceeds 90 degrees F., and hot weather is mainly confined to a period of some two months before the rainy season. In the south there is a vast area below 3,000 feet, which, although recording occasional temperatures of 105 degrees F. to 110 degrees F., is subject to frequent invasions of maritime air from the south-east, and these provide considerable relief from the heat. In spite of the greater altitude in the north-west of the country towards the Victoria Falls, the heat experienced before the rains is more persistent. These hot areas are separated by a plateau, above 4,000 feet, with a congenial climate, on which most of the European settlement has taken place.

The outstanding feature of the climate of Southern Rhodesia is the well-marked summer rainy season. Normally it begins during the latter half of November and extends to the middle of March. Occasional thunderstorms occur in the hot weather prior to the rains, and showers may continue for several weeks after the main rains have ended. The period May to September, however, is almost rainless, although the mountainous districts along the eastern border may receive much orographic rain and drizzle. The first half of this dry season is cool with clear, cold nights and occasional ground frosts, but from the middle of August the temperature rises rapidly to reach its maximum in late October or early November.

The growth of the population and the gradual approach of the European population to a more settled condition can be estimated from the figures obtained at the Censuses:—

	1901	1904	1907	1911	1921	1926	1931	1936	1941	1946	1950
Population in Thousands:											
Europeans	11.0	12.6	14.0	23.6	33.6	39.2	49.9	55.4	69.0	82.4	129.0
Coloured and Asiatics	1.0	1.9	(a)	2.9	3.2	3.6	4.1	5.4	6.5	7.5	8.8
Africans (estimated)	500.0	591.0	670.0	745.0	862.0	934.0	1,076.0	1,239.0	1,404.0	1,704.0	1,957.0
Proportion of European Females per 1,000 Males	(a)	(a)	(a)	515	771	796	839	864	883	863	(a)
Proportion per 1,000 of the European Population living in Towns with Populations of 1,000 or over	(a)	(a)	(a)	(a)	435	479	498	493	577	581	(a)
Crude Birth Rate per 1,000 (European)	(a)	23.9	26.9	27.1	27.0	23.8	23.6	23.4	25.4	25.7	26.3
Crude Death Rate per 1,000 (European)	(a)	18.8	13.7	12.2	9.4	8.8	8.3	10.3	10.0	8.2	6.7
Infant Mortality Rate per 1,000 Live Births (European)	(a)	(a)	115	105	62	49	45	49	43	30	35

(a) Figures not available.

It will be seen that the European population continues to show many pioneer characteristics, the preponderance of males, the high birth rate and the general high rate of immigration. Population pyramid diagrams, based on the 1946 Census, show an irregular shaped pyramid with a broad base in childhood, a narrow waist in adolescence and young adult life, with a great increase in width at the 30-40 age group and then rapidly narrowing to a sharp peak in the older ages. The Union of South Africa shows a regular conical pyramid and that of England and Wales a broad flattened peak, showing the preponderance in the older age groups.

With regard to the constitution and growth of the African population, much less is known and in the past, populations have been estimated by applying various factors to the number of tax paying males. In 1948 a full-scale sample census of the African population was made using the principle of interlocking and counter checking sampling and by this means, the population was shown to be in close agreement with the estimate based on tax register estimates. This census showed that the African birth rate was 46.2 per 1,000, the death rate 18.1 per 1,000, and the infant mortality rate 131 per 1,000 live births. This section of the population is increasing with great rapidity by natural increase and has doubled itself over the past 20 years.

Gold mining is still a major industry although many of the mines are small; mineral production now embraces chrome, asbestos, coal, mica and many other mining products on a smaller scale. Agriculture was established to support the local population, maize being the staple food crop for African workers. Tobacco has been grown for many years and production of this crop has recently been increased with a view to meeting the demand of the United Kingdom for tobacco from the sterling area. The growing of sugar and cotton is being developed, afforestation is proceeding and methods of improving pasture are being investigated to assist the cattle industry in supplying the ever-increasing demand for meat.

Industrial development is fairly new. An Electricity Supply Commission has been established; a fair-sized iron and steel works was recently put into operation at Que Que; cotton spinning mills are in production at Gatooma; sugar is being refined in Bulawayo and numerous secondary industries are springing up. Southern Rhodesia is thus at a stage where its population and industrial activities are growing rapidly.

The two main towns, Salisbury and Bulawayo, have grown very largely and including the areas near these cities and dependant on them, a little under one half of the European population is concentrated in and around these centres.

With regard to Medical and Health Services, a statement on the central government services is contained in the introduction to the 1948 Report. There are six municipalities which are autonomous health authorities employing their own staff. The Town Management Boards, which number 18, are also health authorities, but depend generally on central government staff for advice and guidance.

The proportion of general expenditure allocated to Medical and Health Services is as follows:—

Financial Year	1929-30	1939-40	1949-50	1950-51 (estimated)
Health and Medical expenditure in £ Sterling	155,918	288,997	1,235,140	1,439,705
Total expenditure of Colony from Revenue Funds in millions £ Sterling	2.41	3.79	14.83	16.6
Health and Medical Services expenditure per cent. of Total	6.5	7.6	8.3	8.7

It is very difficult to allocate the central government's expenditure on health and medical services accurately, as between health services and medical care. Medical officers, for example, perform a dual function in this respect and laboratories do work for both sections of the service. The central government has always had to bear a high proportion of the responsibility for medical care in institutions and to this day there are only two European general hospitals and one maternity home privately operated. The total health budget for the financial year 1950-51 is £1,439,705 or 13.9 shillings per head of the total population. This total may be broken down into the following sub-headings of expenditure expressed as a percentage of the total health budget:—

(a) Staff salaries and allowances, Curative Services	33.8
(b) Staff salaries and allowances, Preventive Services	7.8

(c) Cost of maintenance, Curative Services and Institutions	40.6
(d) Grants to Medical Missions	3.9
(e) Grants to local authorities for health purposes	4.8
(f) Cost of Maternity Services	6.1

By rough estimate 12.5 per cent. of the total medical and health budget of the central government is allotted for administration and public health and 87.5 per cent. for medical care. This represents for the financial year 1950-51 an expenditure of 1.74 shillings per head of the population on administration and public health, and 12.16 shillings on medical care.

(2) *Population of Southern Rhodesia.*

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

	1950	1945	1940
Europeans	129,000	80,500	61,450
Asiatics	3,600	2,970	2,540
Coloured Persons	5,200	4,280	3,420
Africans	1,957,000	1,607,000	1,367,000
Total	2,094,800	1,694,750	1,434,410

The next census of the first three categories of the population is due to be held in May, 1951.

(3) *Summarised Vital Statistics.*

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

	1950	1945	1940
Estimated European population	129,000	80,500	61,450
Rate of natural increase for 1,000 of the population	19.6	16.8	19.6
Gross number of immigrants	16,179	1,745	1,157
Number of European births	3,395	2,038	1,748
Illegitimate births included above	50	32	22
Annual birth rate per 1,000	26.3	25.3	28.4
Number of European deaths	860	687	544
Annual crude death rate per 1,000	6.7	8.5	8.9
Number of infant deaths	118	72	71
Infant mortality rate per 1,000 live births	35	35	40
Number of still births (not included in either births or deaths)	54	33	33
Number of maternal deaths	7	8	5
Maternal mortality rate per 1,000 live births	2.1	3.9	2.9

(4) *European Birth Rates.*

	1950	1945	1940
Southern Rhodesia	26.3	25.3	28.4
England and Wales	15.8	17.8	14.6
Union of South Africa	25.7	25.4	25.4

(5) *European Infant Deaths.*

(I) Causes of Death, 1941-50.

Disease	No. of Deaths	Percentage of Total
Premature birth and diseases of early infancy	467	54.5
Diarrhoea and enteritis	97	11.3
Bronchitis and pneumonia	66	7.7
Malaria	55	6.4
Measles, whooping cough, diphtheria and dysentery	27	3.2
Other causes of infant death	145	16.9
	857	100.0

(II) Deaths during different months of age, 1941-50.

	No. of Deaths	Percentage of Total
First month	506	59.0
Two to six months	210	24.5
Six months to twelve months	141	16.5
	857	100.0

(III) Causes of Infant Death, 1950.

International List No.	Cause of Death	No. of Deaths
A 1	Tuberculosis of respiratory system	1
A 12	Typhoid Fever	1
A 20	Septicaemia and pyaemia	2
A 21	Diphtheria	1
A 23	Meningococcal infections	1
A 32	Measles	1
A 37	Malaria	3
A 60	Benign neoplasm and neoplasms of unspecified nature	1
A 69	Mental deficiency	1
A 71	Non-meningococcal meningitis	1
A 88	Influenza	1
A 89	Lobar pneumonia	1
A 90	Bronchopneumonia	8
A 104	Gastro-enteritis and colitis, except diarrhoea of the new-born	14
A 128	Congenital malformations of circulatory system	7
A 129	All other congenital malformations	6
A 130	Birth injuries	11
A 131	Post-natal asphyxia and atelectasis	13
A 133	Haemolytic disease of new-born	5
A 134	All other defined diseases of early infancy	7
A 135	Ill-defined diseases peculiar to the first year of life, and immaturity unqualified	29
A 137	Ill-defined and unknown causes of morbidity and mortality	1
AE 138	Motor vehicle accidents	1
AE 147	All other accidental causes	1
		118

(IV) Infant Mortality Rates.

	1950	1945	1940
Rate per 1,000 live births—			
Southern Rhodesia	35	35	40
England and Wales	30	46	55
Union of South Africa	41	40	50

The infant mortality rate is very unsatisfactory and in 1950 is much worse than the rate in England and Wales. The rate for 1949 was the lowest ever experienced in the Colony. A disquieting feature has been the deaths certified as due to infections such as typhoid fever, cerebro-spinal meningitis, diphtheria and pulmonary tuberculosis, and a very marked increase in the deaths due to enteritis and diarrhoea.

(6) European Deaths.

(I) European Death Rates per 1,000.

	1950	1945	1940
Southern Rhodesia	6.7	8.5	8.9
England and Wales	11.6	12.6	14.4
Union of South Africa	9.1	9.3	9.4

The crude death rate is the lowest rate ever recorded, the rate for 1949 having been 7.0 per 1,000. This throws into even greater prominence the disappointing infant mortality rate.

(II) Causes of European Deaths, 1946-1950.

	1950	1949	1948	1947	1946	Total	Percentage of Total Deaths
1.—Heart Diseases	185	152	165	123	127	752	19.3
2.—Malignant Disease	126	129	97	108	86	546	14.0
3.—Nervous Diseases	78	83	75	70	75	381	9.8
4.—Violence	95	81	81	70	53	380	9.8
5.—Premature Birth and Diseases of early Infancy	65	65	55	62	38	285	7.3
6.—Pneumonia and Bronchitis ..	26	29	35	26	41	157	4.0
7.—Malaria and Blackwater Fever ..	14	18	32	25	34	123	3.2
8.—Tuberculosis (all forms) .. .	11	13	23	8	11	66	1.7
9.—Diarrhoea and Enteritis .. .	14	10	8	18	5	55	1.4
10.—Old Age	9	6	11	10	16	52	1.3
11.—Influenza	8	6	4	3	8	29	0.7
12.—Poliomyelitis	8	1	3	1	6	19	0.5
13.—Enteric Fever	3	5	4	2	4	18	0.5
14.—Dysentery	8	2	5	2	1	18	0.5
15.—Diphtheria	4	4	1	1	4	14	0.4
16.—Cerebro-Spinal Meningitis .. .	5	1	2	1	1	10	0.2
17.—Other Causes	201	203	220	188	177	989	25.4
TOTAL	860	808	821	718	687	3,894	100.0

The details of the causes of European deaths appear at Appendix C where they are classified in accordance with the Intermediate List of 150 causes. During 1950 deaths were classified in accordance with the Sixth Decennial Revision, and the form of death certificate recommended in W.H.O. Regulations No. 1, was also introduced during the year.

(7) Maternal Mortality.

European Maternal Deaths, 1941-1950.

	No. of Deaths	Percentage
Puerperal sepsis	19	34.5
Puerperal haemorrhage	10	18.2
Other accidents of child birth	10	18.2
Puerperal albuminuria and convulsions	8	14.6
Accidents of Pregnancy	7	12.7
Other causes	1	1.8
	55	100.0

The maternal mortality has more than trebled since 1949, when there were only two maternal deaths. The vast majority of European births take place in maternity homes, 93 per cent. of the total. The maternal mortality in institutional confinements was 1.57 per 1,000 live births, the equivalent rate for home confinements is 9.44 per 1,000. It therefore appears that, despite the overcrowding and pressure on maternity home accommodation, it is safer for the mother to be confined in an institution, than in her own home where facilities may be poor and skilled help not always available.

CHAPTER II.—INFECTIOUS AND COMMUNICABLE DISEASES.

(1) Notification of Infectious Disease.

The efforts to improve the notification of infectious disease have met with some success and it is believed that this is now being more accurately done than in previous years.

1. *Convention Diseases.*

Disease	European		Non-European	
	Cases	Deaths	Cases	Deaths
*Cholera	—	—	—	—
*Plague	—	—	—	—
*Smallpox	5	2	1,029	221
*Typhus fever (exanthematous)	—	—	—	—
*Yellow Fever	—	—	—	—

2. *Tuberculosis and Silicosis.*

*Pulmonary tuberculosis	36	4	704	150
*Non-pulmonary tuberculosis	12	2	166	53
Silicosis	—	—	3	1
*Silicosis with active tuberculosis	—	—	27	4

3. *Infectious Diseases of Childhood.*

*Chickenpox	450	—	638	—
German Measles	11	—	—	—
Measles	68	—	66	—
Mumps	29	—	33	—
Whooping Cough	9	—	38	2

4. *Virus Encephalitis Group.*

*Acute anterior poliomyelitis	34	9	20	2
*Polio-encephalitis	3	2	—	—

5. *Bacterial Infections.*

*Anthrax	—	—	6	—
*Scarlet fever	212	—	2	—
*Erysipelas	13	—	2	—
*Puerperal septicaemia	—	—	15	7
*Cerebro-spinal meningitis	19	5	545	72
Meningitis—other organisms	—	—	6	5
*Diphtheria	36	3	78	22
*Typhoid fever	36	2	324	41
*Paratyphoid fever	4	—	11	2

6. *Miscellaneous.*

Relapsing fever	1	—	6	—
Tick typhus	2	—	1	—
Murine typhus	—	—	1	—
Trachoma	—	—	19	—
*Trypanosomiasis	1	—	8	3
*Undulant fever	—	—	2	—
*Rabies	—	—	1	1

* Indicates diseases which are notifiable infectious diseases under the Public Health Act.

(2) *Malaria and Blackwater Fever.*

The 1949-50 rainy season was very favourable to malaria transmission and there was a general increase in the hospital morbidity for malaria, African cases being double the number in the previous year. The Gatooma area was particularly seriously affected and 25 per cent. of the total European admissions and 15 per cent. of the African admissions to the Gatooma hospital were for malaria. In certain areas of this district, agricultural work was brought almost to a standstill because of the malaria incidence. Reference was made in the 1948 Report to the high incidence of malaria and the high mortality from the disease, especially in infants, which was being experienced in Africans being moved to new areas. It was noted, that even quite short distance mass movements of populations, to areas where the malaria situation did not seem very different, had resulted in severe epidemics. The experience, this year, has amply justified the fears which have been expressed, in carrying out such large scale population movements, without a careful survey of conditions at the new site and staff and equipment to deal with any increased morbidity during the early years of development. For this to be possible, proper village siting, the construction of reasonable houses and ready road access, even in the rainy season, are most essential. Efforts to lighten the burden of malaria on these people have included residual spraying of dwellings and the issue on a large scale of prophylactic drugs.

Since the earliest days of the Colony, quinine tablets have been available for purchase at all Post Offices. The Government of the time undertook this service when the price of quinine through commercial channels was high. At the end of the 1939-45 war, quinine was withdrawn from supply by Post Offices and stocks of mepacrine and proguanil (paludrine) were made available. In view, however, of the fixation of the price of these products by the manufacturers, the situation arose when the Government was selling these drugs at Post Offices at the same

price as the stores, which ceased to stock these lines. It was therefore decided, after adequate arrangements with the trade, that the sale of anti-malarial at Post Offices would cease. Mepacrine and proguanil can be stocked and sold by any trader and it is hoped that their availability to the public now will be even greater than could be possible through Post Office channels.

There has been a great increase in the use of residual insecticides as a measure of malarial control and many country dwellers are now providing themselves with this protection and, by spraying the houses of their African labourers, have cut down local breeding and parasite transmission to a minimum. Benzene hexachloride wettable powder and particularly the preparation made in the Union of South Africa, which has a 12½ per cent. gamma isomer content, has proved to be a most effective and cheap material. The complaints of smell and corrosion of pumps reported in other parts of the world, when B.H.C. wettable powders are used, do not seem to arise with this product, which, because of its greater effectiveness against flies, is preferred to D.D.T. preparations. Every encouragement has been given to the voluntary co-operation of groups of people to undertake residual spraying as an organised plan embracing all human habitations in a large area. Details of the Mazoe Valley Project appear in Chapter IV and in Appendix P. In the Nyamandhlovu area, farmers have organised a residual spraying programme with excellent results and in the same area, the African inhabitants of the Gwaai Native Reserve raised a considerable sum of money and residual spraying was carried out over a large area with such good results that the work is being continued and is now being taken up in near-by Native Reserves. As the Regional Medical Officer of Health, Western Region, states: "there is an awakening to the fact that malaria is not an act of God."

In addition to the already large amount of voluntary co-operation now being shown, the Government will, at the end of the two years operation of the Mazoe Valley Health Project in August, 1951, transfer its four spraying teams to work in a group of Native Reserves in Northern Mashonaland, where the Africans will contribute financially to the cost of the scheme. This will protect a population of close on 200,000 people residing in an area with great potentialities for food production. It is hoped to extend this scheme, eventually, to cover all native areas of the Colony where the population density (about 40 per square mile) and accessibility warrant the expenditure. These teams will, of course, be equipped to apply residual insecticide before and during the rainy season and to apply snail killing agents to rivers and streams during the dry winter months.

After a virtual eclipse, blackwater fever has reappeared and a number of cases and deaths in Africans have been reported. Details of the distribution of hospital admissions can be seen in Table F of the Appendix.

(3) Bilharziasis.

Miracil D hydrochloride (B.W. Nilodin) was introduced as the standard treatment of *B. Haematobium* infections about the middle of 1950. It is felt that many patients, who would have had to be admitted to hospital, can now be treated as out-patients. Even should admission be thought necessary, a course of treatment, lasting only three days, results in a big saving in hospitalisation charges. The drug is supplied by the makers to this department in 0.5 gramme compressed uncoated tablets, scored for easy division. Forty-six and a half kilos were issued to institutions during 1950, enough to treat over 11,000 cases of the disease. Preliminary trials of an oral antimony preparation have begun.

The Research Laboratory prepares cercarial antigen, which is used as a skin test in the diagnosis of the disease. Thirty-eight thousand, seven hundred doses were issued to medical practitioners in Southern Rhodesia and 7,200 doses to workers outside the Colony for experimental purposes.

Copper sulphate as a molluscicide was more extensively used than previously, 25½ tons being used in the Mazoe Valley Project, 4,150lb. by Government Health Inspectors, 700lb. by municipalities, and 1,500lb. by other agencies, a total of 28½ tons. Experience is showing that the best hope of snail control is to apply molluscicide by teams and in accordance with a plan, rather than supply the chemical to the landowner free to treat streams on his own land.

A method of macroscopic diagnosis of urinary bilharziasis has been developed. With a simple rack and lens, costing only six shillings, urine deposits can be examined for miracidia, without the need of microscopes or trained microscopists. In very light infections, the macroscopic method is more sensitive than the routine microscopic examination. On the other hand, cases which are passing only dead or unhatchable eggs, will show no evidence of the disease. The method is of particular value when children are being examined, as, in this group, most eggs are in a

hatchable condition. By this means, urinary bilharziasis surveys can be undertaken on a large scale, with the minimum of equipment and relatively untrained staff. Further remarks on this disease will be found in Chapter IV and in Appendix P.

(4) Tuberculosis.

Tuberculosis, especially pulmonary tuberculosis, gives every indication of becoming the main health problem of the Colony. The accommodation for cases in all races is woefully short. During the year, the accommodation for European cases was increased by the provision of six additional beds for male patients at the Salisbury Tuberculosis Hospital. This hospital, originally the Old Salisbury Municipal Isolation Hospital, was requisitioned to Government use during the war and was used to accommodate more chronic types of case, including persons suffering from pulmonary tuberculosis. In 1949, the hospital was handed back to the Salisbury City Council, who ran the hospital for tuberculosis cases. The Government guarantees the fees of these patients to the Council and recovers a small proportion of the cost from those able to pay.

There has been a serious increase in the number of cases requiring hospital treatment, many in persons who have newly arrived in the Colony, having come on the advice of doctors in the United Kingdom, in the mistaken belief that the climate here is a sufficient reason for advocating the emigration of such cases. Whatever may have been the merits of this view a quarter of a century ago, nowadays, with suitable housing difficult to obtain, the environmental conditions of many go far to stultify any climatic advantage. Of a total of 131 European cases of pulmonary tuberculosis now under observation, 74 either arrived with the disease or developed it within two years of entry. The number of cases in new immigrants has risen sharply. In view of the serious difficulties in hospital accommodation and of ensuring reasonable housing for the patient and family on his discharge from hospital, it has been decided to insist that every person seeking to enter the Colony for permanent residence, should produce a report by a radiologist that an X-ray of the chest, taken not longer than three months before entry, showed no evidence of active pulmonary tuberculosis. This will be required of all persons over three years of age.

During the year, the Martin T.B. Sanatorium, in the Chindamora Reserve not far from Salisbury, was brought into commission. This institution can only cope with a small proportion of the cases occurring in Africans, but provides a means whereby cases, who are likely to respond to treatment, will be cared for. It is most important that it should not be thought of as a place where tuberculosis cases go to die.

With the object of determining the level of Mantoux conversion in African school children in an urban area, a co-operative survey has been carried out by a group of medical officers in Bulawayo and the neighbourhood. The standard test was the intradermal injection of 0.1 cc. of 1/1000 dilution of old Tuberculin and the result was read at 72 hours. The reactions were clear cut, positives being recorded when the wheal diameter at its widest was at least 5 mm. Another survey was conducted in a rural area in Mashonaland where children, living in their traditional peasant environment, were tested and surveyed on the same standards as the Bulawayo survey. The Bulawayo group was drawn from children living in the more congested areas in the city and also from the more spacious and generally better housing of a modern, well-designed native village of suburban character. The summarised results of these surveys are as follows:—

Bulawayo Survey				Mashonaland Rural Survey			
Age Group	Number Tested	Number Positive	Per cent. Positive	Age Group	Number Tested	Number Positive	Per cent. Positive
4—7	229	24	10.5	1—5	100	10	10.0
8—11	551	118	21.4	6—10	826	88	10.6
12—15	705	222	31.5	11—16	990	204	20.6
16—19	196	80	40.8	—	—	—	—

The age groups of the two surveys are fairly comparable, as it is difficult to get exact ages in Africans. The numbers examined of each sex in each age group are fairly equal and there seems to be no significant differences on a sex basis in the Mantoux rate. There would, however, appear to be a definite lag

in Mantoux conversion in a rural population as compared with an urban group, who, by the age of 11 years, have attained a conversion rate only reached by rural children at 16 years. In the breakdown of the Bulawayo group of children, there is little difference between the Mantoux rates seen in the children from Luveve village as compared with those living in the congested areas in the City.

The Bulawayo survey included the investigation of African and European training staffs at the Hospital. The African staff falls largely into the age group 20-27 years, where, by analogy with the results in school children, the Mantoux positives would be expected to be of the order of 50-60 per cent. In fact, it was 100 per cent., which probably indicates that nursing trainees are subjected to a high exposure risk to the disease. In the rural Mashonaland survey, 942 adults were also examined and 404 of these, 43 per cent., were Mantoux positive. If the adults are grouped as old and young adults, the older males show the highest conversion rate, 58 per cent., in 164 examined. The old females, on the other hand, show a lower rate than the younger group of that sex. The males, of course, are more likely to be visiting and working in towns and mines and thus exposed to greater risk of infection.

The preliminary findings are, however, of great interest and merit further surveys. The results do indicate that the African population, both rural and urban, shows, by the evidence of the Mantoux test, very much the same reaction to tuberculosis as is evidenced by other populations.

It is proposed, as soon as possible, to proceed with B.C.G. vaccination on a voluntary basis, of all susceptible persons who are entering on vocations where they are subjected to a high exposure risk, e.g. probationer nurses and medical orderlies in training. The results of the pilot scheme will indicate whether B.C.G. vaccination should be extended to other groups, where the risk of infection is above average.

(5) Smallpox.

Yet again this disease was a constant anxiety to the health staff and sporadic cases were reported from many localities in the northern half of the Colony. Localised epidemics occurred in the Belingwe and neighbouring native districts, where the case mortality rate was very high. Practically all outbreaks of the more severe type originated in villages, where there were large numbers of adherents of religious sects, who evaded vaccinations and failed to report cases by hiding them away. Despite energetic action by Magistrates and the deaths of numbers of adherents of these sects, these people continued to defy the authorities and would not co-operate in the vaccination campaign and the quarantining of patients and contacts. In the northern part of the Colony, the position was made more difficult by the existence of small pox in Portuguese East Africa, near our northern border.

These labourers are all vaccinated on entry to the Colony, but some of these were incubating the disease at the time of entry and developed the rash at their place of work a few days later.

Smallpox has again absorbed a very large part of the time and energies of the health inspectors to the detriment of their other duties. During 1950, 957,582 vaccinations were performed, the majority by the staff of this Department.

The present epidemic began in 1945 after the Colony had been relatively free for some years. Since then the progress of the disease has been as follows:—

Year	European		Non-European		Non-European Cases per 100,000
	Cases	Deaths	Cases	Deaths	
1945	—	—	33	—	2
1946	—	—	181	1	11
1947	—	—	685	117	39
1948	4	2	1,819	426	97
1949	4	—	857	60	45
1950	5	2	1,029	221	52

Five cases in European persons were reported. There were two deaths, an unvaccinated child, who was also suffering from whooping cough and an adult male of 42 years, who had not been vaccinated since infancy. The other three cases, all adults, were unvaccinated. During the past five years, there has been heavy immigration from the United Kingdom, and many families, not being vaccinated and not realising that they are exposed to a much greater risk of

infection in this Colony, neglect or refuse to avail themselves of this freely available and well proved method of prophylaxis against the disease. The number of Europeans, who record their conscientious objection to vaccination for themselves and their children, happily remains very small and amounts to less than ten per year.

(6) *Yellow Fever.*

The task of extending the areas, where samples of blood have been taken for the mouse protection tests, has been continued in 1950. Opportunity was taken of the medical patrol, along the reaches of the Zambesi River for 200 miles upstream from the Kariba Gorge, to obtain a number of samples from the population who are concentrated along the bank of the river.

With the co-operation of the Department of Civil Aviation, the blood sample collections were flown out from this most inaccessible area from emergency landing grounds. All bloods taken were in the Virus Research Laboratory in Johannesburg within 48 hours of the blood letting. Further investigations were made along the western and northern areas of the Colony, which, in order from west to east, were as follows:—

Site	Number of Samples	Mouse Protection Test—Positive
1.—Northern Wankie ..	44	—
2.—Binga, Sebungwe ..	106	1
3.—Sigalenke, Sebungwe ..	93	—
4.—Siamupa, Sebungwe ..	123	—
5.—Sampakaruma, Sebungwe ..	77	—
6.—Chanetsa, Urungwe ..	36	—
7.—Bushu, Shamva ..	28	—
TOTAL	507	1

These blood samples were all examined by Dr. J. H. S. Gear at the S.A. Institute for Medical Research at Johannesburg and the positive and inconclusive results were further checked at the Virus Research Institute at Entebbe.

A total of 778 samples have now been examined during 1949 and 1950 from the northern and western areas of the Colony. Three positive blood specimens have been obtained and one of these was confirmed on a repeat examination. They were all from women who had not been inoculated and who were unlikely to have travelled far from their homes. The 1950 positive case lives at Binga's village, which is only a few miles down-stream from the case found in 1949 at Siachilaba's Village, in the northern salient of the Wankie Native District, on the south bank of the Zambesi River. The blood sampling, so far undertaken, can be said to be a reasonable sample of the north-western borders of the Colony and it is hoped to extend the surveys along the northern border and to the areas further to the east and south.

(7) *Rabies.*

The Colony has been free from Rabies since 1913, when the last person to have been bitten by a dog proved to be rabid, received treatment. The disease was first reported in Southern Rhodesia in 1902 and until July, 1906, up to ten cases were treated each year. In July, 1906, however, the disease suddenly became more widespread and in the remainder of 1906, 41 persons, nine Europeans and 32 Africans, received treatment. During the whole of 1906, 45 persons were treated and two deaths occurred. All but 12 of these cases were bitten by dogs proved rabid, pronounced rabid by a veterinary surgeon or medical practitioner or almost certainly rabid from the history. Two deaths occurred from rabies in persons who had received no treatment. The further history of the outbreak was as follows:—

Year	No. of persons treated	European	African	Deaths
1907	33	16	17	—
1908	3	2	1	—
1909	4	1	3	—
1910	2	1	1	—
1911	16	11	5	—
1912	30	16	14	2
1913	4	4	—	—

The recrudescence in 1911-12 started in the Fort Victoria District and spread widely. The epidemic was finally stamped out when, by means of mobile police patrols, all stray dogs or dogs not under proper supervision were destroyed. From 1913 to this year, there has been no evidence of rabies in humans or animals within the Colony, although sporadic cases continued to be reported from neighbouring territories.

A Pasteur Institute was established in Bulawayo by Dr. Lohr, of the Tunis Institute in 1902 and moved to Salisbury in 1906. Until 1938, a strain of virus was maintained and vaccine manufactured and issued to nearby territories.

The Pasteur Institute, Salisbury, up to 1913, had treated 163 patients including persons from Northern Rhodesia. There were three deaths, two after treatment had been completed and one during a course of treatment.

In animals, the experience was that the disease was confined mainly to dogs, and of 54 animal brains proved rabid in 1907, 47 were from dogs.

In August, 1950, canine rabies was confirmed in the Gwanda district, near the southern border, and from investigations, it would seem that the virus had been active in animals for some months before this date. The first and only human case of the disease was reported from the same area. An African child, who had been bitten by a dog six weeks before and subsequent to the news that rabies was present in the area, was brought to hospital for treatment. He developed active signs of rabies and died before treatment could be continued. Canine rabies has spread widely over the southern and eastern parts of the Colony and a number of persons, bitten by, or in close contact with dogs presumed to have died or been destroyed on account of rabies, have sought treatment.

Since 1938, rabies vaccine has been imported from the Union of South Africa to maintain a small stock for emergency use. Consequent on recent advances in vaccine preparation, the Union are now importing their requirements, which has caused temporary difficulties in supplies in Southern Rhodesia. The Veterinary Department are taking energetic steps in the control and movement of dogs in the affected areas. Powers have now been taken to destroy all dogs not under proper control in all proclaimed areas of the Colony and these may have to be extended.

(8) Leprosy.

Details of the cases treated in the two leprosy hospitals are given in Table A of the Appendix.

The excellent results reported last year with sulphetrone in lepromatous cases have been fully confirmed and the vast majority of this type of case in both hospitals is now being treated with this drug. At Ngomahuru, a group of 79 cases have been under treatment with D.A.D.P.S. and the results are very encouraging. In 17 out of 33 cases of neural leprosy with active tuberculoids, the lesions have completely subsided. The results with lepromatous cases are also encouraging, but the progress is rather slower. The added advantages of cheapness, oral administration and the lower incidence of toxic signs and symptoms, give great hopes that D.A.D.P.S. may be the most useful therapeutic agent in this disease.

At Mtemwa, a Government aided school for children and young adults has been established. The qualified teacher is assisted by a leper teacher and the average daily attendance is about 60. This has had an excellent steadying effect on the younger members of the community, who on occasions were liable to get out of hand. This settlement is now very full and much rebuilding and renovation is necessary. The anxieties about the water supply are not now so pressing as they were.

At Ngomahuru, the standard of discipline has deteriorated and it would seem that the first reaction of the community to the grant of more freedom of movement within the settlement has been an increase in drunkenness and prostitution. Conditions have been improved during the year and a new compound was brought into use.

The European and the Coloured patients, the only two non-Africans now undergoing treatment, are making excellent progress on sulphetrone.

Plans are on foot to co-operate with the other two Central African territories in having a comprehensive leprosy survey made by a specialist in this disease. It is hoped that, by sample surveys throughout the Colony, a more accurate picture of the incidence and type of disease will be available. Steps are being taken to

reduce the period of surveillance in a non-infective state within the institutions before permitting discharge and continuation of treatment elsewhere on an out-patient basis.

(9) *Enteric Group of Fevers.*

Since the end of the War, the situation with respect to this group of diseases has been giving cause for increased anxiety, especially in the increase in the number of African cases. Most of the European cases have been in dwellers in rural areas, but the majority of African cases have been in the towns and close-settled areas. Alves in 1936 showed, on the evidence of agglutination reactions, that 15 per cent. of sera from uninoculated African populations not suffering from the disease, showed significant agglutination titres. In spite of this, the incidence of clinical enteric fevers was quite low. It would appear, that the "salting" of the African population in their youth and at their homes does not now take place to such an extent and that, when subjected to a heavy infection, usually when living in congested and insanitary conditions, they now succumb and develop the clinical signs of the disease and show a high mortality. Seventeen European and 121 African cases were reported in 1950 from the Bulawayo area.

The incidence of enteric fevers in the past six years has been as follows:—

Year	European		African	
	Cases	Deaths	Cases	Deaths
1945	40	—	126	—
1946	26	1	95	9
1947	48	3	111	9
1948	37	4	179	17
1949	45	1	194	33
1950	40	2	335	43

(10) *Poliomyelitis.*

This disease caused some anxiety and much public apprehension during the year. The cases continued to occur over much more of the year than usual. Including the other virus encephalitis diseases, 37 cases occurred in Europeans and 11 deaths resulted, which is the highest total recorded and exceeds the 1946 figure of 33 cases. The African cases reported were only slightly less than the 1946 figure. The high mortality rate seems to have been due largely to a small series of cases of bulbar type, with very high mortality in one rural district. In two of these cases, Lansing type virus was recovered from the stools.

(11) *Cerebro-spinal Meningitis.*

The years 1948 and 1949 were made notable over a great deal of Africa, South of the Sahara, by a very large epidemic of this disease involving hundreds of thousands of cases. The epidemic, gradually lessening in its extent, seemed to reach this Colony in the latter half of the year. The local epidemics were scattered throughout the Colony, especially in the Que Que and Salisbury districts, and produced in each focus many more secondary cases than usual. The exhibition of prophylactic sulphonamides was not so successful as in the past. Many of the fatal cases died in a matter of a few hours and, in some cases, were only diagnosed after a post mortem examination had been made to ascertain the cause of death. The Government Pathologist in Appendix O has drawn attention to a haemorrhagic adrenalitis (Waterhouse-Friedrichsen Syndrome) in 17 cases of this condition seen by him. He notes that the same pathological signs in the adrenal glands were found in a number of young children dying with a rapid dysenteric-like disease and suggests a common cause to these differing symptom complexes.

CHAPTER III.—CURATIVE SERVICES.

(1) *European Hospitals.*

No new hospital was opened during the year, but steps are in hand to build a 12-bedded cottage hospital at Filabusi.

It has been the custom, in recent years, to try and assess the pressure on accommodation in Government General Hospitals and these factors are as follows:—

	1950	1945	1940
General Hospital Admissions	16,925	11,483	9,632
Admission rate per 1,000	131	142	156
Average days in hospital each case	9.8	12.4	11.9
Average number of patients per hospital bed	25.2	18.3	20.1
Beds per 1,000 of the population ..	5.3	7.8	7.8

The pressure on general hospital accommodation continues to increase, and not only do the measurements of hospital use quoted above show this clearly, but there is a marked deterioration in the position even from 1949. In a single year the admission rate per 1,000 is down by three, the average days spent in hospital by each case is reduced by nearly half a day and the average patients per hospital bed has gone up by one and a half. The position, in spite of every effort to improve it, is rapidly deteriorating as it is virtually impossible to provide hospital accommodation on the pre-war scale for a European population, which is increasing at a rate of 17 per cent. per annum when immigration figures and natural increase are combined.

The situation in respect of maternity beds is as critical, especially as the proportion of births in institutions continues to rise. The following figures give some indication of the pressure on maternity homes—

	1950	1949	1948	1947	1946
Percentage of births taking place in maternity homes	93.0	91.9	88.7	88.8	88.7
Number of maternity beds	140	125	123	133	118
Beds per 1,000 live births	41	39	43	50	55
Average number of confinements per bed	22.7	23.6	20.7	17.9	16.3

It is to be hoped that the financial aid given to mothers under the Government maternity grants will encourage private enterprise in setting up maternity homes and there are indications that this will occur. The statistical material 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.

This service has now been organised as a separate branch and has its own salary scale and conditions of service, which makes it possible for the permanent staff to rise to a salary equivalent to that of a Junior Matron.

The staff remains at twelve, eight of whom are on the temporary staff. One appointment, the District Nurse at Headlands, was abolished and a new post created at Belvedere on the outskirts of Bulawayo. The appointment at Headlands was made at the express wish of the local European population, but once appointed, they made so little use of her services, an average of seven cases a month was attended, that it was decided to abolish the post. Miss Johnson, District Nurse, Gutu, who joined the service as one of the earliest members, retired during 1950 and it is fortunate for the Gutu area and the Department that she has decided to continue to devote her energies, as a member of the temporary staff, to a district she has, by hard and unselfish work, made her own.

The work done by the staff in 1950 was as follows:—

Number of homes visited	1,367
Number of home visits paid	7,194
Visits of patients to nurse	1,898
Midwifery cases	32
Vaccinations	895
Number of African out-patients treated	14,306

It is most disappointing that rural communities do not make more use of the district nurses as midwives. Many women, who have already had a baby, would be much more comfortable being confined in a well-appointed home than undertaking long journeys to town to secure accommodation in an over-worked maternity home.

(3) Mental Diseases.

The number of patients treated in the Ingutsheni Hospital continues to rise and the statistical details can be gleaned from Tables D and E of the Appendix. At the end of 1950, the population comprised 97 male and 104 female European patients and 595 male and 220 female African patients. It is interesting to note the preponderance of African male over female patients.

Fifty voluntary patients were admitted, 43 Europeans and seven Africans and 43 of these were discharged during the course of the year.

The staff position at Ingutsheni Hospital has been much eased by new recruitment and the employment of married female mental nurses on the temporary staff. A female Occupational Therapist was appointed and despite cramped quarters, considerable headway was made and the general air of contentment among the female patients has been noticeable. On the male side, mattress making is undertaken and those of sub-normal intelligence appear to enjoy this occupation. African patients are largely employed in agricultural and gardening occupations. The Hospital operates a considerable farm which produced, among other items, over 20,000 gallons of milk and quantities of vegetables used as food for patients; due, however, to adverse climatic conditions, the maize crop was a failure. The profit on the farm amounted to £787.

Despite the recent improvements in accommodation for patients, there is still much to be done and the European female and African male accommodation is over-taxed.

Uniformly good results have followed electric convulsant therapy and insulin therapy. Prefrontal leucotomy has also been used in selected cases. z

(4) Native Hospitals.

A change has been introduced in the presentation of the statistical information regarding African hospitals. In the past, details concerning Coloured and Asiatic patients have been included in the African figures. It is thought that as these communities now total nearly 10,000 people and steps are being taken to provide separate hospitals in the larger centres for them, the time is now ripe to consider them as a separate entity for hospital statistical purposes. Three new medical institutions for Africans were opened during 1950, the Harari Maternity Hospital at Salisbury, opened on 23rd May, the Martin T.B. Sanatorium on 28th June, and the Mpilo Maternity Hospital at Bulawayo on 31st August. The sanatorium provides 100 beds for the treatment of tuberculosis and the two maternity hospitals have been built to provide, eventually, 82 beds each. At present, only half this accommodation is used for patients, as the top floor of each hospital is being used to accommodate the trained African staffs and trainees. The new maternity hospitals at Salisbury and Bulawayo represent the first section of the new 1,200-bedded African hospitals for these centres to be put into operation. Considerable improvements to the fabric and maintenance of existing hospitals has been carried out during the year, but hospital accommodation for this section of the population also lags very far behind the demand.

The following figures give some indication of the overcrowding that exists in the general hospitals:—

	1950	1945	1940
No. of beds for which hospitals were designed	1,126	1,171	822
Patients admitted	57,240	27,478	22,964
Average stay of patients in days	12.6	15	17
Daily average in-patient population	2,042	1,190	869

The two maternity hospitals have been well patronised and it has been found necessary to restrict admissions to mothers from the town and immediate environs, and only to admit mothers from rural areas where the local doctor has special reasons for requesting admission to the new hospitals. The clinics will continue therefore to cater for the main mass of the native maternity services.

(5) Native Clinics.

The service given to the African population by this type of medical service continues to be much appreciated and the demands for treatment, both as in-patients and out-patients, indicate that the fear or distrust of European medicine is now very much a thing of the past. It was only possible to open two new clinics during 1950, as building difficulties and the provision of adequate water supplies for these institutions created very considerable obstacles in any large scale expansion.

The following figures give some idea how the work done has increased:—

	1950	1945	1940
Number of Clinics	84	67	51
In-patients treated	127,497	66,758	28,762
Out-patients treated	296,730	203,476	57,890

During the year, the treatment of venereal disease by means of penicillin was introduced as a standard. It was thought that this might have had the effect of swamping the treatment facilities of native clinics. In fact, the number of patients

seeking admission for treatment of venereal disease has fallen to 13,873 from 17,020 in 1949. The numbers reporting as out-patients have risen only slightly from 15,122 to 16,368. The introduction of the new anti-biotics in treatment has not as yet markedly affected the time spent by venereal disease patients in clinics except in some of the larger urban clinics, where a slight but definite reduction is noticeable.

(6) Medical Store.

Previous to the 1939-45 War, the Department purchased its requirements of medical stores and equipment by local tender. In 1941, owing to supply difficulties through trade channels in wartime, a central medical store buying organisation was set up. This provided for military and civil government requirements and, in emergency, kept the Colony's retail drug trade supplied with essentials. The economies effected by bulk-buying were so obvious that the store continued after the end of hostilities. The accommodation is still of a temporary nature and militates against an efficient service, but in 1951 it is hoped to erect an up-to-date store on the new Harari Hospital site in the industrial area. The store, which has a professional staff of five pharmacists in a total European staff of 21, operates a trading account working on a non-profit no-loss basis and supplies all Government Departments. It has a capital of £170,000 and in 1950 it had a turn-over of £204,000, and dealt with 13,800 requisitions. These figures show that the stock position is barely satisfactory for a national stores organisation. A branch store which has been opened as an experiment at Fort Victoria, supplies the large number of Government clinics in this area and considerably improves the service given.

(7) Orthopaedic Centre.

With an increase in the number of orthopaedic surgeons practising in the Colony, there has been a bigger demand on the services of this Centre. The workshops are now making all the orthopaedic appliances ordered and artificial limbs for Africans are also being made locally. Artificial limbs for Europeans are ordered from the United Kingdom and 22 have been supplied and fitted at the Centre during 1950. The technical staff now consists of four Europeans. The following are included in the work undertaken during 1950: 56 artificial limbs for Africans; 44 spinal supports; 68 caliper splints; 120 corsets and belts; 246 foot supports; 105 artificial limb repairs and 670 other tasks. There are now 1,850 European and 342 African patients on the books.

(8) Missions.

As a result of the improved grants-in-aid for medical missions, there has been a great revival of interest in this field of missionary endeavour. There are now 14 doctors employed by missionary bodies, of whom seven hold foreign degrees and are permitted by the Medical Council of Southern Rhodesia to practice medicine on the mission stations exempt from registration. Many of the missions provide out-patient facilities only, but an increasing number, 32 in all, are authorised to receive grants for in-patient accommodation. Several others have put forward plans for building hospitals or extending existing facilities.

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

	1950	1945	1940
Number of aided medical missions	47	34	34
Total admissions	35,499	22,193	20,072
Out-patients treated	228,628	118,800	72,679

Fuller details of the work of missions appears in Table G of the Appendix.

(9) Native Labour on Mines.

Statements on the sickness and mortality of African workers in mines have been featured in these Reports since 1907. No doubt, when started, this information was of the greatest value in pointing the way to the main health problems in mine labour in those days, i.e., pneumonia, scurvy, phthisis and serious accidents. These returns have now long out-lived their usefulness and will be discontinued. On the larger mines, the workers are amongst the best cared for sections of the African working community and there seems little reason now why this industry should be picked out for special attention. Cases of silicosis and tuberculosis are adequately checked through the Silicosis Act and its administration. There have been some marked improvements in African housing and sanitation in developing mines, but, on some mines, where the active life of the property is in some doubt, conditions still leave a great deal to be desired and it is not possible to enforce improvements in the precarious financial position.

(10) Mining and Industrial Medical Services.

Since the end of the 1939-45 War, there has been a great extension in industrial medical practice. Before the war, the only organised industrial medical services were to be found in the mines, gold, asbestos, coal and chrome, but now, with the development of a large number of engineering and light industries in the larger towns and the development of steelworks and larger factories elsewhere, the importance of a good medical service is being more widely appreciated. The quick rehabilitation of the sick and injured workman, where there is a readily available medical service, has shown how much can be saved by the use of modern developments in industrial medical practice.

Some enterprises and their medical officers have been kind enough to supply material for this Report and these figures serve to show what an important aspect of medical practice this has become:—

	1	2	3	4	5	6	7	8
Number of Europeans Employed	326	324	112	44	(a)	165	12	28
Number of Africans Employed	6,093	1,627	1,058	745	(a)	1,600	340	606
Beds for Europeans	20	—	—	—	—	—	—	—
Beds for Africans	359	34	69	12	(a)	150	18	31
European admissions (including dependants and others)	369	—	—	—	—	—	—	—
African admissions (including dependants and others)	5,343	1,247	831	(a)	155	3,926	(a)	284
European Out-patient Attendances	5,207	1,305	(a)	(a)	(a)	931	(a)	(a)
African Out-patient Attendances	10,823	8,109	6,325	(a)	4,605	7,278	1,044	(a)
Occupational Accidents (Workmen's Compensation Act Cases)	376	4,805	507	(a)	211	174	(a)	42

- 1.—Shabanie Asbestos Mines, Shabani.
 - 2.—Riscom Steel Works, Que Que.
 - 3.—Globe and Phoenix Gold Mine, Que Que.
 - 4.—Connemara Gold Mine, Que Que.
 - 5.—Rezende Gold Mine, Penhalonga.
 - 6.—Cam and Motor Gold Mine, Eiffel Flats.
 - 7.—Que Que Gold Mines, Que Que.
 - 8.—African Chrome Mines, Umvukwes.
- (a) Figures not available.

The data shown in this table is very incomplete and patchy and it is hoped that, in the years to come the gaps in information will be filled and a more comprehensive analysis will be possible.

(11) Native Medical Services Generally.

The following table gives details of in-patients treated in various types of Government and State-assisted institutions:

	1950	1945	1940
Native Hospitals	57,240	31,394	23,329
Mental Hospital	385	207	476
Leprosy Hospital	331	242	203
Maternity Hospitals	2,061	—	—
Tuberculosis Hospital	74	—	—
Government Native Clinics	127,497	66,758	28,762
Medical Missions	35,499	22,193	20,679
Local Authority Hospitals	8,459	(a)	(a)
TOTAL	231,546	120,794	73,449
Admission rate per 1,000 of the African population	118.3	75.2	53.7

(a) Figures not available.

The 1950 admission rate per 1,000 of the African population shows a more than 10 per cent. increase over the 1949 figure and the admission rate now seems to be mounting at the rate of 10 per cent. per year. The drain on finances available for medical purposes is becoming serious and it is regretted that a larger proportion

of the funds made available are not directed more to the prevention of disease. At present, Africans seek admission to institutions for the treatment of conditions, which should be prevented from occurring at all and where treatment is of only temporary relief, as the patient returns to his unchanging sanitary environment and falls a victim to disease anew. As all treatment of Africans at Government institutions is free, employers often show little consideration in the way they send Africans for attention, often over long distances, when, if they had been members of their own family, treatment in the first instance by home remedies would have been tried. An African reporting at an institution complaining of a headache, requires as much documentation as a more serious case and the tablet of analgesic could have been as easily provided by the housewife. Many of the cases, reporting for out-patient attention at some of the more congested hospitals, should never be there at all.

(12) *Extracts from District Reports.*

Some extracts from the reports submitted by Government Medical Officers will serve to illustrate the variety of work accomplished by them, often under very difficult conditions.

Government Medical Officer, Bindura, comments on the poor standard of fitness of alien Africans seeking employment in the Colony. They are often in such a state of malnutrition that one is puzzled how and where to begin treatment. Even after much effort, many of these cases are still in such a poor physical state that repatriation to their home land is, in the end, the best solution. Bilharziasis and its complications still require much treatment and it is rare not to find a positive urine or stool in any African patient, no matter from where he comes.

Government Medical Officer, Chipinga, discusses the startling improvement which results from the election of an energetic Town Board. Problems, which were previously insolvable, are dealt with speedily and a most noticeable improvement in the sanitary state of the township has resulted. He draws attention to an interesting situation regarding the great increase in the number of mentally defective or disordered Africans being taken to clinics and dumped there by their relatives. This seems to indicate a breakdown of the tribal arrangements, whereby weaker members of the community were cared for by the community at large.

Government Medical Officer, Concession, comments on the increased turnover of patients made possible by the use of nilodin, as opposed to antimony preparations, in the treatment of bilharziasis. The worst diet of all is now taken by the sophisticated African who can afford to buy white bread, sugar and tea. Not many years ago peptic ulcer would never be considered in differential diagnosis, but now, this condition is comparatively common in the African. One can acquire a reputation for omniscience by associating this condition with the occupations of teacher, storekeeper, clerk, orderly or constable.

Senior Government Medical Officer, Gatooma, records that the V.D. Annexe to his hospital, built in an airy site four miles out of town, is not entirely used for its original purpose because of advances in treatment. It is now used also for the care of chronic cases, especially pulmonary tuberculosis, who seem to pick up much quicker in the good surroundings. He records a number of interesting surgical operations. A woman was diagnosed to have a transverse lie and was operated on by Caesarian Section. Child in the vertex position was removed alive. The uterus was still big and another child also in the vertex position was found in the other half of a septate uterus. The septum was complete except for two inches below. The medical officer at this station visits Gokwe Clinic by air. In view of the increased work at this clinic, a fortnightly air visit is now being made.

The Government Medical Officer, Hartley, has been making a drive to get residual insecticide spraying adopted in his area. Some parts have taken it up and no doubt, when the advantages in good health are apparent, the more cautious will be converted. He has treated over 600 cases of urinary bilharziasis with nilodin with no untoward reactions and with good results. He is not, however, so happy in treating Europeans with this drug because of the severe vomiting experienced in some cases.

The Government Medical Officer, Inyanga, draws attention to the complete change in the medical requirements of a district, which can happen in a year or two, when an area, poorly inhabited by Africans and with next to no Europeans, becomes a thriving farming area and redistribution of African communities fill up the vacant spaces. It is not many years ago that Inyanga became an aided Government Medical Officer Station. Now the need for increased medical care in northern Inyanga is becoming a live issue.

The Government Medical Officer, Inyati, comments on the high incidence of the skin manifestations of pellagra seen. Malnutrition of infants is often seen and seems to be associated with the custom in this area of not putting the new-born babe to the breast until the umbilical cord has separated. During this period the babe is fed on maize porridge. He is hoping, with the assistance of the Native Commissioner, to do something to combat this custom. A bilharziasis survey showed a very low incidence of the disease and an examination of 500 specimens showed an infection rate of only 2.5 per cent. in this rather arid area.

The Government Medical Officer, Karoi, stresses the value of a district nurse in his area, which is more than 50 miles from the nearest cottage hospital. He notes that his young and thriving European farming community numbering 500 in all, had 25 births, which is a birth rate double that of the national average and a tribute to the fertility of the community.

The Government Medical Officer, Mrewa, comments forcibly on the so-called "civilisation of the African." A large reserve in his area is generally regarded as one of the most progressive in the Colony as measured by agricultural achievement, wearing of European clothing and converts to Christianity. Compared with more primitive areas, the standards of health have not changed. It is no common sight to see a mal-nourished child, dressed in expensive and unsuitable clothes, with the mother in a "new look" dress and high-heeled shoes. The advance of civilisation is very lop-sided. An attempt to start a blood transfusion service, with the co-operation of donors from the local community, resulted in long discussions on matters of payment, but little support or help to start a service. He estimates that the bilharziasis incidence in adolescents in his area must be nearly 100 per cent.

The Government Medical Officer, Mtoko, notes the high prevalence of burn cases seen, the majority being epileptics. Such cases used to be a tax on all hospitals and clinics not many years ago. As these cases occupy beds for long periods, their treatment constitutes a serious problem in an already over-taxed institution. He suggests that these unfortunates should be cared for in colonies with simple accommodation. Again it would seem that the old tribal arrangements for the care of defective and maimed persons are falling away. He describes a case of blackwater fever in a European, a feature of the case being excruciating pain, radiating from the splenic area to the left shoulder, suggestive of a coronary thrombosis.

The Senior Government Medical Officer, Ndanga, who controls a group of 11 clinics serving a very large area, notes that he and his staff, from the very remoteness of the area, have to undertake work such as cattle buying and the transportation of food and supplies which, in other more settled areas, would be dealt with by other officials. He notes that, in times of food shortage, his institutions become more than overcrowded with a flood of patients seeking treatment for ailments, which every African can deal with at home. The real reason being a desire to feed themselves at the clinics with food provided to patients free of charge by the Government.

The Government Medical Officer, Nyamandhlovu, discusses two residual insecticide spraying programmes organised in his district, both of which schemes have the merit of being sponsored and paid for by the people concerned. A farming area organised overall spraying with B.H.C. using a trained labourer for the application. The Gwaai Reserve community organised and paid for the spraying which was done under communal arrangements the previous year. This year, unfortunately, the Native Council could not bear the cost and instead, each hut owner was asked to do his own spraying with a measured quantity of insecticide sold to him. This meant that the work could not be done to an ordered plan and was rather less successful.

The Government Medical Officer, Plumtree, records an extensive outbreak of influenza which affected the boys at Plumtree School during the winter. In all, 225 boys out of 289 were affected. The incidence of middle ear trouble in this epidemic was high.

The Senior Government Medical Officer, Salisbury, continues to report excellent results in the treatment of tick typhus with aureomycin. Streptococcal throat infections were common during the year, as were cases of rheumatic fever and a type of pseudo-rheumatic fever. This latter disease is rather a mystery and while some practitioners claim to have seen 50 cases, others will not admit to any. The usual history given is of a child being pale and off-colour for some months, persistent evening rise of temperature, raised B.S.R. and abdominal and joint pains. In hardly any such case is the heart affected. The illness is tedious and no specific

treatment seems of much avail. With regard to his native hospital, which has been adversely commented on for years, he says that while we all decry this institution, a number of important and experienced visitors have been very favourably impressed.

The Government Medical Officer, Selukwe, refers to the high incidence of malaria associated with a low and patchy rainfall. This would seem to have been due to funestus malaria resulting from the absence of flushing of the streams. Few deaths resulted, as the Africans brought their cases promptly to the clinics for treatment. He points out that the African woman not only demands admission to an institution for her confinement, but now also demands ante-natal supervision. This is, of course, an excellent trend.

The Government Medical Officer, Sinoia, has noted that, despite the fact that it was a favourable year for malaria transmission, the position in the township was satisfactory because of the control measures applied. In the farming area, the malaria experience was bad, largely because farmers were often lax and careless in applying residual insecticides to their compounds.

The Government Medical Officer, Umvukwes, states that malaria in his district was severe and in marked contrast to the experience in the adjoining Mazoe Valley. The area is popularly supposed to be a healthy one because of its high elevation and the sandy nature of the soil, and precautions are therefore neglected. In a favourable year of rainfall, malaria epidemic conditions can soon be established. This experience has stimulated interest in the residual insecticide spraying of all habitations on farms and the doctor has used every opportunity to encourage these plans. His efforts to get landowners to use copper sulphate as a molluscicide have been less successful, but better co-operation is expected when the knowledge that the snails, which carry liver fluke in cattle and sheep, are also killed by copper sulphate. Of 746 urine specimens examined by his microscopist, 42 per cent. showed eggs of bilharziasis.

The Senior Government Medical Officer, Umtali, reports that the native maternity unit at his hospital, at which maternity assistants are trained, has now dealt with 5,000 confinements. The neo-natal death rate has been high due chiefly to malaria, congenital syphilis and prolonged labour prior to admission. Six pupils completed their two-year course of instruction during 1950. Comparatively serious outbreaks of malaria occurred in groups of Africans, who had been moved from high land to endemic malarious areas. Little could be done in these inaccessible areas except administer mepacrine to the sick. It is hoped eventually the people will benefit, as their new homes are in fertile territory.

The Government Medical Officer, Umvuma, visits three clinics, which are 23, 64 and 90 miles distant from his home station, Umvuma, so it can be appreciated how much time has to be spent in travelling to ensure supervision. Air transport to some of the outlying clinics will not be a satisfactory solution, because journeys by road enable other duties to be undertaken en route.

CHAPTER IV.—PREVENTIVE HEALTH SERVICES.

(1) Laboratories.

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

	1950	1945	1940
Public Health Laboratory, Salisbury	102,762	85,283	46,354
Hospital Laboratory, Umtali	18,358	—	—
Public Health Laboratory, Bulawayo	84,683	42,276	12,380
Hospital Laboratory, Gwelo	16,867	—	—
Government Analyst's Laboratory	2,194	1,969	1,497
Government Pathologist	3,079	—	—
	227,943	129,528	60,231

The demand for routine laboratory services is now becoming quite unmanageable and one is compelled to the view that some medical practitioners appear to exercise little discretion and thought in asking for laboratory investiga-

tions to be made on their patients. To take one item, it is hard to understand why a European population of 129,000 enjoying a high standard of living and nutrition should need 27,020 blood counts during the year. One cannot help feeling that if more use of the clinical sense—fortified if need be by some simple haemoglobin estimation, such as Talquist, which can easily be done by the doctor himself, were employed—much laboratory time now wasted on futile, uninformative work could be devoted to investigations of more value to doctor and patient.

The Government pathologist assumed duty late in 1949 and the volume and interest of the material dealt with in the past year has amply justified the whole time appointment of a morbid anatomist. A summary of his report appears as a new appendix, Appendix O.

After years of planning, the new Government Analyst's Laboratory is still not yet built. The present building is a small bungalow, believed to be over 50 years old and in a deplorable state of repair. The analysts have to carry out their important and meticulous investigations under most inconvenient and over-crowded conditions.

(2) *Schools' Medical Service.*

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

The number of schools and scholars continues to increase rapidly. There are 121 European schools, with a total enrolment of 23,683, of which 90 are Government Schools, with an enrolment of 19,876. There are 17 Coloured and Asiatic schools, with an enrolment of 2,783 and 12 Government African schools, with 5,320 pupils. Most of these schools are subject to routine medical inspection.

There are also 2,138 Government-aided schools for African children, most of them conducted by missionary bodies in receipt of Government grants and under the general supervision of the Department of Native Education. None of these schools are subjected to schools medical inspection. The volume of work, performed on school medical inspections, showed a very serious falling off, 97 European schools were scheduled for inspection, but only 49 were inspected and 6,187 children were seen, a proportion of only 23 per cent. of the total enrolment of 22,640. In the Coloured and Asiatic schools, 16 schools were scheduled, 10 were inspected and 1,456, or 52 per cent. of the enrolment in these schools, were seen. In 1949, over 60 per cent. of the scheduled schools enrolment was inspected. This was largely due to the priority given to the mental testing of all children in Standard IV and other children recommended for testing, such as sub-normals and problem children. The Terman Merrill revision was used in all cases. In 1950, it was estimated that there were some 2,000 children in Standard IV, but only 1,000 were mental tested, which was a disappointing result. In addition the School Medical Officers tested 301 children for other reasons. Children of I.Q. 80 and below are recorded in a Register of Mentally Defective Children, and the number now has increased to 851. There are over 100 such children in each age group from 7-12 years.

In an effort to keep the routine School Medical inspections up to a reasonable level, the services of the Government Medical Officers in certain districts were called upon and it is proposed to expand this in the coming year. Provided the record cards are maintained centrally, there is much to be said for the medical officer of the district undertaking routine inspections of school children in his area. In most cases it is he who will have to put into effect the treatment recommended and this gives an added interest to his work, and permits him to maintain close contact with the children of his area at an important stage of their development.

The following is a summary of the findings in 1950 compared with earlier years:—

	1950	1945	1940
European children examined — — — — —	4,583	4,312	3,275
Coloured and Asiatic children examined	791	911	461
African children examined — — — — —	942	—	—
Unsatisfactory nutrition per cent.—			
European children — — — — —	22.4	8.8	11.6
Coloured and Asiatic children — — —	48.1	20.3	24.9
African children — — — — —	32.1	—	—
Entrants found to be unvaccinated—			
European children — — — — —	90	207	380
Coloured and Asiatic children — — —	43	103	77
African children — — — — —	56	—	—

There has been a sharp rise evident in the proportion of malnourished children in European and Coloured and Asiatic schools and this, rather suddenly, since 1949. The cause of this is not clear, but may be due, in part, to the serious increase in the cost of living and the large scale immigration in the lower income groups. The increase is most marked in children in Junior Schools.

The school nurses, at Salisbury and Bulawayo, have carried out useful work, including 870 home visits, 678 follow-up visits to schools and altogether 5,697 head and body inspections were made.

(3) Government Dental Service.

The fears expressed in the 1949 Report, regarding the recruitment of dental surgeons, have been amply justified and at one time during the year only one dental surgeon, out of an authorised establishment of five, was on duty. This has had a serious effect, especially on the dental examination of school children and this important work has fallen sadly in arrears. Two new appointments were made during the year, but both officers have since resigned and there is little prospect of attracting dental surgeons to the service until the salary scale is revised.

The State Lottery Trustees provided funds for the purchase of a mobile dental trailer, which has proved to be most useful and a great help in doing dental inspections and treatments at schools, which are so overcrowded that no special room can be set aside for the dental surgeon.

(a) Schools.

	Mashonaland and Manicaland	Midlands	Matabeleland
Children examined	6,369	3,399	5,854
Children treated	939	543	334
Fillings—			
Temporary teeth	818	297	153
Permanent teeth	1,305	553	76
Extractions—			
Temporary teeth	892	330	364
Permanent teeth	152	99	41
Other operations	9	—	10
Scaling	5	4	—

(b) Uniformed Services.

	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Extractions	71	80	—	17	2	—	67	40	—
Fillings	427	216	1	52	10	—	82	32	6
Dentures supplied	27	16	—	—	—	—	3	2	1
Dentures repaired	18	13	—	—	—	—	3	—	—
Other operations	101	73	—	15	4	—	19	5	2

(1) B.S.A. Police.

(2) Permanent Staff Corps.

(3) Prison Service.

(c) Indigent Europeans and Africans.

	Mashonaland and Manicaland	Midlands	Matabeleland
Extractions	3,720	86	1,734
Fillings	106	6	—
Dentures supplied	62	—	41
Dentures repaired	24	—	12
Other operations	53	—	—

The increase in the work done by the Government Dental Service is demonstrated by comparison with the work done in former years.

	1950	1945	1940
Schools Service—			
Children examined	15,622	11,858	8,984
Children treated	1,816	1,471	1,158
Extractions	1,904	2,082	1,601
Fillings	3,202	1,526	1,265
Other operations	28	19	11
Others—			
Extractions	5,817	3,830	3,130
Fillings	938	30	102
New dentures	152	98	98
Dentures repaired	70	13	13
Other operations	272	155	97
Establishment of Dental Surgeons	5	3	3

The work done in 1950, however, is much less than was possible in 1949, especially in the school dental service and the indications are that even less than this can be undertaken in 1951.

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

The health of this Force is maintained at a satisfactory high level.

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

	Europeans	Africans
Total strength — — — — —	851	1,908
Number sick — — — — —	1,237	1,863
Average days lost per case — — — — —	8.68	7.37
Cases of venereal disease — — — — —	—	27
Discharged medically unfit — — — — —	5	8
Deaths — — — — —	5	1

The incidence of malaria in the Force was high, there being 78 European cases and 438 African cases. Over one-quarter of the European cases were in the Fort Victoria police district.

(5) *Military Medical Services.*

A total of 409 Permanent Staff Corps personnel reported sick at the Camp Hospital and, of these, 292 were excused duty or placed on light duty. One member died as a result of a ruptured spleen due to injuries sustained in a road accident.

The Southern Rhodesia Women's Military and Air Service recorded 99 cases, all but 12 of which were on account of minor illness.

The Cadet Camp was held at Inkomo during August, 1950. The health of the boys was on the whole good, only 145 cases being recorded, mostly on account of colds and tonsillitis. Admissions to the Camp Hospital numbered 30.

The Territorial Active Force camp was held at the same site during September. Here again the health was good and only 155 cases were recorded and there were 34 admissions to hospital.

(6) *Central Government Preventive Health Services.*

Any possibility of expanding and improving the services provided by central government for the rural areas and the smaller urban centres of the Colony, was doomed during the year. Sporadic outbreaks of smallpox absorbed a great deal of the time and energies of the small staff of Government Health Inspectors and little more could be done than try and maintain a skeleton service in other spheres. Of a staff of 19 health inspectors, for leave and other reasons, the effective services of only 14 officers were available during the year and it is gratifying that as much work as was done, was possible. In view of transport and petrol difficulties, health inspectors were compelled to confine their attentions to the more accessible parts of their areas, but nevertheless 199,896 miles were covered on official duties.

Work in the preparation of new health legislation has been proceeding only slowly. In view of the unprecedented immigration, the housing standards of all sections of the population have deteriorated and it is difficult to effect any improvement in African housing and sanitation in the midst of cement crises, brick shortages, lack of piping and so on.

The Native Health Demonstrators, working at a simpler and more fundamental level of environmental sanitation and having to improvise chiefly with traditional materials and methods, have performed useful work in preparing rural African communities for the advance into an environment of a wholesome water supply, an airy house free from domestic pests, clean meat and food properly cooked and served, and a general improvement in personal and family hygiene. In the rural areas this is easier to arrange, but when big aggregations of population occur, the poor standard of housing soon makes its invidious mark on health and happiness.

The following is a summary of the work done by Government Health Inspectors during 1950:—

	1950	1945	1940
Vaccinations — — — — —	866,712	572,781	203,958
Diphtheria prophylaxis — — — — —	922	15,564	—
Inspection of licensed hotels — — — — —	216	56	—
Routine inspection of premises — — — — —	10,063	6,387	—
Other duties (including sampling) — — — — —	1,920	948	—
Prosecutions initiated — — — — —	249	104	—
Number of health inspectors — — — — —	19	11	1

The large increase in the number of prosecutions is largely due to action taken against persons evading vaccination or concealing cases of smallpox. In 1940, the health inspector was fully engaged in vaccination duties.

(7) *Mazoe Valley Health Project.*

Reference was made in last year's report to the inauguration of a scheme to carry out malaria and bilharziasis control, with a single organisation, over a large area of territory. With the aid of a large financial grant from the State Lottery Trustees, it was decided to undertake such control, over an area of 1,900 square miles, covering the catchment of the upper Mazoe River.

This area is estimated to have a population of 4,000 Europeans and 110,000 Africans and has suffered severely in the past from the depredations of malaria and blackwater fever and is also known to be heavily infected with bilharziasis. It is one of the best farming areas in the Colony and includes also a typical cross-section of rural life, small townships, native reserves, farms and mines. Four teams were organised, each consisting of a European supervisor, 10-12 labourers and transport. These work on malaria control for six months of the year and bilharziasis control for the rest of the year, thus avoiding the dispersion and wastage of trained staff which results when malaria control only is exercised in an epidemic area.

The four teams worked up the Valley, starting in October, 1949, and completed the first residual spraying of all human habitations in the area by the end of the year. In January, 1950, the second application was given, again working up the Valley. In April, bilharziasis control by the application of copper sulphate as a molluscicide was started at the headwaters of the Mazoe River and working downstream. Over half the area was treated by September, 1950. In October, 1950, the second year's malaria control was started. The first application was of D.D.T. emulsions and wettable powders, but later, B.H.C. (12½% gamma isomer content) wettable powder was used almost exclusively and with acceptance in European dwellings. Residual insecticide was applied to all African habitations, but in European dwellings, only to living rooms and sleeping verandahs. Each residual spraying operation resulted in the treatment of about 3,000 rooms in European dwellings and 33,000 African huts. The cost of B.H.C. spraying was 10d. per room or hut per application for materials alone. Stirrup pumps were used exclusively for application of the insecticide. The results were in every respect quite remarkable. Farmers in the area stated that their labour sickness rate was lower than ever before and that the work output was much higher. A certain proportion of this improvement was attributed, in some cases, to the destruction of other domestic insects, permitting the occupiers of treated huts to enjoy refreshing sleep.

The entomological results were equally gratifying; in 1,800 treated huts examined after a "knock-down" spray had been used, a total of nine *A. gambiae* and three *A. funestus* adults were found. In 300 huts in neighbouring uncontrolled areas, 494 *A. gambiae* and 12 *A. funestus* were recovered.

Larvae of the vector species were unobtainable in the controlled area.

The European hospital admissions for malaria are a good indication of the effectiveness of the residual insecticide application. In the ten years 1940-49, during the months January to May, which is the malaria epidemic season, the Mazoe Valley hospitals admitted an average of 78 patients each year. In the neighbouring district of Lomagundi, the local hospital over the same period, admitted an average of 71 patients. In the first five months of 1950, the Sinoia Hospital, serving the Lomagundi district, admitted 68 patients, while the Mazoe Valley hospitals admitted two. The second year's operations have been equally successful and at the time of writing no European patients suffering from malaria have been admitted to hospital.

The entomological picture is equally satisfactory and despite an exhaustive search only one adult *A. gambiae* was captured.

Large scale blood film surveys of the Native Reserves in the treated area are already showing a substantial reduction in the parasite figures.

The snail control programme has shown encouraging results and 25½ short tons of copper sulphate were distributed in rivers and streams in the upper two-thirds of the control area during the dry season of 1950. Since the onset of the rains in October, only a few snails have been found and these only in a few localities, compared with an almost universal infestation as existed previously. The benefit on the health of the people is, of course, not so dramatic as in malaria control. Widespread urine surveys have been carried out of African children in the Native Reserves within the area. In 5,110 children from 1 to 15 years of age, 2,567, 50.2 per cent., were found to be passing eggs of *B. haematobium* and that on a

single examination. If the snail killing campaign is successfully carried out, there should be a definite fall in the infection rate in the younger age groups and the infection should die out in the older children.

The lessons learnt in this large scale trial will not be lost. The areas of the Mazoe Valley, in European ownership, will be malaria controlled by residual insecticide arranged and administered by local associations, with only technical advice from the Health Department. The team system of control of malaria and bilharziasis will be continued by the Government operating in the Native Reserves when the Mazoe Valley Project ceases in August, 1951. In order to preserve the advances which have been made in northern Mashonaland, a group of 14 Native Reserves of an area of 3,600 square miles, with a population of about 180,000, will be controlled for malaria and bilharziasis. A portion of this area lies around or below the area of the Mazoe Valley which is now being controlled.

Working with backs to a high tableland, where malaria only rarely becomes epidemic, it should be possible to prevent epidemic malaria invading fertile areas, where much heavier food crops should be possible and a happier and healthy community result. At the same time, by the same teams and organisation, bilharziasis, which is an increasing health problem in the same area, should be reduced to manageable proportions.

The Health Department and the people of the Mazoe Valley are much indebted to the State Lottery Trustees for their munificent gift which made such a large scale trial possible.

(8) Local Government Health Services.

The smaller local authorities have had difficulties in maintaining their health inspector staff, who become discontented and lose interest when so little can be done to put their advice to good use. Many small local authorities appear to resent the advice given to them by their technical advisers and it would seem that, on occasions, the contrary action is taken. This has, in some cases, had a serious effect on the environmental sanitation in some rapidly expanding areas, where most of the mistakes, perpetrated in this country over the past 50 years, are being repeated again in the new areas. There has been no material change in the staff of local health authorities since 1949.

No information is forthcoming from the smaller municipalities as to their work in the past year, although some are now administering isolation hospitals and conducting V.D. and other clinics. The following precis gives an idea of the work done by the two larger municipalities:—

	Salisbury	Bulawayo
Estimated European population	24,000	24,000
Estimated Coloured and Asiatic population	1,960	2,130
Estimated African population	65,293	63,000
Admissions—		
European I.D. Hospital	173	281
Native I.D. Hospital	1,687	1,085
Native V.D. Hospital	3,562	2,125
Attendances, Native V.D. clinics	13,055	69,072
New cases of syphilis in Africans	5,613	2,328
New cases of gonorrhoea in Africans		3,283
Medical examination of Africans in employment	108,862	36,642
Laboratory investigations	(a)	10,140
Cases seen at ante-natal clinics (all races)	5,773	673
Diphtheria immunisation	589	694
Vaccination	89,487	41,899
Visits paid by health visitors	10,620	6,242
Inspections by health inspectors	48,711	26,164

(a) Figures not available.

(9) Nutrition Services.

The Nutrition Council met only once during 1950 and its activities are almost at a standstill and it is not seen how any progress will be made until the appointments of a nutritionist and a food technologist have been made. The former post has been approved, but no suitable candidate is available. The latter post has not yet been approved, but it is expected that an appointment can be made in the coming year.

In a country, which has barely averted famine for several years, only by the importation of foodstuffs and where the statutory ration scales for native labourers cannot be enforced because of food shortage, the need for an active

National Nutrition Council must be obvious. Staff is needed to investigate food requirements, food consumption figures, family economics, methods of storage, preservation and processing and to advise on practical education in dietetics and cooking in African schools. Shortages of locally produced essential foodstuffs have trained the African population, especially in urban areas, to new food habits which depend on imports and processing and are thus more costly. If these foodstuffs had any nutritive advantages over local produce the position would not be so deplorable, but as it is, the cost of living has been raised for a less nutritive diet dependent on transportation and general world conditions.

Until there has been a thorough survey of the facts, which has been repeatedly stressed by the Nutrition Council and by Professor Sir Frank Engledow in his recent "Report on Agricultural Development in Southern Rhodesia," nutrition education of the Africans and the prescription of statutory ration scales border on the farcical.

The Health Department provides on its Votes a sum for the provision of supplementary mid-morning meals to malnourished children. This should consist of one-third of a pint of fresh milk, a slice of bread and butter and cheese. Butter and cheese are quite unobtainable in adequate quantities for a large part of the year and supplies of milk are also scarce at times in most urban areas. Even imported substitutes are out of the question and, consequently, only about half the Vote has been spent. During the year, the administration of the scheme was modified, so that it could be extended to all schools and not merely certain schools, and that the Health Department would pay from its Votes for the issue of supplementary meals to scholars, who had been found to be malnourished at the schools medical inspections and whose parents were unwilling or unable to pay for these meals themselves.

(10) Aviation Health.

With the closing down of the B.O.A.C. flying-boat service using the Victoria Falls Water Aerodrome, the Colony has reverted to having only two "sanitary aerodromes," Belvedere at Salisbury, and Kumalo at Bulawayo. Difficulties with regard to smallpox vaccination certificates being issued in Great Britain by private doctors, have arisen. These were enough to ensure the unhampered journey of the traveller out to Southern Rhodesia, but entirely insufficient to cover the return journey in a northward direction. Air travel agencies in this Colony will not issue tickets to a traveller unless his health certificates are in order and his unhindered passage thereby assured. Internationally recognised centres for yellow fever inoculation are maintained at Salisbury and Bulawayo hospitals. International certificates of vaccination against smallpox are completed only by medical officers in the Government Service.

Some concern was created during the year by the decision of the Third World Health Assembly to include Nyasaland Protectorate and a part of Bechuanaland Protectorate within the endemic yellow fever area. Protests were made by the interested parties at the lack of prior consultation before the decision was made and as a result of representations, the inclusion of these areas was withdrawn in December, 1950.

Civilian pilots are examined for the "B" licence by Government Medical Officers at Salisbury and Bulawayo and 110 examinations were carried out in 1950.

At the two yellow fever inoculation centres for the Colony, Salisbury and Bulawayo, 2,189 and 843 persons were inoculated, a total of 3,032 for the year, chiefly air travellers.

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)	4
In Districts (Medical Superintendents, 6; Government Medical Officers, 45; Aided Government Medical Officers, 7; Regional Medical Officers of Health, 2; Schools' Medical Officers, 4)	64
Specialists (Directors of Laboratories, 2; Pathologist, 1; Superintendents and Assistant Superintendents, Mental and Leprosy Institutions, 4; Radiologists, 4; Psychiatrist, 1; Ophthalmologist, 1)	13
Resident Medical Officers	16

Total

2. Dental Surgeons	6
3. Analytical Chemists	5
4. Pharmaceutical Chemists—	
<i>At Headquarters</i>	3
<i>Medical Store (including Relief Staff)</i>	9
<i>At Hospitals (Hospital Secretaries, 9; Dispensers, 3)</i>	12
	<hr/>
	24
5. Health Inspectors	20
6. Laboratory Professional and Technical Assistants	20
7. Research Staff (Professional Assistants, 2; Technical Assistants, 3; Medical Entomologist, 1)	6
8. Nursing Staff (Staff Matron, 1; Senior Matrons, 2; Matrons, 27; Sister Tutors, 5; Sisters, 59; Qualified Nurses (General), 245; District Nurses, 13; Student Nurses, 185; Mental Branch: Males—Head Attendants and Charge Nurses, 6; Qualified Nurses, 20; Females—Senior Matron, 1; Matrons, 2; Sisters, 3; Female Mental Nurses, 18; Male Nurse, Ndanga, 1; Schools Nurses, 2)	590
9. Orthopaedic Technicians	2
10. Radiographers, including Learners	21
11. Masseuses	7
12. Nutritionist	1
13. Dieticians	4
14. Occupational Therapists	2
15. Clerical Staff (Men, 45; Women, 79)	124
16. Other European Staff	55
	<hr/>
Total European Establishment	984
Non-European Staff	1,964
	<hr/>

(2) Staff.

Some small increases in staff have been provided in the Estimates, but the problems of accommodation and the provision of transport of officials whose duties entail travel are such that, until these essential requirements for a happy and contented service are available, caution must be exercised in expanding the services offered by the Department.

Among new posts authorised are one each of the following categories, a regional Medical Officer of Health, an ophthalmologist, an assistant medical superintendent for Ngomahuru Leprosy Hospital, an assistant radiologist and a dental surgeon.

The availability of medical officers for appointment as specialists and general duty medical officers is now much more restricted. Until this year, the usual experience was many applications for each post, allowing a good selection for short listing. Now, the total number of applicants is considerably smaller and selection is therefore more restricted.

Another factor, which has been more obvious this year, has been the great disparity between the financial award to professional officers in the Department, as compared with their colleagues elsewhere in the Colony. This is particularly well illustrated by the establishment of dental surgeons. At one time during the year only two, out of an establishment of five dental surgeons, were available for duty, and because of the prolonged dislocation of staff the schools dental service suffered severely. It is quite impossible to obtain applications for posts on a salary scale which is poor compared with earnings of dental surgeons in private practice in the Colony and elsewhere.

A dental surgeon with two years' experience is offered a basic salary of £734 a year, which, with other allowances, is made up to a total emolument of £1,063. It is understood that the average earnings of a dental surgeon in one of the areas of the National Health Service in the United Kingdom was assessed at over £4,000 a year. It is no wonder then that applications, even from men with no experience at all, are not forthcoming.

(3) *Nursing Service.*

The supply of nurses still gives cause for anxiety and the number on the permanent staff has fallen to 250 from 294 at the end of 1949. The total number of nurses in employment has, however, increased from 456 to 475, but is still 59 below the authorised establishment. Seventy-eight nurses joined the permanent general nursing staff and 87 resigned during the year. An annual turnover of 35 per cent. can hardly be claimed to indicate a "permanent" staff.

Marriage was, as usual, the principal reason for resignation, 50 being for this cause. Only one member of the nursing staff, a Matron, retired. The services of many of those who resigned is not, however, wholly lost, as many seek employment on the temporary nursing staff if they happen to be living within easy reach of a hospital.

Fifty-four nurses joined the temporary staff during 1950 and there were 38 resignations.

The student nurse position is more satisfactory. A sufficiency of suitable candidates is now available, but the wastage during training is still very high and only a few of those actually qualifying become available for the permanent staff. The main, almost the only reason for this, is marriage.

At the end of 1950, there were 149 Student Nurses in training at Salisbury and Bulawayo, 66 having joined during the year and 55 resigned. Of the 55 resignations, 26 were because they had completed their nurse training and fulfilled their contracts. Of this number, not a single one joined the permanent staff, although several will probably do so in future years when they have completed their midwifery training in the United Kingdom or the Union of South Africa. The position in the Mental Staff was not so unsatisfactory and more stable conditions hold.

The comparison of staff establishment and actual numbers in 1949 and 1950 will give a general picture of the nursing staff situation.

Category	Establishment 1948/1949	Actual Numbers 31.12.49	Establishment 1949/1950	Actual Numbers 31.12.50
Senior Matrons	2	2	2	2
Matrons	28	23	27	26
Sister Tutors	5	5	5	5 (1)
Sisters	57	51	58	57 (1)
Qualified Nurses	230	224	241	223
District Sisters	4	2	—	—
District Nurses	14	10	13	12 (1)
School Nurses	2	2	2	1 (1)
TOTAL	342	319	349	326
Student Nurses	182	137	185	149
GRAND TOTAL ..	524	456		475

Figures in brackets indicate the number of temporary staff included. Seventy-six qualified nurses are temporary.

The sole retiral during 1950 was Miss M. Grill, Matron of Gwelo Hospital, who was trained at the Bulawayo Memorial Hospital from which she qualified in 1923. She was promoted Matron in 1937 and served at Gwanda, Fort Victoria, Gatooma and finally Gwelo in that capacity. It can be fairly claimed that she has given the whole of her nursing life to the Service of the Colony.

(4) *Medical Council of Southern Rhodesia.*

The numbers on the Registers of the Council at the end of 1950 are as follows, not all necessarily residing and practising in Southern Rhodesia:—

	Additions	Total at 31.12.50
Medical Practitioners	35	399
Medical Practitioners (temporary registrations)	6	11
Dental Surgeons	7	69
Chemists and Druggists	12	166
Opticians	2	12
Trained Nurses—		
General	133	946
Mental	6	38
Sick Children's	1	14
Fever	2	9

	Additions	Total at 31.12.50
Orthopaedic	—	3
Midwives	96	474
Masseurs and Masseuses	4	23
Radiographers	1	6
Medical Laboratory Technicians	2	2
Sanitary (Health) Inspectors	11	58
Meat and Other Food Inspectors	7	48
Health Visitors	1	7
School Nurses	1	5
Native Nursing Orderlies	28	163
Native Health Demonstrators	—	19

It is estimated that there are about 290 medical practitioners actually resident and practising in the Colony. The vast majority of the doctors are concentrated in the two larger centres of Salisbury and Bulawayo, although there has been a welcome increase in the number of doctors practising privately in the smaller centres. There has also been an increase during the year in the number of specialists, radiologists, ear and throat surgeons and orthopaedic surgeons, especially.

The number of nurses on the Register is very large, but the majority of these are married and no longer engaged in active work. Nevertheless, they form a most valuable reserve of skilled staff for employment in the event of epidemic illness or serious disasters.

(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 1950:—

	No. of Candidates	No. Passed	No. Failed
Preliminary Examinations	38	35	3
Preliminary Examinations (Part I only)	26	26	—
Final Examinations	27	26	1

The examinations were held in April, August and December. Seven nurses passed the Final Examination with honours, three of whom qualified for the gold medals presented by the local branches of the British Medical Association.

(ii) Native Nursing Orderlies.

The results of the Lower and Higher Examinations for Native Nursing Orderlies, held in June and December, are:—

	No. of Candidates	No. Passed	No. Passed Anatomy and Physiology	No. Passed Nursing and Hygiene	No. Failed
Lower Exam.	98	68	3	17	9
Higher Exam.	33	28	—	—	5

(iii) Native Health Demonstrators.

No examinations for Native Health Demonstrators were held during 1950, due to the change over to a full three-year course of instruction.

(6) Military Pensions.

There has been a further fall in the number of Southern Rhodesia pensioners requiring periodic medical boards. This is due, of course, to a number of awards now being made permanent.

This has been compensated, to some extent, by a substantial increase in the number of medical boards held on Imperial and Union of South Africa pensioners, who are now living in Southern Rhodesia.

Medical boards, which are held by Government Medical Officers, assisted where necessary by honorary consultants, were as follows in 1950:—

Southern Rhodesia Pensioners—

European	481
Coloured	13
African	11
New claims to pension	8
Pensioner for Northern Rhodesia	1

Pensioners for Imperial Government	165
Pensioners for Union of South Africa	95
Other Commonwealth pensioners	5
Total	779

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

Both organisations report an increase in their activities and in the interest displayed in their training programmes by the general public.

A handsome new St. John Headquarters is now approaching completion in Salisbury and this rallying point will provide a great stimulus to further activity by the Brigade. The St. John Ambulance Association report that 1,180 certificates were issued to their members, 596 being First Aid Certificates.

Over 20,000 hours of hospital duty were performed. In six ambulances, operated by the Brigade members, over 7,000 patients were carried and attention given to many travelling patients, even including the entire air route to London.

The British Red Cross Society also report an increase in their activities. Eleven European and three African detachments are now operating. The Society has been fortunate in securing the services of a qualified Occupational Therapist, who has been working at the Salisbury Hospital with much success. Occupational therapy has also been introduced at the Bulawayo Hospital and the Infectious Diseases Hospital, Salisbury.

An interesting development has been the inauguration of a welfare centre at Luveve Native Village outside Bulawayo. Demonstrations in hygiene, mothercraft, babycraft and nutrition are given regularly and the average weekly attendance is 53. The Society has arranged for skimmed milk and fresh vegetables to be available at the centre daily. This is a most interesting and important development in the Society's activities and will go far to educate the African women in better standards of living.

Both organisations take an active part in the blood transfusion services at Salisbury, Bulawayo and Umtali and the Red Cross supplied 382 donors in 1950.

(8) *Habit-forming Drugs.*

One hundred and twenty-one import and fifty-eight export certificates were issued in 1950.

Drug	Imports in Grammes	Exports in Grammes
Medicinal opium	4,907	181
Opium (in tinctures, extracts and other preparations)	34,499	3,688
Indian Hemp (in the form of galenicals)	3,175	—
Morphine Alkaloid	1,189	147
Diacetyl Morphine (Heroin) Alkaloid	338	199
Cocaine Alkaloid	542	429
Methyl-Morphine (Codeine) Alkaloid	3,518	254
Ethyl Morphine (Dionine) Alkaloid	276	1
Pethidine Base	5,988	614
Amidone	46	28

During the year, inspections of premises and the method of storage and accounting for habit-forming drugs have been pursued with satisfactory results in securing adequate control over stocks.

Kutama ..	107	709	816	612	4,551	5,163	—	—	22	22	619	10,684	11,303	1,827	16,272	18,099
Mondoro	152	1,599	1,751	2,315	14,153	16,468	—	—	6	6	167	9,280	9,447	332	9,795	10,127
Inyanganga ..	355	2,396	2,751	3,981	23,995	27,976	1	1	8	8	534	5,775	6,309	2,473	29,927	29,927
Tsonzo ..	40	1,078	1,118	478	9,625	10,103	—	—	15	15	356	4,883	5,239	1,367	7,308	8,675
Inyati ..	114	674	788	6,699	11,031	17,730	—	—	50	50	46	723	769	307	5,815	6,122
Dagumella	55	352	407	1,444	4,618	6,062	—	—	7	7	316	3,058	3,374	3,344	13,370	16,714
Nkai ..	219	990	9,225	19,535	28,760	28,760	4	4	8	8	410	1,007	1,417	3,630	17,594	21,224
Karoi ..	203	961	1,164	2,054	6,695	8,749	—	—	25	25	89	4,451	4,540	360	6,880	7,240
Miami ..	65	519	584	780	6,491	7,271	2	2	14	14	157	2,070	2,227	773	6,099	6,872
Urungwe	60	415	475	1,069	4,280	5,349	3	3	7	7	102	4,923	5,025	384	13,847	14,431
Makumbi ..	155	2,447	2,602	1,634	25,274	26,908	—	—	52	52	325	5,599	5,924	2,287	50,292	52,679
Marandellas ..	466	2,432	2,898	12,774	44,941	57,715	—	—	97	97	236	4,462	4,698	421	15,712	16,133
Shota ..	177	849	7,932	8,547	16,479	16,479	2	2	20	20	159	7,591	7,750	405	11,759	12,166
Wedza ..	152	836	988	4,991	28,152	33,143	1	1	20	20	158	5,351	5,509	357	8,474	8,821
Melsetter ..	41	363	404	993	4,764	5,757	—	—	3	3	91	1,682	1,773	993	11,492	12,485
Biri Wiri	13	216	229	394	4,223	4,587	—	—	3	3	49	1,037	1,086	385	6,214	6,599
Jena ..	116	4,369	4,485	1,669	13,782	15,451	—	—	12	12	141	4,301	4,442	5,695	26,898	32,593
Morgenster (a)	188	1,695	1,883	3,562	17,123	20,685	—	—	33	33	162	9,206	9,368	337	16,850	17,187
Mwewa ..	263	4,094	4,357	8,429	47,108	55,537	—	—	62	62	1,148	5,624	6,772	7,454	42,098	49,552
Mtoko ..	98	1,230	1,328	2,443	14,800	17,243	—	—	1	1	204	3,773	3,977	403	8,345	8,748
Nyamazuwi																
Ndanga ..	414	8,311	8,725	13,800	124,387	138,187	1	1	114	115	—	—	—	—	1,182	1,182
Bikita ..	73	4,825	4,898	3,229	134,762	137,982	—	—	44	44	—	—	—	—	5,042	5,042
Chichidza	185	2,420	2,605	8,952	74,213	83,165	1	1	28	29	—	—	—	—	5,483	5,483
Chiduma	37	563	600	1,377	32,966	34,343	—	—	12	12	—	—	—	—	1,684	1,684
Chikuku ..	129	2,030	2,159	4,933	60,293	65,226	6	6	21	27	—	—	—	—	4,707	4,707
Chingombe	386	7,237	7,623	13,194	169,361	182,555	1	1	33	34	—	—	—	—	15,429	15,429
Chitando	191	2,851	3,042	8,040	74,614	82,654	2	2	20	22	—	—	—	—	7,557	7,557
Matsai ..	81	2,584	2,665	3,254	82,326	82,580	1	1	29	30	—	—	—	—	2,246	2,246
Sangwe ..	35	1,168	1,203	1,835	51,173	53,008	2	2	15	17	—	—	—	—	1,040	1,040
Siyawarowa	185	4,334	4,519	7,579	124,202	131,781	3	3	35	38	—	—	—	—	2,440	2,440
Ndanga Group (10)	1,716	36,323	38,039	66,184	928,297	994,481	17	17	351	368	—	—	—	—	46,810	46,810
Norton ..	290	1,417	1,707	10,487	14,008	24,495	1	1	36	37	10	4,267	4,277	44	17,467	17,511
Nyamandhlovu	217	840	1,057	5,475	14,521	19,996	2	2	32	34	65	826	891	272	4,919	5,191

TABLE B (Cont.)

GOVERNMENT NATIVE CLINICS, 1950.

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	Total
Plumtree	Lupani ..	60	770	830	957	4,600	5,557	1	10	11	851
	Sipepa ..	76	356	432	4,394	12,291	16,685	1	9	10	2,884
	Tjototjo ..	188	930	1,118	3,955	11,684	15,639	—	14	14	2,595
	Plumtree ..	230	1,272	1,502	2,823	14,252	17,075	1	40	41	3,190
Que Que	Lady Mary Baring	34	143	177	808	2,229	3,037	1	4	5	3,594
	Mphoengs	198	394	592	2,265	4,122	6,387	—	176	176	1,096
	Stanley ..	195	1,123	1,318	2,504	15,722	18,226	—	469	469	1,686
	Loreto ..	79	1,461	1,540	900	13,399	14,299	—	36	36	2,155
Rusape	Chikuku ..	20	279	299	577	6,293	6,870	1	17	18	3,232
	Nedwedzwo	105	1,600	1,705	3,565	20,781	24,346	—	189	189	7,165
Salisbury	Highfield ..	—	840	840	—	5,310	5,310	1	2	3	2,029
	Selukwe ..	—	1,394	1,394	—	15,624	15,624	173	5,520	5,693	647
Umtali	Dzwama-bande	72	438	510	1,525	4,130	5,655	—	102	102	10,010
	Sebunga ..	248	—	248	11,760	—	11,760	271	10,010	10,281	6,121
	Mabadzengo	—	—	—	—	—	—	272	6,121	6,393	2,808
	Maranke	39	362	401	1,893	4,516	6,409	80	2,808	2,888	56
Umvukwes	Odzi ..	206	1,072	1,278	7,387	4,897	12,284	5	—	5	6,665
	Arrovan	118	773	891	2,042	10,681	12,723	207	2,313	2,520	1,174
Umvuma	Sipolilo ..	53	947	1,000	1,198	13,886	15,084	160	2,679	2,839	2,628
	Umvuma	157	1,763	1,920	8,173	20,265	28,438	36	1,167	1,203	99
	Chilimanzi	88	1,307	1,395	3,711	20,429	24,140	31	3,327	3,358	95
	Chinyika	94	1,025	1,119	2,147	9,263	11,410	199	3,397	3,596	519
Victoria Falls	Gutu ..	163	1,530	1,693	7,415	27,325	34,740	53	2,343	2,396	7,237
	Victoria Falls	—	—	—	—	—	—	72	3,156	3,162	1,142
Wankie	Falls ..	175	216	391	4,328	7,683	12,011	6	4,437	4,457	240
	Lukosi ..	—	—	—	—	—	—	20	15,421	15,661	84,133
TOTAL (84)		13,873	113,624	127,497	382,485	1,941,285	2,323,770	76	1,809	1,885	280,362
								16,368	296,730	313,100	96,978
									1,236,774	1,333,752	84,133
									14,320	14,544	14,544

(a) Supervised by a Missionary Doctor.

CLASSIFICATION OF EUROPEAN DEATHS, 1950.

Deaths Classified according to the International List of Causes of Sickness and Deaths: Sixth Decennial Revision.

International List No.	Cause of Death.	No. of Deaths
A 1	Tuberculosis of respiratory system	9
A 4	Tuberculosis of bones and joints	1
A 5	Tuberculosis, all other forms	1
A 10	All other syphilis	7
A 12	Typhoid fever	3
A 16	Dysentery, all forms	8
A 20	Septicaemia and pyaemia	2
A 21	Diphtheria	4
A 23	Meningococcal infections	5
A 26	Tetanus	2
A 28	Acute poliomyelitis	8
A 31	Smallpox	2
A 32	Measles	1
A 34	Infectious hepatitis	2
A 37	Malaria	14
A 43	All other diseases classified as infective and parasitic	1
A 44	Malignant neoplasm of buccal cavity and pharynx	4
A 45	Malignant neoplasm of oesophagus	4
A 46	Malignant neoplasm of stomach	18
A 47	Malignant neoplasm of intestine, except rectum	9
A 48	Malignant neoplasm of rectum	7
A 49	Malignant neoplasm of larynx	4
A 50	Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	16
A 51	Malignant neoplasm of breast	9
A 52	Malignant neoplasm of cervix uteri	2
A 54	Malignant neoplasm of prostate	5
A 55	Malignant neoplasm of all other and unspecified site	40
A 58	Leukaemia and aleukaemia	4
A 59	Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system	4
A 60	Benign neoplasms and neoplasms of unspecified nature	3
A 62	Thyrotoxicosis with or without goitre	3
A 63	Diabetes mellitus	14
A 65	Anaemias	3
A 66	Allergic disorders, all other endocrine, metabolic and blood diseases	5
A 67	Psychoses	5
A 69	Mental deficiency	2
A 70	Vascular lesions affecting central nervous system	59
A 71	Non-meningococcal meningitis	4
A 73	Epilepsy	1
A 77	Otitis media and mastoiditis	1
A 78	All other diseases of the nervous system and sense organs	6
A 79	Rheumatic fever	3
A 80	Chronic rheumatic heart disease	7
A 81	Arteriosclerotic and degenerative heart diseases	149
A 82	Other diseases of the heart	13
A 83	Hypertension with heart disease	16
A 84	Hypertension without mention of heart	15
A 85	Diseases of arteries	9
A 86	Other diseases of circulatory system	4
A 88	Influenza	8
A 89	Lobar pneumonia	11
A 90	Bronchopneumonia	12
A 93	Bronchitis, chronic and unqualified	3
A 95	Empyema and abscess of lung	2
A 97	All other respiratory diseases	10
A 99	Ulcer of stomach	3
A 100	Ulcer of duodenum	2

International List No.	Cause of Death	No. of Deaths
A 101	Gastritis and duodenitis	1
A 102	Appendicitis	5
A 103	Intestinal obstruction and hernia	2
A 104	Gastro-enteritis and colitis, except diarrhoea of the newborn	14
A 105	Cirrhosis of the liver	10
A 106	Cholelithiasis and cholecystitis	1
A 107	Other diseases of digestive system	5
A 108	Acute nephritis	1
A 109	Chronic, other and unspecified nephritis	12
A 110	Infections of kidney	2
A 111	Calculi of urinary system	1
A 112	Hyperplasia of prostate	8
A 114	Other diseases of genito urinary system	3
A 116	Toxaemias of pregnancy and the puerperium	2
A 117	Haemorrhage of pregnancy and childbirth	3
A 120	Other complications of pregnancy, childbirth and the puerperium	2
A 122	Arthritis and spondylitis	2
A 126	All other diseases of skin and musculo-skeletal system	1
A 128	Congenital malformations of circulatory system	7
A 129	All other congenital malformations	6
A 130	Birth injuries	11
A 131	Postnatal asphyxia and atelectasis	13
A 133	Haemolytic disease of newborn	5
A 134	All other defined diseases of early infancy	7
A 135	Ill-defined diseases peculiar to early infancy and immaturity, unqualified	29
A 136	Senility without mention of psychosis	9
A 137	Ill-defined and unknown causes of morbidity and mortality	16
AE 138	Motor vehicle accidents	37
AE 139	Other transport accidents	12
AE 140	Accidental poisoning	3
AE 141	Accidental falls	9
AE 142	Accident caused by machinery	1
AE 143	Accidents caused by fire and explosion of combustible material	3
AE 145	Accident caused by firearm	1
AE 146	Accidental drowning and submersion	5
AE 147	All other accidental causes	24
AE 148	Suicide and self-inflicted injury	15
AE 149	Homicide and injury purposely inflicted by other persons (not in war)	3

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TABLE E.

STAFFING, BEDS AND PATIENTS OF GOVERNMENT HOSPITALS, 1950.

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		
	Euro- pean	Coloured	Euro- pean	Asiatic and Coloured	African	Euro- pean	Coloured and Asiatic	African	Euro- pean	Coloured and Asiatic	African	Euro- pean	Coloured and Asiatic	Total	Euro- pean	Coloured and Asiatic	African
<i>General:</i>																	
Salisbury ..	119	1	150	22	284	4,055	392	12,309	16,756	128-9	13-8	368-6	5,041	134,548	11-6	12-9	10-0
Bulawayo ..	111	8	244	30	337	5,037	621	10,503	16,851	180-0	18-8	330-2	6,848	123,898	11-6	11-0	11-7
Bindura ..	6	—	10	—	30	274	—	2,511	2,785	5-1	—	48-9	1,865	19,720	6-8	—	7-1
Chiganga ..	5	—	14	—	—	227	—	—	227	3-2	—	—	1,169	—	5-1	—	—
Enkeldoorn ..	6	—	14	—	45	285	—	1,792	2,067	4-5	—	50-6	1,648	21,758	5-8	—	12-2
Fort Victoria ..	8	—	24	1	34	506	21	2,624	3,151	8-2	0-3	85-6	2,081	31,254	5-9	4-7	11-9
Gatooma ..	22	3	42	11	240	1,043	75	6,838	7,956	23-0	2-1	249-3	8,413	760	90,987	10-1	13-3
Gwandu ..	5	—	13	1	84	222	21	3,250	3,493	3-6	0-5	190-1	1,300	176	69,389	5-9	21-3
Gwelo ..	21	5	56	14	72	1,500	127	4,236	5,863	40-4	4-1	133-8	14,736	1,498	65,057	9-8	11-5
Marandellas ..	5	—	10	—	—	220	—	—	220	4-7	—	—	1,709	—	7-7	—	—
Que Que ..	12	—	15	—	92	647	1	2,827	3,475	13-2	—	123-2	4,811	3	44,970	7-4	15-9
Rusape ..	6	—	15	4	42	293	19	3,796	4,108	6-3	0-3	107-5	2,311	106	39,241	7-9	10-8
Sekake ..	5	—	12	—	—	312	—	—	312	6-8	—	—	2,482	—	7-9	—	—
Shamva ..	2	—	4	—	40	—	—	2,205	2,205	0-0	—	111-1	—	—	—	—	16-2
Slinda ..	6	—	11	—	84	451	—	2,462	2,913	6-9	—	96-1	2,535	—	—	—	14-2
Umtali ..	17	4	45	8	80	1,684	188	3,637	5,509	32-4	6-2	129-0	11,843	2,267	47,092	7-0	13-0
TOTAL ..	356	21	689	91	1,126	17,356	1,465	59,070	77,891	467-1	46-0	2,042-1	170,501	745,372	9-8	11-5	12-6
<i>Special Hospitals:</i>																	
Ingenaheni ..	47	—	136	—	580	324	29	1,173	1,526	164-8	18-4	709-3	60,157	258,906	164-8	184-4	229-7
Nervosa Disorders ..	6	—	23	—	—	218	—	—	218	13-8	—	—	5,039	—	23-1	—	—
Martin Tuberculosis Sanatorium .. (b)	4	—	—	—	100	—	—	74	74	—	—	31-9	—	5,926	—	—	80-1
Harazi Maternity .. (c)	3	—	—	—	39	—	—	1,319	1,319	—	—	34-8	—	9,885	—	—	7-5
Mpilo Maternity .. (d)	3	—	—	—	41	—	—	742	742	—	—	37-3	—	4,584	—	—	6-2
TOTAL ..	63	—	159	—	760	542	29	3,308	3,879	178-6	18-4	765-2	65,196	279,301	120-3	184-4	84-4
GRAND TOTAL ..	419	21	848	91	1,886	17,898	1,494	62,378	81,770	645-7	64-5	2,807-3	235,697	1,024,673	13-2	15-7	16-4

(a) Includes patients in hospital 1st January, 1950.

(b) Opened 28th June, 1950.

(c) Opened 23rd May, 1950.

(d) Opened 31st August, 1950.

TABLE F.
ADMISSIONS TO GOVERNMENT GENERAL HOSPITALS, 1950, OF CASES OF CERTAIN SPECIFIED DISEASES.

	MALARIA						BLACKWATER FEVER						DYSENTERY						PNEUMONIA						TYPHOID FEVER					
	European			Coloured and Asiatic			African			European			Coloured and Asiatic			African			European			Coloured and Asiatic			European			Coloured and Asiatic		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	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 ..	111	—	16	—	406	3	—	—	80	—	17	1	152	1	92	1	14	3	623	60	8	—	6	—	8	—	—	—	—	8
Bulawayo ..	173	1	46	—	734	26	—	—	26	—	10	—	92	6	121	8	22	1	766	102	9	—	5	—	—	—	—	—	—	14
Bisdoma ..	21	—	—	—	64	1	—	—	1	—	—	—	2	—	2	—	—	—	61	1	—	—	—	—	—	—	—	—	—	1
Chitunga ..	45	—	—	—	—	—	—	—	5	—	—	—	—	—	12	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—
Bokeldoom ..	26	—	—	—	203	1	—	—	—	—	—	—	—	—	10	—	—	—	34	11	1	—	—	—	—	—	—	—	—	—
Port Victoria ..	151	2	6	1	516	7	—	—	4	—	—	—	25	9	8	—	—	—	39	15	5	—	—	—	—	—	—	—	—	—
Gatooma ..	251	4	12	—	1,054	42	—	—	16	—	1	—	36	—	30	2	—	—	460	41	3	—	1	—	—	—	—	—	—	—
Gwanda ..	21	—	—	—	87	2	—	—	5	—	—	—	17	—	11	1	—	—	98	15	—	—	2	—	—	—	—	—	—	—
Gweru ..	63	—	27	—	532	12	—	—	118	2	—	—	135	8	67	—	3	1	254	44	2	—	—	—	—	—	—	—	—	—
Marandellas ..	16	1	—	—	—	—	—	—	9	—	—	—	—	—	7	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Que Que ..	115	—	—	—	517	31	—	—	18	1	—	—	4	—	18	1	—	—	90	17	2	—	—	—	—	—	—	—	—	—
Rosape ..	51	—	—	—	290	11	—	—	1	—	—	—	7	—	4	—	—	—	58	9	1	—	—	—	—	—	—	—	—	—
Sotikwe ..	27	1	—	—	—	—	—	—	19	—	—	—	—	—	15	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Shamva ..	—	—	—	—	100	—	—	—	—	—	—	—	—	—	—	—	—	—	60	—	—	—	—	—	—	—	—	—	—	—
Sinda ..	77	—	—	—	209	5	—	—	20	—	—	—	—	—	18	—	—	—	108	12	2	—	—	—	—	—	—	—	—	—
Umtali ..	128	—	19	—	376	9	—	—	4	—	—	—	—	—	30	—	2	—	306	23	6	—	2	—	—	—	—	—	—	—
TOTAL ..	1,276	9	126	1	5,088	150	—	—	340	3	28	1	562	29	445	15	41	5	2,057	350	42	1	16	—	270	—	—	—	—	35

Mutumbara	167	794	961	4,527	9,641	14,168	3	9	12	1,245	2,266	3,511	14,514	13,678	28,192	1	1	2	27	27
Nyadori	144	2,968	3,112	1,152	23,721	24,873	—	62	62	104	1,447	1,551	866	14,179	15,045	1	3	3	56	56
Old Umtali	24	796	820	264	4,719	4,983	—	3	3	198	1,183	1,381	1,551	6,991	8,542	—	2	—	24	24
<i>Roman Catholic:</i>																				
All Soul's, Mtoko	70	1,048	1,118	391	9,130	9,721	—	16	16	975	12,482	13,457	5,015	29,417	34,432	—	2	—	16	16
Chishawasha	—	246	246	—	1,244	1,244	—	1	1	57	8,464	8,521	262	9,243	9,505	—	1	1	5	5
Driefontein	7	68	75	60	528	588	—	1	1	238	3,480	3,718	1,214	8,565	9,779	—	1	—	8	8
Empandeni	—	390	390	—	5,822	5,822	—	2	2	285	11,228	11,513	2,961	29,553	32,514	—	1	3	12	23
Fatima	136	480	616	2,282	3,912	6,194	3	12	15	40	2,143	2,183	128	2,784	2,912	1	—	—	80	80
Gokomoro	95	1,573	1,668	623	9,307	9,930	—	7	7	686	12,883	13,569	3,693	51,632	55,325	—	1	—	22	22
Holy Cross	93	143	236	502	834	1,336	1	4	5	1,789	248	2,037	6,423	1,058	7,481	—	1	—	4	4
Mount Melleray	5	296	301	39	2,442	2,481	—	4	4	25	860	885	143	1,876	2,019	—	1	—	6	6
Mukaro	55	221	276	385	5,429	5,814	—	5	5	4,614	13,104	17,718	29,116	94,908	124,024	—	1	—	3	3
Silveira	60	861	921	456	6,357	6,813	1	11	12	24	6,791	6,815	100	18,477	18,577	1	2	1	24	24
St. Barbara's	186	965	1,151	2,181	11,223	13,404	1	15	16	95	6,040	6,135	540	6,580	7,120	—	1	1	20	20
St. Joseph's, Gwelo	16	115	131	218	1,555	1,773	2	6	8	208	11,451	11,659	1,996	24,664	26,660	—	1	—	2	4
St. Joseph's, Semokwe	89	343	432	1,163	3,928	5,091	1	3	4	482	3,257	3,739	2,205	6,369	8,574	—	1	—	15	15
St. Michael's, Mondoro	15	505	520	320	3,433	3,753	1	5	7	71	4,967	5,038	920	15,947	16,867	—	1	1	6	17
St. Paul's, Musami	8	858	866	240	12,380	12,620	2	20	22	271	7,495	7,766	2,993	15,256	18,249	—	1	—	13	13
Trishill	246	818	1,064	2,536	12,414	14,950	2	9	11	290	6,533	6,823	2,360	15,426	17,786	—	1	1	24	24
<i>Salvation Army:</i>																				
Howard Institute	1	643	644	5	6,224	6,229	—	6	6	—	1,756	1,756	—	9,252	9,252	—	2	1	15	16
Mtombeswana	—	150	150	—	815	815	—	1	1	—	1,669	1,669	—	5,192	5,192	—	1	1	6	6
Tshelanyemba	192	419	611	2,229	2,908	5,137	7	3	10	1,456	1,750	3,206	6,505	5,157	11,662	—	1	1	8	8
<i>Seventh Day Adventist:</i>																				
Lower Gwelo	14	644	658	83	3,930	4,013	—	18	18	367	4,496	4,863	1,279	6,510	7,789	—	1	—	16	16
Solusi	—	150	150	—	1,050	1,050	—	10	10	4,256	3,281	7,537	12,768	16,405	29,173	—	2	—	5	5
<i>South African General Mission:</i>																				
Rusitu	—	207	207	—	2,661	2,661	—	2	2	10	882	892	10	8,174	8,184	—	1	1	8	20
<i>Swedish Mission:</i>																				
Manana	672	391	1,063	14,376	9,611	23,987	—	6	6	115	144	259	852	2,234	3,086	—	1	2	25	25
Massaso	1,527	429	1,956	37,175	13,807	50,982	—	21	21	534	416	950	3,934	5,453	9,387	—	2	2	30	30
Muene	1,585	2,750	4,335	39,272	61,753	101,025	—	83	83	1,013	2,599	3,612	12,014	16,206	28,220	1	6	7	130	160
<i>Wesleyan Methodist:</i>																				
Epworth	—	—	—	—	—	—	—	—	—	11	3,942	3,953	80	5,439	5,519	—	1	1	—	—
Waddilove	—	806	806	—	6,468	6,468	—	14	14	—	7,184	7,184	—	13,186	13,186	—	1	1	20	20
<i>Zambesi Industrial:</i>																				
Mavura-dontha	433	466	899	5,194	5,627	10,821	—	13	13	327	5,052	5,379	2,580	20,792	23,372	1	—	—	12	12
TOTAL (47)	6,591	28,908	35,499	124,427	341,762	466,189	27	571	598	22,361	206,267	228,628	137,817	650,785	797,602	13	62	47	731	1,015

TABLE H.
MATERNITY HOMES, 1950.

Name	Town	Patients remaining 1,1,50	Admitted	Died	Patients remaining 31.12.50	Confinements	Births		Deaths of Infants	Operations		Equipped Beds
							Live	Still		Major	Minor	
Lady Chancellor	Salisbury	31	1,308	4	28	1,247	1,243	19	32	66	573	37
Lady Rodwell	Bulawayo	22	992	—	19	865	854	17	17	25	295	38
Appleby	Bindura	—	42	—	42	42	42	—	—	—	—	3
Birchenough	Gwelo	2	202	—	4	177	175	2	1	—	4	9
Donaldson	Selukwe	—	30	1	1	29	28	1	—	—	—	5
Enkeldoorn	Enkeldoorn	2	31	—	1	31	31	—	—	—	7	2
Fort Victoria	Fort Victoria	1	90	—	1	74	75	1	1	—	30	9
Que Que	Que Que	3	121	—	4	112	110	2	4	5	1	6
Rusapi	Rusapi	—	44	—	—	44	43	1	—	1	4	2
Sinoia	Sinoia	2	66	—	2	60	62	—	—	1	1	2
Lady Kennedy	Umtali	5	314	—	5	272	268	4	5	19	32	10
Total Government operated Homes (10)		68	3,240	5	66	2,953	2,931	47	60	117	946	123
Clarison	Bulawayo	2	115	—	3	109	105	4	—	—	—	8
Queen Mary	Gatoorna	3	133	—	4	121	121	—	2	—	57	9
Total privately operated Homes (2)		5	248	—	7	230	226	4	2	—	57	17
GRAND TOTAL		73	3,488	5	73	3,183	3,157	51	62	117	1,003	140

EUROPEAN SCHOOLS: FINDINGS OF MEDICAL INSPECTION, 1950.

Routine Medical Examinations Children Born										Group 0, 1944	Group 1, 1943, 1942	Group 2, 1941, 1940	Group 3, 1939, 1938	Group 4, 1937, 1936	Group 5, 1935, 1934	Group 6, 1933, 1932	Total	Percentage
<i>Children Examined</i>										483	1,377	1,077	1,087	416	131	12	4,583	—
<i>Nutritional State</i> (U.K. Board of Education Classification)										37	115	150	244	132	63	8	749	16.3
A										310	872	663	645	249	65	4	2,808	61.3
B										135	386	261	198	34	3	—	1,017	22.2
C										1	4	3	—	1	—	—	9	0.2
D										16	36	32	24	9	6	—	123	2.6
<i>Skin Diseases</i>										4	10	13	8	6	1	1	43	0.9
<i>Sculp</i>										42	118	114	70	45	20	3	412	9.0
<i>Dental Defects</i>										103	392	375	450	177	53	6	1,556	33.9
<i>E.N.T.:</i>										41	122	63	57	14	6	—	303	6.6
Tonsils and Adenoids										14	24	13	17	4	2	—	74	1.6
(1) Removed Previously										27	99	42	23	9	3	—	203	4.4
(2) Enlarged										—	—	—	—	—	—	—	—	—
(3) Removal advised										2	8	6	3	1	1	—	21	0.5
Nose: Other conditions										11	31	20	23	7	3	—	95	2.1
<i>Ears:</i>										—	—	4	1	—	—	—	5	0.1
Otitis Media with discharge										4	8	13	2	—	1	—	28	0.6
Defective Hearing: Slight										3	18	12	12	8	3	—	56	1.2
Marked										4	18	23	18	13	4	—	80	1.7
Speech Defects										10	82	68	61	23	7	1	252	5.5
<i>Eyes, Vision:</i>										1	21	47	43	12	4	—	128	2.7
Eyes, Lids—										8	19	31	56	24	9	1	148	3.2
(1) Squints										—	1	7	4	2	—	—	14	0.3
(2) Other Defects										6	8	5	9	8	2	—	38	0.8
<i>Vision:</i>										2	1	2	6	1	1	—	13	0.3
Refractive Defects										2	4	4	10	4	1	—	25	0.5
(1) For observation										2	5	2	5	3	—	—	17	0.4
(2) Requiring glasses										17	39	10	12	4	—	—	82	1.8
(3) Having glasses										—	—	—	—	—	—	—	13	0.3
Other Defects										6	8	5	9	8	2	—	38	0.8
<i>Heart:</i>										2	1	2	6	1	1	—	13	0.3
Functional Disorders										2	4	4	10	4	1	—	25	0.5
<i>Organic Diseases:</i>										2	5	2	5	3	—	—	17	0.4
(1) Rheumatic										17	39	10	12	4	—	—	82	1.8
(2) Other										—	—	—	—	—	—	—	13	0.3
<i>Lungs:</i>										—	—	—	—	—	—	—	13	0.3
Asthma										6	8	5	9	8	2	—	38	0.8
Bronchitis										2	5	2	5	3	—	—	17	0.4
<i>Abdomen:</i>										2	5	2	5	3	—	—	17	0.4
Enlarged Spleen										17	39	10	12	4	—	—	82	1.8
<i>Nervous System:</i>										—	—	—	—	—	—	—	13	0.3
Functional Disorders										6	8	5	9	8	2	—	38	0.8
Organic Diseases										3	7	3	4	2	—	—	19	0.36
<i>Posture Defects:</i>										3	7	3	4	2	—	—	19	0.36
Spinal										56	175	128	136	60	18	1	574	12.5
Spinal and Flat Feet										43	142	130	121	40	12	—	488	10.6
Flat Feet										62	190	144	164	58	20	—	638	13.9
<i>Deformities:</i>										—	—	—	—	—	—	—	11	0.25
Head, Neck, Arms										—	4	4	2	1	—	—	11	0.25
Spine, Chest										4	10	11	6	2	1	—	35	0.8
Knock Knees, Bow Legs, Club Feet										52	90	77	97	29	7	—	352	7.6
<i>Other Defects:</i>										3	6	4	13	2	2	—	30	0.6
Miscellaneous										30	61	46	61	10	8	1	217	4.7
<i>Other Conditions</i>										—	—	—	—	—	—	—	—	—

COLOURED AND INDIAN SCHOOLS: FINDINGS OF MEDICAL INSPECTION, 1950.

TABLE J.

Routine Medical Examinations Children Born		Group 0, 1944	Group 1, 1943, 1942	Group 2, 1941, 1940	Group 3, 1939, 1938	Group 4, 1937, 1936	Group 5, 1935, 1934	Group 6, 1933, 1932	Total	Percentage
<i>Children Examined</i>		29	205	176	172	153	46	10	791	—
<i>Nutritional State</i> (U.K. Board of Education Classification)										
A		—	2	11	11	30	17	7	78	9.8
B		12	50	50	86	97	25	3	332	42.1
C		15	141	99	72	26	4	0	357	45.1
D		2	12	7	3	—	—	—	24	3.0
<i>Skin Diseases</i>		—	7	6	5	1	1	—	20	2.5
<i>Scalp</i>		—	22	10	16	9	3	1	63	7.9
<i>Dental Defects</i>		3	24	20	19	16	8	1	91	11.5
<i>E.N.T.:</i>										
Tonsils and Adenoids		1	4	10	16	14	4	—	49	6.2
(1) Removed previously		5	14	10	14	9	1	—	53	6.7
(2) Enlarged		1	1	—	2	2	—	—	6	0.75
(3) Removal advised		—	—	—	—	—	—	—	—	—
<i>Nose:</i>		1	13	2	1	1	—	—	18	2.25
<i>Other Conditions</i>		—	—	—	—	—	—	—	—	—
<i>Ears:</i>		—	—	—	—	—	—	—	—	—
Otitis Media with discharge		—	1	1	1	1	1	—	5	0.6
Defective Hearing: Slight		—	3	2	2	4	1	—	12	1.5
Marked		—	—	—	—	—	—	—	—	—
<i>Speech Defects</i>		—	—	—	—	—	—	—	—	—
<i>Eyes, Vision:</i>		—	—	—	—	—	—	—	—	—
Eyes, Lids		2	6	4	4	4	1	—	21	2.65
(1) Other Defects		—	3	—	1	1	—	—	5	0.6
(2) Squints		—	—	—	—	—	—	—	—	—
<i>Vision:</i>		—	—	—	—	—	—	—	—	—
Refractive Defects		1	10	7	9	4	2	1	34	4.3
(1) For observation		—	—	—	2	6	1	—	12	1.5
(2) Requiring glasses		—	—	3	5	6	3	1	16	2.0
(3) Having glasses		—	1	—	1	3	—	—	4	0.5
<i>Other Defects</i>		—	—	—	—	—	—	—	—	—
<i>Heart:</i>		—	—	—	—	—	—	—	—	—
Functional Disorders		1	1	—	2	1	—	—	5	0.6
Organic Diseases (1)		—	—	—	2	—	1	—	3	0.4
Rheumatic		—	—	—	—	—	—	—	—	—
(2) Other		1	1	3	1	1	1	—	8	1.0
<i>Lungs:</i>		—	—	—	—	—	—	—	—	—
Asthma		—	—	—	—	—	—	—	—	—
Bronchitis		—	6	3	1	—	1	—	11	1.4
<i>Abdomen:</i>		—	—	—	—	—	—	—	—	—
Enlarged Spleen		—	2	—	2	1	2	1	8	1.0
<i>Nervous System:</i>		—	—	—	—	—	—	—	—	—
Functional Disorders		—	—	—	—	—	—	—	—	—
Organic Diseases		—	1	—	—	—	—	—	1	0.1
<i>Posture Defects:</i>		—	—	—	—	—	—	—	—	—
Spinal		5	42	30	22	17	7	3	126	15.9
Spinal and Flat Feet		2	15	11	17	16	7	2	70	8.8
Flat Feet		—	14	10	19	23	4	1	71	8.9
<i>Deformities:</i>		—	—	—	—	—	—	—	—	—
Head, Neck, Arms		—	—	—	—	—	1	—	1	0.1
Spine, Chest		—	5	2	4	—	—	—	11	1.4
Knock Knees, Other Defects		—	12	7	6	16	7	1	49	6.2
<i>Other Conditions:</i>		—	—	—	—	—	—	—	—	—
Miscellaneous		—	26	6	12	4	6	—	54	6.8

TABLE K.
AFRICAN SCHOOLS: FINDINGS OF MEDICAL INSPECTIONS, 1950.

Routine Medical Examinations Children Born		Group 0, 1944	Group 1, 1943, 1942	Group 2, 1941, 1940	Group 3, 1939, 1938	Group 4, 1937, 1936	Group 5, 1935, 1934	Group 6, 1933, 1932	Total	Percentage
<i>Children Examined</i>		22	246	233	169	129	96	47	942	—
<i>Nutritional State (U.K. Board of Education Classification)</i>										
A		—	5	15	13	26	36	15	110	11.7
B		15	117	123	111	81	52	30	529	56.2
C		7	120	93	44	21	8	2	295	31.25
D		—	4	2	1	1	—	—	8	.85
3		3	23	18	12	10	6	—	72	7.7
—		—	5	2	1	—	—	—	8	.85
<i>Skin Diseases</i>										
Scalp		—	—	—	—	—	—	—	—	—
<i>Eyes, Vision:</i>										
Eyes, Lids		—	1	—	3	—	—	—	4	.4
(1) Squints		—	19	12	5	2	—	—	39	4.1
(2) Blepharitis, Conjunctivitis		—	2	1	1	—	1	—	7	.7
(3) Other		—	—	—	—	—	—	—	—	—
<i>Vision:</i>										
Refractive Defects		—	4	—	1	7	4	1	17	1.8
(1) For observation		—	—	—	—	—	—	—	—	—
(2) Requiring glasses		—	—	2	4	—	4	1	11	1.2
(3) Having glasses		—	—	—	—	1	0	1	2	.2
<i>Other Defects</i>		—	—	—	—	—	—	—	—	—
<i>Heart:</i>										
Functional Disorders		—	2	1	2	—	1	—	6	.6
Organic Diseases		—	—	—	—	—	—	—	—	—
(1) Rheumatic V.D.H.		—	2	1	1	1	—	—	5	.5
(2) Other V.D.H.		—	—	—	—	—	—	—	—	—
<i>Myocarditis</i>		—	—	—	—	—	—	—	—	—
<i>Abdomen:</i>										
Spleen		—	6	4	3	2	2	—	17	1.8
Liver		—	1	1	—	—	—	—	2	.2
<i>Lungs:</i>										
Asthma		—	—	—	—	—	—	—	—	—
Bronchitis		—	7	—	—	—	—	—	—	—
Other		2	1	6	—	—	—	1	16	1.7
<i>Nervous System:</i>										
Functional Disorders		—	—	—	—	—	—	—	—	—
Organic Diseases		—	—	—	—	—	—	—	—	—
<i>Deformities:</i>										
Knock Knees		—	—	—	5	1	3	1	10	1.0
Other Conditions		—	—	—	—	2	—	—	2	.2
<i>Other Conditions:</i>										
Miscellaneous		10	52	43	23	10	14	7	159	16.9

APPENDIX L.

REPORT OF PUBLIC HEALTH LABORATORY, SALISBURY.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood counts, etc.	13,705	3,646	17,351
Blood films for parasites	3,161	2,858	6,019
<i>P. falciparum</i>	448	518	
<i>P. vivax</i>	3	—	
<i>P. malariae</i>	1	—	
Trypanosomes	1	4	
Filaria	—	10	
Spirochaetes	—	32	
Leishmania	—	—	
Cultural—			
Blood cultures performed	170	399	569
Salmonella Group	6	19	
Brucella Group	—	1	
Other Organisms	13	60	
Serological—			
Agglutination Tests	780	722	1,502
Salmonella Group	135	309	
Brucella Group	74	33	
Other Organisms	35	26	
Serological Tests for Syphilis	1,108	29,313	30,421
Gonococcal Complement Fixation Tests	1	—	1
Grouping—Landsteiner	1,071	343	1,414
Grouping—Rhesus	639	2	641
Biochemical—			
Estimations performed	1,023	569	1,592
Miscellaneous—			
Sedimentation Rates, Fragility Curves, Spectroscopic examinations, etc.	1,120	289	1,409
URINE.			
Chemical examinations	3,346	457	3,803
Centrifuged Deposits examined	8,349	7,230	15,579
<i>B. haematobium</i>	233	1,753	
<i>B. mansoni</i>	—	3	
Miscellaneous parasites	11	2	
Centrifuged Deposits cultured	755	359	1,114
Salmonella Group	—	3	
Other Organisms	235	11	
Reducing Substances investigated	2	—	2
Miscellaneous examinations	32	13	45
SPUTUM.			
Microscopical—			
Unstained preparations examined	1	—	1
Stained Films examined	1,008	2,458	3,466
Bacteriological—			
Specimens cultured	18	9	27
FAECES.			
Direct or Concentrated Films	4,821	6,543	11,364
<i>B. mansoni</i>	41	274	
<i>B. haematobium</i>	10	18	
<i>E. histolytica</i> —trophozoites	5	16	
<i>E. histolytica</i> —cysts	40	24	
Miscellaneous parasites	152	561	
Bacteriological—			
Specimens cultured	245	384	629
Chemical—			
Estimations or Tests performed	89	30	119

	European	Non-European	Total
CEREBRO-SPINAL FLUID.			
Routine Chemical examinations	103	319	422
Routine Bacteriological examinations	103	670	773
Streptococcus	—	22	
Neisseria	4	155	
Haemophilus	—	1	
Wassermann Reactions	15	111	126
PUS, EXUDATES, PUNCTURE FLUIDS.			
Microscopic—			
Examinations performed	857	1,403	2,260
Culture—			
Specimens cultured—Bacteria	774	589	1,363
Specimens cultured—Fungi	1	2	3
Chemical—			
Qualitative or Quantitative examinations performed	10	55	65
AUTOGENOUS VACCINES.			
Number prepared	25	2	27
ANIMAL INOCULATIONS.			
Friedman Tests	81	—	81
Virulence Tests	30	14	44
<i>C. diphtheriae</i>	—	1	
<i>Myco tuberculosis</i>	15	10	
MISCELLANEOUS.			
Water Samples examined	122	—	122
Fractional Test Meals	156	6	162
Glucose Tolerance Curves	48	—	48
Hospital Sterilisers	71	—	71
Government Analyst—specimens to	51	5	56
Chemical Tests for pregnancy—Kapeller Adler	67	4	71
TOTAL ESTIMATIONS PERFORMED			102,762

UMTALI LABORATORY.

	BLOOD.		
	European	Non-European	Total
Microscopical—			
Blood counts, etc	1,590	729	2,319
Blood Films for parasites	503	915	1,418
<i>P. falciparum</i>	94	166	
<i>P. malariae</i>	1	—	
Cultural—			
Blood cultures performed	9	1	10
Serological—			
Agglutination Tests	51	125	176
Grouping—Landsteiner	37	54	91
Grouping—Rhesus	3	—	3
Biochemical—			
Estimations performed	89	77	166
Miscellaneous—			
Sedimentation Rates, Fragility curves, Spectroscopic examinations, etc.	146	197	343
URINE.			
Chemical examinations	285	2,172	2,457
Centrifuged Deposits examined	1,362	3,402	4,764
<i>B. haematobium</i>	5	790	
Centrifuged Deposits cultured	27	20	47

	European	Non-European	Total
SPUTUM.			
Microscopical—			
Stained Films examined	81	237	318
FAECES.			
Direct or Concentrated Films	849	4,664	5,513
<i>B. mansonii</i>	27	96	
<i>E. histolytica</i> —trophozoites	—	1	
Miscellaneous parasites	25	803	
Bacteriological—			
Specimens cultured	25	30	55
CEREBRO-SPINAL FLUID.			
Routine Chemical examinations	3	6	9
Routine Bacteriological	11	68	79
PUS, EXUDATES, PUNCTURE FLUIDS.			
Microscopic—			
Examinations performed	91	261	352
Culture—			
Specimens cultured	67	79	146
MISCELLANEOUS.			
Fractional Test Meals	30	7	37
Glucose Tolerance Curves	6	—	6
TOTAL ESTIMATIONS PERFORMED			18,358

APPENDIX M.

REPORT OF THE PUBLIC HEALTH LABORATORY, BULAWAYO.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood counts	11,185	3,036	14,221
Blood Films for parasites	1,601	3,263	4,864
<i>P. falciparum</i>	61	440	
<i>P. vivax</i>	21	53	
<i>P. malariae</i>	3	12	
Filaria	—	5	
Spirochaetes	2	6	
Cultural—			
Blood cultures performed	153	639	792
Salmonella group	9	77	
Other organisms	6	10	
Serological—			
Agglutination tests	539	4,515	5,054
Salmonella group	29	281	
Brucella group	10	—	
Other organisms	2	—	
Serological tests for syphilis	1,046	19,623	20,669
Gonococcal Complement Fixation tests	11	—	11
Grouping—Landsteiner	176	205	381
Grouping—Rhesus	137	—	137
Biochemical—			
Estimations performed	1,126	390	1,516
Miscellaneous—			
Sedimentation rates, Fragility curves,			
Spectroscopic examinations, etc.	809	259	1,068

	European	Non-European	Total
URINE.			
Chemical examinations	2,683	3,251	5,934
Centrifuged deposits examined	4,501	5,213	9,714
Centrifuged deposits cultured	1,250	1,302	2,552
Miscellaneous examinations	21	—	21
SPUTUM.			
Microscopical—			
Unstained preparations examined	12	15	27
Stained Films examined	616	1,683	2,299
Bacteriological—			
Specimens cultured	87	31	118
FAECES.			
Direct or concentrated films	3,651	2,649	6,300
<i>B. mansonii</i>	4	2	
<i>B. haematobium</i>	—	1	
<i>E. histolytica</i> (trophozoites)	34	10	
<i>E. histolytica</i> (cysts)	50	27	
Other parasites	103	223	
Bacteriological—			
Specimens cultured	835	1,332	2,167
<i>Salmonella</i> organisms isolated	5	11	
<i>Shigella</i> organisms isolated	10	2	
Chemical—			
Estimations or tests performed	57	4	61
CEREBRO-SPINAL FLUID.			
Routine chemical examinations	122	508	630
Routine bacteriological examinations	49	294	343
<i>Strept. pneumoniae</i>	3	18	
<i>Neisseria</i>	6	165	
<i>Bact. friedlander</i>	1	2	
<i>Haemophilus</i>	—	5	
<i>Strept. haemolyticus</i>	—	1	
Wassermann reactions	35	144	179
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical—			
Examinations performed	674	394	1,068
Cultural—			
Specimens cultured—bacteria	1,237	933	2,170
Specimens cultured—fungi	14	4	18
Chemical—			
Qualitative or quantitative examinations performed	20	20	40
AUTOGENOUS VACCINES.			
Number prepared	20	—	20
ANIMAL INOCULATIONS.			
Pregnancy tests	25	—	25
Virulence tests—			
<i>Myc. tuberculosis</i>	12	10	22
POST-MORTEM EXAMINATIONS.			
Number performed			25
HISTOLOGICAL EXAMINATIONS.			
Number and sections examined	821	600	1,421
MEDICO-LEGAL EXAMINATIONS.			
Smears for spermatozoa, blood groups, etc.			52

	European	Non-European	Total
MISCELLANEOUS TESTS.			
Fractional Test meals	110	6	116
Bilharzia skin tests	74	—	74
Seminal fluids	71	—	71
Examination for cancer cells in sputa and exudates	20	6	26
Sensitivity tests (antibiotics)	91	4	95
Waters			346
Milks (Methylene blue tests)			36
EXAMINATIONS PERFORMED	33,891	50,333	84,683

GWELO LABORATORY.

	European	Non-European	Total
BLOOD.			
Microscopical—			
Blood counts, etc.	540	239	779
Blood films for parasites	239	788	1,027
<i>P. falciparum</i>	27	301	
<i>P. vivax</i>	—	5	
<i>Spirochaetes</i>	—	2	
Cultural—			
Blood cultures performed	50	61	111
Salmonella group	—	11	
Brucella group	—	—	
Serological—			
Agglutination tests	68	80	148
Serological tests for syphilis	300	4,524	4,824
Grouping—Landsteiner	7	12	19
Biochemical—			
Estimations performed	103	20	123
Miscellaneous—			
Sedimentation rates	162	48	210
Bleeding and clotting times	10	3	13
URINE.			
Chemical examinations	691	1,536	2,227
Centrifuged deposits examined	1,047	1,950	2,997
Centrifuged deposits cultured	108	56	164
Miscellaneous examinations	15	—	15
SPUTA.			
Stained preparations examined	166	668	834
FAECES.			
Microscopical—			
Direct or concentrated films	811	1,308	2,119
Bacteriological—			
Specimens cultured	150	86	236
CEREBRO-SPINAL FLUID.			
Routine chemical examinations	30	118	148
Routine bacteriological examinations	37	80	117
Kahn reactions	4	12	16
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical—			
Estimations performed	63	394	457
Bacteriological—			
Specimens cultured	93	165	258
MISCELLANEOUS.			
Smears for spermatozoa	—	3	3
Fractional test meals	7	4	11
Glucose tolerance curves	10	1	11
ESTIMATIONS PERFORMED	4,711	12,156	16,867

REPORT OF THE GOVERNMENT ANALYST.

NUMERICAL SUMMARY AND ANALYSIS.

Exhibits in connection with Criminal Investigation—

For presence of poisons — — — — —	642	
For presence of bloodstains and for bloodgrouping — — — — —	148	
For presence of seminal stains — — — — —	161	
Miscellaneous forensic exhibits (hairs, fibres, duco paint scrapings, etc.) — — — — —	149	
		1,100

Samples of Water—

Private (domestic) supplies from boreholes, wells, rivers, springs and mine shafts — — — — —	45	
Supplies to Government establishments—Army, Police, Schools, etc. — — — — —	16	
Township supplies — — — — —	25	
Hotel and Club supplies for Liquor Licensing Court — — — — —	7	
Community supplies, control and investigation of outbreaks of illnesses — — — — —	23	
Abnormal waters, advice re clarification, purification, softening, etc. — — — — —	21	
Corrosive, ferruginous borehole and well waters — — — — —	10	
Industrial borehole and well supplies, mineral and general analysis and examination of sediments — — — — —	14	
Waters for boiler use — — — — —	10	
Analysis for copper after anti-bilharzial treatment — — — — —	7	
Borehole and mine shaft waters for arsenic — — — — —	7	
Supplies for special examination of fluorine, heavy metals, abnormal minerals, etc., for dental research and hydroponics experiments — — — — —	7	
Swimming bath waters — — — — —	4	
Distilled water samples for corrosive qualities, deoxygenation, etc., in connection with Broadcasting Station use — — — — —	28	
		224

Cows' Milk—

Official and routine samples for conformity to legal standards	128	
Individual cow samples for cryoscopic research — — — — —	189	
		317

Samples of Dairy Produce—

Butter, cheese, cream, ice-cream (and margarine) — — — — —	52	
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Customs Control—

Excise samples of wines and spirits — — — — —	5	
Miscellaneous substances for tariff classification — — — — —	28	
		33

Illicit Spirits and other Intoxicants — — — — —

50

Clinical—

Various specimens from Public Health Laboratories — — — — —	144	
Drugs and Chemicals examined for Medical Store and Wholesale Chemists — — — — —	13	
Maize Meal — — — — —	57	
Foodstuffs — — — — —	48	
Samples from Lloyds' Agents in connection with claims for damage	18	
Miscellaneous — — — — —	138	

2,194

A big drop in the sample numbers as compared with 1949, 2,194 as compared with 3,101, is due almost entirely to the exclusion of samples of native liquor (skokiaan). The new Harmful Liquids Act, 1949, renders analysis of these samples virtually unnecessary.

Criminal investigations amounted to much the same total as last year. Cases from Northern Rhodesia and Nyasaland continue to be dealt with and the criminal courts in these territories accept the affidavits in evidence. In toxicological investigations, specimens were submitted from 150 cases and poisonous substances

were found in 48; arsenic, as usual, being the commonest poison found, in 18 cases. In eight cases cyanide was detected. The Laboratory, being the only one of its type in the region, undertakes much work of a varied nature, such as examining and testing of new imported materials, ranging from milk preserving tablets to asphalt wrapping paper.

In the past, there have been claims that the cryoscopic test for the adulteration of milk with water, did not necessarily apply under local conditions, and in order to refute these statements, a series of controlled trials was undertaken.

APPENDIX O.

REPORT OF THE GOVERNMENT PATHOLOGIST.

It is only possible to give here a short analysis of the work done by this sub-Department, which employs one medical officer and one technician, apart from the usual *post-mortem* room attendance. The following is a brief summary of the type of work undertaken.

	Specimens
Surgical histo-pathology	1,571
Autopsies	792
Silicosis Board specimens	134
Medico-legal specimens	39
Research and veterinary investigations	415
Autopsy material from district hospitals	128
Total	3,079

The bulk of the surgical histo-pathology was from European patients—97½ cases—and the work was mainly checking the histological diagnosis of new growth, which was verified in 102 cases.

The majority of the autopsies, 445 instances, were done for the Police, that is, of persons dying of sudden and violent death or from some unexplained cause. Fortunately, the African does not object very strongly to the making of *post-mortem* examinations in order to clear up the true cause of death and, of the total number of 792 autopsies, 749 were made on Africans.

A number of cases of more than usual interest were noted.

- (a) Dysentery of unknown aetiology, of which there were 89 cases, 41 males and 23 females being Africans aged up to four years. The symptoms described are malaise, abdominal discomfort, lethargy and, in a few cases, diarrhoea. The temperature runs between 99 and 101 degrees F. and there is a pneumonic type of respiration, but the chest and abdomen showed nothing abnormal on examination. The duration of the illness is up to seven days and death is very sudden. Treatment with antibiotics and the "sulpha" group of drugs had no effect on those coming to autopsy. The *post-mortem* findings—generally well-nourished children, but a few adult cases seen, no marked dehydration, spleen enlarged up to twice normal size, marked mesenteric adenitis and, in the lower ileum on the anti-mesenteric border, oval areas, with their long axis along the bowel, were seen. These areas are of "pig-skin glove-like" appearance. There was no peritonitis. The cerebral cortex, in a few cases, was pink in colour and there was some flattening of the convolutions. A histological examination of the oval areas in the ileum showed a pleomorphic cellular infiltration of the mucosa, not of typhoid type. No pathogenic organisms were cultured.
- (b) Haemorrhagic adrenalitis. Seventeen cases of meningococcal origin, of which 15 were between 15 and 44 years old, were typical of this condition. Four other cases, also between 15 and 44 years of age, had intestinal pathology as in (a) above. It is suggested that these cases may be due to the same agent as the cases of dysentery of unknown aetiology.
- (c) Cysticercosis of the brain was seen on seven occasions; in three the cysticerci were lying free in the ventricles. In two cases, the cysts were identified as those of *Taenia solium*.

(d) Three cerebral tumours occurred:—

- (i) PINEAL DERMOID: Male European adult, 40 years, who died while diving into swimming bath. Only complaints were loss of libido and moderate irritability for few months.
- (ii) ASTROCYTOMA.
- (iii) HAEMANGIOMATOID MENINGIOMA.

In all, the Service sectioned 4,300 blocks, examined 5,000 sections and made and examined 1,200 bacteriological smears from *post-mortem* material.

APPENDIX P.

REPORT OF THE RESEARCH LABORATORY.

Block Control of Malaria and Bilharzia:

As foreshadowed in last year's report, a full year's work has been done on malaria and bilharzia control in the Mazoe Valley, using benzene hexachloride as a residual insecticide and copper sulphate as a molluscicide. The results of snail control over a wide area cannot be assessed immediately, and will require constant following up before evaluation, but it can safely be said that the malaria control scheme was an unqualified success, admission for malaria to hospitals in the area dropping to the lowest figure ever encountered.

Much of the staff's time has been taken up during the year with work connected with this scheme, such as checking huts and houses for anophelines, carrying out large-scale blood-film surveys in the Reserves in the area, and checking rivers and streams for the presence or absence of snails.

The Vectors of Bilharzia:

We have continued during the year to make collections of snails, and must again report that no *Bulinus* spp. have been found infected. The only vectors in this area appear to be *Physopsis* and *Planorbis* (*Biomphalaria*).

Treatment of Bilharziasis:

Further work has been done with "Nilodin" uncoated tablets in the treatment of urinary bilharziasis and the same good results continue to be reported.

A new oral drug, Sodium III—antimony gluconate—has been received for trial at the request of the makers, and one case has been treated so far, with promising results. It is intended, particularly, to examine the efficacy of this drug in *B. mansonii* infections, in the coming year, since the present preparations of Miracil and Nilodin do not appear to be uniformly effective in this form of the disease.

Control of Bilharziasis:

We continue to advise and help with the application of copper sulphate and other molluscicides, and are constantly answering queries and visiting farms in this connection.

Laboratory Study of Snails:

One of the problems in the study of snails has always been the difficulty of extracting the animals from their shells in an intact and relaxed condition. Many elaborate methods, involving the use of chemical such as menthol, thymol, chloroform, cocaine, etc., have been suggested, but we have now found a simple and inexpensive method, using materials obtainable anywhere. If snails are immersed in hot, soapy water, they relax completely and can be easily withdrawn, undamaged from their shells. A study of the anatomy of our Rhodesian species has now been initiated as a result of this discovery, and it is hoped to build up a reference collection of African species using this technique in conjunction with a study of the shells.

Fasciola Infection in Southern Rhodesia:

A subcutaneous abscess was excised from the chest wall of a native female in the Salisbury Hospital and submitted to the Government Pathologist for histological investigation. The tissues were in turn submitted to the Research Laboratory as they contained objects which appeared to be trematode eggs.

The eggs have been identified as those of *Fasciola hepatica*. Their interest lies in the fact that this appears to be the first record of human fascioliasis in this country, although of course "cattle fluke" is rife throughout Rhodesia.

Other Investigations:

As part of our work has consisted of large-scale surveys of native populations for bilharzia and malaria, which necessitate the collecting together of many of the inhabitants of a reserve at one time, we have begun mantoux-testing these populations in addition to the examinations already mentioned, and it will be possible by the end of 1951 to give the results of thousands of these tests.

